BL2000-CIC-V6

Modular Elevator
IC Card Control System

User Manual

Version: 1.4

Contents

1 Elevator IC Card Control System Overview

1.1 System Overview

Elevator IC Card Control System consists of two parts, i.e. Client Terminal and Administration Terminal. The Client Terminal refers to the Elevator IC Card Controller which is installed inside of elevator's COP (Car Operating Panel), the Administration Terminal composes of Elevator IC Card Reader and Management System Software. The IC Card Control operation is applied when the elevator is in auto mode and IC Card control function is enabled. This system is normally used in residential community area, and through the access permission authorization to control the car call registration.

1.2 System Functions

- Elevator Access Permission Control: To configure owners access permission optionally.
- Time Limit and Count Limit of Usage Control: To control the time of usage and number of usage times freely.
- Programmable Accessible Floors for using IC Card Control: To configure any floors access permission with IC Card controller.
- Report Lost or Disabled Card: To register any specified IC cards which are lost or disabled.
- Cancel Lost or Disabled Cards: To recover any specified IC cards which have been previously registered as lost or disabled.
- Data Management: To view information and records of distributed IC cards; to view payment information and payment record.
- Controlled Data Management: To read the information from IC Card Controller such like information on lost or disabled IC cards, to view IC Card usages and to adjust the date/time.
- Anti-copy Function: Rolling code prevents from copying. Copy card is invalid.

1.3 System Usage Condition

IC Card Control is operative when the following conditions are fulfilled:

- Elevator is in automatic mode and without errors
- IC Card Control function is set to enable by Car Control Board in the COP
- Open IC card by Car Control Board in the COP

1.4 System Usage Procedures

1. Installation and commissioning of IC Card Controller at elevator COP
2. Enable IC Card Control and set up floor accessibility as controlled or uncontrolled
3. Installation of IC Card Management System
4. Configuring of IC Card Management System
5. Distribute Property Manager Cards and setup IC Card Controller identifier at elevator COP
6. Distribute Owner Cards and payment manage
7. Data Searching and Management

2 Usage Description for Products related to Elevator Cabin

2.1 Elevator IC Card Controller Installation

1. Terminal Connection Definition

In using, connect terminal JP1 of IC controller to terminal JP5 of cabin command board via flat cable.

2. Installation Layout Diagram

Device and installation are shown as following. Affix the reading area close to the sensing area.

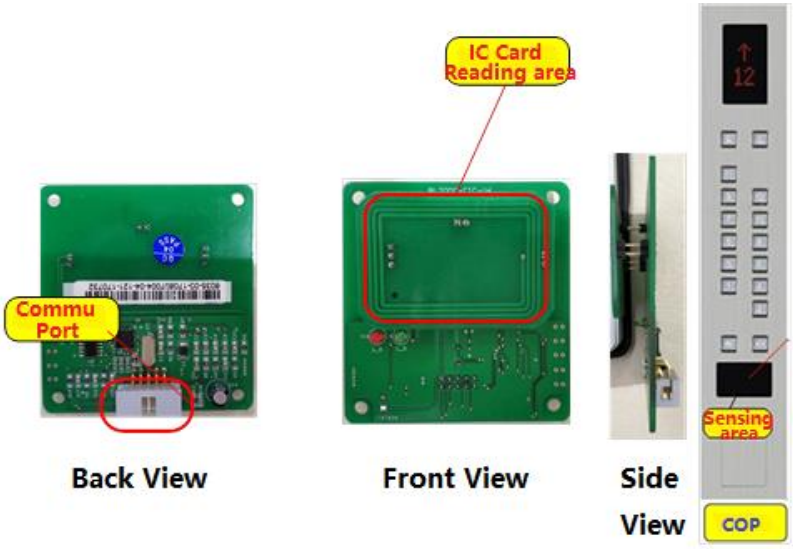
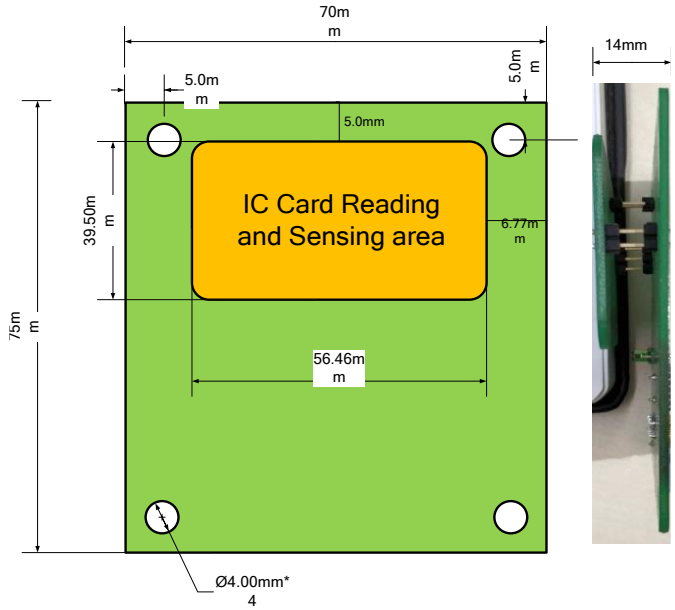


