SmartPSS-AC_Access Control Solution

User's Manual



Foreword

General

This manual introduces the access control solution of SmartPSS-AC (hereinafter referred to as "the SmartPSS-AC").

Safety Instructions

The following categorized signal words with defined meaning 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.
A CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
©T TIPS	Provides methods to help you solve a problem or save you time.
NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.1	 Add first card unlock function, multi card unlock function, inter-door lock function. Add video viewing function. 	June 2020
V1.0.0	First release.	May 2020

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others such as face, fingerprints, car plate number, email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

• The manual is for reference only. If there is inconsistency between the manual and the actual product, the actual product shall prevail.

- We are not liable for any loss caused by the operations that do not comply with the manual.
- The manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper manual, CD-ROM, QR code or our official website. If there is inconsistency between paper manual and the electronic version, the electronic version shall prevail.
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1 Overview

The access control solution is used with the access control devices through SmartPSS-AC platform, which is helpful in small and medium scenarios such as controlling doors remotely and configuring alarms.

2 Access Guide

You can quickly use the common functions of access control here.

- Step 1 Select Access Control Solution in the left bar.
- Step 2 Click **Access Guide** on the homepage.

 The guide bar is displayed at any functions.
- <u>Step 3</u> Configure functions in the order from top to bottom and from left to right. For details about how to use these functions, see the corresponding chapters.

Figure 2-1 Access guide

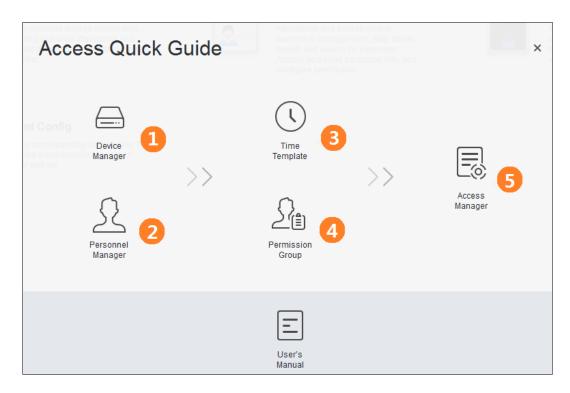


Table 2-1 Functions of access guide

Functions	Description
Device Manager	For details, see SmartPSS-AC_General_User's Manual.
Personnel Manager	For details, see "3 Personnel Management."
Time Template	You can set time template, configure parameters of anti-pass back, configure access controller and view historical event."
Permission Group	For details, see "3.3 Permission Configuration."
Access Manger	You can control door remotely. For details, see "8 Access Management."
In addition to the above functions, you can also configure events. For details, see "9 Event Configuration."	

3 Personnel Management

You can manage department information and staff information.

3.1 Department Management

You can add, modify or delete department. Here takes the department adding as an example. Step 1 Select **Personnel Manager** on the homepage.

- Step 2 (Optional) Select the company and click of to modify campby info, such as region, email and websete.
- Step 3 Click in the **Department List** to add.
- <u>Step 4</u> Select a superior department, and then add a new sub-department. Click **OK** to confirm.

Figure 3-1 Add department

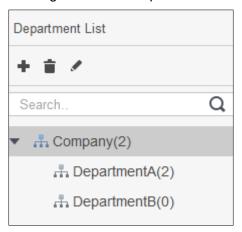
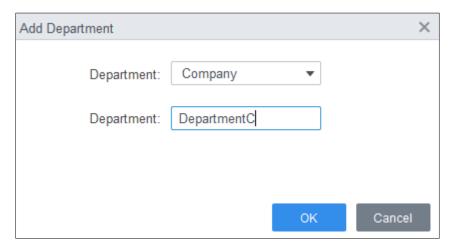


Figure 3-2 Add department information



- Step 5 (Optional) Click in the **Department List** to delete.
- Step 6 (Optional) Select the department and click in the **Department List** to modify.

3.2 Staff Management

You can add personnel information, issue cards, export personnel information to local, and freeze cards.

3.2.1 Card Type Setting

Before issuing card, set card type first. For example, if the issued card is ID card, select type as ID card.

Setting card type X

ID ID Card

IC IC Card

OK Cancel

Figure 3-3 Set card type

3.2.2 Adding Staff

Select one of the methods to add staff.

- Add staff one by one manually.
- Add staff in batches.
- Extract staff information from other devices.
- Import staff information from the local.

Add Staff One by One Manually

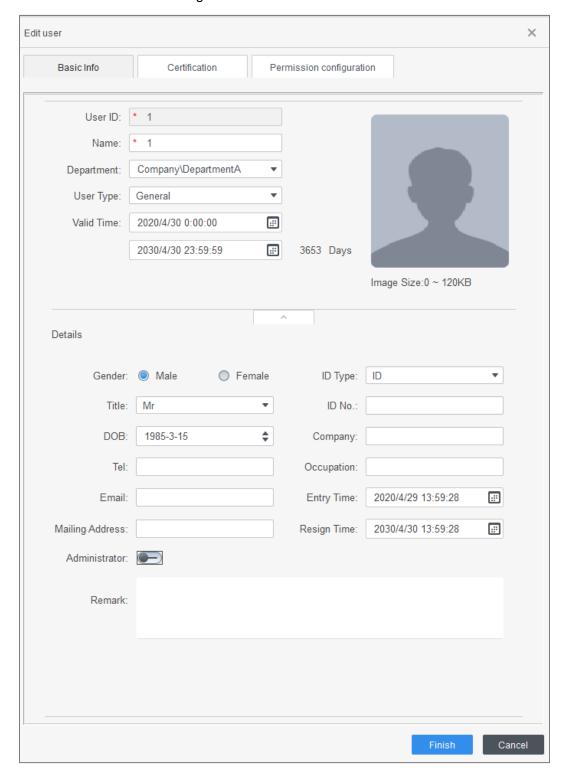
Step 1 Click Personnel Manger > User > Add.

