## HIKVSION

iVMS-4200 AC Client
User Manual

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## Port List

Before installing iVMS-4200 AC Client service, ensure the default ports of the iVMS-4200 AC Client are not used by other services, otherwise the iVMS-4200 AC Client service will be unavailable.

For more details about port list, enter Hikvision official website (http://www.hikvision.com) or scan the QR code below to get more details.


## Symbol Conventions

The symbols that may be found in this document are defined as follows.

| Symbol | Description |
| :--- | :--- |
| ! Danger | Indicates a hazardous situation which, if not avoided, will or could <br> result in death or serious injury. |
| ! Caution | Indicates a potentially hazardous situation which, if not avoided, could <br> result in equipment damage, data loss, performance degradation, or <br> unexpected results. |
| i Note | Provides additional information to emphasize or supplement <br> important points of the main text. |

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# Chapter 1 Overview 

### 1.1 Introduction

iVMS-4200 Client Software is designed to configure and manage Hikvision devices in a unified and intuitive manner, including access control devices and video intercom devices.
The software provides multiple functionalities, including person management, access control, video intercom, time \& attendance, etc.
This user manual describes the functions, configurations and operation steps of the client software. To ensure the properness of usage and stability of the software, refer to the contents below and read the manual carefully before installation and operation.

### 1.2 Summary of Changes

The followings are the key changes between this version and the previous version.

- Added the function of issuing cards to the selected persons with no cards in a person group. For details, refer to Issue Cards to Persons in Batch .
- Added the function of configuring cross-controller anti-passback. For details, refer to Configure Cross-Controller Anti-Passback.


## Chapter 2 Service Management

iVMS-4200 Service is mainly applicable for data storage, data management, and data calculation. With continuous running and processing, it can manage the data, such as event records and attendance records, received by the iVMS-4200 Client Software. iVMS-4200 Service also provides management for user permissions, devices, groups, logs, etc.

You can view the module running status, and click Edit Port to edit its ports. You need to restart the iVMS-4200 Service to take effect.
Enter the ISUP port number configured on the router, so that you will be able to add ISUP devices to the client for management.
Check WAN Address, and enter the IP Address for port mapping, or edit Event Uploading Port (ISUP 4.0), Event Uploading Port (ISUP 5.0), Picture Storage Server Port, Live View Port of Video Intercom, and Two-Way Audio Port.
Check Auto-Launch to enable launching the iVMS-4200 Service automatically after the PC started up.
The iVMS-4200 Service will not show after running it. Enter the system tray and click $\Delta$ to open the service management window.

## I ${ }^{\text {Note }}$

- After closing the service window, the client will log out and return to the login page. You need to run the service and then log in again.
- The client can be run by no more than one operating system user at the same time on the same computer.
- The Service should run on the same computer with the client.


## Chapter 3 Device Management

The client supports managing access control devices and video intercom devices.

## Example

You can control entrance \& exit and manage attendance after adding access control devices to the client; you can perform video intercom with the indoor stations and door stations.

### 3.1 Activate Devices

For the inactive devices, you are required to create a password to activate them before they can be added to the software and work properly.

## Before You Start

Make sure the device to be activated is connected to the network and on the same subnet with the PC where the client runs.

## Steps

## [ i] Note

This function should be supported by the device.

1. Enter the Device Management page.
2. Click Device on the top of the right panel.
3. Click Online Device to show the online device list at the bottom of the page.

The searched online devices are displayed in the list.
4. Check the device status (shown on Security Level column) and select an inactive device.


Figure 3-1 Online Inactive Device
5. Click Activate to open the Activation dialog.
6. Create a password in the password field, and confirm the password.

## Caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least
three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

## [i] ${ }_{\text {Note }}$

For the NVR device, you are required to create a password in Network Cameras' Default Password field and confirm the password for activating network camera(s) connected to the NVR.
7. Click OK to activate the device.
8. Optional: Click in the Operation column to edit the network information (including IP address, port number, gateway, etc.) for the online device.

### 3.2 Add Device

The client provides three device adding modes including by IP/domain, IP segment, and ISUP protocol. The client also supports importing multiple devices in a batch when there are large amount of devices to be added.

### 3.2.1 Add Single or Multiple Online Devices

The client can detect online devices which are in the same network as the PC running the client. You can select a detected online device displayed in the online device list and add it to the client. For detected online devices sharing the same user name and password, you can add them to the client in a batch.

## Before You Start

- The device(s) to be added are in the same network as the PC running the client.
- The device(s) to be added have been activated.


## Steps

1. Click Device Management $\rightarrow$ Device .
2. Click Online Device to show the online device area.

The searched online devices are displayed in the list.


Figure 3-2 Online Device
3. In the Online Device area, check one or more online device(s), and click Add to open the device adding window.


Figure 3-3 Add Single Online Device


Figure 3-4 Add Multiple Online Devices
4. Enter the required information.

## Name

Enter a descriptive name for the device.

## IP Address

Enter the device's IP address. The IP address of the device is obtained automatically in this adding mode.

## Port

You can customize the port number. The port number of the device is obtained automatically in this adding mode.
[i] Note
For some device types, you can enter $\mathbf{8 0}$ as the port No. This function should be supported by the device.

## User Name

By default, the user name is admin.

## Password

Enter the device password.

## $\triangle$ caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
5. Optional: Check Transmission Encryption (TLS) to enable transmission encryption using TLS (Transport Layer Security) protocol for security purpose.
[I] ${ }_{\text {Note }}$

- This function should be supported by the device.
- If you have enabled Certificate Verification, you should click Open Certificate Directory to open the default folder, and copy the certificate file exported from the device to this default directory to strengthen the security. See for details about enabling certificate verification.
- You can log into the device to get the certificate file by web browser.

6. Check Synchronize Time to synchronize the device time with the PC running the client after adding the device to the client.
7. Optional: Check Import to Group to create a group by the device name, and import all the channels of the device to this group.

## Example

For access control device, its access points, alarm inputs/outputs, and encoding channels (if exist) will be imported to this group.
8. Click Add.
9. Optional: Click Export Device, select the saving path and device type, and click OK to export the device information to your PC.

```
[i]
```

Currently, the platform only supports exporting the information of video intercom devices, including door stations, indoor stations, and main stations.

### 3.2.2 Add Device by IP Address or Domain Name

If you know the IP address or domain name of the device to add, you can add devices to the client by specifying the IP address (or domain name), user name, password, etc.

## Steps

1. Enter Device Management module.
2. Click Device tab on the top of the right panel.

The added devices are displayed on the right panel.
3. Click Add to open the Add window, and then select IP/Domain as the adding mode.
4. Enter the required information.

## Name

Create a descriptive name for the device. For example, you can use a nickname that can show the location or feature of the device.

## Address

The IP address or domain name of the device.

## Port

The devices to add share the same port number. The default value is $\mathbf{8 0 0 0}$.

## Note

For some device types, you can enter $\mathbf{8 0}$ as the port No. This function should be supported by the device.

## User Name

Enter the device user name. By default, the user name is admin.

## Password

Enter the device password.
> $\triangle$ Caution
> The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
> Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
5. Optional: Check Transmission Encryption (TLS) to enable transmission encryption using TLS (Transport Layer Security) protocol for security purpose.

## [i] Note

- This function should be supported by the device.
- If you have enabled Certificate Verification, you should click Open Certificate Directory to open the default folder, and copy the certificate file exported from the device to this default directory to strengthen the security. See for details about enabling certificate verification.
- You can log into the device to get the certificate file by web browser.

6. Check Synchronize Time to synchronize the device time with the PC running the client after adding the device to the client.
7. Optional: Check Import to Group to create a group by the device name, and import all the channels of the device to this group.

## Example

For access control device, its access points, alarm inputs/outputs, and encoding channels (if exist) will be imported to this group.
8. Finish adding the device.

- Click Add to add the device and back to the device list page.
- Click Add and New to save the settings and continue to add other device.


### 3.2.3 Add Devices by IP Segment

If the devices share the same port No., user name and password, and their IP addresses ranges in the same IP segment, you can add them to the client by specifying the start IP address and the end IP address, port No., user name, password, etc of the devices.

## Steps

1. On the Maintenance and Management panel on the right side of the Client, Click Device

## Management.

2. Click Device tab on the top of the left panel.

The added devices are displayed on the right panel.
3. Click Add to open the Add window.
4. Select IP Segment as the adding mode.
5. Enter the required information.

## Start IP

Enter a start IP address.
End IP
Enter an end IP address in the same network segment with the start IP.
Port
Enter the device port No. The default value is $\mathbf{8 0 0 0}$.
[i] Note
For some device types, you can enter $\mathbf{8 0}$ as the port No. This function should be supported by the device.

## User Name

By default, the user name is admin.

## Password

Enter the device password.

## $\triangle$ Caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
6. Optional: Check Transmission Encryption (TLS) to enable transmission encryption using TLS (Transport Layer Security) protocol for security purpose .

## [i] Note

- This function should be supported by the device.
- If you have enabled Certificate Verification, you should click Open Certificate Folder to open the default folder, and copy the certificate file exported from the device to this default directory to strengthen the security. See for details about enabling certificate verification.
- You can log into the device to get the certificate file by web browser.

7. Check Synchronize Time to synchronize the device time with the PC running the client after adding the device to the client.
8. Optional: Check Import to Group to create a group by the device name, and import all the channels of the device to the group.
9. Finish adding the device.

- Click Add to add the device and back to the device list page.
- Click Add and New to save the settings and continue to add other device.


### 3.2.4 Add Device by ISUP Account

For access control devices supports ISUP 5.0 protocol, you can add them to the client by ISUP protocol after entering device ID and key, if you have configured their server addresses, port No., and device IDs.

## Before You Start

Make sure the devices have connected to the network properly.

## Steps

1. Enter Device Management module.

The added devices are displayed on the right panel.
2. Click Add to open the Add window.
3. Select ISUP as the adding mode.
4. Enter the required information.

## Device Account

Enter the account name registered on ISUP protocol.

## ISUP Key

For ISUP 5.0 devices, enter the ISUP key if you have set it when configuring network center parameter for the device.
[i] ${ }_{\text {Note }}$

This function should be supported by the device.
5. Optional: Check Synchronize Time to synchronize the device time with the PC running the client after adding the device to the client.
6. Optional: Check Import to Group to create a group by the device name, and import all the channels of the device to the group.
7. Finish adding the device.

- Click Add to add the device and go back to the device list.
- Click Add and New to save the settings and continue to add other device.

8. Optional: Perform the following operation(s).

| Device Status | Click on Operation column to view device status. |
| :--- | :--- |
| Edit Device | Click on Operation column to edit the device information, such as <br> device name, device account, and ISUP key. |
| Information | Click on Operation column to check the online users who access the <br> device, such as user name, user type, user's IP address, and login time. |
| Check Online User |  |
| Refresh | Click on Operation column to get the latest device information. |

## Delete Device $\quad$ Select one or multiple devices and click Delete to delete the selected device(s) from the client.

### 3.2.5 Import Devices in a Batch

You can add multiple devices to the client in a batch by entering the device parameters in a predefined CSV file.

## Steps

1. Enter the Device Management module.
2. Click Device tab on the top of the right panel.
3. Click Add to open the Add window, and then select Batch Import as the adding mode.
4. Click Export Template and then save the pre-defined template (CSV file) on your PC.
5. Open the exported template file and enter the required information of the devices to be added on the corresponding column.

For detailed description of the required fields, refer to the introductions in the template.

## Adding Mode

Enter $\mathbf{0}$ or $\mathbf{1}$ or $\mathbf{2}$.

## Address

Edit the address of the device.

## Port

Enter the device port number. The default port number is $\mathbf{8 0 0 0}$.

## User Name

Enter the device user name. By default, the user name is admin.

## Password

Enter the device password.

## $\triangle$ caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

## Import to Group

Enter 1 to create a group by the device name. All the channels of the device will be imported to the corresponding group by default. Enter $\mathbf{O}$ to disable this function.
6. Click $\cdots$ and select the template file.
7. Click Add to import the devices.

### 3.3 Reset Device Password

If you forgot the password of the detected online devices, you can reset the device password via the client.

## Steps

1. Enter Device Management page.
2. Click Online Device to show the online device area.

All the online devices sharing the same subnet will be displayed in the list.
3. Select the device from the list and click on the Operation column.
4. Reset the device password.

- Click Generate to pop up the QR Code window and click Download to save the QR code to your PC. You can also take a photo of the QR code to save it to your phone. Send the picture to our technical support.


For the following operations for resetting the password, contact our technical support.

## ! Caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

### 3.4 Upgrade Device Firmware Version

When there is a new firmware version available for the added device, you can upgrade its firmware version via the client.

## [ i $]_{\text {Note }}$

- The device should support this function.
- You can configure upgrading mode in System Configuration. See Set General Parameters for details.

Enter the Device Management module, and then click Device tab to show the device list.
Perform the following operations according to different upgrading modes.

## Disable

On the Device for Management panel, if there is a new firmware version available, the status in the Firmware Upgrade column of the device will turn to Upgradeable.
Select the upgradeable device and click Upgrade to start upgrading the device firmware.

## [ i] Note

The upgrade progress will show. When the upgrade is completed, the status in the Firmware Upgrade column of the device will turn to Upgraded.

## Prompt Me If Download and Upgrade

If there is a new firmware version available, a prompt window will pop up. Click Upgrade All to start downloading and upgrading.

## Download and Prompt Me If Upgrade

A dialog will pop up for selecting whether to upgrade after downloading package of new version. Click Upgrade All to start upgrading the device firmware.


Figure 3-5 Device Upgrade Prompt

## [i] Note

After clicking Upgrade All, a prompt will pop up for viewing details. If you are not in Device Management page, click View Details to jump to Device Management page; if you are in Device Management page, close the prompt.

## Upgrade Status

On the device management page, the following upgrade status will be shown in the Firmware Upgrade column.

## No Available Version

No new firmware version available.

## Upgradeable

A new firmware version available.


Move the cursor on (i) to view the current version, latest version, and upgrade content of the firmware version.

## Waiting

The device is waiting for upgrade.

## Downloading

The client is downloading the package of the new firmware version.

## Upgrading

The upgrading of the device firmware is going on.

## Upgraded

Hover the cursor on Upgraded to show the version after upgrading.

## Upgrading Failed

When the upgrade fails, a prompt will pop up for viewing details. If you are not in Device Management page, click View Details to jump to Device Management page; if you are in Device Management page, close the prompt. Hover the cursor on Upgrading Failed to show the error details, and click Upgrade Again to try again.


Figure 3－6 Firmware Upgrade

## 3．5 Manage Added Devices

After adding devices to device list，you can manage the added devices including editing device parameters，remote configuration，viewing device status，etc．

Table 3－1 Manage Added Devices

| Edit Device | Click to edit device information including device name，address，user name，password，etc． |
| :---: | :---: |
| Delete Device | Check one or more devices，and click Delete to delete the selected devices． |
| Remote Configuration | On the device list page，click 图 in the Operation column to perform remote configuration for a device．The 㖨 is in the rightmost column of the Device page．For details，refer to the user manual of device． |
| View Device Status | Click 圆 to view device status，including door No．，door status，etc． $\square$ Note <br> For different devices，you will view different information about device status． |
| View Online User | Click $\Omega$ to view the details of online user who access the device， including user name，user type，IP address and login time． |
| Refresh Device Information | Click \＆to refresh and get the latest device information． |
| Upgrade Device | View device status in the Firmware Upgrade column，check one or more upgradable devices，and click Upgrade Device Firmware to upgrade the selected devices．For details，refer to Upgrade Device Firmware Version |


| Get Events from Device | Check one device, and click Get Events from Device to synchronize <br> events. For details, refer to Get Events from Device. |
| :--- | :--- |
| Export Device | Click Export Device, set the saving path and select device type to export <br> the device details (such as device type, IP address, and port No.) to your <br> local PC. |
| $[\mathbf{i}]$ Note |  |
| The super user can enable Password Protection and enter the |  |
| password, then the exported file of device information will be |  |
| encrypted. |  |

### 3.6 Group Management

The client provides groups to manage the added resources in different groups. You can group the resources into different groups according to the resources' locations.

## Example

For example, on the 1st floor, there mounted 16 doors, 64 alarm inputs, and 16 alarm outputs. You can organize these resources into one group (named 1st Floor) for convenient management. You can control door status, and do some other operations of the devices after managing the resources by groups.

### 3.6.1 Group Resources

The client provides two methods of adding a group: customizing a group or creating a group by device name. After customizing a group, you need to import resources into this group manually. After creating a group by the device name, the resources of the device will be imported into the group automatically. You can choose one method to group your resources according to actual needs.

## Steps

1. In the Maintenance and Management area, click Device Management $\rightarrow$ Group to enter the group management page.
2. Add a group.

- Customize a Group: Click Add Group and create a name for the new group.
- Create a Group by Device Name: Click Create Group by Device Name and select an added device to create a new group by the name of the selected device. After creating a group by the device name, the resources (such as encoding channels, alarm inputs, alarm outputs, and access points) of the device will be automatically imported to the group.


## [i]Note

- Up to 256 groups can be added.
- You can select multiple groups by pressing and holding Shift or Ctrl key on the keyboard.

3. After adding a group, you need to import resources into the group.

## [ i ] Note

For one resource, it can be added to different groups.

1) Select the type of resources to be imported, and click Import.
2) Select the resources to be imported, and click Import to import all the selected resources into this group.
4. Optional: After adding a group, perform one of the following operations if needed.

Expand or Fold Click / / to expand or fold the resource list in the group.
Resource List
Search Resource Enter the keyword and click a to search target resources.
Remove Resource Select resource(s) and click Delete to remove the selected resource(s) from Group from the group.

Update Resource You can update all the resource names in a group or in a channel. Name

- Select a group, and click Update Resource Name to update all the resource names in the selected group.
- Select a channel in one group, and update all the resource names in this channel.
[ i] Note
This function should be supported by the device.


### 3.6.2 Edit Resource Parameters

After importing the resources to the group, you can edit the resource parameters. For access point, you can edit the access point name. For alarm input, you can edit the alarm input name. Here we take access point as an example.

## Before You Start

Import the resources to group.

## Steps

1. Enter the Device Management module.
2. Click Device Management $\rightarrow$ Group to enter the group management page.

All the added groups are displayed on the left.
3. Select a group on the group list and click Access Point.

The access points imported to the group will display.
4. Click in the Operation column to open the Edit Resource window.
5. Edit the resource name.
6. Click OK to save the new settings.

## Chapter 4 Event Configuration

Event is used to notify security personnel of the particular situation which helps handle the situation promptly. Event can trigger a series of linkage actions (e.g., audible warning and sending email ) for notification and event handling. You can enable the event and set linkage action(s) for the resources added to the client. If the selected events happen, the client will receive event notifications in real-time and you can check the details and handle the events accordingly.

## Access Control Event

The access control events refer to the special events triggered at the access control devices, doors, card readers, elevators, video intercom devices, etc. For more details, refer to Configure Client Actions for Access Event and Configure Video Intercom Event .

## Chapter 5 Event Center

The event information (for example, device offline) received by the client displays. In the Event Center, you can check the detailed information of the real-time and historical events, view the event linked video, handle the events, and so on.

Before the client can receive the event information from the device, you need to enable the events of the resource and arm the device first. For details, refer to Event Configuration and Enable Receiving Event from Devices .

### 5.1 Enable Receiving Event from Devices

Before the client software can receive event notifications from the device, you need to arm the device first.

## Steps

1. Click 国 $\rightarrow$ Tool $\rightarrow$ Device Arming Control to open Device Arming Control page.

All the added devices appear on this page.
2. Optional: If there are to many devices, enter the key words in Filter filed to filter the device(s) you want.
[ i] Note
For the filtered devices, you can click Arm All or Disarm All to enable receiving event of these devices.
3. In the Auto-Arming column, turn on the switch to enable auto-arming.


Figure 5-1 Arm Device
After turned on, the device(s) will be armed. And notifications about the events triggered by the armed device(s) will be automatically sent to the client software in real-time.

### 5.2 View Real-Time Events

The real-time event information received by the client of the connected resources are displayed. You can check the real-time event information, including event source, event time, priority, etc.

## Before You Start

Enable receiving events from devices before the client can receive event from the device, see Enable Receiving Event from Devices for details.

## Steps

1. Click Event Center $\rightarrow$ Real-time Event to enter the real-time event page and you can view the real-time events received by the client.

## Event Time

For encoding device, event time is the client time when it receives the event. For other device types, event time is the time when the event is triggered.

## Priority

Priority represents the emergency degree of the event.
2. Filter the events.

## Filter by Device Type and (or) Priority <br> Select device type(s) and (or) priorities to filter events. <br> Enter the keywords to filter the events.

3. Optional: Right-click the table header of the event list to customize the event related items to be displayed in the event list.
4. Select an event in the event list to view the event details.


