User Manual

SenseFace T1 & SenseFace T2

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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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It is an essential pre-requisite for the satisfactory operation and maintenance that the operating and maintenance personnel are fully familiar with the design and that the said personnel have received thorough training in operating and maintaining the machine/unit/equipment. It is further essential for the safe operation of the machine/unit/equipment that personnel has read, understood and followed the safety instructions contained in the manual.

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The product will be updated from time to time without prior notice. The latest operation procedures and relevant documents are available on http://www.zkteco.com.

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

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To know more about our global branches, visit www.zkteco.com.

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 template-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 **SenseFace T1 & SenseFace T2**.

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.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	**Description**
Bold font	Used to identify software interface template names e.g. **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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Data Security Statement

ZKTeco, as a smart product supplier, may also need to know and collect some of your personal information to better assist you in using ZKTeco's goods and services, and will treat your privacy carefully by developing a Privacy Policy.

Please read and understand completely all the privacy protection policy regulations and key points that appear on the device before using ZKTeco products.

As a product user, you must comply with applicable laws and regulations related to personal data protection when collecting, storing, and using personal data, including but not limited to taking protective measures for personal data, such as performing reasonable rights management for devices, strengthening the physical security of device application scenarios, and so on.

Safety Measures

The following precautions are to keep the user's safety and prevent any damage. Please read carefully before installation.

1. **Read, follow, and retain instructions** - All safety and operational instructions must be properly read and followed before bringing the device into service.
2. **Do not ignore warnings** - Adhere to all warnings on the unit and in the operating instructions.
3. **Accessories** - Use only manufacturer-recommended or product-sold accessories. Please do not use any other components other than manufacturer suggested materials.
4. **Precautions for the installation** – Do not place this device on an unstable stand or frame. It may fall and cause serious injury to persons and damage to the device.
5. **Service** - Do not try to service this unit yourself. Opening or removing covers may expose you to hazardous voltages or other hazards.
6. **Damage requiring service** - Disconnect the system from the main AC or DC power source and refer service personnel under the following conditions:
   - When cord or connection control is affected.
   - When the liquid was spilled, or an item dropped into the system.
   - If the system is exposed to water and/or inclement weather conditions (rain, snow, and more).
   - If the system is not operating normally under operating instructions.

Just change controls defined in operating instructions. Improper adjustment of other controls may result in damage and involve a qualified technician to return the device to normal operation.

7. **Replacement parts** - When replacement parts are required, service technicians must only use replacement parts provided by the supplier. Unauthorized substitutes can lead to the risk of burns, electric shock, or other hazards.
8. **Safety check** - On completion of service or repair work on the unit, ask the service technician to

perform safety checks to ensure proper operation of the unit.

9. **Power sources** - Operate the system only from the label's power source form. If the sort of power supply to use is unclear, call your dealer.
10. **Lightning** – Can install external lightning conductors to protect against electrical storms. It stops power-ups destroying the system.

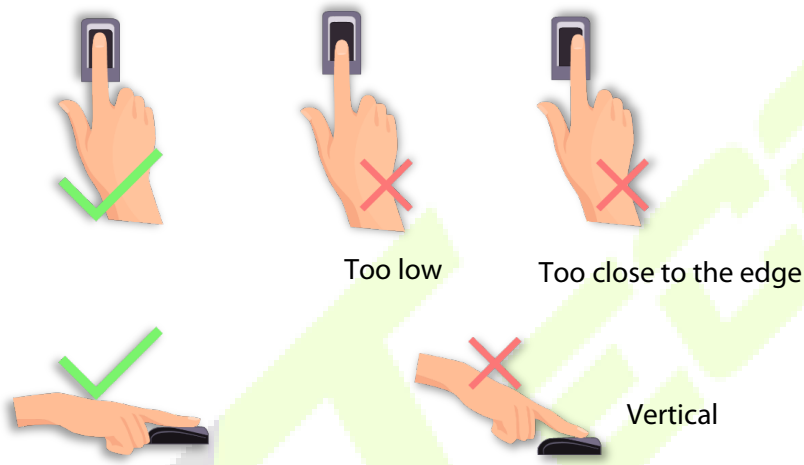
The devices should be installed in areas with limited access.

1 Instruction for Use

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

1.1 Finger Positioning

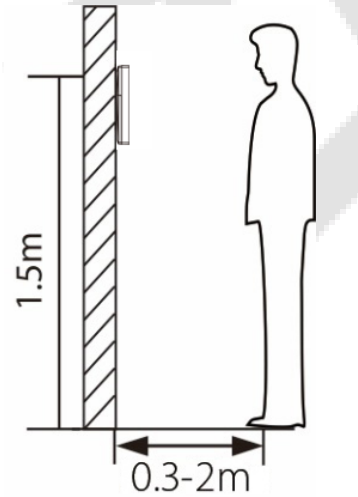
Recommended fingers: The index, middle, or ring fingers are recommended fingers to use, and avoid using the thumb or pinky, as they are difficult to position correctly onto the fingerprint reader.



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.*

1.2 Standing Position, Posture and Facial Expression

- **The recommended distance**



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

➢ **Recommended Standing Posture and Facial Expression:**

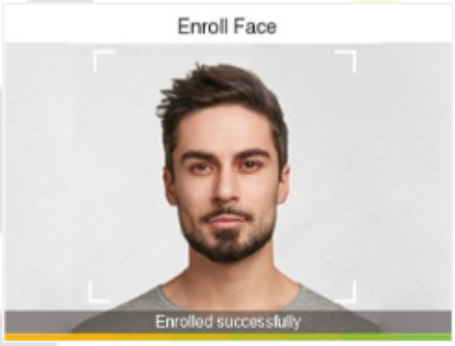
Standing Posture

Facial Expression

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

1.3 Face Template Registration

Please make sure that the face template 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 the image below:



Correct face Registration and Authentication Method

➢ **Recommendation for Registering a Face Template**

- When registering a face template, maintain a distance of 40 cm to 80 cm space between the device and the face template.
- Be careful not to change your facial expression. (Smiling face template, drawn face template, 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.

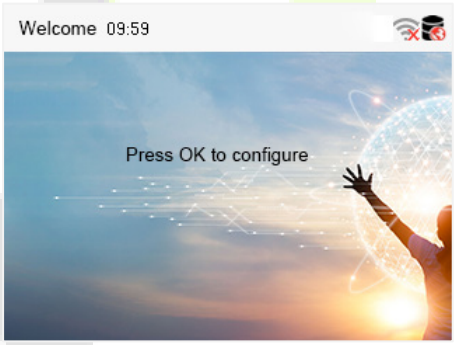
- Do not wear hats, masks, sunglasses, or eyeglasses.
- Ensure only one person is visible in the camera's frame during face template registration.
- It is recommended for a user wearing glasses to register both face templates with and without glasses.

➢ **Recommendation for Authenticating a Face Template**

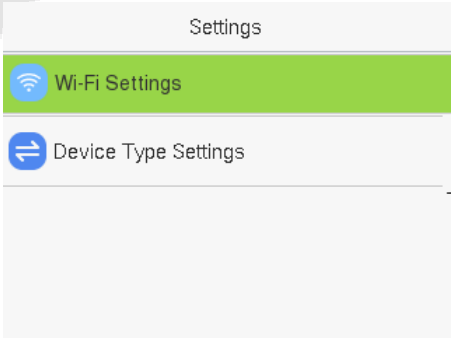
- Ensure that the face template appears inside the guideline displayed on the screen of the device.
- If the glasses have been changed, authentication may fail. If the face template without glasses has been registered, authenticate the face template without glasses further. If the face template with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

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 for the first time, the following standby interface is displayed:



Press **M/OK** to enter the Settings interface:

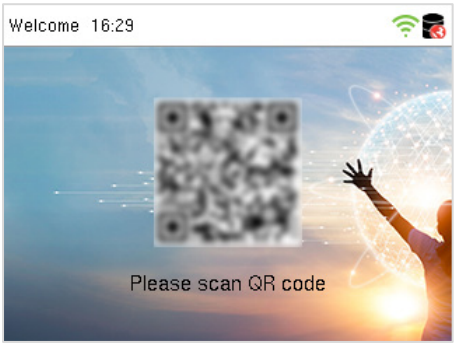


The device type is **BEST Protocol** by default. You can enter **Device Type Settings** to switch the communication protocol as needed.

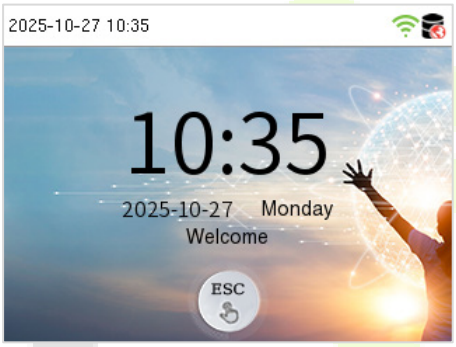
➢ **BEST Protocol:** It is suitable for connecting to ZKBio Zlink.

➢ **PUSH Protocol:** It is suitable for connecting to ZKBio CVAccess.

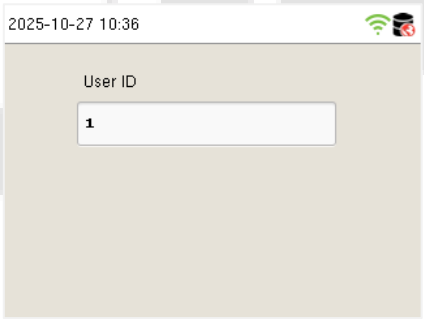
Enter **Wi-Fi Settings** to configure the network. After setting successfully, the device will pop up a QR code interface for scanning.

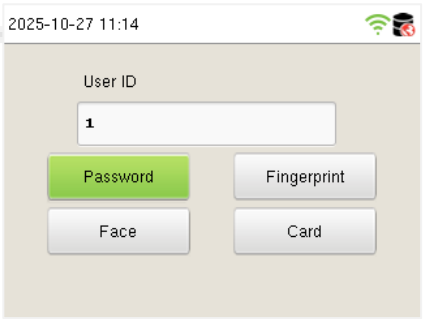


Once the device is connected to ZKBio Zlink, the QR code will disappear. Or the device type is switched to PUSH Protocol, the following standby interface is displayed:

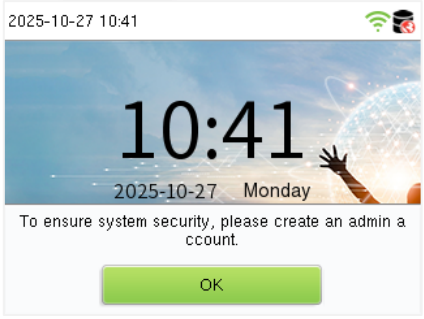


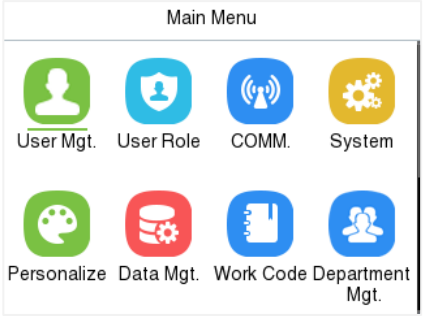
- Enter any number to access the User ID input interface.



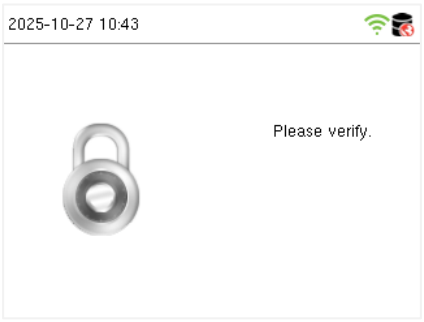


- When there is no Super Administrator set in the device, press **M/OK** to go to the menu.



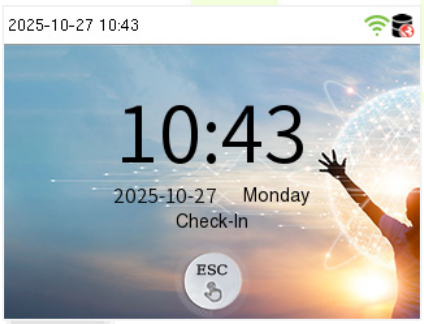


- After adding a Super Administrator on the device, it requires the Super Administrator's verification before opening the menu functions.



***Note**: For the security of the device, it is recommended to register 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."

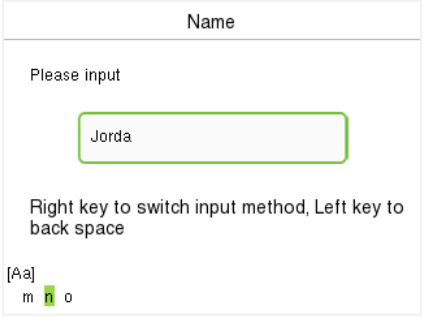


***Note:** The punch state options are only available when the device type is set as PUSH Protocol.*

1.5 T9 Mode

T9 mode allows you to enter the Uppercase, Lowercase, and Special characters in the text input fields. You can enter the alphabets and special characters by pressing one keystroke per letter. Press the < ▶> key in the text box to activate T9 mode.

1. Navigate to the required text field and press **<M/OK>**.



2. Each key on the keypad has a few letters printed above them. For example, pressing 3 can enter D, E, and F. To enter "**F**", press 3 thrice. This is accomplished by comparing the number of keystrokes with the internal syntactical dictionary to determine the letter.
3. Press < ▶ to switch between Uppercase, Lowercase, and Special characters.
4. To add the special character, press the corresponding key once. For example, to enter "@" press 2 once.
5. After the input is complete, press the <**M/OK**> key twice to save.

1.6 Verification Mode

1.6.1 Fingerprint Verification

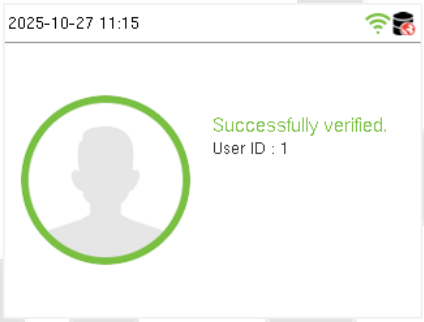
➢ **1: N Fingerprint Verification Mode**

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

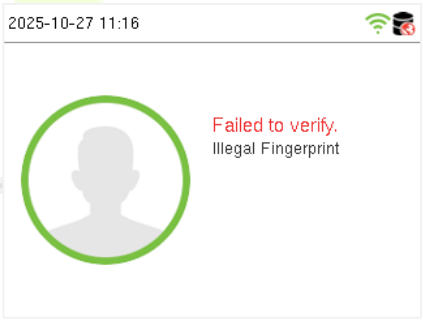
Fingerprint authentication mode is activated when a user places their finger onto the fingerprint scanner.

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

Verification is successful:



Verification is failed:

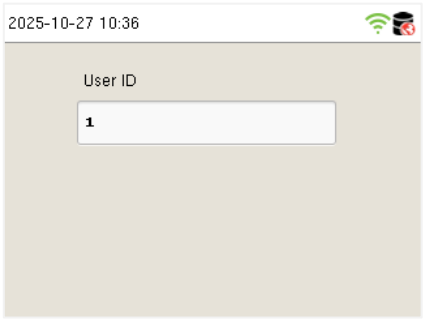


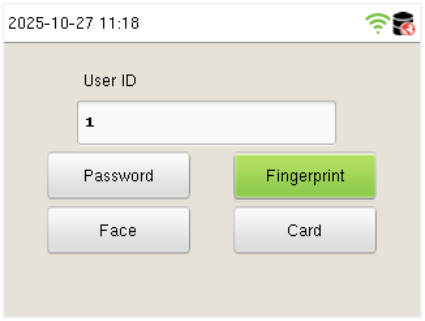
➢ **1: 1 Fingerprint Verification Mode**

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

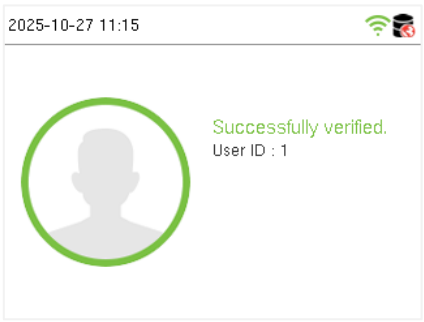
Enter the user ID and press **M/OK**. If the user has registered card, face, and password in addition to the fingerprint, and the verification method is set to Password/Fingerprint/Card★/Face, the following screen will appear. Select **Fingerprint** to enter the 1:1 fingerprint verification mode.



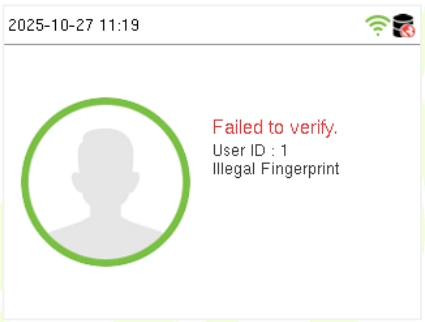


Press the fingerprint to verify.

Verification is successful:



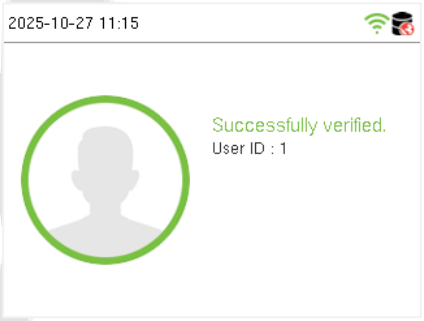
Verification is failed:



1.6.2 Card Verification★

➢ **1:N card verification**

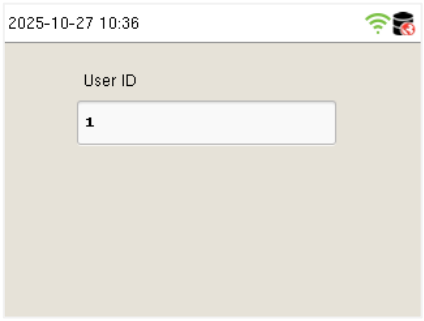
The 1:N card verification mode compares the card number in the card induction area with all the card number data registered in the device; The following screen displays on the card verification:

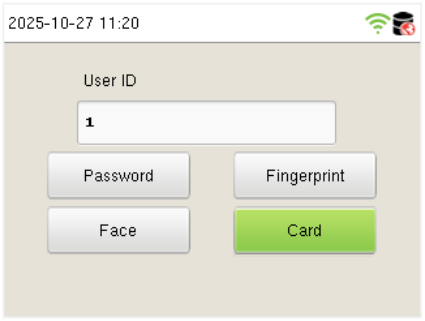


➢ **1:1 Card Verification**

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.

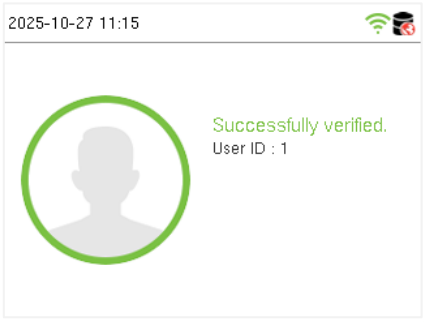
Enter the user ID and press **M/OK**. If the user has registered fingerprint, face, and password in addition to the card, and the verification method is set to Password/Fingerprint/Card/Face, the following screen will appear. Select **Card** to enter the 1:1 card verification mode.



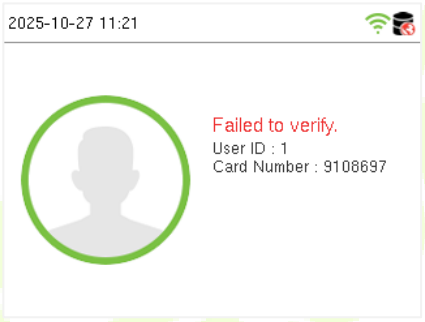


After successful verification, the prompt box displays "**Successfully verified**", as shown below:

Verification is successful:



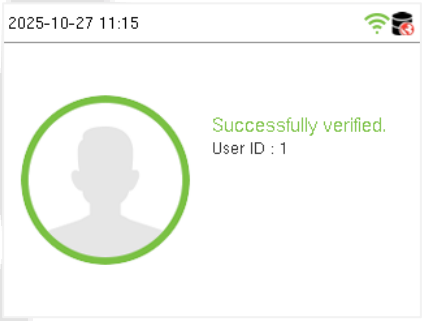
Verification is failed:



1.6.3 Facial Verification

➢ **1:N Facial Verification**

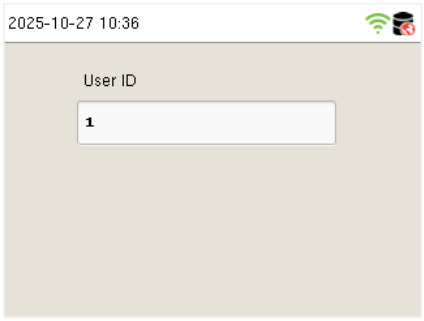
Device compares the currently acquired facial images with all the registered face template data stored in its database. The following is the pop-up prompt box displaying the result of the comparison.

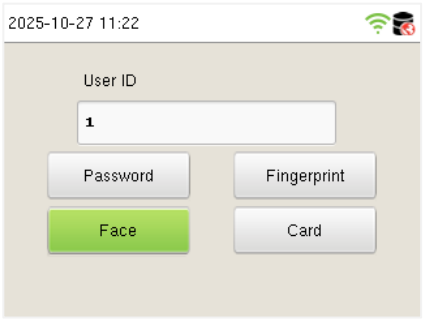


➢ **1:1 Facial Verification**

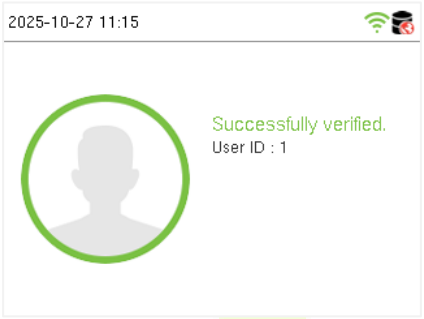
In this verification mode, the device compares the face captured by the camera with the facial template related to the entered user ID.

Enter the user ID and press **M/OK**. If the user has registered fingerprint, card and password 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 1:1 face verification mode.





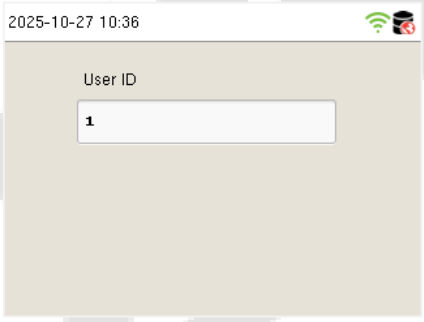
After successful verification, the prompt box displays "**Successfully verified**", as shown below:



1.6.4 Password Verification

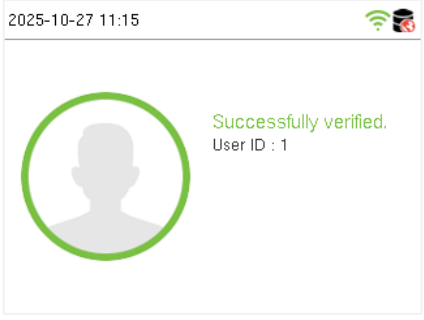
The device compares the entered password with the registered password and User ID.

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

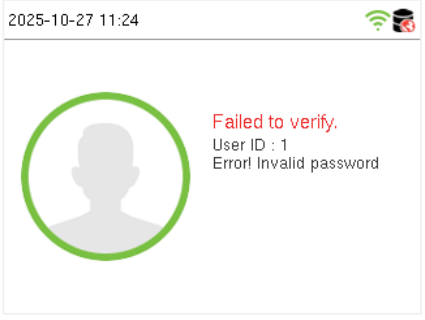


The following screen displays, after inputting a correct password and a wrong password respectively.

Verification is successful:



Verification is failed:

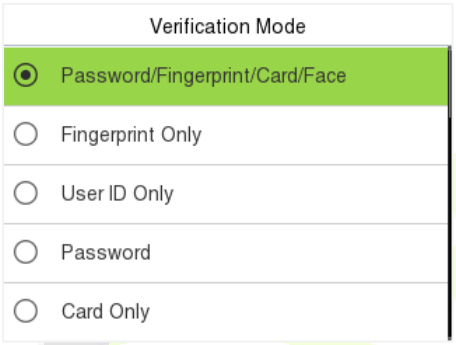


1.6.5 Combined Verification

To increase security, this device offers the option of using multiple forms of verification methods. A total of 21 different verification combinations can be used, as shown 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 template previously stored to that Personnel ID in the Device.



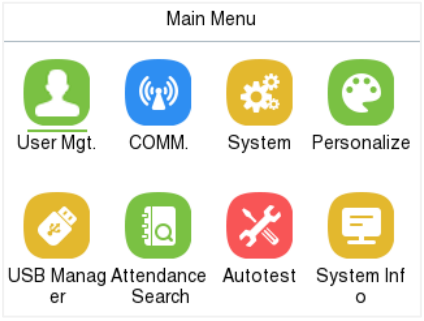
➢ **Procedure to set for Combined Verification Mode:**

- Combined verification requires personnel to register all the different verification method. Otherwise, employees will not be able to successfully verify the combined verification process.
- For instance, when an employee has registered only the data, but the Device verification mode is set as "Face + Password", the employee will not be able to complete the verification process successfully.
- This is because the Device compares the scanned face template of the person with registered verification template (both the Face template and the Password) previously stored to that Personnel ID in the Device.
- But as the employee has registered only the Face template but not the Password, the verification will not get completed and the Device displays "Verification Failed".

