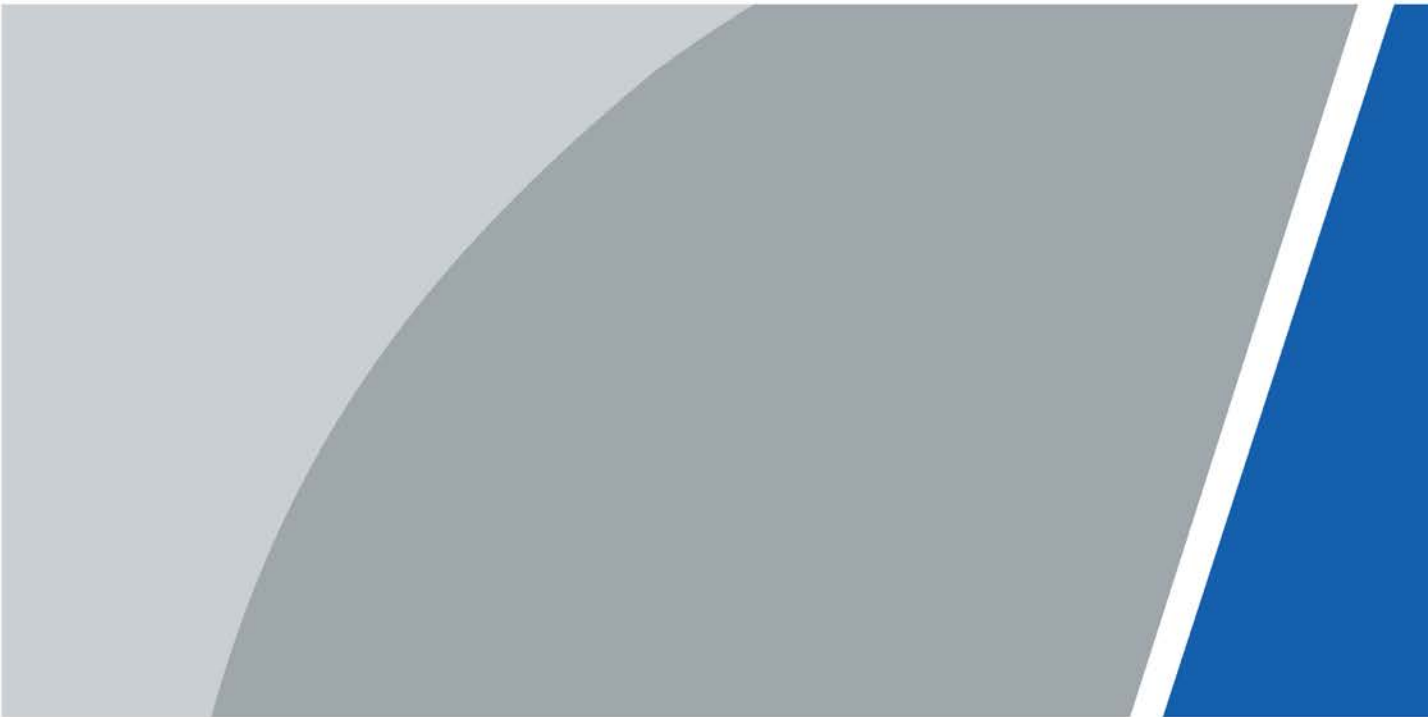


Attendance Standalone

User's Manual








Foreword

General

This manual introduces the functions and operations of the Attendance Standalone (hereinafter referred to as the "Device"). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 TIPS	Provides methods to help you solve a problem or save time.
 NOTE	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.1	Updated "2.8 USB Management".	July 2023
V1.0.0	First Release.	December 2022

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the Device, hazard prevention, and prevention of property damage. Read carefully before using the Device, and comply with the guidelines when using it.

Transportation Requirement



Transport, use and store the Device under allowed humidity and temperature conditions.

Storage Requirement



Store the Device under allowed humidity and temperature conditions.

Installation Requirements



- Do not connect the power adapter to the Device while the adapter is powered on.
- Strictly comply with the local electric safety code and standards. Make sure the ambient voltage is stable and meets the power supply requirements of the Device.
- Do not connect the Device to two or more kinds of power supplies, to avoid damage to the Device.
- Improper use of the battery might result in a fire or explosion.



- Personnel working at heights must take all necessary measures to ensure personal safety including wearing a helmet and safety belts.
- Do not place the Device in a place exposed to sunlight or near heat sources.
- Keep the Device away from dampness, dust, and soot.
- Install the Device on a stable surface to prevent it from falling.
- Install the Device in a well-ventilated place, and do not block its ventilation.
- Use an adapter or cabinet power supply provided by the manufacturer.
- Use the power cords that are recommended for the region and conform to the rated power specifications.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Please note that the power supply requirements are subject to the Device label.
- The Device is a class I electrical appliance. Make sure that the power supply of the Device is connected to a power socket with protective earthing.

Operation Requirements



- Check whether the power supply is correct before use.
- Do not unplug the power cord on the side of the Device while the adapter is powered on.
- Operate the Device within the rated range of power input and output.

- Use the Device under allowed humidity and temperature conditions.
- Do not drop or splash liquid onto the Device, and make sure that there is no object filled with liquid on the Device to prevent liquid from flowing into it.
- Do not disassemble the Device without professional instruction.
- This product is professional equipment.
- This equipment is not suitable for use in locations where children are likely to be present.

Table of Contents

Foreword	I
Important Safeguards and Warnings.....	III
1 Product Overview.....	1
2 Local Operations	2
2.1 Keypad Introduction	2
2.2 Powering On.....	5
2.3 Creating Administrator Account.....	5
2.4 Logging In.....	6
2.5 User Management	6
2.5.1 Add New Users	6
2.5.1.1 Adding One by One.....	6
2.5.1.2 Adding in Batches.....	8
2.5.2 Viewing User Information	9
2.5.3 Adding Departments	9
2.6 Attendance Logs Management	10
2.6.1 Searching for Attendance Records	10
2.6.2 Exporting Attendance Log	11
2.7 Configuring the Attendance Time.....	11
2.7.1 Configuring Shifts	11
2.7.2 Configuring Schedules.....	12
2.7.3 Configuring Late-in and Early-out Time.....	14
2.8 USB Management.....	14
2.8.1 Importing/Exporting User Information	14
2.8.2 Importing/Exporting User Fingerprint	15
2.8.3 Importing/Exporting Bell Information.....	15
2.8.4 Importing/Exporting Auto Switch Time	15
2.9 Configuring Time.....	16
2.10 Configuring Network Communication.....	16
2.11 Configuring Features	17
2.11.1 Configuring Bell Time	17
2.11.2 Configuring Recheck Interval	18
2.11.3 Configuring Attendance Method.....	18
2.11.4 Configuring the System Automatic Test	19
2.11.5 Configuring the Attendance Event Mode.....	19
2.11.6 Configuring State Switch Time.....	20

2.12 Configuring the System	20
2.13 Viewing the System Information	21
2.14 Checking Attendance.....	21
2.15 Attendance Rules	21
2.16 Working Hours Calculation	22
3 SmartPSS Lite Operations	24
3.1 Installation	24
3.2 Initialization	24
3.3 Logging In.....	25
3.4 Adding Devices	26
3.5 Department Management	27
3.6 Adding Staff	28
3.6.1 Adding Staff One by One Manually	28
3.6.2 Adding Staff in Batches	32
3.7 Permission Configuration	34
3.7.1 Adding Permission Group	34
3.7.2 Assigning Permissions	35
3.8 Adding Attendance Period	36
3.9 Adding Attendance Shift	40
Appendix 1 Important Points of Fingerprint Registration Instructions	42
Appendix 2 Input Method.....	44
Appendix 3 FAQ	45
Appendix 4 Cybersecurity Recommendations	46

1 Product Overview

The Device can be used to track attendance of people. People can clock in/out through fingerprint, password, and card. Card swiping is only available on select models.

2 Local Operations

The keypad is slightly different depending on the models of the Device. This section uses the GL model as an example.

2.1 Keypad Introduction

Figure 2-1 Appearance (GL)



Table 2-1 Parameters description

Parameter	Description
0-9	Number keys to input numbers and letters.
ESC/F1	<ul style="list-style-type: none">Exit or go to the previous screen.Tap it on the standby screen to clock in.
^/F2	<ul style="list-style-type: none">Tap it on the standby screen, BREAK OUT will be displayed on the screen.Tap to go up the options.
v/F3	<ul style="list-style-type: none">Tap it on the standby screen, and BREAK IN will be displayed on the screen.Tap it to go down through the options.
OK/F4	<ul style="list-style-type: none">Confirm your settings.On the standby screen, tap it to clock out.



Parameter	Description
#	<ul style="list-style-type: none"> Delete. Shortcut for reviewing records.
	<ul style="list-style-type: none"> Press and hold it for over 3 seconds to turn the Device off/on. On the standby screen, tap it to enter the main menu by fingerprints, passwords or cards.  <p>Only administrators can enter the main menu.</p> <ul style="list-style-type: none"> Tap it to change the input types (numbers, letters and symbols).