When Save Pictures in Structure Data Format is enabled, no pictures will be displayed in Event Details in Event Center. For details about Save Pictures in Structure Data Format, refer to Set General Parameters.
5. Optional: Perform the following operations if necessary.

| Handle Single Event | Click Handle to enter the processing suggestion, and then click OK. |
| :---: | :---: |
|  | [ i] ${ }_{\text {Note }}$ |
|  | After an event is handled, the Handle button will become Add Remark. Click Add Remark to add more remarks for this handled event. |
| Handle Events in a Batch | Select events that need to be processed, and then click Handle in Batch. Enter the processing suggestion, and then click OK. |
| Enable/Disable Alarm Audio | Click Audio On/Mute to enable/disable the audio of the event. |
| Select the Latest Event Automatically | Check Auto-Select Latest Event to select the latest event automatically and the event information details is displayed. |
| Clear Events | Click Clear to clear the all the events in the event list. |
| Send Email | Select an event and then click Send Email, and the information details of this event will be sent by email. |
|  | [ i] ${ }_{\text {Note }}$ |

You should configure the email parameters first, see Set Email Parameters for details.

## Auto-Play Video Check Auto-Play Video to automatically play video when displaying

 event details.Enlarge Video or - Double click the video image to view video in a larger window.
Picture

- Put the cursor on the picture, and click 图 to view picture in a larger window.


## Download Captured Picture

Hover the cursor on the captured picture, and click the download icon on the lower right corner of the picture to download it to the local PC.

## Download Event <br> Triggered Video

Hover the cursor on the recorded video, click $\Delta$ to download the video (30s before the event happens) triggered by the event.

### 5.3 Search Historical Events

You can search and view historical events by setting search conditions such as time, device type, and priority in the client. For the searched events, you can handle and export them.

## Before You Start

Enable receiving events from devices before the client can receive event information from the device, see Enable Receiving Event from Devices for details.

## Steps

1. Click Event Center $\rightarrow$ Event Search to enter the event search page.
2. Set the filter conditions to display the required events only.

## Time

The time when the event starts.

## Search by

Device
Search the events by device or the device's resource channels. If searched by device, you need to set the followings:

- Include Sub-Node: Search the events of the device and all resource channels.
- Device Type: Select the device from which you want to search events.


## Group

Search the events by resource channels in the group.

## i ${ }_{\text {Note }}$

- For video intercom device, you need to select search scope: All and Locking Log.
- For access control device, you can click Show More to set more conditions: status, event type, card reader type, person name, card No., and organization.


## Priority

The priority including low, medium, high and uncategorized which indicates the emergency degree of the event.

## Event Type

Select one or more event types to be searched from the drop-down list.

## il Noote

You can enter a key word (supports fuzzy search) in the search box to search the target event type(s).

## Status

The handling status of the event.

## Search by Keyword

Enter a key word (supports fuzzy search) to quickly search the target historical event(s). For example, you can enter a person's name to search the events related with this person.
3. Click Search to search the events according the conditions you set.
[i] Note
When Save Pictures in Structure Data Format is enabled, no pictures will be displayed in Event Details field in Event Center. For details about Save Pictures in Structure Data Format, refer to Set General Parameters .


Figure 5-2 Search Historical Events

## [ i] ${ }_{\text {Note }}$

If you have selected Access Control as device type in Step 2, you can view extra information such as card No., skin-surface temperature, and abnormal temperature (if device supports) in the searched events.


Figure 5-3 Search Historical Event
4. Optional: Right click the table header of the event list to customize the event related items to be displayed in the event list.
5. Select an event in the event list to view the event details.
6. Optional: Perform one of the following operations.

Handle Single Handle single event: Select one event that needs to be handled, and then Event

Batch Handle click Handle in the event information details page, and enter the handling suggestion.

## [i] Note

After an event is handled, the Handle button will become Add Remark, click Add Remark to add more remarks for this handled event.

Events

Handle events in a batch: Select the events which need to be handled, and then click Handle in Batch, and enter the handling suggestion.


After an event is handled, the Handle button will become Add Remark, click Add Remark to add more remarks for this handled event.

| Auto-Play Video | Check Auto-Play Video to automatically play video when displaying event <br> details. |
| :--- | :--- |
| Enlarge Video or | - Double click the video image to view video in a larger window. |
| Picture | - Put the cursor on the picture, and click 图 to view picture in a larger <br>  <br> window. |
| Send Email | Select an event and then click Send Email, and the information details of <br> this event will be sent by email. |

[Ji]Note
You should configure the email parameters first, see Set Email Parameters for details.

Click Export to export the event log or event pictures to the local PC in CSV/Excel file. You can set the saving path manually.

Hover the cursor on the captured picture, and click the download icon on the lower right corner of the picture to download it to the local PC.

Hover the cursor on the recorded video, click $\downarrow$ to download the video (30s before the event happens) triggered by the event.

### 5.4 Get Events from Device

For some scenarios (e.g., the client cannot start up, access control device has been armed by other client, etc.), the events received by the client and triggered on access control device are not consistent. You can get events from device remotely to synchronize the events from device to Event Center of the client。

Click Device Management $\rightarrow$ Device, select access control device(s), and click Get Events from Device .

Synchronize the events by the two ways:

- Online: When the device is online and the device can communicate with client at real time, you can select Online and set the start time and end time to get the events during this period.
- Import File: If the network is not good or the device cannot communicate with the client at real time, you can export the event file from the selected device firstly, and import this exported file on the client later by selecting Import File and entering the password of the encrypted file.


## [i] Note

- For data security, you should encrypt the file when exporting on the device. Meanwhile, the selected access control device should be the one you exported the file from.
- The function should be supported by the device.


Figure 5-4 Get Events from Device

## [ i] Note

If you want to get the events related with attendance only, you can also enter Time \& Attendance $\rightarrow$ Attendance Statistics $\rightarrow$ Attendance Records, click Get Events from Device and select Online or Import File to get the events.

## Chapter 6 Person Management

You can add person information to the system for further operations such as access control, video intercom, time and attendance, etc. You can manage the added persons such as issuing cards to them in a batch, importing and exporting person information in a batch, etc.

### 6.1 Add Organization

You can add an organization and import person information to the organization for effective management of the persons. You can also add a surbodinate organization for the added one.

## Steps

1. Enter Person module.
2. Select a parent organization in the left column and click Add in the upper-left corner to add an organization.
3. Create a name for the added organization.

## [i] ${ }_{\text {Note }}$

Up to 10 levels of organizations can be added.
4. Optional: Perform the following operation(s).

Edit Organization Hover the mouse on an added organization and click to edit its name.
Delete Organization

Show Persons in
Sub Organization
Hover the mouse on an added organization and click $\times$ to delete it.
[i] Note

- The lower-level organizations will be deleted as well if you delete an organization.
- Make sure there is no person added under the organization, or the organization cannot be deleted.

Check Show Persons in Sub Organization and select an organization to show persons in its sub organizations.

### 6.2 Add Single Person

You can add persons to the client software one by one. The person information contains basic information, detailed information, profiles, access control information, credentials, custom information, etc.

### 6.2.1 Configure Basic Information

You can add person to the client one by one and configure the person's basic information such as name, email, phone number, etc.

## Steps

1. Enter Person module.


For the first time you enter Person module, a window pops up, and you can set the rules to generate person ID (letters and numbers supported) when adding person. When getting person information from device, if there are no person IDs, the person IDs will be generated according to the rule.
2. Select an organization in the organization list to add the person.
3. Click Add to open the adding person window.

The Person ID will be generated automatically.
4. Enter the basic information including person name, telephone number, email address, validity period, etc.


Figure 6-1 Configure Basic Information

## [i] ${ }_{\text {Note }}$

Once validity period expired, the credentials and access control settings of the person will be invalid and the person will have no authorization to access the doors\floors. You can click Extend to extend the person's validity period for 1 month, 3 months, 6 months, or 1 year.
5. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.

6. Delete Registered Face Picture


Figure 6-2 Delete Registered Picture

## []i]Note

If Save Pictures in Structure Data Format is enabled, the Delete Registered Picture button will be added to the Person page. In general, the registered face picture will be deleted automatically once the person's information is applied to the device. By double clicking the person, the Edit Person window will pop up, and you can check whether the registered face picture has been deleted. If not, you can select this person and click Delete Registered Picture to delete the picture manually.

### 6.2.2 Issue a Card to One Person

When adding a person, you can issue a card to him/her as a credential to access the door(s). Before issuing a card to one person, you need to set the card issuing mode to get the card number. Except for manually entering the card number, the client also provides the other two modes for reading the card number: by local mode (via card enrollment station) or by remote mode (via the card reader of the access control device).

## [i] Note

Up to five cards can be issued to one person.

## Issue a Card by Entering Card Number

When there is no device (card enrollment station/card reader) available to read card number, you can issue a card by manually entering card number.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add to enter Add Person panel.
[ $\overline{\text { i }}]_{\text {Note }}$
Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Card area, click +.


Figure 6-3 Add Card Page
4. Manually enter the card number in the Add page.
5. Click Add.

The card will be issued to the person.

## Issue a Card by Local Mode

If a card enrollment station is available, you can issue a card by local mode. To read the card number, you should connect the card enrollment station to the PC running the client by USB interface or COM, and place the card on the card enrollment station.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add to enter Add Person panel.

## [i] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Card area, click +.
4. Click Settings to enter the Settings page.
5. Select Local as the card issuing mode.


Figure 6-4 Issue a Card by Local Mode
6. Set other related parameters.

## Card Enrollment Station

Select a model of card enrollment station from the drop-down list. You can connect the card enrollment station to the PC, and transfer the basic information about the added person between the two devices through USB.

## [I] ${ }_{\text {Note }}$

The currently supported models of card enrollment station: DS-K1F100-D8, DS-K1F100-M, DS-K1F100-D8E, DS-K1F180-D8E, DS-K1F100A-D8E, DS-K1F180A-D8E, and enrollment station.

## Card Type

This field is only available when the model is DS-K1F100-D8E or DS-K1F180-D8E. Select the card type as EM card or Mifare card according to the actual card type.

## Buzzing

Enable or disable the buzzing when the card number is read successfully.

## Card No. Type

Select the type of the card number according to actual needs.

## M1 Card Encryption

This field is only available when the model is DS-K1F100-D8, DS-K1F100-D8E, or DS-K1F180D8E. If the card is M1 card, then you can enable the M1 Card Encryption function and select the sector of the card to encrypt.
7. Click OK to confirm the operation.
8. Place the card on the card enrollment station, and click Read to get the card number.

The card number will display in the Card No. field automatically.
9. Click Add.

The card will be issued to the person.

## Issue a Card by Remote Mode

Except for issuing a card by local mode, you can also swipe the card on the card reader of the added access control device to get the card number. This is applicable when the client and the persons need issuing cards are not in the same location. For example, you can issue cards for employees in the branch company by remote mode via the client.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add to enter Add Person panel.

## [ $\mathbf{i}]_{\text {Note }}$

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Card area, click +.
4. Click Settings to enter the Settings page.
5. Select Card Reader as the card issuing mode.


Figure 6-5 Issue a Card by Remote Mode
6. Select an access control device added in the client.
7. Select an added access control device or the enrollment station from the drop-down list.

Note

- If you select access control device, make sure you have armed the devices.
- If you select the enrollment station, you should click Login to set related parameters of the device including IP address, port No., user name, and password. Also, you should check RF card type(s) as needed.

8. Click OK to confirm the operation.
9. Place the card on the card reader, and click Read to get the card number.

The card number will display in the Card No. field automatically.
10. Click Add.

The card will be issued to the person.

### 6.2.3 Upload a Face Photo from Local PC

When adding person, you can upload a face photo stored in local PC to the client as the person's profile.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.


Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. Click Add Face in the Basic Information panel.
4. Select Upload.
5. Select a picture from the PC running the client.

## [i] Note

The picture should be in JPG or JPEG format and smaller than 200 KB.
6. Optional: Enable Verify by Device to check whether the facial recognition device managed in the client can recognize the face in the photo.

This function is hidden or shown according to the device capacity.
7. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons .


### 6.2.4 Take a Photo via Client

When adding a person, you can take a photo of a person by the client integrated camera, USB camera or enrollment station, and set this photo as the person's profile.

## Before You Start

Make sure the PC running the client meets one of the following conditions:

- The client has a camera.
- You have connected USB camera to the PC.
- You have connected enrollment station to the PC by USB interface.


## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add to enter Add Person window.

## []$_{\text {Note }}$

Enter the person's basic information first. For details, refer to Configure Basic Information .
3. Click Add Face in the Basic Information area.
4. Select Take Photo to enter Take Photo window.
5. Click $\geqslant$ to select the integrated camera or enrollment station from the drop-down list.
6. Optional: Enable Verify by Device to check whether the captured face photo can meet the uploading requirements.

## [i] ${ }_{\text {Note }}$

This function is hidden or shown according to the device capacity.
7. Take a photo.

1) Face to the camera and make sure your face is in the middle of the collecting window.
2) Click 回 to capture a face photo.
3) Optional: Click to capture again.
4) Click OK to save the captured photo.


Figure 6-6 Take a Photo via Client
8. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.5 Collect Face via Access Control Device

When adding person, you can collect the person's face via access control device added to the client which supports facial recognition function.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.

## [ i] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. Click Add Face in the Basic Information panel.
4. Select Remote Collection.
5. Select an added access control device or the enrollment station from the drop-down list.

## [i]Note

If you select the enrollment station, you should click Login to set related parameters of the device including IP address, port No., user name, and password. Also, you can check Face AntiSpoofing and select the liveness level as Low, Medium, or High.

## Face Anti-Spoofing

If you check this function, then the device can detect whether the face to be collected is an authentic one.
6. Optional: Click Card Reader, select the card reader ID, click OK.


This function should be supported by device.
7. Collect face.

1) Face to the camera of the selected access control device and make sure your face is in the middle of the collecting window.
2) Click 回 to capture a photo.
3) Click OK to save the captured photo.
8. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons .


### 6.2.6 Collect Fingerprint via Client

Collecting fingerprints locally means you can collect the fingerprint via the fingerprint recorder or the enrollment station connected directly to the PC running the client. The fingerprints recorded can be used as credentials of the persons to access the authorized doors.

## Before You Start

Make sure the PC running the client meets one of the following conditions:

- The fingerprint recorder has been connected to the client.
- The enrollment station has been connected to the client.


## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.

## [J] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Fingerprint panel, click + .
4. In the pop-up window, select the collection mode as Local.
5. Select the model of the connected fingerprint recorder or the enrollment station.

## $\left[\right.$ i] ${ }_{\text {Note }}$

If the fingerprint recorder is DS-K1F800-F, you can click Settings to select the COM the fingerprint recorder connects to.
6. Collect the fingerprint.

1) Click Start.
2) Place and lift your fingerprint on the fingerprint recorder to collect the fingerprint.
3) Click Add to save the recorded fingerprint.
7. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.7 Collect Fingerprint via Access Control Device

When adding person, you can collect fingerprint information via the access control device's fingerprint module. The fingerprints recorded can be used as credentials of the persons to access the authorized doors.

## Before You Start

Make sure fingerprint collection is supported by the access control device.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.


Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Fingerprint panel, click + .
4. In the pop-up window, select the collection mode as Remote.
5. Select an added access control device or the enrollment station from the drop-down list.

## [ i] ${ }_{\text {Note }}$

If you select the enrollment station, you should click Login, and set IP address, port No., user name and password of the device.
6. Collect the fingerprint.

1) Click Start.
2) Place and lift your fingerprint on the fingerprint scanner of the selected access control device to collect the fingerprint.
3) Click Add to save the recorded fingerprint.
7. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons .


### 6.2.8 Collect Iris via Client

When adding a person, you can collect the iris information by the iris recorder connected to the Client via USB. The iris recorded can be used as credentials of the persons to access the authorized doors.

## Before You Start

Make sure the iris recorder has been connected to the Client.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.


Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Iris panel, click + .
4. In the pop-up window, select the collection mode as USB.
5. Collect the iris.

1) Click Start to recording the iris.
2) Click Add to save the recorded iris.
6. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.9 Collect Iris via Access Control Device

When adding person, you can collect the person's iris information via access control device which supports iris recognition function.

## Before You Start

Make sure iris collection is supported by the access control device.

## Steps

1. Enter Person module.
2. Select an organization in the organization list and click Add.

## [ i] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Credential $\rightarrow$ Iris panel, click + .
4. In the pop-up window, select the collection mode as Card Reader.
5. Select an added access control device from the drop-down list.
6. Collect the iris.

1) Click Start to recording the iris.
2) Click Add to save the recorded iris.
7. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.10 Configure Access Control Information

When adding a person, you can set her/his access control information, such as binding an access control group with the person, configuring PIN code, setting the person as a visitor, a blocklist person, or a super user, etc.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.
3. In the Access Control area, click $\boldsymbol{\sim}$ to select access group(s) for the person.


For details, refer to Set Access Group to Assign Access Authorization to Persons .


Figure 6-7 Configure Access Control Information
4. Set a unique PIN code for the person which can be used for access authentication.

- Manually enter a PIN code containing 4 to 8 digits.

Persons' PIN codes cannot be repeated.

- Click Generate to randomly generate an unrepeated PIN code of 6 digits.


If there are repeated PIN codes, a prompt will pop up on the client. The admin can generate a new PIN code to replace the repeated PIN code and notify related persons.
5. Check the person's operation permissions.

## Super User

If the person is set as a super user, he/she will have authorization to access all the doors/ floors and will be exempted from remaining closed restrictions, all anti-passback rules, and first person authorization.

## Extended Door Open Time

Use this function for persons with reduced mobility. When accessing the door, the person will have more time than others to pass through doors.
For details about setting the door's open duration, refer to Configure Parameters for Door/ Elevator.
Add to Blocklist
Add the person to the blocklist and when the person tries to access doors/floors, an event will be triggered and sent to the client to notify the security personnel.

## Mark as Visitor

If the person is a visitor, you should set the her/his valid times for visit.

## [ i] ${ }_{\text {Note }}$

The valid times for visit is between 1 and 100. You can also check No Limit, then there are no limited times for the visitor to access doors/floors.

## Device Operator

For person with device operator role, he/she is authorized to operate on the access control devices.
[ i] Note
The Super User, Extended Door Open Time, Add to Blocklist, and Mark as Visitor functions cannot be enabled concurrently. For example, if one person is set as super user, you cannot enable extended door open time for her/him, add her/him to the blocklist, or set her/him as visitor.
6. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.11 Customize Person Information

You can customize the person properties which are not pre-defined in the client according to actual needs, e.g., place of birth. After customizing, when add a person, you can enter the custom information to make the person information complete.

## Steps

1. Enter Person module.
2. Set the fields of custom information.
1) Click Custom Property.
2) Click Add to add a new property.
3) Enter the property name.
4) Click OK.
3. Set the custom information when adding a person.
1) Select an organization in the organization list to add the person and click Add.

## [ i] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
2) In the Custom Information panel, enter the person information.
3) Click Add to add the person and close the Add Person window, or click Add and New to add the person and continue to add other persons.

### 6.2.12 Configure Resident Information

If the person is resident, for video intercom purpose, you need to set the room number for her/him and bind an indoor station. After bound, you can call this person by calling the indoor station and perform video intercom with her/him.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.

## [ i] Note

Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Resident Information panel, select the indoor station to bind it to the person.


If you select Analog Indoor Station, the Door Station field will display and you are required to select the door station to communicate with the analog indoor station.
4. Enter the floor No. and room No. of the person.
5. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons.


### 6.2.13 Configure Additional Information

When adding person, you can configure the additional information for the person, such as person's identity type, identity No., country, etc., according to actual needs.

## Steps

1. Enter Person module.
2. Select an organization in the organization list to add the person and click Add.


Enter the person's basic information first. For details about configuring person's basic information, refer to Configure Basic Information .
3. In the Additional Information panel, enter the additional information of the person, including person's ID type, ID No., job title, etc., according to actual needs.
4. Confirm to add the person.

- Click Add to add the person and close the Add Person window.
- Click Add and New to add the person and continue to add other persons .


### 6.3 Import and Export Person Identify Information

You can import the information and pictures of multiple persons to the client software in a batch. Meanwhile, you can also export the person information and pictures and save them in your PC.

### 6.3.1 Import Person Information

You can enter the information of multiple persons in a predefined template (CSV/Excel file) to import the information to the client in a batch.

## Steps

1. Enter the Person module.
2. Select an added organization in the list, or click Add in the upper-left corner to add an organization and then select it.
3. Click Import to open the Import panel.
4. Select Person Information as the importing mode.
5. Click Download Template for Importing Person to download the template.
6. Enter the person information in the downloaded template.