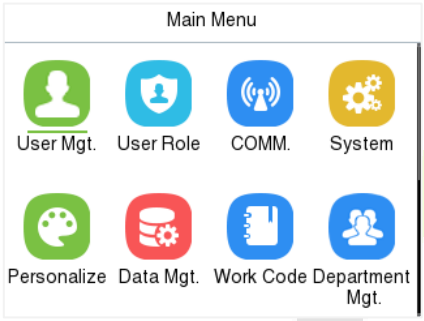
2 Main Menu

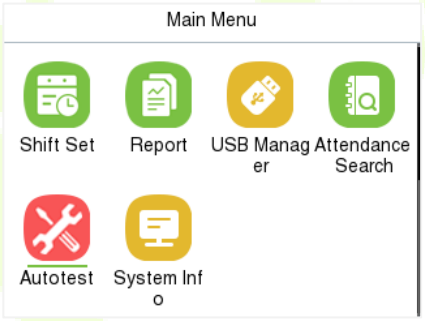
Press **M/OK** to enter the **Main Menu**, the following screen will be displayed:

Note: The menu display may vary depending on the device type (BEST Protocol/ PUSH Protocol).



BEST Protocol



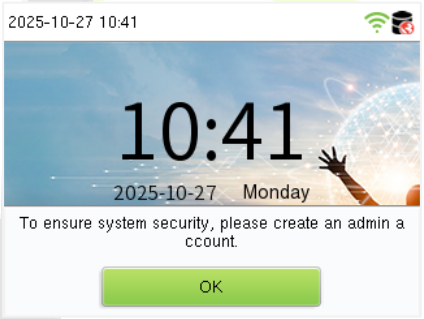


PUSH Protocol

Menu	Descriptions
User Mgt.	To add, edit, view, and delete basic information of a User. (Only support viewing user information when the device type is BEST Protocol.)
User Role	To set the permission scope of the custom role for the users, that is, the rights to operate the system. (Only for PUSH Protocol)
COMM.	To set the relevant parameters of pc connection, wireless network, cloud server and network diagnosis.
System	To set the parameters related to the system, including date time, attendance, face & fingerprint parameters, device type settings, security settings, tap-to-unlock, update firmware online, USB upgrade, and restore to factory.
Personalize	This includes user interface, voice, bell schedules, punch state options and shortcut key mappings settings.
Data Mgt.	To delete all relevant data in the device. (Only for PUSH Protocol)
Work Code	Set different type of work. (Only for PUSH Protocol)
Department Mgt.	Establish the organizational structure of the department, including functions like adding, editing, or deleting the department, and scheduling the department, etc. (Only for PUSH Protocol)

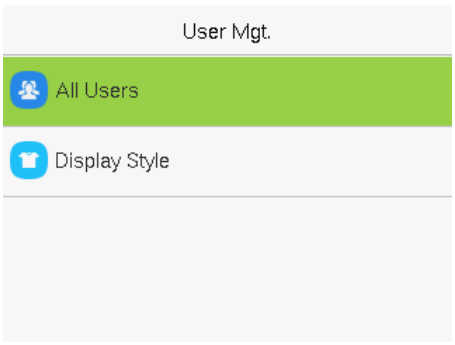
Shift Set	Set attendance rules and the number of shifts to be used, and schedule employees. The device supports up to 24 shifts. (Only for PUSH Protocol)
Report	Use USB flash drive to download the attendance statistics form to check on the computer or download the attendance settings form to set shifts on the computer, assign shifts to employees and then upload the attendance settings form. At this time, the device will give priority to the use of the schedule of the settings form. (Only for PUSH Protocol)
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, keyboard, camera, fingerprint sensor and real-time clock.
System Info	To view data capacity, device and firmware information and privacy policy of the device.

Note: *When users use the product for the first time, they should operate it after setting administrator privileges. Enter* ***User Mgt.*** *to add an administrator or edit user permissions as a super administrator. If the product does not have an administrator setting, the system will show an administrator setting command prompt every time you enter the device menu.*

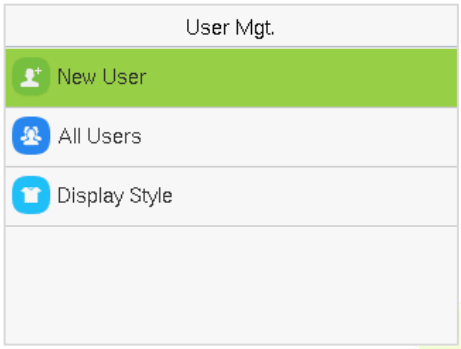


3 User Management

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



BEST Protocol



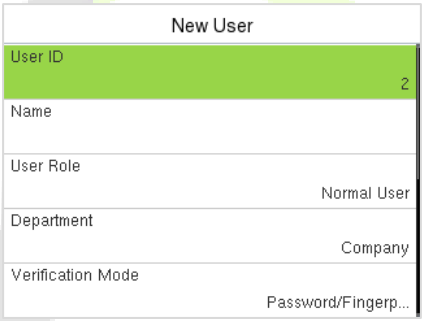
PUSH Protocol

3.1 User Registration (PUSH Protocol)

Select **New User** on the **User Mgt.** interface to add a new user.

3.1.1 User ID and Name

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



Notes:

- *A username can contain a maximum of 34 characters.*
- *The user ID may contain 1 to 14 digits by default,* supporting both numbers and alphabetic characters.
- *During the initial registration, you can modify your ID, which cannot be modified after registration.*
- *If a message "**Duplicated!**" pops up, you must choose another ID as the enter User ID already exists.*

3.1.2 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 already registered in the Device, then the Normal Users will

not have the privileges to manage the system and can only access authentication verifications.

- **User Defined Roles:** The Normal User can also be set with **User Defined Role** which are the custom roles that can be set to the Normal User.

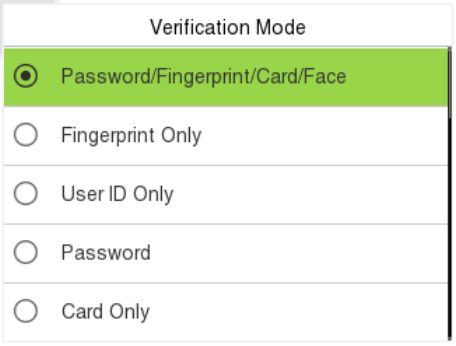
Note: *If the selected user role is the Super Admin, the user must pass the identity authentication to access the main menu. The authentication is based on the authentication method(s) that the super administrator has registered. Please refer to Verification Mode.*

3.1.3 Department

The system defaults to eight departments. Please assign personnel to departments based on their actual job responsibilities. For detailed department information, refer to the introduction in 10 Department Management.

3.1.4 Verification Mode

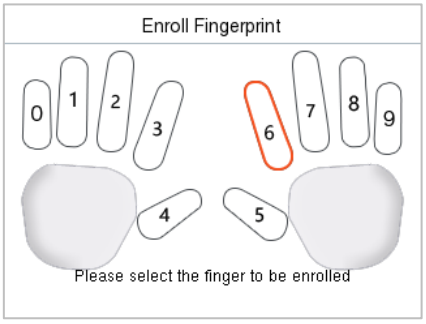
Select the mode of verification for the user, a total of 21 different verification combinations can be used. Please refer to 1.6.5 combined verification for details.

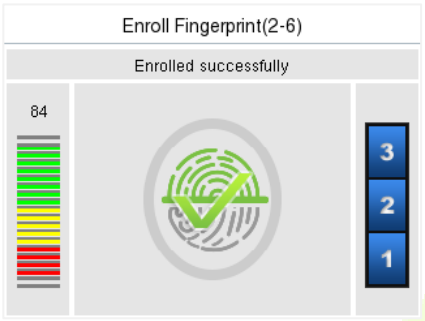


3.1.5 Register Fingerprint

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.

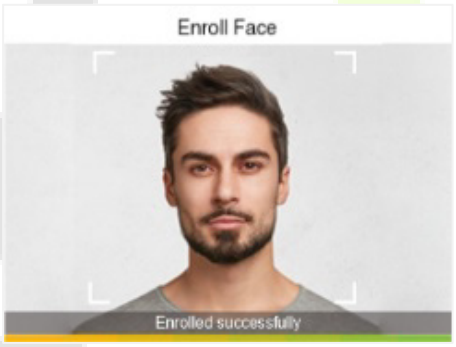




3.1.6 Register Face Template

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

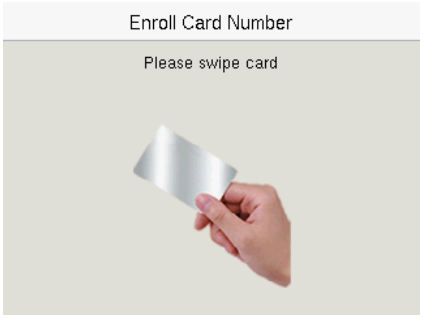
- Please face towards the camera and position your face template inside the white guiding box and stay still during face template registration.
- A progress bar shows up while registering the face template and a **"Enrolled successfully"** is displayed as the progress bar completes.
- If the face template is registered already then, the **"Duplicated Face"** message shows up. The registration interface is as follows:

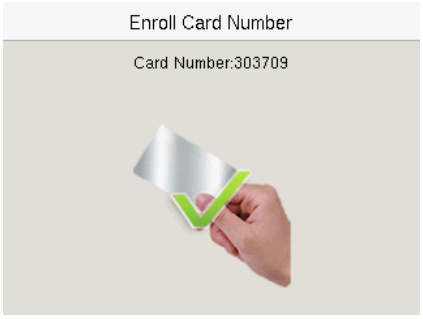


3.1.7 Card★

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

- On the Card interface, swiping card underneath the card reading area. The card registration will be successful.
- If the card is registered already then, the "**Error! Card already enrolled**" message shows up. The registration interface is as follows:

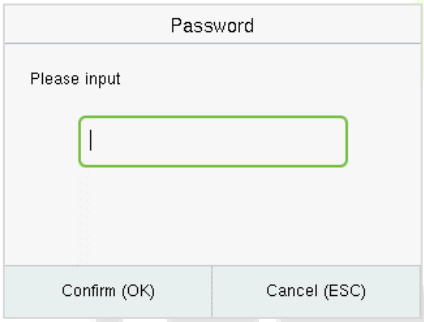


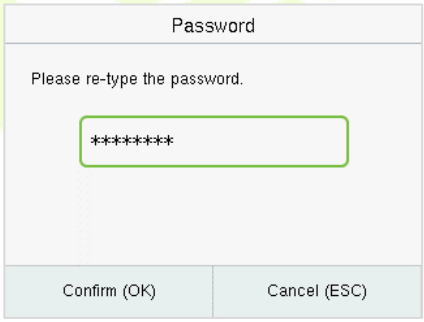


3.1.8 Password

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

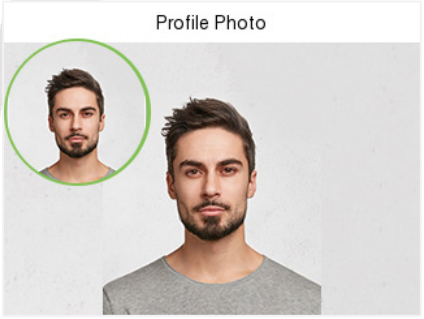
- On the Password interface, enter the required password and re-enter to confirm it and press **M/OK**.
- If the re-entered password is different from the initially entered password, then the device prompts the message as "**Password not match!**", where the user needs to re-confirm the password again.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





3.1.9 Profile Photo

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



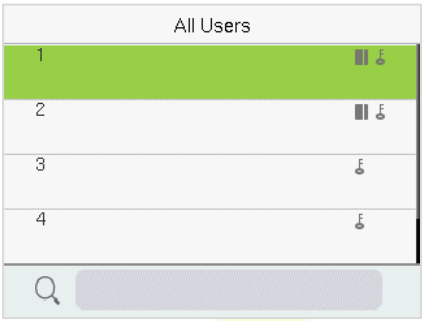
- When a user registered with a photo passes the authentication, the registered photo will be displayed (enter **[System]** > **[Attendance]** to enable **Display User Photo**).
- Select **Profile Photo**, the device's camera will open, then press **M/OK** to take a photo. The captured photo is displayed on the top left corner of the screen. The camera remains active to allow for additional photos if needed.

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.*

3.2 Search for Users

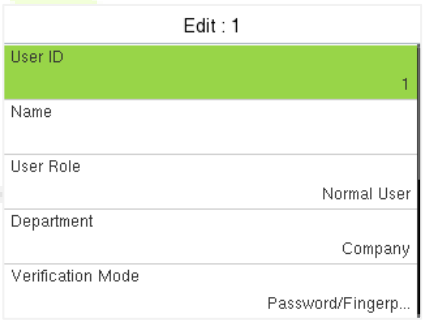
When the device is on the initial interface, press **M/OK** and enter **User Mgt.** > **All Users**.

- On the **All Users** interface, enter the required retrieval keyword (where the keyword may be the user ID or full name) and the system will search for the related user information.



3.3 Edit User (PUSH Protocol)

On the **All Users** interface, select the required user from the list and press **M/OK** and select **Edit** to edit the user information.



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

3.4 Delete User (PUSH Protocol)

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

➢ **Delete Operations:**

Delete User: All information of the user will be deleted (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.

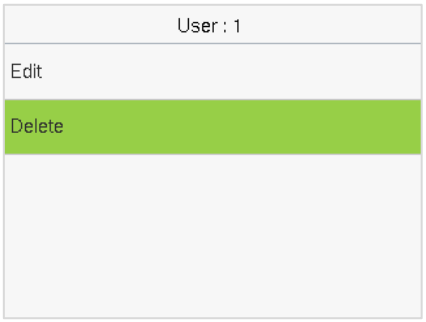
Delete Fingerprint Only: Deletes the fingerprint information of the selected user.

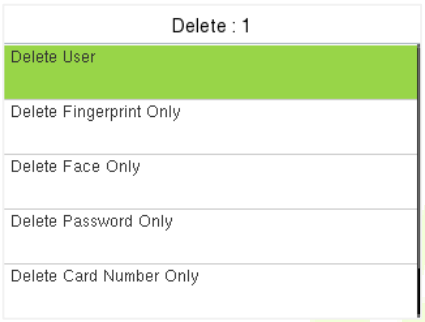
Delete Face Only: Deletes the face template information of the selected user.

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.



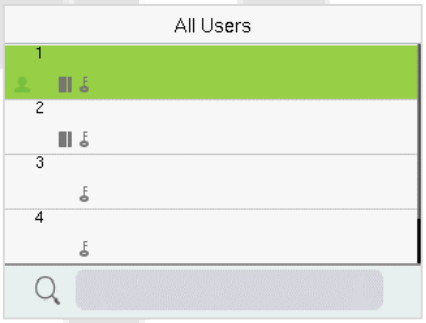


3.5 Display Style

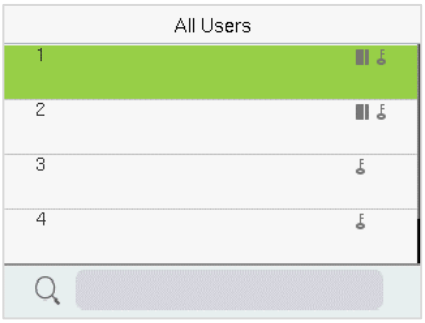
When the device is on the initial interface, press **M/OK** and enter **User Mgt.** > **Display Style**.

Different display styles are shown as below:

Multiple Line:



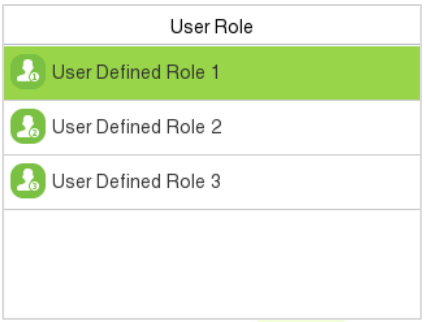
Mixed Line:



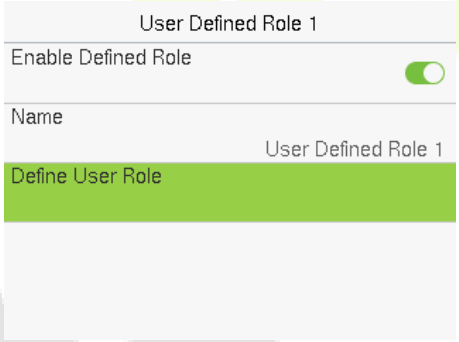
4 User Role (PUSH Protocol)

User Role facilitates to assign some specific permissions to specific users, based on the requirement.

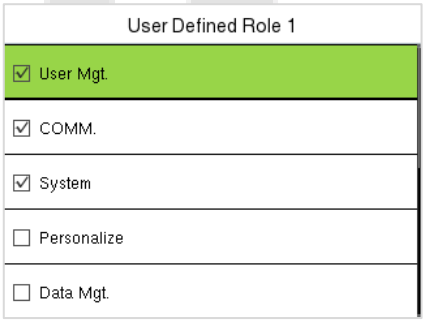
- When the device is on the initial interface, press **M/OK** and enter **User Role** > **User Defined Role** to set the user defined permissions.
- The permission scope of the custom role can be set up into 3 roles, that is, the custom operating scope of the menu functions of the user.

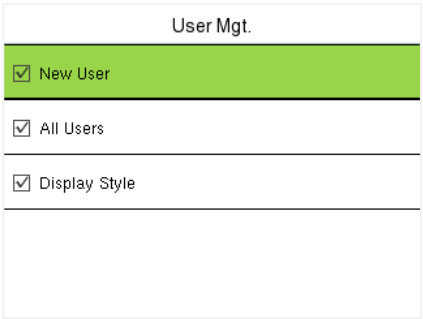


- On the **User Defined Role** interface, toggle **Enable Defined Role** to enable or disable the user defined role.



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



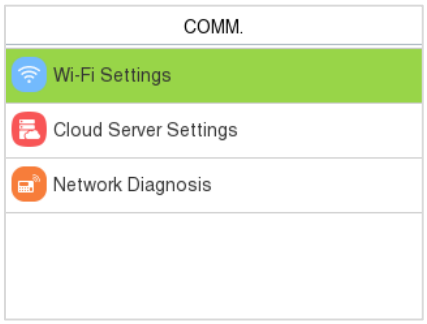


Note: *If the User Role is enabled for the Device, enter* ***User Mgt. > New User > User Role*** *to assign the created roles to the required users. But if there is no super administrator registered in the Device, then the device will prompt "Please enroll super admin first!" when enabling the User Role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

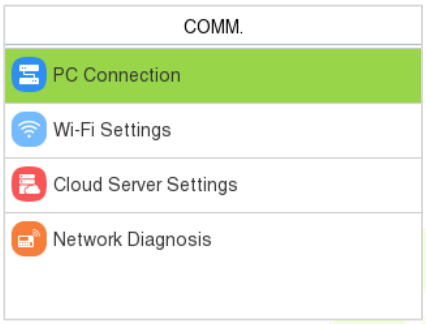
5 Communication Settings

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

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



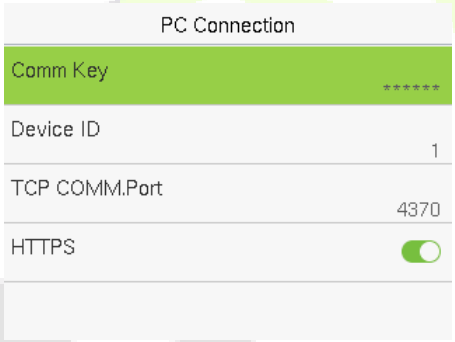
BEST Protocol



PUSH Protocol

5.1 PC Connection (PUSH Protocol)

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



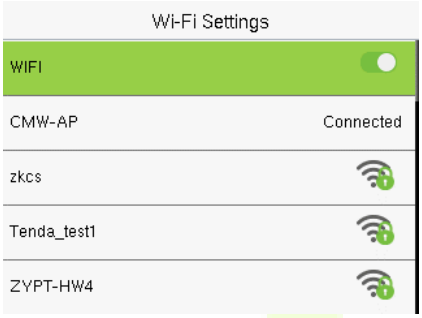
Function Name	Descriptions
Comm Key	This menu only appears after enabling **Standalone Communication** function in **System> Security Settings**. To improve the security of data, the Comm Key needs to be entered before the device can be connected to the C/S software. It can be changed as needed.
Device ID	The identity number of the device, which ranges between 1 and 254.
TCP COMM. Port	The default TCP COMM Port value is 4370. It can be modified according to the network availability.
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.

5.2 Wi-Fi Settings

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

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 button.

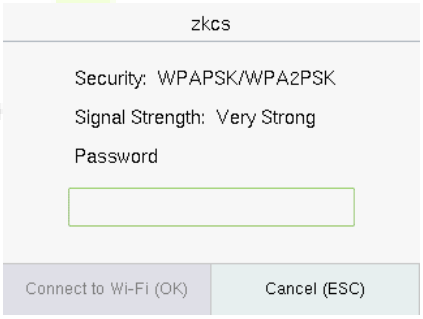
Select **Wi-Fi Settings** on the **COMM.** Settings interface to configure the Wi-Fi settings.



➢ **Search the Wi-Fi Network**

- Wi-Fi is enabled in the Device by default. Toggle on 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.
- Choose the appropriate Wi-Fi name from the available list, and input the correct password in the password interface, and then press **M/OK**.

Wi-Fi Enabled: Select the required network from the searched network list.

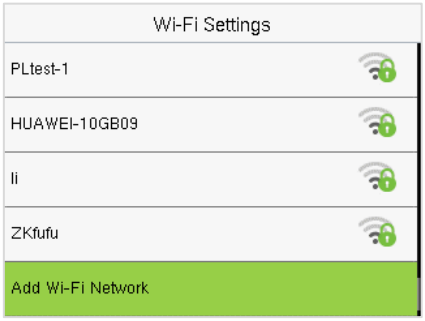


Enter the password, and then press on **M/OK.**

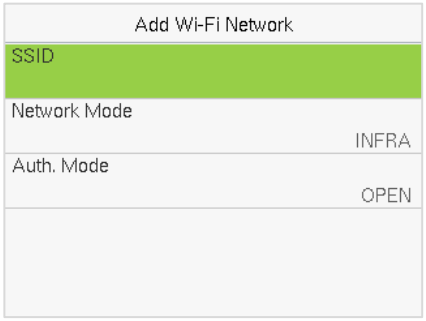
- When the Wi-Fi is connected successfully, the initial interface will display the Wi-Fi logo.

➢ **Add Wi-Fi Network Manually**

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



Select **Add Wi-Fi Network** to add the Wi-Fi manually.

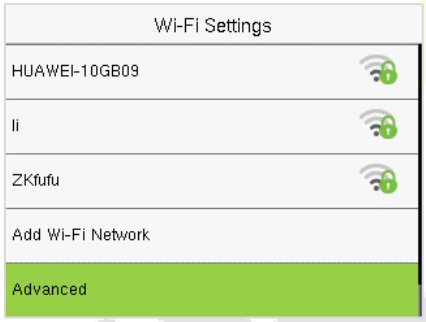


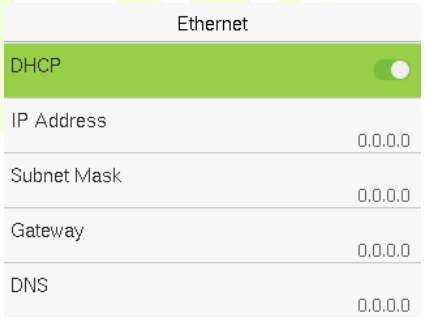
On this interface template, enter the Wi-Fi network parameters. (The added network must exist.)

***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, select **Advanced** to set the relevant parameters as required.

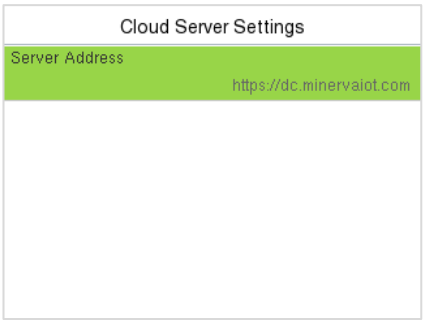




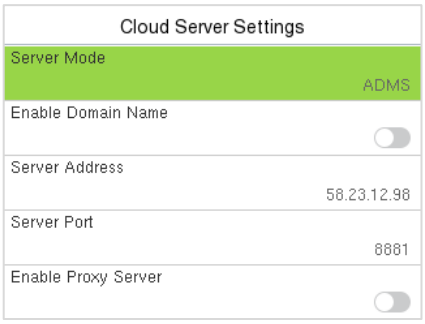
Function Name	Description
DHCP	Dynamic Host Configuration Protocol (DHCP) dynamically allocates IP addresses to network clients. If the DHCP is enabled, then the IP cannot be set manually.
IP Address	IP address for the Wi-Fi network, the default is 0.0.0.0. It can be modified according to the network 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. 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.

5.3 Cloud Server Settings

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



BEST Protocol



PUSH Protocol

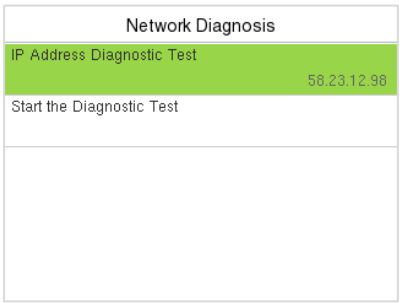
Function Name		Description
Enable Domain Name	**Server Address**	Once this function is enabled, the domain name mode "https://..." will be used, such as https://www.XYZ.com, while "XYZ" denotes the domain name (when this mode is turned ON).
Disable Domain Name	**Server Address**	IP address of the ADMS 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.

Note: When the Communication Protocol of the device is **BEST Protocol**, you don't need to configure the cloud sever settings.

