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Security at Fingertips

MANUAL

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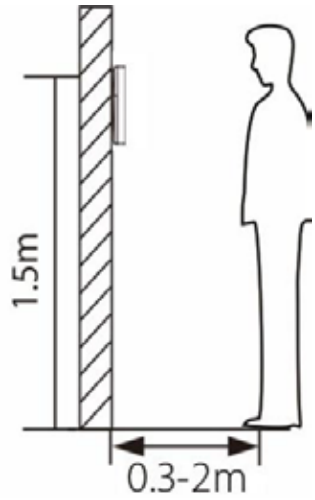
Table of Contents

1 Instruction for Use

Before getting into the device features and functions, it is recommended to be familiar with the below fundamentals.

1.1 Standing Position, Posture and Facial Expression

- **The recommended distance**



The distance between the device and a user whose height is in a range of 1.55m to 1.85m is recommended to be 0.3 to 2m. Users may slightly move forward or backward to improve the quality of facial images captured.

- **Recommended Standing Posture and Facial Expression**

Standing Posture

Facial Expression

Note: Please keep your facial expression and standing posture natural while enrolment or verification.

1.2 Face Template Registration

Try to keep the face in the centre of the screen during registration. Please face towards the camera and stay still during face template registration. The screen should look like this:

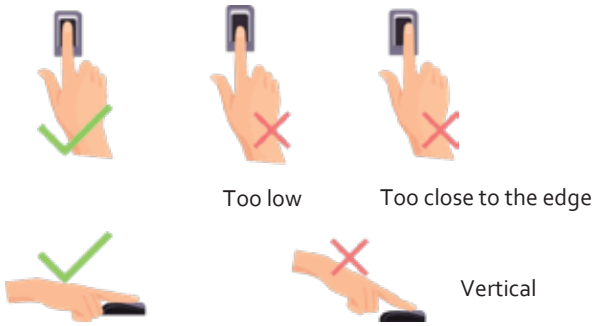
Correct face registration and authentication method

- **Recommendation for registering a face**
    - When registering a face template, maintain a distance of 40cm to 80cm between the device and the face.
    - Be careful not to change your facial expression. (Smiling face, drawn face, wink, etc.)
    - If you do not follow the instructions on the screen, the face template registration may take longer or may fail.
    - Be careful not to cover the eyes or eyebrows.
    - Do not wear hats, masks, sunglasses, or eyeglasses.
    - Be careful not to display two faces on the screen. Register one person at a time.
    - It is recommended for a user wearing glasses to register both faces with and without glasses.

- **Recommendation for authenticating a face template**
    - Ensure that the face appears inside the guideline displayed on the screen of the device.
    - If the glasses have been changed, authentication may fail. If the face without glasses has been registered, authenticate the face template without glasses further. If the face with glasses has been registered, authenticate the face with the previously worn glasses.
    - If a part of the face is covered with a hat, a mask, an eye patch, or sunglasses, authentication may fail. Do not cover the face, allow the device to recognize both the eyebrows and the face.

1.3 Finger Positioning

Recommended fingers: The index, middle, or ring finger and avoid using the thumb or pinky fingers, as they are difficult to accurately press onto the fingerprint reader.

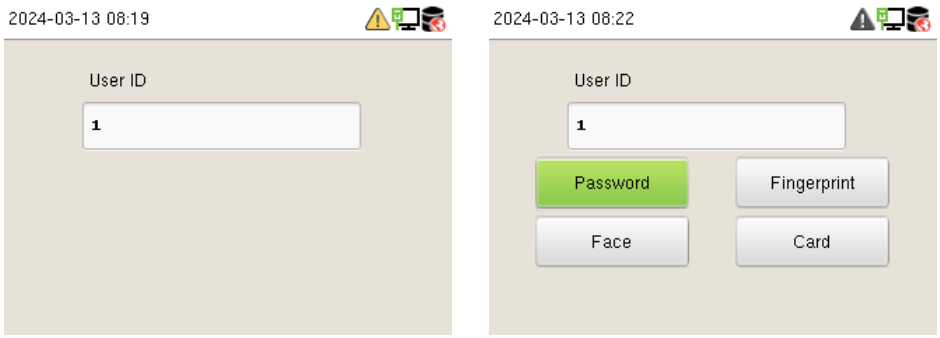


Note: Please use the correct method when pressing your fingers onto the fingerprint reader for registration and identification. Our company will assume no liability for recognition issues that may result from incorrect usage of the product. We reserve the right of final interpretation and modification concerning this point.

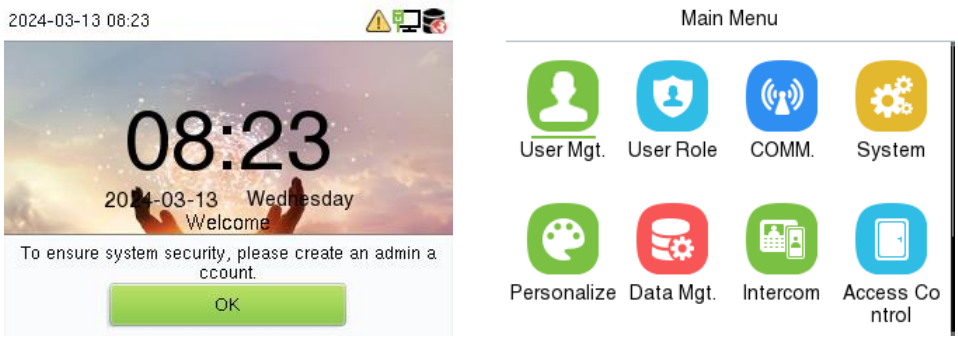
1.4 Standby Interface

The device uses a 2.4-inch color screen, which all operations are performed through the keypad. After connecting the power supply, the following standby interface is displayed:

- Enter any number to access the User ID input interface.



- When there is no Super Administrator set in the device, press **M/OK** to go to the menu.



- After adding a Super Administrator on the device, it requires the Super Administrator's verification before opening the menu functions.

Note: For the security of the device, it is recommended to register a super administrator the first time you use the device.

- On the standby interface, the punch state options can also be shown and used directly. The shortcut key mappings will be displayed on the screen if you press the relevant shortcut key on the keypad, as shown in the picture below. For the specific operation method, please see "Shortcut Key Mappings."

Note: The punch state options are disabled by default when the device type is set as an attendance terminal.

1.5 Verification Mode

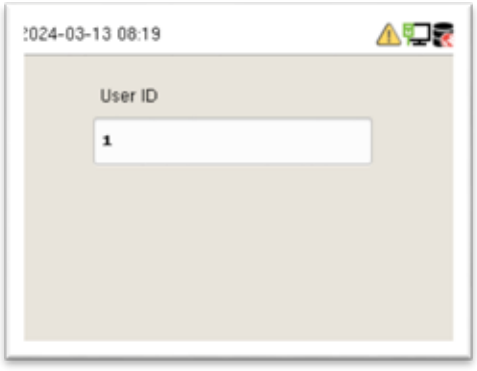
1.5.1 Facial Verification

1: N Facial Verification

In this verification mode, the device compares the collected facial images with all face data registered in the device. The following is the pop-up prompt of a successful comparison result.

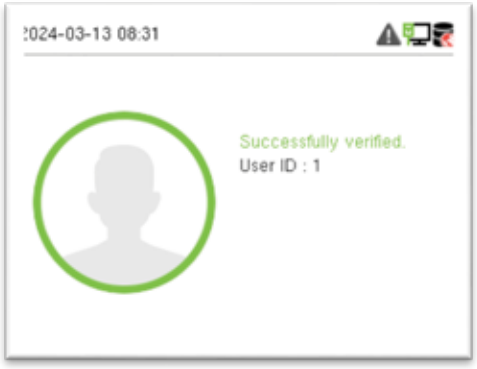
1:1 Facial Verification

In this verification mode, the device compares the face captured by the camera with the facial template related to the entered user ID. Enter the user ID and press **M/OK** to enter the 1:1 facial verification mode.



If the user has registered password, card and fingerprint in addition to the face, and the verification method is set to Password/Fingerprint/Card/Face, the following screen will appear. Select **Face** to enter the face verification mode.

After successful verification, the prompt box displays "**Successfully verified**", as shown below:



1.5.2 Fingerprint Verification

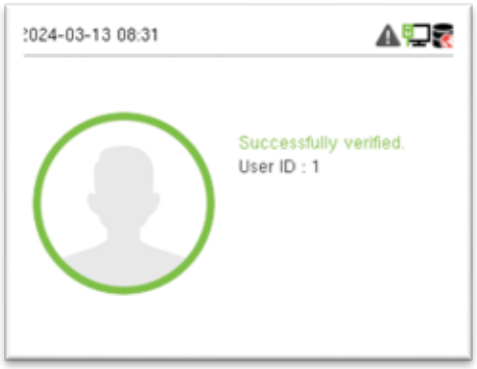
- **1: N Fingerprint Verification Mode**

The device compares the current fingerprint with the available fingerprint data stored in its database.

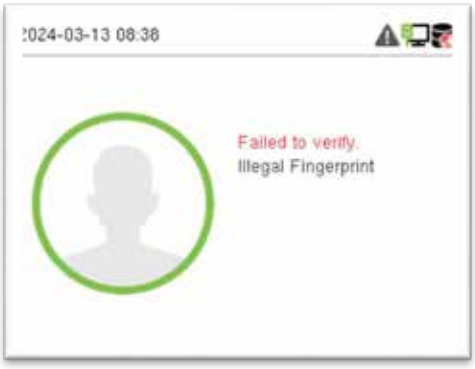
Fingerprint authentication mode is activated when a user places their finger onto the fingerprint scanner.

Please follow the recommended way to place your finger onto the sensor. For details, refer to section Finger Positioning.

Verification is successful:



Verification is failed:

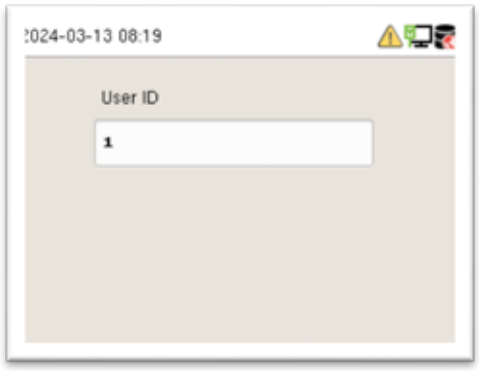


- **1:1 Fingerprint Verification Mode**

The device compares the current fingerprint with the fingerprints linked to the entered User ID through the virtual keyboard.

In case users are unable to gain access using the 1:N authentication method, they can attempt to verify their identity using the 1:1 verification mode.

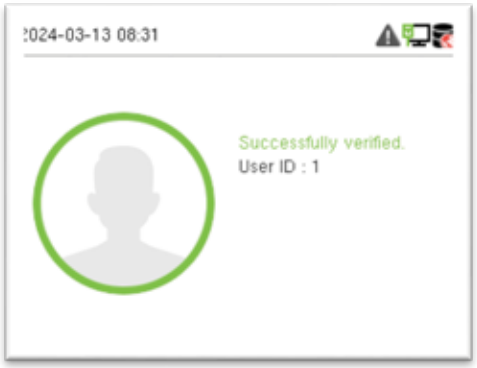
Enter the user ID and press **M/OK** to enter the 1:1 fingerprint verification mode.



If an employee registers a password, card and face in addition to the fingerprint, the following screen will appear. Select **Fingerprint** to enter fingerprint verification mode.

Press the fingerprint to verify.

Verification is successful:

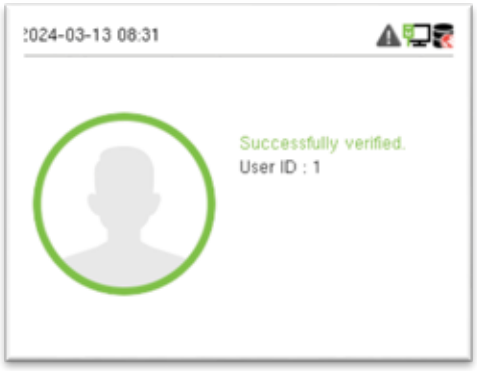


Verification is failed:

1.5.3 Card Verification

- **1: N Card Verification Mode**

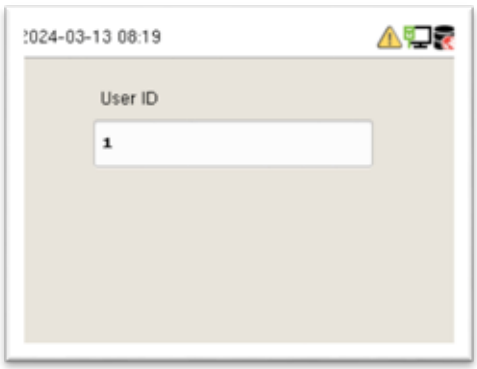
The 1: N Card Verification Mode compares the card number in the card induction area with all the card number data registered in the device. The following screen displays on the card verification screen.



- **1:1 Card Verification Mode**

The 1:1 Card Verification mode compares the card number in the card induction area with the number associated with the employee's User ID registered in the device.

Enter the user ID and press **M/OK** to enter the 1:1 card verification mode.

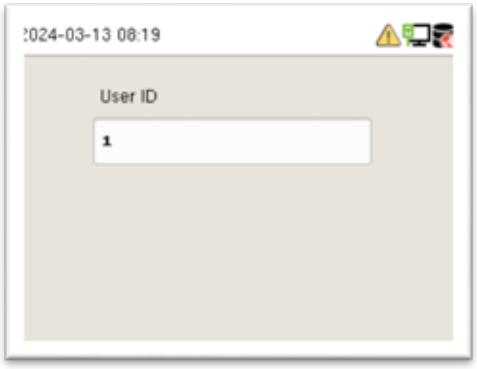


If an employee registers a fingerprint, face and password in addition to the card, the following screen will appear. Select **Card** to enter card verification mode.

1.5.4 Password Verification

The device compares the entered password with the registered password and User ID.

Enter the user ID and press **M/OK** to enter the 1:1 password verification mode. Then, input the user ID and press **M/OK**.



If an employee registers a fingerprint, face and card in addition to the password, the following screen will appear. Select **Password** to enter card verification mode.

Below are the display screens after entering a correct password and a wrong password, respectively.

Verification is successful:

Verification is failed:

1.5.5 Combined Verification

This device allows you to use different types of verification methods to increase security. There are a total of 21 different verification combinations that can be implemented, as listed below:

Combined Verification Symbol Definition

Symbol	Definition	Explanation
/	or	This method compares the entered verification of a person with the related verification template previously stored to that Personnel ID in the Device.
+	and	This method compares the entered verification of a person with all the verification templates previously stored to that Personnel ID in the Device.