Figure 2.1.1 Photo of Controller Installation



Note: IC card sensing area is 10mm higher than the base board

Figure 2.1.2 Dimension of Product

2.2 Enabling IC Card Control and setting up of floor access with controlled or uncontrolled function

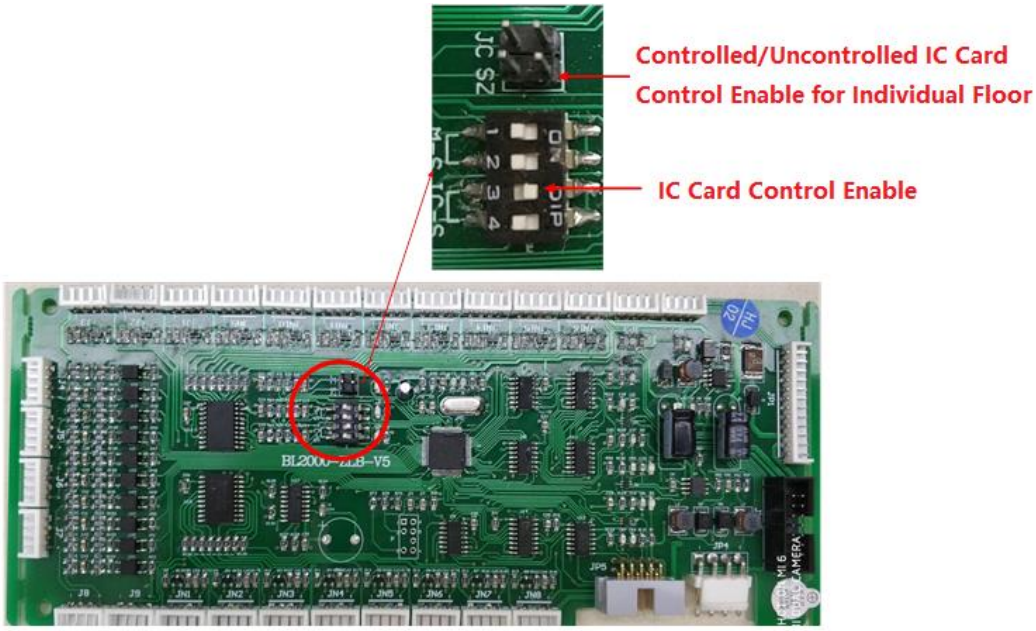


Figure 2.2.1 DIP Switch Enables IC Card and Jumper Sets Individual Floor Controlled/Uncontrolled

The setting jumper SZ and DIP switches SW of modular cabin command board BL2000-ZLBare used to set IC Card Control function. When DIP switch 3 is on, enables IC card control function. When jumper SZ is shorted, enable to set IC card controlled or uncontrolled for individual floor.

2.2.1 COP IC Card Control Enable

(1) When elevator is in auto mode without any error, the elevator IC Card Control is operative when IC Card Control function is enabled by setting DIP switch 3 of modular cabin command board, to ON. After IC card control is activated, swiping IC card then car call can register.