Step 2 Add basic information of staff.

- 1) Select Basic Info.
- 2) Add basic information of staff, and upload picture. Then click **Finish** to save.

The card number can be read automatically or filled in manually. For automatically read, select card reader next to the **Card No.**, and then place the card on the card reader. The card number is read automatically after that.

Figure 3-4 Add basic information

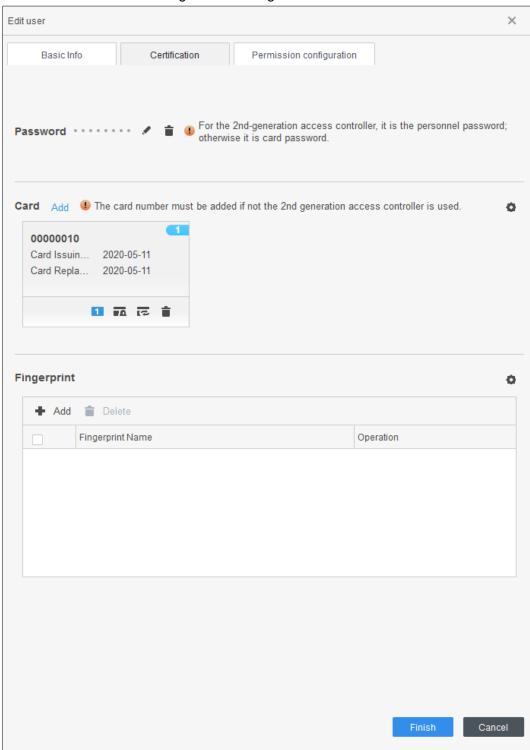


<u>Step 3</u> Click **Personnel Manger > User > Add > Certification** to add certification information of staff.

- Configure password.
- Set password. For the second generation access controllers, set the personnel password; for other devices, set the card password. The new password must consist of 6-8 digits.
- Configure card.
- Click to select **Device** or **Card issuer** as card reader.

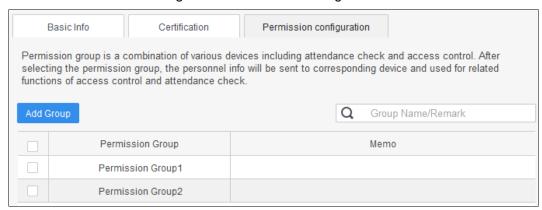
- 2) Add card. The card number must be added if the non-second generation access controller is used.
- 3) After adding, you can select the card as main card or duress card, or replace the card with new one, or delete the card.
- Configure fingerprint.
- 1) Click to select **Device** or **Fingerprint Scanner** as fingerprint collector.
- Add fingerprint. Click Add Fingerprint and press finger on the scanner three times continuously.

Figure 3-5 Configure certification



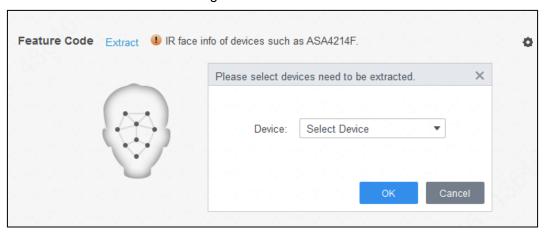
Step 4 Permission group is a combination of all devices supported by various solutions. After selecting the permission group, the personnel info will be sent to corresponding device and used for related functions of access control and attendance check. For details, see "3.3 Permission Configuration."

Figure 3-6 Permission configuration



Step 5 Click Finish.

Figure 3-7 Feature code

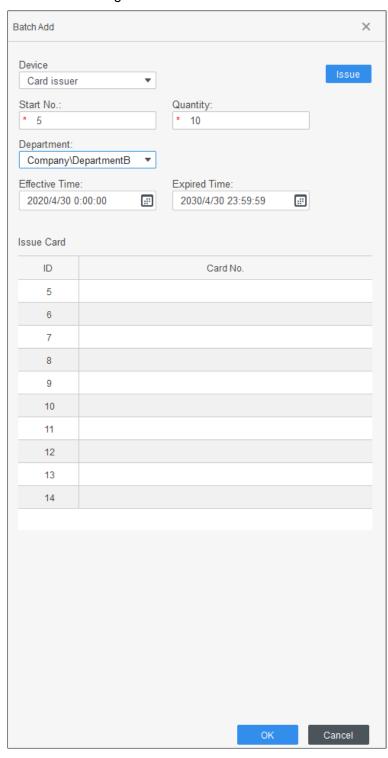


- <u>Step 6</u> (Optional) If the user you added has face unlock permission of a device (device model is ASA4214F for example) with IR face feature function, and if you want to grant the user face unlock permission of other devices with IR face feature function, do the following operations.
 - 1) Click on the right of the user.
 - 2) Click the authentication tag on the pop-up interface.
 - 3) Click .
 - 4) Select devices that are with face features of the user.
 - 5) Click **OK** and then click **Extract**. The user can unlock with faces on the selected devices that are with IR face feature function.