Combined Verification Mode set up procedure:

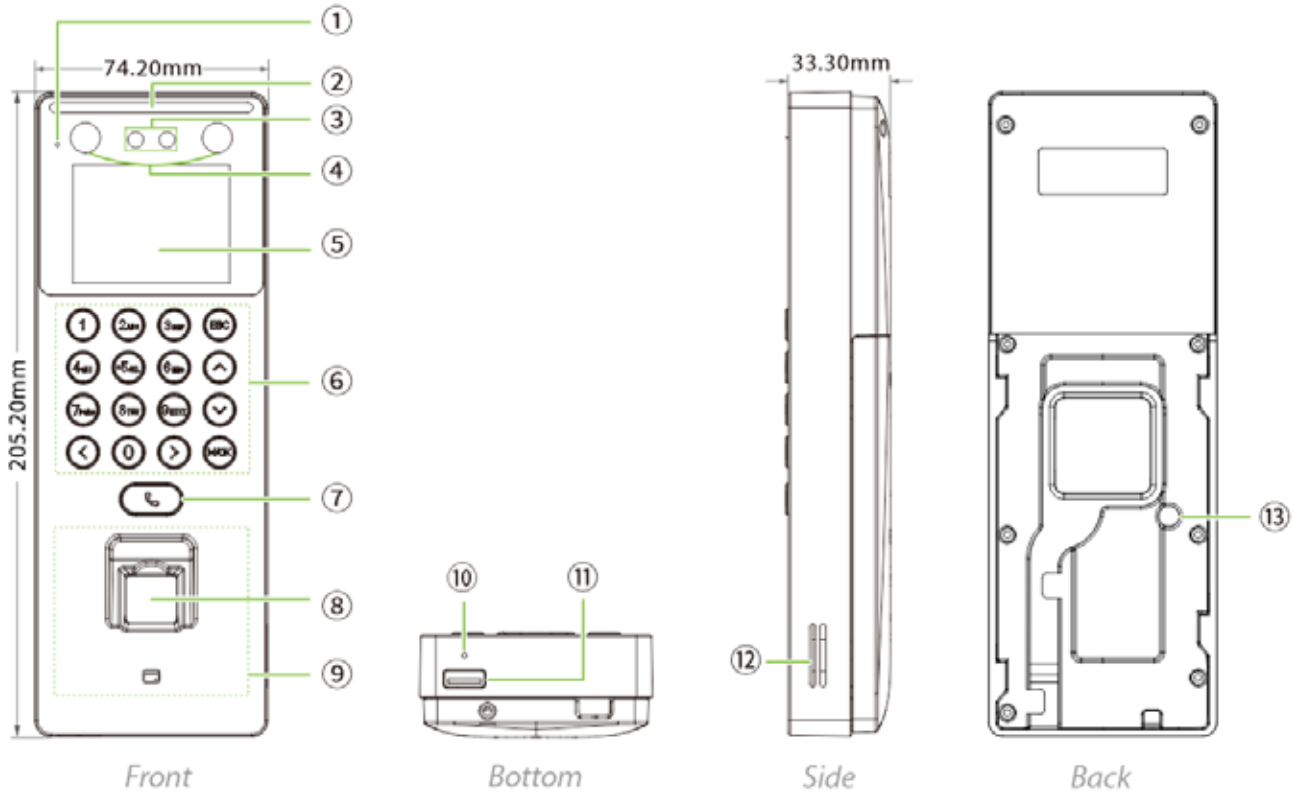
- Combined verification requires personnel to register all the different verification methods. Otherwise, employees will not be able to successfully verify the combined verification process.
- For example, if an employee has only registered for password data but the Device verification mode is set to "Password + Card," the employee will not be able to successfully complete the verification procedure.

Reason:

- This is because the Device compares the password template of the person with the registered verification template (both the Card and the Password) previously stored to that Personnel ID in the Device.
- But, since the employee has only registered their password and not their card, the verification process will not be successful, and the device will display the "Verification Failed."

2 Overview

2.1 Appearance



No.	Description
1	Microphone
2	Flash
3	Camera
4	Near-infrared Flash
5	2.4-inch Color Screen
6	Keypad
7	Doorbell Button
8	Fingerprint Sensor
9	Card Reading Area
10	Reset

11	USB
12	Speaker
13	Tamper Switch

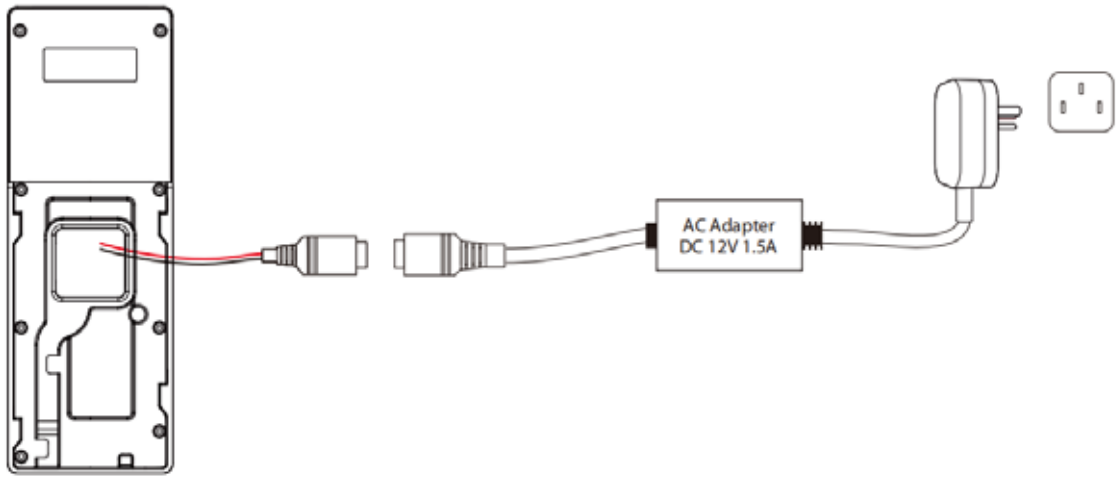
2.2 Terminal and Wiring Description

2.2.1 Terminal Description

Interface	Description	
	NC	Lock
	COM	
	NO	
	SEN	Door Sensor & Exit Button
	GND	
	BUT	
	12V Power in	
	Network Interface	

2.3 Wiring Description

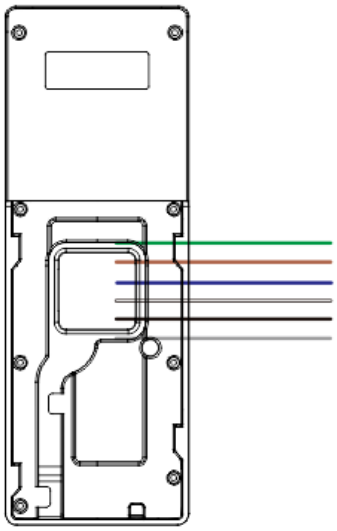
2.3.1 Power Connection

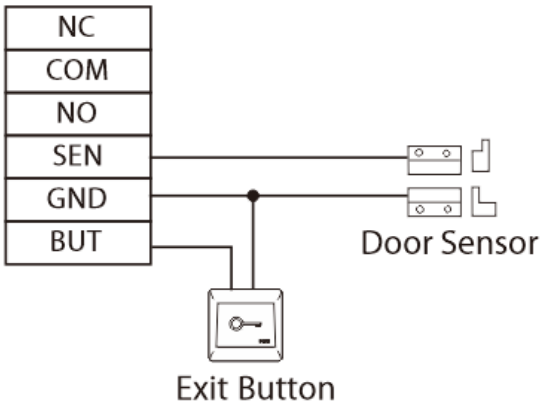


Recommended power supply

- Rating of 12V and 1.5A.
- To share the device's power with other devices, use a power supply with higher current ratings.

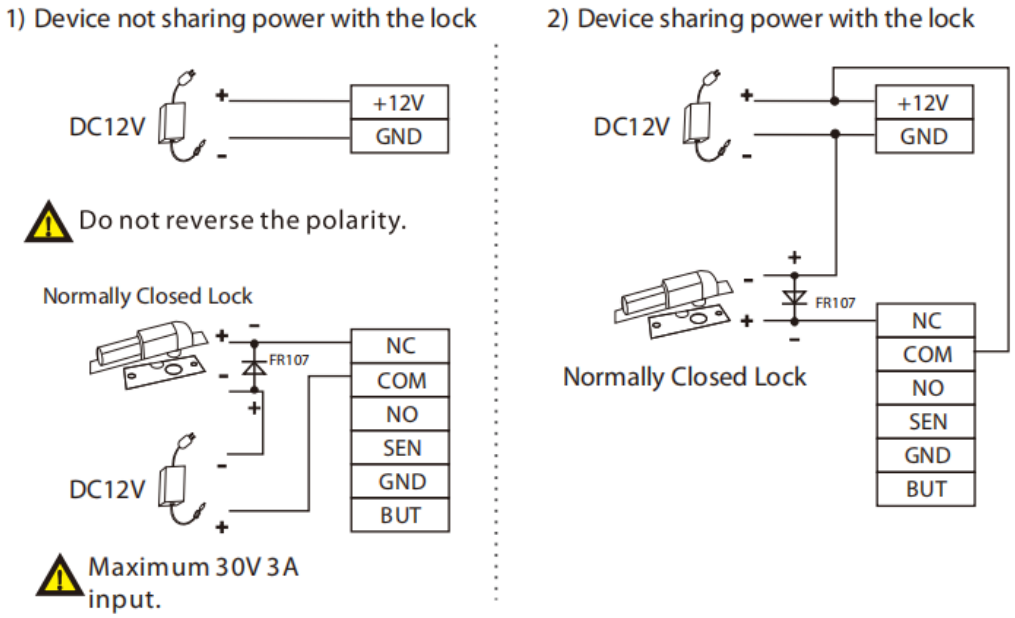
2.3.2 Door Sensor & Exit Button Connection





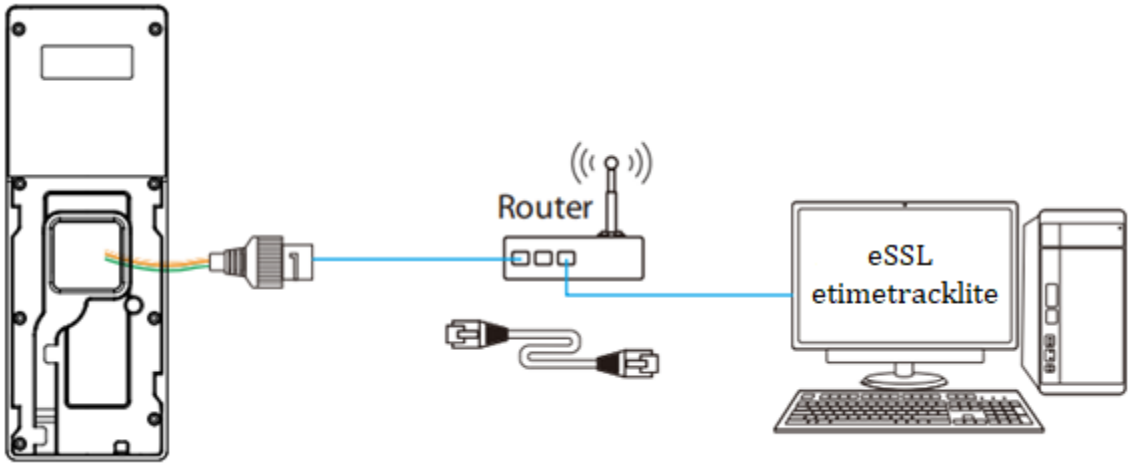
2.3.3 Lock Relay Connection

The system supports both Normally Opened Lock and Normally Closed Lock. The NO Lock (normally opened when powered) is connected with 'NO1' and 'COM1' terminals, and the NC Lock (normally closed when powered) is connected with 'NC1' and 'COM1' terminals. The power can be shared with the lock or can be used separately for the lock, as shown in the example with NC Lock below:



2.3.4 Ethernet Connection

Connect the device to the computer software using an Ethernet cable. An example is shown below:



Enter **[COMM.] > [Ethernet]** to set the relevant parameters of network.

Note: In a LAN, the IP addresses of the server (PC) and the device must be in the same network segment when connecting to the software.

3 Installation

3.1 Installation Environment

Please refer to the following recommendations for installation.

KEEP DISTANCE

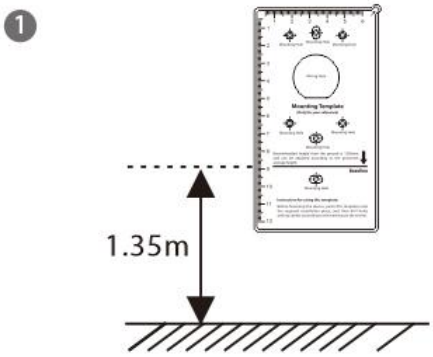
AVOID GLASS REFRACTION

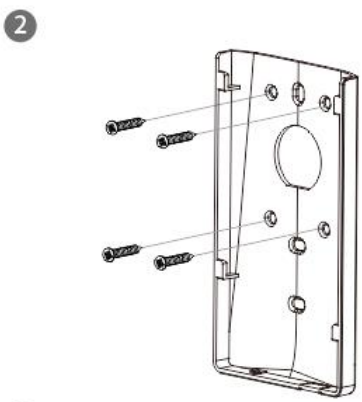
AVOID DIRECT SUNLIGHT AND EXPOSURE

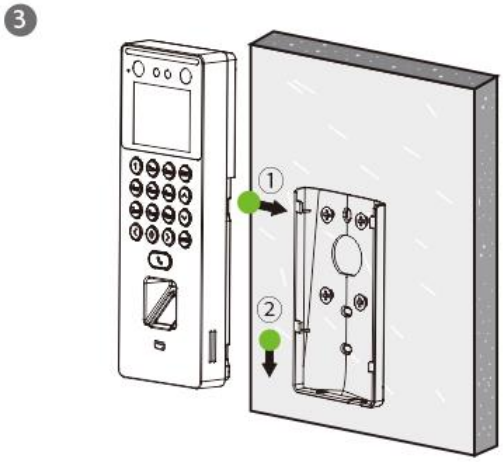
AVOID USE OF ANY HEAT SOURCE NEAR THE DEVICE

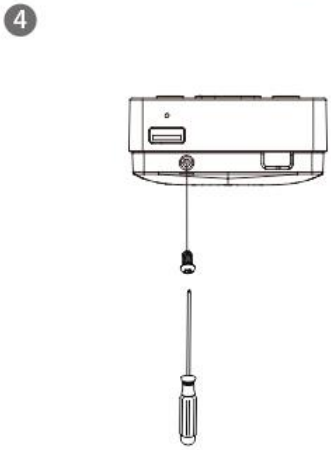
3.2 Device Installation

1. Stick the mounting template sticker to the wall and drill holes according to the mounting template sticker.
2. Fix the back plate on the wall using wall mounting screws.
3. Attach the device to the back plate.
4. Attach the device to the back plate with a security screw.



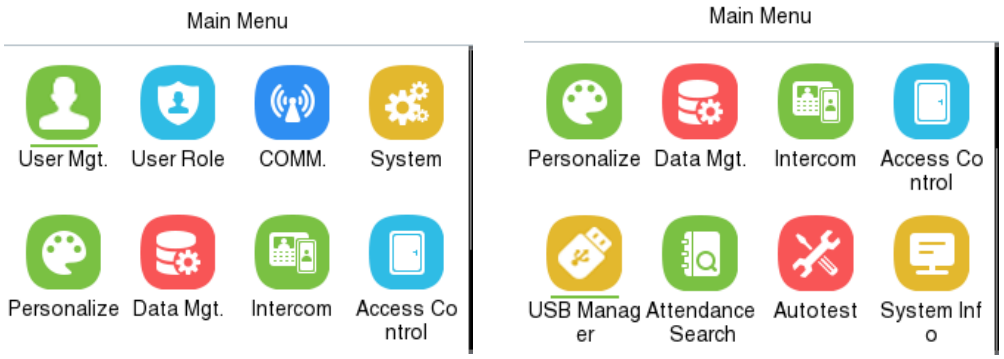






4 Main Menu

Press **M/OK** on the initial interface to enter the main menu, as shown below:



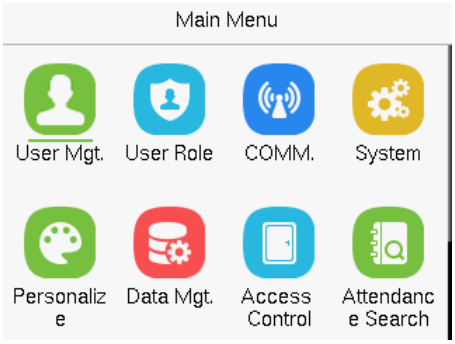
Function Description

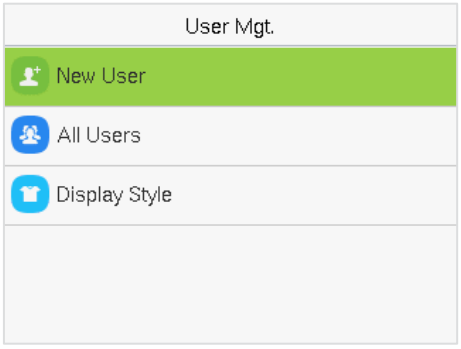
Menu	Description
User Mgt.	To Add, Edit, View, and Delete information of a User.
User Role	To set the permission scope of the custom role and enroller for the users, for example the system's operating rights.
COMM.	To set the relevant parameters of Network, PC Connection, Wi-Fi★, Cloud Server and Network Diagnosis.
System	To set parameters related to the system, including Date Time, Attendance/Access Logs Settings, Face, Fingerprint, Device Type Settings, Security Settings, USB Upgrade, Update Firmware Online and Resetting to factory settings.
Personalize	To customize settings of User Interface, Voice, Bell Schedules, Punch State Options and Shortcut Key Mappings settings.
Data Mgt.	To delete the data.
Intercom	To set relevant parameters of intercom, including SIP, Doorbell and ONVIF Settings.
Access Control	To set the parameters of the lock and the relevant access control device including options like Time rule, Holiday Settings, Combine verification and Duress Option Settings.
USB Manager	To upload or download the specific data by a USB drive.
Attendance Search	To query the specified event logs, check Attendance Photos and Blocklist attendance photos.
Autotest	To automatically test whether each module functions properly, including the LCD Screen, Audio, Microphone, Keyboard, fingerprint sensor, camera and Real-Time Clock.
System Info	To view Privacy Policy, Data Capacity and Device and Firmware information of the current device.