(2) How to open or close the IC card on the cabin command board
By default, the IC card has been enabled on the factory modular instruction board.
After the DIP switch 3 of the modular instruction board is turned to ON, if the elevator is in the open IC card control state at this time, use the setting card to swipe the card three times continuously, wait for about 4 seconds for the buzzer to ring five times continuously, which means that the card swiping is successful. At this time, the elevator turns off the IC card control, and cannot ride the elevator by swiping the card, but returns to the normal way of pressing the button to ride the elevator;
After the DIP switch 3 of the modular instruction board is turned to ON, if the elevator is not open to IC card control at this time, use the setting card to swipe the card three times continuously, wait for about 4 seconds for the buzzer to ring three times continuously, which means that the card swiping is successful. At this time, the elevator

opens the IC card control function, and the elevator needs to swipe the card to take the elevator;

When the DIP switch 3 of the modular instruction board is turned to OFF, the elevator will always turn off the IC card control function, and swiping the card three times continuously with the setting card will not enable the elevator to turn on the IC card control function.

2.2.2 Controlled/uncontrolled IC Card Control Function Enable for Individual Floor

Table 2.2.1 Instruction for DIP Switch Enables IC Card and Jumper Sets Individual Floor Controlled/Uncontrolled

Jumper SZ	DIP Switch SW				Function
SZ	SW-1	SW-2	SW-3	SW-4	
ON	X	X	ON	X	Individual Floor IC Card Controlled/Uncontrolled

1. Disconnect power to cabin command board, set DIP switch SW and jumper SZ according to table above to activate Controlled/uncontrolled IC Card Control Function. Then connect the power, the buzzer will beep twice to enter this function setting. In this mode, the calling buttons of cabin command board will indicate setting status; door open button indicates Visitor function setting.

2. If the car calling button(s) of floor(s) is/are lightened, it means the respective floor(s) is/are under controlled by IC Card Control; if the calling button(s) of floor(s) is/are not lightened, it means the respective floor(s) is/aren't controlled by IC Card Control, that is, the particular floor(s) will not be restricted by the IC Card Control. Press the car calling button(s) to set controlled or uncontrolled floor(s).

3. If the door open button is on, it means visitor function is enabled. If the door open button is off, it means visitor function is disabled.

4. By default, all floors are initially set as controlled by IC Card, no visitor function.

5. Disconnect the jumper SZ to exit the setting mode as well as to save the setting, all set buttons flash three times and then resume to normal operation.

Note:

1. By default, all floors are controlled by IC Card, if the homing floor or evacuation floor shall not be controlled, then user should do the setting before putting it into operation.

2. For system with secondary cabin command board, both two cabin command boards need to be set at the same time.

2.3 The Usage of IC Card Control Board

2.3.1 Elevator IC Card Parameter Settings

Before using IC card controller, users need to set device address and sector starting address on elevator main control board by an operator. The FD-03 parameter menu displayed on operator screen corresponds to the settings of device address and sector starting address. This menu should be set as decimal number, which converts from16-bit binary number. The higher 8 bits refer to sector starting address and the lower 8 bits refer to device address.

Table 2.3.1 Device Address and Sector Starting Address Settings

FD-03（decimalnumber:0-65535 == binary number:16bits）	
Higher 8 bits	Lower 8 bits
Sector Starting Address Range from（1-14）	Device Address Range from（1-99）

Setting value: **FD - 03 = Sector Starting Address * 256 + Device Address**

If there no special requirement, all sector starting address will be default value of 1. Thus, FD-03=256+Device address.

For example: Sector starting address is 1, device address is 3, FD-03=259;

Sector starting address is 8, device address is 25, FD-03=2073.

2.3.2 Buzzer and LED Indicators of IC Card Control Board

IC Card Control Board is using buzzer, LED "L_G" to indicate operating, and digital displays SM2 and SM1 to show the card swiping operation and error codes.