Figure 2-2 Appearance (Model E)



Figure 2-3 Appearance (Model E-S)



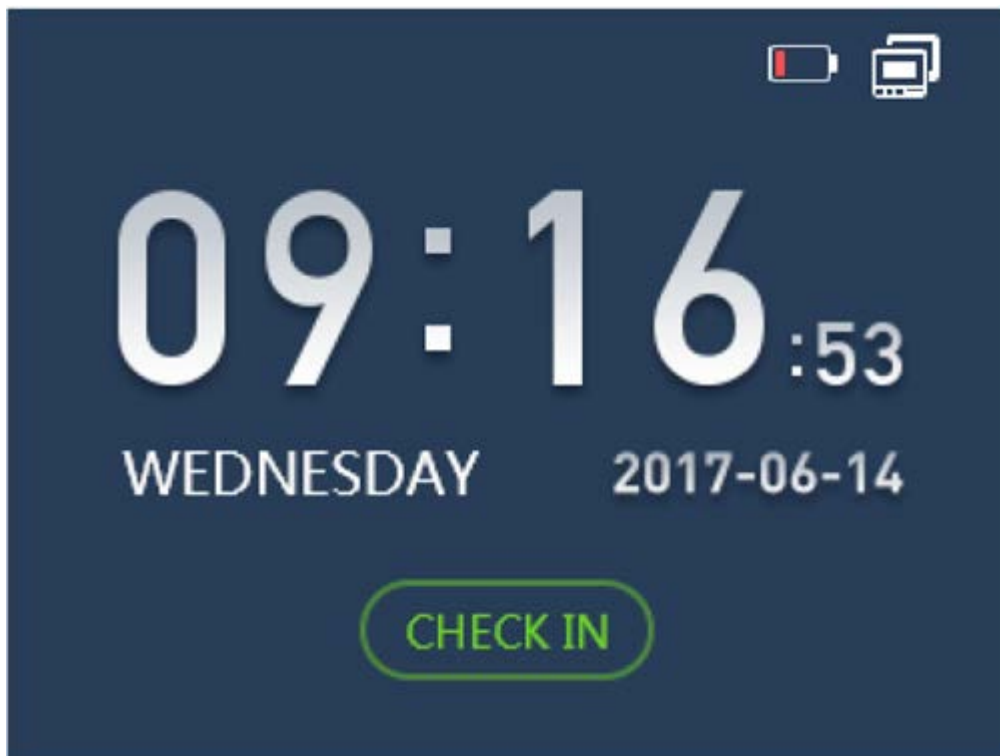
Table 2-2 Parameters description




Parameter	Description
0~9	Number key to input numbers and letters.
ESC	Go back or exit.
^	Tap it to go up the options.
v	Tap it to go down through the options.
OK	Enter or confirm
#	Backspace
	Enter the main menu or switch input method.

2.2 Powering On

After the Device is powered on, the standby screen is displayed.

Figure 2-4 Standby screen




-  indicates that the network is disconnected.
-  indicates that the network is connected.
-  indicates the battery status. When the Device starts for the first time, the battery level is 25% (can last for about 1 hour).

2.3 Creating Administrator Account

When the Device is started for the first time, anyone can enter the main menu and configure the Device. For the account security, we recommend you create the administrator account first, and then only administrators can enter the main menu.

Procedure

- Step 1 Tap  to enter the main menu screen.
- Step 2 Select **1 User > Add New User**
- Step 3 Enter the user information.
- Step 4 Select **Administrator** from **User Level**.
 1. Select **User Level**, and then tap **OK/F4**.
 2. Select **^/F2** or **v/F3** to select **Administrator**.
 3. Tap **OK/F4**.

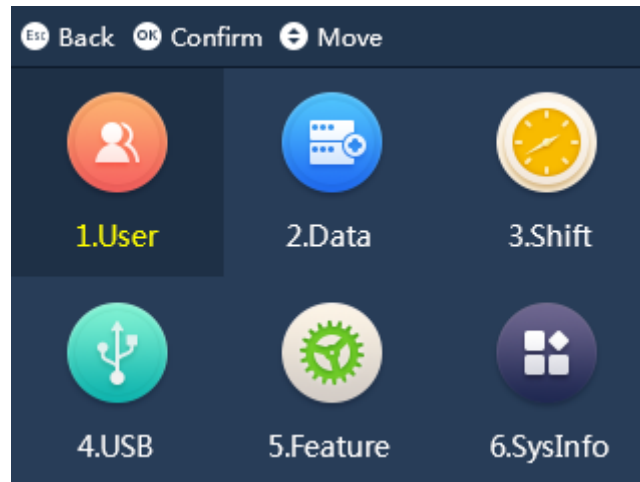
2.4 Logging In




After the admin account is created, you can enter the main menu after you have verified your identifications through fingerprint, password or card.



The card swiping function is only available on select models.

Figure 2-5 Main Menu



Tap   , and then enter the main menu after your identity has been verified.

- Place your finger on the fingerprint sensor.
- Enter the administrator's ID and password.
- Swipe the card on the card reader.

2.5 User Management

On the main menu, select **1 User**, and then you can add new users.

2.5.1 Add New Users

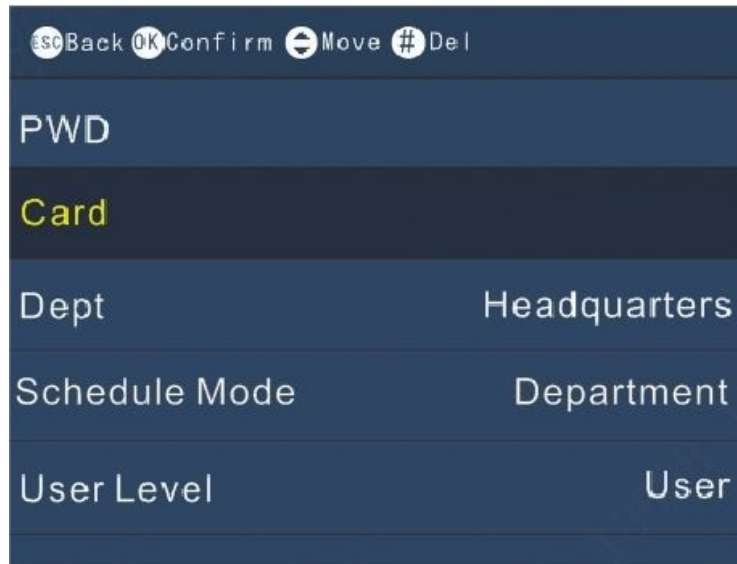
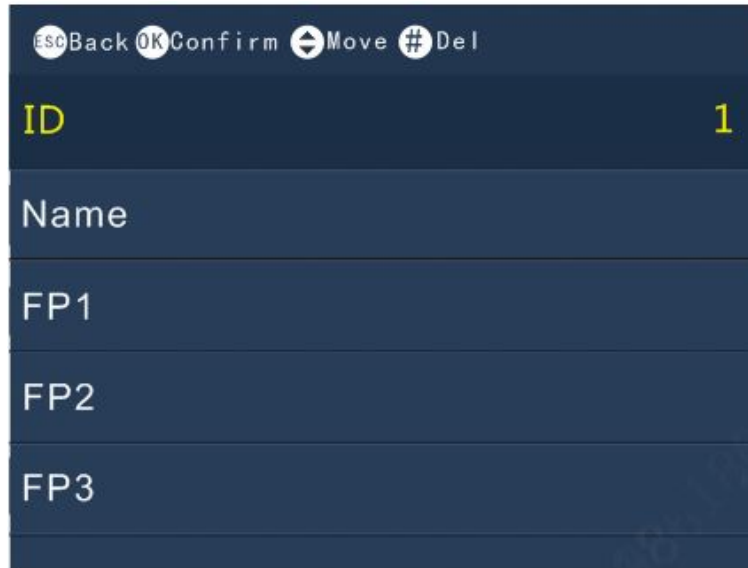
Add users to the Device.

2.5.1.1 Adding One by One

Procedure


Step 1 On the main menu, select **1 User** > **Add New User**.


Figure 2-6 Adding new user



Step 2 Enter the user information.

Table 2-3 Parameters description

Parameter	Description
User ID	Maximum user ID length is 8 digits (the user ID length range can be 1–99999999).
Name	Maximum user name length is 16 letters.
FP	Register fingerprints. A user can register up to 3 fingerprints.
Card	A user can register five cards at most. Swipe your card, and then the card information will be read by the Device.  Card function is only available on select models.

Parameter	Description
PWD	Enter the user password. The maximum length of the password is 8 digits.  0 alone cannot be set as password and cannot be the first number of a password.
Dept.	Set departments.
Schedule Mode	<ul style="list-style-type: none"> • Department: Configure department schedules. • Personal: Configure personal schedules..
User Level	<ul style="list-style-type: none"> • User: General users can only check their attendance. • Administrator: Administrator account can check attendance and enter the main menu.