5 User Management

5.1 New User Registration

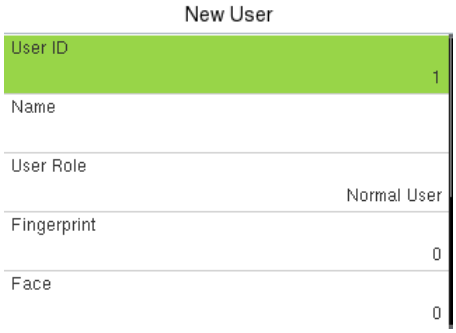
When the device is on the initial interface, press **M/OK** and enter [**User Mgt.**] > [**New User**].





5.1.1 Register a User ID and Name

Enter the **User ID** and **Name**.



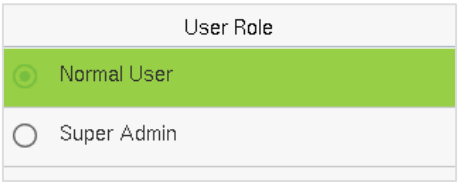
Note:

1. A name can be taken up to 36 characters long.
2. The user ID may contain 1 to 14 digits by default, supporting both numbers and alphabetic characters.
3. During the initial registration, you can modify your ID, but not after registration.
4. If the message "**Duplicated!**" appears, you must choose a different User ID because the one you entered already exists.

5.1.2 User Role

On the **New User** interface, select **User Role** to set the user's role as either **Normal User** or **Super Admin**.

- **Super Admin:** The Super Administrator owns all management privileges in the Device.
- **Normal User:** If the Super Admin is registered already in the device, then the Normal Users will not have the privilege to manage the system and can only access authentic verifications.
- **User Defined Roles:** The Normal User can also be assigned custom roles with User Defined Role. The user can be permitted to access several menu options as required.

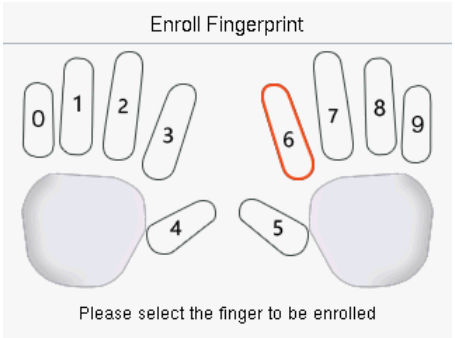


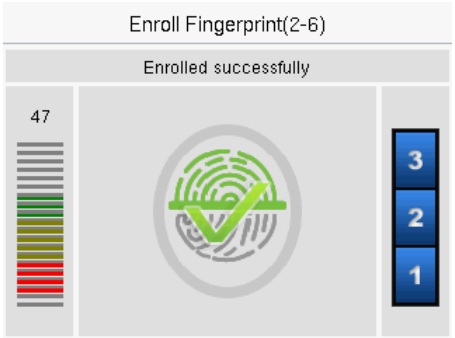
Note: If the selected user role is the Super Admin, then the user must pass the identity authentication to access the main menu. The authentication is based on the authentication method(s) that the super administrator has registered.

5.1.3 Register Fingerprint

Select **Fingerprint** in the **New User** interface to enter the fingerprint registration page.

- Select the finger to be enrolled.
- Press the same finger on the fingerprint reader three times.
- Green indicates that the fingerprint was enrolled successfully.





5.1.4 Register Face

Select **Face** in the **New User** interface to enter the face registration page.

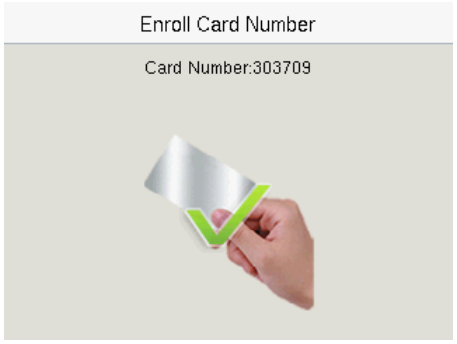
- Please face towards the camera and place yourself in such a way that your face image fits inside the white guiding box and stays still during face registration.

- A progress bar shows up while registering the face and then "**Enrolled Successfully**" message is displayed as the progress bar completes.
- If the face is registered already then, the "**Duplicated Face**" message shows up. The registration interface is as follows:

5.1.5 Card

Select **Card** in the **New User** interface to enter the card registration page.

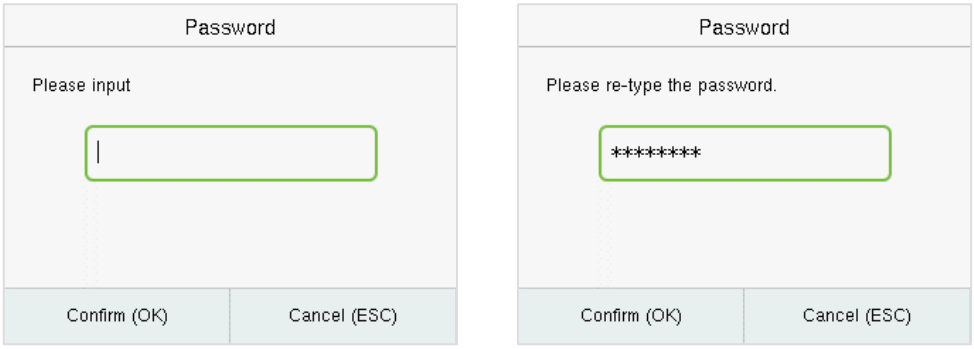
- On the card interface, swipe the card under the card reading area. The registration of the card will be successful.
- If the card has already been registered, the message "**Error! Card already enrolled**" appears. The registration interface appears as follows:



5.1.6 Password

Select **Password** in the **New User** interface to enter the password registration page.

- On the Password interface, enter the required password and re-enter to confirm it and press **M/OK**.
- If the re-entered password is different from the initially entered password, then the device prompts the message as "**Password not match!**", where the user needs to re-confirm the password again.
- The password may contain 6 to 8 digits by default.



5.1.7 Profile Photo

Select **Profile Photo** in the **New User** interface to go to the Profile Photo registration page.

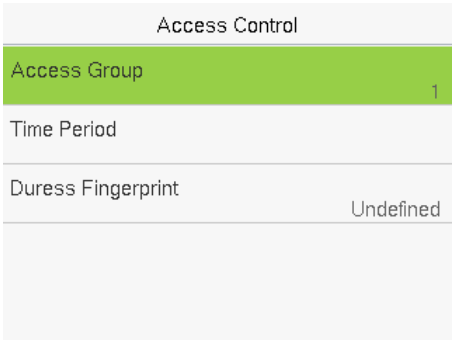
- Tap **Profile Photo**, the device's camera will open, then press **M/OK** to take a photo. The captured photo is displayed on the top left corner of the screen.

Note: While registering a face template, the system automatically captures a photo as the user profile photo. If you do not register a profile photo, the system automatically sets the photo captured while registration as the default photo.

5.1.8 Access Control Role

The **Access Control Role** sets the door access privilege for each user. It includes the access group, time period and duress fingerprint.

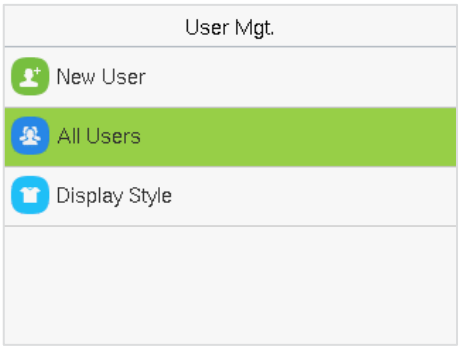
- Enter [**Access Control Role**] > [**Access Group**] to assign the registered users to different groups for better management. New users belong to Group 1 by default and can be reassigned to other groups. The device supports up to 99 Access Control groups.
- Tap **Time Period**, to select the time to use.
- The user may specify one or more fingerprints that have been registered as a duress fingerprint(s). When press the finger corresponding to the duress fingerprint on the sensor and pass the verification, the system will immediately generate a duress alarm.

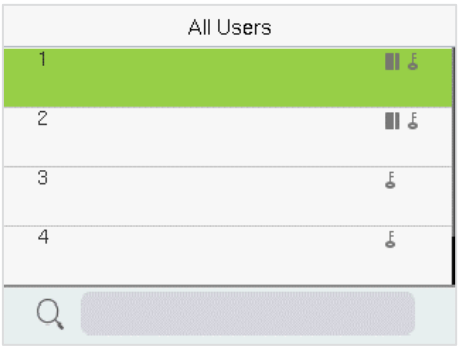


5.2 All Users

When the device is on the initial interface, press **M/OK** and enter [**User Mgt.**] >[**All Users**].

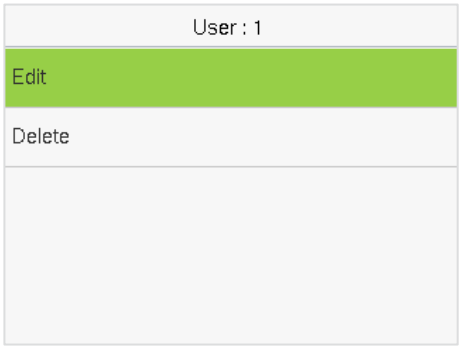
- On the **All Users** interface, tap on the search bar on the user's list to enter the required retrieval keyword (where the keyword may be the user ID, surname, or full name) and the system will search for the related user information.

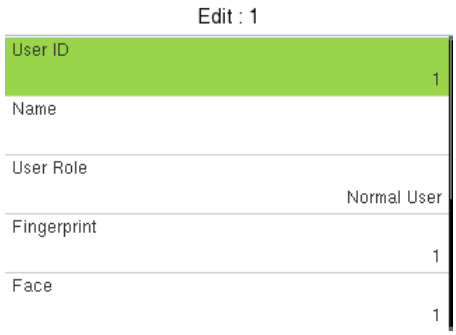




5.2.1 Edit User

On the **All Users** interface, tap on the required user from the list and tap **Edit** to edit the user information.





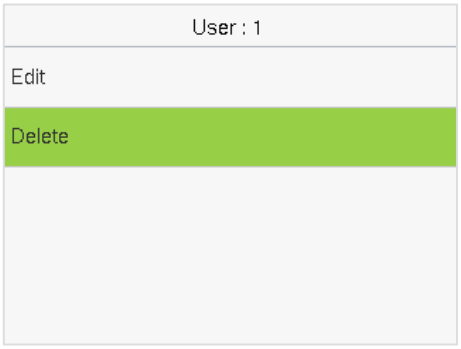
Note: The process of editing the user information is the same as adding a new user, except that the User ID cannot be modified while editing a user. The process in detail refers to "User Registration".

5.2.2 Delete User

On the **All Users** interface, tap on the required user from the list and tap **Delete** to delete the user or specific user information from the device. On the **Delete** interface, tap on the required operation, and then press **M/OK** to confirm the deletion.

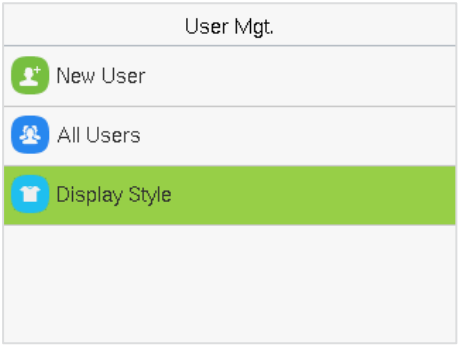
Delete Operations:

- **Delete User:** Deletes all the user information (deletes the selected User as a whole) from the Device.
- **Delete User Role Only:** Deletes the user's administrator privileges and make the user a normal user.
- **Delete Fingerprint Only:** Deletes the fingerprint information of the selected user.
- **Delete Face Only:** Deletes the face information of the selected user.
- **Delete Password Only:** Deletes the password information of the selected user.
- **Delete Card Number Only:** Deletes the card information of the selected user.
- **Delete Profile Photo Only:** Deletes the profile photo of the selected user.



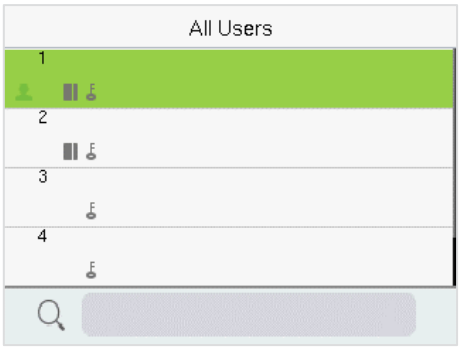
5.3 Display Style

When the device is on the initial interface, press **M/OK** and enter [**User Mgt.**] > [**Display Style**].

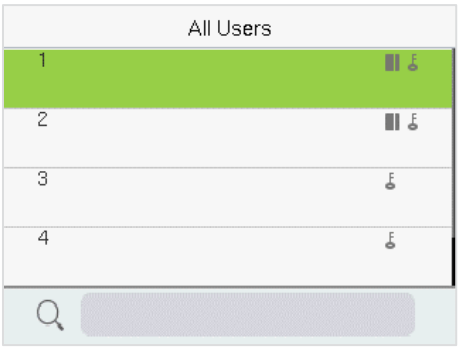


All the Display Styles are shown as below:

Multiple Line:



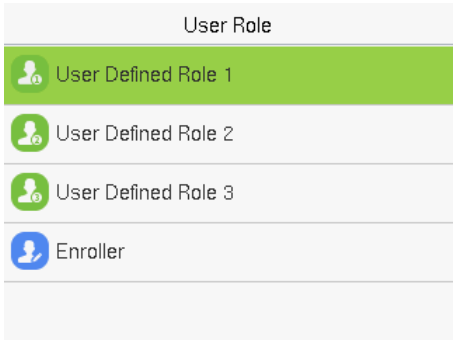
Mixed Line:



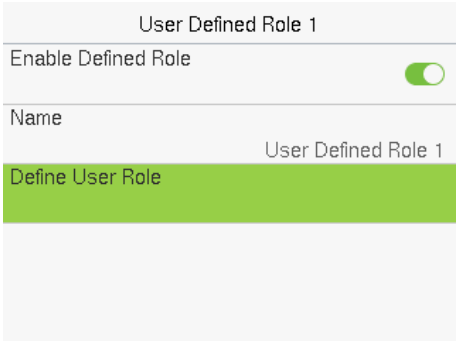
6 User Role

User Role allows you to assign specific permissions to certain users based on their requirements.