Add Staff in Batches

- Step 1 Click Personnel Manger > User > Batch Add.
- <u>Step 2</u> Select card reader and the department of staff. Set the start number, end number of card, effective time and expired time of card.
- Step 3 Click **Issue** and the card number will be read automatically.
- Step 4 Click OK.

Figure 3-8 Add staff in batches



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

Extract Staff Information from Other Devices

- Step 1 Click Personnel Manger > User > Extract.
- Step 2 Select the needed device, and click **OK**.

Figure 3-9 Devices with staff information



Step 3 Select the needed staff information, and click Extract.

Step 4 In the list of staff, click of to modify information or add details of staff.

Import Staff Information from the Local

Step 1 Click Personnel Manger > User > Import.

Step 2 Import staff information according to instructions.

3.2.3 Issuing Card in Batches

You can issue cards to staff who have been added but have no card.

Step 1 Select Personnel Manager > User.

Step 2 Select the needed staff and then click **Batch Issue Card**.

Step 3 Issue card in batches. Card No. can be auto read by card reader or entered manually.

- Auto read
- 1) Select card reading device, and then click **Issue**.
- According to the order list, put the cards of the corresponding staff on card reader in sequence, and then the SmartPSS-AC will auto read the card No..
- 3) Modify staff info, such as start time and end time for card validation.
- Enter manually
- 1) Select staff in card list and enter the corresponding card No..
- 2) Modify staff info, such as start time and end time for card validation.

Figure 3-10 Issue card in batches Batch Issue Card × Device: • Card issuer ID: Name: 7 7 Card No.: Department: Company Start Time: End time: 2020-05-04 00:00:00 2030-05-04 23:59:59 Card List User ID Name Card No. Operation 1 2 3

Step 4 Click OK.

3.2.4 Exporting Staff Information

Select the staff information which needs to be exported, and then click **Export** to export all staff information to local.

Cancel

3.2.5 Searching for Staff

Search for staff who meet the conditions, according to ID, name or card. Figure 3-11 Search for staff

5



3.2.6 Staff Displaying

You can select display modes: card display and list display; and you can also edit department and valid time of users in batches.

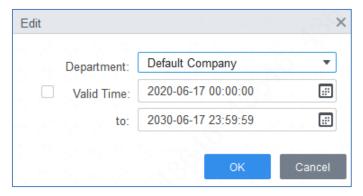
Figure 3-12 Card display



Figure 3-13 List display



Figure 3-14 Edit department



3.3 Permission Configuration

3.3.1 Adding Permission Group

- Step 1 Click Personnel Manger > 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.
 - Ш

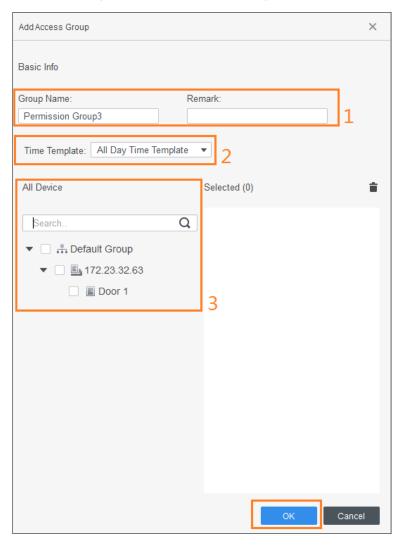
For details of time template setting, see SmartPSS-AC_Access Control Solution_User's Manual.

- 3) Select the corresponding device, such as door 1.
- Step 4 Click **OK** to save operations.
- Step 5 (Optional) Click to delete group.
- Step 6 (Optional) Click to modify group info.
- $\underline{\text{Step 7}}\ \ \text{(Optional)}$ Double-click permission group name to view group info.

Figure 3-15 Add permission group (1)



Figure 3-16 Add permission group (2)



3.3.2 Configuring Permission

The method to configure permission for department and for personnel is similar, and here takes department as an example.

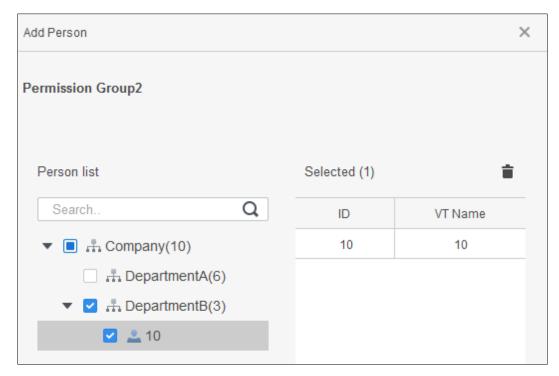
Step 1 Click **Personnel Manger > Permission Configuration**.

Step 2 Click .

Step 3 Select the department need to be configured permission.

Step 4 Click OK.

Figure 3-17



Step 5 (Optional) Click in the left navigation bar to view the authorization progress. Click

to view the details.

4 Time Template Setting

Time template is to configure the working hours of access controllers, such as when to open and when to open. The SmartPSS-AC provides 4 time templates by default. You can set new time templates as needed.



The default templates cannot be modified.