2.5.1.2 Adding in Batches

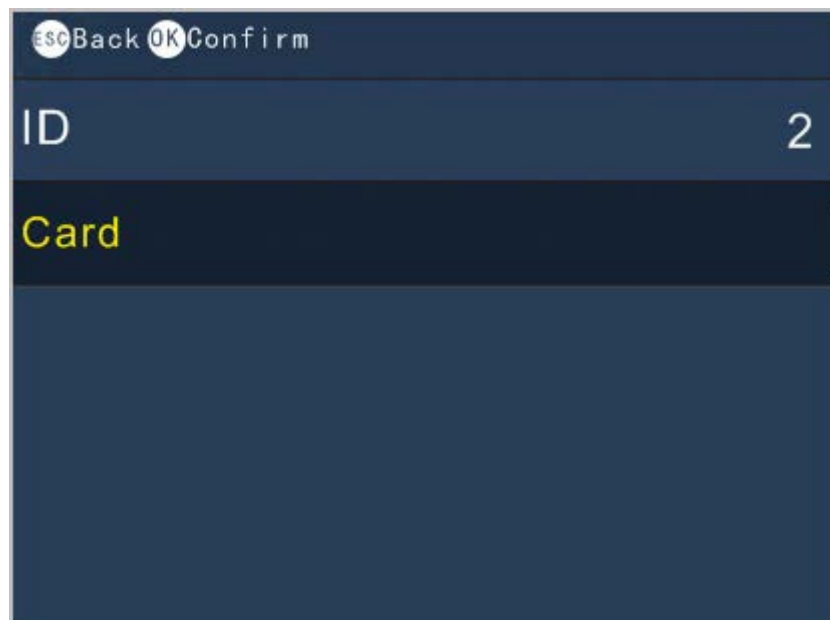
Adding through cards



Adding users through cards is only available on select models.

1. On the main menu, select **1 User > Add Cards in Batch**.

Figure 2-7 Adding users through cards



2. Swipe cards on the card reader.
User ID and card number will be automatically read by the Device.
3. Enter the user names, add fingerprints and passwords separately.

Adding through USB

Excel charts with special format are stored in the USB. Export the excel chart first, and then enter user information (including user ID, user name, password, card number, department, user level and schedule mode) into the charts, and then import the charts to the Device. User information with the

same User ID will be overwritten.

1. On the main menu, select **4 USB > Import User Info.**
2. Select **Confirm-OK.**

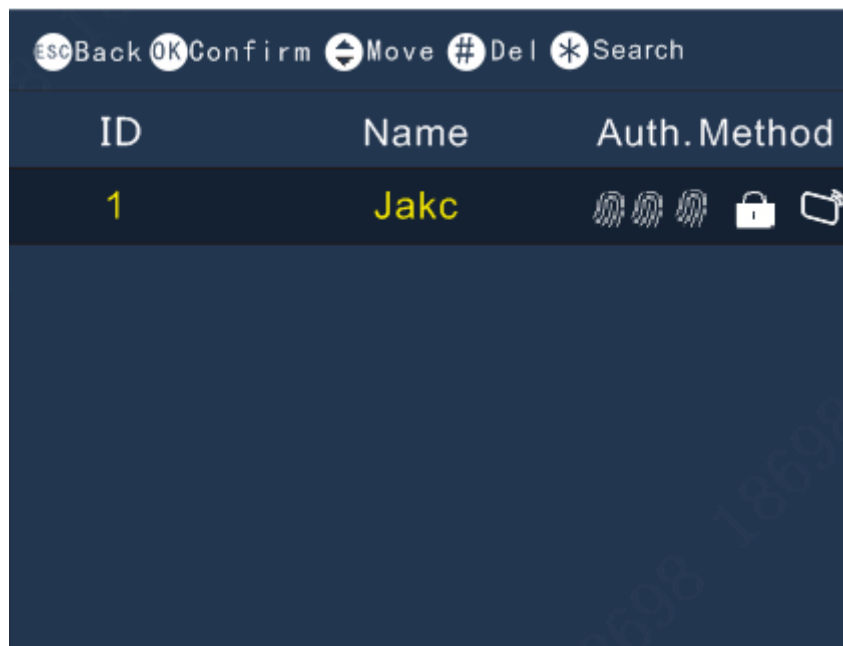
The user information will be imported.





2.5.2 Viewing User Information

Procedure

- Step 1 On the main menu, select **1 User > Query & Edit User.**
- Step 2 Press **OK/F4.**

Figure 2-8 Query & edit users



ID	Name	Auth. Method
1	Jakc	    

- Step 3 Tap **^/F2** or **v/F3** to select a user.
- Step 4 Tap **OK/F4.**
Information on the user is displayed.
- Step 5 (Optional) Tap **OK/4** to edit the information of the user.

2.5.3 Adding Departments

Procedure

- Step 1 On the main menu, select **1 User > Edit Dept.**
- Step 2 Tap **OK/F4.**

Figure 2-9 Edit department

Dept.ID	Dept.
01	HQ
02	PM1
03	PM2
04	
05	

Step 3 Tap \wedge /**F2** or \vee /**F3** to select a department ID, and then Tap **OK/F4**.

Step 4 Enter the name of the department, and then tap **OK/F4**.



- The Device supports 20 departments, and they cannot be deleted.
- Department names cannot be empty.

2.6 Attendance Logs Management

2.6.1 Searching for Attendance Records

Procedure

Step 1 On the main menu, select **2 Data** > **Query User ATT. Record**, and then tap **OK/F4**.

Step 2 Enter the User ID.

The user name is displayed automatically.

Figure 2-10 Enter user ID

User ID : 1

Name :

Step 3 Tap **OK/F4**.

The attendance log of the user is displayed.

2.6.2 Exporting Attendance Log

Before you export attendance record, make sure the USB is inserted. During exporting, do not remove the USB or operate the Device, otherwise the exporting will fail and system malfunction will occur.

Procedure

- Step 1** On the main menu, select **2 Data**, and then select **Export Monthly ATT. Record** or **Export Monthly ATT. Report**, and then tap **OK/F4**.
- Step 2** Select the date, and then tap **OK/F4**.
- Step 3** Tap **☰|*|☺**.
The log is exported.

2.7 Configuring the Attendance Time

2.7.1 Configuring Shifts

Configure shifts to define time attendance rules. Employee need to come to work at the scheduled shift start time, and leave at the scheduled shift end time except when they work overtime. You can set up to 24 shifts.

Procedure

- Step 1** On the main menu, select **3 Shift > Shift Setup > Shift**.
- Step 2** Select the number of the shift, and then tap **OK/F4**.
- Step 3** Configure the parameters of the shift.

Figure 2-11 Shift setting

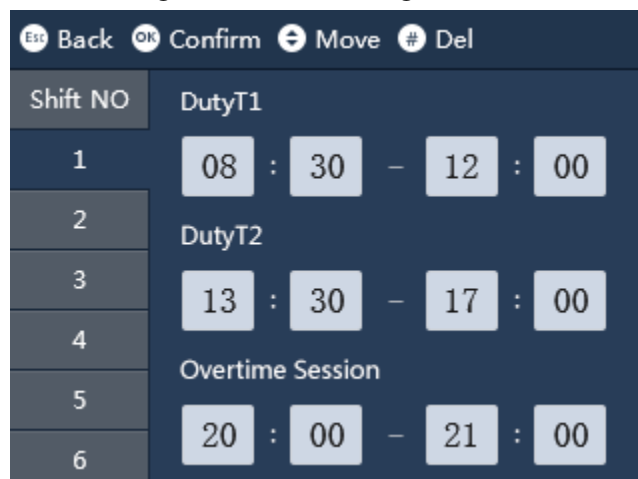



Table 2-4 Shift parameters description

Parameter	Description
Duty T1	Set the time attendance periods. If you set 08:00 —17:00, you

Parameter	Description
Duty T2	<p>need to clock in before 08:00 or earlier, and punch out at 17:00 or later, otherwise the abnormal attendance is abnormal.</p>  <p>If you clock in for more than once, the earliest punch-in is effective; if you clock out for more than once, the latest punch-out is effective.</p> <p>You can set 2 periods at the same time, the 2 periods cannot overlap. People must clock in and clock out in the both defined periods, and make sure their attendance is normal.</p>
Overtime Session	<p>People who clock in/out in the defined overtime period works beyond normal working hours.</p>

Related Operations

- **Export Shift:** When the shifts are configured, you can export the shift settings to other Devices through the USB.



The exported file is name after "Import&export_00001". The number indicates the number of the Device.

- **Import Shift:** Before you import shifts, make sure the USB is inserted to the Device. To avoid failure or system malfunction, do not remove the USB or operate the Device during importing.



Make sure the number of the file name is same to the number of the Device that you will be import to.

2.7.2 Configuring Schedules

A work schedule generally refers to the days per month and the hours per day that an employee is expected to be at their job. You can create different types of work schedules based on different individuals or departments, and then employees must follow the established work schedules.

Procedure

Step 1 On the main menu, select **Shift > Schedule Setup > Users Schedule**, and then tap **OK/F4**.

Step 2 Set works schedules for individuals.

1. Select **User Schedule**, and then tap **OK/F4**.
2. Enter the ID of an existing user.
The user name and department is displayed automatically.
3. Tap **OK/F4**.
4. On the calendar, select a date, and then tap **OK/F4**.

Figure 2-12 User schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 1	2 1	3
4	5 1	6 1	7 1	8 1	9 1	10
11	12 1	13 1	14 1	15 1	16 1	17
18	19 1	20 1	21 1	22 1	23 1	24
25	26 1	27 1	28 1	29 1	30 1	

5. Tap **^/F2** or **v/F3** to select the schedule, and then tap **OK/F4**.
 - 0 indicates break.
 - 1 to 24 indicates the number of the pre-defined shifts. For how to configure shifts, see "2.7.1 Configuring Shifts".
 - 25 indicates the business trip.
 - 26 indicates the leave of absence.

Step 3 Set works schedules for the department.