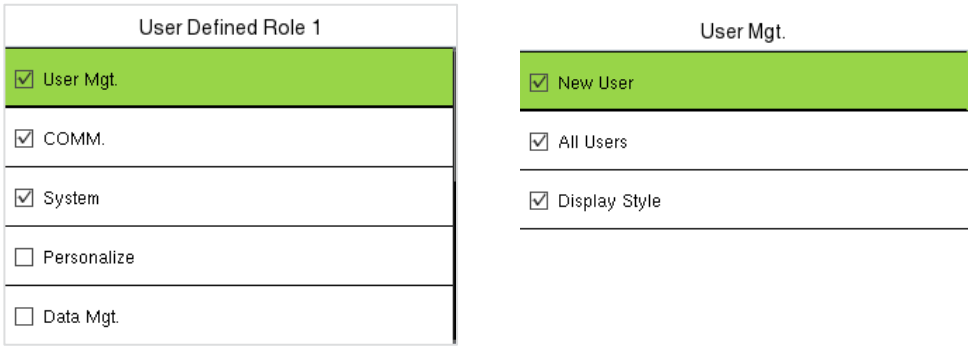
- When the device is on the initial interface, press **M/OK** and enter [**User Role**] > [**User Defined Role**] to set the user defined permissions.
- The permission scope of the custom role can be set up into 3 roles, that is, the custom operating scope of the menu functions of the user.



- On the **User Defined Role** interface, toggle **Enable Defined Role** to enable or disable the user defined role.



- Then, by selecting on Define User Role, select the required privileges for the new role, and then press the **M/OK** key.
- First tap on the required **Main Menu** function name, then press **M/OK** and select its required sub-menus from the list.

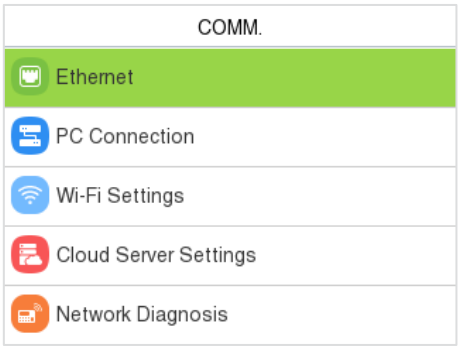


Note: If the User Role is enabled for the Device, enter **[User Mgt.] > [New User] > [User Role]** to assign the created roles to the required users. But if there is no super administrator registered in the Device, then the device will prompt "**Please enroll super admin first!**" when enabling the User Role function.

7 Communication

Communication Settings are used to set the parameters of the Network, PC Connection, Wi-Fi★, Cloud Server, and Network Diagnosis.

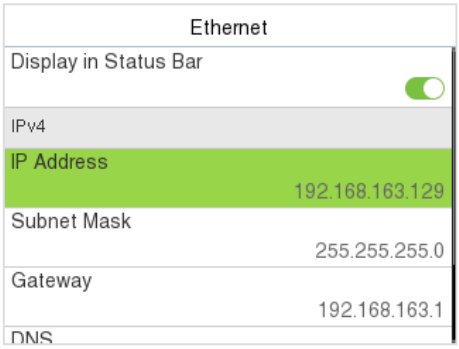
When the device is on the initial interface, press **M/OK** and select **COMM.**



7.1 Ethernet

When the device needs to communicate with a PC via the Ethernet, you need to configure network settings and make sure that the device and the PC connecting to the same network segment.

Select **Ethernet** on the **COMM.** Settings interface to configure the settings.

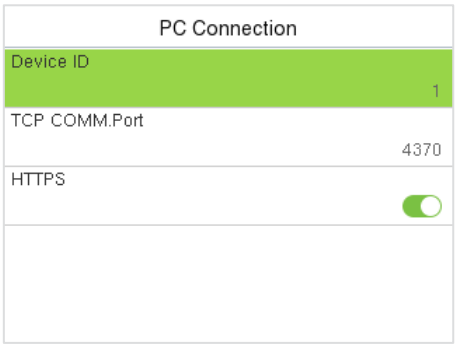


Function Description:

Function Name	Description
Display in Status Bar	Toggle to set whether to display the network icon on the status bar.
IP Address	The default IP address is 192.168.1.201. It can be modified according to the network availability.
Subnet Mask	The default Subnet Mask is 255.255.255.0. It can be modified according to the network availability.
Gateway	The Default Gateway address is 0.0.0.0. It can be modified according to the network availability.
DNS	The default DNS address is 0.0.0.0. It can be modified according to the network availability.
DHCP	Dynamic Host Configuration Protocol dynamically allocates IP address for clients via server.

7.2 PC Connection

Select **PC Connection** on the **COMM.** Settings interface to configure the communication settings.



Function Description

Function Name	Description

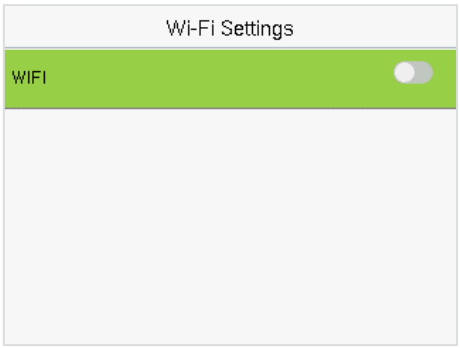
Device ID	It is the identification number of the device, which ranges between 1 and 254.
TCP COMM. Port	The factory default value is 4370. Please set the value as per the requirements.
HTTPS	To increase the security of software access, users can enable the HTTPS protocol to create a secure and encrypted network transmission and assure the security of sent data through identity authentication and encrypted communication. This function is enabled by default. This function can be enabled or disabled through the menu interface, and when changing the HTTPS status, the device will pop up a security prompt, and restart after confirmation.

7.3 Wi-Fi Settings★

The device provides a Wi-Fi module, which can be built-in within the device module or can be externally connected.

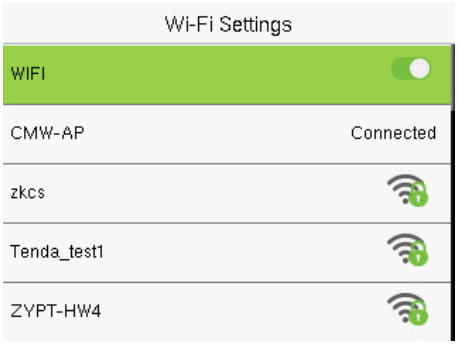
The Wi-Fi module enables data transmission via Wi-Fi (Wireless Fidelity) and establishes a wireless network environment. Wi-Fi is enabled by default in the device. If you don't need to use the Wi-Fi network, you can toggle the Wi-Fi to disable the button.

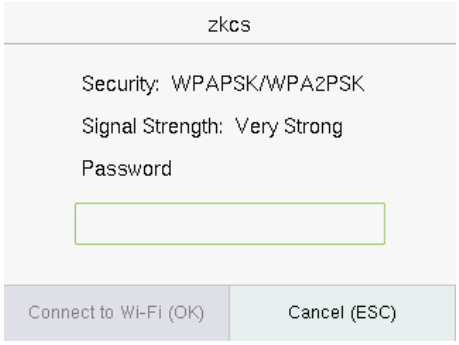
Select **Wi-Fi Settings** on the **COMM.** Settings interface to configure the Wi-Fi settings.



➢ **Searching the Wi-Fi Network**

- Wi-Fi is enabled in the device by default. Toggle the button to enable or disable Wi-Fi.
- Once the Wi-Fi is turned on, the device will search for the available Wi-Fi within the network range.
- Tap on the required Wi-Fi name from the available list and input the correct password in the password interface, and then press **M/OK**.





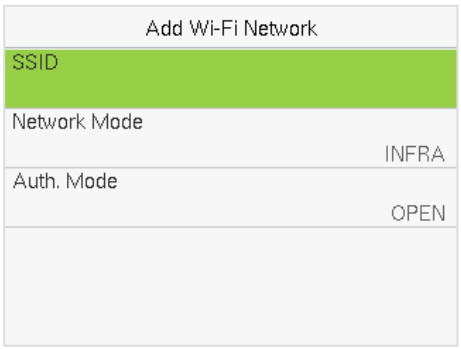
WIFI Enabled: Tap on the required network from the searched network list.

Tap on the password field to enter the password and press **M/OK.**

- When the Wi-Fi is connected successfully, the initial interface will display the Wi-Fi logo.

➢ **Adding Wi-Fi Network Manually**

The Wi-Fi can also be added manually if the required Wi-Fi does not show on the list.



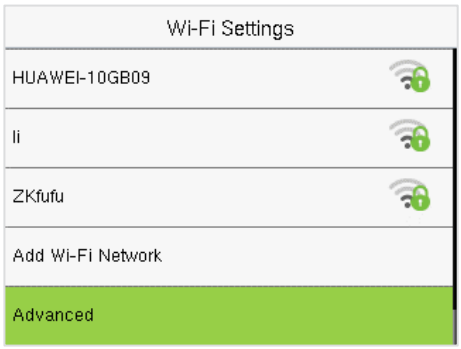
Tap on **Add Wi-Fi Network** to add the Wi-Fi manually.

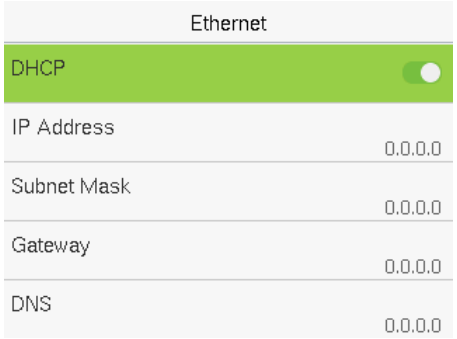
On this interface, enter the Wi-Fi network parameters. (The added network must exist.)

Note: After successfully adding the Wi-Fi manually, follow the same process to search for the added Wi-Fi name.

➢ **Advanced Setting**

On the **Wi-Fi Settings** interface, tap **Advanced** to set the relevant parameters as required.



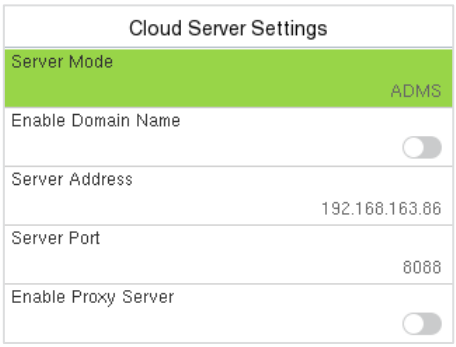


Function Description

Function Name	Description
DHCP	Dynamic Host Configuration Protocol (DHCP) dynamically allocates IP address to network clients. If the DHCP is enabled, then the IP cannot be set manually.
IP Address	The IP address for the Wi-Fi network, the default is 0.0.0.0. It can be modified according to the network availability.
Subnet Mask	The default Subnet Mask of the Wi-Fi network is 255.255.255.0. It can be modified according to the network availability.
Gateway	The Default Gateway address is 0.0.0.0. It can be modified according to the network availability.
DNS	The default DNS is 0.0.0.0. It can be modified according to the network availability.

7.4 Cloud Server Settings

Select **Cloud Server Settings** on the **COMM.** Settings interface to connect with the ADMS server.



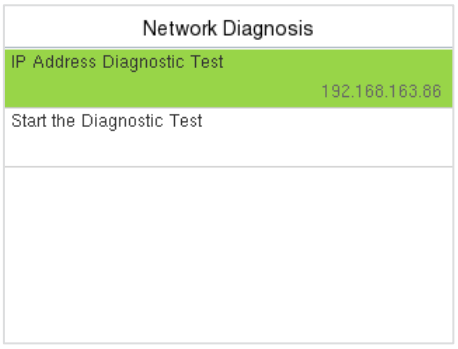
Function Description

Function Name		Description
Enable Domain Name	**Server Address**	Once this mode is turned ON, the domain name mode "http://... " will be used, such as http://www.XYZ.com, while "XYZ" denotes the domain name.
Disable Domain Name	**Server Address**	The IP address of the ADMS server.
	Server Port	Port used by the ADMS server.
Enable Proxy Server		The IP address and the port number of the proxy server is set manually when the proxy is enabled.

7.5 Network Diagnosis

It helps to set the network diagnosis parameters.

Select **Network Diagnosis** on the **COMM.** Settings interface. Enter the IP address that needs to be diagnosed and tap **Start the Diagnostic Test** to check whether the network can connect to the device.

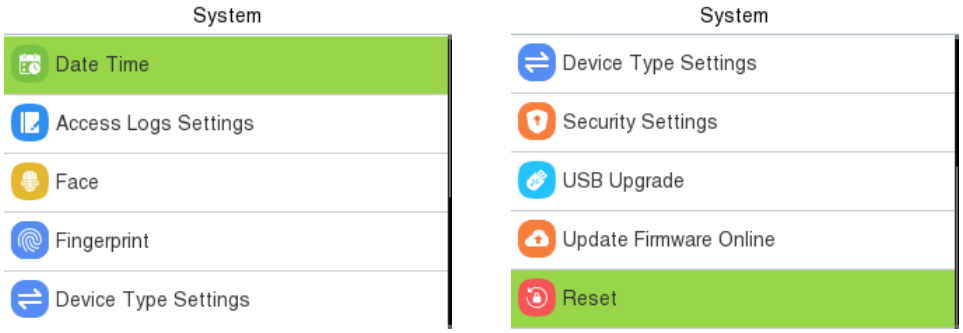


8 System Settings

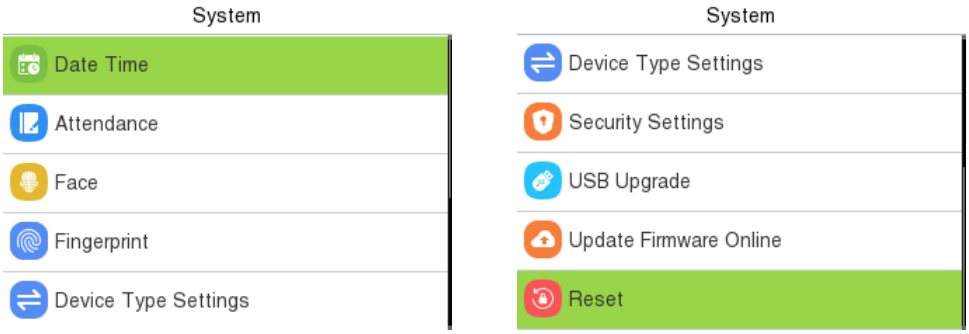
It helps to set related system parameters to optimize the accessibility of the device.

When the device is on the initial interface, press **M/OK** and select **System.**

Access Control Terminal:

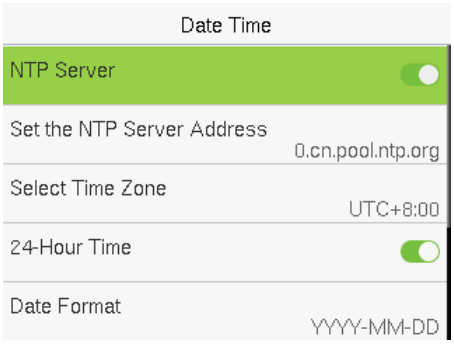


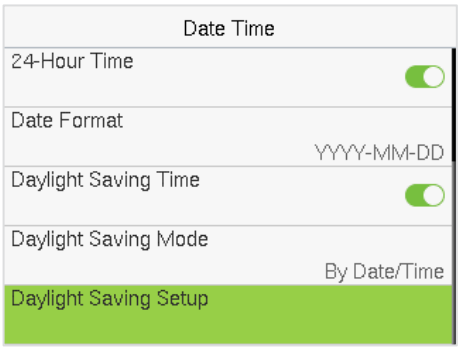
Time Attendance Terminal:



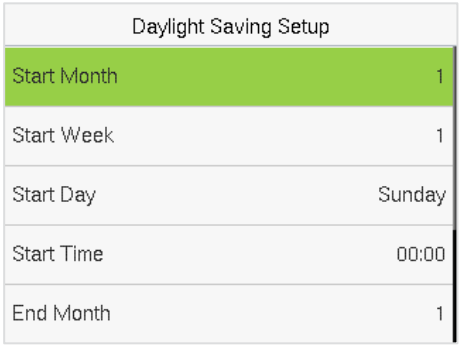
8.1 Date and Time

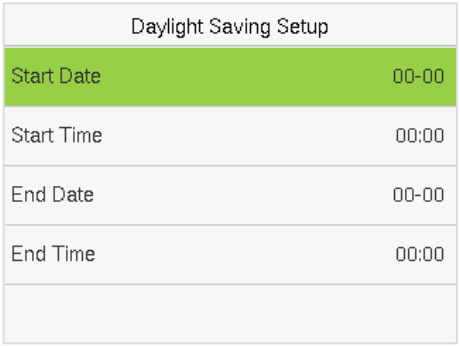
Select **Date Time** on the **System** interface to set the date and time.