- Step 1 Click **Access Configuration** on the homepage. (Or select **Access Guide** > on the homepage.)
- Step 2 Click Add.
- Step 3 Set time template.
 - 1) Enter **Template Name** and description note.
 - Click Week Plan to set week plan to allow personnel to pass through during specified periods from Monday to Sunday. Up to 4 needed time periods for each day.

There are two methods.

♦ Method 1: Move the cursor to the period area. When cursor is , click the periods that are not needed, and the periods become gray and not allow personnel to pass through. When cursor is , click the needed periods, and the periods become green and allow personnel to pass through. Click Save.

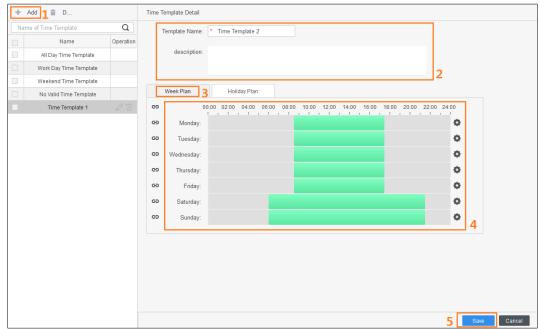
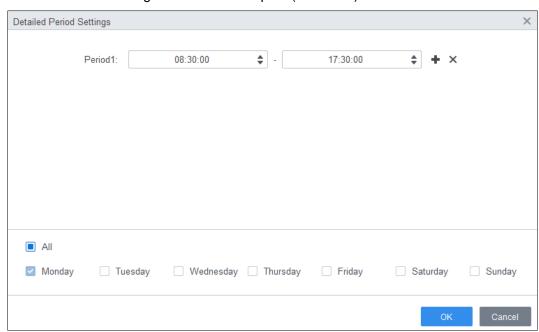


Figure 4-1 Set week plan (method 1)

Method 2: Click to the right of the time bar, and set time period. You can apply the set time period to other days. Click **OK** and **Save**.

Figure 4-2 Set week plan (method 2)



- 4) Click **Holiday Plan** to set holiday plan. Set the time periods; click **Add**, enter the holiday information on the right side of the interface, and then click **OK**. Select the needed holiday in the **Holiday List** and click **OK**.



- When the week plan and the holiday plan are in conflict, the holiday plan has higher priority.
 For example, if the week plan is set to allow access but the holiday plan is not, the access controller is accessible.
- After the time template is configured, assign the permission in Personnel Manager >
 Permission Configuration when selecting time template.

Figure 4-3 Set holiday plan (1)

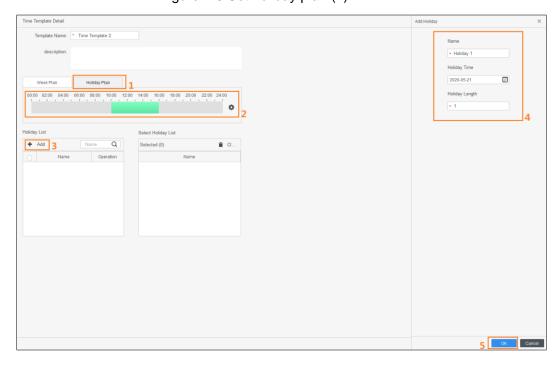
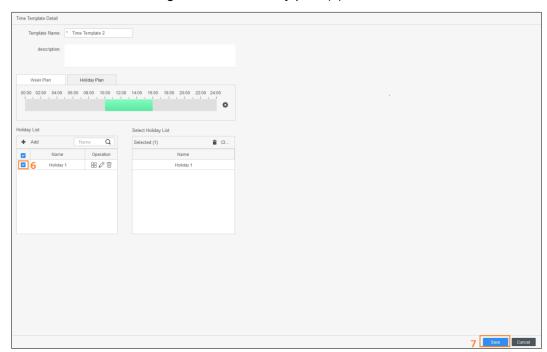


Figure 4-4 Set holiday plan (2)



5 Advanced Functions Configuration

5.1 First Card Unlock

Only after the specified first-card user swipes the card every day can other users unlock the door with their cards. You can set multiple first cards. Only after any one of the users swipes the first card can other users without first cards unlock the door with their cards.

- The person to be granted with the first card unlock permission should be the **General** user type and have permission of the certain door. Set the type when adding. For details, see "3.2.2 Adding Staff."
- For details of permission assignment, see "3.3 Permission Configuration."
- Step 1 Select Access Configuration > Advanced Config.
- Step 2 Click the First Card Unlock tab.
- Step 3 Click Add.
- Step 4 Configure the First Card Unlock parameters and click Save.

Figure 5-1 First card unlock configuration

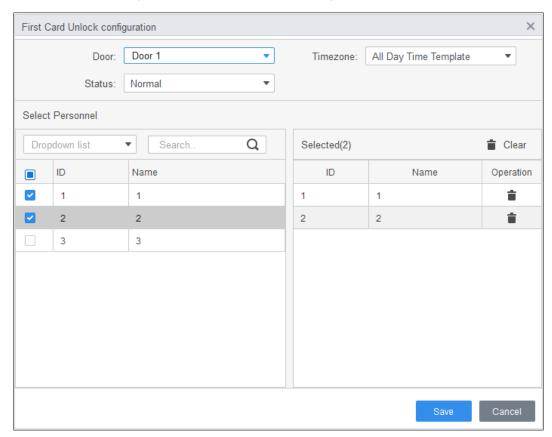


Table 5-1 Parameters of first card unlock

Parameter	Description
Door	Select the target access control channel to configure the first card unlock.
Timezone	First Card Unlock is valid in the time period of the selected time template.
Status	After First Card Unlock is enabled, the door is in either the Normal mode or
	Always Open mode.