1. Select **Department**, and then tap **OK/F4**.
2. Select a department, and then tap **OK/F4**.
3. On the calendar, select a date, and then tap **OK/F4**.
4. Tap **^/F2** or **v/F3** to select the schedule, and then tap **OK/F4**.
 - 0 indicates break.
 - 1 to 24 indicates the number of the pre-defined shifts. For how to configure shifts, see "2.7.1 Configuring Shifts".
 - 25 indicates the business trip.
 - 26 indicates the leave of absence.

Figure 2-13 Department schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	1	1	1	1	

Related Operations

- Export Schedule: When the schedules are configured, you can export the schedules settings to other Devices through the USB.



The exported file is name after "Import&export_00001". The number means indicates the number of the Device.

- Import Schedule: Before you import schedules, make sure the USB is inserted to the Device. To avoid failure or system malfunction, do not remove the USB or operate the Device during importing.



Make sure the number of the file name is same to the number of the Device that you will be import to.

2.7.3 Configuring Late-in and Early-out Time

The late-in and early-out allowed time is used mainly to give the employee a little flexibility to come a little late or leave a little early from work. For example, if the normal punch-in time is 8:00, and the late-in allowed time is set to 5 minutes, the employee who arrives at 8:06 AM will be marked late by 1 minute. If the normal punch-out time is 17:30, and the early-out allowed time is 5 minute, the employee who clock out at 17:25 will be not be considered as an early leave.

Procedure

- Step 1** On the main menu, select **Shift**, and then tap **OK/F4**.
- Step 2** Tap **Late Time Setup** or **Early Leave Time Setup**, and then tap **OK/F4**.
- Step 3** Tap \wedge /**F2** or \vee /**F3** to set the time, and then tap **OK/F4**.

2.8 USB Management

We recommend you use the USB as recommended below. The product also supports other types of USB with the capacity \geq 8 GB.

Table 2-5 Applicable USB models

Brand	Model
Sandisk	CZ600 32 GB
BanQ	<ul style="list-style-type: none"> • P8 16 GB • P9 8 GB • P9 16 GB
Aigo	U350 64 GB
Hewlett Packard	V220W 16 GB

2.8.1 Importing/Exporting User Information

Excel charts with special format are stored in the USB. You can enter user information (including user ID, user name, password, card number, department, user level and shifts) into the charts, and then

import/export the charts to/from the Device.

Procedure

Step 1 On the main menu, select **4 USB**, and then tap **OK/F4**.

Step 2 Select **Import User Info** or **Export User Info**, and then tap **OK/F4**.

Step 3 Import or export the user information.

The existing user information with the same user ID will be overwritten if you export user information to the Device.

2.8.2 Importing/Exporting User Fingerprint

Procedure

Step 1 On the main menu, select **4 USB**, and then tap **OK/F4**.

Step 2 Select **Import User FP** or **Export User FP**, and then tap **OK/F4**.

Step 3 Import or export the user fingerprint.

The existing user information will be overwritten if you export user information to the Device.

2.8.3 Importing/Exporting Bell Information

Bell information can be imported to and exported from the Device. The bell will ring during the defined period.

Procedure

Step 1 On the main menu, select **4 USB**, and then tap **OK/F4**.

Step 2 Select **Import Bell Info** or **Export Bell Info**, and then tap **OK/F4**.

Step 3 Import or export the bell information.

The existing user information will be overwritten if you export user information to the Device.

2.8.4 Importing/Exporting Auto Switch Time

Auto switch time can be imported and exported to/from the Device. Check in, Break out, Break in, Check out, OT-In, and OT-Out will be displayed on the screen during the defined period.

Procedure

Step 1 On the main menu, select **4 USB**, and then tap **OK/F4**.

Step 2 Select **Import Auto Switch Time** or **Export Auto Switch Time**, and then tap **OK/F4**.

Step 3 Import or export the bell information.

If the existing user information will be overwritten if you export user information to the Device.



2.9 Configuring Time

Procedure

Step 1 On the main menu, select **5 Features > Date & Time**, and then tap **OK/F4**.

Step 2 Configure the date.

Table 2-6 Description of time parameters

Parameter	Description
Date Format	Select a date format.  Y stands for the year. M stands for the month. D stands for the day.
Date Setup	Set up the date and the time for the Device. The date and time will be displayed on the standby screen.
Time Setup	
Time Zone	Set time zone for the Device. The time zone range is GMT-12:00 to GMT+13:00.
DST	<ol style="list-style-type: none"> 1. Tap DST, and then tap OK/F4. 2. Tap OK/F4 to turn on the DST function. 3. Select By Date or By Week from the DST mode list. 4. Enter start time and end time, and then tap OK/F4.
NTP Setup  This function is only available on select models.	<p>A network time protocol (NTP) server is a machine dedicated as the time sync server for all client computers. If your computer is set to sync with a time server on the network, your clock will show the same time as the server. When the administrator changes the time (for daylight savings), all client machines on the network will also update.</p> <ol style="list-style-type: none"> 1. Tap NTP Setup, and then tap OK/F4. 2. Tap OK/F4 to turn on the NTP function. 3. Configure the parameters. <ul style="list-style-type: none"> ● IP: Enter the IP address of the NTP server, and the Device will automatically sync time with NTP server. ● Port: Enter the port of the NTP server. ● Update Period(min): Enter the time synchronization interval.

2.10 Configuring Network Communication

Configure the network communication of the Device. This function is only available on select models.

Procedure

Step 1 On the main menu, select **5 Features > Communication**, and then tap **OK/F4**.

Step 2 Configure the parameters.

Figure 2-14 Communication



Table 2-7 Communication Parameters

Parameter	Description
IP	It is 192.168.1.108 by default.
Mask	It is 255.255.255.0 by default.
Gateway	It is 192.168.1.1 by default.
MAC	MAC address of the Device, and it cannot be changed.
Port	Port number of the Device.

2.11 Configuring Features

Select **5 Feature > Features**, and then you can set state switch time, bell time, recheck interval, verification method, system auto test, attendance event mode, fixed mode setup, and open door keep time.

2.11.1 Configuring Bell Time

Configure the time when the bell rings as a reminder.

Procedure

- Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.
- Step 2 Select **Bell Time**, and then tap **OK/F4**.
- Step 3 Configure the time when the bell rings.

Figure 2-15 Bell time

Esc Back OK Confirm			
	Time	Cycle	Duration(s)
1	00:00	Every Day	00
2	00:00	Every Day	00
3	00:00	Every Day	00
4	00:00	Every Day	00
5	00:00	Every Day	00

Table 2-8 Parameters description

Parameter	Description
Time	The time when the bell rings.
Cycle	The bell rings in a cycle. For example, if you set cycle to Monday, the bell rings every Monday.
Duration	The ring duration.

2.11.2 Configuring Recheck Interval

Recheck interval is used to set the interval in which you can get your attendance checked. For example, if the interval is set to 3, and you clock in/out for more than once in 3 minutes, the Device will prompt repeat clock in/out.

Procedure

- Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.
- Step 2 Select **Recheck Interval**, and then tap **OK/F4**.
- Step 3 Enter the number or tap **^/F2** or **∨/F3** to select the time.
The time interval only supports 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

2.11.3 Configuring Attendance Method

Set attendance methods, and people can clock in/out by using fingerprint and password and or card.

Procedure

- Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.
- Step 2 Select **Verification Method**, and then tap **OK/F4**.
- Step 3 Tap **^/F2** or **∨/F3** to select the attendance method, and then tap **OK/F4**.
 - FP: clock in/out through fingerprint.
 - PWD: clock in/out through password.
 - Card: clock in/out by swiping card.



Card swiping function is only available on select models.

- FP or PWD or Card: clock in/out through fingerprint or password or card.
- FP or PWD: clock in/out through fingerprint or password.



FP or PWD is only available on select models.

2.11.4 Configuring the System Automatic Test

Run the self-test of the system to make sure the Device can work properly.

Procedure

- Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.
- Step 2 Select **System self check**, and then tap **OK/F4**.
- Step 3 Tap **^/F2** or **v/F3** to select a self-check item , and then tap **OK/F4**.

Table 2-9 Self-test

Parameter	Description
Auto self-check	The system automatically perform the self-test of fingerprint enrollment, display, voice, keypad, USB in sequence.
FP self-check	Place you finger on the sensor to check whether the fingerprint is displayed on the screen.
Display self-check	The screen displays red, green and blue in sequence.
Voice self-check	The Device gives voice prompt.
Key self-check	Tap the button to check whether the keypad functions well.
USB self-check	Insert a USB to the Device to check whether the Device can recognize the USB.

2.11.5 Configuring the Attendance Event Mode


When you clock in or clock out, you can set the attendance modes to define the time attendance status.

Procedure

- Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.
- Step 2 Select **Att. Event Mode**, and then tap **OK/F4**.
- Step 3 Tap **^/F2** or **v/F3** to select attendance mode , and then tap **OK/F4**.

Table 2-10 Attendance mode

Parameter	Description
Auto/Manual Mode	After you clock in/out, the screen displays the time attendance status automatically, and you can manually change the attendance status.
Forced Mode	After you clock in/out, tap Attendance status to manually select the attendance status.

Parameter	Description
Fixed Mode	Select an attendance status for Fixed Mode Setup , and the screen will displays the pre-defined attendance status all the time when you punch in/out.
Keep Door Open for (sec)	The door is held open for a defined time (0 s–600 s.) after you successfully clock in/out.  This function is only available on select models.

2.11.6 Configuring State Switch Time

If you have set manual/auto attendance mode, you can set the state switch time to define the attendance status during different time periods. You can configure up to 24 state switch time.