5.4 Network Diagnosis

It helps to set the network diagnosis parameters.

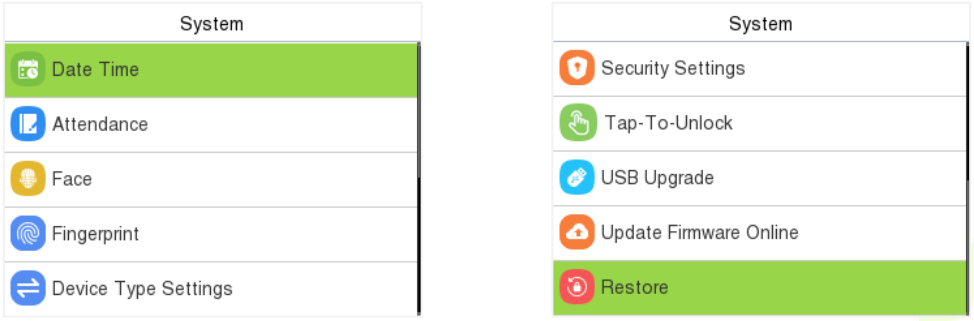
Select **Network Diagnosis** on the **COMM.** Settings interface. Enter the IP address that needs to be diagnosed and select **Start the Diagnostic Test** to check whether the network can connect to the device.



6 System Settings

Set related system parameters to optimize the performance of the device.

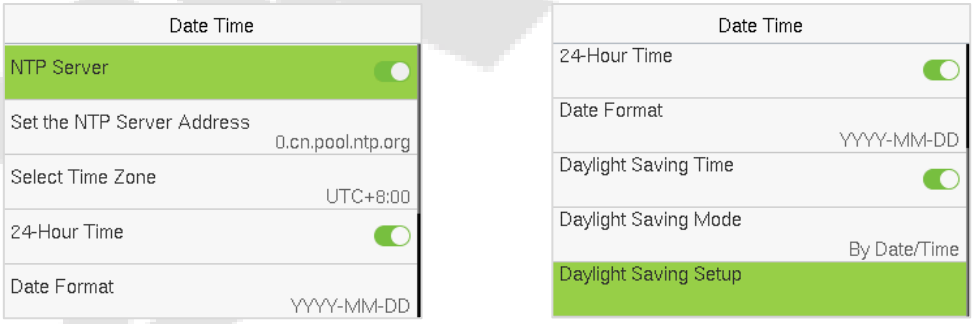
When the device is on the initial interface, press **M/OK** and select **System.**



6.1 Date and Time

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

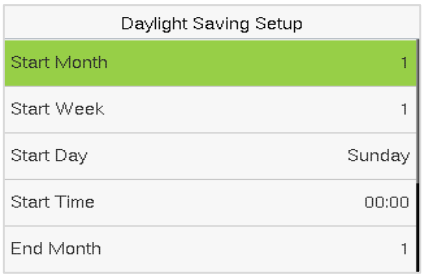
BEST Protocol



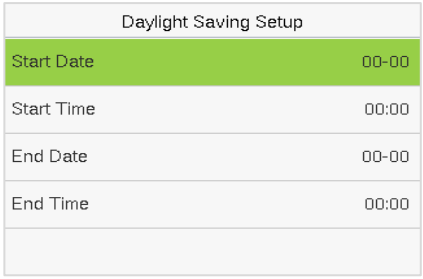
PUSH Protocol

- Select **NTP Server** to enable automatic time synchronization based on the service address you enter.
- Select **Manual Date and Time** to manually set the date and time and then press **M/OK** and save.
- Select **Time Zone** to manually select the time zone where the device is located.
- Enable or disable the **24-Hour Time**. Select the **Date Format** to set the date format.
- Select **Daylight Saving Time** to enable or disable the function. If enabled, enter **Daylight**

Saving Mode to select a daylight-saving mode and then enter **Daylight Saving Setup** to set the switch time.



Week Mode



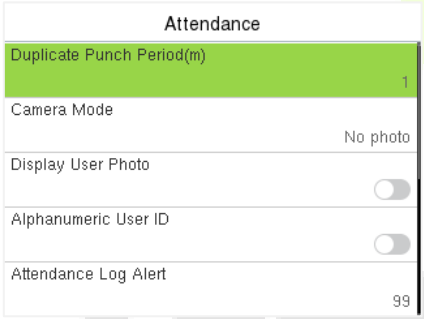
Date Mode

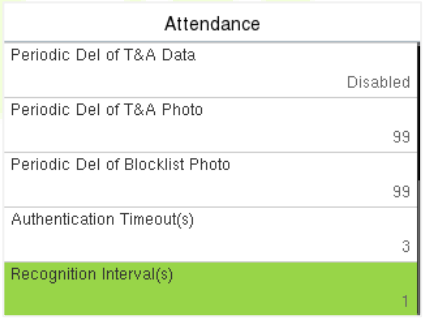
- When restoring the factory settings, the time (24-hour) and date format (YYYY-MM-DD) can be restored, but the device date and time cannot be restored.

Note: *For example, the user sets the time of the device (18:35 on March 15, 2019) to 18:30 on January 1, 2020. After restoring the factory settings, the time of the equipment will remain 18:30 on January 1, 2020.*

6.2 Attendance

Select **Attendance** on the System interface.



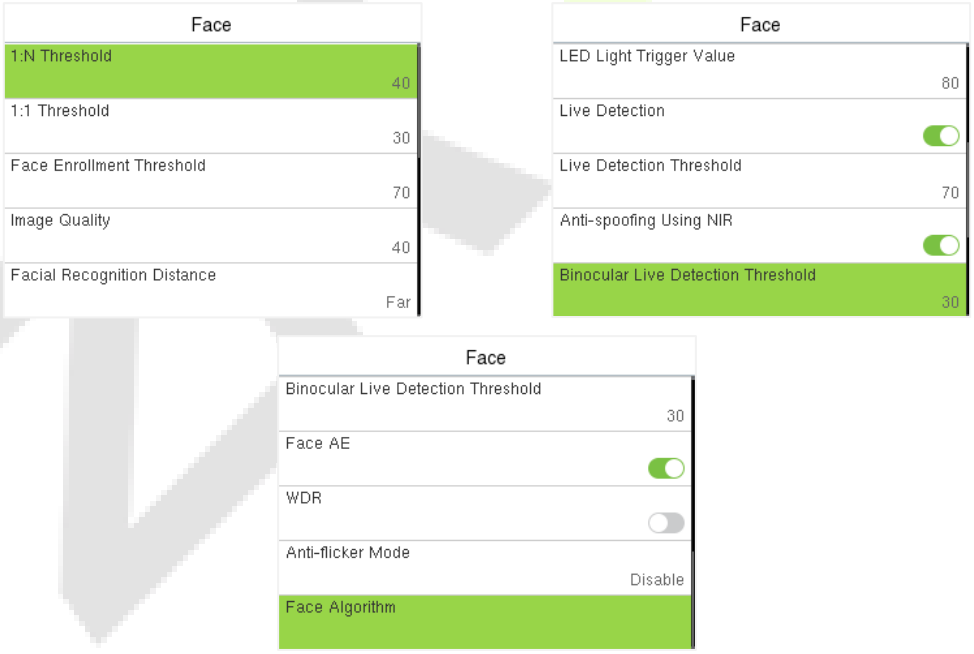


Function Name	Description
Duplicate Punch Period(m)	Within a set time period (unit: minutes), the duplicated attendance record will not be reserved (value ranges from 1 to 999999 minutes).
Camera Mode	This function is disabled by default. When enabled, a security prompt will pop-up and the sound of shutter 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	This function is disabled by default. When enabled, a security prompt will pop-up.
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 storage 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 blocklisted photos reach its maximum storage 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: 1~9 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.

6.3 Face Parameters

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



Function Name	Description
1:N Threshold	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, the higher the rejection rate, and vice versa. It is recommended to set the default value of 40.

1:1 Threshold	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 0 to 100. The higher the thresholds, the lower the misjudgement rate, the higher the rejection rate, and vice versa. It is recommended to set the default value of 30.
Face Enrollment Threshold	During face template 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 this threshold, it indicates that the face template has already been registered.
Image Quality	Image quality for facial registration and comparison. The higher the value, the clearer the image requires.
Facial 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.
Live Detection	It detects the spoof attempt using visible light images to determine if the provided biometric source sample is of a real person (a live human being) or a false representation.
Live Detection Threshold	It facilitates judging whether the captured visible image is a real person (a live human being). The larger the value, the better the anti-spoofing performance using visible light.
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 the 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	Used when WDR is turned off. This helps reduce flicker when the device's screen flashes at the same frequency as the light.
Face Algorithm	Facial algorithm related information and pause facial template update.

Note: *Improper adjustment of the exposure and quality parameters may severely affect the performance of the device. Please adjust the exposure parameter only under the guidance of the after-sales service personnel of our company.*

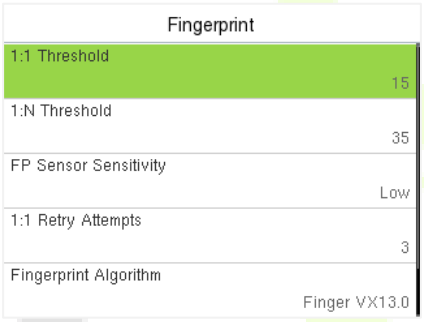
➢ **Process to modify the Face Recognition Accuracy**

- On the **System** interface, select **Face** and then toggle to enable **Anti-Spoofing using NIR** to set the anti-spoofing.
- Then, on the **Main Menu**, select **Autotest > Cam Test** and perform the face test.
- Press the "**8**" key, then press "**9**" key to enter the calibration mode.
- After entering calibration mode, the face detection frame displays in red. After successful calibration, it automatically switches to black & white face images, and the face detection frame displays in green.

Note: *Without entering calibration mode, press the left and right keys to switch between viewing black & white and color face images.*

6.4 Fingerprint Parameters

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

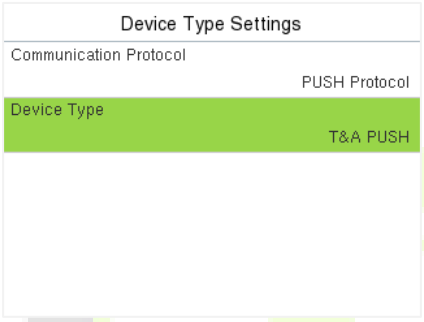


Function Name	Descriptions
1:1 Threshold	Under 1:1 verification method, the verification will only be successful when the similarity between the acquired fingerprint data and the fingerprint template associated with the entered user ID enrolled in the device is greater than the set value.
1:N Threshold	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 Algorithm	Fingerprint algorithm version. Default support ZKFinger VX13.0, can change to ZKFinger VX10.0.

Fingerprint Image	This function is disabled by default. After disabling it, the fingerprint image will not be displayed when registering and verifying fingerprints. The menu interface allows to enable or disable this function, and there are security prompts when switching. 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.

6.5 Device Type Settings

Select **Device Type Settings** on the **System** interface to go to the device type settings.

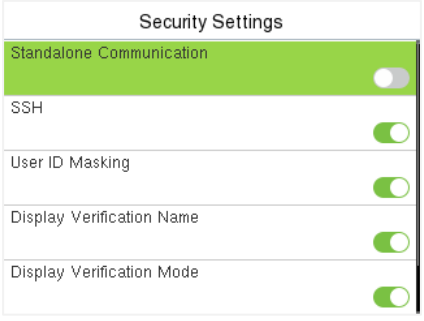


Function Name	Description
Communication Protocol	Set the device communication protocol, PUSH Protocol or BEST Protocol. (It is **BEST Protocol** by default, which is suitable for ZKBio Zlink, please refer to 17 Connecting to ZKBio Zlink App and 18 Connecting to ZKBio Zlink Web.)
Device Type	It is T&A PUSH by default, and cannot be modified.

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

6.6 Security Settings

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

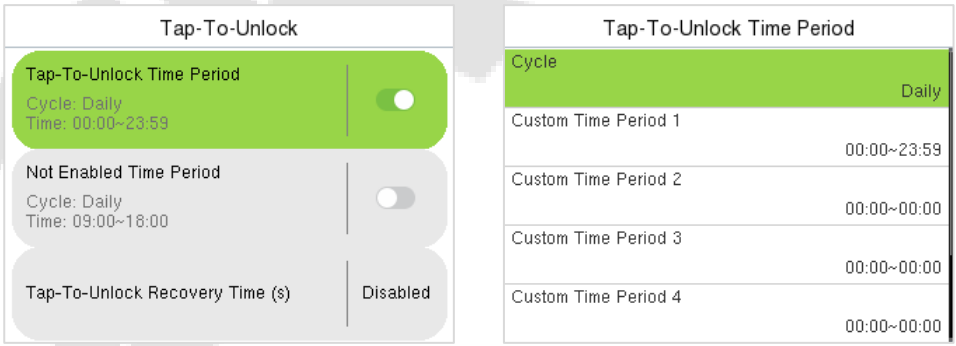


Function Name	Description
Standalone Communication	By default, this function is disabled. It is used to connect the C/S software (like ZKTime.Net, etc.). When it is switched on, a security prompt appears, and you need to set the Comm Key, the device will restart after you confirm.
SSH	The device does not support the Telnet feature, hence SSH is typically used for remote debugging. By default, SSH is enabled. The menu interface allows you to enable and disable SSH. When enabled, there will be a security prompt, but the device will not need to be restarted after confirmation.
User ID Masking	After enabled, the User ID will be partially displayed after the personnel verification result (only the User ID with more than 2 digits supports the masking display), and it is enabled by default.
Display Verification Name	After enabled, the user's name will be displayed after the personnel verification result. The verification result will not show the name after disabling it.
Display Verification Mode	After enabled, the personnel verification result will show the user's verification mode. The verification result will not show the verification mode after you disable it.
Save Photo as Template	After disabling this function, face template re-registration is required after an algorithm upgrade.

6.7 Tap-To-Unlock

Select **Tap-To-Unlock** on the **System** interface.

After enabling Tap-To-Unlock, the device will disable the camera's automatic recognition sensing function. The camera's automatic recognition can only be activated by pressing the **ESC** button.



Function Name	Description
Tap-To-Unlock Time Period	Set the time period for enabling Tap-To-Unlock on the device.
Not Enabled Time Period	Set the time period for not enabling Tap-To-Unlock on the device.
Tap-To-Unlock Recovery Time(s)	Set the duration for which the device is awakened. It can be disabled or set a value within 3 to 9 seconds. When it is disabled, if the device enters into the verification interface and no face is detected, it exits after approximately 45

	seconds. If a face is recognized, the timer resets to 45 seconds.

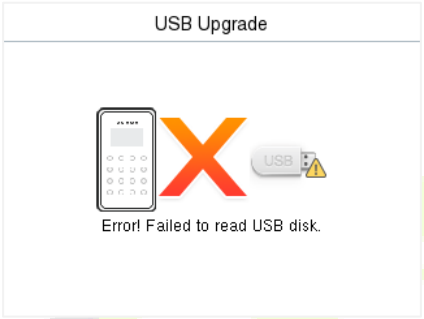
Note: *Tap-To-Unlock Time Period and Not Enabled Time Period are mutually exclusive options. Enabling Not Enabled Time Period will automatically disable Tap-To-Unlock Time Period, and vice versa.*

6.8 USB Upgrade

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

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.

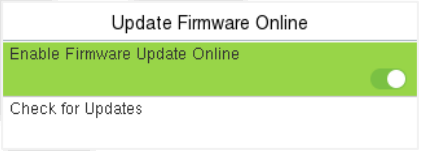
If no USB disk is inserted in, the system gives the following prompt after you select **USB Upgrade** on the System interface.



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

6.9 Update Firmware Online

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



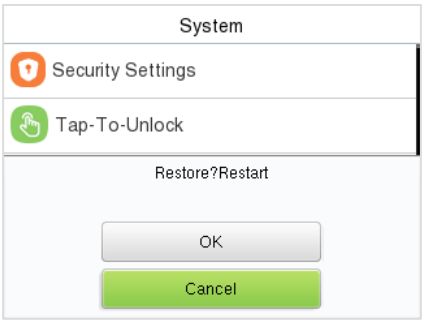
The Firmware Update Online function is enabled by default. Select **Check for Updates** it may have the following 3 scenarios:

- If the query fails, the interface will prompt "Query Failed".
- If the firmware version of the device is latest, it will prompt “Already the Latest Version”.
- 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.

6.10 Factory Restore

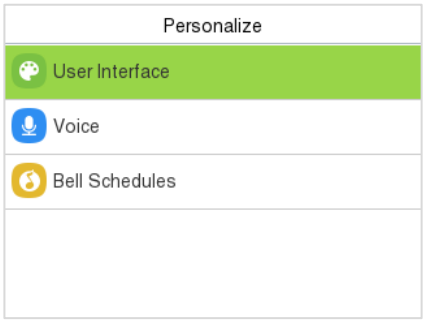
The Factory Restore function restores the device settings such as communication settings and system settings, to the default factory settings (This function does not clear registered user data).

Select **Restore** on the **System** interface and then press **M/OK** to restore the default factory settings.

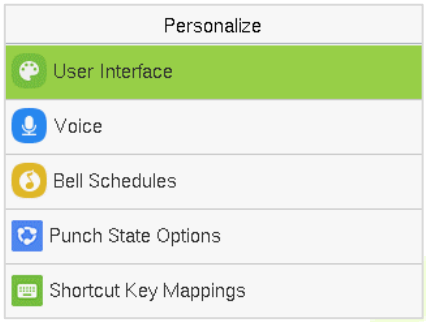


7 Personalize Settings

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.



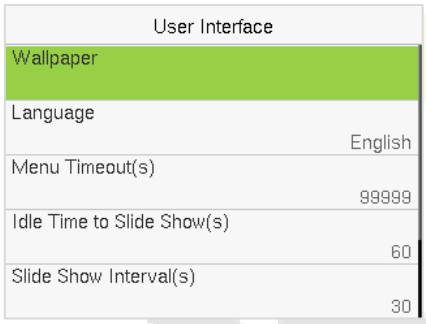
BEST Protocol



PUSH Protocol

7.1 User Interface Settings

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

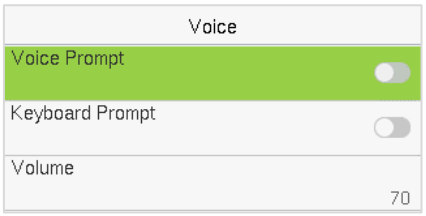


Function Name	Description
Wallpaper	The main screen wallpaper can be selected according to the user preference.
Language	Select the language of the device.
Menu Timeout (s)	When there is no operation, and the time exceeds the set value, the device will automatically go back to the initial interface. The function either can 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 will be played. 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 photos. 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 1-999 minutes.

Main Screen Style	The main screen style can be selected according to the user preference.

7.2 Voice Settings

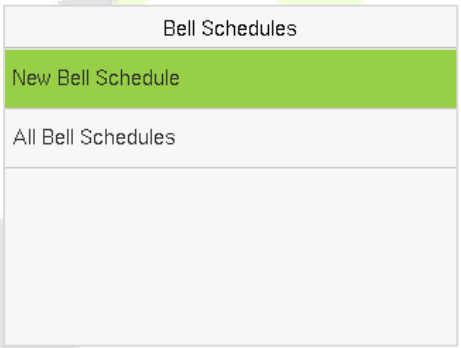
Select **Voice** on the **Personalize** interface to configure the voice settings.



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.

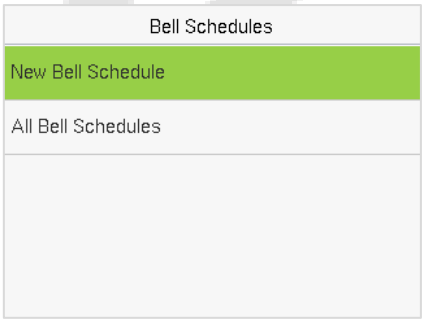
7.3 Bell Schedules

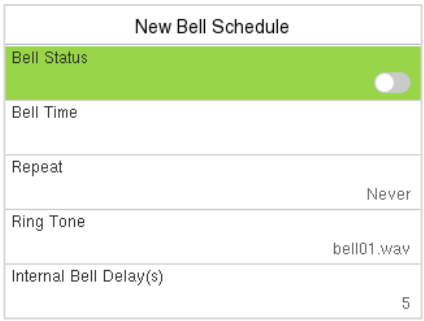
Select **Bell Schedules** on the **Personalize** interface to configure the Bell settings.



➢ **New Bell Schedule**

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





Function Name	Description
Bell Status	Toggle to enable or disable the bell status.

Bell Time	Once the required time is set, the device will automatically trigger to ring the bell during that time.
Repeat	Set the required number of counts to repeat the scheduled bell.
Ring Tone	Select a ring tone.
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, press **All Bell Schedules** to view the newly scheduled bell.

➢ **Edit the Scheduled Bell**

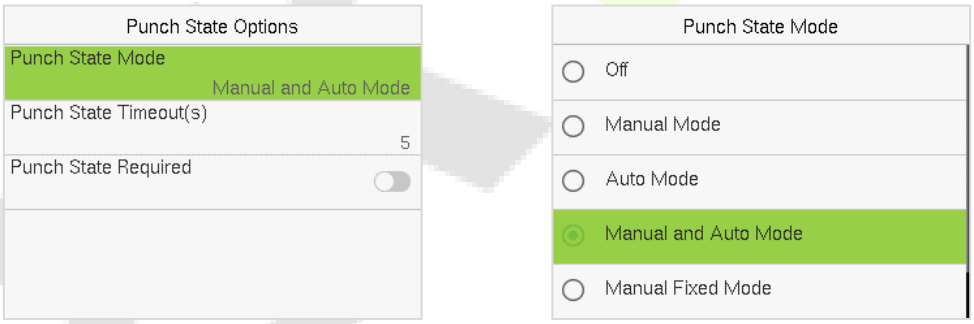
On the **All Bell Schedules** interface, select on the required bell schedule, and select **Edit** to edit the selected bell schedule. The editing method is the same as the operations of adding a new bell schedule.

➢ **Delete a Bell**

On the **All Bell Schedules** interface, select the required bell schedule, and select **Delete**, and then press **M/OK** to delete the selected bell.

7.4 Punch States Options (PUSH Protocol)

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



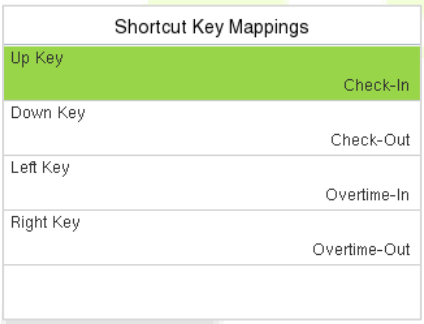
Function Name	Description
Punch State Mode	**Off:** Disable the punch state function. Therefore, the punch state key set under **Shortcut Key Mappings** menu will become invalid. **Manual Mode:** Switch the punch state key manually, and the punch state key will disappear after **Punch State Timeout**. **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 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 being manually switched again. **Fixed Mode:** Only the manually fixed punch state key will be shown. Users cannot change the status by pressing 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.

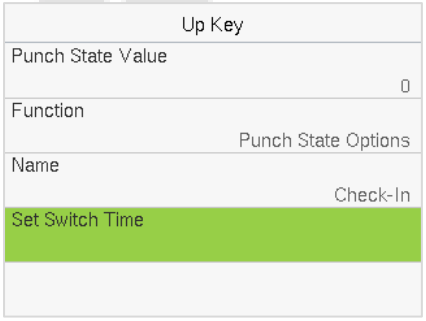
7.5 Shortcut Key Mappings (PUSH Protocol)

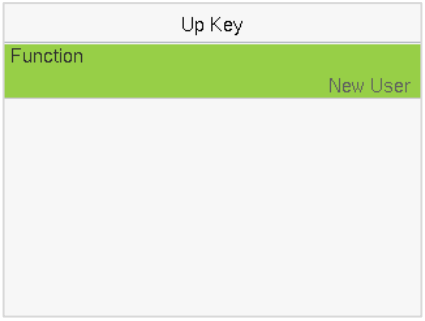
Users may define shortcut keys for attendance status and for functional keys which will be defined on the main interface. So, on the main interface, when the shortcut keys are pressed, the corresponding attendance status or the function interface will be displayed directly.

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



- On the **Shortcut Key Mappings** interface, select the required shortcut key to configure the shortcut key settings.
- On the **Shortcut Key** interface, select **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.

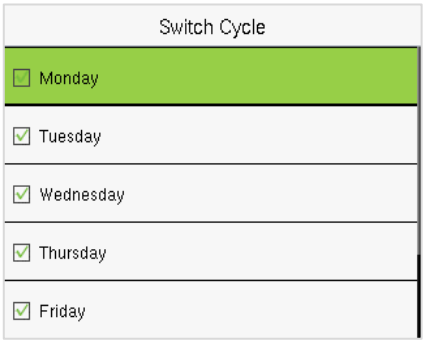


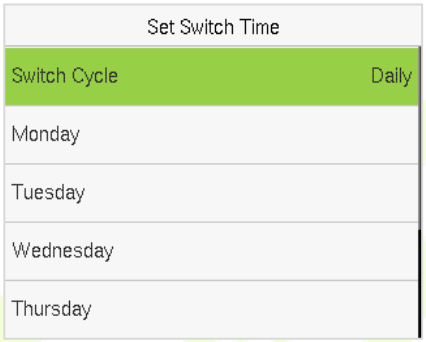


- If the Shortcut key is set as a punch state key (such as check in, check out, etc.), then it is required to set the punch state value (valid value 0~250), name.