Table 2.3.2 Setting card

Valid Card Swiping Type		**Buzzer Sounds Times**	**WORK LED Flash Times**
Setting success		Sound twice	Flash once
Setting fail		No sound	No flash
Copy protection	Continuously swipe 5 times to activate copy protection	Sound 1 times	Flash once
	Continuously swipe 5 times to inactivate copy protection	Sound 6 times	Flash twice
Turn on or off the IC card with the modular cabin command board	Continuously swipe 3 times to open IC card	Sound 3 times	Flash once
	Continuously swipe 3 times to close IC card	Sound 5 times	Flash twice

Table 2.3.3 Public card

Valid Card Swiping Type	**Buzzer Sounds Times**	**WORK LED Flash Times**
Swipe success	Sound once	Flash once
System identification mismatch	Sound 4 times	Flash once
Overtime	Sound 5 times	Flash once
Set the card to turn off the IC card function	Sound 6 times	Flash twice

Table 2.3.4 User card

Valid Card Swiping Type	**Buzzer Sounds Times**	**WORK LED Flash Times**
Swipe success	Sound once	Flash once
Invalid address	Sound 4 times	Flash twice
Community identification mismatch	Sound 4 times	Flash once
Overtime	Sound 5 times	Flash once
Over count	Sound 5 times	Flash twice
Copy card	Sound twice	Flash once
Set the card to close the IC card function and swipe the user card	Sound 6 times	Flash twice

3 Installation and Description for Management Centre Related Products

3.1 IC Card Management System Installation

1. Download IC card management software from link:

   http://iecs.com.cn/soft/iccard-manager_en_v4.rar

2. Decompress file, find this icon IC_Card_System.exe and open it. The following figure will show up since the program has not been activated.

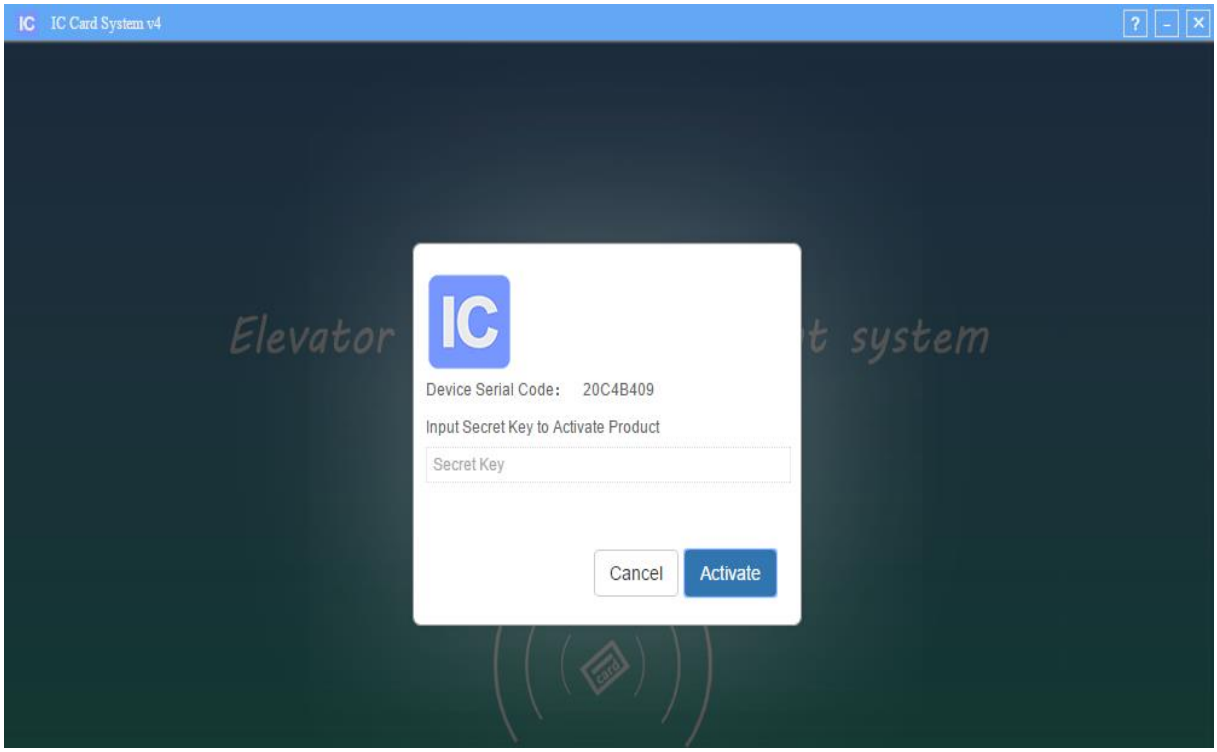


Figure 3.1 Program has not been activated

3. Send the 8-bit Device Serial Code to Bluelight staff whom will reply with an 8-bit Secret Key. Fill in secret key then click 'Activate' to enter the program. Username and password are required.