Parameter	Description
	Select the user to hold the first card. Supports selecting a number of users
User	to hold first cards. Any one of them swiping the first card means first card
	unlock is done.

Step 5 (Optional) Click . The icon changing into indicates First Card Unlock is enabled.

6) The newly added First Card Unlock is enabled by default.

5.2 Multi Card Unlock

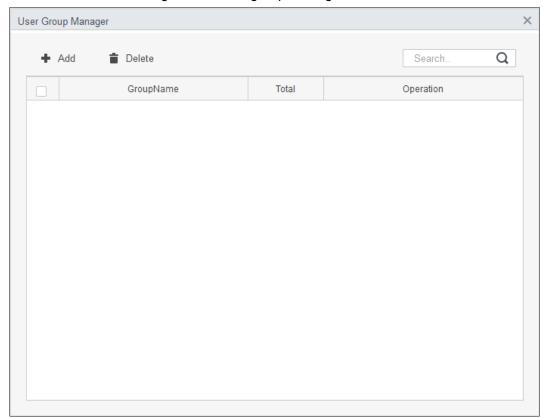
In this mode, one or multiple groups of users have to swipe cards for an access control channel in an established sequence to unlock the door.

- One group can have up to 50 users, and one person can belong to multiple groups.
- With Multi-Card Unlock enabled for an access control channel, there can be up to four groups of users being on site at the same time for verification. The total number of users can be 200 at most, with up to 5 valid users.

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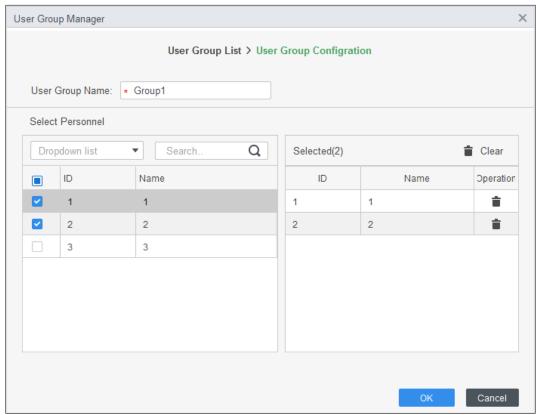
- First card unlock has higher priority than multi-card unlock, which means if the two rules are both enabled, the system performs first card unlock first.
- You are recommended to add people with first card unlock permission to the multi-card Unlock group.
- Do not set the VIP or Patrol type for people in the user group. For details, see "3.2.2 Adding Staff."
- For details of permission assignment, see "3.3 Permission Configuration."
- **Step 1** Select **Access Configuration > Advanced Config.**
- Step 2 Click the Multi Card Unlock tab.
- Step 3 Add user group.
 - 1) Click User Group.

Figure 5-2 User group manager



2) Click Add.

Figure 5-3 User group configuration

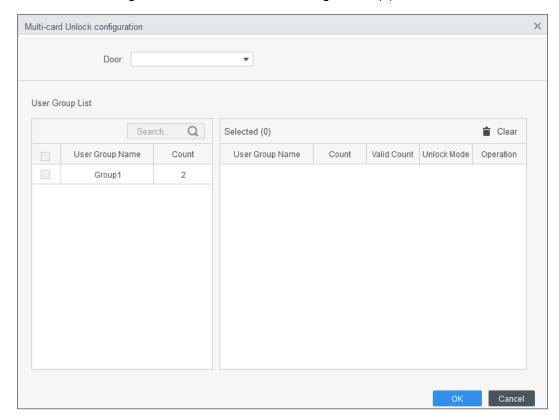


- 3) Set up **User Group Name**. Select users from **User List** and click **OK**. You can select up to 50 users.
- 4) Click at the upper-right corner of the **User Group Manager** interface.

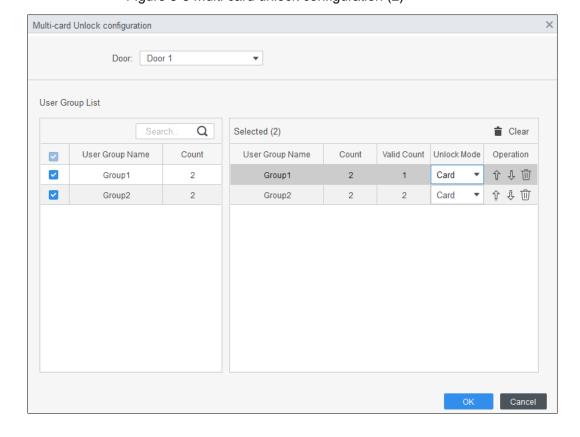
Step 4 Configure parameter of multi card unlock.

1) Click Add.

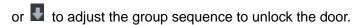
Figure 5-4 Multi card unlock configuration (1)



- 2) Select the door.
- 3) Select the user group. You can select up to four groups. Figure 5-5 Multi card unlock configuration (2)



4) Fill in the Valid Count for each group to be on site and the Unlock Mode. Click



The valid count refers to the number of users in each group that must be on site to swipe their cards. Take Figure 5-5 as an example. The door can be unlocked only if it swiped by any person of group 1 and 2 persons of group 2.