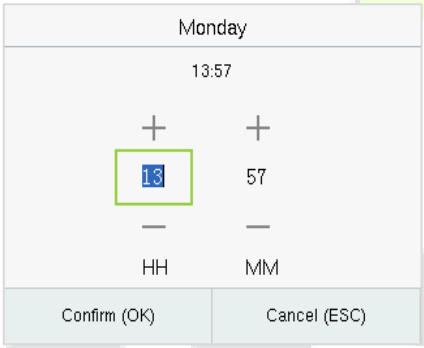
➢ Set the Switch Time

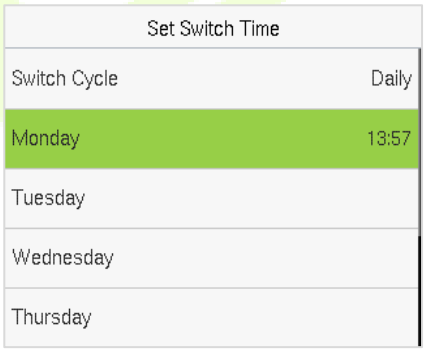
- The switch time is set in accordance with the punch state options.
- When the **Punch State Mode** is set to **Auto Mode**, the switch time should be set.
- On the **Shortcut Key** interface, select **Set Switch Time** to set the switch time.
- On the **Switch Cycle** interface, select the switch cycle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





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

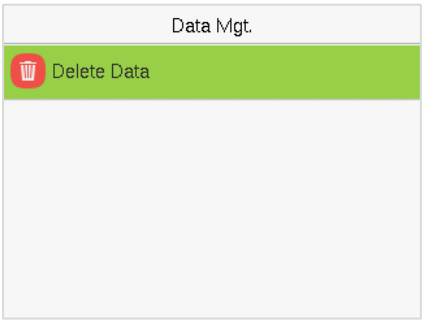




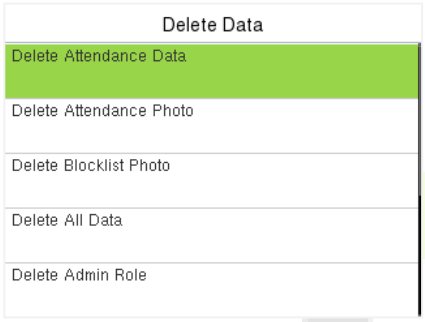
Note: *When the function is set to Undefined, the device will not enable the punch state key.*

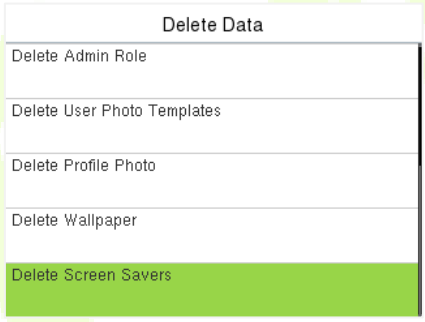
8 Data Management (PUSH Protocol)

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



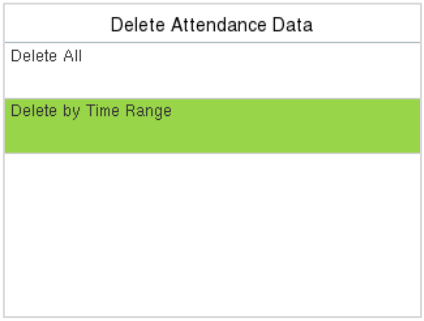
Select **Delete Data** on the **Data Mgt.** interface to delete the required data.



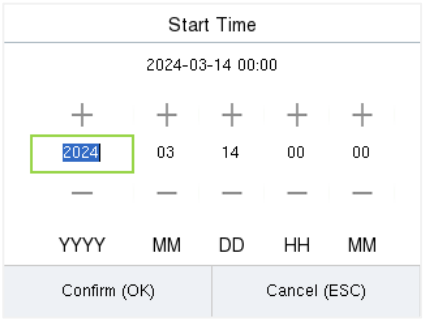


Function Name	Description
Delete Attendance Data	To delete attendance data conditionally.
Delete Attendance Photo	To delete attendance photos of designated personnel.
Delete Blocklist Photo	To delete the photos taken during failed verifications.
Delete All Data	To delete information and attendance logs of all registered users.
Delete Admin Role	To remove all administrator privileges.
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 user photos in the device.
Delete Wallpaper	To delete all wallpapers in the device.
Delete Screen Savers	To delete the screen savers in the device.

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



Select **Delete by Time Range**.

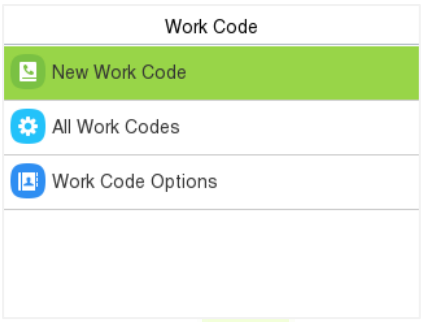


Set the time range and press **M/OK**.

9 Work Code (PUSH Protocol)

Employees' salaries are subject to their attendance records. An employee can be engaged in more than one type of work which may vary with time. As the pay varies according to the work types, the FFR terminal provides a parameter to indicate the corresponding work type for every attendance record to facilitate rapid understanding of different attendance situations during the handling of attendance data.

Select **Work Code** on the main menu interface.



9.1 Add a Work Code

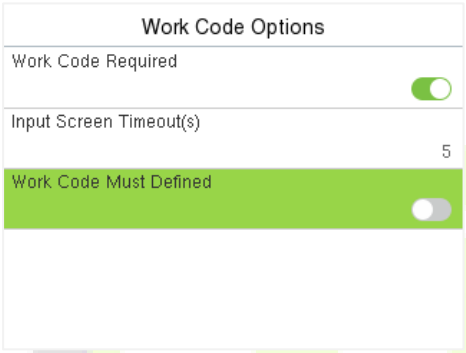
Menu	Description
ID	It is the digital code of the work code. Users may set a valid value between 1 and 99999999.
Name	It is the naming of the work code.

9.2 All Work Codes

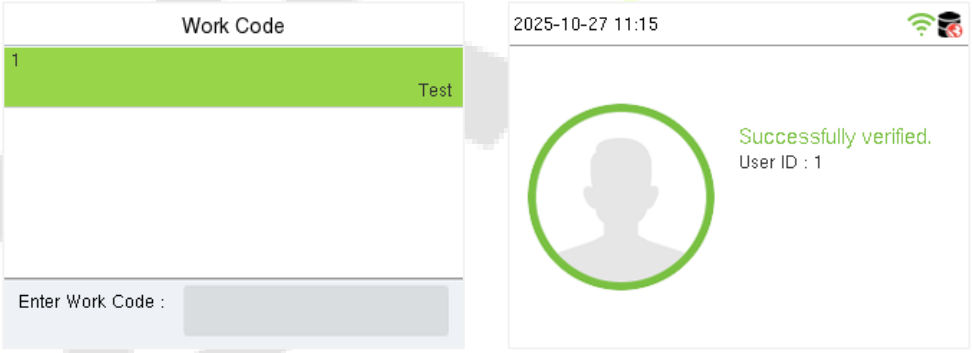
You can view, edit and delete work codes in All Work Codes. The process of editing a work code is the same as adding a work code, except that the ID is not allowed to be modified.

9.3 Work Code Options

To set whether entering the work code is a must and whether the entered work code must exist during authentication.



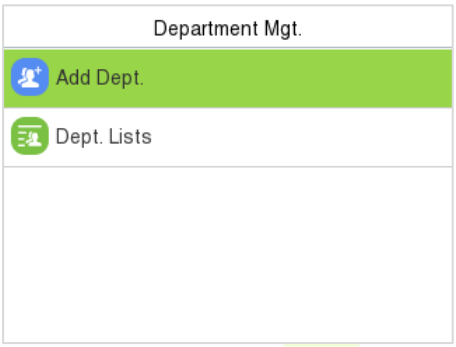
In **1: N** or **1:1** verification, the system will automatically pop up the following window. Select the corresponding Word Code manually to verify successfully.



10 Department Management (PUSH Protocol)

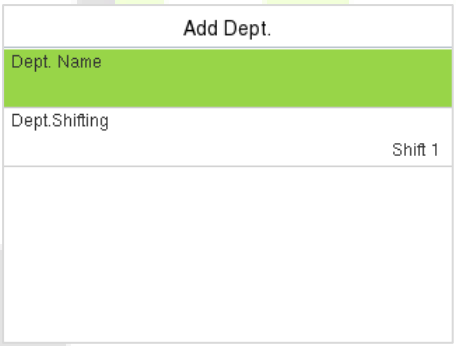
Establishing an organizational structure of the company and arranging departments shift is necessary to view the department information of the device. In this menu option, you can add, edit, or remove a department.

Select **Department Mgt**. on the main menu interface.

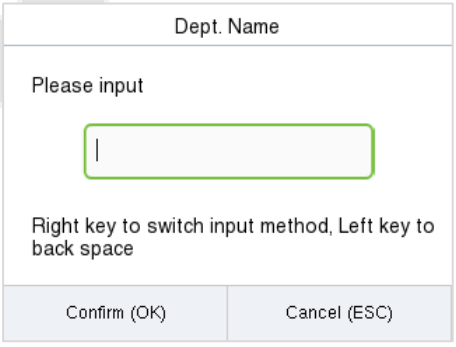


10.1 Add a Department

1. Select **Add Dept.** and press [**M/OK**] to enter.



2. Select **Dept. Name** and enter the department name using the T9 input method.



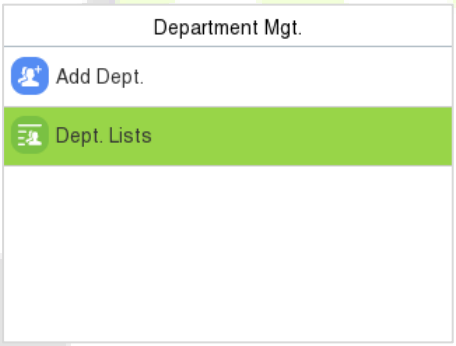
3. Select the **Dept. Shifting** of the department.

Note:

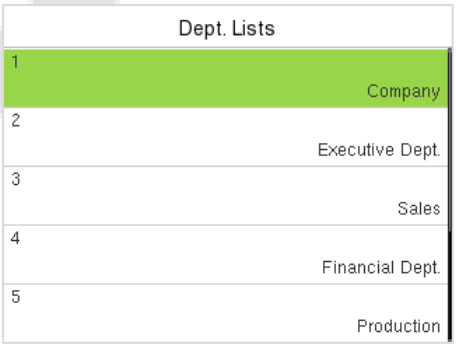
1. The equipment will automatically assign numbers to departments, starting from 1 and so on.
2. **Dept. Shift:** Select the shift attendance used by all users of the department. Shifts can be set in **Shift Set** > **Shift Settings**, with a maximum of 24 shifts set by default. Refer to Shift Set section.

10.2 Edit a Department

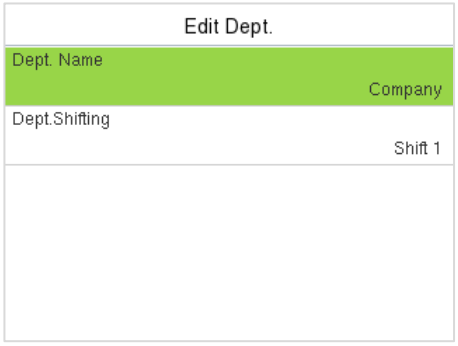
There are 8 departments in the device by default. You can edit the department name and department shift, but you cannot delete them. In addition to the 8 default departments, additional departments can be edited and deleted.



1. Select **Dept. Lists** and press [**M/OK**] to enter.



2. Select a department to edit and press [**M/OK**] to enter.

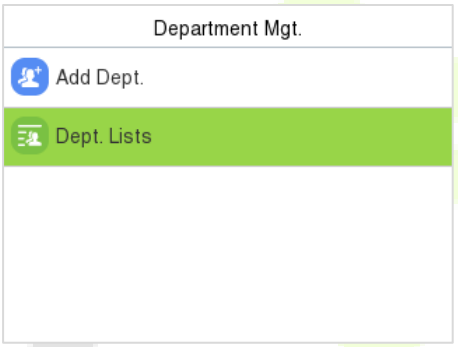


3. Modify **Dept. Name** and **Dept. Shifting** and press [**M/OK**] to save.

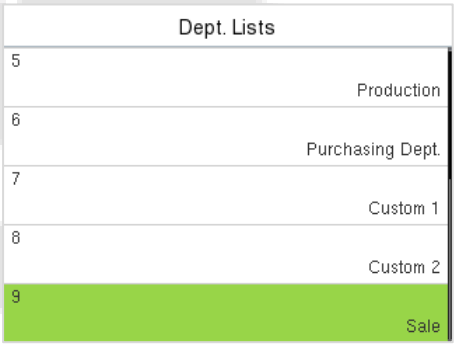
The editing of the department is the same as of **Add Dept**.

10.3 Delete a Department

It helps to remove one or more department as required.



1. Select **Dept. Lists** and press [**M/OK**] to enter.



2. Select a department to delete and press **[M/OK]** to enter.

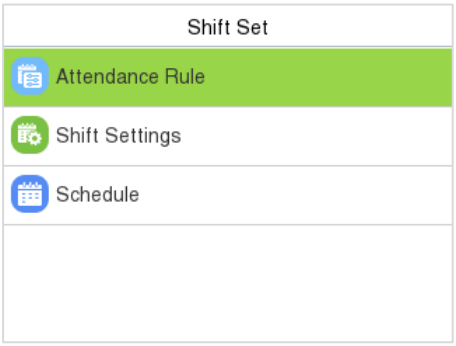
3. Select **Delete** and press **[M/OK]**.

Note: Only departments other than the 8 default departments in the device can be deleted.

11 Shift Set (PUSH Protocol)

Set attendance rules, number of shifts to be used, and schedule employees.

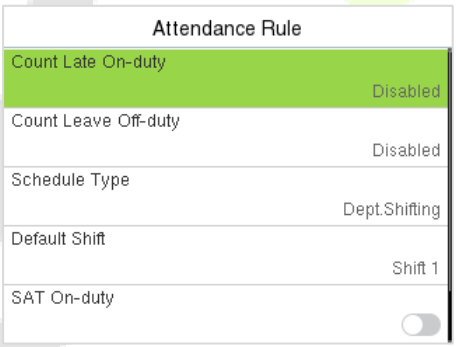
Select **Shift Set** option on the main menu interface.



11.1 Attendance Rule

All attendance statistics are conducted according to the attendance rules. Therefore, the staff attendance rules need to be set first, including late, early leave calculation method, and scheduling type. Once the attendance rules are set, it is not recommended to modify them frequently as it may affect the result of attendance calculation and may cause chaos in the scheduling if it is modified in the middle of the month.

Select **Attendance Rule** on the Shift Set interface.

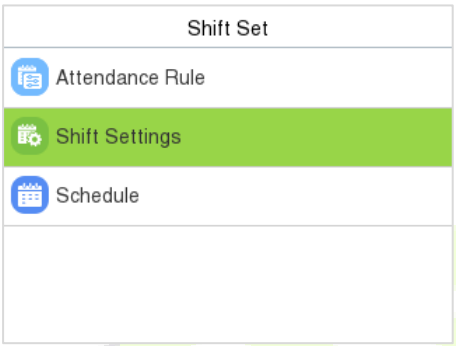


Item	Descriptions
Count Late On-duty	Set a time after which the lateness calculation for an employee should start. If it is disabled, the lateness calculation starts with the start of working hours.
Count Leave Off-duty	Set a time before which the early leave calculation for an employee should start. If disabled, it is calculated with respect to the end of the working hours.
Schedule Type	The device supports both department and individual-based scheduling. If a company uses one timetable, then only one department needs to be set and department-based scheduling is recommended. If the departments have their respective timetables, department-based

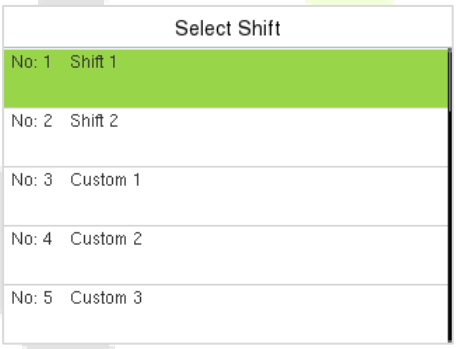
	scheduling is recommended. If employees may take different shifts, individual-based scheduling is recommended.
Default Shift	When individual-based scheduling is used, the default shift applies to all the non-scheduled employees.
SAT On-duty	Enable whether to work normally on Saturdays.
SUN On-duty	Enable whether to work normally on Sundays.

11.2 Shift Settings

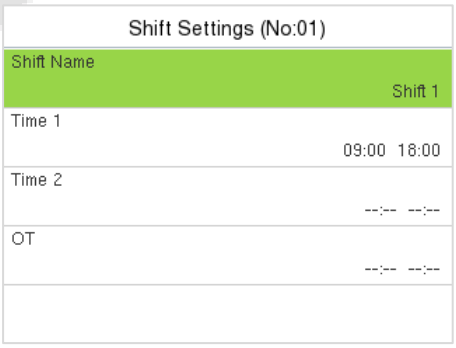
Select **Shift Settings** on the Shift set interface.



Select a Shift on the list, and press **[M/OK]**.



Use the T9 input method to enter "Shift Name" and set the required start and end times.

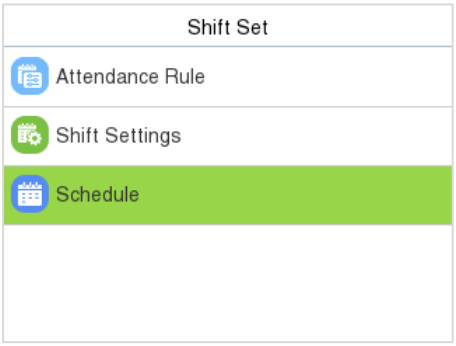


Note: The device supports a maximum of 24 shifts including two default shifts (Shift 1 and Shift 2). All the shifts are editable, and a single shift includes three-time ranges at most.

11.3 Schedule

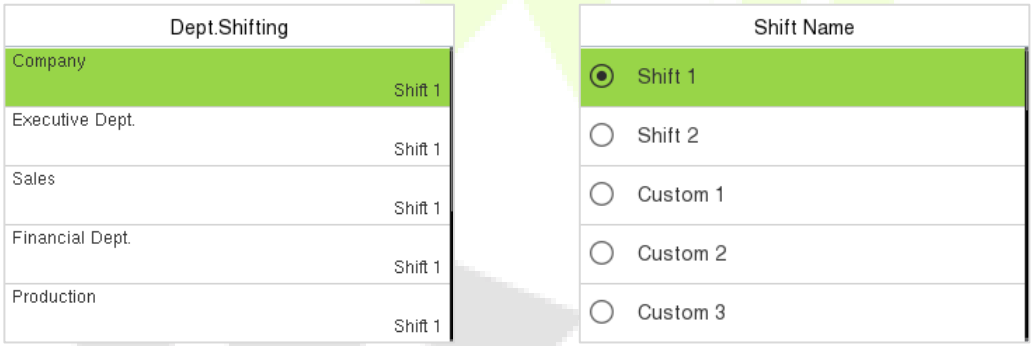
The shifts should be set based on the actual condition of a company. If no shift is set, the system makes attendance calculations based on default shifts set in attendance rules.

Select **Schedule** on the Shift Set interface.



➢ **Department-based Scheduling**

Select **Shift Set** > **Attendance Rule** > **Schedule Type** > **Dept. Shifting** to schedule shift for a department.



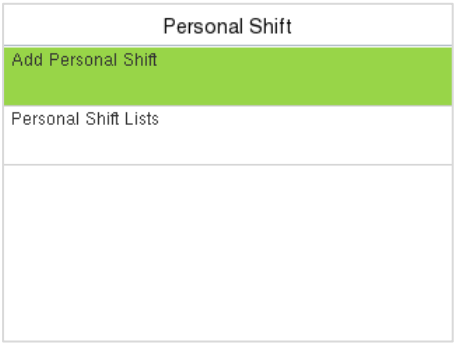
When a shift is selected for a department, it is implemented for all the members of the department.

➢ **Individual-based Scheduling**

Select **Shift Set** > **Attendance Rule** > **Schedule Type** > **Personal Shift** to schedule shift for an individual.

1. Add Schedule

1) Press **[M/OK]** to enter Schedule interface and select **Add Personal Shift**.



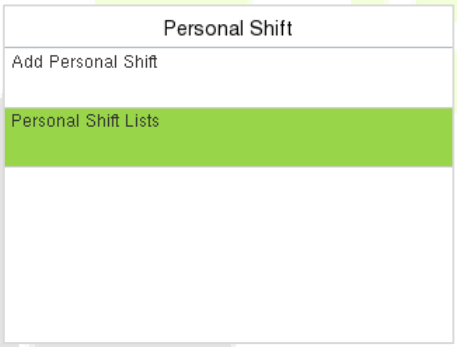
2) Enter an ID. The device automatically displays the name. Select Shift Name and then press [**M/OK**].

3) Press [**ESC**] to exit and save.

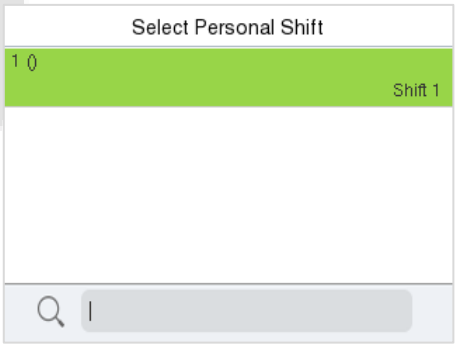
2. Edit Schedule

Enter the **Personal Shift Lists** for editing when the scheduling of individual employee needs to be adjusted.

1) Select **Personal Shift Lists** on the Personal Shift interface.



2) Select a scheduled user and press **[M/OK]**.



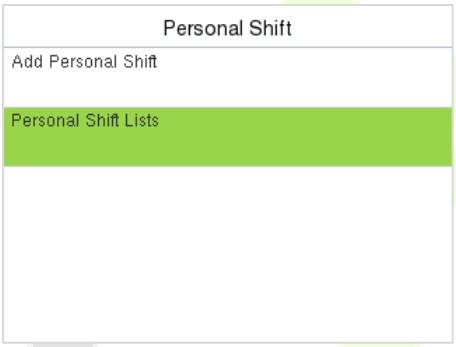
3) Select **Edit**, press **[M/OK]** to enter and modify the "Shift Name" of the user.

Note: The User ID cannot be modified. The other operations are the same as those performed to add a shift.

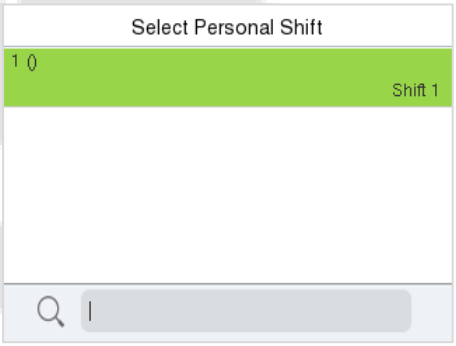
3. Delete a shift

Go to the **Personal Shift Lists**, to delete an employee's schedule that is no longer required.

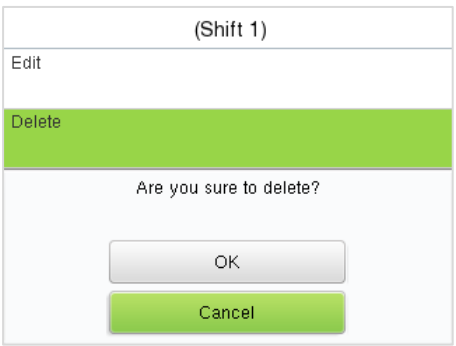
1) Select **Personal Shift Lists** on the Personal Shift interface.



2) Select a scheduled user and press **[M/OK]**.



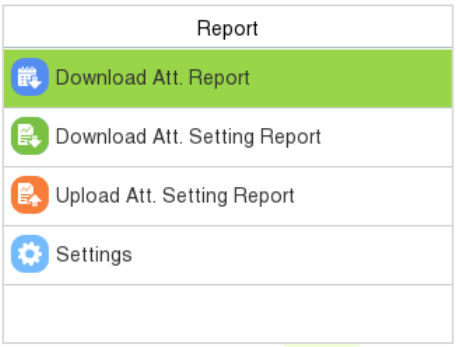
3) Select **Delete**, press [**M/OK**], and choose "**OK**" to delete the Shift successfully.



12 Report (PUSH Protocol)

This menu item allows you to download statistical reports of attendance or attendance setting reports to a USB flash drive or SD card. You can also upload attendance setting reports with defined shifts and employees' schedules. The device gives priority to the schedules in an attendance setting report.

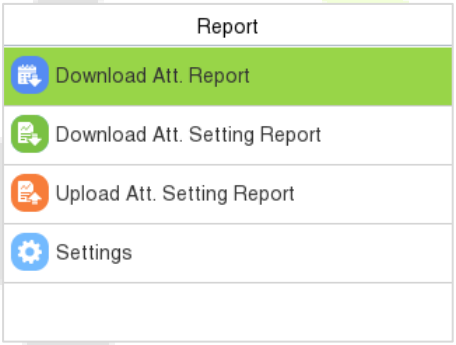
Select **Report** on the main menu interface.