- If the person has multiple cards, separate the card No. with semicolon.
- Items with asterisk are required.
- By default, the Hire Date is the current date.

7. Click .... to select the CSV/Excel file with person information from local PC.
8. Click Import to start importing.

## [i] Note

- If a person No. already exists in the client's database, delete the existing information before importing.
- You can import information of no more than 2,000 persons.


### 6.3.2 Import Person Pictures

After importing face pictures for the added persons to the client, the persons in the pictures can be identified by an added face recognition terminal. You can either import person pictures one by one, or import multiple pictures at a time according to your need.

## Before You Start

Be sure to have imported person information to the client beforehand.

## Steps

1. Enter the Person module.
2. Select an added organization in the list, or click Add in the upper-left corner to add an organization and then select it.
3. Click Import to open the Import panel and check Face.
4. Optional: Enable Verify by Device to check whether face recognition device managed in the client can recognize the face in the photo.
5. Click .... to select a face picture file.
[i] Note

- The (folder of) face pictures should be in ZIP format.
- Each picture file should be in JPG format and should be no larger than 200 KB.
- Each picture file should be named as "Person ID_Name". The Person ID should be the same with that of the imported person information.

6. Click Import to start importing.

The importing progress and result will be displayed.

### 6.3.3 Export Person Information

You can export the added persons' information to local PC as a CSV/Excel file.

## Before You Start

- Make sure you have added persons to an organization.
- Make sure you have enabled the Export Person Information function to display the Export button. See Set General Parameters for details.


## Steps

1. Enter the Person module.
2. Optional: Select an organization in the list.

## [i) ${ }^{\text {Note }}$

All persons' information will be exported if you do not select any organization.
3. Click Export.
4. Enter the super user name and password for verification.

The Export panel is displayed.
5. Check Person Information as the content to export.
6. Check desired items to export.
7. Click Export to save the exported file in CSV/Excel file on your PC.

### 6.3.4 Export Person Pictures

You can export face picture file of the added persons and save in your PC.

## Before You Start

- Make sure you have added persons and their face pictures to an organization.
- Make sure you have enabled the Export Person Information function to display the Export button. See Set General Parameters for details.


## Steps

1. Enter the Person module.
2. Optional: Select an organization in the list.


All persons' face pictures will be exported if you do not select any organization.
3. Click Export on the top menu bar.
4. Enter the super user name and password for verification.

The Export panel is displayed.
5. Check Face as the content to export.
6. Click Export and set an encryption key to encrypt the exported file.


- The exported file is in ZIP format.
- The exported face picture is named as "Person ID_Name_0" ("0" is for a full-frontal face).


### 6.4 Get Person Information from Access Control Device

If the access control device has been configured with person information (including person details, fingerprint, and issued card information), you can get the person information from the added device and import them to the client for further operations.

## Steps

## Note

- If the person name stored in the device is empty, the person name will be filled with the issued card No. after importing to the client.
- Persons will be Male by default.
- If the card number or person ID (employee ID) stored on the device already exists in the client database, the person with this card number or person ID will not be imported to the client.

1. Enter Person module.
2. Select an organization to import the persons.
3. Click Get from Device.
4. Select an added access control device or the enrollment station from the drop-down list.

## [ i] Note

If you select the enrollment station, you should click Login, and enter IP address, port No., user name and password of the device.

## 5. Select the Getting Mode.

## [i] Note

The getting mode varies according to different devices. The access control device supports getting the person information by employee ID. Up to 5 employee IDs can be specified each time.
6. Click Import to start importing the person information to the client.


Up to 2,000 persons and 5,000 cards can be imported.
The person information, including person details, person's fingerprint information (if configured), and the linked cards (if configured), will be imported to the selected organization.

### 6.5 Move Persons to Another Organization

You can move the added persons to another organization if you need.

## Before You Start

- Make sure you have added at least two organizations.
- Make sure you have imported person information.


## Steps

1. Enter Person module.
2. Select an organization in the left panel.

The persons under the organization will be displayed in the right panel.
3. Select the person to move.

## 4. Click Change Organization.

5. Select the organization to move persons to.
6. Click OK.

### 6.6 Issue Cards to Persons in Batch

The client provides a convenient way to issue cards to multiple persons in a batch.

## Steps

1. Enter Person module.
2. Optional: Select a person group, and select the persons with no card issued.

- The selected persons with no card issued in the person group will be displayed in the right panel.
- If you do not select the persons with no card issued in a person group, all the added persons with no card issued will be displayed in the right panel.

3. Click Batch Issue Cards.
4. Optional: Enter key words (name or person ID) in the input box to filter the person(s) that need issuing cards.
5. Optional: Click Settings to set the card issuing parameters. For details, refer to Issue a Card to One Person .
6. Click Initialize to initialize the card enrollment station or card reader to make it ready for issuing cards.
7. Click the Card No. column and enter the card number.

- Place the card on the card enrollment station.
- Swipe the card on the card reader.
- Manually enter the card number and press the Enter key.

The person(s) in the list will be issued with card(s).

### 6.7 Report Card Loss

If the person lost his/her card, you can report the card loss so that the card's related access authorization will be inactive.

## Steps

1. Enter Person module.
2. Select the person you want to report card loss for and click Edit to open the Edit Person window.
3. In the Credential $\rightarrow$ Card panel, click 㘣 on the added card to set this card as lost card.

After reporting card loss, the access authorization of this card will be invalid and inactive. Other person who gets this card cannot access the doors by swiping this lost card.
4. Optional: If the lost card is found, you can click 㘣 to cancel the loss.

After cancelling card loss, the access authorization of the person will be valid and active.
5. If the lost card is added in one access group and the access group is applied to the device already, after reporting card loss or cancelling card loss, a window will pop up to notify you to apply the changes to the device. After applying to device, these changes can take effect on the device.

### 6.8 View Resource Statistics

After applying persons and access control credentials (including faces, cards, and fingerprints) to device, you can view resource statistics on client and on device to know whether the resources have been successfully applied.

You have applied persons and credentials to device. For details, refer to Set Access Group to Assign Access Authorization to Persons .
Click Person Management $\rightarrow$ Resource Statistics to enter Resource Statistics window.


Figure 6-8 Overview on Client
In Overview on Device area, select a device from drop-down list, and click Counting to view device resources including persons, faces, cards, and fingerprints. By comparing resources on client and that on device, you can know whether the client resources have been applied to device.


Figure 6-9 Client Resources Applied to Device
[i] ${ }_{\text {Note }}$
This function should be supported by device. If the device does not support face or fingerprint, a prompt will pop up on the bottom right corner of the PC desktop.

## Chapter 7 Access Control

The Access Control module is applicable to access control devices and video intercom device. It provides multiple functionalities, including access group configuration, video intercom, and other advanced functions.

## Note

For the user with access control module permissions, the user can enter the Access Control module and configure the access control settings. For setting the user permission of Access Control module, refer to Add User .

### 7.1 Flow Chart



Figure 7-1 Flow Chart of Access Control

- Add Access Control Device: You can add access control devices on the client. For more details, refer to Add Device .
- Group Access Points: You can group the added access points into groups for convenient management. For more details, refer to Group Management .
- Add Organization: You can add an organization and import person information to the organization for managing persons. For more details, refer to Add Organization .
- Configure Schedule and Template: You can configure the template including holiday and week schedule. For more details, refer to Configure Schedule and Template .
- Set Access Group and Access Authority: You can set an access group to define which person(s) can get access to which door(s) and then apply the access group to the access control device to take effect. For more details, refer to Set Access Group to Assign Access Authorization to Persons.
- Configure Device Parameters: You can configure parameters for the access control device, including device time, linkage settings, maintenance settings, etc. For more details, refer to Configure Device Parameters .
- Configure Remaining Open/Closed: You can set the status of the door as open or closed and set the elevator controller as free and controlled. For more details, refer to Configure Remaining Unlocked/Locked .
- Configure Card Reader Authentication Mode: You can set the passing rules for the card reader of the access control device according to your actual needs. For more details, refer to Configure Card Reader Authentication Mode and Schedule.
- Configure Individual Authentication Mode: You can set the passing rules for person to the specified the access control device according to your actual needs. For more details, refer to Configure Person Authentication Mode.
- Configure Other Parameters: You can set parameters for access control devices such as network parameters, capture parameters, RS-485 parameters, Wiegand parameters, etc. For more details, refer to Configure Other Parameters .
- Configure Linkage Actions: You can configure linkage action for access control, so that the events can trigger a series of linkage actions to notify the security personnel. For more details, refer to Configure Linkage Actions for Access Control .
- Door/Elevator Control: You can view the real-time status of the doors or elevators managed by the added access control device. For more details, refer to Door/Elevator Control .


### 7.2 Configure Schedule and Template

You can configure the template including holiday and week schedule. After setting the template, you can adopt the configured template to access groups when setting the access groups, so that the access group will take effect in the time durations of the template.

For access group settings, refer to Set Access Group to Assign Access Authorization to Persons .

### 7.2.1 Add Holiday

You can create holidays and set the days in the holidays, including start date, end date, and holiday duration in one day.

## Steps

## i] ${ }_{\text {Note }}$

You can add up to 64 holidays in the software system.

1. Click Access Control $\rightarrow$ Schedule $\rightarrow$ Holiday to enter the Holiday page.
2. Click Add on the left panel.
3. Create a name for the holiday.
4. Optional: Enter the descriptions or some notifications of this holiday in the Remark box.
5. Add a holiday period to the holiday list and configure the holiday duration.

## [ i] Note

Up to 16 holiday periods can be added to one holiday.

1) Click Add in the Holiday List field.
2) Drag the cursor to draw the time duration, which means in that duration of time, the configured access group is activated.

## [ i] Note

Up to 8 time durations can be set to one holiday period.
3) Optional: Perform the following operations to edit the time durations.

- Move the cursor to the time duration and drag the time duration on the timeline bar to the

- Click the time duration and directly edit the start/end time in the appeared dialog.
- Move the cursor to the start or the end of time duration and drag to lengthen or shorten the time duration when the cursor turns to $\underset{\sim}{2}$

4) Optional: Select the time duration(s) that need to be deleted, and then click $\mathbf{x}$ in the Operation column to delete the selected time duration(s).
5) Optional: Click 寧 in the Operation column to clear all the time duration(s) in the time bar.
6) Optional: Click $\boldsymbol{\chi}$ in the Operation column to delete this added holiday period from the holiday list.
6. Click Save.

### 7.2.2 Add Template

Template includes week schedule and holiday. You can set week schedule and assign the time duration of access authorization for different person or group. You can also select the added holiday(s) for the template.

## Steps

## Note

You can add up to 255 templates in the software system.

1. Click Access Control $\rightarrow$ Schedule $\rightarrow$ Template to enter the Template page.

## [ i] Note

There are two default templates: All-Day Authorized and All-Day Denied, and they cannot be edited or deleted.

## All-Day Authorized

The access authorization is valid in each day of the week and it has no holiday.

## All-Day Denied

The access authorization is invalid in each day of the week and it has no holiday.
2. Click Add on the left panel to create a new template.
3. Create a name for the template.
4. Enter the descriptions or some notification of this template in the Remark box.
5. Edit the week schedule to apply it to the template.

1) Click Week Schedule tab on the lower panel.
2) Select a day of the week and draw time duration(s) on the timeline bar.

## [i] Note

Up to 8 time duration(s) can be set for each day in the week schedule.
3) Optional: Perform the following operations to edit the time durations.

- Move the cursor to the time duration and drag the time duration on the timeline bar to the desired position when the cursor turns to $\sqrt{5 m}$.
- Click the time duration and directly edit the start/end time in the appeared dialog.
- Move the cursor to the start or the end of time duration and drag to lengthen or shorten the time duration when the cursor turns to $\xrightarrow{\pi}$

4) Repeat the two steps above to draw more time durations on the other days of the week.
6. Add a holiday to apply it to the template.

## [i] Note

Up to 4 holidays can be added to one template.

1) Click Holiday tab.
2) Select a holiday in the left list and it will be added to the selected list on the right panel.
3) Optional: Click Add to add a new holiday.

## [ i] ${ }_{\text {Note }}$

For details about adding a holiday, refer to Add Holiday.
4) Optional: Select a selected holiday in the right list and click $\times$ to remove the selected one, or click Clear to clear all the selected holiday(s) in the right list.
7. Click Save to save the settings and finish adding the template.

### 7.3 Set Access Group to Assign Access Authorization to Persons

After adding the person and configuring the person's credentials, you can create the access groups to define which person(s) can get access to which door(s) and then apply the access group to the access control device to take effect.

## Before You Start

- Add person to the client.
- Add access control device to the client and group access points. For details, refer to Group Management .
- Add template.


## Steps

When the access group settings are changed, you need to apply the access groups to the devices again to take effect. The access group changes include changes of template, access group settings, person's access group settings, and related person details (including card number, fingerprint, face picture, linkage between card number and fingerprint, linkage between card number and fingerprint, card password, card effective period, etc).

1. Click Access Control $\rightarrow$ Authorization $\rightarrow$ Access Group to enter the Access Group interface.
2. Click Add to open the Add window.
3. In the Name text field, create a name for the access group as you want.
4. Select a template for the access group.


You should configure the template before access group settings. Refer to Configure Schedule and Template for details.
5. In the left list of the Select Person field, select person(s) to assign access authority.
6. In the left list of the Select Access Point field, select door(s), door station(s) or floor(s) for the selected persons to access.
7. Click Save.

You can view the selected person(s) and the selected access point(s) on the right side of the interface.


Figure 7-2 Display the Selected Person(s) and Access Point(s)
8. After adding the access groups, you need to apply them to the access control device to take effect.

1) Select the access group(s) to apply to the access control device.
2) Click Apply All to Devices start applying all the selected access group(s) to the access control device or door station.
3) Click Apply All to Devices or Apply Changes to Devices.

## Apply All to Devices

This operation will clear all the existed access groups of the selected devices and then apply the new access group to the device.

## Apply Changes to Devices

This operation will not clear the existed access groups of the selected devices and only apply the changed part of the selected access group(s) to the device(s).
4) View the applying status in the Status column or click Applying Status to view all the applied access group(s).

You can check Display Failure Only to filter the applying results.
The selected persons in the applied access groups will have the authorization to enter/exit the selected doors/door stations with their linked card(s) or fingerprints.
9. Optional: Click to edit the access group if necessary.

## [I] Note

If you change the persons' access information or other related information, you will view the promptAccess Group to Be Applied on the right corner of the client.
You can click the prompt to apply the changed data to the device. You can select either Apply Now or Apply Later.


Figure 7-3 Data Synchronization

### 7.4 Search Access Group

After setting access group and assigning access authority to persons, you can search the access group that the person belongs to and view other related information including credential No., credential type, applying status, etc.

## [ i] ${ }_{\text {Note }}$

Make sure you have set access group to assign access authorization to designed persons and applied it. For details, refer to Set Access Group to Assign Access Authorization to Persons .

Click Access Control $\rightarrow$ Authorization $\rightarrow$ Search . Select a device name, and set search condition (including person name and applying status, optional), and then click Search.
You can view the access group that the searched person belongs to and other information including the credential type, door name, credential No., applying status, remark, etc.


Figure 7-4 Search Access Group

### 7.5 Configure Advanced Functions

You can configure the advanced functions of access control to meet some special requirements in different scene, such as multi-factor authentication, anti-passback, etc.

## Note

- For the card related functions(the type of access control card/multi-factor authentication), only the card(s) with access group applied will be listed when adding cards.
- The advanced functions should be supported by the device.
- Hover the cursor on the Advanced Function, and then Click 图 to customize the advanced function(s) to be displayed.


### 7.5.1 Configure Device Parameters

After adding the access control device, you can configure the parameters of access control device (access controller), access control points (door or floor), alarm inputs, alarm outputs, card readers and lane controller.

## Configure Parameters for Access Control Device

After adding the access control device, you can configure its parameters, including overlaying user information on picture, uploading pictures after capturing, saving captured pictures, etc.

## Before You Start

Add access control device to the client.
Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter .

## [i]Note

If you can not find Device Parameter in the Advanced Function list, hover the cursor on the Advanced Function, and then Click 國 to select the Device Parameter to be displayed.
2. Select an access device to show its parameters on the right page.
3. Turn the switch to ON to enable the corresponding functions.


- The displayed parameters may vary for different access control devices.
- Some of the following parameters are not listed in the Basic Information page, click More to edit the parameters.


## RS-485 Comm. Redundancy

You should enable this function if you wire the RS-485 card reader to the access control device redundantly.

## Display Detected Face

Display face picture when authenticating.

## Display Card Number

Display the card information when authenticating.

## Display Person Information

Display the person information when authenticating.

## Overlay Person Info. on Picture

Display the person information on the captured picture.

## Voice Prompt

If you enable this function, the voice prompt is enabled in the device. You can hear the voice prompt when operating in the device.

## Upload Pic. After Linked Capture

Upload the pictures captured by linked camera to the system automatically.

## Save Pic. After Linked Capture

If you enable this function, you can save the picture captured by linked camera to the device.

## Press Key to Enter Card Number

If you enable this function, you can input the card No. by pressing the key.

## Wi-Fi Probe

If you enable this function, the device can probe the surrounding communication devices' MAC address and upload the MAC address to the system. If the MAC address match the specified MAC address, the system can trigger some linkage actions.

## 3G/4G

If you enable this function, the device can communicate in $3 \mathrm{G} / 4 \mathrm{G}$ network.

## NFC Anti-Cloning

If you enable this function, you cannot use the cloned card for authentication and further enhance security.
4. Click OK.
5. Optional: Click Copy to, and then select the access control device(s) to copy the parameters in the page to the selected device(s).

## Configure Parameters for Door/Elevator

After adding the access control device, you can configure its access point (door or floor) parameters.

## Before You Start

Add access control device to the client.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter .
2. Select an access control device on the left panel, and then click $\rightarrow$ to show the doors or floors of the selected device.
3. Select a door or floor to show its parameters on the right page.
4. Edit the door or floor parameters.


- The displayed parameters may vary for different access control devices.
- Some of the following parameters are not listed in the Basic Information page, click More to edit the parameters.


## Name

Edit the card reader name as desired.

## Door Contact

You can set the door sensor as remaining closed or remaining open. Usually, it is remaining closed.

## Exit Button Type

You can set the exit button as remaining closed or remaining open. Usually, it is remaining open.

## Door Locked Time

After swiping the normal card and relay action, the timer for locking the door starts working.

## Extended Open Duration

The door contact can be enabled with appropriate delay after person with extended accesss needs swipes her/his card.
Door Left Open Timeout Alarm

The alarm can be triggered if the door has not been closed in a configured time period. If it is set as 0 , no alarm will be triggered.

## Lock Door when Door Closed

The door can be locked once it is closed even if the Door Locked Time is not reached.

## Duress Code

The door can open by inputting the duress code when there is duress. At the same time, the client can report the duress event.

## Super Password

The specific person can open the door by inputting the super password.

## Dismiss Code

Create a dismiss code which can be used to stop the buzzer of the card reader (by entering the dismiss code on the keypad).

## [ i] Note

- The duress code, super code, and dismiss code should be different.
- The duress code, super password, and the dismiss code should be different from the authentication password.
- The length of duress code, super password, and the dismiss code is according the device, usually it should contains 4 to 8 digits.

5. Click OK.
6. Optional: Click Copy to , and then select the door/floor(s) to copy the parameters in the page to the selected doors/floor(s).

## [ i] ${ }_{\text {Note }}$

The door or floor's status duration settings will be copied to the selected door/floor(s) as well.

## Configure Parameters for Card Reader

After adding the access control device, you can configure its card reader parameters.

## Before You Start

Add access control device to the client.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter .
2. In the device list on the left, click $\square$ to expand the door, select a card reader and you can edit the card reader's parameters on the right.
3. Edit the card reader basic parameters in the Basic Information page.

## [i]Note

- The displayed parameters may vary for different access control devices. There are part of parameters listed as follows. Refer to the user manual of the device for more details.
- Some of the following parameters are not listed in the Basic Information page, click More to edit the parameters.


## Name

Edit the card reader name as desired.

## OK LED Polarity/Error LED Polarity/Buzzer Polarity

Set OK LED Polarity/Error LED Polarity/Buzzer LED Polarity of main board according to the card reader parameters. Generally, adopts the default settings.

## Minimum Card Swiping Interval

If the interval between card swiping of the same card is less than the set value, the card swiping is invalid. You can set it as 0 to 255.

## Max. Interval When Entering PWD

When you inputting the password on the card reader, if the interval between pressing two digits is larger than the set value, the digits you pressed before will be cleared automatically.

## Alarm of Max. Failed Attempts

Enable to report alarm when the card reading attempts reach the set value.

## Max. Times of Card Failure

Set the max. failure attempts of reading card.

## Tampering Detection

Enable the anti-tamper detection for the card reader.