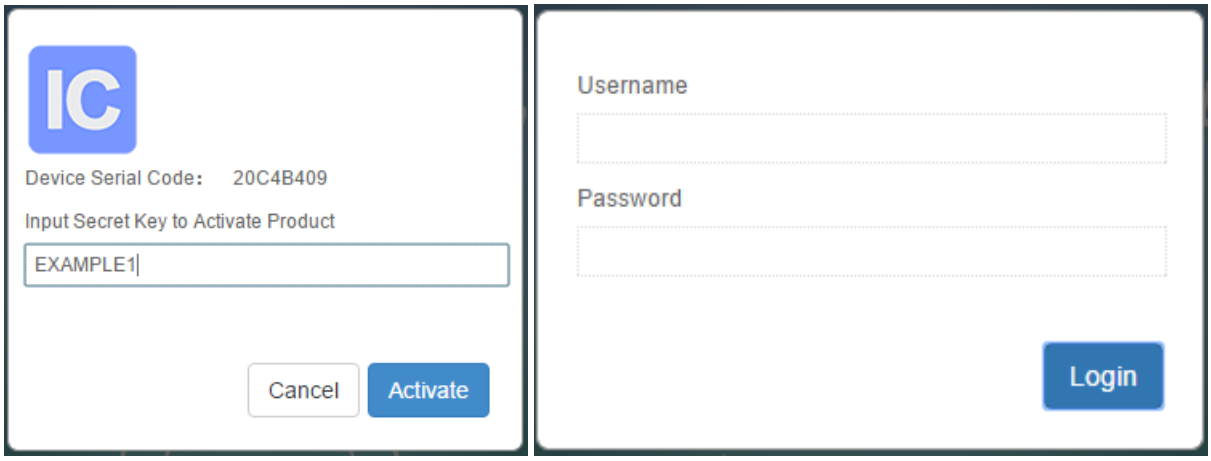
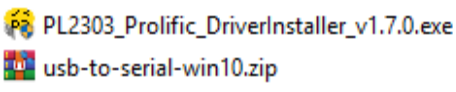


Figure 3.2 Activate Pages

3.2 IC Card Read/Write Device Installation

Plug the device to the USB port of the Personal Computer.

Figure 3.3 Elevator IC Card Read/Write Device

Depends on user's PC setting, some computers do not need to install USB driver to connect this device. Otherwise, find 

icons, run PL2303 or decompress the zip file and run the Driver installer according to computer operating system.

4 Description of IC Card Management System

4.1 Initialize Setting

4.1.1 Super Administrator Login

First time for super administrator to login:

Username: **admin**

Password: **admin**

After login, click【Change Password】at the bottom left of the page can change the administrator password.

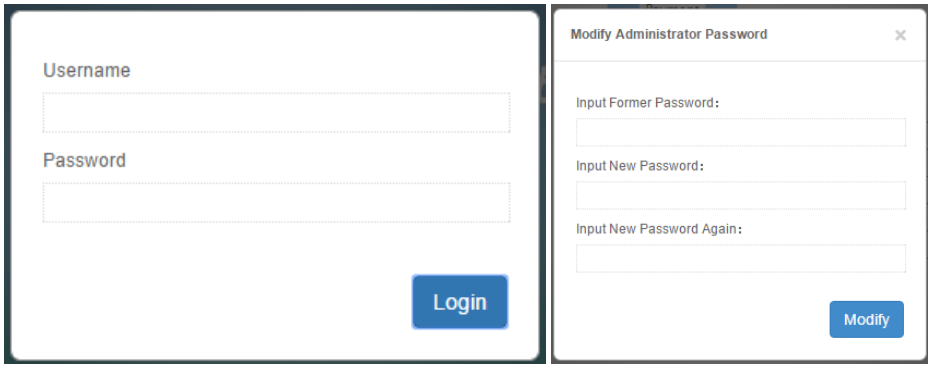


Figure 4.1 Super Administrator Login and Change Password Pages

4.1.2 General Administrator (Staff) Login

With super administrator login, click【User Config】at the bottom left of the page can enter Staff Management dialog-window. In this window, super administrator can add, delete, edit staff username and password. Then click【Save】to save change.