Prerequisites

The attendance mode was set to **Auto/Manual**. For details, see "2.11.5 Configuring the Attendance Event Mode".

Procedure

Step 1 On the main menu, select **5 Features > Features**, and then tap **OK/F4**.

Step 2 Select **State Switch Time**, and then configure the time and state.

Figure 2-16 State switch time

NO.	Time	State
1	08:00	Check In
2	17:30	Check Out
3	00:00	NULL
4	00:00	NULL
5	00:00	NULL
6	00:00	NULL

Result

For example, if you set the time to 08:00 and the state to **Check In** for No 1, and set the time to 17:30 and the state to **Check Out** for No.2, it means from 08:00 to 17:30, the Device automatically displays **Check In** when you clock in, and you can also manually change your attendance status.

2.12 Configuring the System

Procedure

Step 1 On the main menu, select **5 Features > System**, and then tap **OK/F4**.

Step 2 Configure the system parameters.

2.13 Viewing the System Information

On the main menu, select **6 SysInfo**, and then tap **OK/F4**, you can the information on the system.

Table 2-12 Parameters description

Parameters	Description
Admin Level Management	View or change the user information of administrator account.
Management	Enter the ID of the user, and then tap OK/F4 , and then you can view the operation logs of administrator.
Registration Info	The storage capacity of the Device, such as users, fingerprints, and more.
Device Info	View the information of the Device, such as the version, ID, and more.
Open Source Software Notice	View the open source software notice of the Device.

2.14 Checking Attendance

Check attendance through password, fingerprint, or card.

- Attendance through password:
 1. On the standby screen, enter the User ID on the keypad, and tap **OK/F4**.
 2. Enter the password, and then tap **OK/F4**.
- Attendance through fingerprint: On the standby screen, place your finger on the sensor of the scanner.
- Attendance through card: On the standby screen, swipe the card on the card reader area.



Card swiping function is only available on select models.

2.15 Attendance Rules

This section uses the configured shifts below as an example.

Table 2-13 Shifts (example)

Shifts	Time
Period 1	9:00–12:00
Period 2	14:00–17:30
Overtime Session	18:45–20:00
late-in allowed time	5 minutes
early-out allowed time	5 minutes



For details on how to configure shifts, see "2.7.1 Configuring Shifts".

Clock In/Out Time


If 2 time periods are configured, the middle point of the interval is the division of the 2 time periods.

- If the interval of 2 periods is an even number, for example, period 1 is 9:00–12:00, and period 2 is 14:00–17:30, the interval between the 2 periods is 120 minutes, the allowed punch-out time for period 1 is 12:00–12:59, and the allowed punch-in time for period 2 is 13:00–14:00.
- If the interval of 2 periods is an odd number, for example, the period 2 is 14:00–17:30 and the over-time period is 18:45–20:00, the interval is 75. The allowed punch-out time is 17:30–18:07, and the allowed punch-in time of the overtime period is 18:08–18:45.



- If you clock in for multiple times during the allowed punch-in time, the earliest punch-in is effective.
- If you clock out for multiple times during the allowed punch-out time, the last time punch-out is effective.
- There is no late-in or early-out status in the overtime period. The time between the punch-in and punch-out is the overtime.

Table 2-14 Normal Attendance

Period	Normal Punch-in Time	Normal Punch-out Time
Period 1	00:00–9:05  The attendance time is precise to seconds. For example, 9:05:00–9:05:59 is the normal punch-in time.	11:55–12:59
Period 2	13:00–13:05	17:25–18:07

Abnormal Attendance

One time period indicates 0.5 day. Each period requires both punch-in and punch-out record, otherwise 0.5 day absence is recorded.

According to Table 2-14, if a person checks the attendance at 9:05, 11:54, and 17:00, it be marked as an early leave by 1 minute in the first period, and 0.5 day absence from work because there is no punch-out in the second period.

2.16 Working Hours Calculation

Actual Working Hours

The total working hours of a day = The working hours of period 1 + The working hours of period 2.

For example, the period 1 is 9:00–12:00 and the period 2 is 14:00–17:30, and the normal working hours for a day is 6.5 hours. If a person checks the attendance at 8:00, 12:30, 15:00 and 17:00, the working hours are 3 hours in the period 1, and the working hours are 2 hours in the period 2, and the total working hours are 5 hours.



The working hours are precise down to one decimal place.

Overtime Working Hours

The total overtime = Punch-in time in the overtime period — Punch-out time in the overtime period

For example, if a person punches in at 18:20 and punches out at 19:30 during the overtime period, the total overtime working hours are 1.1 hours.

3 SmartPSS Lite Operations

Only certain models support configurations on SmartPSS Lite. For details, see the user's manual of SmartPSS Lite.

3.1 Installation

Contact technical support or download ToolBox to get SmartPSS Lite.

- If you get the software package of SmartPSS Lite, install and run the software according to page instructions.
- If you get the software by the ToolBox, run SmartPSS Lite according to the instructions on the page.

3.2 Initialization

Initialize SmartPSS Lite when you log in for the first time. You will need to set a password for login and your security questions for resetting the password.

Procedure

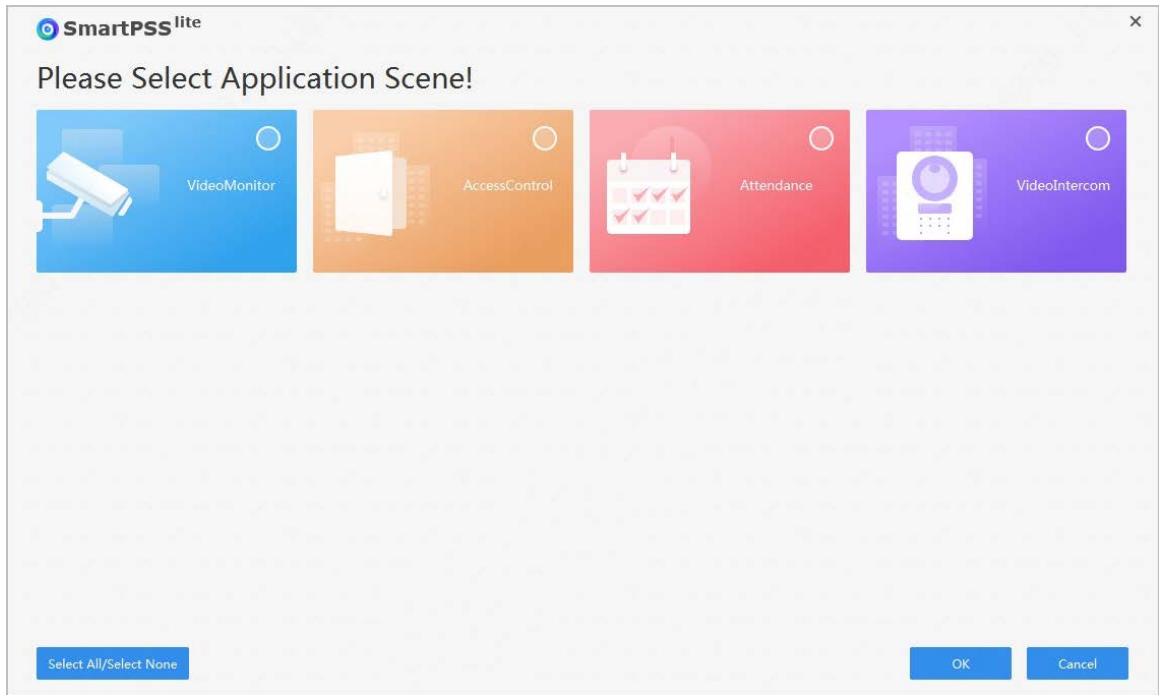
- Step 1 Double-click SmartPSSLite.exe, or click **Open** next to the software icon in the ToolBox.
- Step 2 Select the language from the drop-down list, select **I have read and agree the software agreement**, and then click **Next**.
- Step 3 Click **Browse** to select the installation path, and then click **Install**.
- Step 4 Click **Finish** to complete the installation.



Select **Run SmartPSSLite** to start SmartPSS Lite.

- Step 5 Select the application scenes you want to add, and then click **OK**.

Figure 3-1 Select application scenes



Step 6 Click **Agree and Continue** to agree **Software License Agreement** and **Product Privacy Policy**.

Step 7 Set password on the **Initialization** page, and then click **Next**.

Table 3-1 Initialization parameters

Parameter	Description
Password	The password must consist of 8 to 32 non-blank characters and contain at least 2 types of characters including uppercase letters, lowercase letters, numbers and special characters
Password Strength	Displays the strength of a password against being guessed and brute-force attacks. Green means the password is strong, and red means it is too weak. Set a high security password using the password strength prompt to assist you.
Confirm Password	Enter the password again to confirm the password.
Auto Login after Registration	Enable Auto Login after Registration so that SmartPSS Lite will log in automatically after initialization; otherwise the login page is displayed.

Step 8 Set security questions, and then click **Finish**.

3.3 Logging In

Procedure

Step 1 Double-click SmartPSSLite.exe, or click **Open** next to the software icon in the Toolbox.

Step 2 Enter the username and password, and then click **Login**.

Table 3-2 Parameters of login

Parameter	Description
Remember Password	Enable Remember Password so that you do not need to enter the password again when you log in next time.
Auto Login	Enable Auto Login so that the SmartPSS Lite will log in automatically the next time when you use the same account.
Forgot password?	Click Forgot password? to reset the password when you forget the password.