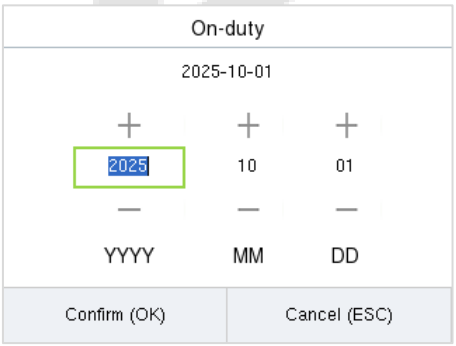
Note: First insert the USB flash drive into the USB slot of the machine, and then enter the main menu to perform the related operations of the **Report**.

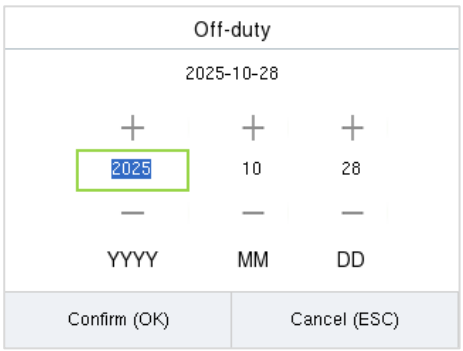
12.1 Download Att. Report

Select **Download Att. Report** and press **[M/OK]**.



Set the on-duty and off-duty time and press **[M/OK]**.





When Data download succeeds, Press **[M/OK]** to take out the USB disk or SD card. The SSRTemplateS.xls gets stored in the USB disk or SD card. The Schedule Information, Statistical Report of

Attendance, Attendance Record Report, Exception Statistic Report, and Card Report can be viewed on a PC. The following reports show the preceding information:

To make reports more understandable, a report containing two-day attendance records of four employees is provided as an example.

- **Schedule Information Report:** The report allows you to view schedule records of all employees.

Schedule Information Report

Stat.Date: 2020-08-01 ~ 2020-08-15 Special shifts:25-Ask for leave, 26-Out, Null-Holiday

ID	Name	Department	1 FEB	2 MAR
1	Joe	company	1	1
2	David	company	1	1
3	Mark	company	1	1
4	Tom	company	1	1

- **Statistical Report of Attendance:** The report allows you to query the attendance of each person in a specified period. Salaries can be calculated directly based on this report.

Statistical Report of Attendance

Stat.Date: 2020-08-01~2020-08-15

ID	Name	Department	Work hour		Late		Leave early		Overtime hour		Att. Days	Out	Absent(Day)	AFL (Day)	Additem payment			Deduction payment			Real pay	Note
			Normal	Real	Times	Min	Times	Min	Workday	Holiday	(Nor./Real)	(Day)			Label	Overtime	Subsidy	Late/Leave	AFL	Cutpayment		
1	Joe	company	18:00	17:50	0	0	1	10	00:00	00:00	2/2	0	0	0								
2	David	company	18:00	17:48	1	12	0	0	00:00	00:00	2/2	0	0	0								
3	Mark	company	18:00	08:50	1	5	1	10	00:00	00:00	2/2	0	0	0								
4	Tom	company	18:00	18:00	0	0	0	0	00:00	00:00	2/2	0	0	0								

Note: The unit of Work hour and Overtime hour in the Statistical Report of Attendance is HH: MM. For example, 17:50 indicates that the on-duty time is 17 hours and 50 minutes.

- **Attendance Record Report:** The report lists the daily attendance records of all employees within a specified period.

Attendance Record Report

Att. Time 2020-08-01~2020-08-15 Tabulation 2019-08-15

1	2																																	
ID:	1							Name:		Joe								Dept.:		company														
07:26	07:54																																	
12:25	12:56																																	
13:31	13:51																																	
17:50	18:52																																	
ID:	2							Name:		David								Dept.:		company														
07:36	09:12																																	
12:26	15:50																																	
13:31	15:51																																	
18:31	18:52																																	
ID:	3							Name:		Mark								Dept.:		company														
07:50																																		
12:30	09:05																																	
17:50																																		
ID:	4							Name:		Jack								Dept.:		company														
07:45	08:11																																	
12:50	17:55																																	
18:31	18:06																																	

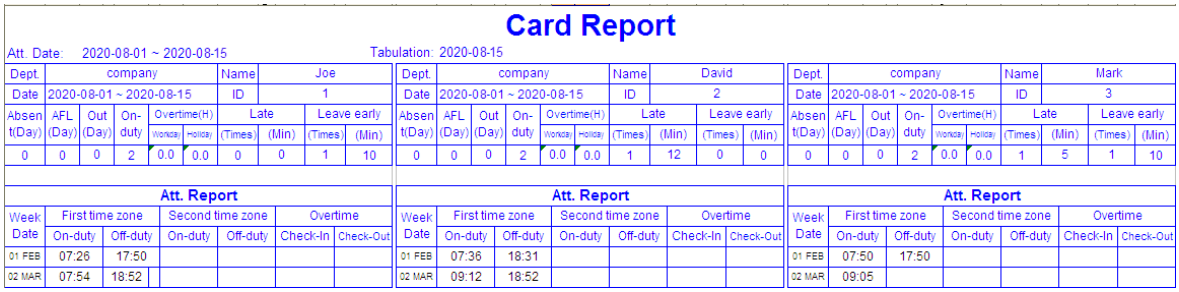
- **Exception Statistic Report:** The report displays the attendance exceptions of all employees within a specified period so that the attendance department handles the exceptions and confirm them with the employees involved and their supervisors.

Exception Statistic Report

Stat.Date: 2020-01-01 ~ 2020-08-15

ID	Name	Department	Date	First time zone		Second time zone		Late time(Min)	Leave early(Min)	Absence (Min)	Total(Min)	Note
				On-duty	Off-duty	On-duty	Off-duty					
1	Joe	company	2019-08-01	07:26	17:50			0	10	0	10	
2	David	company	2019-08-02	09:12	18:52			12	0	0	12	
3	Mark	company	2019-08-01	07:50	17:50			0	10	0	10	
4	Tom	company	2019-08-02	09:05				5	0	535	540	

❖ **Card Report:** The report can substitute for clock-based cards and can be sent to each employee for confirmation.



Card Report

Att. Date: 2020-08-01 ~ 2020-08-15 Tabulation: 2020-08-15

Dept.	company				Name	Joe		
Date	2020-08-01 ~ 2020-08-15				ID	1		
Absent(Day)	AFL (Day)	Out (Day)	On-duty	Overtime(H)		Late		Leave early	
				Workday	Holiday	(Times)	(Min)	(Times)	(Min)
0	0	0	2	0.0	0.0	0	0	1	10

Att. Report

Week Date	First time zone		Second time zone		Overtime	
	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out
01 FEB	07:26	17:50				
02 MAR	07:54	18:52				

Dept.	company				Name	David		
Date	2020-08-01 ~ 2020-08-15				ID	2		
Absent(Day)	AFL (Day)	Out (Day)	On-duty	Overtime(H)		Late		Leave early	
				Workday	Holiday	(Times)	(Min)	(Times)	(Min)
0	0	0	2	0.0	0.0	1	12	0	0

Att. Report

Week Date	First time zone		Second time zone		Overtime	
	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out
01 FEB	07:36	18:31				
02 MAR	09:12	18:52				

Dept.	company				Name	Mark		
Date	2020-08-01 ~ 2020-08-15				ID	3		
Absent(Day)	AFL (Day)	Out (Day)	On-duty	Overtime(H)		Late		Leave early	
				Workday	Holiday	(Times)	(Min)	(Times)	(Min)
0	0	0	2	0.0	0.0	1	5	1	10

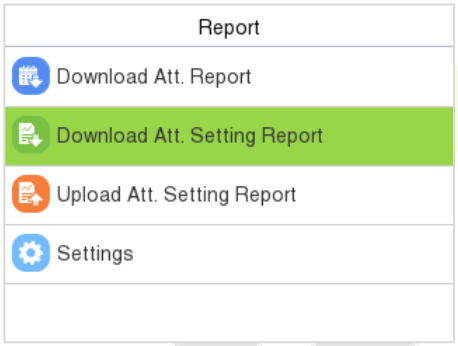
Att. Report

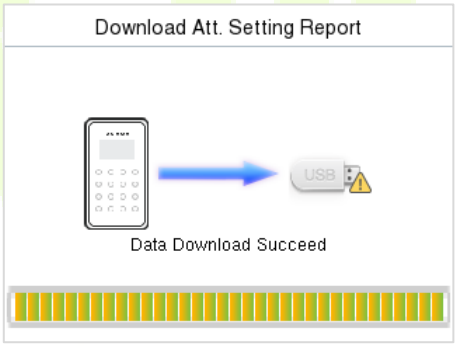
Week Date	First time zone		Second time zone		Overtime	
	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out
01 FEB	07:50	17:50				
02 MAR	09:05					

12.2 Download Att. Setting Report

If shifts are complex or the shifts of a person are not fixed, it is recommended that the attendance setting report be downloaded and shifts and schedules be set for employees in the attendance setting report.

Select **Download Att. Setting Report** and press **[M/OK]**.





Open the setting "AttSettingE.xls" in the USB disk or SD card on a PC. Set the Shift in the Attendance setting report. The shifts that have been set on the attendance machine shall be displayed. (For more details, see Shift Settings. You can modify the 24 shifts and add more shifts. After modification, the shifts shall prevail on the attendance machine.

Attendance Setting Report						
	Shift					
Numbe r	First time zone		Second time zone		Overtime	
	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out
1	9:00	18:00				
2	9:00	12:00	13:30	18:00		
3	9:00	12:00	13:30	18:00		
4	9:00	12:00	13:30	18:00		
5	9:00	12:00	13:30	18:00		
6	9:00	12:00	13:30	18:00		
7	9:00	12:00	13:30	18:00		
8	9:00	12:00	13:30	18:00		
9	9:00	12:00	13:30	18:00		
10	9:00	12:00	13:30	18:00		
11	9:00	12:00	13:30	18:00		
12	9:00	12:00	13:30	18:00		
13	9:00	12:00	13:30	18:00		
14	9:00	12:00	13:30	18:00		
15	9:00	12:00	13:30	18:00		
16	9:00	12:00	13:30	18:00		
17	9:00	12:00	13:30	18:00		
18	9:00	12:00	13:30	18:00		
19	9:00	12:00	13:30	18:00		
20	9:00	12:00	13:30	18:00		
21	9:00	12:00	13:30	18:00		
22	9:00	12:00	13:30	18:00		
23	9:00	12:00	13:30	18:00		
24	9:00	12:00	13:30	18:00		

Enter the On-duty and Off-duty time in the corresponding columns, where the First time zone shall be the On-duty or Off-duty time of Time 1 of Shift Settings, and the Second time zone shall be the On-duty or Off-duty time of Time 2.

For the correct schedule time format, see "What is the correct time format used in the setting reports" in the "Self-Service Attendance Terminal FAQs."

Set a schedule setting report

Enter the **ID**, **Name**, and **Department** respectively on the left of the **Schedule Setting Report**. Set shifts for employees on the right of the **Schedule Setting Report**, where shifts 1–24 are shifts to set the **Attendance Setting Report.** Shift 25 is for leave and Shift 26 is for out.

Schedule Setting Report																																		
Special shifts:25-Ask for leave, 26-Out, Null-Holiday																																		
Schedule date				2020-8-1																																
ID	Name	Department	Card number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
				THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
1	Joe	company																																
2	David	company																																
3	Mark	company																																
4	Jack	company																																

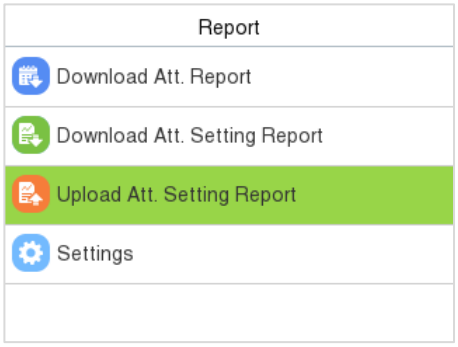
Notes:

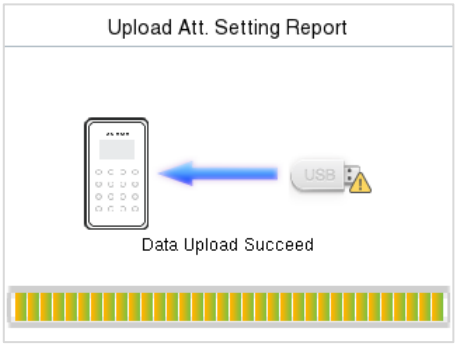
1. The shifts of only 31 days can be arranged in one schedule setting report. For example, if the scheduling date is 2020-1-1, the schedule setting report contains the schedules of 31 days after 2020-1-1, that is, scheduled from 2020-1-1 to 2020-1-31. If the scheduling date is 2020-1-6, the schedule setting report contains the schedules of 31 days after 2020-1-6, that is, scheduled from 2020-1-6 to 2020-2-5.
2. If no schedule setting report is set, all employees use Report 1 by default from Monday to Friday.

12.3 Upload Att. Setting Report

After setting the attendance setting table, save the "Setting Report.xls" to the USB flash drive and reinsert the USB flash drive into the USB slot of the device.

Select **Upload Att. Setting Report** on the Report interface and press **[M/OK]**.





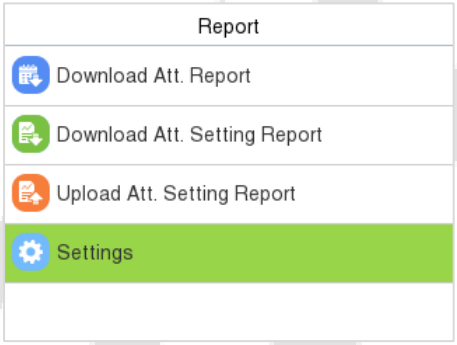
After uploading, remove the USB disk or SD card. At this time, the employee information, shift, and department in the setting report can be viewed respectively by the Management User, Shift Number, and Department available in the device. Or the above information and scheduling information can be seen in the standard download report.

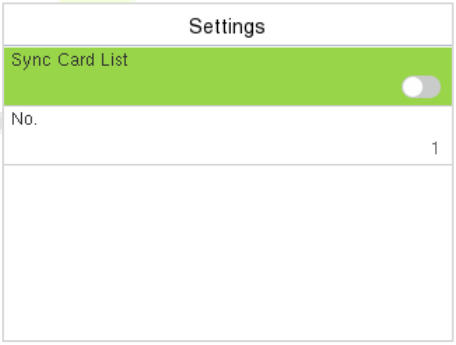
Note: If the schedule time format is incorrect, Re-upload the attendance setting report after modification.

12.4 Settings

Set whether to synchronize the card report and distinguish the device ID when downloading the attendance report.

Select **Settings** on the Report interface and press **[M/OK]**.



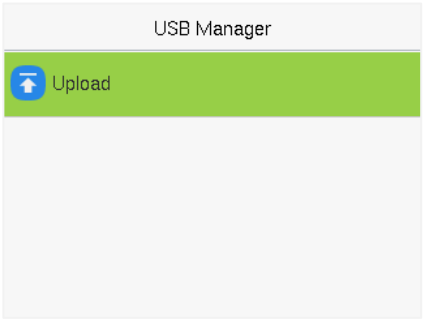


13 USB Manager

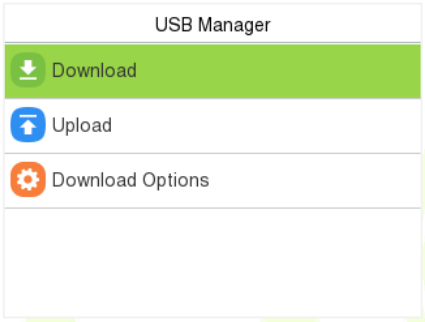
You can import the user information, and attendance data in the machine to matching attendance software for processing by using a USB disk, or import the user information to other devices for backup.

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.



BEST Protocol

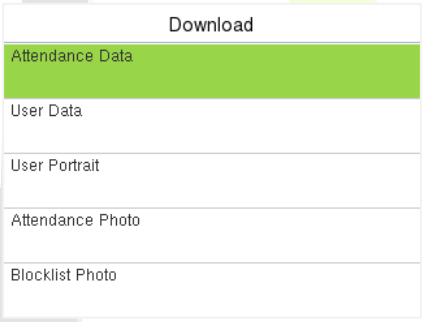


PUSH Protocol

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

13.1 USB Download (PUSH Protocol)

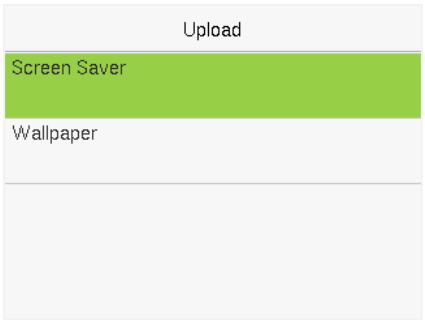
On the **USB Manager** interface, select **Download**.



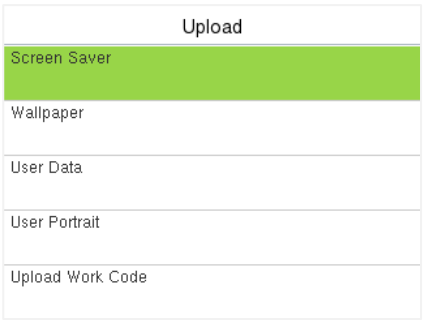
Function Name	Description
Attendance Data	To download all attendance data in specified time period into USB disk.
User Data	To download all user information from the device into USB disk.
User Portrait	To download all user portraits from the device into USB disk.
Attendance Photo	To download all attendance photos from the device into USB disk.
Blocklist Photo	To download all blocklist photos (photos taken after failed verifications) from the device into USB disk.
Work Code	To download all work code from the device into USB disk.

13.2 USB Upload

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



BEST Protocol

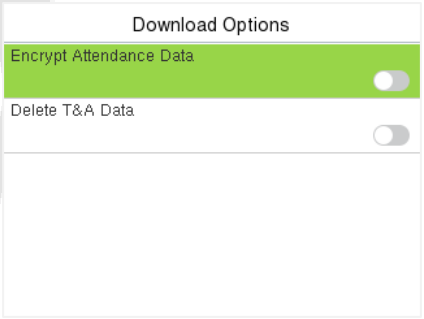


PUSH Protocol

Function Name	Description
Screen Saver	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.
Upload Work Code	To upload all work code from USB disk into the device.

13.3 Download Options (PUSH Protocol)

On the **USB Manager** interface, select **Download Options**.

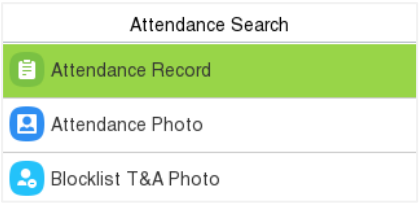


Function Name	Description
Encrypt Attendance Date	The attendance data is encrypted during the uploading and downloading.
Delete T&A Data	After successful downloading, the attendance data on the device is deleted.

14 Attendance Search

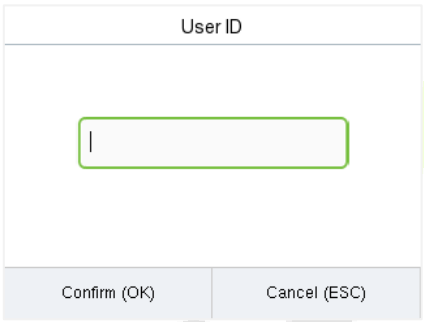
Once the identity of a user is verified, the Event Logs will be saved in the device. This function enables users to check their attendance records.

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

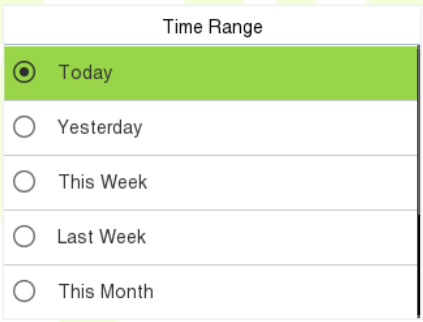


The process of searching for attendance and blocklist photos is similar to that of searching for event logs. The following is an example of searching for attendance record.

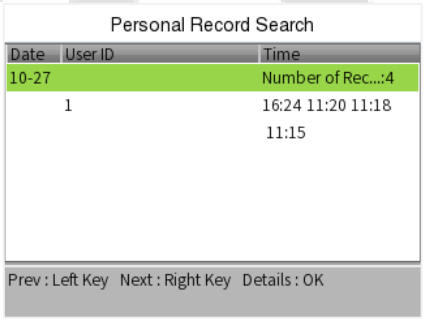
On the **Attendance Search** interface, select **Attendance Record** to search for the required record.



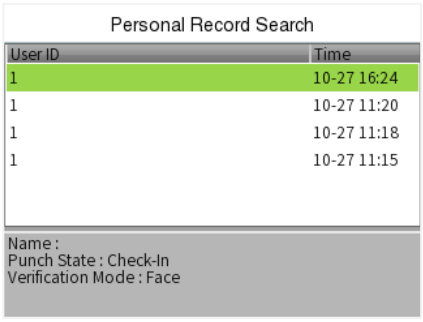
1. Enter the user ID to be searched and press **M/OK**. If you want to search for records of all users, press **M/OK** without entering any user ID.



2. Select the time range in which the records need to be searched.



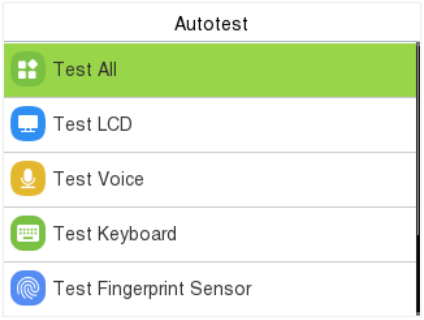
3. Once the record search completes. Select the record highlighted in green to view its details.



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

15 Autotest

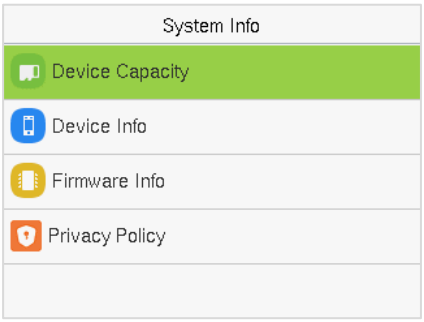
When the device is on the initial interface, press **M/OK** and select **Autotest**, it enables the system to automatically test whether the functions of various modules are working normally, including the LCD, Voice, Keyboard, Fingerprint, Camera and Real-Time Clock (RTC).



Function Name	Description
Test All	To automatically test whether the LCD, Audio, Keyboard, Fingerprint, Camera and 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.
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 by checking the photos taken to see if they are clear enough. (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.

16 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 Name	Description
Device Capacity	Displays the current device's user storage, password, face template, fingerprint and card★ storage, T&A records, attendance and blocklist photos, 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	The privacy policy control will appear when the gadget turns on for the first time. After clicking "**I have read it**," the customer can use the product regularly. Click **System Info** > **Privacy Policy** to view the content of the privacy policy. The privacy policy's content does not allow for U disc export. ***Note:*** *The current privacy policy's text is only available in Simplified Chinese/ English. However, translation of other multi-language content is underway, with more iterations.*

17 Connecting to ZKBio Zlink App

The App pages may vary depending on the version, and the document is for reference only.

Change the device communication protocol to BEST protocol, then the device can be managed by ZKBio Zlink, please refer to 6.5 Device Type Settings.

- **Download the ZKBio Zlink App**

Search for the "ZKBio Zlink" App in the iOS App Store or Google Play Store. Or scan the QR code below to install the app.