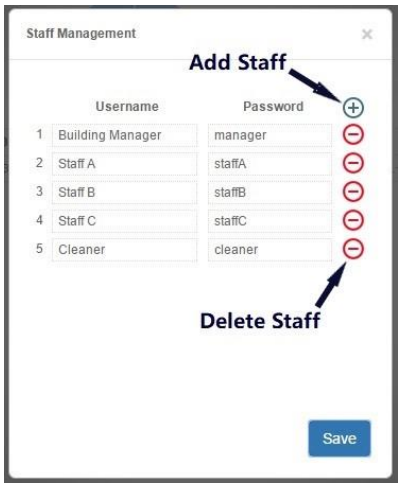


Figure 4.2 General Administrator (Staff) Login Page

4.1.3 System Configuration

With super administrator login, click【System Config】to enter system configure dialog-window. In this window:

'System Title' is the title displayed in the upper left corner of this system platform window.

'System LOGO' is the picture displayed in the upper left corner of this system, default setting is of words "IC Card System". Upload a picture to change the display.

'Origin Section' is the starting disc sector at where system reads and writes IC card configures, the initial value is 1.

The above settings will be validated after clicking 【Save and Restart】key.

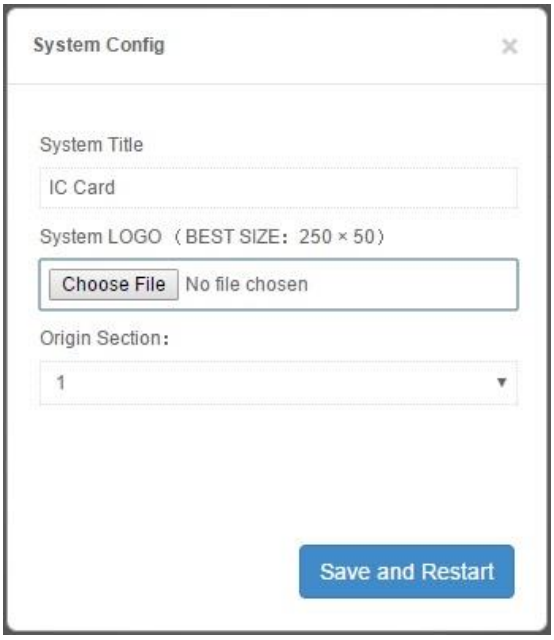


Figure 4.3 System Configuration Page

4.1.4 Residential Information Setting

① Communities Management: right click {Communities} list-icon in the left column, select 'add Community'. In the pop out window, fill in Community Name and Community ID. Assign community ID with hexadecimal number start from 0 to FFFFFFFF, ID numbers cannot be identical. Alternatively, click【Generate】will create ID number automatically. Choose to select User Card Control Mode from Times Limit Mode or Count Limit Mode. This will give IC card service restrictions. Also, choose to use Times Limit for Public Card Control Mode.

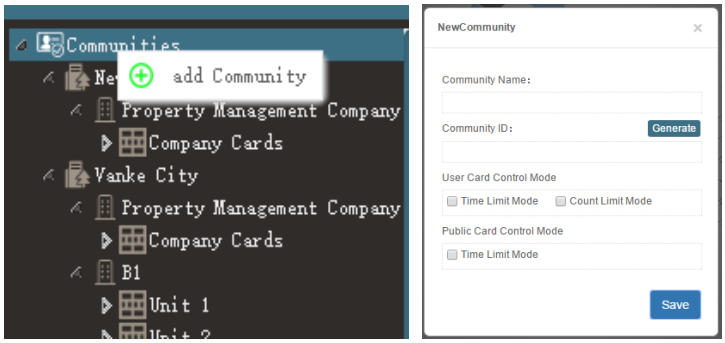


Figure 4.4 Add Community Pages

Right click on a community name from communities list in the left column, in the menu, select 'delete' can delete this community, select 'edit' can change community name, double click on a community name can also change this community name, select 'community conf' can enter Community Management window. It is same as New Community window.