3.4 Adding Devices

We recommend you add devices manually when you need to add one single device with certain IP address or domain name.

Procedure

- Step 1 Select **Add** on the **Device Manager** page.
- Step 2 Set device parameters.
- Add devices through IP/Domain.

Figure 3-2 Add device manually

Table 3-3 Parameters of IP adding

Parameter	Description
Device Name	We recommend you name devices with the monitoring area for easy identification.
Method to add	Select IP/Domain .

Parameter	Description
IP/Domain	Enter the IP address or domain name of the device.
Port	Enter the port number, and the port number is 37777 by default. The actual port number might differ according to different models.
User Name	Enter the login user name.
Password	Enter the login password.

- Add devices through SN.

Figure 3-3 Add devices through SN

Table 3-4 Parameters of SN adding

Parameter	Description
Method to add	Select SN (For Device Support P2P) .
SN	Enter the serial number of the device.

Step 3 Click **Add** to add the device, and then close the **Add Device** page; or click **Add and Continue** to add the device and stay on the **Add Device** page so that you can add another device conveniently.

3.5 Department Management

You can add, modify or delete department. Here uses the department adding as an example.

Procedure

- Step 1** Select **Personnel > User Management**.
- Step 2** Click **+** in the **Department List** to add.
- Step 3** Select a superior department, and then add a new sub-department.

Step 4 Click **OK** to confirm.

Figure 3-4 Add department

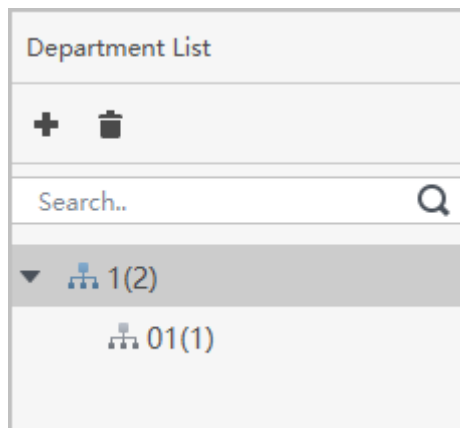
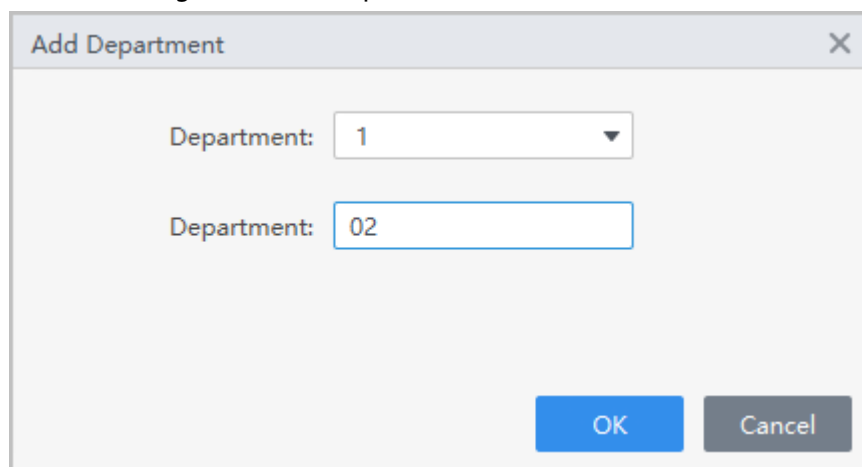


Figure 3-5 Add department information



3.6 Adding Staff

Background Information

Select one of the methods to add staff.

- Add staff one by one manually.
- Add staff in batches.

3.6.1 Adding Staff One by One Manually



Procedure

Step 1 Select **Personnel > User Management > Add**.

Step 2 Enter basic information of staff.

- 1) Select **Basic Info**.
- 2) Add basic information of staff.
- 3) Take snapshot or upload picture, and then click **Finish**.



- The card number can be read automatically or filled in manually. To automatically read card number, select the card reader next to **Card No.**, and then place the card on the card reader. The card number will be read automatically.
- You can select multiple USB cameras to snap pictures.
- Set password
Click **Add** to add the password. For second-generation access controllers, set person passwords; for other devices, set card passwords. New passwords must consist of 6-8 digits.
- Configure card
 1. Click  to select **Device** or **Card issuer** as card reader.
 2. Add card. The card number must be added if the non-second generation access controller is used.
 3. After adding, you can select the card as main card or duress card, or replace the card with a new one, or delete the card.
 4. Click  to display the QR code of the card.



Only 8-digit card number in hexadecimal mode can display the QR code of the card.

- Configure fingerprint
 1. Click  to select **Device** or **Fingerprint Scanner** as the fingerprint collector.
 2. Add fingerprint. Select **Add > Add Fingerprint**, and then press finger on the scanner for three times continuously.

Figure 3-6 Add basic information

The 'Add User' dialog box is divided into three tabs: 'Basic Info', 'Extended information', and 'Permission'. The 'Basic Info' tab is active, showing the following fields:

- User ID: * [Text Input]
- Name: * [Text Input]
- Department: Default Company [Dropdown]
- User Type: General User [Dropdown]
- Validity Time: 2022/11/29 0:00:00 [Calendar Icon]
- 2032/11/29 23:59:59 [Calendar Icon] 3654 Days
- Times Used: Unlimited [Text Input]

There are three image upload placeholders, each with a silhouette and the text 'Take Snapshot Upload Picture' and 'Image Size: 0-100 KB'.

Password Add ⓘ For the 2nd-generation access controller, it is the person password; otherwise it is the card password.

Card Add ⓘ The card number must be added if non-2nd generation access controller is used. ⚙️

Fingerprint ⚙️

+ Add - Delete		
<input type="checkbox"/>	Fingerprint Name	Operation
<input type="checkbox"/>		

Buttons: Add More, Finish, Cancel

Step 3 Select **Personnel > User Management > Add > Certification** to add the extended information of the staff, and then click **Finish** to save.

Figure 3-7 Add extended information

The screenshot shows a software window titled "Add User" with a close button (X) in the top right corner. The window contains three tabs: "Basic Info", "Extended information" (which is selected), and "Permission". Below the tabs, the word "Details" is displayed. The form fields are organized as follows:

- Gender:** Radio buttons for "Male" (selected) and "Female".
- Title:** A dropdown menu with "Mr" selected.
- Date of Birth:** A date picker showing "1985/3/15".
- Tel:** An empty text input field.
- Email:** An empty text input field.
- Mailing Address:** An empty text input field.
- Administrator:** A toggle switch that is currently turned on.
- Remark:** A large empty text area.
- ID Type:** A dropdown menu with "ID" selected.
- ID No.:** An empty text input field.
- Company:** An empty text input field.
- Occupation:** An empty text input field.
- Employment Date:** A date picker showing "2022/11/28 19:38:45".
- Termination Date:** A date picker showing "2032/11/29 19:38:45".

At the bottom right of the window, there are three buttons: "Add More" (blue), "Finish" (blue), and "Cancel" (grey).

Step 4 Configure permissions.

Figure 3-8 Permission configuration

The screenshot shows the 'Add User' dialog box with the 'Permission' tab selected. The 'Group' radio button is chosen. Below the tabs, there is a text box with the following text: 'Permission group is a combination of various devices including attendance check and access control devices. After selecting the permission group, the person information will be sent to corresponding devices and used for functions related to access control and attendance check.' Below this text is a blue 'Add Group' button and a search box labeled 'Group Name/Remarks'. A table with two columns, 'Permission Group' and 'Memo', contains one row with 'Permission Group1' in the first column. At the bottom right, there are three buttons: 'Add More', 'Finish', and 'Cancel'.

<input type="checkbox"/>	Permission Group	Memo
<input type="checkbox"/>	Permission Group1	

Step 5 Click **Finish**.

3.6.2 Adding Staff in Batches

Procedure

- Step 1 Select **Personnel > User Management > Batch Update > Batch Add**.
- Step 2 Select card reader and the department of staff. Set the start number, number of card, effective time and expired time of card.
- Step 3 Click **Read Card No.**, and then the card number will be read automatically.
- Step 4 Click **OK**.



Figure 3-9 Add staff in batches

Batch Add ✕

Device
 Read C...

Start No.: Quantity:


Department:

Validity Time:  Expiration Time: 

Issue Card

ID	Card No.

OK Cancel

Step 5 In the list of staff, click  to modify information or add details of staff.

3.7 Permission Configuration

3.7.1 Adding Permission Group

Procedure

- Step 1 Select **Personnel > Permission Configuration**.
- Step 2 Click **+** to add a permission group.
- Step 3 Set permission parameters.
- 1) Enter group name and remark.
 - 2) Select the needed time template.



For details on time template setting, see *SmartPSS-Lite_Access Control Solution_User's Manual*.

- 3) Select the verification method.
- 4) Select the corresponding device, such as door 1.

Figure 3-10 Add permission group (1)

<input type="checkbox"/>	Permission Group	Operation
<input type="checkbox"/>	Permission Group1	
<input type="checkbox"/>	Permission Group2	
<input type="checkbox"/>	Permission Group3	

Figure 3-11 Add permission group (2)

The screenshot shows a software window titled "Add Permission Group". It contains the following elements:

- Basic Info:** A "Group Name" field with the text "Permission Group4" and an empty "Remark" field.
- Time Templ...:** A dropdown menu currently showing "All Day Time Ten".
- Verification Method:** Four checkboxes, all of which are checked: "Card", "Fingerprint", "Password", and "Face".
- All Device:** A section with a search bar labeled "Search..". Below it is a list of devices with checkboxes:
 - Default Group
 - [Redacted]
 - [Redacted]
 - Door 1
- Selected (0):** A text label indicating the number of selected devices, accompanied by a trash icon.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Step 4 Click **OK** to save operations.