- Tap **NTP Server** to enable automatic time synchronization based on the service address you enter.
- Tap **Manual Date and Time** to manually set the date and time and then tap **Confirm** and save.
- Tap **Select Time Zone** to manually select the time zone where the device is located.
- Enable or disable this format by tapping 24-Hour Time. If enabled, then tap **Date Format** to set the date.
- Tap **Daylight Saving Time** to enable or disable the function. If enabled, tap **Daylight Saving Mode** to select a daylight-saving mode and then tap **Daylight Saving Setup** to set the switch time.





Week Mode **Date Mode**

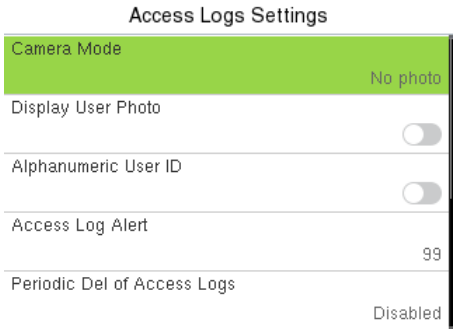
- When restoring the factory settings, the time (24-hour) and date format (YYYY-MM-DD) can be restored, but the device date and time cannot be restored.

Note: For example, if a user sets the time of the device from 18:35 on March 15, 2020 to 18:30 on January 1, 2021. After restoring the factory settings, the time of the device will remain at 18:30 on January 1, 2021.

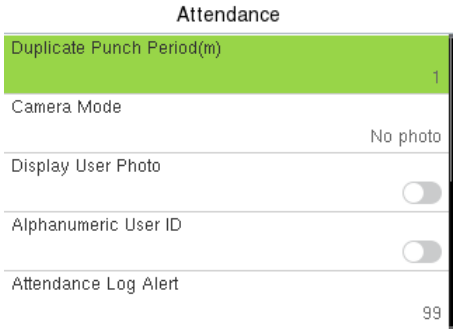
8.2 Access Logs Settings / Attendance

Select **Access Logs Settings / Attendance** on the **System** interface.

Access Control Terminal:



Time Attendance Terminal:



Function Description of Access Control Terminal:

Function Name	Description
Camera Mode	This function is disabled by default. When enabled, a security prompt will pop-up and the sound of shutter in the camera will turn on mandatorily. There are 5 modes: **No photo:** No photo is taken during user verification. **Take photo, no save:** Photo is taken but not saved during verification. **Take photo and save:** All the photos taken during verification is saved. **Save on successful verification:** Photo is taken and saved for each successful verification.

	Save on failed verification: Photo is taken and saved only for each failed verification.
Display User Photo	Whether to display the user photo when the user passes the verification.
Alphanumeric User ID	Enable/Disable the alphanumeric as User ID.
Access Log Alert	When the record space of the attendance access reaches the maximum threshold value, the device automatically displays the memory space warning. Users may disable the function or set a valid value between 1 and 9999.
Periodic Del of Access Logs	When access logs reach its maximum capacity, the device automatically deletes a set of old access logs. Users may disable the function or set a valid value between 1 and 999.
Periodic Del of T&A Photo	When attendance photos reach its maximum capacity, the device automatically deletes a set of old attendance photos. Users may disable the function or set a valid value between 1 and 99.
Periodic Del of Blocklist Photo	When block listed photos reach its maximum capacity, the device automatically deletes a set of old block listed photos. Users may disable the function or set a valid value between 1 and 99.
Authentication Timeout(s)	The amount of time taken to display a successful verification message. Valid value: 1 to 9 seconds.
Recognition Interval(s)	After the interval identifying is clicked (selected), for example, if the comparison interval is set to 5 seconds, then the face recognition will verify the face every 5 seconds. Valid value: 0 to 9 seconds. 0 means continuous identifying, 1 to 9 means identifying at intervals.

Function Description of Time Attendance Terminal:

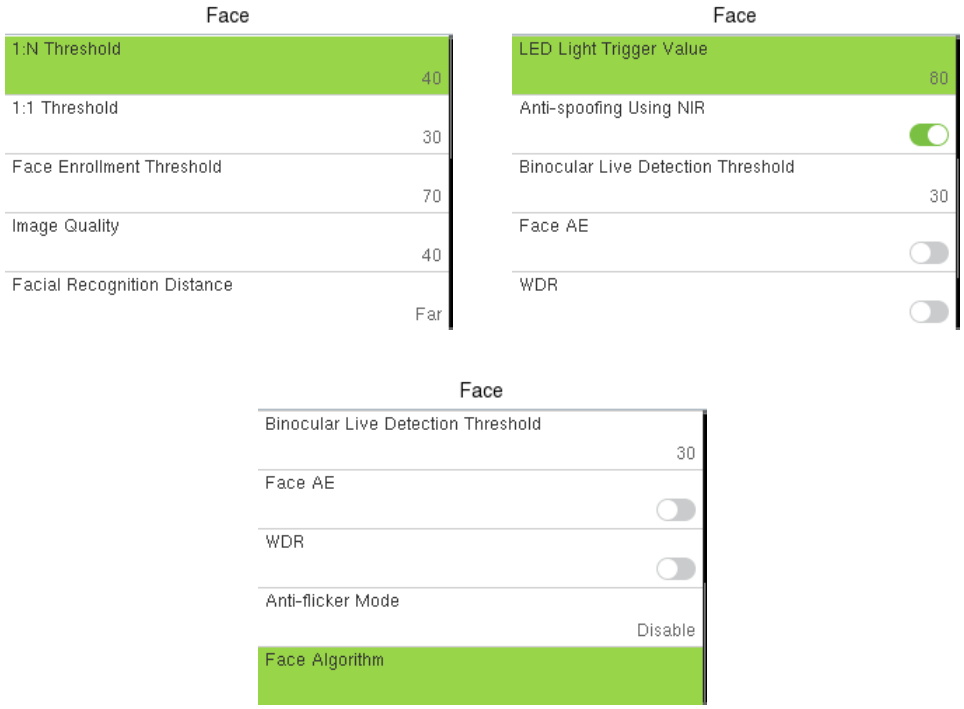
Function Name	Description
Duplicate Punch Period(m)	Within a set time period (unit: minutes), the duplicated attendance record will not be reserved (value ranges from 1 to 999999 minutes).
Camera Mode	This function is disabled by default. When enabled, a security prompt will pop-up and the sound of shutter in the camera will turn on

	mandatorily. There are 5 modes: **No photo:** No photo is taken during user verification. **Take photo, no save:** Photo is taken but not saved during verification. **Take photo and save:** All the photos taken during verification is saved. **Save on successful verification:** Photo is taken and saved for each successful verification. Save on failed verification: Photo is taken and saved only for each failed verification.
Display User Photo	Whether to display the user photo when the user passes the verification.
Alphanumeric User ID	Enable/Disable the alphanumeric as User ID.
Attendance Log Alert	When the record space of the attendance reaches the maximum threshold value, the device automatically displays the memory space warning. Users may disable the function or set a valid value between 1 and 9999.
Periodic Del of T&A Data	When attendance records reach its maximum storage capacity, the device automatically deletes a set of old attendance records. Users may disable the function or set a valid value between 1 and 999.
Periodic Del of T&A Photo	When attendance photos reach its maximum capacity, the device automatically deletes a set of old attendance photos. Users may disable the function or set a valid value between 1 and 99.
Periodic Del of Blocklist Photo	When block listed photos reach its maximum capacity, the device automatically deletes a set of old block listed photos. Users may disable the function or set a valid value between 1 and 99.
Authentication Timeout(s)	The amount of time taken to display a successful verification message. Valid value: 1 to 9 seconds.
Recognition Interval(s)	After the interval identifying is clicked (selected), for example, if the comparison interval is set to 5 seconds, then the face recognition will verify the face every 5 seconds. Valid value: 0 to 9 seconds. 0 means

	continuous identifying, 1 to 9 means identifying at intervals.

8.3 Face Parameters

Select **Face** on the **System** interface to go to the face template parameter settings.



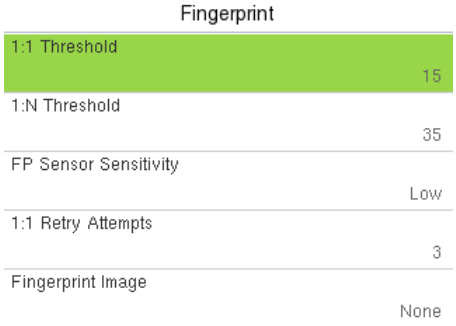
Function Description

Function Name	Description
1:N Threshold Value	Under 1:N verification mode, the verification will only be successful when the similarity between the acquired facial image and all registered facial templates is greater than the set value. The valid value ranges from 0 to 100. The higher the thresholds, the lower the misjudgement rate and the higher the rejection rate, and vice versa. It is recommended to set the default value of 47.
1:1 Threshold Value	Under 1:1 verification mode, the verification will only be successful when the similarity between the acquired facial image and the user's facial templates enrolled in the device is greater than the set value. The valid value ranges from 0to 100. The higher the thresholds, the lower the misjudgement rate and the higher the rejection rate, and vice versa. It is recommended to set the default value of 63.
Face Enrollment Threshold	During face enrollment, 1:N comparison is used to determine whether

	the user has already registered before. When the similarity between the acquired facial image and all registered facial templates is greater than the set threshold, it indicates that the face has already been registered.
Image Quality	It is the image quality for facial registration and comparison. The higher the value, the clearer image is required.
Face Recognition Distance	The farther the individual is, the smaller the face, and the smaller number of pixels of the face obtained by the algorithm. Therefore, adjusting this parameter can adjust the farthest comparison distance of faces.
LED Light Trigger Value	This value controls the turning on and off of the LED light. The larger the value, the LED light will turn on or off more frequently.
Anti-spoofing Using NIR	Using near-infrared spectra imaging to identify and prevent fake photos and videos attack.
Binocular Live Detection Threshold	It is convenient to judge whether the near-infrared spectral imaging is fake photo and video. The larger the value, the better the anti-spoofing performance of near-infrared spectral imaging.
Face AE	When the face is in front of the camera in Face AE mode, the brightness of the face area increases, while other areas become darker.
WDR	Wide Dynamic Range (WDR) balances light and extends image visibility for surveillance videos under high contrast lighting scenes and improves object identification under bright and dark environments.
Anti-flicker Mode	It is used when WDR is turned off. It helps to reduce flicker when the device's screen flashes at the same frequency as the light.
Face algorithm	It has facial algorithm related information and pause the facial template update.

8.4 Fingerprint

Select **Fingerprint** on the **System** interface to go to the Fingerprint parameter settings.

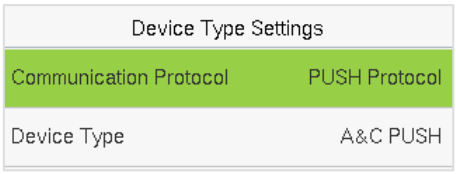


Function Description

Function Name	Description
1:1 Threshold	Under 1:1 verification method, the verification will only be successful when the similarity between the acquired fingerprint data and the fingerprint template associated with the entered user ID enrolled in the device is greater than the set value.
1:N Threshold	Under 1:N verification method, the verification will only be successful when the similarity between the acquired fingerprint data and the fingerprint templates enrolled in the device is greater than the set value.
FP Sensor Sensitivity	To set the sensibility of fingerprint acquisition. It is recommended to use the default level "**Medium**". When the environment is dry, resulting in slow fingerprint detection, you can set the level to **"High"** to raise the sensibility; when the environment is humid, making it hard to identify the fingerprint, you can set the level to "**Low**".
1:1 Retry Attempts	In 1:1 Verification, users might forget the registered fingerprint, or press the finger improperly. To reduce the process of re-entering user ID, retry is allowed.
Fingerprint Image	To set whether to display the fingerprint image on the screen during fingerprint enrollment or verification. Four choices are available: **Show for Enroll:** to display the fingerprint image on the screen only during enrollment. **Show for Match:** to display the fingerprint image on the screen only during verification. **Always Show:** to display the fingerprint image on screen during enrollment and verification. **None:** not to display the fingerprint image.

8.5 Device Type Settings

Select **Device Type Setting** on the **System** interface to configure the Device Type Settings.



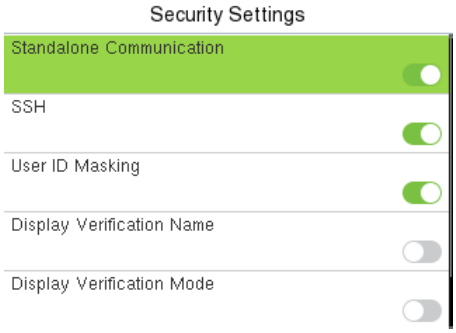
Function Description

Function Name	Description
Communication Protocol	Set the device communication protocol.
Device Type	Set the device as an access control terminal or attendance terminal.

Note: After changing the device type, the device will delete all the data and restart, and some functions will be adjusted accordingly.

8.6 Security Settings

Select **Security Settings** on the **System** interface to go to the Security settings.



Function Description

Function Name	Description
Standalone Communication	To avoid being unable to use when the device is offline, you can download the software on your computer in advance for offline use.
SSH	SSH is used to enter the background of the device for maintenance.
User ID Masking	When enabled, and then the user is successfully compared and verified, the User ID in the displayed verification result will be replaced with an * to achieve secure protection of sensitive private data.
Display Verification Name	Set whether to display the username in the verification result interface.
Display Verification Mode	Set whether to display the verification mode in the verification result

	interface.
Save Photo as Template	After disable this function, face re-registration is required after an algorithm upgrade.

8.7 USB Upgrade

The device's firmware program can be upgraded with the upgrade file in a USB drive. Before conducting this operation, please ensure that the USB drive contains the correct upgrade file and is properly inserted into the device.

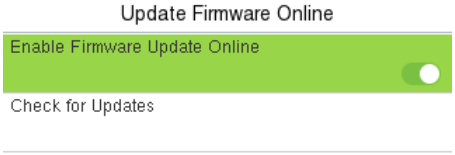
If no USB disk is inserted in, the system gives the following prompt after you tap USB Upgrade on the System interface.

Select **USB Upgrade** on the **System** interface.

Note: If upgrade file is needed, please contact our technical support. Firmware upgrade is not recommenced under normal circumstances.

8.8 Update Firmware Online

Select **Update Firmware Online** on the System interface.



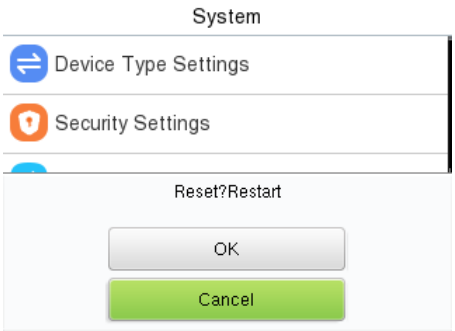
The Firmware Update Online function is enabled by default. Tap **Check for Updates** it may have the following 3 scenarios:

- If the query fails, the interface will prompt "Query failed".
- If the firmware version of the device is latest, it will prompt that the current firmware version is already the latest.
- If the firmware version of the device is not the latest, the version number and change log of the latest version will be displayed. Users can choose whether to update to the latest firmware version.