## Communicate with Controller Every

When the access control device cannot connect with the card reader for longer than the set time, the card reader will turn offline automatically.

## Buzzing Time

Set the card reader buzzing time. The available time ranges from 0 to 5,999 s. 0 represents continuous buzzing.

## Card Reader Type/Card Reader Description

Get card reader type and description. They are read-only.

## Fingerprint Recognition Level

Select the fingerprint recognition level in the drop-down list.

## Default Card Reader Authentication Mode

View the default card reader authentication mode.

## Fingerprint Capacity

View the maximum number of available fingerprints.

## Existing Fingerprint Number

View the number of existed fingerprints in the device.

## Score

The device will score the captured picture according to the yaw angle, pitch angle, and pupillary distance. If the score is less than the configured value, face recognition will be failed.

## Face Recognition Timeout Value

If the recognition time is more than the configured time, the device will remind you.

## Face Recognition Interval

The time interval between two continuous face recognitions when authenticating. By default, it is 2 s .

## Face 1:1 Matching Threshold

Set the matching threshold when authenticating via 1:1 matching mode. The larger the value, the smaller the false accept rate and the larger the false rejection rate when authentication.

## 1:N Security Level

Set the matching security level when authenticating via 1:N matching mode. The larger the value, the smaller the false accept rate and the larger the false rejection rate when authentication.

## Live Face Detection

Enable or disable the live face detection function. If enabling the function, the device can recognize whether the person is a live one or not.

## Live Face Detection Security Level

After enabling Live Face Detection function, you can set the matching security level when performing live face authentication.
Max. Failed Attempts for Face Auth.
Set the maximum live face detection failed attempts. The system will lock the user's face for 5 minutes if the live face detection is failed for more than the configured attempts. The same user cannot authenticate via the fake face within 5 minutes. Within the 5 minutes, the user can authenticate via the real face twice continuously to unlock.

## Lock Authentication Failed Face

After enabling the Live Face Detection function, the system will lock the user's face for 5 minutes if the live face detection is failed for more than the configured attempts. The same user cannot authenticate via the fake face within 5 minutes. Within the 5 minutes, the user can authenticate via the real face twice continuously to unlock.

## Application Mode

You can select indoor or others application modes according to actual environment.
4. Click OK.
5. Optional: Click Copy to, and then select the card reader(s) to copy the parameters in the page to the selected card reader(s).

## Configure Parameters for Alarm Input

After adding the access control device, you can configure the parameters for its alarm inputs.

## Before You Start

Add access control device to the client, and make sure the device supports alarm input.

## Steps

## i Note

If the alarm input is armed, you cannot edit its parameters. Disarm it first.

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter .
2. In the device list on the left, click $\square$ to expand the door, select an alarm input and you can edit the alarm input's parameters on the right.
3. Set the alarm input parameters.

## Name

Edit the alarm input name as desired.

## Detector Type

The detector type of the alarm input.

## Zone Type

Set the zone type for the alarm input.

## Sensitivity

Only when the duration of signal detected by the detector reaches the setting time, the alarm input is triggered. For example, you have set the sensitivity as 10 ms , only when the duration of signal detected by the detector reach 10 ms , this alarm input is triggered.

## Trigger Alarm Output

Select the alarm output(s) to be triggered.
4. Click OK.
5. Optional: Click the switch on the upper-right corner to arm or disarm the alarm input.

## Configure Parameters for Alarm Output

After adding the access control device, if the device links to alarm outputs, you can configure the parameters.

## Before You Start

Add access control device to the client, and make sure the device supports alarm output.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter to enter access control parameter configuration page.
2. In the device list on the left, click $\square$ to expand the door, select an alarm input and you can edit the alarm input's parameters on the right.
3. Set the alarm output parameters.

## Name

Edit the card reader name as desired.

## Alarm Output Active Time

How long the alarm output will last after triggered.
4. Click OK.
5. Optional: Set the switch on the upper right corner to $\mathbf{O N}$ to trigger the alarm output.

## Configure Parameters for Lane Controller

After adding the lane controller to the client, you can configure its parameters for passing through the lane.

## Before You Start

Add access control device to the client.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Device Parameter to enter Parameter Settings page.
2. In the device list on the left, select a lane controller and you can edit the lane controller's parameters on the right.
3. Edit the parameters.

## Passing Mode

Select the controller which will control the barrier status of the device.

- If you select According to Lane Controller's DIP Settings, the device will follow the lane controller's DIP settings to control the barrier. The settings on the software will be invalid.
- If you select According to Main Controller's Settings, the device will follow the settings of the software to control the barrier. The DIP settings of the lane controller will be invalid.


## Free Passing Authentication

If you enable this function, when both entrance and exit's barrier mode is Remain Open, the pedestrians should authenticate each time passing through the lane. Or an alarm will be triggered.

## Opening/Closing Barrier Speed

Set the barrier's opening and closing speed. You can select from 1 to 10 . The greater the value, the faster the speed.

## [i] Note

The recommended value is 6 .

## Audible Prompt Duration

Set how long the audio will last, which is played when an alarm is triggered .

## [i] Note

0 refers to the alarm audio will be played until the alarm is ended.

## Temperature Unit

Select the temperature unit that displayed in the device status.
4. Click OK.

### 7.5.2 Configure Remaining Unlocked/Locked

You can set the status of the door as unlocked or locked and set the elevator controller as free and controlled. For example, you can set the door remaining locked in the holiday, and set the door remaining unlocked in the specified period of the work day.

## Before You Start

Add the access control devices to the system.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Remain Locked/Unlocked to enter the Remain Locked/Unlocked page.
2. Select the door or elevator controller that need to be configured on the left panel.
3. To set the door or elevator controller status during the work day, click the Week Schedule and perform the following operations.
1) For door, click Remain Unlocked, Remain Locked, Inductive Mode, or Barrier-Free Mode.


- Inductive Mode: The door opening and closing is triggered by infrared induction of human body.
- Barrier-Free Mode: When a large number of people need to pass the door, the door will remain open (without frequent authentication) if the person and ID comparison succeeds. Only when the person and ID comparison fails, the door will be closed.
- Inductive mode and barrier-free mode should be supported by device.

2) For elevator controller, click Free or Controlled.
3) Drag the cursor to draw the time duration, which means in that duration of time, the configured access group is activated.


Up to 8 time durations can be set to each day in the week schedule.
4) Optional: Perform the following operations to edit the time durations.

- Move the cursor to the time duration and drag the time duration on the timeline bar to the desired position when the cursor turns to sm.
- Click the time duration and directly edit the start/end time in the appeared dialog.
- Move the cursor to the start or the end of time duration and drag to lengthen or shorten the time duration when the cursor turns to $\underset{\sim}{2}$.

5) Click Save.

## Related Operations

Copy to Whole Select one duration on the time bar, click Copy to Whole Week to copy all Week the duration settings on this time bar to other week days.

Delete Selected
Select one duration on the time bar, click Delete Selected to delete this duration.

Clear Click Clear to clear all the duration settings in the week schedule.
4. To set the door status during the holiday, click the Holiday and perform the following operations.

1) Click Remain Unlocked, Remain Locked, Inductive Mode, or Barrier-Free Mode.
2) Click Add.
3) Enter the start date and end date.
4) Drag the cursor to draw the time duration, which means in that duration of time, the configured access group is activated.

## il Note

Up to 8 time durations can be set to one holiday period.
5) Perform the following operations to edit the time durations.

- Move the cursor to the time duration and drag the time duration on the timeline bar to the desired position when the cursor turns to sm.
- Click the time duration and directly edit the start/end time in the appeared dialog.
- Move the cursor to the start or the end of time duration and drag to lengthen or shorten the time duration when the cursor turns to $\stackrel{\square}{4}$.

6) Optional: Select the time duration(s) that need to be deleted, and then click $x$ in the Operation column to delete the selected time duration(s).
7) Optional: Click 㿾 in the Operation column to clear all the time duration(s) in the time bar.
8) Optional: Click $X$ in the Operation column to delete this added holiday period from the holiday list.
9) Click Save.
5. Optional: Click Copy to to copy the door status settings of this door to other door(s).

### 7.5.3 Configure Multi-Factor Authentication

You can manage the persons by group and set the authentication for multiple persons of one access control point (door).

## Before You Start

Set access group and apply the access group to the access control device. For details, refer to Set
Access Group to Assign Access Authorization to Persons .
Perform this task when you want to set authentications for multiple cards of one access control point (door).

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Multi-Factor Auth .
2. Select an access control device in device list on the left panel.
3. Add a person/card group for the access control device.
1) Click Add on the right panel.
2) Create a name for the group as desired.
3) Specify the start time and end time of the effective period for the person/card group.
4) Select members(s) and card(s) in the Available list, and the selected member(s) and card(s) will be added to the Selected list.

## [i] Note

Make sure you have issue card to the person.
Make sure you have set access group and apply the access group to the access control device successfully.
5) Click Save.
6) Optional: Select the person/card group(s), and then click Delete to delete it(them).
7) Optional: Select the person/card group(s), and then click Apply to re-apply access group that failed to be applied previously to the access control device.
4. Select an access control point (door) of selected device on the left panel.
5. Enter the maximum interval when entering password.
6. Add an authentication group for the selected access control point.

1) Click Add on the Authentication Groups panel.
2) Select a configured template as the authentication template from the drop-down list.

For setting the template, refer to Configure Schedule and Template .
3) Select the authentication type as Local Authentication, Local Authentication and Remotely Open Door, or Local Authentication and Super Password from the drop-down list.

## Local Authentication

Authentication by the access control device.

## Local Authentication and Remotely Open Door

Authentication by the access control device and by the client. When the person swipes the card on the device, a window will pop up. You can unlock the door via the client.


Figure 7-5 Remotely Open Door

## [i] Note

You can check Offline Authentication to enable the super password authentication when the access control device is disconnected with the client.

## Local Authentication and Super Password

Authentication by the access control device and by the super password.
4) Select the added person/card group in the left list below and it will be added to the Selected list on the right as the authentication group.
5) Click the added authentication group in the right list to set authentication times in the Auth Times column.

## [ i] ${ }_{\text {Note }}$

- The authentication times should be larger than 0 and smaller than the added personnel quantity in the personnel group.
- The maximum value of authentication times is 16 .

6) Click Save.

## Note

- For each access control point (door), up to four authentication groups can be added.
- For the authentication group of which authentication type is Local Authentication, up to 8 person/card groups can be added to the authentication group.
- For the authentication group of which authentication type is Local Authentication and Super Password or Local Authentication and Remotely Open Door, up to 7 person/card groups can be added to the authentication group.

7. Click Save.

### 7.5.4 Configure Custom Wiegand Rule

Based on the knowledge of uploading rule for the third party Wiegand, you can set multiple customized Wiegand rules to communicate between the device and the third party card readers.

## Before You Start

Wire the third party card readers to the device.

## Steps

## [i] Note

- By default, the device disables the custom wiegand function. If the device enables the custom Wiegand function, all wiegand interfaces in the device will use the customized wiegand protocol.
- Up to 5 custom Wiegands can be set.
- For details about the custom Wiegand, see Custom Wiegand Rule Descriptions .

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Custom Wiegand to enter the Custom Wiegand page.
2. Select a custom Wiegand on the left.
3. Create a Wiegand name.
```
Note
```

Up to 32 characters are allowed in the custom Wiegand name.
4. Click Select Device to select the access control device for setting the custom wiegand.
5. Set the parity mode according to the property of the third party card reader.


- Up to 80 bits are allowed in the total length.
- The odd parity start bit, the odd parity length, the even parity start bit and the even parity length range from 1 to 80 bit.
- The start bit of the card ID, the manufacturer code, the site code, and the OEM should range from 1 to 80 bit.

6. Set output transformation rule.
1) Click Set Rule to open the Set Output Transformation Rules window.


Figure 7-6 Set Output Transformation Rule
2) Select rules on the left list.

The selected rules will be added to the right list.
3) Optional: Drag the rules to change the rule order.
4) Click OK.
5) In the Custom Wiegand tab, set the rule's start bit, length, and the decimal digit.
7. Click Save.

### 7.5.5 Configure Card Reader Authentication Mode and Schedule

You can set the passing rules for the card reader of the access control device according to your actual needs.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Authentication to enter the authentication mode configuration page.
2. Select a card reader on the left to configure.
3. Set card reader authentication mode.
1) Click Configuration.

## Card Reader Authentication

Select the authentication mode that the card reader should support.

```
Selectable Mode
\checkmark Card+PIN
\checkmark Card
~ FP
```

```\(F P+P I N\)
```

```FP/Card
```

```FP + Card
```

```\(\mathrm{FP}+\mathrm{Card}+\mathrm{PIN}\)
```

```Face/FP/Card/PIN
```

```Face + FP
```

```Face + PIN
\(\checkmark\) Face + Card
\(\checkmark\) Face
\(\checkmark\) Face + FP + Card
```

```Face + PIN + FP
```

```FP/Face
```

```Card/Face
```

```Card/Face/FP
```

```Card/FP/PIN
```

```Iris
```

```Face, Fingerprint, Card, Password, or Iris
```


## [i] ${ }_{\text {Note }}$

PIN refers to the PIN code set to open the door. Refer to Configure Access Control Information .
2) Check the modes in the Available Mode list and they will be added to the selected modes list.
3) Click OK.

After selecting the modes, the selected modes will display as icons with different color.
4. Click the icon to select a card reader authentication mode, and drag the cursor to draw a color bar on the schedule, which means in that period of time, the card reader authentication is valid.
5. Repeat the above step to set other time periods.


Figure 7-8 Set Authentication Modes for Card Readers
6. Optional: Select a configured day and click Copy to Week to copy the same settings to the whole week.
7. Optional: Click Copy to to copy the settings to other card readers.
8. Click Save.

### 7.5.6 Configure Person Authentication Mode

You can set the passing rules for person to the specified the access control device according to your actual needs.

## Before You Start

- Add access control device to the client, and make sure the access control device support the function of person authentication.
- Add person and assign access authorization to designed person. For details, refer to Person Management and Set Access Group to Assign Access Authorization to Persons .


## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Authentication .
2. Select an access control device (support the function of person authentication) on the left panel to enter the person Authentication Mode page.
3. Click Add to enter the Add window.
4. Select the person(s) need to be configured on the left panel.

The selected person(s) will be added to the right panel.
5. Select the authentication mode on the drop-down list of Authentication Mode.
6. Click OK.


Figure 7-9 Set Authentication Modes for Persons
7. Optional: Select person(s) on the Person Authentication mode page, and then click Apply to apply the person authentication mode to the device.

## [ i] Note

Person authentication has higher priority than other authentication mode. When the access control device has been configured person authentication mode, the person should authenticate on this device via person authentication mode.

### 7.5.7 Configure Relay for Elevator Controller

For elevator controller, you can manage the relationship between the floor and the relay and configure the floor's relay type. Different relay type can implement different functions. By
configuring the relationship between the floor and the relay, you can assign different functions to the elevator and control the elevator.

## Configure Relationship between Relay and Floor

You can assign different relay types to the target floors, and each floor can be assigned with 3 relay types. By this way, you can call the elevator, and assign the operations for different floors.

## Before You Start

Add the elevator controller to the client.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Elevator Configuration to enter the Relay Settings page.
2. Select an elevator controller on the left.
3. Select an unconfigured relay in the Unconfigured Relay panel on the right.

There are three types of relay available.

## Button

Control the validity for buttons of each floor.

represents button relay.

## Call Elevator

Control to call the elevator to go to the specified floor by indoor station or outdoor station.

```
Note
```

```represents the call elevator relay.
```


## Auto

Control to press the button when the user swipes card inside the elevator. The button of the floor will be pressed automatically according to the user's permission.

## Note

- represents the auto button relay.


## Example

Take the following picture as an example. In the number 1-2, 1 represents the distributed elevator controller number, 2 represents the relay, and the icon - represents the relay type. You can change the relay type. For details, refer to Configure Relay Type .


Figure 7-10 Relay
4. Configure the relationship between the relays and the floors.

- Drag the unconfigured relay from the Unconfigured Relay panel to the target floor in the Floor List panel.
- Drag the relay from the Floor List panel to the Unconfigured Relay panel.
- Drag the relay from one floor to another floor in the Floor List panel. If the target floor has already configured with a relay of the same type as the dragged one, it will replace the existed one of the same type.


Figure 7-11 Relationship between Relay and Floor

## 

- An elevator controller can link to up to 24 distributed elevator controllers. A distributed elevator controller can link up to 16 relays.
- By default, the relay total amount is the added floor number *3 (three types of relay).
- Up to 3 types of relay can be dragged to one floor.
- If you change the floor number in the door group management, all relays in the Relay Settings interface will restore to the default settings.

5. Click Save to apply the settings to the selected elevator controller.

## Configure Relay Type

To implement different functions, you can configure different relay type, including: button relay, call elevator relay and auto button relay. Different relay type can implement different functions. The button relay is to control the validity for buttons of each floor.. The call elevator relay is to call the elevator to the specified floor by indoor station or outdoor station. The auto button relay is to control to press the button when the user swipes card inside the elevator, the button of the floor will be pressed automatically according to the user's permission.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Elevator Configuration to enter the Relay Settings page.
2. Select an elevator controller on the left of the page.
3. Click Relay Type Settings to open the Relay Type Settings window.


- All relays in the Relay Type Settings window are unconfigured relays.
- Three types of relay are available: $\square$ represents the button relay, - represents the call elevator relay, and - represents the auto button relay.

4. Drag the relay from one relay type panel to the target one.


Figure 7-12 Configure Relay Type
5. Click OK.

### 7.5.8 Configure First Person In

You can set multiple first persons for one access control point. After the first person is authorized, it allows multiple persons access the door or other authentication actions.

## Before You Start

- Add access control device to the client, and make sure the device supports the first person in function.
- Add person and assign access authorization to designed person. For details, refer to Person Management and Set Access Group to Assign Access Authorization to Persons .


## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ First Person In to enter the First Person In page.
2. Select an access control device in the list on the left panel.
3. Select the current mode as Enable Remaining Open after First Person, Disable Remaining Open after First Person, or Authorization by First Person from the drop-down list for each access control point of the selected device.

## Enable Remaining Open after First Person

The door remains open for the configured time duration after the first person is authorized until the remain open duration ends. If you select this mode, you should set the consecutive authentication times and interval of consecutive authentication.

## [i] ${ }_{\text {Note }}$

The remain open duration should be between 0 and 1440 minutes. By default, the remain open duration is 10 minutes.

## Disable Remaining Open after First Person

Disable the function of first person in, namely normal authentication.

## Authorization by First Person

All authentications (except for the authentications of super card, super password, duress card, and duress code) are allowed only after the first person authorization.

You can authenticate by the first person again to disable the first person mode.
4. Click Add on the First Person List panel.
5. Select person(s) in the left list and the person(s) will be add to the selected persons as the first person(s) of the doors.
The added first person(s) will list in the First Person List
6. Optional: Select a first person from the list and click Delete to remove the person from the first person list.
7. Click Save.

### 7.5.9 Configure Anti-Passback

The anti-passback feature is designed to minimizes the misuse or fraudulent use of access credentials such as passing back card to an unauthorized person, or tailed access. The antipassback function establishes a specific sequence in which access credentials must be used in order to grant access. You can set the sequence according to the actual path via the client and if the person uses the credential in wrong sequence, you can also reset the anti-password records.

## Before You Start

Add access control device to the client, and enable the anti-passing back function of the access control device.

## Steps

## Note

Either the anti-passing back or multi-door interlocking function can be configured for an access control device at the same time. For the configuration of multi-door interlocking, refer to Configure Multi-door Interlocking .

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Anti-Passback to enter the Anti-Passpack Settings page.
2. Select an access control device on the left panel.
3. Select a card reader as the beginning of the path in the First Card Reader field.
4. Click of the selected first card reader in the Card Reader Afterward column to open the select card reader dialog.
5. Select the afterward card readers for the first card reader.

## [i] Note

Up to four afterward card readers can be added as afterward card readers for one card reader.
6. Click OK in the dialog to save the selections.
7. Click Save in the Anti-Passback Settings page to save the settings and take effect.

## Example

Set Card Swiping Path: If you select Reader In_01 as the beginning, and select Reader In_02, Reader Out_04 as the linked card readers. Then you can only get through the access control point by swiping the card in the order as Reader In_01, Reader In_02 and Reader Out_04.
8. Click Reset Anti-Passback and select the person(s) to delete the related anti-passback records about the person(s) on the device.


This function should be supported by the device.

### 7.5.10 Configure Cross-Controller Anti-Passback

You can set anti-passback for card readers in multiple access control devices. You should swipe the card according to the configured swiping card route. And only one person could pass the access control point after swiping the card. You can configure area anti-passback rules or route antipassback rules for different scenarios.

## [i] Note

It should be supported by the device.