Apple App Store

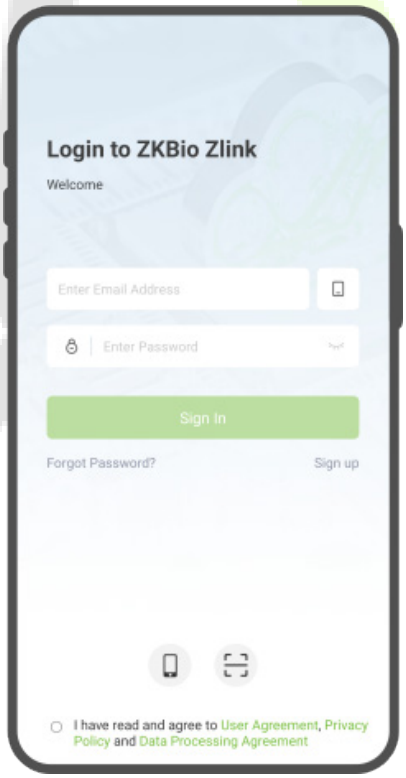
Google Play Store

Download on the App Store

GET IT ON Google Play

17.1 Login to the App

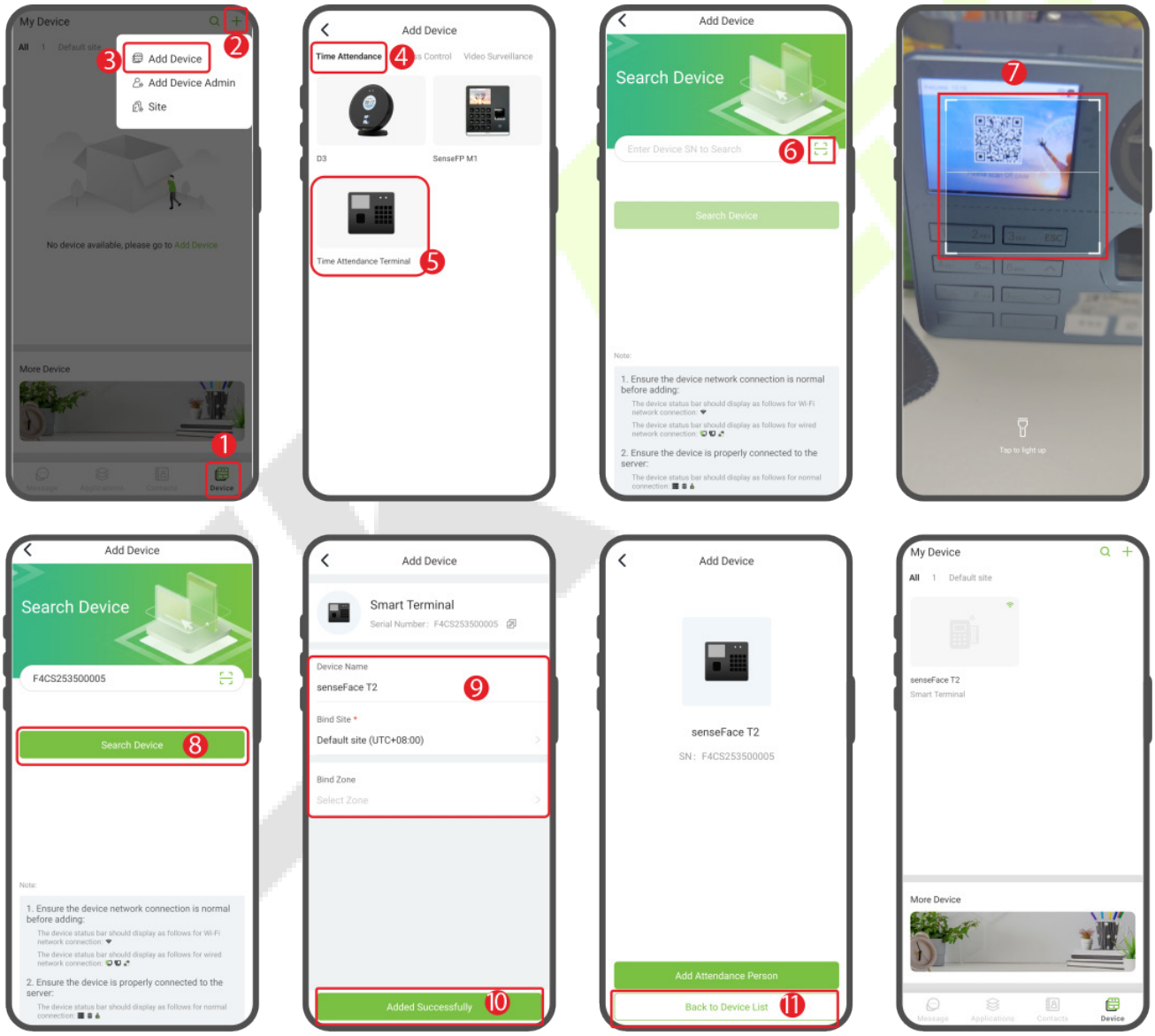
Enter your registered account and password, check “I have read and agree to User Agreement, Privacy Policy and Data Processing Agreement” and click **Sign In** to log in to the App.



Note: *For more operations, refer to the ZKBio Zlink App's user manual.*

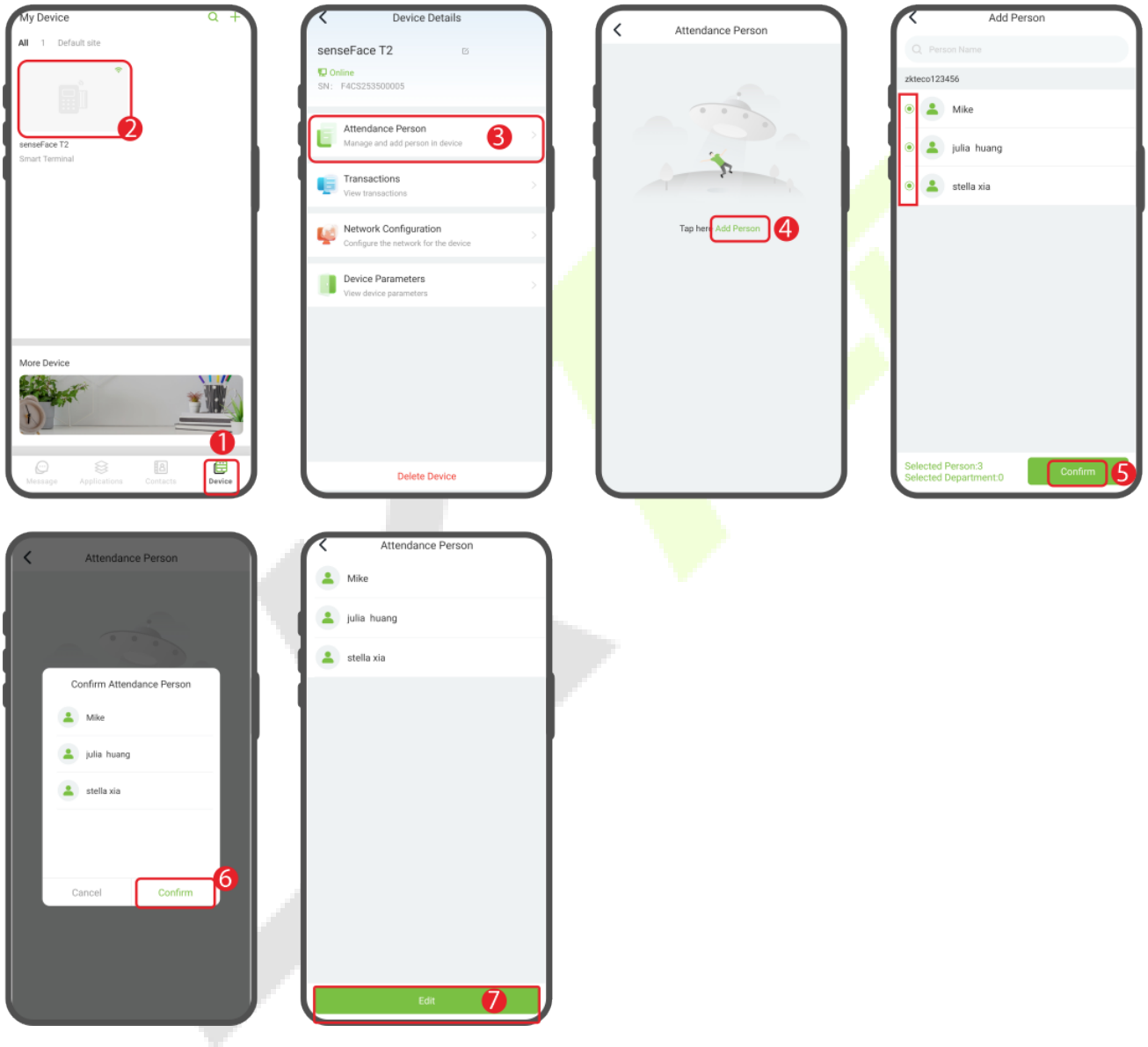
17.2 Add Device on the App

- Access the ZKBio Zlink App and click on [**Device**] > + icon > [**Add Device**] > [**Time Attendance**] > **[Time Attendance Terminal]**. (1,2,3,4,5)
- Click icon to scan the QR code on the device. The serial number of the device will be displayed in the bar. Then click **[Search Device]**. (6,7,8)
- Enter the device name and specify the device to a site and zone. Click [**Added Successfully**] to complete the addition. At the same time, the device voice prompts "**Device is added successfully**" indicating that the addition is complete. (9,10,11)
- Once successfully added, the device is displayed in the list of the device interface.



17.3 Manage and Add Person in Device

- Click [**Device**], select the device in the list to enter the Device Details interface. (1,2)
- Click [**Attendance Person**] > [**Add Person**], select the persons and click [**Confirm**] to add them to the device. (3,4,5)
- Click [**Confirm**] in the pop-up confirmation window. (6)
- After completion, the personnel will be synchronized to the device, and you can click [**Edit**] to edit and modify. (7)

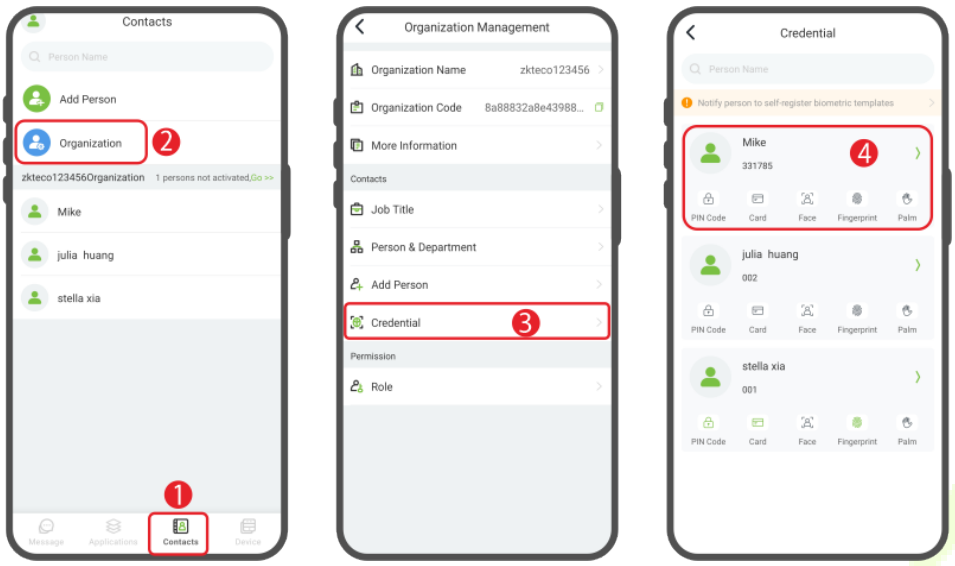


17.4 Register Verification Mode on the App

Once you have added persons to the device, you can register verification modes to them.

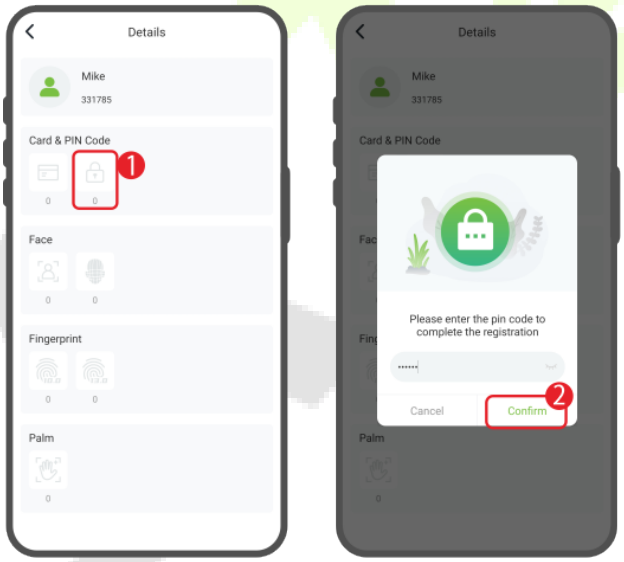
Note: It must be based on the functions actually supported by the device.

Click [**Contacts**] > [**Organization**] > [**Credential**] to enter the Credential screen, select the person who needs to register verification mode. (1,2,3,4)



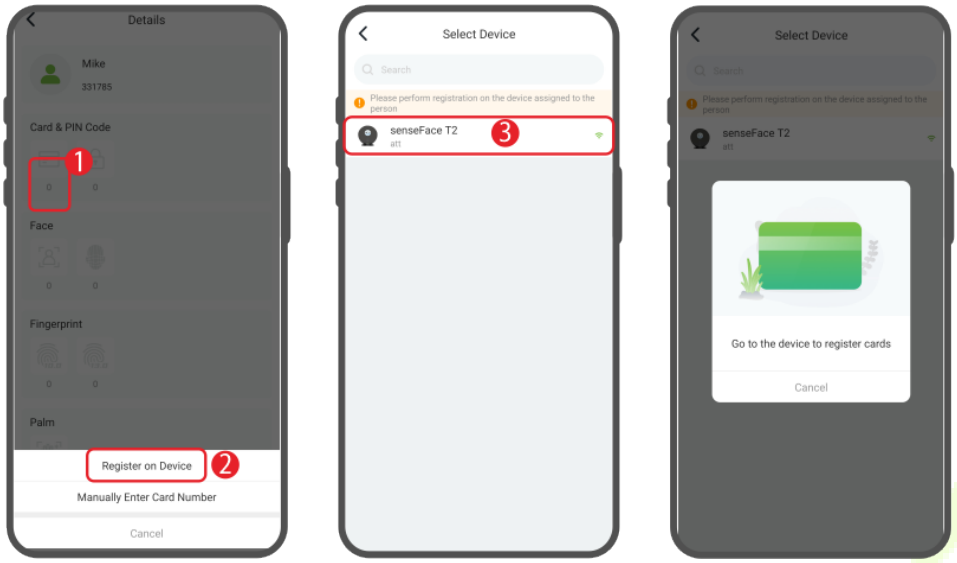
Register Password

In the Details interface, click on the icon and enter the password in the pop-up window, then click [**Confirm**]. (1,2)



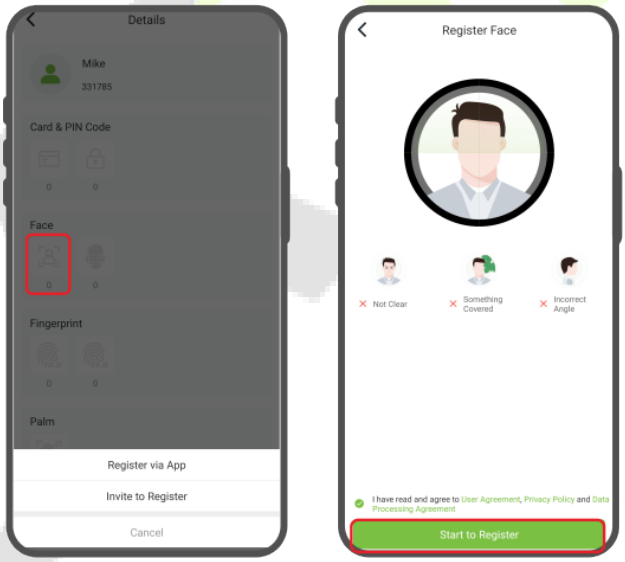
Register Card★

- In the Details interface, click on the icon. You can select Register on Device or Manually Enter Card Number. If you want to register on device, then click **Register on Device**. (1,2)
- Select the registration device, at the same time, the device displays the Enroll Card Number interface. Place the card in the swipe area, when the display shows "**Card registered successfully**", it means the card is successfully registered. (3)



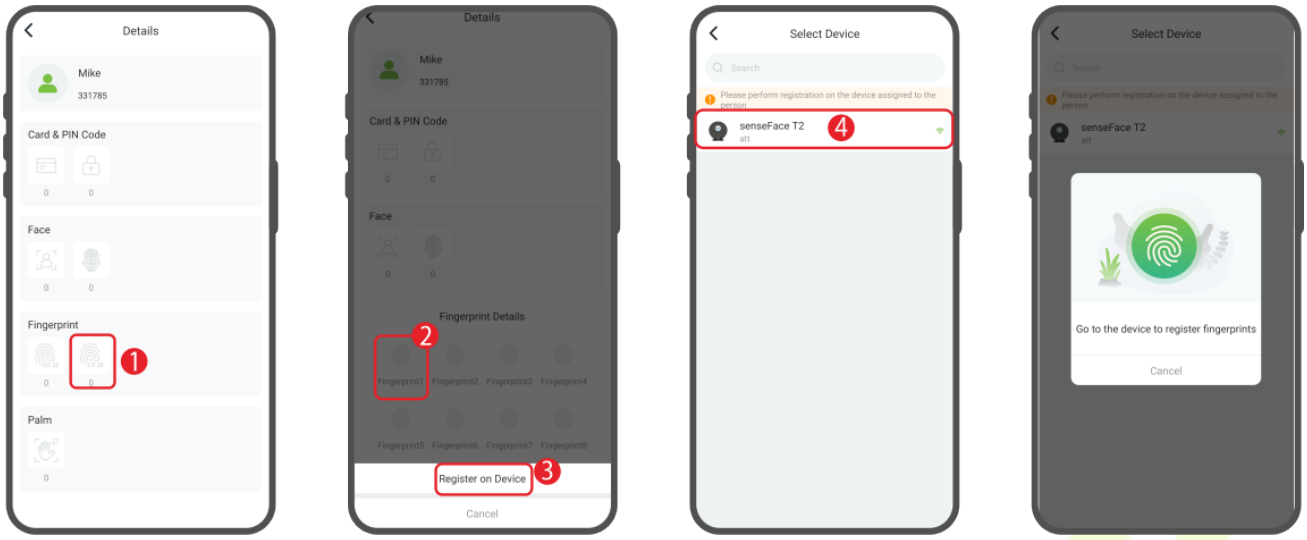
Register Face

- In the Details interface, click on the icon. You can select Register via App or Invite to Register. If you want to register via App, then click **Register via App** > **Start to Register** to take a shot.
- You can also click **Invite to Register** to send a message to the person to upload the facial photo. (**Note:** The person should be activated.)



Register Fingerprint

- In the Details interface, click on the or icon (it depends on the fingerprint algorithm that set in **System > Fingerprint**), select the fingerprint and click **Register on Device** > **Register on Device**. (1,2,3)
- Select the registration device, at the same time, the device displays the fingerprint registration screen. According to the prompts, place your finger on the fingerprint sensor and press **3** times. When the interface prompts "**Enrolled successfully**", it means the fingerprint registration is successful. (4)



18 Connecting to ZKBio Zlink Web

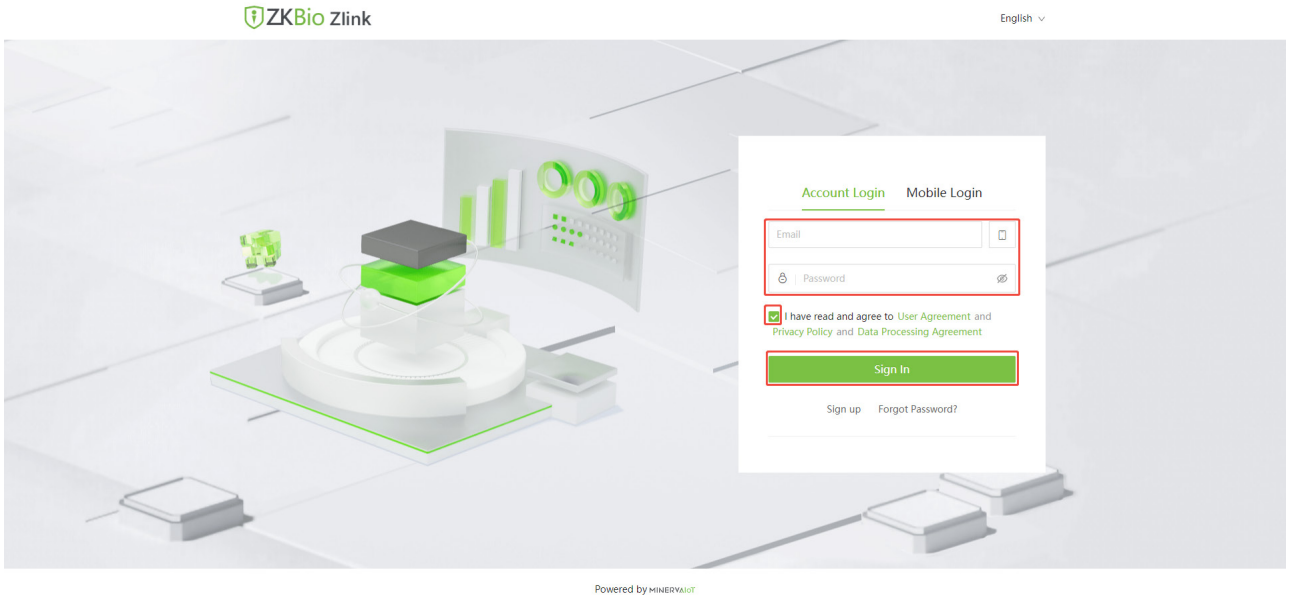
The web pages may vary depending on the version, and the document is for reference only.

Change the device communication protocol to BEST protocol, then the device can be managed by ZKBio Zlink, please refer to 6.5 Device Type Settings.

Users can use the created account to access ZKBio Zlink Web to connect devices, add new personnel, register the verification method of registered personnel, synchronize personnel to devices and query records.

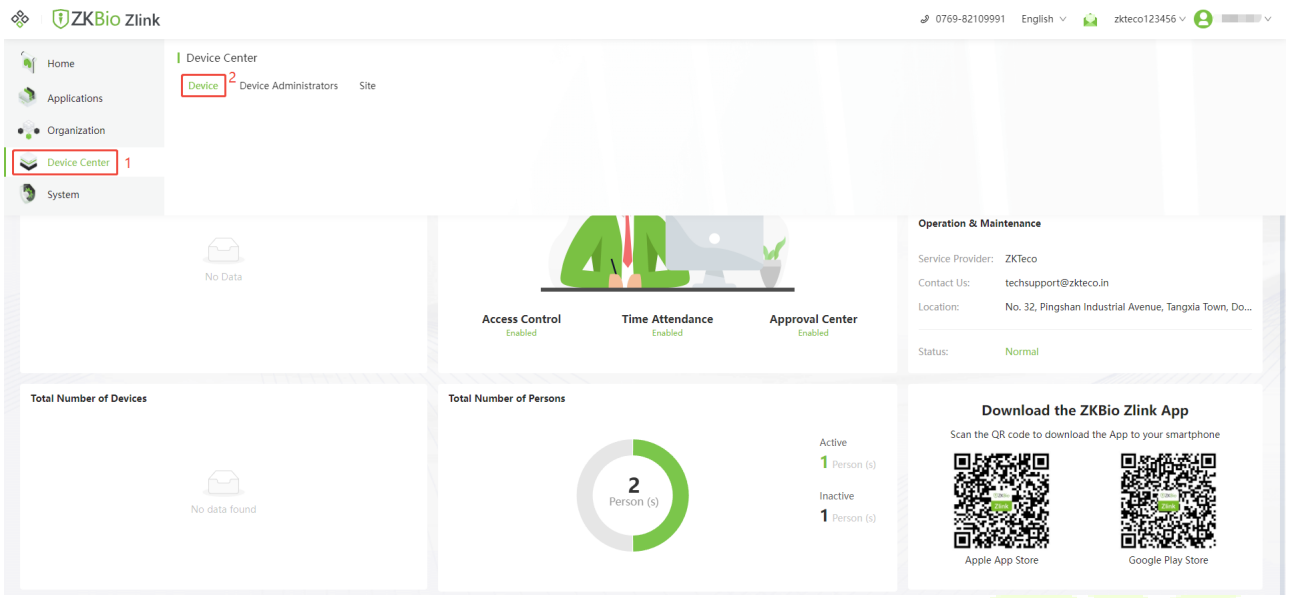
18.1 Login to the Web

1. Please open the recommended browser and enter the IP address to access the ZKBio Zlink Web: http://zlink.minervaiot.com.
2. Enter your Email ID and password on the login screen, check "I have read and agree to User Agreement and Privacy Policy and Data Processing Agreement" and click [**Sign In**] to login.

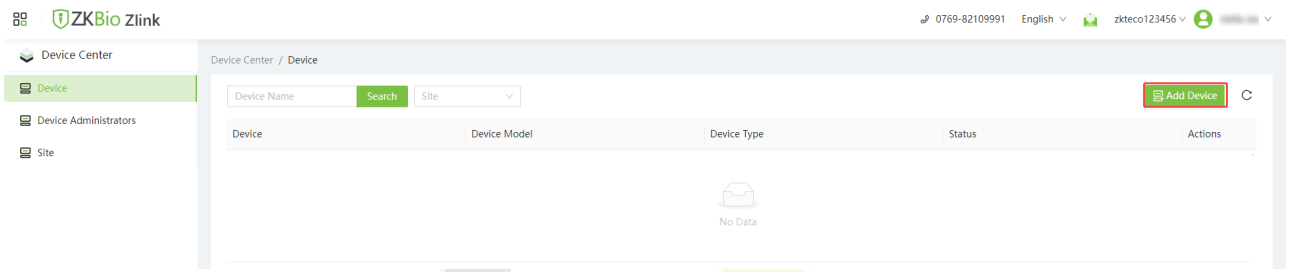


18.2 Add Device on the Web

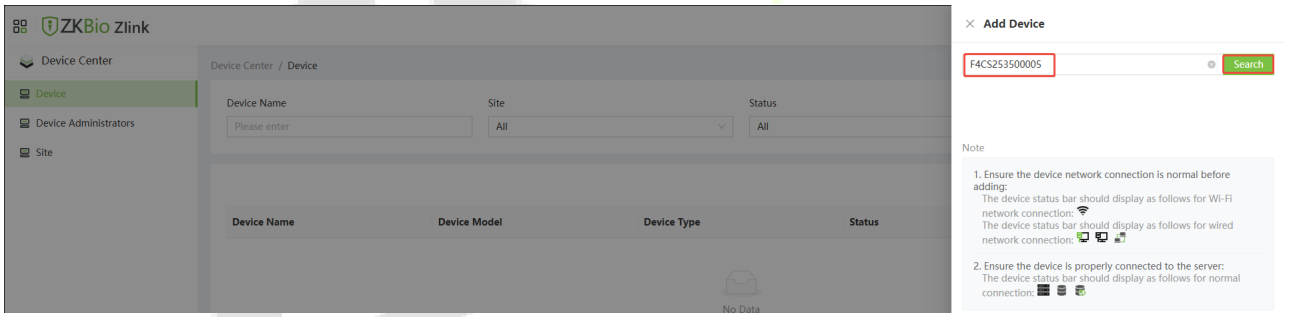
1. Click the icon on the top left corner, and click [**Device Center**] > [**Device**] to enter the device setting interface.