3.7.2 Assigning Permissions

Associate users with the permission group so that users can check attendance on the Device.

Procedure


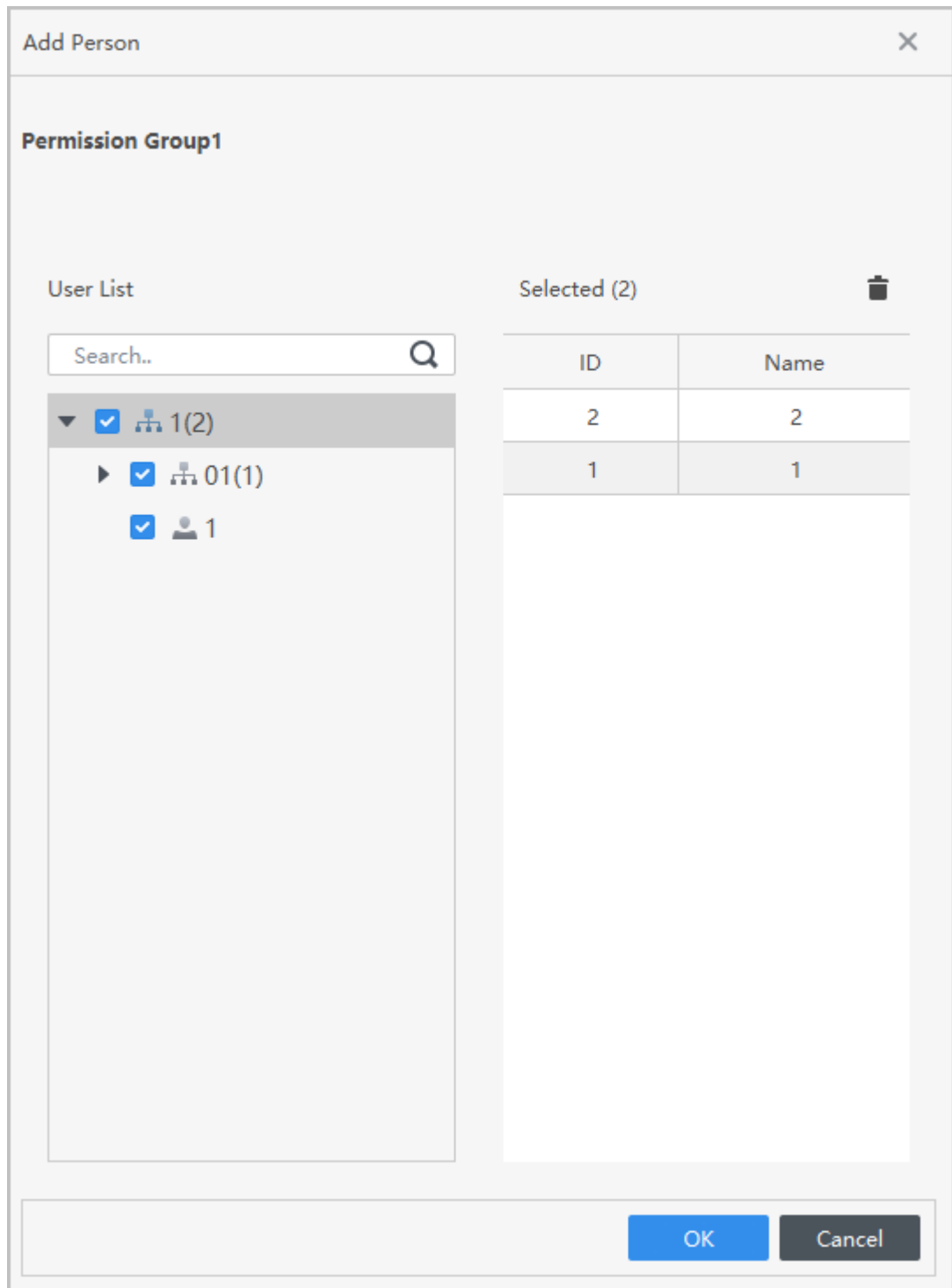
- Step 1 Select **Personnel > Permission Configuration**.
- Step 2 Click , and select users or you can select a whole department.
- Step 3 Click **OK**.

Figure 3-12 Assign permissions



Step 4 Click **OK**.

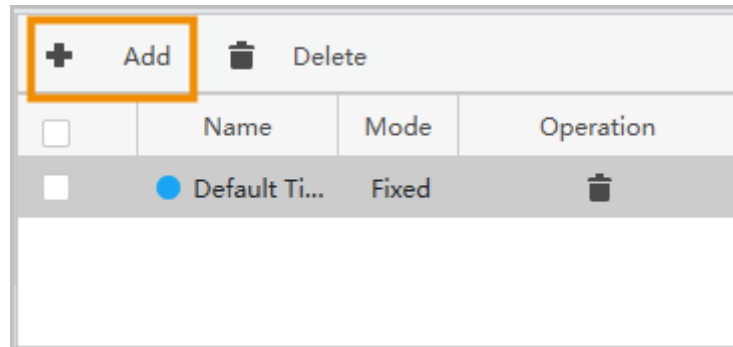
3.8 Adding Attendance Period

Procedure

Step 1 Select **Attendance > Attendance Period**.

Step 2 Click **Add**, and then set the basic information on the period, attendance period and attendance rule.

Figure 3-13 Add attendance periods



Step 3 Configure attendance period parameters.



- You can mark the attendance period in color. When you arrange and apply shifts, the color will be displayed in the calendar.
- Start work time of the current period must not be earlier than end work time of the previous period.
- After enabling **Use First Check-In and Last Check-Out Only**, the attendance record will only take the earliest and latest record within the valid check-in and check-out time range. Otherwise, multiple working periods will appear by pairing records according to the valid check-in and check-out time range.
- Fixed type: Set the working hour, valid check-in time, valid check-out time and more.
The attendance period is fixed. For fixed type, you can add up to 8 attendance periods. For the fixed type, you can add a rest period, and you can add up to 7 rest periods. Click **Configure Rest Period** to set the rest periods, and then click **Add** to add the rest period to the list.

- Figure 3-14 Set attendance period (fixed type)

Period Details ?

Device Model

Fixed
 Flexible
 Rest

Basic Info

Timezon... * Color: ● Blue ▼

Attendance Period:

Work Time: 08:30 ▼ - 17:30 ▼ ! The time span must not exceed 24 hours.

Record as: 540.0 ▼

Valid Check-in Time: 06:30 ▼ - Valid Check-out Time: 19:30 ▼

Use First Check-In and Last Check-Out Only

Attendance Rule:

Must not be late for more than 5.00 ▼ minutes is permitted.

Late sign in over 120.00 ▼ minutes is recorded as absence.

Early leave within 5.00 ▼ minutes is permitted.

✖

Save Cancel

Figure 3-15 Rest period

Period Details ?

Model

Fixed
 Flexible
 Rest

Basic Info

+ Add Configure Rest Period

Name	Start Time	End Time	Validity Start Time	Validity End Time	Rest Period (Minute)	Auto Deduction	Must Check In/Out	Transfer Unused Rest Time to Valid Work Time	Remark
2	12:00	12:10	12:00	12:10	10	● Enable	<input type="radio"/> Disable	<input checked="" type="radio"/> Disable	

✖

Save Cancel

Figure 3-16 Set rest periods

Set Rest Period

+ Add - Delete

<input type="checkbox"/>	Rest Name
<input checked="" type="checkbox"/>	1
<input type="checkbox"/>	2

Rest Name: 1

Start Time: 01:00 End Time: 02:00

Rest Period: 60.00 Minute

Auto Deduction

Must Check In/Out

- Flexible type: Set the required working hour of a day. The checking time is flexible.

Figure 3-17 Set attendance period (flexible type)

Period Details ?

Device Model

Fixed Flexible

Basic Info

Timezon... * Color: Blue ▼

Required work hours Work Hours

Cross Day Punch Change ... Work Hours

Use First Check-In and Last Check-Out Only

Overtime Rule

Save Cancel

Step 4 Click **Save**.

3.9 Adding Attendance Shift

You can arrange shift by day or week. Here uses the weekly shift as an example.

Procedure

- Step 1 Select **Attendance > Attendance Shift**.
- Step 2 Click **Add** on the upper-left corner of page.
- Step 3 Set the shift name, start date, cycle mode and cycle period, and then drag the period to the calendar to arrange the shift.
Click **Clear All** to clear all the settings.

Figure 3-18 Set attendance shift

The screenshot shows a 'Shift Details' form with the following sections:

- Basic Info:** Shift Name: * 1; Start Date: 2022-11-23; Cycle Mode: Day (selected) / Week; Number of Cycles: 31.
- Period:** (Drag to the calendar to arrange shift). It lists two periods: 00:00-23:59 Rest and 08:30-17:30 Default Time.
- Shift Arrangement Image:** (Right-click to clear shifts). A calendar grid from 00 to 23 hours. It shows a repeating pattern of 'Rest' (00:00-23:59) and 'Default Time' (08:30-17:30) shifts.
- Buttons:** Save and Cancel.