8.9 Factory Reset

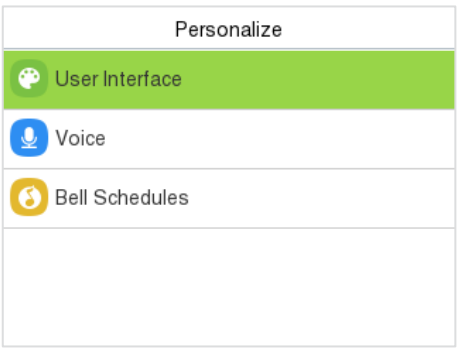
The Factory Reset function restores the device settings such as communication settings and system settings, to the default factory settings (this function does not clear registered user data).

Select **Reset** on the **System** interface and then tap **OK** to restore the default factory settings.

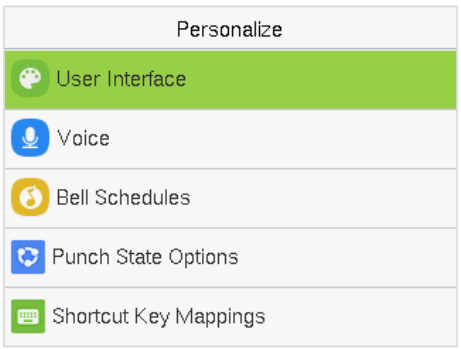


9 Personalize Settings

When the device is on the initial interface, press **M/OK** and select **Personalize** to customize the interface settings, voice, bell, punch state options, and shortcut key mappings.



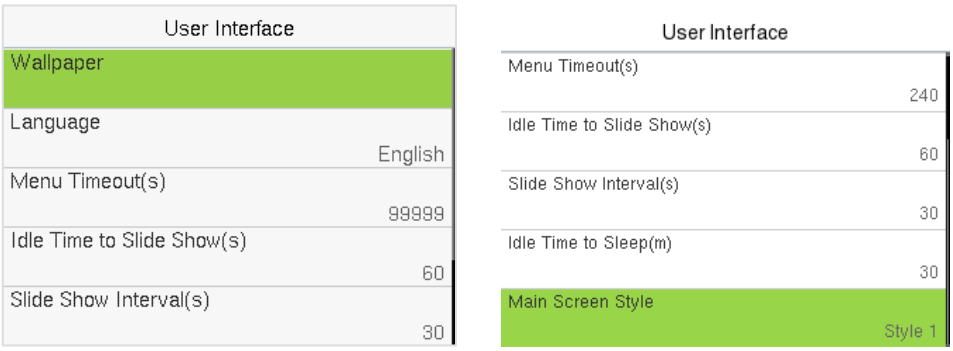
A&C Terminal



T&A Terminal

9.1 User Interface

Select **User Interface** on the **Personalize** interface to customize the display style of the main interface.

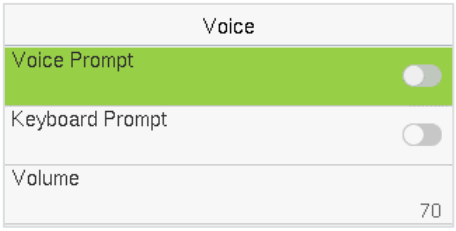


Function Description

Function Name	Description
Wallpaper	It helps to select the main screen wallpaper according to the user preference.
Language	It helps to select the language of the device.
Menu Timeout (s)	When there is no operation, and the time exceeds the set value, the device automatically goes back to the initial interface. The function can either be disabled or set the required value between 60 and 99999 seconds.
Idle Time to Slide Show (s)	When there is no operation, and the time exceeds the set value, a slide show is displayed. The function can be disabled, or you may set the value between 3 and 999 seconds.
Slide Show Interval (s)	It is the time interval in switching between different slide show pictures. The function can be disabled, or you may set the interval between 3 and 999 seconds.
Idle Time to Sleep (m)	If the sleep mode is activated, and when there is no operation in the device, then the device will enter standby mode. This function can be disabled or set a value within 1 to 999 minutes.
Main Screen Style	The style of the main screen can be selected according to the user preference.

9.2 Voice

Select **Voice** on the **Personalize** interface to configure the voice settings.

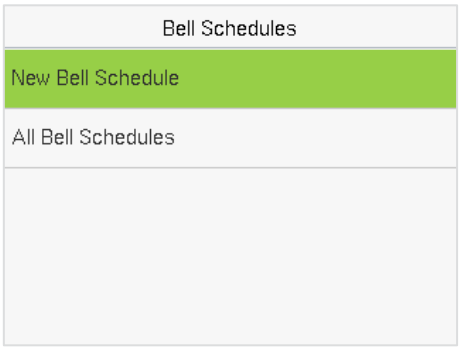


Function Description

Function Name	Description
Voice Prompt	Toggle to enable or disable the voice prompts during function operations.
Keyboard Prompt	Toggle to enable or disable the keypad sounds.
Volume	Adjust the volume of the device which can be set between 0 to 100.

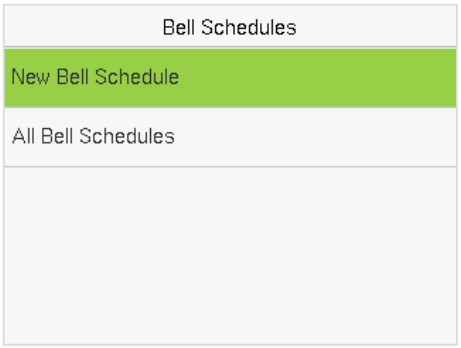
9.3 Bell Schedules

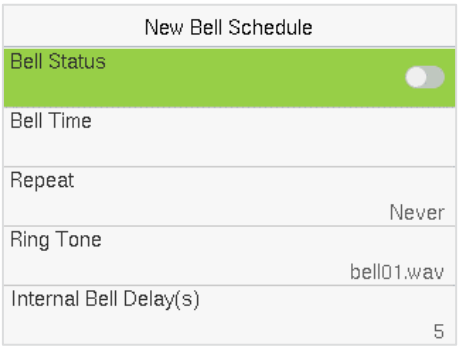
Select **Bell Schedules** on the **Personalize** interface to configure the Bell settings.



- **New Bell Schedule:**

Tap **New Bell Schedule** on the **Bell Schedule** interface to add a new bell schedule.





Function Description

Function Name	Description
Bell Status	Toggle to enable or disable the bell status.
Bell Time	Once the required time is set, the device automatically triggers to ring the bell during that time.
Repeat	Set the required number of counts to repeat the scheduled bell.
Ring Tone	Select a ringtone.
Internal Bell Delay(s)	Set the replay time of the internal bell. Valid values range from 1 to 999 seconds.

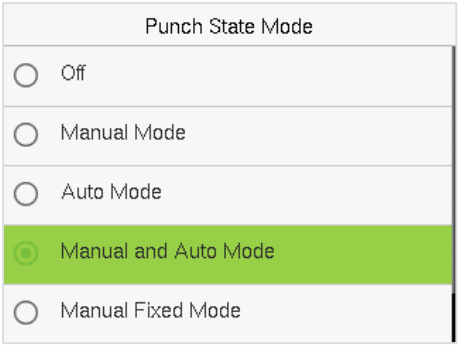
- **All Bell Schedules:**
  Once the bell is scheduled, on the **Bell Schedules** interface, tap **All Bell Schedules** to view the newly scheduled bell.

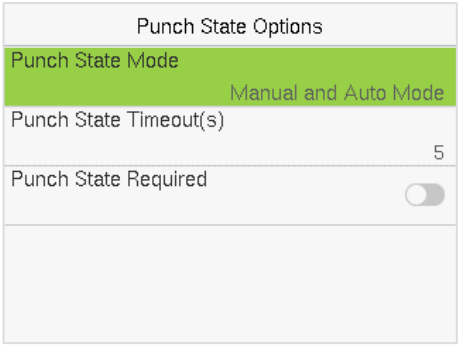
- **Edit the Scheduled Bell:**
  On the **All Bell Schedules** interface, tap on the required bell schedule, and tap **Edit** to edit the selected bell schedule. The editing method is the same as the operations of adding a new bell schedule.

- **Delete a Bell Schedules:**
  On the **All Bell Schedules** interface, tap the required bell schedule, tap **Delete**, and then tap **Yes** to delete the selected bell.

9.4 Punch States Options

Select **Punch States Options** on the **Personalize** interface to configure the punch state settings.





Function Description

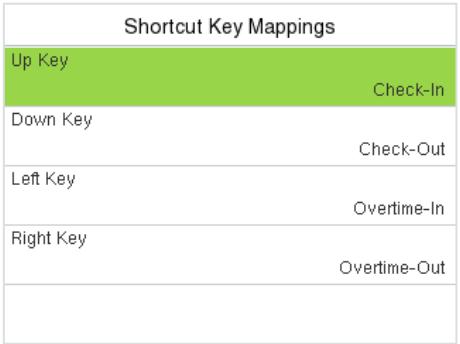
Function Name	Description
Punch State Mode	**Off:** Disable the punch state function. Therefore, the punch state key set under Shortcut Key Mappings menu will become invalid.

	Manual Mode: Switch the punch state key manually, and the punch state key will disappear after Punch State Timeout. **Auto Mode:** The punch state key will automatically switch to a specific punch status according to the predefined time schedule which can be set in the Shortcut Key Mappings. **Manual and Auto Mode:** The main interface will display the auto-switch punch state key. However, the users will still be able to select alternative that is the manual attendance status. After timeout, the manual switching to punch state key will become auto-switch punch state key. **Manual Fixed Mode:** After the punch state key is set manually to a particular punch status, the function will remain unchanged until it is being manually switched again. **Fixed Mode:** Only the manually fixed punch state key will be shown. Users cannot change the status by taping any other keys.
Punch State Timeout(s)	It is the time for which the punch state displays. The value ranges from 5 to 999 seconds.
Punch State Required	Select whether an attendance state needs to be selected after verification. **ON:** Attendance state needs to be selected after verification. **OFF:** Attendance state need not requires to be selected after verification.

9.5 Shortcut Key Mappings

Users may define shortcut keys for attendance status and functional keys which will be defined on the main interface. So, on the main interface, when the shortcut keys are tapped, the corresponding attendance status or the function interface will be displayed directly.

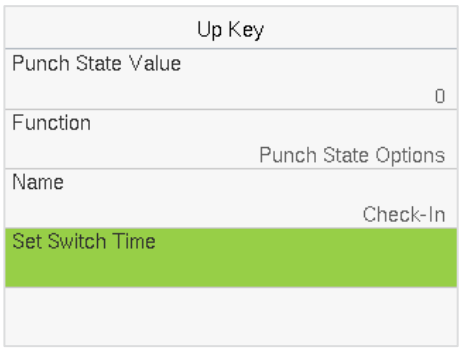
Select **Shortcut Key Mappings** on the **Personalize** interface to set the required shortcut keys.

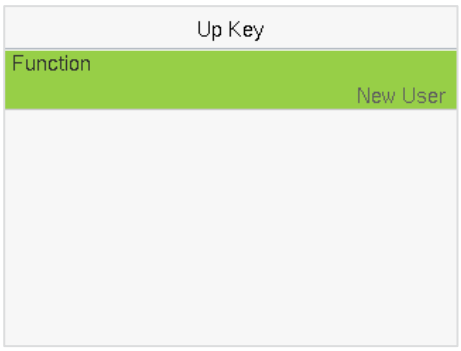


- On the **Shortcut Key Mappings** interface, tap on the required shortcut key to configure the shortcut key settings.
- On the **Shortcut Key (example, "Up Key") interface,** tap **function** to set the functional process of

the shortcut key either as punch state key or function key.

- If the Shortcut key is defined as a function key (such as New user, All users, etc.), the configuration is completed as shown in the image below.

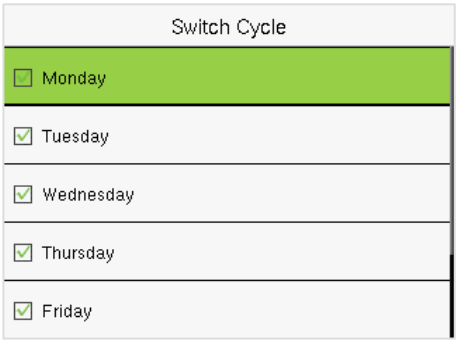


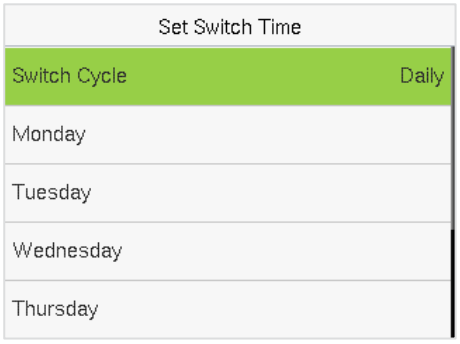


- If the Shortcut key is set as a punch state key (such as check in, check out, etc.), then it is required to set the punch state value (valid value 0 to 250), name.

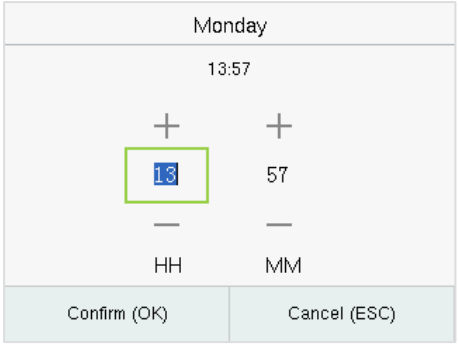
➢ **Set the Switch Time**

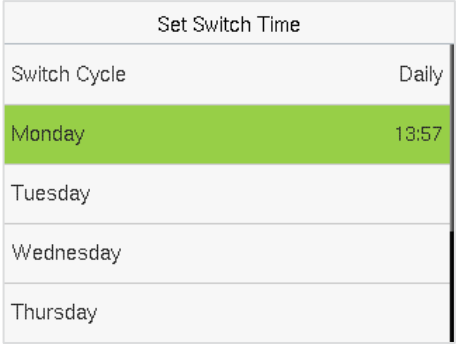
- The switch time is set in accordance with the punch state options.
- When the **Punch State Mode** is set to **Auto Mode**, the switch time should be set.
- On the **Shortcut Key** interface, tap **Set Switch Time** to set the switch time.
- On the **Switch Cycle** interface, select the switch cycle (Monday, Tuesday, etc.) as shown in the image below.





- Once the Switch cycle is selected, set the switch time for each day, and tap **OK** to confirm, as shown in the image below.

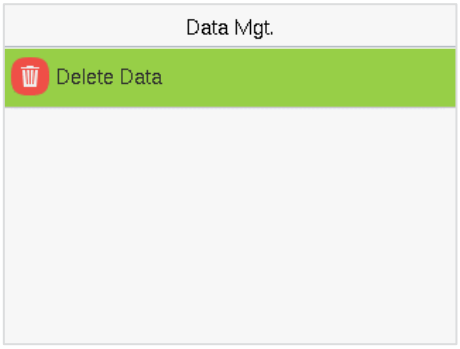




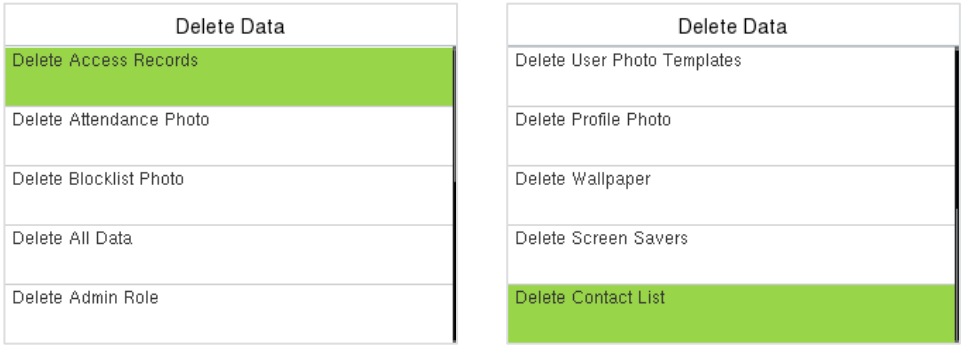
Note: When the function is set to Undefined, the device will not enable the punch state key.