Up to five valid users are allowed.

5) Click OK.

Step 5 (Optional) Click . The icon changing into indicates Multi Card Unlock is enabled.

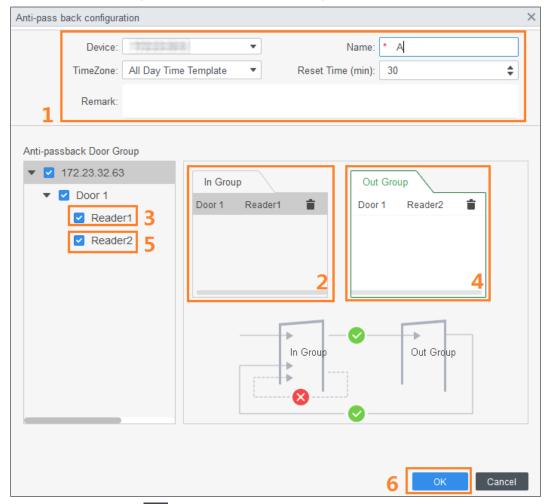
The newly added **Multi Card Unlock** is enabled by default.

5.3 Anti-passback

The Anti-passback feature requires a person to exit from the specific doors. For the same person, an entry record must pair with an exit record. If someone has entered by tailing someone else, which means there is no entry record, this person cannot unlock the door for exit.

- Step 1 Select Access Configuration > Advanced Config.
- Step 2 Click Add.
- Step 3 Configure parameters.
 - 1) Select device and enter device name.
 - 2) Select time template.
 - 3) Set rest time and the unit is minute. For example, set the reset time as 30 minutes. If one staff has swiped in but not swiped out, the anti-pass back alarm will be triggered when this staff tends to swipe in again within the 30 minutes. The second swipe-in of this staff is only valid after 30 minutes later.
 - 4) Click **In Group** and select the corresponding reader. And then click **Out Group** and select the corresponding reader.
 - 5) Click **OK**. And then the configuration will issue to device and take effect.

Figure 5-6 Anti-pass back configuration



<u>Step 4</u> (Optional) Click . The icon changing into indicates **Anti-passback** is enabled.

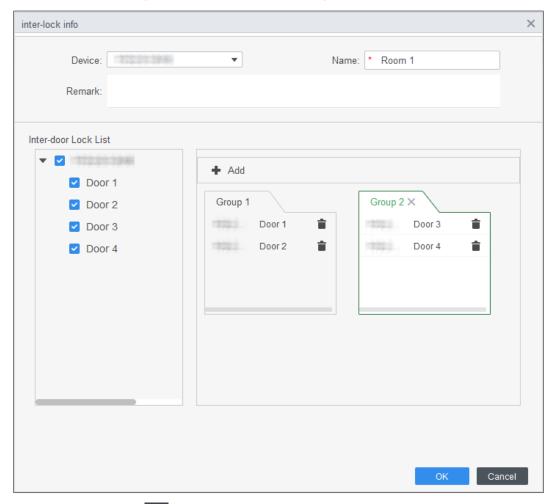
The newly added Anti-passback is enabled by default.

5.4 Inter-door Lock

One A&C central controller supports two groups of inter-door unlock, and each door group can add up to 4 doors.

- Step 1 Select Access Configuration > Advanced Config.
- Step 2 Click the Inter-Lock tab.
- Step 3 Click Add.
- Step 4 Configure parameters and click **OK**.
 - 1) Select device and enter device name.
 - 2) Enter remark.
 - 3) Click **Add** twice to add two door groups.
 - 4) Add doors of the access controller to the needed door group. Click one door group and then click doors to add.
 - 5) Click OK.

Figure 5-7 Inter-door lock configuration



Step 5 (Optional) Click . The icon changing into indicates Inter-door Lock is enabled.

The newly added Inter-door Lock is enabled by default.

6 Access Controller Configuration

You can configure access door, such as reader direction, door status and unlock mode.

- Step 1 Select Access Configuration > Access Config.
- Step 2 Click the door needs to be configured.
- Step 3 Configure parameters.