Step 4 Click **Save**, and then click **OK** to confirm operation.

Appendix 1 Important Points of Fingerprint Registration Instructions

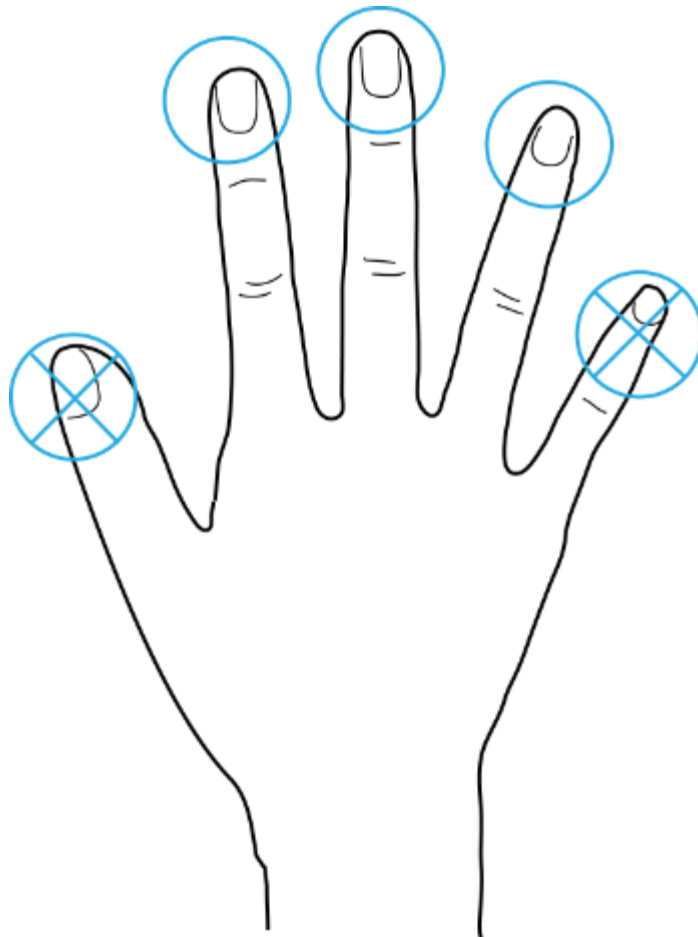
When you register the fingerprint, pay attention to the following points:

- Make sure that your fingers and the scanner surface are clean and dry.
- Press your finger on the center of the fingerprint scanner.
- Do not put the fingerprint sensor in a place with intense light, high temperature, and high humidity.
- If your fingerprints are unclear, use other unlocking methods.

Fingers Recommended

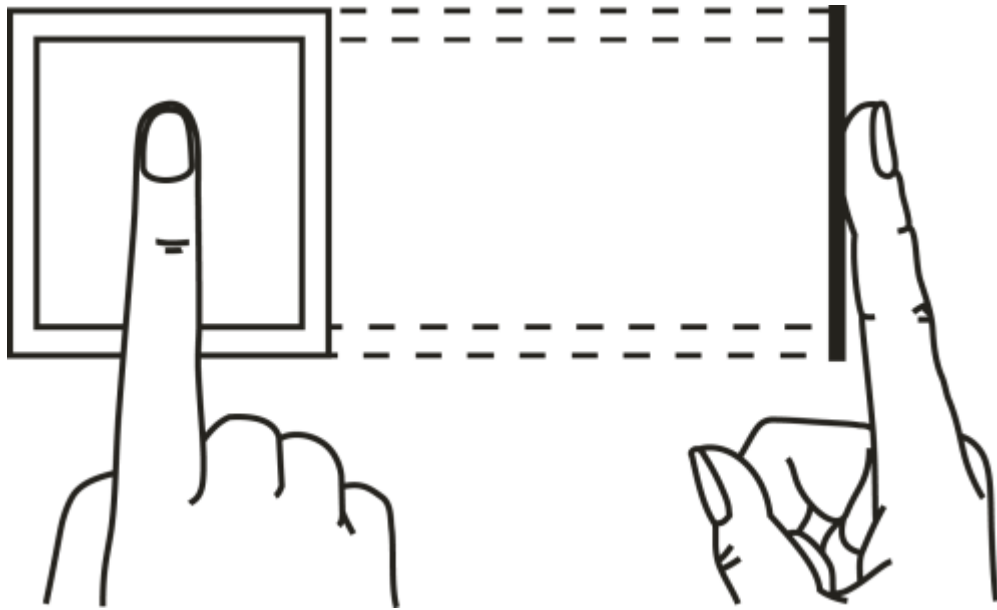
Forefingers, middle fingers, and ring fingers are recommended. Thumbs and little fingers cannot be put at the recording center easily.

Appendix Figure 1-1 Recommended fingers

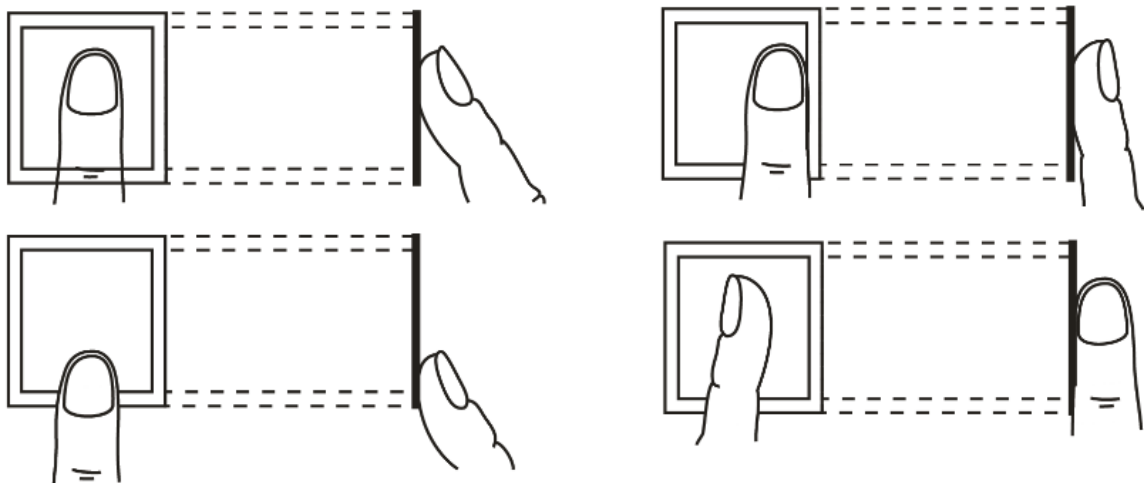


How to Press Your Fingerprint on the Scanner

Appendix Figure 1-2 Correct placement






Appendix Figure 1-3 Wrong placement






Appendix 2 Input Method

You can type English letters, numbers and symbols.




Numbers

1. Tap    to switch input methods until **123** is displayed on the screen.
2. Enter numbers.
3. Tap **OK/F4** to confirm.

Letters

1. Tap    to switch input methods until **ABC** is displayed on the screen.
2. Enter letters.
3. Tap **OK/F4** to confirm.

Symbols

1. Tap    to switch input methods until **:-)** is displayed on the screen.
2. Tap **^/F2** or **∨/F3** to select symbols.
3. Tap **OK/F4** to confirm.

Appendix 3 FAQ

- Q: The Device prompts me to do it again after I have placed my finger on the sensor.
A: Check if your fingerprints have been registered.
- Q: The bell does not ring.
A: Check if bell ring is set successfully and the broadcast volume switch is on.
- Q: I cannot update the Device through the USB.
A: Check if the Device is successfully recognized by the Device, and check the update file name.
- Q: Failed to export by USB flash drive.
A: Use USB in FAT32 format.
- Q: I forget administrator password.
A: Contact the manufacturer.
- Q: How to search for user attendance record?
A: On the standby screen, tap #, and then place your finger on the fingerprint sensor, or enter the user ID and password, or swipe the card.

Appendix 4 Cybersecurity Recommendations

Mandatory actions to be taken for basic equipment network security:

1. Use Strong Passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters.
- Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
- Do not contain the account name or the account name in reverse order.
- Do not use continuous characters, such as 123, abc, etc.
- Do not use overlapped characters, such as 111, aaa, etc.

2. Update Firmware and Client Software in Time

- According to the standard procedure in Tech-industry, we recommend to keep your equipment (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the “auto-check for updates” function to obtain timely information of firmware updates released by the manufacturer.
- We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your equipment network security:

1. Physical Protection

We suggest that you perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable equipment (such as USB flash disk, serial port), etc.

2. Change Passwords Regularly

We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. Set and Update Passwords Reset Information Timely

The device supports password reset function. Please set up related information for password reset in time, including the end user’s mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. Enable Account Lock

The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. Change Default HTTP and Other Service Ports

We suggest you to change default HTTP and other service ports into any set of numbers between 1024–65535, reducing the risk of outsiders being able to guess which ports you are using.

6. Enable HTTPS

We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. MAC Address Binding

We recommend you to bind the IP and MAC address of the gateway to the equipment, thus

reducing the risk of ARP spoofing.

8. Assign Accounts and Privileges Reasonably

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. Disable Unnecessary Services and Choose Secure Modes

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up strong passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

10. Audio and Video Encrypted Transmission

If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. Secure Auditing

- Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
- Check equipment log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. Network Log

Due to the limited storage capacity of the equipment, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. Construct a Safe Network Environment

In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
- Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.