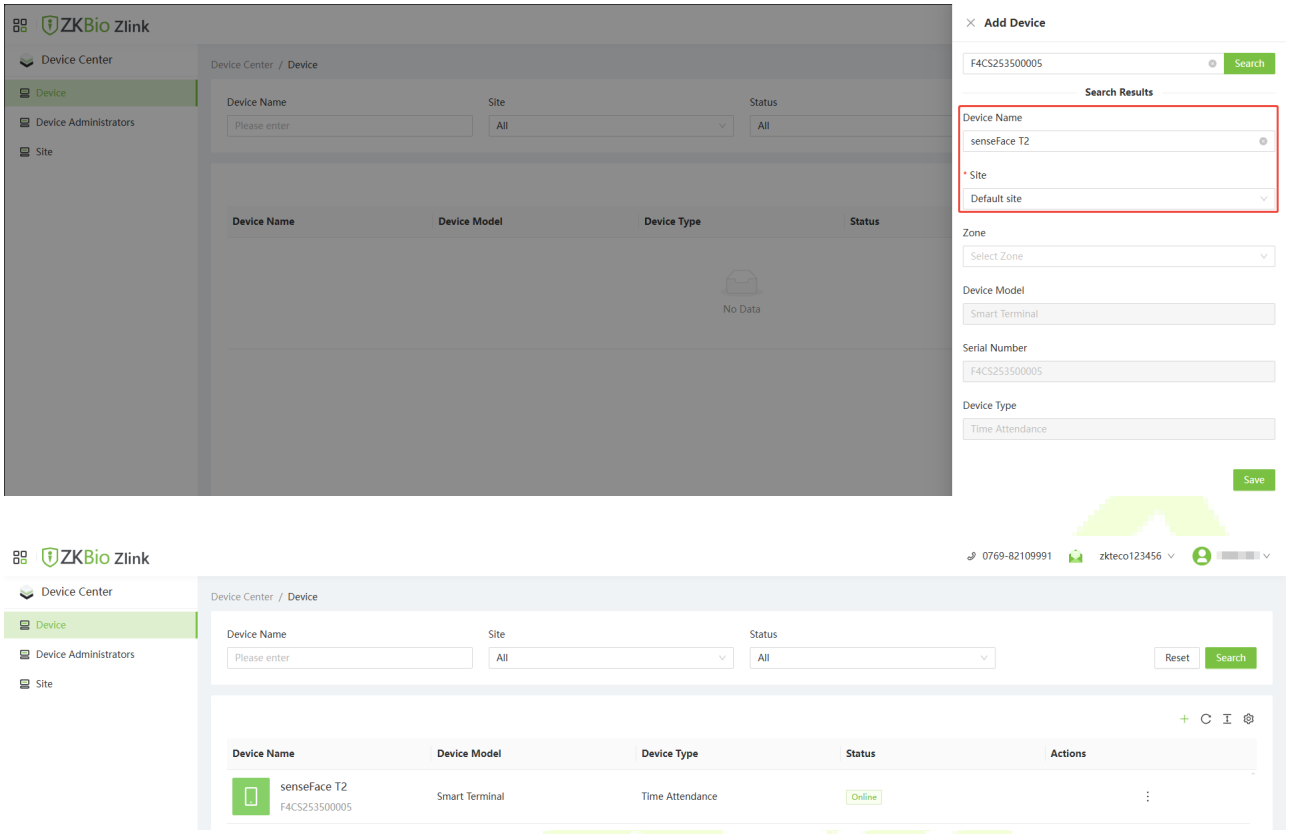
2. Then click [**Add Device**] to enter the Add Device interface.



3. Enter the Serial Number and click [**Search**].



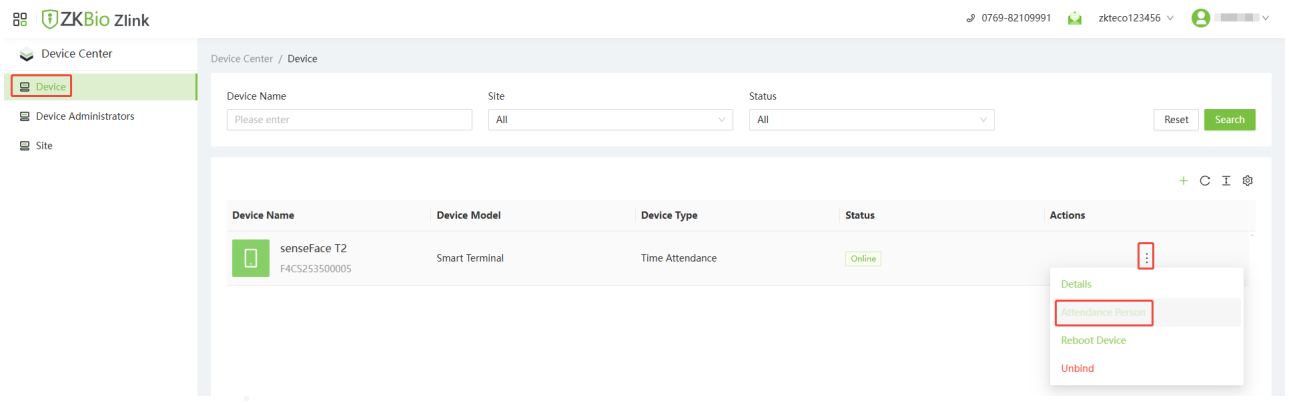
4. Then enter the device name and specify the device to a site. Select Site from the drop-down menu. Click [**Save**] to complete the addition.



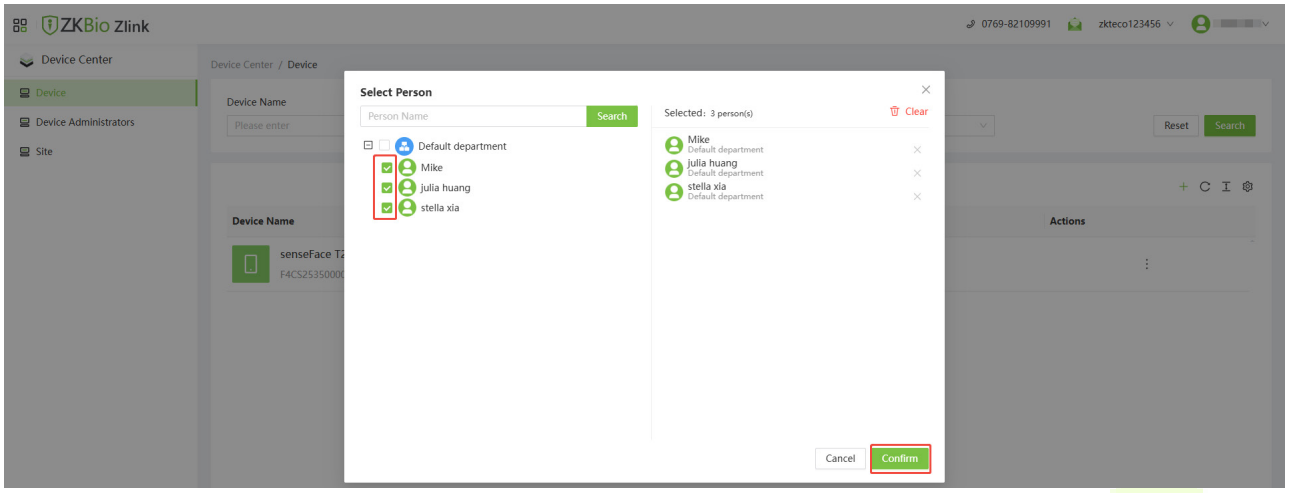
Note: *Wait a moment for the device status to change from "**Offline**" to "**Online**".*

18.3 Manage and Add Person to Device

1. Click the icon on the top left corner, and click [**Device Center**] > [**Device**] to enter the device setting interface. Select the device in the list, click the icon > [**Attendance Person**] to enter the Select Person interface.

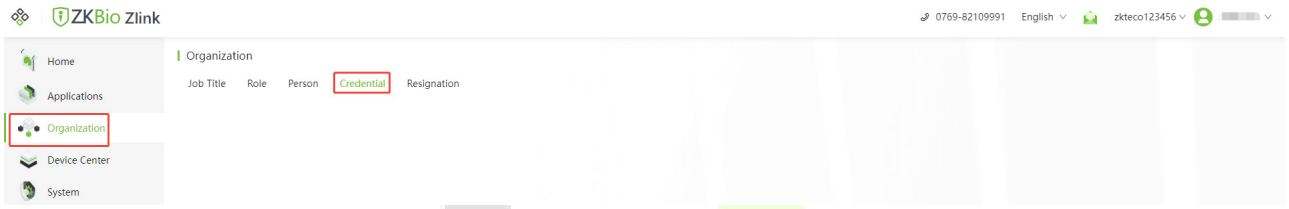


2. Tick the person in the pop-up window and click [**OK**] to add the person to the device.

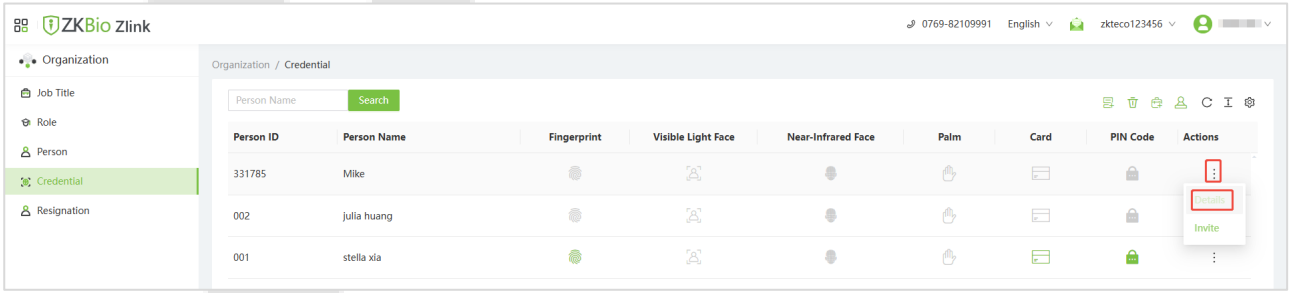


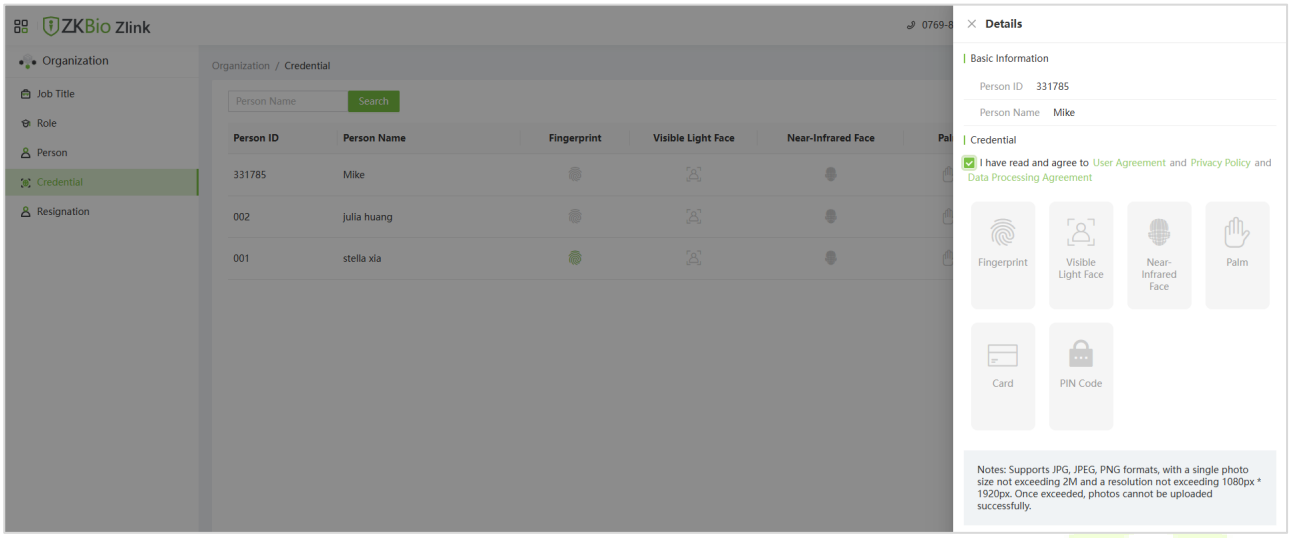
18.4 Register Verification Mode on the Web

1. Click the icon on the top left corner, and click [**Organization**] > [**Credential**] to enter the credentials setting interface.



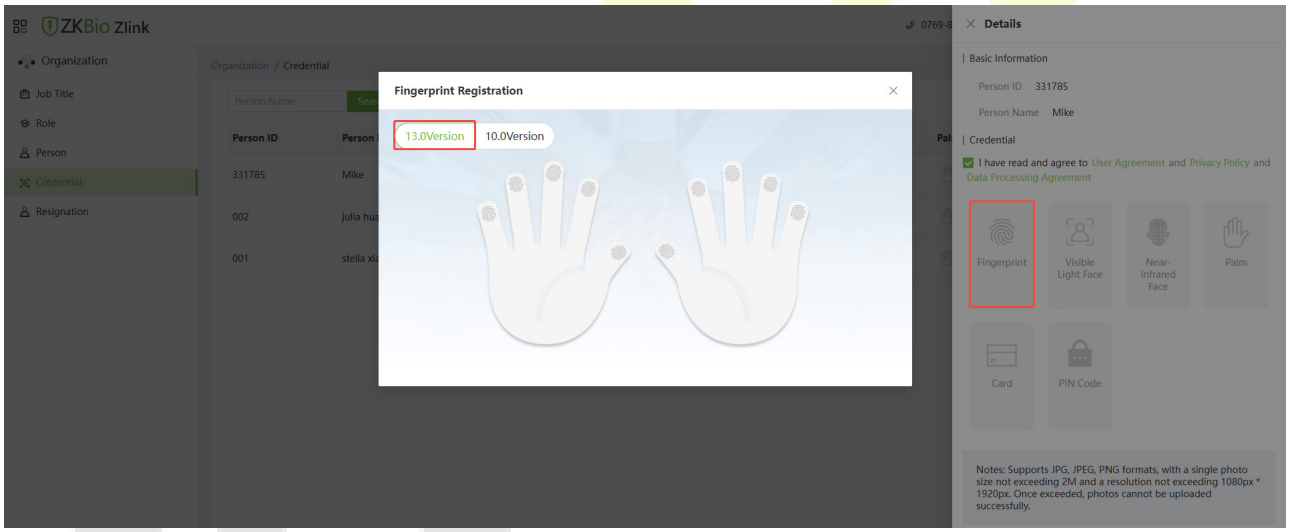
2. Select the person and click the icon > **Details**, check "I have read and agree to User Agreement and Privacy Policy and Data Processing Agreement" and click **Fingerprint/Visible Light Face/Card★/PIN Code** to remotely register the personnel biometric verification mode.



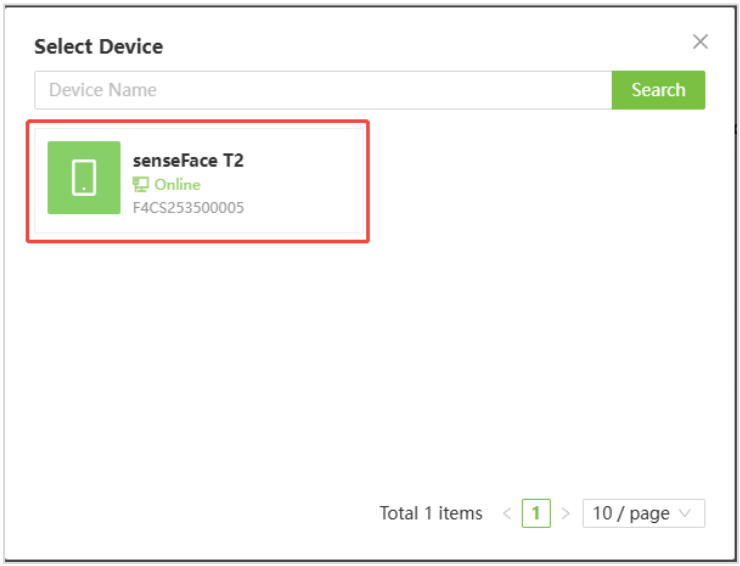


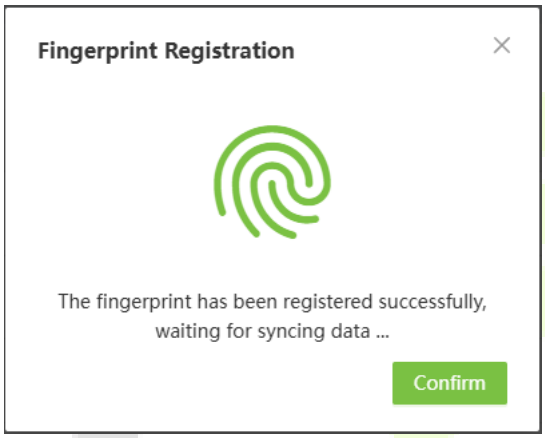
- **Register Fingerprint**

1. Click **Fingerprint** in the Details page. Click **13.0Version** or **10.0Version** (it depends on the fingerprint algorithm that set in **System** > **Fingerprint**). Choose the hand and finger to be enrolled in the pop-up prompt window.



2. Select the registration device, the device will display the fingerprint registration screen. According to the prompts, place your finger on the fingerprint sensor and press 3 times. When the interface prompts “Enrolled Successfully”, it means the fingerprint registration is successful.

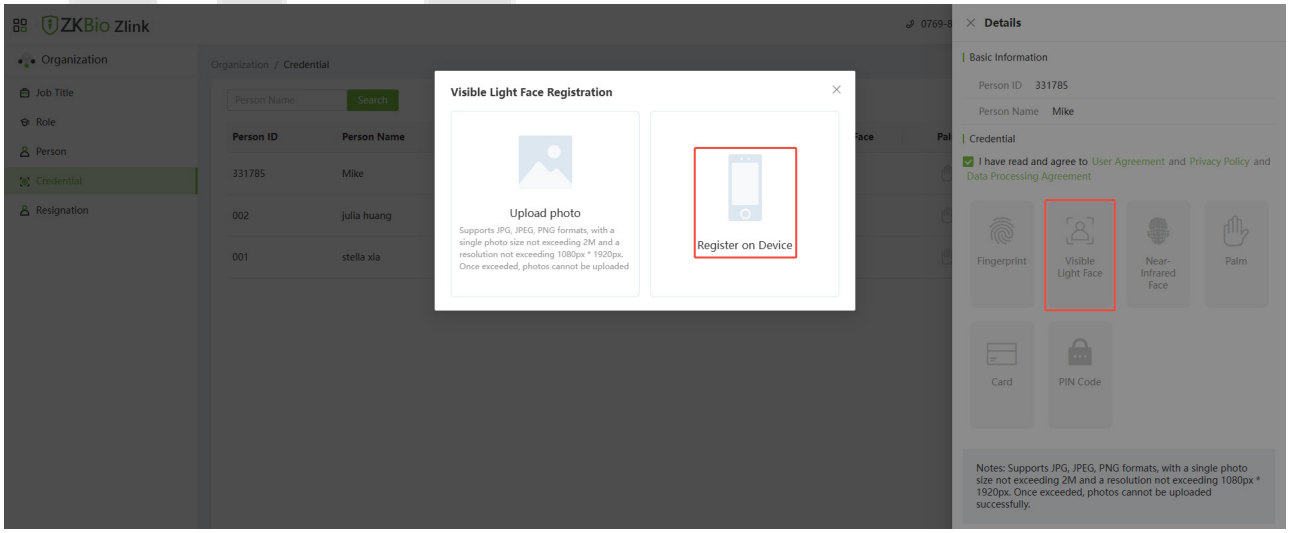




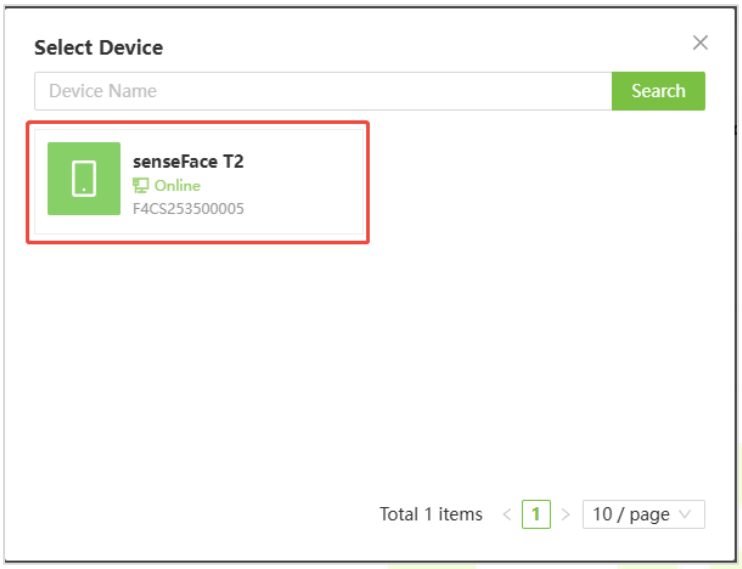
3. And you can repeat the above operation to register other fingers.

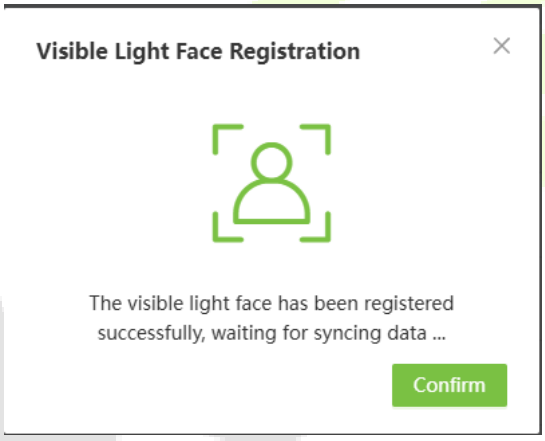
- **Register Face**

1. Click **Face** in the Details page. You can select Register on Device or Upload photo. If you want to register on device, then click **Register on Device**.



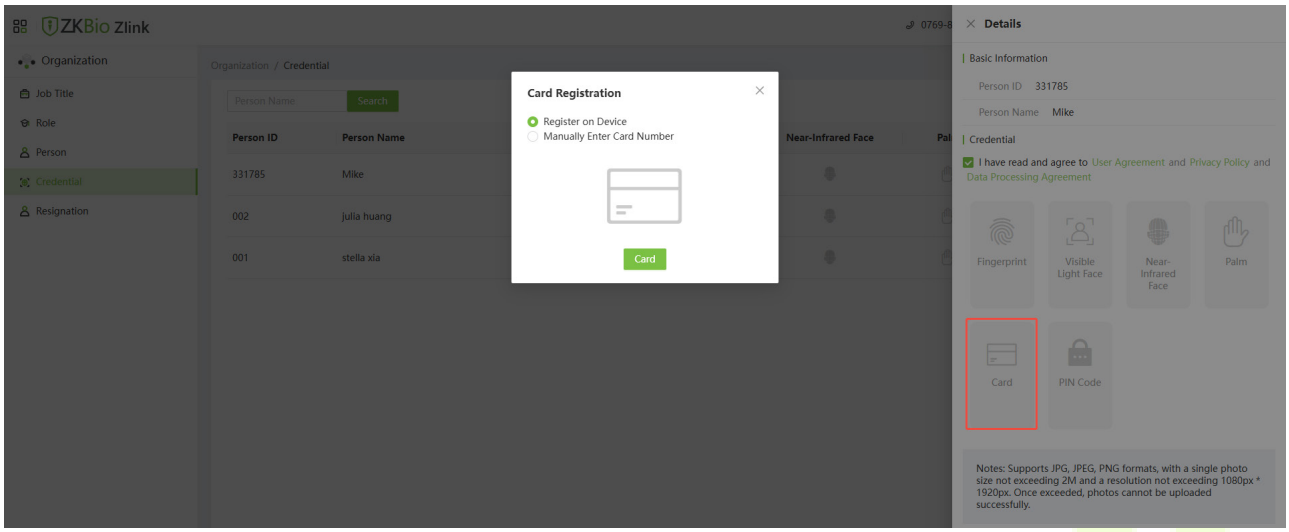
2. Select the registration device, at the same time, the device displays the Enroll Face interface. Face towards the camera and stay still during face template registration, when the display shows "**Enrolled successfully**", it means the face is successfully registered.



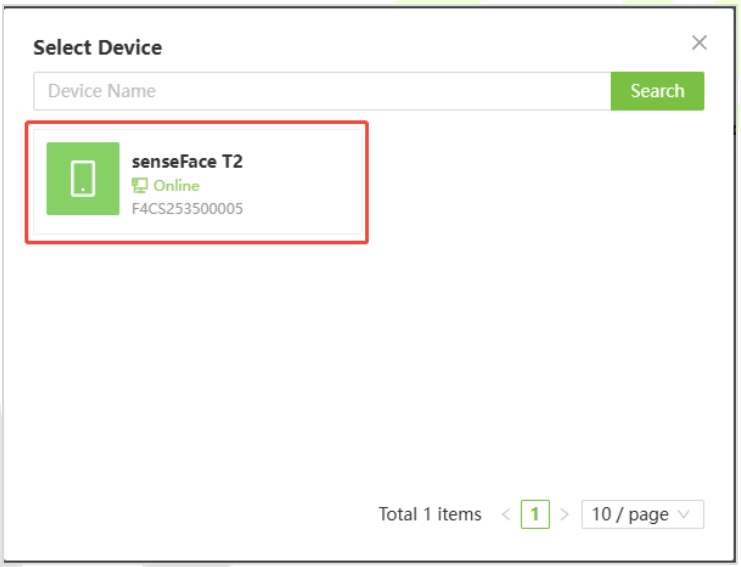


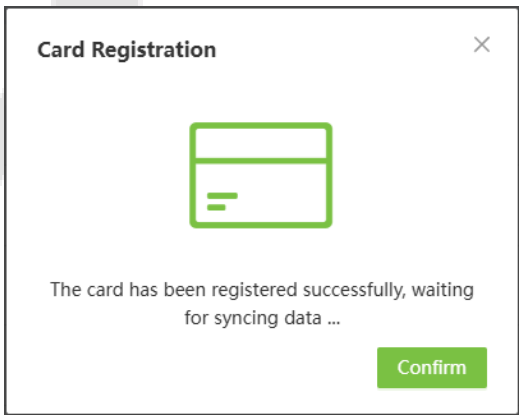
- **Register Card★**

1. Click **Card** in the Details page. You can select Register on Device or Manually Enter Card Number. If you want to register on device, then click **Register on Device**.