Figure 6-1 Configure access door

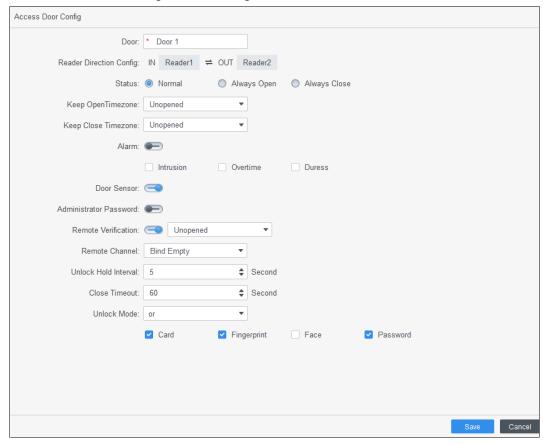


Figure 6-2 Unlock by time period

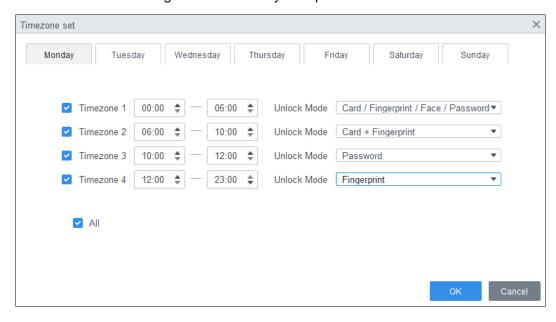


Table 6-1 Parameters of access door

Description
Enter door name.
Click = to set reader direction according to actual situations.
Set door status, including Normal, Always Open and Always Close. It is not the actual door status because the SmartPSS-AC can only send commands to the device. If you want to know the actual door status, enable door sensor.
Select time template when door is always opened.
Select time template when door is always closed.
Enable alarm function and set alarm type, including intrusion, overtime and duress. When alarm enabled, the SmartPSS-AC will receive uploaded message when the alarm is triggered.
Enable door sensor so that you can know the actual door status. You are recommended to enable the function.
Enable and set the administrator password. You can access by entering the password.
Enable the function and set the time template, and then the access of personnel have to be verified remotely through the SmartPSS-AC during the template periods.
Set the linked video channel of access controllers. After setting, when viewing the video of access controller, the real-time video of the pre-defined video channel will be displayed.
Set the unlock holding interval. The door will auto close when time is over.
Set the timeout for alarm. For example, set close timeout as 60 seconds. If the door is not closed for more than 60 seconds, the alarm message will be uploaded.
 Select unlock mode as needed. Select And and select unlock methods. You need to satisfy all the configured methods at the same time to open the door. Select Or and select unlock methods. You can open the door in any way you configured Select Unlock by time period and select unlock mode for each time period. The door can only be opened when you

Step 4 Click **Save**. And then the configuration will issue to device and take effect.

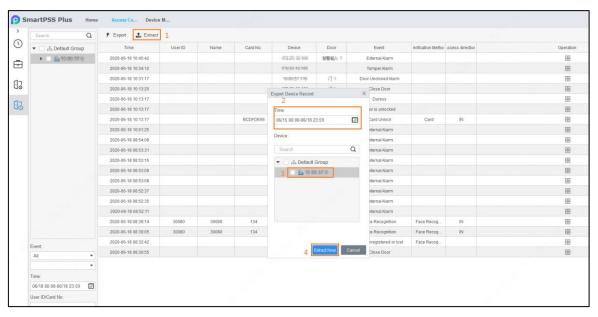
7 Viewing Historical Event

Historical door events include those happened on the SmartPSS-AC and door devices. Before viewing, extract historical events on the door devices to ensure that all events are searched.

- Step 1 Add the needed personnel to the SmartPSS-AC.
- <u>Step 2</u> Click **Access Configuration > History Event** on the homepage.
- Step 3 Click on the Access Manager interface.
- <u>Step 4</u> Extract events from door device to the local. Click **Extract**, set the time, select the door device, and then click **Extract Now**.
 - 7)

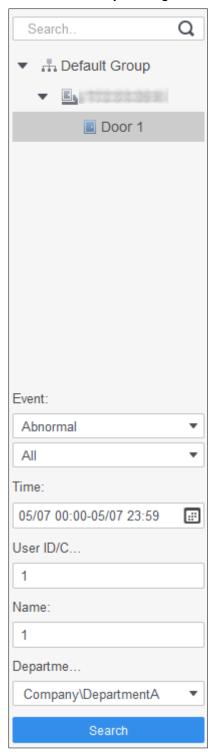
You can select multiple devices at one time to extract events.

Figure 7-1 Extract events



Step 5 Set filtering conditions, and then click **Search**.

Figure 7-2 Search for events by filtering conditions



<u>Step 6</u> (Optional) Click **Export**, and then operate according to instructions to save the searched door events to the local.

8 Access Management

8.1 Remotely Opening and Closing Door

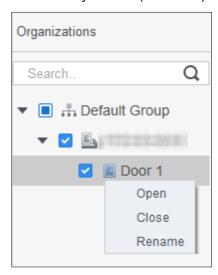
After access configuration, you can remotely control door through SmartPSS-AC.

Step 1 Click Access Manager on the homepage. (Or click Access Guide > ().

Step 2 Remotely control the door. There are two methods.

Method 1: Select the door, right click and select Open.

Figure 8-1 Remotely control (method 1)



Method 2: Click or to open or close the door.

Figure 8-2 Remotely control (method 2)



Step 3 View door status by **Event Info** list. For details, see "7 Viewing Historical Event."



- Event filtering: Select the event type in the Event Info, and the event list displays
 events of the selected types. For example, select Alarm, and the event list only
 displays alarm events.
- Event refresh locking: Click to the right of **Event Info** to lock or unlock the event list, and then the real-time events cannot be viewed.
- Event deleting: Click to the right of Event Info to clear all events in the event list.

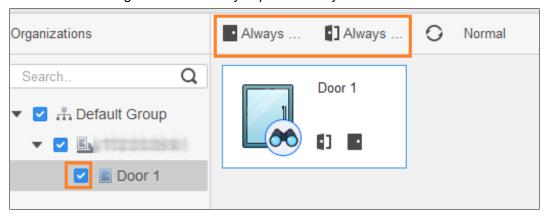
8.2 Setting Always Open and Always Close

After setting always open or always close, the door is open or closed all the time and cannot be controlled manually. If you want to manually control the door again, click **Normal** to reset the door status.