10 Data Management

When the device is on the initial interface, press **M/OK** and select **Data Mgt.** to manage the relevant data in the device.



Select **Delete Data** on the **Data Mgt.** interface to delete the required data.

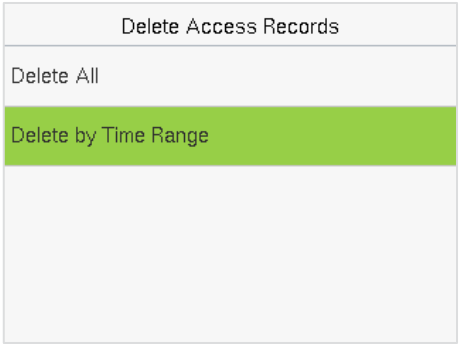


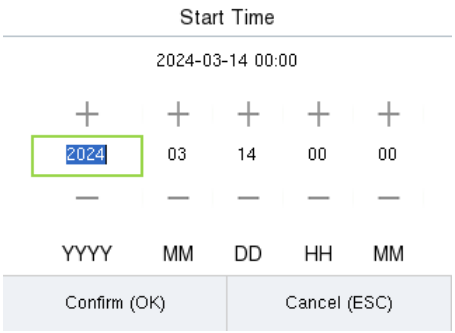
Function Description

Function Name	Description
Delete Access Records / Attendance Data	To delete the access records & attendance data conditionally.
Delete Attendance Photo	To delete attendance photos of designated personnel.
Delete Blocklist Photo	To delete the photos taken during failed verifications.
Delete All Data	To delete the information and access records & attendance data of all registered users.
Delete Admin Role	To remove all the administrator privileges.
Delete Access Control	To delete all the access data.

Delete User Photo Templates	To delete user photo templates in the device. When deleting template photos, there is a risk reminder: “Face re-registration is required after an algorithm upgrade.”
Delete Profile Photo	To delete all the profile photos on the device.
Delete Wallpaper	To delete all the wallpapers in the device.
Delete Screen Savers	To delete all the screen savers in the device.
Delete Contact List	To delete all contact list of video intercom in the device.

The user may select **Delete All** or **Delete by Time Range** when deleting the access records / attendance data, to **Delete by Time Range**, you need to set a specific time range to delete all data within a specific period.

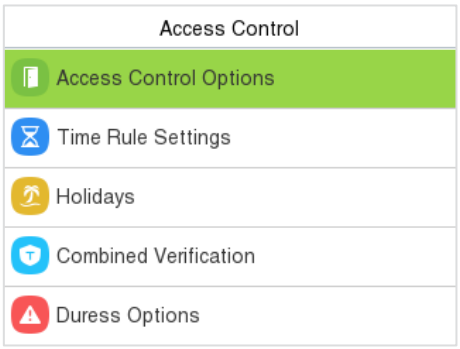




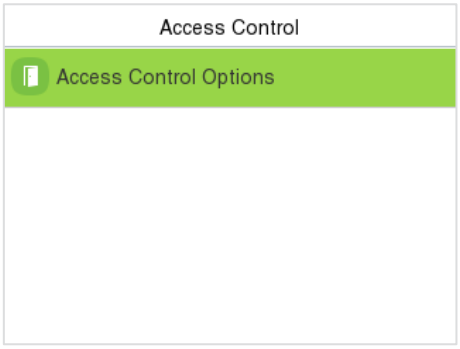
11 Access Control

When the device is on the initial interface, press **M/OK** and select **Access Control** to set the schedule of the door opening, locks control and to configure other parameters settings related to access control.

Access Control Terminal:



Time Attendance Terminal:



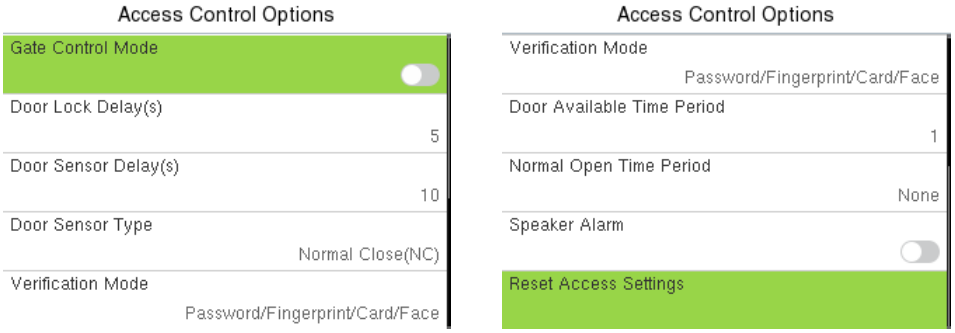
To get access, the registered user must meet the following conditions:

1. The relevant door's current unlock time should be within any valid time zone of the user's time period.
2. The corresponding user's group must be already set in the door unlock combination (and if there are other groups, being set in the same access combo, then the verification of those group's members is also required to unlock the door).
3. In default settings, new users are allocated into the first group with the default group time zone, where the access combo is "1" and is set in unlock state by default.

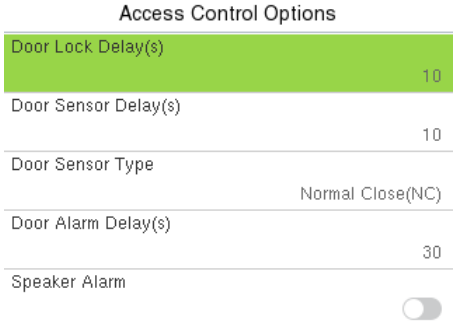
11.1Access Control Options

Select **Access Control Options** on the **Access Control** interface to set the parameters of the control lock of the terminal and related equipment.

Access Control Terminal:



Time Attendance Terminal:



Function Description of Access Control Terminal:

Function Name	Description
Gate Control Mode	It toggles between **ON** or **OFF** switch to get into gate control mode or not. When set to **ON**, the interface removes the Door Lock Delay, Door Sensor Delay, and Door Sensor Type options.
Door Lock Delay (s)	The length of time that the device controls the electric lock to be in unlock state. Valid value: 1~99 seconds.
Door Sensor Delay (s)	If the door is not locked and is left open for a certain duration (Door Sensor Delay), an alarm will be triggered. The valid value of Door Sensor Delay ranges from 1 to 255 seconds.
Door Sensor Type	There are three Sensor types: **None**, **Normal Open**, and **Normal Closed**. **None:** It means the door sensor is not in use. **Normally Open:** It means the door is always left open 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 Password/Fingerprint/Card/Face, Fingerprint Only, User ID Only, Password, Card Only and so on.
Door Available Time Period	It sets the timing for the door so that the door is accessible only during that period.
Normal Open Time Period	It is the scheduled time-period for "Normal Open" mode so that the door is always open during this period.
Speaker Alarm	It transmits a sound alarm or disassembly alarm from the local. When the door is closed or the verification is successful, the system cancels the alarm from the local.

Reset Access Setting	The access control reset parameters include door lock delay, door sensor delay, door sensor type, verification mode, door available time period, normal open time period, and alarm. However, erased access control data in Data Mgt. is excluded.

Function Description of Time Attendance Terminal:

Function Name	Description
Door Lock Delay (s)	The length of time that the device controls the electric lock to be in unlock state. Valid value: 0 to 10 seconds.
Door Sensor Delay (s)	If the door is not locked and is left open for a certain duration (Door Sensor Delay), an alarm will be triggered. The valid value of Door Sensor Delay ranges from 1 to 255 seconds.
Door Sensor Type	There are three Sensor types: **None**, **Normal Open**, and **Normal Closed**. **None:** It means the door sensor is not in use. **Normally Open (NO):** It means the door is always left open when electric power is on. **Normally Closed (NC):** It means the door is always left closed when electric power is on.
Door Alarm Delay(s)	When the state of the door sensor is inconsistent with that of the door sensor type, alarm will be triggered after a time period; this time period is the Door Alarm Delay (the value ranges from 1 to 999 seconds).
Speaker Alarm	It transmits a sound alarm or disassembly alarm from the local. When the door is closed or the verification is successful, the system cancels the alarm from the local.

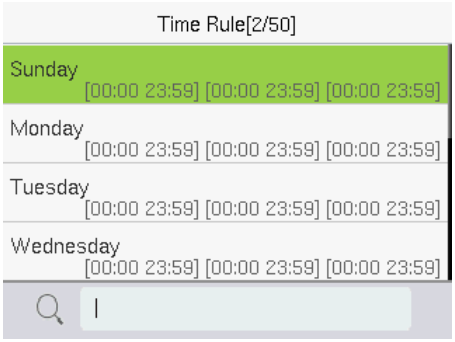
11.2 Time Rule Settings

Select **Time Rule Settings** on the **Access Control** interface to configure the time settings.

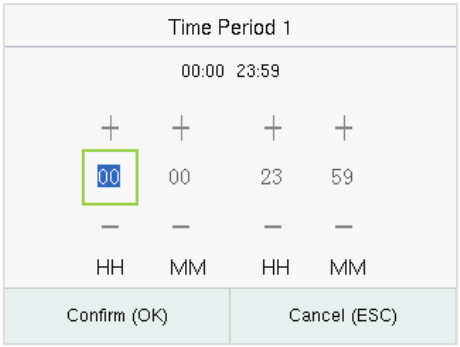
- The entire system can define up to 50 Time Rules.
- Each time-rule represents **10** Time Zones, i.e., **1** week and **3** holidays, and each time zone is a standard 24 hour period per day and the user can only verify within the valid time-period.
- One can set a maximum of 3 time periods for every time zone. The relationship among these time-periods is "**OR**". Thus, when the verification time falls in any one of these time-periods, the verification is valid.
- The Time Zone format of each time-period is **HH MM-HH MM**, which is accurate to minutes

according to the 24-hour clock.

Tap the grey box to search the required Time Rule and specify the required Time Rule number (maximum up to 50 rules).



On the selected Time Rule number interface, tap on the required day (that is Monday, Tuesday, etc.) to set the time.



Specify the start and the end time, and then press **M/OK**.

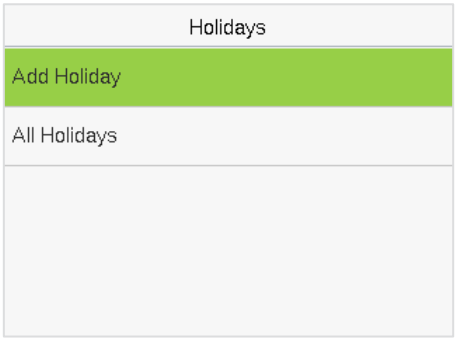
Note:

1. The door is inaccessible for the whole day when the End Time occurs before the Start Time (such as **23:57 to 23:56**).
2. It is the time interval for valid access when the End Time occurs after the Start Time (such as **08:00 to 23:59**).
3. The door is accessible for the whole day when the End Time occurs after the Start Time (such that Start Time is **00:00** and End Time is **23:59**).
4. The default Time Zone 1 indicates that the door is open all day long.

11.3 Holidays

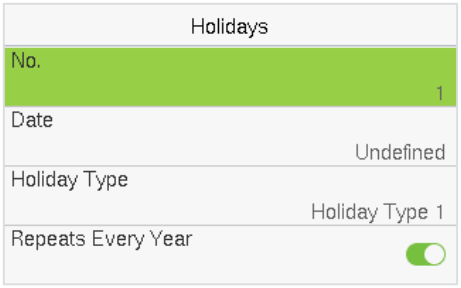
When there is a holiday, you may need a different access time; however, altering everyone's access time one by one is extremely time-consuming. Thus, a holiday access time that applies to all workers can be set, and the user will be able to open the door during the holidays.

Select **Holidays** on the **Access Control** interface to set the holiday access.



- **Add a New Holiday:**

  Tap **Add Holiday** on the **Holidays** interface and set the holiday parameters.



- **Edit a Holiday:**

  On the **Holidays** interface, select a holiday item to be modified. Tap **Edit** to modify holiday parameters.

- **Delete a Holiday:**

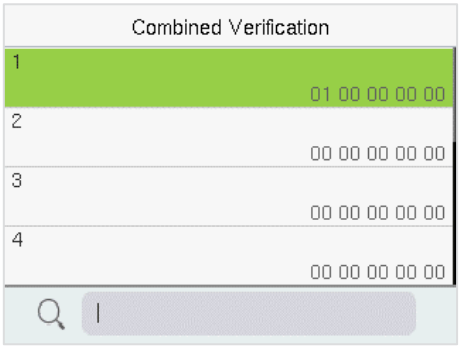
  On the **Holidays** interface, select a holiday item to be deleted and tap **Delete**. Press **M/OK** to confirm the deletion. After deletion, this holiday does not display on the **All Holidays** interface.

11.4 Combined Verification

Access groups are arranged into different door-unlocking combinations to achieve multiple verifications and strengthen security.

In a door-unlocking combination, the range of the combined number N is $\mathbf{0 \leq N \leq 5}$ and the number of members N may all belong to one access group or may belong to five different access groups.

Select **Combined Verification** on the **Access Control** interface to configure the combined verification setting.



On the combined verification interface, tap the Door-unlock combination to be set, and press the **up** and **down** keys to input the combination number, and then press **M/OK**.

For Example:

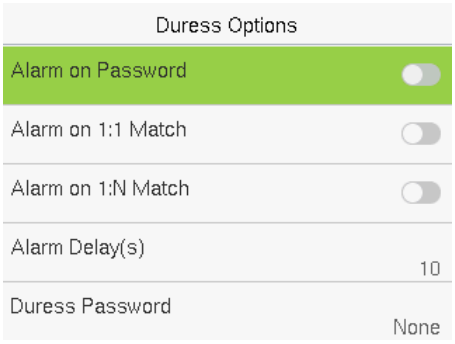
- If the **Door-unlock combination 1** is set as (**01 03 05 06 08**). It indicates that the unlock combination 1 consists of 5 people and all the 5 individuals are from 5 groups, namely, AC Group 1, AC Group 3, AC Group 5, AC Group 6, and AC Group 8, respectively.
- If the **Door-unlock combination 2** is set as (**02 02 04 04 07**). It indicates that the unlock combination 2 consists of 5 people; the first two are from AC Group 2, the next two are from AC Group 4, and the last person is from AC Group 7.
- If the **Door-unlock combination 3** is set as (**09 09 09 09 09**). It indicates that there are 5 people in this combination; all of which are from AC Group 9.
- If the **Door-unlock combination 4** is set as (**03 05 08 00 00**). It indicates that the unlock combination 4 consists of only three people. The first person is from AC Group 3, the second person is from AC Group 5, and the third person is from AC Group 8.

Note: To delete the door-unlock combination, set all Door-unlock combinations to 0.

11.5 Duress Options Settings

Once a user activates the duress verification function with a specific authentication method(s), and when he/she is under coercion and authenticates using duress verification, the device unlocks the door as usual. At the same time, a signal is sent to activate the alarm as well.

On the **Access Control** interface, select **Duress Options** to configure the duress settings.