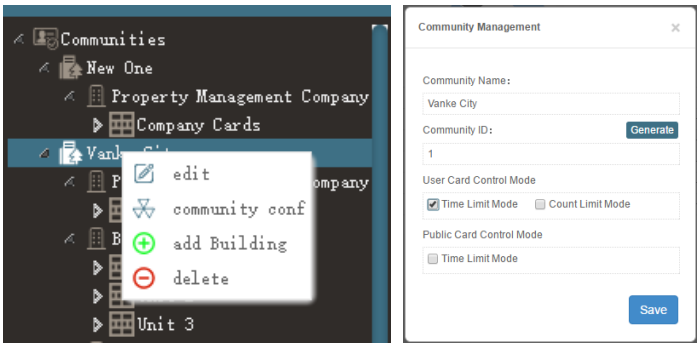


Figure 4.5 Community Management Pages

② Building Management: right click on a community name from communities list in the left column, in the menu, select 'add Building' can create a building configure under this community and then give the building a name. Users can name a building using Property Management Company and so on to manage the IC cards which are issued to staffs. Right click on a building name in the left column, in the menu, select 'delete' can delete this building configure, select 'edit' can change building name.

Figure 4.6 Unit Management Page

③ Unit Management: right click on a building name in the left column, in the menu, select 'add Unit' can create a unit configure under this building and then give the unit a name. Press Enter on keyboard to save it. Right click on a unit name in the left column, in the menu, select 'delete' can delete this unit configure, select 'edit' can change unit name, select 'elevator confi' can enter elevator configuration dialog-window: click【+】can add an elevator controller. Then click to select a controller and use the red delete icon at the upper right corner of this button can delete this controller. Setting a controller: type in or change Controller ID with a number between 0 to 255, ID numbers cannot be identical. Alternatively, click 【Generate】will create ID number automatically. Type in or change controller Name, for example '1#' or 'Elevator A'. Fill in Total Stations of elevator, up to 64 floors for non-through door elevator (one door open), or up to 32 floors for through door elevator (two doors open). Choose to tick whether it is a Through Door elevator. After filling in above content, users can also change the display settings for each floor. For example, set floor '1' display as 'G' or floor '2' display as '1A'.