## Configure Route Anti-Passback Based on Card

The route anti-passback depends on the card swiping route. You should set the first card reader and the card readers afterwards. It will judge the anti-passback according to the entrance and exit records on the card.

Perform this task if you need to configure route anti-passback and judge the anti-passback according to the entrance and exit records on the card.

## Steps

[i] Note
It supports M1 card at present and the sector cannot be encrypted. For details about sector encryption, refers to Enable M1 Card Encryption .

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Cross-Controller Anti-Passback to enter the crosscontroller Anti-Passback configuration page.
2. Check Enable Cross-Controller Anti-Passback to enable the function.
3. Select Based on Card as the anti-passback mode.
4. Select Route Anti-Passback as the rule.
5. Set the sector ID.
6. Click Select Access Controller to select a device for anti-passback.

## [i] Note

Up to 64 devices with anti-passback function can be added.
7. Set the first card reader and after card readers.

1) In the Card Reader area, click the icon on the left of the card reader column to set it as the first card reader.

| Card Reader: | Note1: Click the icon on the left of the card reader's nam Note2: After successfully authenticating on the first card | e to select the first card. reader, you can authentica | $d$ reader afterward in the card |
| :---: | :---: | :---: | :---: |
|  | Card Reader | Card Reader Afterward | Enable Anti-passing Back |
|  | 9 Access Controller_A_Entrance Card Reader1 |  | $\square$ |
|  | Q Access Controller_A_Exit Card Reader2 |  | ■ |
|  | Q Access Controller_A_Entrance Card Reader3 |  | $\square$ |
|  | Q Access Controller_A_Exit Card Reader4 |  | $\square$ |
|  | Q Access Controller_A_Entrance Card Reader5 |  | ■ |
|  | Q Access Controller_A_Exit Card Reader6 |  | $\square$ |
|  | Q Access Controller_A_Entrance Card Reader7 |  | $\square$ |

Figure 7-13 Select First Card
The icon will turn to ${ }^{0}$.
2) Click the card reader afterward input field to select the card readers afterward in the pop-up window.
[i] Note

- Up to 16 card readers afterward can be added for each card reader.
- The displayed card readers in the card reader afterward input field should be in authentication order.

3) Check the checkbox in the Enable Anti-Passback column to enable the Anti-Passback function.
8. Click Save.

## Configure Route Anti-Passback Based on Network

The route anti-passback depends on the card swiping route. You should set the first card reader and the card readers afterwards. It will authenticate the anti-passback according to the entrance and exit information stored on the card reader.

Perform this task if you need to configure route anti-passback and authentice the anti-passback result according to the entrance and exit information stored on the card reader.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Cross-Controller Anti-Passback to enter the crosscontroller anti-passback configuration page.
2. Check Enable Cross-Controller Anti-Passback to enable the function.
3. Select Based on Network as the anti-passback mode.
4. Select Route Anti-Passback as the rule.
5. Select a server in the drop-down list for judging the anti-passback.
[i] ${ }_{\text {Note }}$

- You can click Delete Card Swiping Record and select the card in the pop-up window to delete the card swiping information in all devices.
- Up to 5000 cards' swiping records can be stored in the selected server.

6. Click Select Access Controller to select a device for anti-passback.


Up to 64 devices with anti-passback function can be added.
7. Set the first card reader and after card readers.

1) In the Card Reader area, click the icon on the left of the card reader column to set it as the first card reader.
```
Card Reader: Note1: Click the icon on the left of the card reader's name to select the first card.
    Note2: After successfully authenticating on the first card reader, you can authenticate on any card reader afterward in the card re
\begin{tabular}{|c|c|c|}
\hline Card Reader & Card Reader Afterward & Enable Anti-passing Back \\
\hline Q Access Controller_A_Entrance Card Reader1 & & \(\square\) \\
\hline Q Access Controller_A_Exit Card Reader2 & & \(\square\) \\
\hline Q Access Controller_A_Entrance Card Reader3 & & 回 \\
\hline 9 Access Controller_A_Exit Card Reader4 & & - \\
\hline Q Access Controller_A_Entrance Card Reader5 & & \(\square\) \\
\hline Q Access Controller_A_Exit Card Reader6 & & 0 \\
\hline Q Access Controller_A_Entrance Card Reader7 & & - \\
\hline
\end{tabular}
```

Figure 7-14 Select First Card
The icon will turn to ${ }^{0}$.
2) Click the card reader afterward input field to select the card readers afterward in the pop-up window.


- Up to 16 card readers afterward can be added for each card reader.
- The displayed card readers in the card reader afterward input field should be in authentication order.

3) $\overline{\text { Check the checkbox in the Enable Anti-Passback column to enable the anti-passback function. }}$
8. Click Save.

## Configure Area Anti-Passback Based on Card

You can set the entrance card reader and the exit card reader only for entering and exiting, without setting the first card reader and the card readers afterwards. It will judge the anti-passback according to the entrance and exit records on the card.

Perform this task if you need to configure area anti-passback and judge the anti-passback according to the entrance and exit records on the card.

## Steps

## Note

It supports M1 card at present and the sector cannot be encrypted. For details about sector encryption, refers to Enable M1 Card Encryption .

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Cross-Controller Anti-Passback to enter the crosscontroller anti-passback configuration page.
2. Check Enable Cross-Controller Anti-Passback to enable the function.
3. Select Based on Card as the anti-passback mode.
4. Select Area Anti-Passback as the rule.
5. Set the sector ID.
6. Click Select Access Controller to select a device for anti-passback.

## [i] Note

Up to 64 devices with anti-passback function can be added.
7. In the Card Reader area, check the checkboxes in the Enable Anti-Passback column to select the entrance card reader and the exit card reader.

## [i] ${ }_{\text {Note }}$

Up to one entrance carder and one exit card reader should be checked.
8. Click Save.

## Configure Area Anti-Passback Based on Network

You can set the entrance card reader and the exit card reader only for entering and exiting, without setting the first card reader and the card readers afterwards. It will authenticate the anti-passback according to the entrance and exit information on the card reader.

Perform this task if you need to configure area anti-passback and judge the anti-passback according to the entrance and exit information stored on the card reader.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Cross-Controller Anti-Passback to enter the crosscontroller anti-passback configuration page.
2. Check Enable Cross-Controller Anti-Passback to enable the function.
3. Select Based on Network as the anti-passback mode.
4. Select Area Anti-Passback as the rule.
5. Select a server in the drop-down list for judging the anti-passback.


- You can click Delete Card Swiping Record and select the card in the pop-up window to delete the card swiping information in all devices.
- Up to 5000 cards' swiping records can be stored in the selected server.

6. Click Select Access Controller to select a device for anti-passback.
[i] Note
Up to 64 devices with anti-passback function can be added.
7. In the Card Reader area, check the checkboxes in the Enable Anti-Passback column to select the entrance card reader and the exit card reader.

## [i] ${ }_{\text {Note }}$

Up to one entrance carder and one exit card reader should be checked.
8. Click Save.

### 7.5.11 Configure Multi-door Interlocking

You can set the multi-door interlocking between multiple doors of the same access control device. To open one of the doors, other doors must keep closed. That means in the interlocking combined door group, up to one door can be opened at the same time.

## Before You Start

Add access control device to the client, and make sure the device supports the multi-door interlocking function.

## Steps

## i Note

- Multi-door Interlocking function is only supported by the access control device which has more than one access control points (doors).
- Either the anti-passing back or multi-door interlocking function can be configured for an access control device at the same time. For the configuration of anti-passing back function, refer to Configure Anti-Passback .

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Multi-door Interlocking .
2. Select an access control device on the left panel.
3. Click Add on the Multi-door Interlocking List panel to open Add Access Control Point to open the Add window.
4. Select at least two access control points(doors) from the list.

## [ i] Note

Up to four doors can be added in one multi-door interlocking combination.
5. Click OK to add the selected access control point(s) for interlocking.

The configured multi-door interlocking combination will list on the Multi-door Interlocking List panel.
6. Optional: Select an added multi-door interlocking combination from the list and click Delete to delete the combination.
7. Click Apply to apply the settings to the access control device.

### 7.5.12 Configure Authentication Code

You can configure authentication code on the client. And after that, you can open door by entering authentication code when you forget to bring the card with you.

## Before You Start

Add access control device to the client, and make sure the device supports authentication code as the authentication mode.

## Steps

1. Click Access Control $\rightarrow$ Advanced Function $\rightarrow$ Authentication Code to enter the authentication code configuration page.
2. Select an access control device in the list of Controller List panel.

All the applied cards and persons will display on the Card List panel.

```
Note
```

For setting and applying the permissions to the device, refer to Set Access Group to Assign Access Authorization to Persons.
3. Click the field of each card in the Authentication Code column to enter the authentication code.

Note
The authentication code should contain 4 to 8 digits.
4. Click Save at the upper-right corner of Authentication Code page to save the settings. The authentication code function of the card will be enabled automatically.

## What to do next

You should set the card reader authentication mode of access control device as Card/ Authentication Code. Refer to Configure Card Reader Authentication Mode and Schedule for details.

### 7.6 Configure Other Parameters

After adding the access control device, you can set its parameters such as network parameters, capture parameters, RS-485 parameters, Wiegand parameters, etc.

### 7.6.1 Set Multiple NIC Parameters

If the device supports multiple network interfaces, you can set the network parameters of these NICs via the client, such as IP address, MAC address, port number, etc.

## Before You Start

Add access control device to the client, and make sure the device supports multiple NICs.

## Steps

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and click NIC to enter Multiple NIC Settings page.
4. Select an NIC you want to configure from the drop-down list.
5. Set its network parameters such as IP address, default gateway, subnet mask, etc.

## MAC Address

A media access control address (MAC address) is a unique identifier assigned to the network interface for communications on the physical network segment.

## MTU

The maximum transmission unit (MTU) of the network interface.
6. Click Save.

### 7.6.2 Set Network Parameters

After adding the access control device, you can set the device log uploading mode, and create ISUP account via wired or wireless network.

## Set Log Uploading Mode

You can set the mode for the device to upload logs via ISUP protocol.

## Steps

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and enter Network $\rightarrow$ Uploading Mode .
4. Select the center group from the drop-down list.
5. Check Enable to enable to set the uploading mode.
6. Select the uploading mode from the drop-down list.

- Enable N1 or G1 for the main channel and the backup channel.
- Select Close to disable the main channel or the backup channel
[i] ${ }_{\text {Note }}$
The main channel and the backup channel cannot enable N1 or G1 at the same time.

7. Click Save.

## Create ISUP Account in Wired Communication Mode

You can set the account for ISUP protocol in wired communication mode. Then you can add devices via ISUP protocol.

## Steps

## i ${ }^{\text {Note }}$

This function should be supported by the device.

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and enter Network $\rightarrow$ Network Center .
4. Select the center group from the drop-down list.
5. Select the Address Type as IP Address or Domain Name.
6. Enter IP address or domain name according to the address type.
7. Enter the port number for the protocol.


The port number of the wireless network and wired network should be consistent with the port number of ISUP.
8. Select the Protocol Type as ISUP.
9. Set an account name for the network center.
10. Click Save.

## Create ISUP Account in Wireless Communication Mode

You can set the account for ISUP protocol in wireless communication mode. Then you can add devices via ISUP protocol.

## Steps

## il Note

This function should be supported by the device.

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and enter Network $\rightarrow$ Wireless Communication Center.
4. Select the APN Name as CMNET or UNINET.
5. Enter the SIM Card No.
6. Select the center group from the drop-down list.
7. Enter the IP address and port number.

## [i] Note

- By default, the port number for ISUP is 7660.
- The port number of the wireless network and wired network should be consistent with the port number of ISUP.

8. Select the Protocol Type as ISUP.
9. Set an account name for the network center.
10. Click Save.

### 7.6.3 Set Device Capture Parameters

You can configure the capture parameters of the access control device, including manual capture and event triggered capture.

## [i] Note

- The capture function should be supported by the device.
- Before setting the capture parameters, you should set the picture storage first to define where the event triggered pictures are saved. For details, refer to Set Picture Storage .


## Set Triggered Capture Parameters

When an event occurs, the camera of the access control device can be triggered to capture picture(s) to record what happens when the event occurs. You can view the captured pictures when checking the event details in Event Center. Before that, you need to set the parameters for the capture such as number of pictures captured for one time.

## Before You Start

Before setting the capture parameters, you should set the picture storage first to define where the captured pictures are saved. For details, refer to Set Picture Storage .

## Steps

[i] Note
This function should be supported by the device

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters $\rightarrow$ Capture .
3. Select an access control device in the device list and select Linked Capture.
4. Set the picture size and quality.
5. Set the capture times once triggered which defines how many pictures will be captures for one time.
6. If the capture times is more than 1 , set the interval for each capture.
7. Click Save.

## Set Manual Capture Parameters

In Status Monitoring module, you can capture a picture manually the access control device's camera by clicking a button. Before that, you need to set the parameters for the capture such as picture quality.

## Before You Start

Before setting the capture parameters, you should set the saving path first to define where the captured pictures are saved. For details, refer to Set File Saving Path .

## Steps

[ i] ${ }_{\text {Note }}$
This function should be supported by the device

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters $\rightarrow$ Capture .
3. Select an access control device in the device list and select Manual Capture.
4. Select the resolution of the captured pictures from the drop-down list.
5. Select the picture quality as High, Medium, or Low. The higher the picture quality is, the larger size the picture will be.
6. Click Save.

### 7.6.4 Set Parameters for Face Recognition Terminal

For face recognition terminal, you can set its parameters including face picture database, QR code authentication, etc.

## Steps

[i] ${ }_{\text {Note }}$
This function should be supported by the device.

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and click Face Recognition Terminal.
4. Set the parameters.
[I] ${ }_{\text {Note }}$
These parameters displayed vary according to different device models.

## COM

Select a COM port for configuration. COM1 refers to the RS-485 interface and COM2 refers to the RS-232 interface.

## Face Picture Database

select Deep Learning as the face picture database.

## Authenticate by QR Code

If enabled, the device camera can scan the $Q R$ code to authenticate. By default, the function is disabled.

## Blocklist Authentication

If enabled, the device will compare the person who want to access with the persons in the blocklist.
If matched (the person is in the blocklist), the access will be denied and the device will upload an alarm to the client.
If mismatched (the person is not in the blocklist), the access will be granted.

## Save Authenticating Face Picture

If enabled, the captured face picture when authenticating will be saved on the device.

## MCU Version

View the device MCU version.
5. Click Save.

### 7.6.5 Enable M1 Card Encryption

M1 card encryption can improve the security level of authentication.

## Steps

[i] Note
The function should be supported by the access control device and the card reader.

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and click M1 Card Encryption to enter the M1 Card Encryption page.
4. Set the switch to on to enable the M1 card encryption function.
5. Set the sector ID.

The sector ID ranges from 1 to 100.
6. Click Save to save the settings.

### 7.6.6 Set RS-485 Parameters

You can set the access control device's RS-485 parameters including the baud rate, data bit, the stop bit, parity type, flow control type, communication mode, work mode, and connection mode.

## Before You Start

Add access control device to the client, and make sure the device supports RS-485 interface.

## Steps

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and click RS-485 to enter the RS-485 Settings page.
4. Select the serial port number from the drop-down list to set the RS-485 parameters.
5. Set the baud rate, data bit, the stop bit, parity type, communication mode, working mode, and connection mode in the drop-down list.
[i] Note
When the connection mode is Connect Access Control Device, you can select Card No. or Person ID as the output type.

## 6. Click Save.

- The configured parameters will be applied to the device automatically.
- When you change the working mode or connection mode, the device will reboot automatically.


### 7.6.7 Set Wiegand Parameters

You can set the access control device's Wiegand channel and the communication mode. After setting the Wiegand parameters, the device can connect to Wiegand card reader via Wiegand communication.

## Before You Start

Add access control device to the client, and make sure the device supports Wiegand.

## Steps

1. Enter the Access Control module.
2. On the navigation bar on the left, enter Advanced Function $\rightarrow$ More Parameters .
3. Select an access control device in the device list and click Wiegand to enter the Wiegand Settings page.
4. Set the switch to on to enable the Wiegand function for the device.
5. Select the Wiegand channel No. and the communication mode from the drop-down list.

## [i] Note

If you set Communication Direction as Sending, you are required to set the Wiegand Mode as Wiegand 26 or Wiegand 34.
6. Click Save.

- The configured parameters will be applied to the device automatically.
- After changing the communication direction, the device will reboot automatically.


### 7.7 Configure Linkage Actions for Access Control

You can configure different linkage actions for the event detected by the access control device. After that, linkage actions will be triggered once the event happens. This mechanism is used for notifying the security personnel the event, or triggering automatic access control in real time.
Two types of linkage actions are supported:

- Client Actions: When the event is detected, it will trigger the actions on the client, such as the client making an audible warning..
- Device Actions: When the event is detected, it will trigger the actions of a specific device, such as buzzing of a card reader and, opening/closing of a door, ..


### 7.7.1 Configure Client Actions for Access Event

Even if you are far away from an access point, you can still know what happens and how urgent the event is via the client by configuring client actions for the access event. Client actions here refer to the actions automatically executed by the client itself, such as making an audible warning and sending an email. Once an event is triggered, the client will notify the security personnel, so that he/she can handle the event in time.

## Before You Start

Add access control device to the client.

## Steps

1. Click Event Configuration $\rightarrow$ Access Control Event .

The added access control devices will display in the device list.
2. Select a resource (including device, alarm input, door/elevator, and card reader) from the device list.
The event types which the selected resource supports appear.
3. Select the event(s) and click Edit Priority to define the priority for the event(s), which can be used to filter events in the Event Center.
4. Set the linkage actions of the event.

1) Select the event(s) and click Edit Linkage to set the client actions when the event(s) are triggered.

## Audible Warning

The client software gives an audible warning when the event is triggered. You can select alarm sound for the audible warning.

For details about setting the alarm sound, refer to Set Alarm Sound .

## Send Email

Send an email notification about the event to one or more receivers.
For details about setting email parameters, refer to Set Email Parameters.
2) Click OK.
5. Enable the event so that when the event is detected, event will be sent to the client and the linkage actions will be triggered.
6. Optional: Click Copy to to copy the event settings to other access control device, alarm input, door/elevator, or card reader.

### 7.7.2 Configure Device Actions for Access Event

You can set the access control device's linkage actions for the access control device's triggered event. After that, when an event is triggered, it can trigger the alarm output, buzzer on access controller, and other actions.

## Steps

## i] Note

The linkage actions should be supported by the device.

1. Click Access Control $\rightarrow$ Linkage Configuration .
2. Select the access control device from the list on the left.
3. Click Add to add a new linkage.
4. Select Event Linkage as the event source.
5. select the event type and detailed event to set the linkage.
6. In the Linkage Target area, set the property target to enable this action.

## Buzzer on Controller

The audible warning of access control device will be triggered.

## Capture

An event-related picture will be captured when the selected event happens.

## Recording

An event-related picture will be captured when the selected event happens.
[i] Note
The device should support recording.

## Buzzer on Reader

The audible warning of card reader will be triggered.

## Alarm Output

The alarm output will be triggered for notification when the selected event happens

## Alarm Input

Arm or disarm the alarm input.
[i] Note
The device should support alarm input function.

## Access Point

The door status of open, close, remain open, or remain close will be triggered.

## [i] ${ }_{\text {Note }}$

The target door and the source door cannot be the same one.

## Audio Play

The audio prompt will be triggered. And the select audio index related audio content will be played according to the configured play mode.
7. Click Save.
8. Optional: After adding the device linkage, you can do one or more of the followings:

Edit Linkage Select the configured linkage settings in the device list and you can edit its Settings event source parameters, including event source and linkage target.
Delete Linkage Select the configured linkage settings in the device list and click Delete to Settings delete it.

### 7.7.3 Configure Device Actions for Card Swiping

You enable access control device's linkage actions (such as disarming a zone and triggering audio prompt) for the swiping of a specific card, In this way, you can monitor the card holder's behaviors and whereabouts.

## Steps

## Note

It should be supported by the device.

1. Click Access Control $\rightarrow$ Linkage Configuration .
2. Select the access control device from the list on the left.
3. Click Add to add a new linkage.
4. Select Card Linkage as the event source.
5. Enter the card number or select the card from the drop-down list.
6. Select the card reader where the card swipes.
7. In the Linkage Target area, set the property target to enable this action.

## Buzzer on Controller

The audible warning of access control device will be triggered.

## Buzzer on Reader

The audible warning of card reader will be triggered.

## Capture

An event-related picture will be captured when the selected event happens.

## Recording

An event-related picture will be captured when the selected event happens.

The device should support recording.

## Alarm Output

The alarm output will be triggered for notification.

## Alarm Input

Arm or disarm the alarm input.
Ti] Note
The device should support alarm input function.