Step 1 Click Access Manager on the homepage. (Or click Access Guide > (

Step 2 Select the needed door, and then click Always Open or Always Close.

Figure 8-3 Set always open or always close



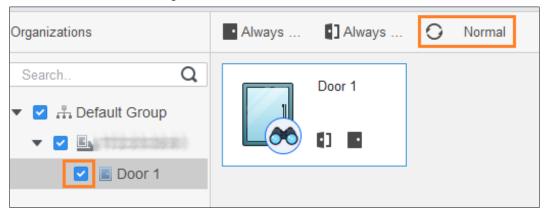
8.3 Resetting Door Status

Click **Normal** to reset the door status, if you want to manually control the door again when you have clicked **Always Open** or **Always Close**.

Step 1 Click Access Manager on the homepage. (Or click Access Guide > (Control of the homepage).

<u>Step 2</u> Select the needed door, and then click **Normal**. And then follow the on-screen instructions to operate.

Figure 8-4 Reset door status



9 Event Configuration

By event configuration, you can make software linkages, such as alarm sound, mail sending and alarm linkages.

- Configure external alarm linkages connected to the access controller, such as smoke alarm.
- Configure linkages of access controller events.
 - ♦ Alarm event
 - ♦ Abnormal event
 - ♦ Normal event

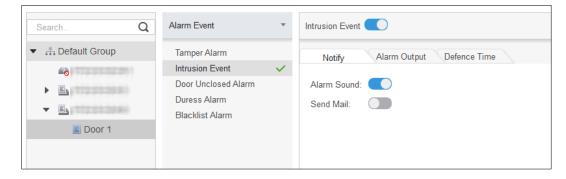


For anti-pass back function, set the anti-pass back mode in **Abnormal** of **Event Config**, and then configure the parameters in **Advanced Config**. For details, see "5 Advanced Functions Configuration."

- Step 1 Click **Event Config** on the homepage.
- Step 2 Select the needed door and select **Alarm Event > Intrusion Event**.
- Step 3 Click to the right of Intrusion Alarm to enable the function.
- Step 4 Configure intrusion alarm linage actions as needed.
 - Enable alarm sound.
 - Click the **Notify** tab, and click to the right of **Alarm Sound**. When intrusion event happens, the access controller warns by alarm sound.
 - Send alarm mail.
 - 1) Enable **Send Mail** and confirm to set SMTP, you will automatically go to the **System Settings** interface.
 - 2) Configure SMTP parameters, such as server address, port number, and encrypt mode.

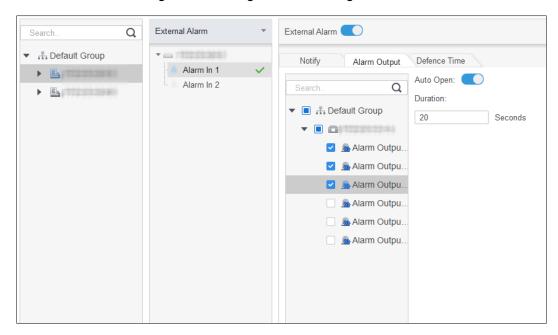
When intrusion event happens, the system automatically sends alarm mails to the specified receiver.

Figure 9-1 Configure intrusion alarm



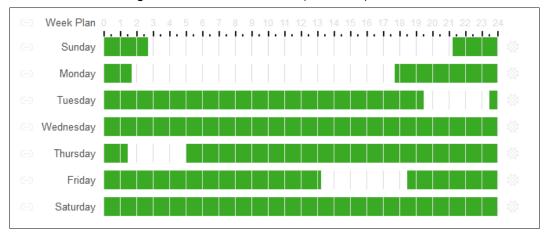
- Configure alarm I/O.
- 1) Click Alarm Output tab.
- 2) Select the device which supports alarm in, then select alarm-in interface, and then enable **External Alarm**.
- 3) Select the device which supports alarm out, then select alarm-out interface.
- 4) Enable **Auto Open** for the alarm linkage.
- 5) Set the duration.

Figure 9-2 Configure alarm linkage



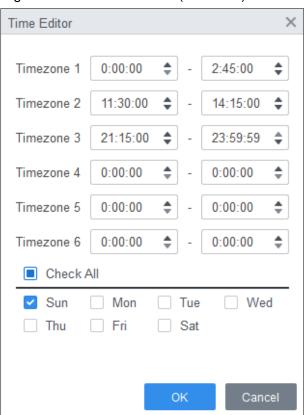
- Set defence time. There are two methods.
 - Method 1: Move the cursor to set time periods. When the cursor is pencil, click to add periods; when the cursor is eraser, click to minus periods. The green area is the periods with defence.

Figure 9-3 Set defence time (method 1)



♦ Method 2: Click 🌣 to set periods, and then click **OK**.

Figure 9-4 Set defence time (method 2)



Step 5 (Optional) Click **Copy To**, select the access controller to be applied on, and then click **OK**.

Step 6 Click Save.

Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations on how to create a more secured security system.

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 equipment 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. Enable Whitelist

We suggest you to enable whitelist function to prevent everyone, except those with specified IP addresses, from accessing the system. Therefore, please be sure to add your computer's IP address and the accompanying equipment's IP address to the whitelist.

8. 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.

9. Assign Accounts and Privileges Reasonably

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

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.
- It is recommended that you enable your device's firewall or blacklist and whitelist feature to reduce the risk that your device might be attacked.