Function Description:

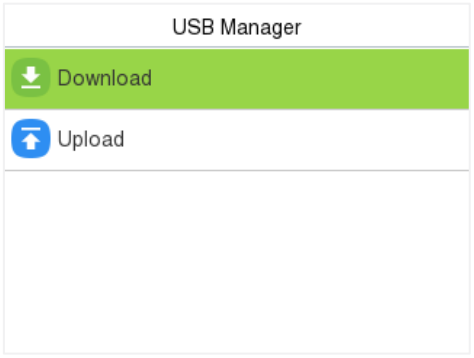
Function Name	Description
Alarm on Password	When a user uses the password verification method, an alarm signal will be generated, otherwise there will be no alarm signal.
Alarm on 1:1 Match	When a user uses the 1:1 verification method, an alarm signal will be generated, otherwise there will be no alarm signal.
Alarm on 1:N Match	When a user uses the 1:N verification method, an alarm signal will be generated, otherwise there will be no alarm signal.
Alarm Delay (s)	Alarm signal will not be transmitted until the alarm delay time is elapsed. The value ranges from 1 to 999 seconds.
Duress Password	Set the 6-digit duress password. When the user enters this duress password for verification, an alarm signal will be generated.

12 USB Manager

You can import user information, access data and other data from a USB drive to computer or other devices.

Before uploading/downloading data from/to the USB disk, insert the USB disk into the USB slot first.

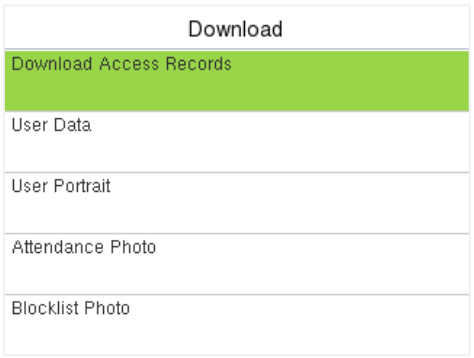
Select **USB Manager** on the main menu interface.



Note: Only FAT32 format is supported when downloading data using USB disk.

12.1 USB Download

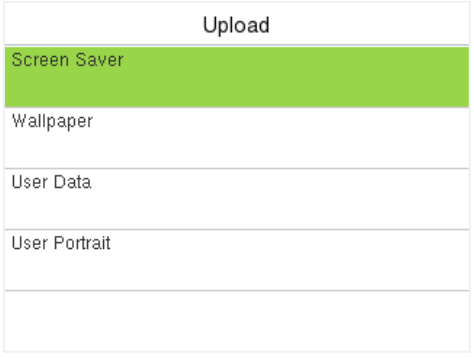
On the **USB Manager** interface, tap **Download**.



Menu	Description
Download Access Records	To download access record in specified time period into USB disk.
User Data	To download all user information from the device into USB disk.
User Portrait	To download all user portraits from the device into a USB disk.
Attendance Photo	To download all attendance photos from the device into USB disk.
Blocklist Photo	To download all blocklisted photos (photos taken after failed verifications) from the device into USB disk.

12.2USB Upload

On the **USB Manager** interface, tap **Upload**.



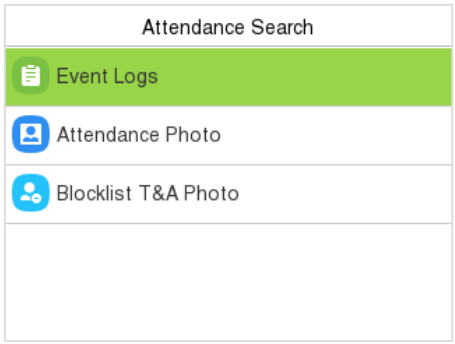
Menu	Description
Screen Save	To upload all screen savers from USB disk into the device. You can choose Upload selected photo or Upload all photos. The images will be displayed on the device's main interface after upload.

Wallpaper	To upload all wallpapers from USB disk into the device. You can choose Upload selected photo or Upload all photos. The images will be displayed on the screen after upload.
User Data	To upload all the user information from USB disk into the device.
User Portrait	To upload all user portraits from USB disk into the device.

13 Attendance Search

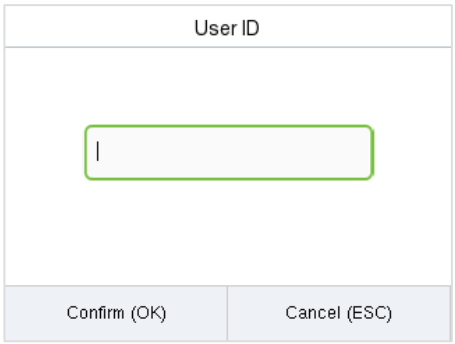
Once the identity of a user is verified, the access record is saved in the device. This function enables users to check their event logs.

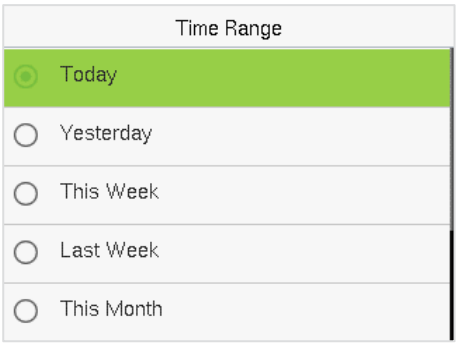
When the device is on the initial interface, press **M/OK** and select **Attendance Search** to search for the required event Logs.



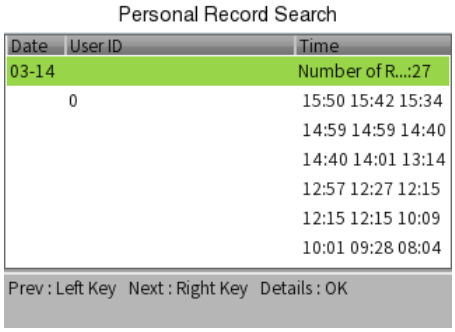
The process of searching for attendance and blocklist photos is similar to that of searching for event logs. The following is an example of searching for attendance record.

On the **Attendance Search** interface, select **Event Logs** to search for the required record.

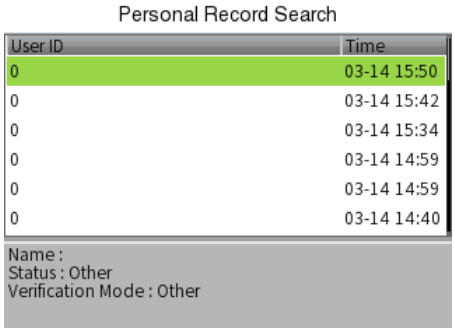




1. Enter the user ID to be searched and press **M/OK**. If you want to search for records of all users, press **M/OK** without entering any user ID.
2. Select the time range in which the records need to be searched.



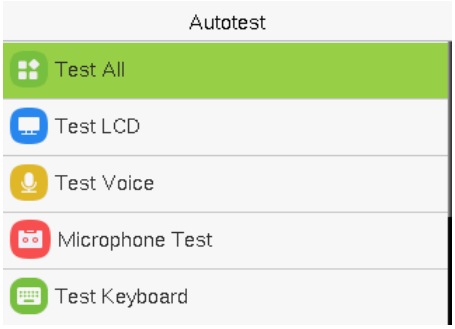
3. Once the record search completes. Tap the record highlighted in green to view its details.



4. The figure shows the details of the selected record.

14 Autotest

When the device is on the initial interface, press **M/OK** and select **Autotest**, it enables the system to automatically test whether the functions of various modules are working normally, including the LCD, Voice, Microphone, Keyboard, Fingerprint, Camera and Real-Time Clock (RTC).



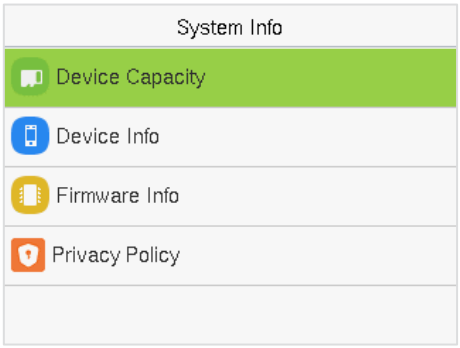
Function Description

Function Name	Description
Test All	To automatically test whether the LCD, Voice, Microphone, keyboard, Fingerprint, Camera and Real-Time Clock (RTC) are normal.
Test LCD	To automatically test the display effect of LCD screen by displaying full-color, pure white, and pure black to check whether the screen displays colors normally.
Test Voice	To automatically test whether the audio files stored in the device are

	complete and the voice quality is good.
Microphone test	To test if the microphone is working properly by speaking into the microphone.
Test Keyboard	The terminal tests whether every key on the keyboard works normally. Press any key on the **Test Keyboard** interface to check whether the pressed key matches the key displayed on the screen. The keys are displayed as dark grey before and turn green after pressed. Press **ESC** to exit the test.
Test Fingerprint Sensor	To test the fingerprint sensor by pressing a finger on the scanner to check if the acquired fingerprint image is clear. When you are pressing a finger on the scanner, the fingerprint image will display on the screen.
Cam Test	To test if the camera functions properly. (Same as "Test Face")
Test Clock RTC	To test the RTC. The device tests whether the clock works normally and accurately with a stopwatch. Press **M/OK** to start counting and press it again to stop counting.

15 System Information

When the device is on the initial interface, press **M/OK** and select **System Info** to view the storage status, version information of the device, firmware information and privacy policy.



Function Description

Function Name	Description
Device Capacity	Displays the current device's user storage, face, fingerprint, card and password storage, administrators, records, attendance, blocklist and profile photos.
Device Info	Displays the device's name, serial number, MAC address, Fingerprint algorithm, Face algorithm, Platform information, MCU Version and Manufacturer.
Firmware Info	Displays the firmware version and other version information of the

	device.
Privacy Policy	Display the device's privacy policy.

Appendix

Requirements of Live Collection and Registration of Visible Light Face Templates

1) It is recommended to perform registration in an indoor environment with an appropriate light source without underexposure or overexposure.
2) Do not place the device towards outdoor light sources like door or window or other harsh light sources.
3) Dark-color apparels, different from the background color is recommended for registration.
4) Please expose your face template and forehead properly and do not cover your face template and eyebrows with your hair.
5) It is recommended to show a plain facial expression. (A smile is acceptable, but do not close your eyes, or incline your head to any orientation).
6) Two templates are required for a person with eyeglasses, one template with eyeglasses and the other without the eyeglasses.
7) Do not wear accessories like a scarf or mask that may cover your mouth or chin.
8) Please face template right towards the capturing device, and locate your face template in the template capturing area as shown in the template below.
9) Do not include more than one face template in the capturing area.
10) A distance of 50cm to 80cm is recommended for capturing the template. (The distance is adjustable, subject to body height).

Requirements for Visible Light Digital Face Template Data

The digital photo should be straight-edged, colored, half-portrayed with only one person, and the person should be uncharted and in casuals. Persons who wear eyeglasses should remain to put on eyeglasses for getting photo captured.

- **Eye distance**

200 pixels or above are recommended with no less than 115 pixels of distance.

- **Facial expression**

Neutral face template or smile with eyes naturally open are recommended.

- **Gesture and angel**

Horizontal rotating angle should not exceed ±10°, elevation should not exceed ±10°, and depression angle should not exceed ±10°.

- **Accessories**

Masks or colored eyeglasses are not allowed. The frame of the eyeglasses should not cover eyes and should not reflect light. For persons with thick eyeglasses frame, it is recommended to capture two templates, one with eyeglasses and the other one without the eyeglasses.

- **Face template**

Complete face template with clear contour, real scale, evenly distributed light, and no shadow.

- **Template format**

Should be in BMP, JPG or JPEG.

- **Data requirement**

Should comply with the following requirements:

1) White background with dark-colored apparel.

2）24bit true color mode.

3）JPG format compressed template with not more than 20kb size.

4）Resolution should be between 358 x 441 to 1080 x 1920.

5）The vertical scale of head and body should be in a ratio of 2:1.

6）The photo should include the captured person’s shoulders at the same horizontal level.

7）The captured person’s eyes should be open and with clearly seen iris.

8）Neutral face template or smile is preferred, showing teeth is not preferred.

9）The captured person should be clearly visible, natural in color, no harsh shadow or light spot or reflection in face template or background. The contrast and lightness level should be appropriate.

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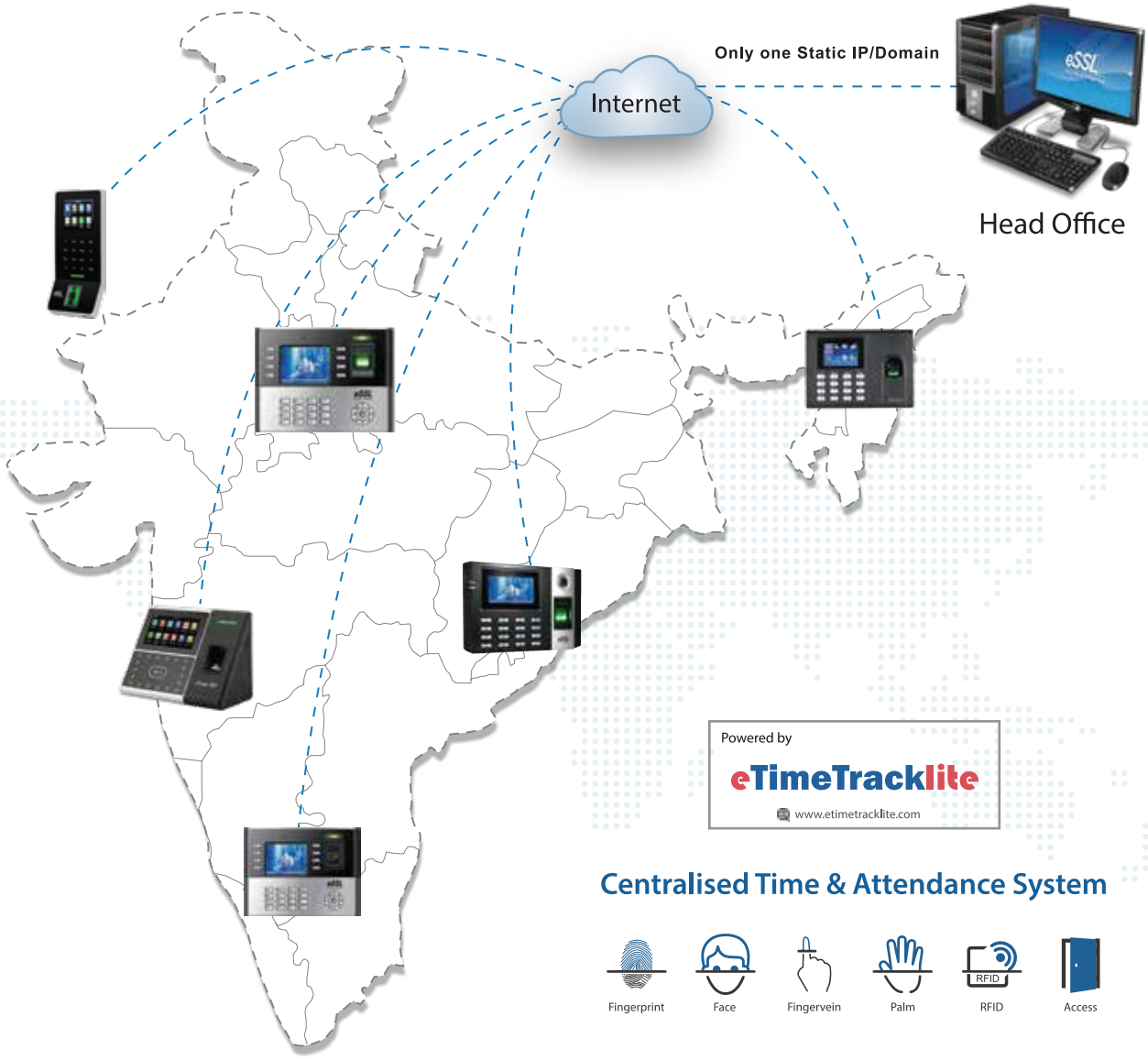

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