## Access Point

The door status of open, close, remain open, or remain closed will be triggered.

## Audio Play

The audio prompt will be triggered. And the select audio index related audio content will be played according to the configured play mode.
8. Click Save.

When the card (configured in Step 5) swipes on the card reader (configured in Step 6), it can trigger the linked actions (configured in step 7).
9. Optional: After adding the device linkage, you can do one or more of the followings:

Delete Linkage Select the configured linkage settings in the device list and click Delete to Settings delete it.

Edit Linkage Select the configured linkage settings in the device list and you can edit its Settings event source parameters, including event source and linkage target.

### 7.7.4 Configure Device Actions for Person ID

You can set the access control device's linkage actions for the specified person ID. When access control device detects the specified person ID, it can trigger the alarm output, buzzer on card reader, and other actions, so as to implement special monitoring on the specified person.

## Steps

## Note

It should be supported by the device.

1. Click Access Control $\rightarrow$ Linkage Configuration .
2. Select the access control device from the list on the left.
3. Click Add to add a new linkage.
4. Select Person Linkage as the event source.
5. Enter the employee number or select the person from the drop-down list.
6. Select the card reader where the card swipes.
7. In the Linkage Target area, set the property target to enable this action.

## Buzzer on Controller

The audible warning of access control device will be triggered.

## Buzzer on Reader

The audible warning of card reader will be triggered.

## Capture

An event-related picture will be captured when the selected event happens.

## Recording

An event-related picture will be captured when the selected event happens.
[i] Note
The device should support recording.

## Alarm Output

The alarm output will be triggered for notification.

## Alarm Input

Arm or disarm the alarm input.
[ i] Note
The device should support zone function.

## Access Point

The door status of open, close, remain open, or remain closed will be triggered.

## Audio Play

The audio prompt will be triggered. And the select audio index related audio content will be played according to the configured play mode.
8. Click Save.
9. Optional: After adding the device linkage, you can do one or more of the followings:

| Delete Linkage <br> Settings | Select the configured linkage settings in the device list and click Delete to <br> delete it. |
| :--- | :--- |
| Edit Linkage | Select the configured linkage settings in the device list and you can edit its <br> event source parameters, including event source and linkage target. |
| Settings |  |

### 7.8 Door/Elevator Control

In Monitoring module, you can view the real-time status of the doors or elevators managed by the added access control device. You can also control the doors and elevators such as open/close the door, or remain the door open/closed via the client remotely. The real-time access event are displayed in this module. You can view the access details and person details.

## [i] Note

For the user with door/elevator control permission, the user can enter the Monitoring module and control the door/elevator. Or the icons used for control will not show. For setting the user permission, refer to Add User .

### 7.8.1 Control Door Status

You can control the status for the door(s), including unlock door, locking door, remaining the door unlock, remaining the door locked, remain all unlocked, etc.

## Before You Start

- Add person and assign access authorization to designed person, and person will have the access authorization to the access points (doors). For details, refer to Person Management and Set Access Group to Assign Access Authorization to Persons .
- Make sure the operation user has the permission of the access points (doors). For details, refer to Add User .


## Steps

1. Click Monitoring to enter the status monitoring page.
2. Select an access point group on the upper-right corner.

## [ i] ${ }_{\text {Note }}$

For managing the access point group, refer to Group Management .
The doors in the selected access control group will display.
3. Click a door icon to select a door, or press Ctrl and select multiple doors.

## [i] Note

For Remain All Unlocked and Remain All Locked, ignore this step.
4. Click the following buttons to control the door.

## Unlock Door

When the door is locked, unlock it and it will be open for once. After the open duration, the door will be closed and locked again automatically.

## Lock Door

When the door is unlocked, lock it and it will be closed. The person who has the access authorization can access the door with credentials.

## Remain Unlocked

The door will be unlocked (no matter closed or open). All the persons can access the door with no credentials required.

## Remain Locked

The door will be closed and locked. No person can access the door even if he/she has the authorized credentials, except the super users.

## Remain All Unlocked

All doors in the group will be unlocked (no matter closed or open). All the persons can access the doors with no credentials required.

## Remain All Locked

All doors in the group will be closed and locked. No person can access the doors even if he/she has the authorized credentials, except the super users.

## Capture

Capture a picture manually.


The Capture button is available when the device supports capture function. The picture is saved in the PC running the client. For setting the saving path, refer to Set File Saving Path .

## Remotely Unlocking Door Station

When the group includes door stations, you can check Lock1 or Lock2, then click Unlock Door to unlock the door station.


By default, Lock1 is checked for door stations.

## Result

The icon of the doors will change in real-time according to the operation if the operation is succeeded.

### 7.8.2 Control Elevator Status

You can control the elevator status of the added elevator controller, including opening elevator's door, controlled, free, calling elevator, etc.

## Before You Start

- Add person and assign access authorization to designed person, and person will have the access authorization to the access points (floors). For details, refer to Person Management and Set Access Group to Assign Access Authorization to Persons .
- Make sure the operation user has the permission of the access points (floors). For details, refer to Add User .


## Steps

## Note

- You can control the elevator via the current client if it is not armed by other client. The elevator cannot be controlled by other client software if the elevator status changes.
- Only one client software can control the elevator at one time.
- The client which has controlled the elevator can receive the alarm information and view the elevator real-time status.

1. Click Monitoring to enter the status monitoring page.
2. Select an access point group on the upper-right corner.

## [ $\mathbf{i}]_{\text {Note }}$

For managing the access point group, refer to Group Management .
The elevators in the selected access point group will display.
3. Click a door icon to select an elevator.
4. Click the following buttons to control the elevator.

## Open Door

When the elevator's door is closed, open it. After the open duration, the door will be closed again automatically.

## Controlled

You should swipe the card before pressing the target floor button. And the elevator can go to the target floor.

## Free

The selected floor's button in the elevator will be valid all the time.

## Disabled

The selected floor's button in the elevator will be invalid and you cannot go to the target floor.

## Result

The icon of the doors will change in real-time according to the operation if the operation is succeeded.

### 7.8.3 Check Real-Time Access Records

The real-time access records can be displayed in the client, including card swiping records, face recognition records, skin-surface temperature information, etc. Also, you can view the person information and view the picture captured during access.

## Before You Start

You have added person(s) and access control device(s) to the client. For details, refer to Person Management and Add Device .

## Steps

1. Click Monitoring to enter monitoring module.

Real-time access records are displayed on the bottom of the page. You can view record details, including card No., person name, event time, door location, temperature, authentication type etc.


Figure 7-16 Real-time Access Records

## [ $\mathbf{i}]_{\text {Note }}$

You can right click the column name of access event table to show or hide the column according to actual needs.
2. Optional: Select an access point group from the drop-down list in the upper-right corner to show the real time access records of the selected group.
3. Optional: Check the event type and event status.

The detected events of checked type and status will be displayed in the list below.
4. Optional: Check Show Latest Event to view the latest access record.

The record list will be listed reverse chronologically.
5. Optional: Check Enable Abnormal Temperature Prompt to enable abnormal skin-surface temperature prompt.

## [i] ${ }_{\text {Note }}$

When enabled, if there is abnormal temperature information, an Abnormal Temperature window pops up when you enter Monitoring module, displaying person's picture, skin-surface temperature, card No., person name, etc.
6. Optional: Click an event to view person pictures (including captured picture and profile).

## [ i] Note

In Linked Capture Picture field, you can double click the captured picture to view an enlarged picture.
7. Optional: Click to view monitoring details (including person's detailed information and the captured picture).

```
Ii \({ }_{\text {Note }}\)
In the pop-up window, you can click \(\square\) to view monitoring details in full screen.
```


## Chapter 8 Time and Attendance

The Time and Attendance module provides multiple functionalities to track and monitor when employees start and stop work, and full control of employees working hours such as late arrivals, early departures, time taken on breaks and absenteeism.

## Note

In this section, we introduce the configurations before you can getting the attendance reports. The access records recorded after these configurations will be calculated in the statistics.

### 8.1 Flow Chart



Figure 8-1 Flow Chart of Time and Attendance

- Add Access Control Device: You can add access control devices on the client. For more details, refer to Add Device .
- Configure Person Information: You should add person information to the client before configuring time and attendance parameters for them. For more details, refer to Person Management .
- Set Weekend: You can select one or more days as the weekends according to actual requirements on the client. For more details, refer to Set Weekend .
- Configure Authentication Mode: You can configure authentication mode such as card, fingerprint, face, etc. For more details, refer to Configure Authentication Mode.
- Configure Overtime Parameters: You can configure the overtime parameters for workday and weekend, including overtime level, work hour rate, etc. For more details, refer to Configure Overtime Parameters .
- Configure Attendance Check Point: You can set the card reader(s) of the access point as the attendance check point on the client. For more details, refer to Configure Overtime Parameters .
- Configure Holiday: You can add the holiday during which the check-in or check-out will not be recorded on the client. For more details, refer to Configure Holiday .
- Configure Leave Type: You can customize the leave type according to actual needs. For more details, refer to Configure Leave Type .
- Add Timetable: You can add general timetable and flexible timetable for employees on the client according to actual needs. For more details, refer to Add Flexible Timetable and Add General Timetable.
- Add Shift: You can add shift for employees including setting shift periods and the effective attendance time. For more details, refer to Add Shift .
- Manage Shift Schedule: You can set department schedule, person schedule, and temporary schedule on the client. For more details, refer to Manage Shift Schedule .
- Calculate Attendance Data: The client can calculate the attendance data automatically or you can manually calculate the attendance data. For more details, refer to Calculate Attendance Data.
- Attendance Records: You can search and view the employee's attendance records on the client, including attendance time, attendance status, check point, etc. For more details, refer to Get an Overview of Employees' Attendance Data .
- Attendance Report: The client supports generating attendance reports to view the employees' attendance results. Also, you can pre-define the report content and it can send the report automatically to you via email. For more details, refer to Generate Instant Report and Send Report Regularly.


### 8.2 Configure Attendance Parameters

You can configure the attendance parameters, including the general rule, overtime parameters, attendance check point, holiday, leave type, etc.

### 8.2.1 Set Weekend

The days of weekends may vary in different countries and regions. The client provides weekends definition function. You can select one or more days as the weekends according to actual requirements, and set different attendance rules for weekends from workdays.

## Steps

## i) Note

The parameters configured here will be set as default for the newly added time period. It will not affect the existed one(s).

1. Enter Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ General Rule .
3. Select the day(s) as weekend, such as Saturday and Sunday.
4. Click Save.

### 8.2.2 Configure Authentication Mode

The client supports configuring authentication modes, including card, fingerprint, face, card or fingerprint, etc. After setting authentication mode, you can get device events of the configured authentication mode via the client and the client will calculate attendance data of the configured authentication mode.
Click Attendance Settings $\rightarrow$ General Rule $\rightarrow$ Authentication Mode .
Select the authentication mode from the drop-down list as All, Card, FP, Face, Card/FP, Card/Face, FP/Face, Card/FP/Face.

## [i] Note

- This function should be supported by device.
- After setting authentication mode, you can only get attendance records of the configured authentication mode and calculate attendance data of the configured authentication mode.


### 8.2.3 Configure Overtime Parameters

You can configure the overtime parameters for workday and weekend, including overtime level, work hour rate, attendance status for overtime, etc.

## Steps

1. Click Time \& Attendance $\rightarrow$ Attendance Settings $\rightarrow$ Overtime .
2. Set required information.

## Overtime Level for Workday

When you work for a certain period after end-work time on workday, you will reach different overtime level: overtime level 1, overtime level 2 and overtime level 3. You can set different work hour rate for three overtime levels, respectively.

## Work Hour Rate

Work Hour Rate is used to calculate work hours by multiplying it by overtime. When you work for a certain period after end-work time on workday, you will reach different overtime level.

You can set different work hour rates (1-10, can be a decimal) for three overtime levels. For example, your valid overtime is one hour (in overtime level 1), and the work hour rate of overtime level 1 is set as 2 , then the work hours in the period will be calculated as 2 hours.

## Overtime Rule for Weekend

You can enable overtime rule for weekend and set calculation mode.
3. Click Save.

### 8.2.4 Configure Attendance Check Point

You can set the card reader(s) of the access control device as the attendance check point(s), so that the authentication on the card readers will be recorded for attendance.

## Before You Start

- You have added access control device(s). For details, refer to Add Device .
- You have enabled T\&A Status. For details, refer to Add General Timetable .

By default, all card readers of the added access control devices are set as start/end-work check points. If you need to edit check point function of card reader(s), you can perform the following operations.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ Attendance Check Point to enter the attendance check point settings page.
3. Set Set All Card Readers as Check Points switch to off.
4. Check the desired card reader(s) as attendance check point(s) in the list below.
5. Set check point function as Start/End-Work, Start-Work or End-Work.


When selecting Start-Work or End-Work, the attendance status uploaded from the device will be decided by the check point function you set here.

## Start-Work

Attendance status uploaded from the device will all be calculated as Check-in.

## End-Work

Attendance status uploaded from the device will all be calculated as Check-out.

## Start/End-Work

Attendance status will be calculated as Check in/out according to the actual attendance status on the device.
6. Click Set as Check Point.

The configured attendance check point(s) are displayed on the right list.
7. Optional: After setting attendance check points, and perform the following operations.

| Edit Check | Check one attendance check point, click Edit to edit its information including <br> name, check point function, etc. <br> Cheint |
| :--- | :--- |
| Check two or more attendance check points, click Edit to batch edit check <br> point function, enter remark, etc. |  |
| Delete Check | Check one or more check points, and click Delete to delete it/them. |
| Point |  |

### 8.2.5 Configure Holiday

You can add the holiday during which the check-in or check-out will not be recorded.

## Add Regular Holiday

You can configure a holiday which will take effect annually on regular days during the effective period, such as New Year's Day, Independence Day, Christmas Day, etc.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ Holiday to enter the Holiday Settings page.
3. Check Regular Holiday as holiday type.
4. Custom a name for the holiday.
5. Set the first day of the holiday.
6. Enter the number of the holiday days.
7. Set the attendance status if the employee works on holiday.
8. Optional: Check Repeat Annually to make this holiday setting effective every year.
9. Click OK.

The added holiday will display in the holiday list and calendar.
If the date is selected as different holidays, it will be recorded as the first-added holiday.
10. Optional: After adding the holiday, perform one of the following operations.

Edit Holiday Click to edit the holiday information.
Delete Holiday Select one or more added holidays, and click Delete to delete the holiday(s) from the holiday list.

## Add Irregular Holiday

You can configure a holiday which will take effect annually on irregular days during the effective period, such as Bank Holiday.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ Holiday to enter the Holiday Settings page.
3. Click Add to open the Add Holiday page.
4. Check Irregular Holiday as holiday type.
5. Custom a name for the holiday.
6. Set the start date of the holiday.

## Example

If you want to set the forth Thursday in November, 2019 as the Thanksgiving Day holiday, you should select 2019, November, 4th, and Thursday from the four drop-down lists.
7. Enter the number of the holiday days.
8. Set the attendance status if the employee works on holiday.
9. Optional: Check Repeat Annually to make this holiday setting effective every year
10. Click OK.

The added holiday will display in the holiday list and calendar.
If the date is selected as different holidays, it will be recorded as the first-added holiday.
11. Optional: After adding the holiday, perform one of the following operations.

Edit Holiday Click to edit the holiday information.
Delete Holiday Select one or more added holidays, and click Delete to delete the holiday(s) from the holiday list.

### 8.2.6 Configure Leave Type

You can customize the leave type (major leave type and minor leave type) according to actual needs. You can also edit or delete the leave type.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ Leave Type to enter the Leave Type Settings page.
3. Click Add on the left to add a major leave type.
4. Optional: Perform one of the following operations for major leave type.

Edit Move the cursor over the major leave type and click to edit the major leave type.
Delete Select one major leave type and click Delete on the left to delete the major leave type.
5. Click Add on the right to add a minor leave type.
6. Optional: Perform one of the following operations for minor leave type.

Edit Move the cursor over the minor leave type and click to edit the minor leave type.
Delete Select one or multiple major leave types and click Delete on the right to delete the selected minor leave type(s).

### 8.2.7 Synchronize Authentication Record to Third-Party Database

The attendance data recorded on the client can be used by other system for calculation or some other operations. You can enable synchronization function to apply the authentication record from the client to the third-party database automatically.

## Steps

1. Enter Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ Third-Party Database .
3. Set Apply to Database switch to on to enable synchronization function.
4. Select database Type as SQLServer or MySQL.


- Supported versions : SQLServer 2008, MySQL V5.7.26.
- You should set the field type of the database type as varchar.
- If you select MySQL, you should import the configuration file (libmysql.dII) from local PC.

5. Set the other required parameters of the third-party database, including server IP address, port No., database name, user name and password.

## Note

The default port No. of the selected database type is displayed automatically. You can enter a number ranging from 1 to 65535 to customize the port No if needed.
6. Set table parameters of database according to the actual configuration.

1) Enter the table name of the third-party database.
2) Set the mapped table fields between the client and the third-party database.
7. Click Save to test whether database can be connected and save the settings for the successful connection.

- The attendance data will be written to the third-party database.
- During synchronization, if the client disconnects with the third-party database, the client will start reconnection every 30 mins. After being reconnected, the client will synchronize the data recorded during the disconnected time period to the third-party database.


### 8.2.8 Configure Attendance Calculation Accuracy

To calculate the attendance data accurately, you can set the attendance calculation accuracy for different attendance items, including the minimum unit for attendance calculation and round-off control rule. For example, you can set the minimum unit as 1 hour for leave duration, and set the round-off control rule as round up.

## Steps

1. Enter the Time and Attendance module.
2. Click Attendance Settings $\rightarrow$ General Rule .
3. In the Advanced Function area, set the minimum units (including min, Hour(s) and Workday) for different statistic items.
4. Set the round-off control rules (including Round Down, Round Off and Round Up) for different statistic items.
5. Set the Display Format as MM or HH:MM.
6. Click Save.

## Example

Set the minimum unit as 1 hour and the round-off control rule as round down for overtime duration, and if the overtime duration is less than 1 hour, it will be calculated as 0 . If the overtime duration is 1.5 hour, it will be calculated as 1 hour.

### 8.2.9 Configure Break Time

You can add break time and set start time, end time, duration, calculation mode and other parameters for the break. The added break time can also be edited or deleted.

## Steps

1. Click Time \& Attendance $\rightarrow$ Timetable $\rightarrow$ Break Time .

The added break time is displayed in the list.
2. Click Break Time Settings to enter Break Time Settings window.
3. Click Add.
4. Enter a name for the break time.
5. Set related parameters for the break time.

## Start Time / End Time

Set the time when the break starts and ends.

## No Earlier Than / No Later Than

Set the earliest swiping time for starting break and the latest swiping time for ending break.

## Break Duration

The duration from start time to end time of the break.

## Calculation

## Auto Deduct

The break duration will be calculated according to the time you set.

## Must Check

The break duration will be calculated and excluded from work hours according to actual check-in and check-out time.

## Return from Break Early for

The actual check-in and check-out time does not exceed the break time, and can be marked as normal work or work overtime.

## Return from Break Late for

The actual check-in and check-out time exceeds the break time, and can be marked as late, absent or early leave.

## Calculated by

Each Check in/out: Each check-in time and check-out time is valid and the sum of all periods between adjacent check-in and check-out time will be recorded as the break time duration.
First In \& Last Out: The first check-in time is recorded as start break time and the last check-out time is recorded as the end break time.

## Enable T\&A Status

Set Enable T\&A Status switch to on to calculate the actual break time according to attendance status on the device.


This function should be supported by the device.

## Valid Authentication Interval

During the valid authentication interval, person swiping card for several times will only be calculated as once when calculating attendance data.
6. Click Save to save the settings.
7. Optional: Click Add to continue adding break time.

### 8.3 Add Flexible Timetable

On the timetable page, you can add flexible timetable for employees, which does not requires the check-in/out time but requires the staffs' working time (from the start time you set) is equal or greater than the predefined work hours.

## Steps

1. Click Time and Attendance $\rightarrow$ Timetable to enter the timetable settings page.
2. Click Add to enter add timetable page.
. Create a name for the timetable.


You can click the color icon beside the name to customize the color for the valid timetable on the time bar.
4. Select the timetable type as flexible.


Figure 8-2 Add Flexible Timetable
5. Select calculation method.

## First In \& Last Out

The first check-in time is recorded as start work time and the last check-out time is recorded as the end-work time.

## Each Check-In/Out

Each check-in time and check-out time is valid and the sum of all periods between adjacent check-in and check-out time will be recorded as the valid working duration.
You need to set Valid Authentication Interval for this calculation method. For example, if the interval between card swiping of the same card is less than the set value, the card swiping is invalid.
6. Optional: Enable Enable T\&A Status to calculate according to attendance status of the device.