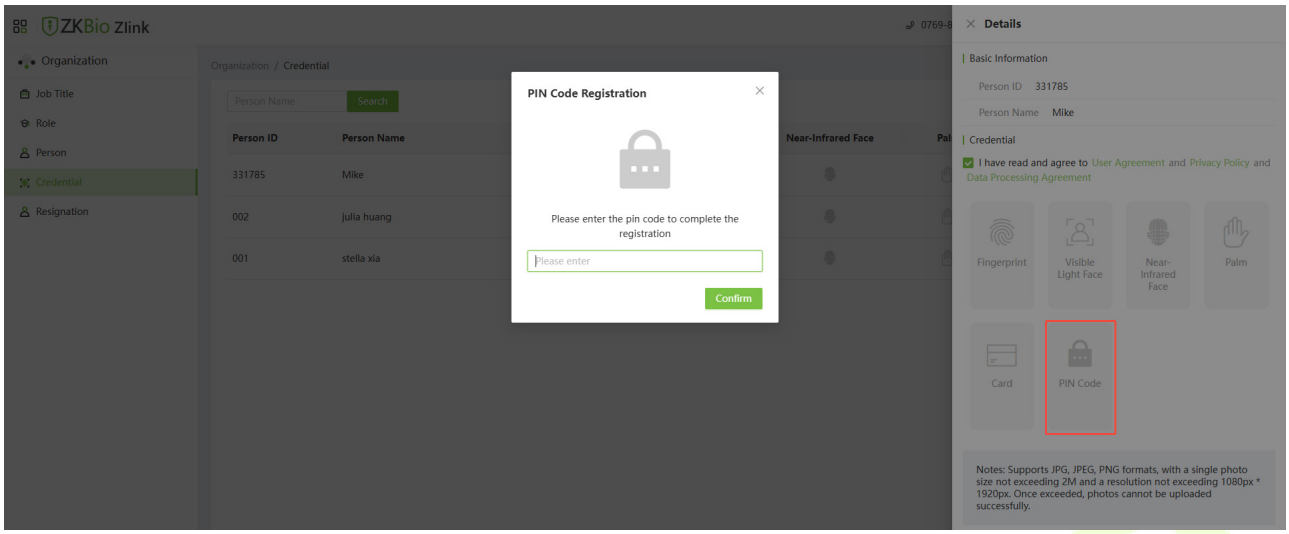
2. Select the registration device, the device will display the **Enroll Card Number** interface. Place the card in the swipe area, when the display shows green √, it means the card is successfully registered.





- **Register Password**

Click **PIN Code** in the Details page. Set the password in the pop-up prompt window, and then click [**Confirm**].



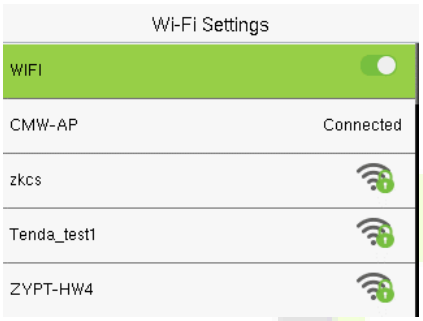
For more details, please refer to the ZKBio Zlink User Manual.

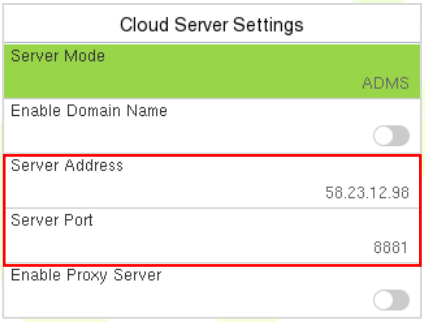
19 Connect to ZKBio CVAccess Software

Change the device type as PUSH Protocol, then the device can be connected to ZKBio CVAccess, please refer to 6.5 Device Type Settings.

19.1 Set the Communication Address

1. Press **M/OK** and enter **COMM.** > **Wi-Fi Settings** to configure the network of the device. (***Note:*** The network should be able to communicate with the ZKBio CVAccess server)
2. Press **M/OK** and enter **COMM.** > **Cloud Server Setting** 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.

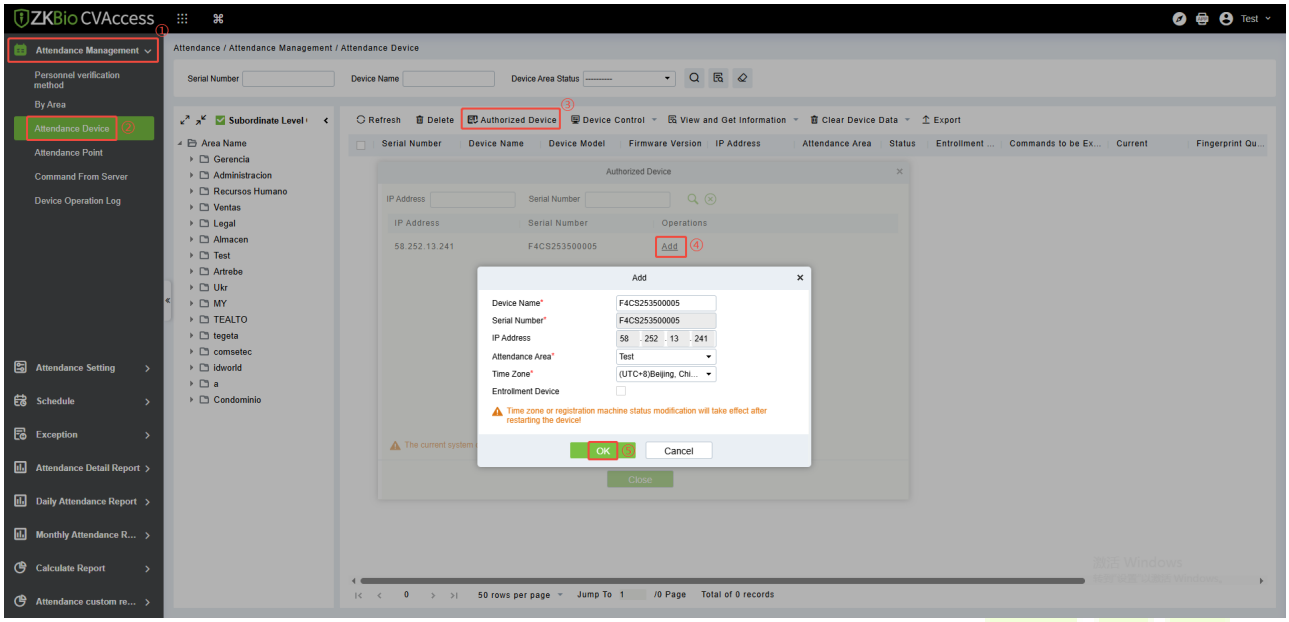




19.2 Add Device on the Software

The process is as follows:

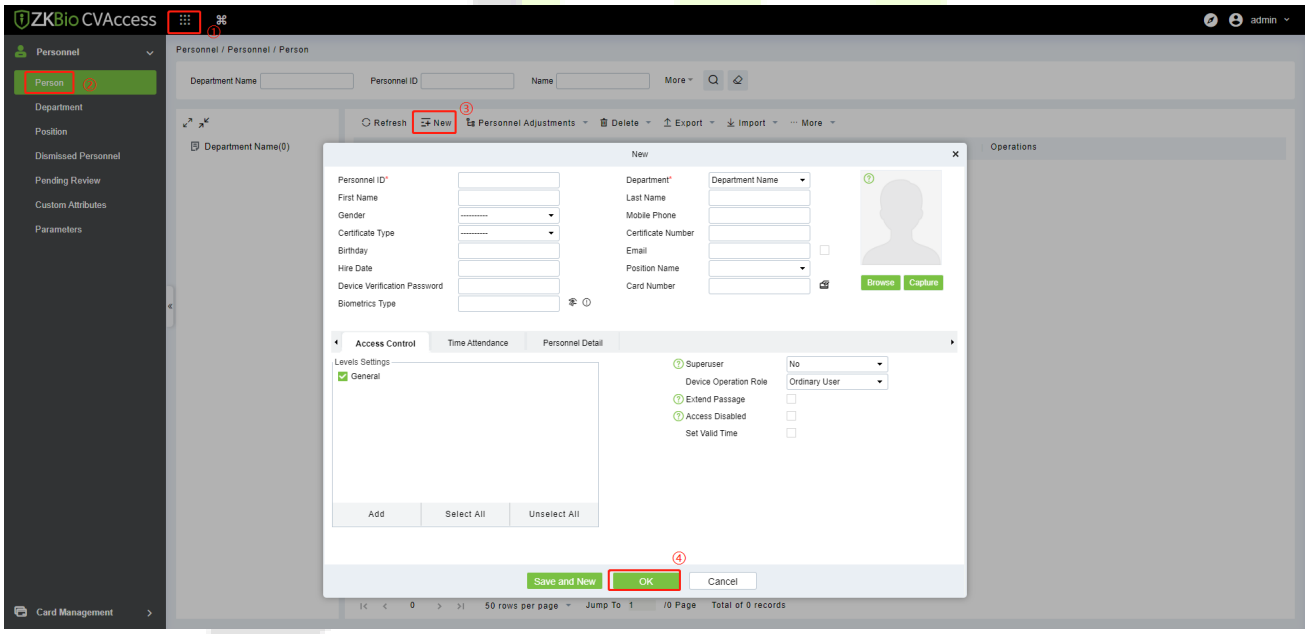
1. Click **Attendance** > **Attendance Management** > **Attendance Device** > **Authorized Device**, the list of authorized devices will be displayed.
2. Select the device to be added and click [**Add**] in operation column, a new window will pop-up. Modify the Device Name and select Attendance Area from dropdown and click [**OK**] to add the device.



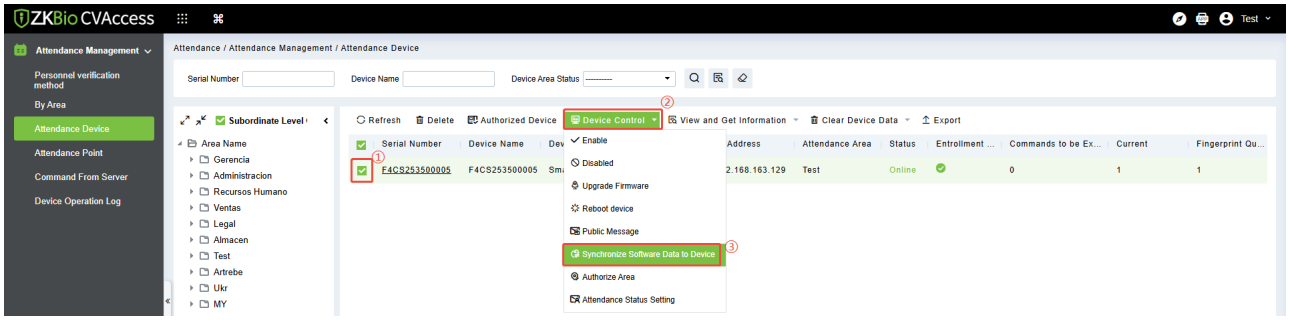
3. After the addition is successful, the device will be displayed in the device list.

19.3 Add Personnel on the Software

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



2. Fill in all the required fields of the user and click **OK** to save the user.
3. Click **Attendance** > **Attendance Management** > **Attendance Device**, select the device and click **Device Control** > **Synchronize Software Data to Device** to synchronize all the data to the device including the new users.



Note: For other specific operations, please refer the *ZKBio CVAccess User Manual*.

Appendix 1

Self-Service Attendance Terminal FAQs

1. Does self-service attendance terminal support scheduling based on every other day?

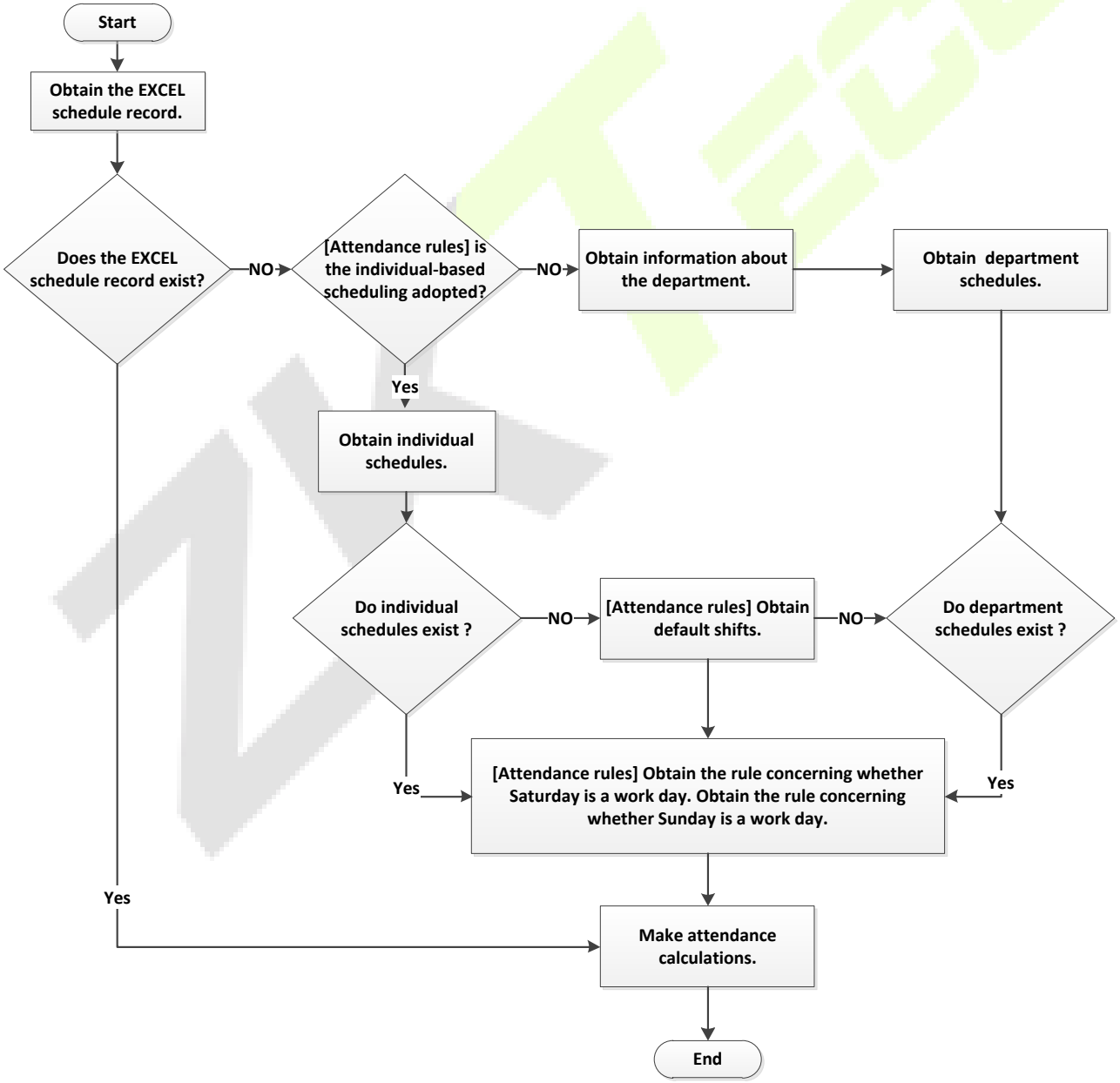
A: No.

2. Can the setting records downloaded from the device be edited on WPS software?

A: Yes. Setting records are supported in Microsoft Office 2003, Microsoft Office 2007, and WPS Office 2012 Personal.

3. What is the attendance calculation flow adopted by the self-service attendance terminal?

A: SSR attendance calculation flow.



4. How to calculate special overtime hours?

The following cases are deemed special overtime:

a) When an EXCEL schedule record exists and attendance reports are used for attendance calculation, there are check-in and check-out records though there is no schedule (or rest is arranged) for the current date.

b) When no EXCEL schedule record is available, there are check-in and check-out records though Saturday and Sunday are non-working days.

Overtime hours refer to the duration counted from the first check-in time to the last check-out time on the current day.

5. How to arrange schedules using the attendance setting report?

Step 1: Insert a USB flash drive into the USB port or SD card into the SD port of the device and download the Attendance Setting Report.xls to the USB flash drive or SD card.

Step 2: Open the Attendance Setting Report.xls on a computer.

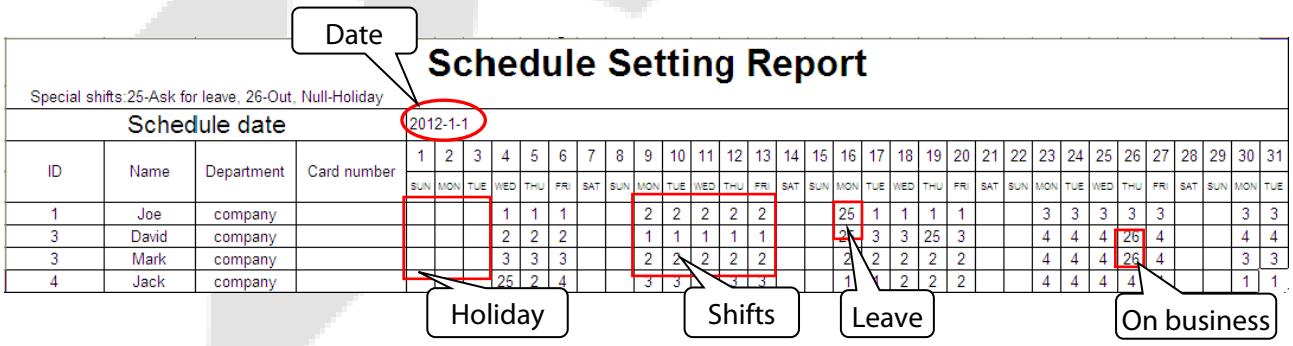
Step 3: Set shifts in the Attendance Setting Report.xls as required.

Attendance Setting Report

Shift						
Number	First time zone		Second time zone		Overtime	
	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out
1	9:00	18:00				
2	9:00	12:00	13:30	18:00		
3	9:00	12:00	13:00	18:00		
4	9:00	12:00	14:00	18:00		

Data enclosed by a red rectangle is new shifts (shift 3 and shift 4). To add a shift, enter a time directly, in the range of 00:00 to 24:00.

Step 4: Arrange schedules for employees.



Note: Dates must be set correctly. For example, if the scheduling date is 2012-1-1, the schedule setting report contains the schedules of 31 days after 2012-1-1, that is, the schedule from 2012-1-1 to 2012-1-31. If the scheduling date is 2012-1-6, the schedule setting report contains schedules of 31 days after 2012-1-6, that is, the schedule from 2012-1-6 to 2012-2-5.

Step 5: Insert a USB flash drive into the USB port or SD card into the SD port of the device and upload the *Attendance Setting Report.xls* to the device. Then, the schedules in the *Attendance Setting Report* can be used.

6. What is the correct time format used in the setting reports?

A. The correct time format is shown in the following table.

Shift No.	First Time Range		Second Time Range		Overtime Range	
	On-duty	Off-duty	On-duty	Off-duty	Check-in	Check-out
1	09:00	18:00				
2	09:00	12:00	13:30	18:00		
3	9:5	18:00				

B. Incorrect time formats are as follows:

a) A time value is beyond the time range, such as 24:00.

b) A time value contains Chinese characters, for example, 9:00, which differs from 9:00.

c) A time value is preceded by a space. As shown in the following table, there is a space in front of 09:00 in shift 1.

Shift No.	First Time Range		Second Time Range		Overtime Range	
	On-duty	Off-duty	On-duty	Off-duty	Check-in	Check-out
1	09:00	18:00				
2	09:00	12:00	13:30	18:00		
3	9:5	18:00				

d) A time value contains special characters, for example, _9:00 and 09:-1.

The device performs a validity check and error tolerance for other formats.

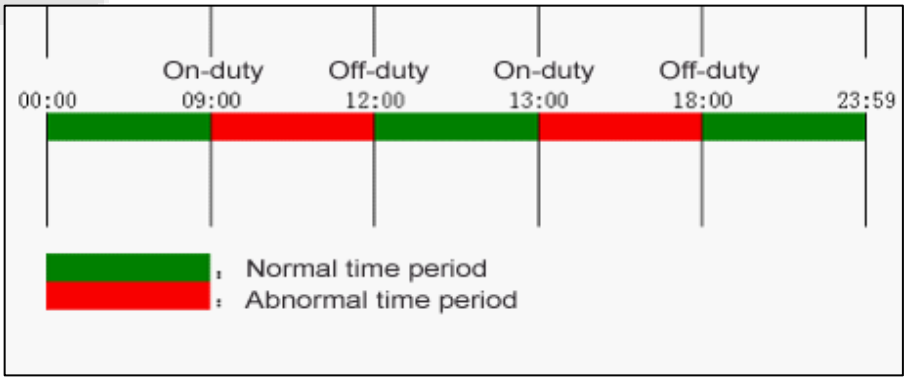
7. How does the self-service attendance terminal collect the correct attendance time based on the preset shift time?

A: The device collects attendance time based on the following principles:

a) Adopt the earliest time for normal attendance and the nearest time for abnormal attendance.

b) Adopt the normal attendance time if the normal attendance time and abnormal attendance time coexist.

c) Adopt a median in the attendance time range.



B: The following uses four examples to describe the preceding principles.

Example 1: Normal attendance

Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	8:30, 8:35, 11:55,12:01, 12:50, 18:02,19:00					
Statistical result based on attendance rules	8:30	12:01	12:50	18:02		

Description: The attendance time 8:30 and 8:35 are earlier than the on-duty time 9:00 and they are within the normal attendance time range. Therefore, 8:30 is adopted for the on-duty time 9:00 based on the principle of adopting the earliest time for normal attendance. 18:02 and 19:00 are later than the off-duty time 18:00, and therefore, 18:02 is adopted based on the same principle.

Example 2: Late arrival

Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	9:01, 9:04, 12:01, 12:50, 18:00					
Statistical result based on attendance rules	9:01	12:01	12:50	18:00		

Description: Employer 1 checks in for work at 9:01 and 9:04 and he/she is late based on the preset on-duty time. Based on the principle of adopting the nearest time for abnormal attendance, the correct check-in time is 9:01 rather than 9:04 because of 9:01 is nearer 9:00.

Example 3: Early leave

Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	8:50, 11:40,11:55, 12:50, 18:01					
Statistical result based on attendance rules	8:50	11:55	12:50	18:01		

Description: The attendance time 12:50 is adopted based on the principle of adopting a median in the attendance time range. For the attendance time range from 9:00 to 12:00, the normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the calculated time of attendance is shown in the preceding table.

Example 4: Absence

Case 1:

Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	8:50, 12:50, 18:01					
Statistical result based on attendance rules	8:50		12:50	18:01		

Description: The attendance time 12:50 is adopted based on the principle of adopting a median in the attendance time range. For the attendance time range from 9:00 to 12:00, the normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the check-out time is blank. The normal check-in time range for the on-duty time from 13:00 is from 12:30 to 13:00. The calculated time of attendance is shown in the preceding table.

Case 2:

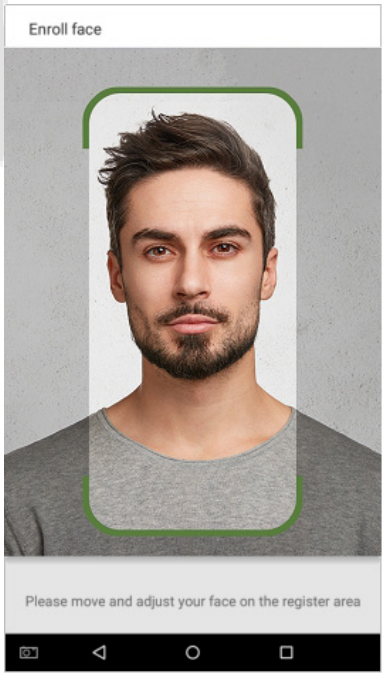
Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	8:50, 11:55, 12:20, 18:01					
Statistical result based on attendance rules	8:50	12:20		18:01		

Description: The time 12:20 is adopted based on the principle of adopting a median in the attendance time range. The normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the check-out time of the employee is 12:20. The normal check-in time range for the on-duty time from 13:00 is from 12:30 to 13:00. Therefore, the check-in time of the employee is blank. The calculated time of attendance is shown in the preceding table.

Appendix 2

Requirements of Live Collection and Registration of Visible Light Face Templates

1) It is recommended to perform registration in an indoor environment with appropriate lighting to avoid 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 tilt your head to any direction).
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 example 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 angle**

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) A neutral facial expression or a slight smile is preferred, but showing teeth is not recommended.
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.

Appendix 3

Privacy Policy

Notice:

To help you better use the products and services of ZKTeco (hereinafter referred as "we", "our", or "us") a 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 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 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.

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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