## [ I $]$ Note

This function should be supported by the device.
7. Optional: Enable Calculate Break Time into Attended Duration.

## [1] Note

When enabled, break time will be calculated into the overall attendance duration. That is, the actual attendance duration equals to the overall attendance duration (includes break time).
8. Set the related attendance time parameters as the following:

## Working Hours

The employees' working hours should be equal or greater than the set value.

## Start Time of Timetable

Calculate the working hours of each day from the set value.
For example, if you have set the working hours as 8 hours, and the start time of timetable as 9:00 am, and the staff A checked-in at 8:00 am and checked-out at 5:00 pm (effective working hours are $9: 00$ am to 5:00 pm, totally 8 hours), the attendance result for staff $A$ will be calculated as normal.
9. Click Save to add the timetable.
10. Optional: Perform one or more following operations after adding timetable.

Edit Timetable Select a timetable from the list to edit related information.
Delete Timetable Select a timetable from the list and click Delete to delete it.

### 8.4 Add General Timetable

On the timetable page, you can add general timetable for employees, which requires the fixed start-work time and end-work time. Also, you can set valid check-in/out time, allowable timetable for being late and leaving early.

## Steps

1. Click Time and Attendance $\rightarrow$ Timetable to enter the timetable settings page.
2. Click Add to enter add timetable page.


Figure 8-3 Add Timetable
3. Create a name for the timetable.


You can click the color icon beside the name to customize the color for the valid timetable on the time bar in the Configuration Result area.
4. Select the timetable type as general.
5. Select calculation method.

## First In \& Last Out

The first check-in time is recorded as start work time and the last check-out time is recorded as the end-work time.

## Each Check-In/Out

Each check-in time and check-out time is valid and the sum of all periods between adjacent check-in and check-out time will be recorded as the valid working duration.

You need to set Valid Authentication Interval for this calculation method. For example, if the interval between card swiping of the same card is less than the set value, the card swiping is invalid.
6. Optional: Set Enable T\&A Status switch to on to calculate according to attendance status of the device.


This function should be supported by the device.
7. Optional: Enable Calculate Break Time into Attended Duration.


When enabled, break time will be calculated into the overall attendance duration. That is, the actual attendance duration equals to the overall attendance duration (includes break time).
8. Optional: Enable Count Early Check-In as Overtime, then the period between your early checkin and the official start-work time will be calculated as overtime.
9. Set the related attendance time parameters as the following:

## Start/End-Work Time

Set the start-work time and end-work-time.

## Valid Check-in/out Time

On the time bar, adjust the yellow bar to set the timetable during which the check-in or check-out is valid.

## Calculated as

Set the duration calculated as the actual work duration.

## Late/Early Leave Allowable

Set the timetable for late or early leave.
10. Set absence related parameters.

## Check-In, Late for

You can set the late time duration for the employee who has checked in but is late for work. If the employee exceeds the required time period, his/her attendance data will be marked as absent.

## Check-Out, Early Leave for

You can set the early leave time duration for the employee who checks out earlier than the normal leave time, and his/her attendance data will be marked as absent.

## No Check-in

If the employee does not check in, his/her attendance data may be marked as absent or late.

## No Check-Out

If the employee does not check out, his/her attendance data may be marked as absent or early leave.
11. Click Save to add the timetable.
12. Optional: Perform one or more following operations after adding timetable.

Edit Timetable Select a timetable from the list to edit related information.
Delete Timetable Select a timetable from the list and click Delete to delete it.

### 8.5 Add Shift

You can add shift for employees including setting shift period (day, week, month) and the effective attendance time. According to the actual requirements, you can adding multiple timetables in one shift for employees, which requires them to check in and check out for each timetable.

## Before You Start

Add a timetable first. See Add General Timetable for details.

## Steps

1. Click Time \& Attendance $\rightarrow$ Shift to enter shift settings page.
2. Click Add to enter Add Shift page.
3. Enter the name for shift.
4. Select the shift period from the drop-down list.
5. Select the added timetable and click on the time bar to apply the timetable.


Figure 8-4 Add Shift

## [i) ${ }_{\text {Note }}$

You can select more than one timetables. The start and end work time and the valid check-in and out time in different time tables can not be overlapped.


Figure 8-5 Add Multiple Timetables
6. Click Save.

The added shift lists on the left panel of the page. At most 64 shifts can be added.
7. Optional: Assign the shift to organization or person for a quick shift schedule.

1) Click Assign.
2) Select Organization or Person tab and check the desired organization(s) or person(s) box.

The selected organizations or persons will list on the right page.
3) Set the Expire Date for the shift schedule.
4) Set other parameters for the schedule.

## Check-in Not Required

Persons in this schedule do not need to check-in when they come to work.

## Check-out Not Required

Persons in this schedule do not need to check-out when they end work.

## Scheduled on Holidays

On the holidays, this schedule is still effective and the persons needs to go to work according to the schedule.

## Effective for Overtime

The persons' overtime will be recorded for this schedule.
5) Click Save to save the quick shift schedule.

### 8.6 Manage Shift Schedule

Shift work is an employment practice designed to make use of all 24 hours of the clock each day of the week. The practice typically sees the day divided into shifts, set periods of time during which different shifts perform their duties.

You can set department schedule, person schedule, and temporary schedule.

### 8.6.1 Set Department Schedule

You can set the shift schedule for one department, and all the persons in the department will be assigned with the shift schedule.

## Before You Start

In Time \& Attendance module, the department list is the same with the organization. You should add organization and persons in Person module first. See Person Management for details.

## Steps

1. Click Time \& Attendance $\boldsymbol{\rightarrow}$ Shift Schedule to enter the Shift Schedule Management page.
2. Click Department Schedule to enter Department Schedule page.
3. Select the department from the organization list on the left.
```
[i]}\mathrm{ Note
```

If Include Sub Organization is checked, when selecting the organization, its sub organizations are selected at the same time.
4. Select the shift from the drop-down list.
5. Optional: Enable Multiple Shift Schedules and select the effective time period(s) from the added timetables for the persons.


This is only available for shift with only one timetable.

## Multiple Shift Schedules

It contains more than one timetables. The person can check in/out in any of the timetables and the attendance will be effective.

If the multiple shift schedules contains three timetables: 00:00 to 07:00, 08:00 to 15:00 and 16:00 to $23: 00$. The attendance of the person adopting this multiple shift schedules will be effective in any of the three timetables. If the person checks in at 07:50, it will apply the nearest timetable 08:00 to 15:00 to the person's attendance.
6. Set the start date and end date.
7. Set other parameters for the schedule.

## Check-in Not Required

Persons in this schedule do not need to check-in when they come to work.

## Check-out Not Required

Persons in this schedule do not need to check-out when they end work.

## Scheduled on Holidays

On the holidays, this schedule is still effective and the persons needs to go to work according to the schedule.

## Effective for Overtime

The persons' overtime will be recorded for this schedule.

## Flexible Shift Schedule on Weekend

The person's attendance on the weekend will be recorded as overtime.
8. Click Save.

### 8.6.2 Set Person Schedule

You can assign the shift schedule to one or more persons. You can also view and edit the person schedule details.

## Before You Start

Add department and person in Person module. See Person Management for details.

## Steps

[i] Note
The person schedule has the higher priority than department schedule.

1. Click Time \& Attendance $\rightarrow$ Shift Schedule to enter the Shift Schedule page.
2. Click Person Schedule to enter Person Schedule page.
3. Select the organization and select the person(s).
4. Select the shift from the drop-down list.
5. Optional: Enable Multiple Shift Schedules and select the effective time period(s) from the added timetables for the persons.

## [i] Note

This is only available for shift with only one timetable.

## Multiple Shift Schedules

It contains more than one timetables. The person can check in/out in any of the timetables and the attendance will be effective.
If the multiple shift schedules contains three timetables: 00:00 to 07:00, 08:00 to 15:00 and $16: 00$ to $23: 00$. The attendance of the person adopting this multiple shift schedules will be effective in any of the three timetables. If the person checks in at 07:50, it will apply the nearest timetable 08:00 to 15:00 to the person's attendance.
6. Set the start date and end date.
7. Set other parameters for the schedule.

## Check-in Not Required

Persons in this schedule do not need to check-in when they come to work.

## Check-out Not Required

Persons in this schedule do not need to check-out when they end work.

## Scheduled on Holidays

On the holidays, this schedule is still effective and the persons needs to go to work according to the schedule.

## Effective for Overtime

The persons' overtime will be recorded for this schedule.

## Flexible Shift Schedule on Weekend

The person's attendance on the weekend will be recorded as overtime.
8. Click Save.

### 8.6.3 Set Temporary Schedule

You can add a temporary schedule for the person and the person will be assigned with the shift schedule temporarily. You can also view and edit the temporary schedule details.

## Before You Start

Add department and person in Person module. See Person Management for details.

## Steps

[i] Note
The temporary schedule has higher priority than department schedule and person schedule.

1. Click Time \& Attendance $\rightarrow$ Shift Schedule to enter the Shift Schedule Management page.
2. Click Temporary Schedule to enter Temporary Schedule page.
3. Select the organization and select the person(s).
4. Click one date or click and drag to select multiple dates for the temporary schedule.
5. Select Workday or Non-Workday from drop-down list.

If Non-Workday is selected, you need to set the following parameters.
Calculated as
Select normal or overtime level to mark the attendance status for temporary schedule.

## Timetable

Select a timetable from drop-down list.

## Multiple Shift Schedule

It contains more than one timetables. The person can check in/out in any of the timetables and the attendance will be effective.

If the multiple shift schedules contains three timetables: 00:00 to 07:00, 08:00 to 15:00 and 16:00 to 23:00. The attendance of the person adopting this multiple shift schedules will be effective in any of the three timetables. If the person checks in at 07:50, it will apply the nearest timetable 08:00 to 15:00 to the person's attendance.

## Rule

Set other rule for the schedule, such as Check-in Not Required, andCheck-out Not Required.
6. Click Save.

### 8.6.4 Check Shift Schedule

You can check the shift schedule in calendar or list mode. You ca also edit or delete the shift schedule.

## Steps

1. Click Time \& Attendance $\boldsymbol{\rightarrow}$ Shift Schedule to enter the Shift Schedule Management page.
2. Select the organization and corresponding person(s).
3. Click 围or to view the shift schedule in calendar or list mode.

## Calendar

In calendar mode, you can view the shift schedule for each day in one month. You can click the temporary schedule for one day to edit or delete it.

## List

In list mode, you can view the shift schedule details about one person or organization, such as shift name, type, effective period and so on. Check the shift schedule(s), and click Delete to delete the selected shift schedule(s).

### 8.7 Manually Correct Check-in/out Record

If the attendance status is not correct, you can manually correct the check-in or check out record. You can also edit, delete, and export the check-in or check-out record.

## Before You Start

- You should add organizations and persons in Person module. For details, refer to Person Management.
- The person's attendance status is incorrect.


## Steps

1. Click Time \& Attendance $\rightarrow$ Attendance Handling to enter attendance handling page.
2. Click Correct Check-in/out to enter adding check-in/out correction page.
3. Select one or more persons from left list for correction.
4. Select the correction date.
5. Select the correction type as Check-in, Check-out, Break-in, Break-out, etc,. and set the correct time.
[ i] Note
You can click © to add multiple correction items. At most 8 check-in/out items can be added.
6. Optional: Enter the remark information as desired.
7. Click Save to save the above settings.
8. Optional: After adding the check-in/out correction, perform one of the following operations.

View Click 围 or to view the added attendance handling information in calendar or list mode.
Edit - In calendar mode, click $\rightarrow$ Edit to edit the details.

- In list mode, double-click the related field in Date, Handling Type, Time, or Remark column to edit the details.
[I] Note
The edited check-in/out correction will take affect.
Delete - In calendar mode, select one check-in/out correction, and click Delete to delete the selected item.
- In list mode, check one or more check-in/out corrections, and click Delete to delete the selected items.

The deleted check-in/out correction will no longer take affect.
Export In list mode, check one or more check-in/out corrections to export the attendance handling details (CSV file) to local PC.

### 8.8 Add Leave and Business Trip

You can add leave and business trip when the employee want to ask for leave or go on a business trip.

## Before You Start

You should add organizations and persons in the Person module. For details, refer to Person

## Management .

## Steps

1. Click Time \& Attendance $\rightarrow$ Attendance Handling to enter attendance handling page.
2. Click Apply for Leave/Business Trip to enter adding the leave/business trip page.
3. Select person from left list.
4. Set the date(s) for your leave or business trip.
5. Select the major leave type and minor leave type from the drop-down list.

## i] Note

You can set the leave type in Attendance Settings. For details, refer to Configure Leave Type .
6. Set the time for leave.
7. Optional: Enter the remark information as desired.
8. Click Save.
9. Optional: After adding the leave and business trip, perform one of the following operations.

View Click 果 or to view the added attendance handling information in calendar or list mode.
$[\mathbf{i}]_{\text {Note }}$
In calendar mode, you need to click Calculate to get the attendance status of the person in one month.

Edit - In calendar mode, click the related label on date to edit the details.

- In list mode, double-click the filed in Date, Handling Type, Time, or Remark column to edit the related information.

Delete Delete the selected items.
Export Export the attendance handling details to local PC.
Note
The exported details are saved in CSV format.

### 8.9 Calculate Attendance Data

You need to calculate the attendance data before searching and viewing the overview of the attendance data, employees' detailed attendance data, employees' abnormal attendance data, the employees' overtime working data, and card swiping log.

### 8.9.1 Automatically Calculate Attendance Data

You can set a schedule so that the client can automatically calculate attendance data of the previous day at the time you configured every day.

## Steps

## Note

1. Enter the Time \& Attendance module.
2. Click Attendance Settings $\rightarrow$ General Rule .
3. In the Auto-Calculate Attendance area, set the time that you want the client to calculate the data.
4. Click Save.

The client will calculate the attendance data of the previous day from the time you have configured.

### 8.9.2 Manually Calculate Attendance Data

You can manually calculate attendance data by setting conditions including attendance time, department, attendance status, etc.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Statistics $\rightarrow$ Calculation .
3. Set the start time and end time to define the attendance data range.
4. Select the department from the drop-down list.
5. Optional: Set other conditions, including name and person ID.
6. Check attendance status (supports multi-selection).
7. Click Calculate.
[i]Note
Only the attendance data within three months can be calculated.
8. Optional: Perform one of the following operations.

Correct Check- Select one person, click Correct Check-in/out to add check-in/out
in/out
Select Items to
Display
Adjust Items
Sequence
Generate Report
correction.
Click on the upper right corner, or right click the table header of the attendance data list to customize the items to be displayed in the list.
Click one item (except Person ID) and move the mouse to customize the sequence of different items.
Click Report to generate the attendance report.

The report items will be displayed in the sequence you have set.
Export Report Click Export to export attendance data (CSV file) to local PC.
[i] ${ }_{\text {Note }}$
The report items will be displayed in the sequence you have set.

### 8.10 Attendance Statistics

You can check the original attendance record, generate and export the attendance report based on the calculated attendance data.

### 8.10.1 Get an Overview of Employees' Attendance Data

You can search and view the employee's attendance data on the client, including attendance time, attendance status, check point, etc.

## Before You Start

- You should add organizations and persons in Person module and the persons have swiped cards. For details, refer to Person Management .
- Calculate the attendance data.
- The client will automatically calculate the previous day's attendance data at 1:00 am on the next day.
- Keep the client running at 1:00 am or it cannot calculate the previous day's attendance data automatically. If not calculated automatically, you can calculate the attendance data manually. For details, refer to Manually Calculate Attendance Data .


## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Statistics $\rightarrow$ Attendance Record .
3. Set the attendance start time and end time that you want to search.
4. Set other search conditions, including department, name, and person ID.
5. Select data source as All, Original Records on Device or Manually Handled Records.
6. Optional: Click Get Events from Device to get the attendance data from the device.

## [ i $]_{\text {Note }}$

There are two methods for getting attendance events from the device, including Online and Import File. For more details about operations, refer to Get Events from Device .
7. Optional: Click Reset to reset all the search conditions and edit the search conditions again.
8. Click Search.
9. Optional: For the displayed search results, perform one of the following operations.

| Edit Attendance | Select one incorrect record, double click the field of Attendance Status <br> column and select from the drop-down list to edit single piece of <br> attendance status. |
| :--- | :--- |
|  | Check two or more incorrect records, click Edit Attendance Status on the <br> upper left corner and select from the drop-down list to batch edit multiple <br> pieces of attendance status. |

Generate Report Click Report to generate the attendance report.
Export Report Click Export and select saving path to export the attendance report (CVS file) to the local PC.
Custom Export Click Custom Report and set conditions to export attendance records according to actual needs. For details, refer to Custom Export Attendance Records.

### 8.10.2 Custom Export Attendance Records

After viewing the employee's attendance data, you can export the attendance records according to actual needs.

Before exporting the necessary attendance records, you should search and get employee's attendance data. For details, refer to Get an Overview of Employees' Attendance Data .
Click Custom Export to set the related information.

## Start/End Time

You can set the start and end time of exporting attendance records.

## Saving Path

You can select the file path for saving attendance records.

## File Name

The file will be named according to the actual exporting date. You can select format of the date such as dd-MM-yyyy and dd-MM-yy.

## Format

You can export the original attendance records in .TXT and .CVS formats.

## Separator

You can select to have/not have separators (including comma, space, tab) for separating different items in the exported file.

## Export

You can select the items you need to export including ID, person name, department, date, etc.

## Default Value

When there is no information for the item you have selected to export, you can set a default value to replace the blank space.

### 8.10.3 Configure Report Display

You can configure display contents displayed in the attendance report, such as the company name, logo, date format, time format, and mark.

## Steps

1. Enter Time \& Attendance module.
2. Click Attendance Statistics $\rightarrow$ Report Display .
3. Set the display settings for attendance report.

## Company Name

Enter a company name to display the name in the report.

## Attendance Status Mark

Enter the mark and select the color. The related fields of attendance status in the report will display with the mark and color.

## Weekend Mark

Enter the mark and select the color. The weekend fields in the report will display with the mark and color.
4. Click Save.

### 8.10.4 Generate Instant Report

It supports to generate the a series of attendance reports manually to view the employees' attendance results.

## Before You Start

Calculate the attendance data.

## [ i] Note

You can calculate the attendance data manually, or set the schedule so that the client can calculate the data automatically every day. For details, refer to Calculate Attendance Data .

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Statistics $\rightarrow$ Report .
3. Select a report type.
4. Select the department or person to view the attendance report.
5. Set the start time and end time during which the attendance data will be displayed in the report.
6. Click Report to generate the statistics report and open it.

### 8.10.5 Send Report Regularly

The client supports multiple report types and you can pre-define the report content and it can send the report automatically to the email address you configured.

## Steps

1. Enter the Time \& Attendance module.
2. Click Attendance Statistics $\rightarrow$ Regularly Send Report .
3. Click Add to enter the add custom report page.
4. Set the report content.

## Report Name

Enter a name for the report.

## Report Type

Select one report type and this report will be generated.

## Report Time

The time to be selected may vary for different report type.

## Person

Select the added person(s) whose attendance records will be generated for the report.


You can view the selected person(s) in the right side of the Person area.
5. Set the schedule to send the report to the email address(es) automatically.

The Auto-Send Email function is enabled by default.

1) Set the Effective Period during which the client will send the report on the selected sending date(s).
2) Select the Sending Date(s) on which the client will send the report.
3) Set the Sending Time at which the client will send the report.

## Example

If you set the effective period as 2018/3/10 to 2018/4/10, select Friday as the sending date, and set the sending time as 20:00:00, the client will send the report at $8 \mathrm{p} . \mathrm{m}$. on Fridays during 2018/3/10 to 2018/4/10.

## [i] Note

Make sure the attendance records are calculated before the sending time. You can calculate the attendance data manually, or set the schedule so that the client can calculate the data automatically every day. For details, refer to Calculate Attendance Data .
4) Enter the receiver email address(es).

## [i] ${ }_{\text {Note }}$

Up to 5 email addresses can be added. You can click + to add a new email address.
5) Optional: Click Preview to view the email details.
6. Click OK.
7. Optional: After adding the custom report, you can do one or more of the followings:

Edit Report Select one added report and click Edit to edit its settings.
Delete Report Select one added report and click Delete to delete it.
Generate Report Select one added report and click Report to generate the report instantly and you can view the report details.

## Chapter 9 Video Intercom

Video intercom is an audiovisual communication system used within a building or a small collection of buildings. With microphones and video camera devices at both sides, it enables the intercommunication via video and audio signals. A video intercom system can provide a safe and easy monitoring solution for apartment buildings and private houses.

Be sure to add video intercom devices to the client and link the indoor stations to the persons beforehand. You should also set the access authorization for the persons to open doors via the linked indoor stations.

## Note

- For details about adding persons, refer to Add Single Person .
- For details about setting person's access authorization, refer to Set Access Group to Assign Access Authorization to Persons.


### 9.1 Flow Chart



Figure 9-1 Flow Chart of Video Intercom

- Add Video Intercom Device: You can add video intercom devices on the client. For more details, refer to Add Device .
- Group Access Points: You can group the added access points into groups for convenient management. For more details, refer to Group Management .
- Video Intercom Arming Control: You can enable or disable the calling between the added video intercom devices and the client. For more details, refer to Enable Calling between Video Intercom Device and Client.
- Apply APP Package to Indoor Station: You can apply the application package saved in local PC to one or multiple indoor stations remotely via the client. For more details, refer to Apply Application Package to Indoor Station .
- Call Indoor Station From Client: You can call the added indoor station by the client to perform video intercom. For more details, refer to Call Indoor Station from Client .
- Answer Call via Client: You can answer call from the added indoor station, door station, etc. via the client to perform video intercom. For more details, refer to Answer Call via Client .
- View Call Logs: You can view details of all the calls. For more details, refer to View Real-Time Call Logs.
- Release Notice to Resident: You can send a notice to the residents by one-touch on the client. For more details, refer to Release a Notice to Resident .
- Configure Video Intercom Event: By configuring linked actions of video intercom event on the client, you will be notified once the event is triggered. For more details, refer to Configure Video Intercom Event .
- Search Real-Time/History Event: You can view the real-time events, search the historical events on the client. For more details, refer to Event Center .


### 9.2 Manage Calls between Client Software and an Indoor/Door Station/ Access Control Device

You can call the residents by the client, and vice versa. You can also use an indoor station/door station or specified access control device to call the client.

Before making calls, you can set the parameters such as ring duration and speaking duration. For details, refer to Set Access Control and Video Intercom Parameters .

### 9.2.1 Call Indoor Station from Client

You can call the added indoor station by the client to perform video intercom.

## Before You Start

- Be sure to have added a resident to the client. For details, refer to Add Single Person .
- Be sure to have linked the resident with an indoor station and configured the resident information (including floor No. and room No.) in Person module. For details about configuring the linkage and resident information, refer to Configure Resident Information .


## Steps

## Note

- A video intercom device can be added to more than one client, but perform video intercom with only one client at a time.
- You can remotely configure the Max. Ring Duration and the Max. Speaking Duration.

1. Click Access Control $\rightarrow$ Video Intercom $\rightarrow$ Contacts .
2. Unfold the organization list on the left panel and select an organization.

The information (including resident name, device name, floor No. and room No.) of all the residents in the selected group will be displayed on the right panel.
3. Select a resident, or enter a keyword in the Filter field to find the desired resident.
4. Click to start calling the selected resident.

After the call is answered, you will enter the In Call window.
5. Optional: After the call is answered, perform the following operation(s).

Adjust Loudspeaker Volume Click D) to adjust the volume of the loudspeaker.
End Speaking Click Hang Up to end speaking.
Adjust Microphone Volume Click to adjust the volume of the microphone.

### 9.2.2 Answer Call via Client

You can answer call from the added indoor station, door station, or specific access control device via the client and perform video intercom.

## Steps

[ i] Note
A video intercom device can be added to more than one client, but perform video intercom with only one client at a time.

1. Call the client by an indoor station, door station, or specific access control device.

An incoming call dialog will pop up.


Figure 9-2 Incoming Call
2. Click Answer to answer the call.

After the call is answered, you will enter the In Call window.
3. Optional: In the In Call window, perform the following operation(s).

Adjust Loudspeaker Click to adjust loudspeaker's volume. Volume

End Speaking
Adjust Microphone Volume

Open Door
Click Hang Up to end speaking.
Click $\boldsymbol{\square}$ to adjust the microphone's volume.

When an indoor station is linked with a door station, click 国 to open the door linked with the door station.

### 9.3 View Real-Time Call Logs

You can view details of all the calls, and you can call the residents or export the logs if they are needed.

## Steps

1. Click Access Control $\rightarrow$ Video Intercom $\rightarrow$ Call Log .

Details of all the calls will be displayed on the right panel including call status, start time, speaking duration, device type and name, and organization and name of resident.
2. Optional: Click to re-dial the resident.
3. Optional: Set search conditions (including call status, device type, and time) on the top of the page to filter call logs.
4. Click Export to save the logs (a CSV file) in your PC.

### 9.4 Release a Notice to Resident

You can send a notice to the residents by one-touch. Four notice types are available: advertising, property, alarm, and notice information.

## Steps

1. Click Access Control $\rightarrow$ Video Intercom $\rightarrow$ Notice .
2. Click Add to open the Create Notice panel.
3. Click $\ldots$ to select the residents you are going to deliver notice to.
4. Enter the required information.
[i] ${ }_{\text {Note }}$

- Up to 63 characters are allowed in the Subject field.
- Up to 1023 characters are allowed in the Content field.
- You can add up to 6 pictures. Each picture should be in JPG format and smaller than 512 KB.

5. Click Send to send the notice to the selected resident(s).

Information about the sent notices will be displayed on the left panel. Click a notice to view its details on the right panel.
6. Optional: Click Export to save all the notices in your PC.

### 9.5 Configure Video Intercom Event

Video intercom events include calling elevator, door bell ring, door locked, etc. You can enable an event for the video intercom device on the client. When the event is triggered on the video intercom device, the client can receive and record event for checking and trigger a series of linkage actions (e.g., sending email) for notification.

## Steps

1. Click Event Configuration $\rightarrow$ Access Control Event $\rightarrow$ Video Intercom .
2. Unfold the group and select a video intercom device as event source.

## [I] Note

Make sure the resource is online.
All the event types supported by the selected video intercom device will appear.
3. Optional: Enter keywords in Filter field to locate the desired event quickly.
4. Optional: Turn on the switch on the Enable column to enable the event type, or click Enable All to enable all the event types of this device.

## [J] Note

After enabled, the event can be received by the client and trigger the linkage action(s). You can also disable an event type or disable all event types.
5. Optional: After selecting the event(s), perform the following operations.

| Edit | Click Edit Priority to set the priority of the event(s). |
| :--- | :--- |
| Priority | Priority represents the emergency degree of the event. |
| Edit Event | Click Edit Linkage to set the linkage action(s) of the event(s). |
| Linkage | Audible Warning |

Trigger the client's audible warning when the event is triggered.
You can select the audio file on the drop-down list, or click Add to add new audio file (in WAV format).
You can click (a) to make an audition of the selected audio file.

## Send Email

Send an email notification of the alarm information to one or more receivers.
For details about setting email parameters, refer to Set Email Parameters .

## Copy Event Click Copy to to copy the event settings of this video intercom device to other Settings video intercom device(s).

## [I] Note

You can only copy the event settings to the resource(s) of the same type.

## What to do next

You need to arm the device which the video intercom device belongs to, otherwise the client cannot receive the configured events. For details, see Enable Receiving Event from Devices .

### 9.6 Enable Calling between Video Intercom Device and Client

You can enable or disable the calling between the added video intercom devices and the client. If enabled, you can call the intercom device via client, and the client can receive the calling from the device; If disabled, the client and video intercom device cannot call each other.

## i] ${ }^{\text {Note }}$

You needn't enable this function for the door stations added by ISUP for calling.
Click 国 $\rightarrow$ Tool $\rightarrow$ Video Intercom Arming Control to open Video Intercom Arming Control page. The list shows the status of the video intercom devices. You can set the switch to on for the video intercom device to enable calling between the video intercom device and the client. If required, perform the following operations.

- Filter Device : If there are too many devices, you can enter the key words in the Filter field to filter the device.
- Arm All / Disarm All: Click Arm All to arm all devices. Click Disarm All to disarm all devices.


### 9.7 Apply Application Package to Indoor Station

If you want to install application on indoor station, you can apply the application package saved in local PC to one or multiple indoor stations remotely via the client. The package will be installed on the indoor stations automatically after the indoor stations receive the package.

## i] ${ }_{\text {Note }}$

This function should be supported by the device.
Click Access Control $\rightarrow$ Video Intercom $\rightarrow$ Application to enter the applying application page.
Select one or multiple added indoor stations, and click Apply Application. You can select the installation package from local folder to apply the application package to the selected indoor stations.
After the indoor stations receive the package, the application will be installed on the devices automatically.
Up to two applications can be installed on the indoor station. If two applications have been installed, you need to uninstall one for installing another one. Click 邓to uninstall the application installed on indoor station remotely.

## Chapter 10 Log Search

Two log types are provided: operation log and system log. The operation logs refer to the normal operations that the user did on the client, such as adding device, resetting password, etc.; and the system logs record the system information, such as login, logout, locking and unlocking, etc. You can search the log files and view the log details, including time, user, etc.

## Steps

1. Enter the Log Search module.
2. Click 甸 to specify the start time and end time.

## Note

You can search the logs within one month.
3. Select a user to search the log files which are generated when this user operate on the client.
4. Select Operation Log or System Log as log type.
5. Click Search.

The log files between the start time and end time will be displayed on the list. You can check the operation time, type and other information of the logs.
6. Optional: Perform the following operations if there are too many log files.

Filer Click $\quad$ Ton each table header and select to filter the logs.
Sort Click the table header to sort the logs by the time or letter sequence.

## Chapter 11 User Management

To improve the system security, the administrator should create different account for different user, and assign different permissions to the user. To avoid different people sharing the same user account, we recommend you manage the user accounts periodically.

### 11.1 Add User

The super user and administrator can add new users, and assign different permissions for different users if needed.

Perform this task to add an user account.

## Steps

## [i] ${ }_{\text {Note }}$

The user account you registered to log in the software is set as the super user.

1. Enter the User Management module.
2. Click Add User to show user information area.
3. Select the user type from the drop-down list.

## Administrator

The administrator account has all permissions by default, and can modify the passwords and permissions of all operators and its own.

## Operator

The operator account has no permission by default and you can assign the permissions manually. An operator can only change the passwords of its own account and the accounts which are added by it.
4. Enter the user name, password, and confirm password as desired.

## ! <br> Caution

The password strength of the device can be automatically checked. We highly recommend you change the password of your own choosing (using a minimum of 8 characters, including at least three kinds of following categories: upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you change your password regularly, especially in the high security system, changing the password monthly or weekly can better protect your product.
Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
5. Check the checkboxes to assign the permissions to the created user.
6. Optional: Click Default Value to restore the default permissions of this user.
7. Click Save.
[i] Note
Up to 50 user accounts can be added for the client software.
After created user account successfully, the user account is added to the user list on the Account Management page.
8. Optional: Perform the following operations after the user account is created.

Edit User Click a user from the list to edit the user information.


Only the password of the super user can be edited.
Delete User Select the user from the list and click Delete User.


You cannot delete the super user.

### 11.2 Change User's Password

The administrator can change normal user's password without entering the old password, while the administrator should enter the old password when changing the password of itself.

## Before You Start

Add user to the software client.

## Steps

1. Enter the User Management module.
2. Select the user need to be change password, click Change.
3. Optional: Enter the old password.


When changing the administrator's password, you need to enter the old password first.
4. Enter the new password and confirm the password.
5. Click OK.

## Chapter 12 System Configuration

### 12.1 Set General Parameters

You can configure the frequently-used parameters, including log expired time, network performance, etc.

## Steps

1. Enter the System Configuration module.
2. Click General tab to enter the General Settings page.
3. Configure the general parameters.

## Date Format / Time Format

The display style of date and time on related pages.

## Log Retention Period

The time for keeping the log files. Once exceeded, the files will be deleted.

## Maximum Mode

Select Maximize or Full Screen as the maximum mode. Maximize mode can maximize the display and show the taskbar. Full Screen mode can display the client in full-screen mode.

## Calendar Type

Select Gregorian Calendar or Nepali Calendar as the calendar type. If you select Nepali Calendar, the calender will switch to Nepali language and calculated time by Nepali calendar. You need to restart the client after switching the calendar.

## Network Performance

Set the network conditions to Normal, Better or Best.

## Save Pictures in Structure Data Format

- After Save Pictures in Structure Data Format is enabled, the Delete Registered Picture in Person module will be available. If a person's information is applied to the device(s) successfully, the person's picture will be automatically deleted and no picture will be displayed in Basic Information. The Face column in Person module will display the number of the added face picture(s).
- When Save Pictures in Structure Data Format is enabled, no pictures will be displayed in Event Details field in Event Center.


## Export Person Information

If you enable this, the Export button for exporting person information will be displayed on the Person Management page. Please pay attention to person information security.

## Event Retention Period

The time period for keeping the event information. When the retention period expires, the event record will be deleted automatically.

## Automatic Time Synchronization

Automatically synchronize the time of the added devices with the time of the PC running the client at a specified time point.

## Auto-Upgrade Device

Set the upgrading mode after the new version of device are detected.

## Disable

After enabled, the client will not download the firmware package and upgrade even if the client detects a new version of the client.

## Prompt Me If Download and Upgrade

After the client detects a new version of the device, it will prompt the user whether to download the firmware package and upgrade.

## Download and Prompt Me If Upgrade

After the client detects the new version of the device, it will download the firmware package automatically, and prompt the user whether to upgrade.

## Download and Prompt Automatically

After the client detects the new version of the devices, it will download the firmware package and upgrade the new version automatically.
You need to set a schedule in the Upgrade Time field, during which the client upgrades the new version automatically.

## 4. Click Save.

### 12.2 Set Picture Storage

The pictures, captured by the camera of video access control terminal, triggered by events, can be saved in the PC running the iVMS-4200 Service. You can set the picture storage location here manually.

## Steps

1. Enter the System Configuration module.
2. Click Event Picture Storage.
3. Set the Store Pictures in Server switch to on.

All the disks of the PC running the iVMS-4200 service will show.
4. Select the disk to save the pictures.


The default saving path is: Disk/iVMS-4200alarmPicture
5. Click Save.

### 12.3 Set Alarm Sound

When the event is triggered, the client can give an audible warning to notify the security personnel. You can set the sound of the audible warning in this section.

## Steps

1. Open the System Configuration page.
2. Click Alarm Sound tab to enter the Alarm Sound Settings page.
3. Optional: Click ${ }^{[ }$and select the audio files from the local path for different events.
4. Optional: Add customized alarm sound.
1) Click Add to add customized alarm sound.
2) Double click the Type field to customize the alarm sound name as desired.
3) Click .. and select the audio files from the local path for different alarms.
5. Optional: Click (4)) for a testing of the audio file.
6. Optional: Click $\triangle$ in the Operation column to delete the custom sound.
7. Click Save.
[I] ${ }_{\text {Note }}$
The format of the audio file can only be WAV.

### 12.4 Set Access Control and Video Intercom Parameters

You can configure the access control and video intercom parameters according to actual needs.

## Steps

1. Open the System Configuration page.
2. Click the Access Control \& Video Intercom tab.
3. Input the required information.

## Ringtone

Click .... and select the audio file from the local path for the ringtone of indoor station. Optionally, you can click for a testing of the audio file.

## Max. Ring Duration

Specify the seconds that the ring will last for at most. The maximum ring duration can be set from 15 s to 60 s .

## Max. Speaking Duration with Indoor Station

Specify the seconds that the call with indoor station will last for at most. The maximum speaking duration between indoor station and the client can be set from 120 s to 600 s .

## Max. Speaking Duration with Door Station

Specify the seconds that the call with door station will last for at most. The maximum speaking duration between door station and the client can be set from 90 s to 120 s.

## Max. Speaking Duration with Access Control Device

Specify the seconds that the call with access control device will last for at most. The maximum speaking duration between access control device and the client can be set from 90s to 120s.
4. Click Save.

### 12.5 Set File Saving Path

The pictures captured in Status Monitoring module are stored on the local PC. The saving path of these files can be set.

## Steps

1. Open the System Configuration page.
2. Click File tab to enter the File Saving Path Settings page.
3. Click ... and select a local path for the files.
4. Click Save.

### 12.6 Set Email Parameters

When an event is triggered, if you can set Send Email as linkage action for this event, the client will an email to the recipients for notification. You need to set the email settings and specify target recipients in this section.

## Steps

1. Enter the System Configuration module.
2. Click Email tab to enter the Email Settings interface.
3. Enter the required information.

## STMP Server

The STMP server IP address of host name (e.g., smtp.263xmail.com)

## Encryption Type

You can check the radio to select Non-Encrypted, SSL, or STARTTLS .

## Port

Enter the communication port used for SMTP. The port is 25 by default.

## Sender Address

The email address of the sender.

## Security Certificate (Optional)

If your email server requires authentication, check this checkbox to use authentication to log into the server and enter the login user name and password of your email account.

## User Name

Enter the user name of the sender email address if Server Authentication is checked.

## Password

Enter the password of the sender Email address if Server Authentication is checked.

## Receiver 1 to 3

Enter the email address of the receiver. Up to 3 receivers can be set.
4. Optional: Click Send Test Email to send an email to the receiver for test.
5. Click Save.

## Chapter 13 Operation and Maintenance

You can perform maintaining operations in the menu to ensure a smooth and convenient usage of the client.

In the upper-right corner of the client, click $: 三 \rightarrow$ File $\rightarrow$ System $\rightarrow$ Tool, and perform the following operations.

## Open Log File

You can open a log file saved in your local PC or log files of the client.

## Import/Export Configuration File

You can import configuration files from local PC to the client if needed, and vice versa.

## Auto Backup

Select day and time to backup configuration files and data in database, or restore the backed up data.

Skin
Change the skin of the client, including bright-color series and black-color series.

## Batch Time Sync

Synchronize selected devices' time with your PC time.

## Message Queue

After configuring email linkage, the triggered event(s) will be displayed here. Select an event and cancel sending the an email to the receiver.

## Appendix A. Custom Wiegand Rule Descriptions

Take Wiegand 44 as an example, the setting values in the Custom Wiegand tab are as follows:

| Custom Wiegand Name | Wiegand 44 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Length | 44 |  |  |  |  |
| Transformation Rule (Decimal Digit) | byFormatRule[4]=[1][4][0][0] |  |  |  |  |
| Parity Mode | XOR Parity |  |  |  |  |
| Odd Parity Start Bit |  | Length |  |  |  |
| Even Parity Start Bit |  | Length |  |  |  |
| XOR Parity Start Bit | 0 | Length per Group | 4 | Total Length | 40 |
| Card ID Start Bit | 0 | Length | 32 | Decimal Digit | 10 |
| Site Code Start Bit |  | Length |  | Decimal Digit |  |
| OEM Start Bit |  | Length |  | Decimal Digit |  |
| Manufacturer Code <br> Start Bit | 32 | Length | 8 | Decimal Digit | 3 |

## Wiegand Data

Wiegand Data = Valid Data + Parity Data

## Total Length

Wiegand data length.

## Transportation Rule

4 bytes. Display the combination types of valid data. The example displays the combination of Card ID and Manufacturer Code. The valid data can be single rule, or combination of multiple rules.

## Parity Mode

Valid parity for Wiegand data. You can select either odd parity or even parity.

## Odd Parity Start Bit, and Length

If you select Odd Parity, these items are available. If the odd parity start bit is 1 , and the length is 12 , then the system will start odd parity calculation from bit 1. It will calculate 12 bits. The result will be in bit 0 . (Bit 0 is the first bit.)

## Even Parity Start Bit, and Length

If you select Even Parity, these items are available. If the even parity start bit is 12, and the length is 12 , then the system will start even parity calculation from bit 12. It will calculate 12 bits. The result will be in the last bit.

## XOR Parity Start Bit, Length per Group, and Total Length

If you select XOR Parity, these items are available. Depending on the table displayed above, the start bit is 0 , the length per group is 4 , and the total length is 40 . It means that the system will calculate from bit 0 , calculate every 4 bit, and calculate 40 bits in total ( 10 groups in total). The result will be in the last 4 bits. (The result length is the same as the length per group.)

## Card ID Start Bit, Length, and Decimal Digit

If you use the transformation rule, these items are available. Depending on the table displayed above, the card ID start bit is 0 , the length is 32 , and the decimal digit is 10 . It represents that from bit 0 , there are 32 bits represent the card ID. (The length here is calculated by bit.) And the decimal digit length is 10 bits.

## Site Code Start Bit, Length, and Decimal Digit

If you use the transformation rule, these items are available. For detailed information, see the explanation of the card ID.

## OEM Start Bit, Length, and Decimal Digit

If you use the transformation rule, these items are available. For detailed information, see the explanation of the card ID.

## Manufacturer Code Start Bit, Length, and Decimal Digit

If you use the transformation rule, these items are available. Depending on the table displayed above, the manufacturer code start bit is 32 , length is 8 , and decimal digit is 3 . It represents that from bit 32, there are 8 bits are manufacturer code. (The length here is calculated by bit.) And the decimal length is 3 .

See Far, Go Further