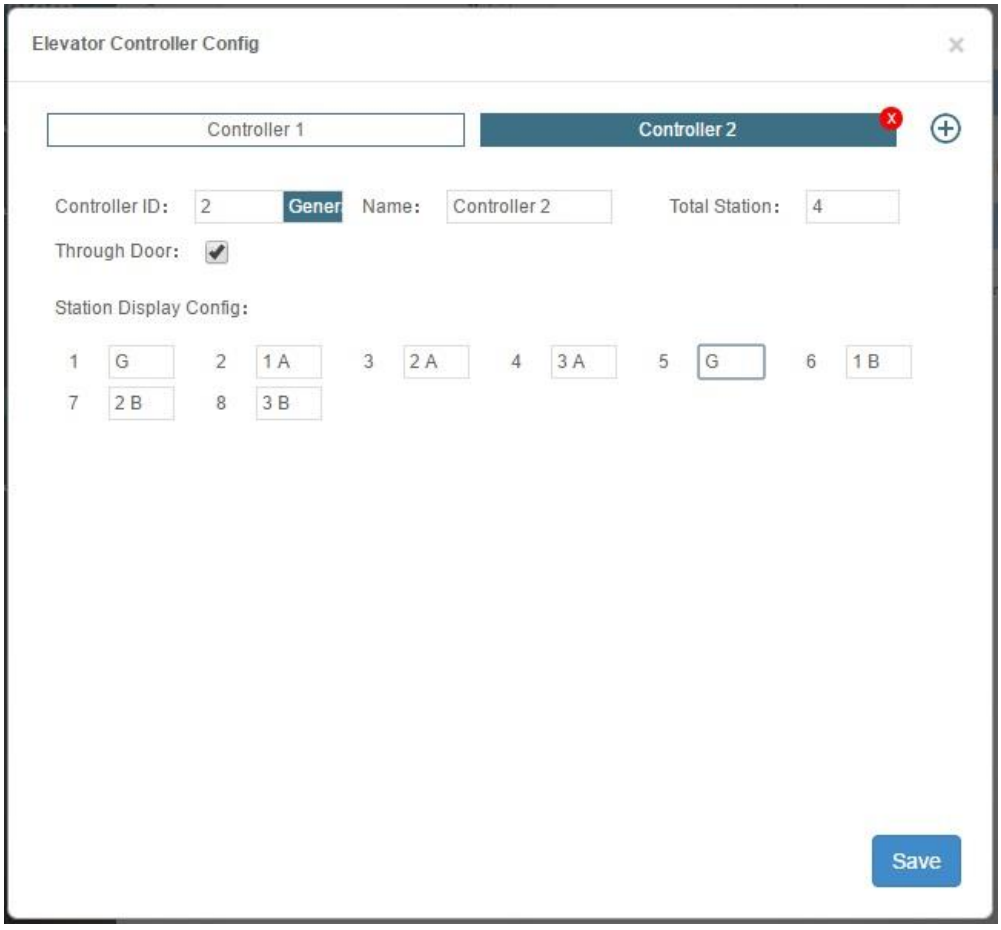


Figure 4.7 Unit Management Page

4.2 Card Information Setting

4.2.1 Search for IC card information in system

Click an item from any class in the left column: all the cards information under this item class could be found. For example, click a building name, all IC cards hold by the residents who live in this building, will be displayed in the right column. Click a household name, then only this household's IC card will be displayed. Keyword search from top of window: fill in Owner and Mobile, choose whether to tick Arrearage, then cards information of all the residents who meets this keyword conditions, will be displayed. The above two searching methods can be used together.

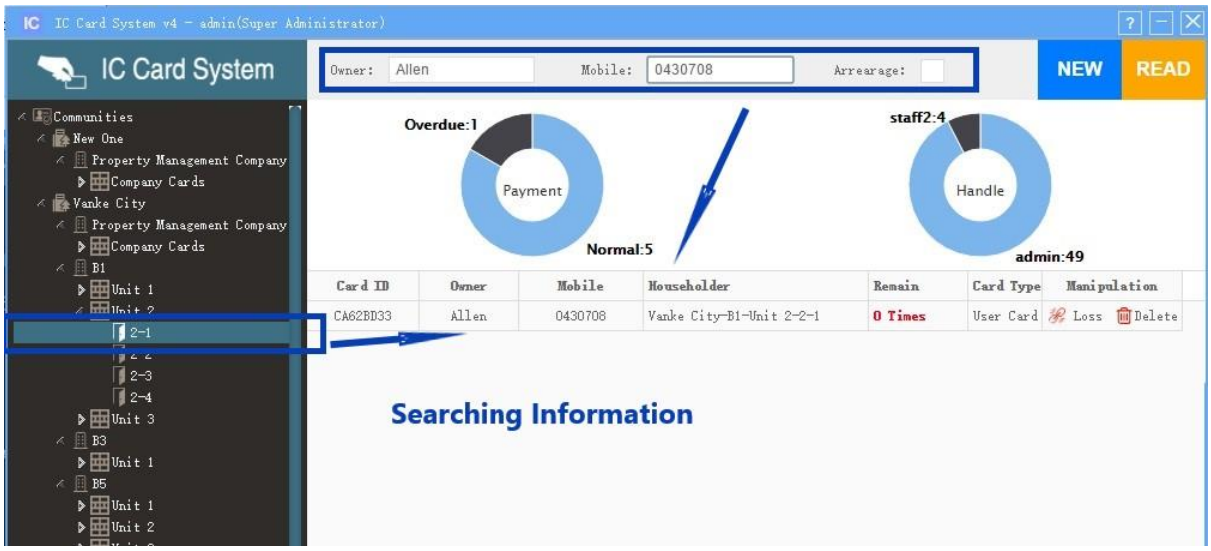


Figure 4.8 Search and Inquire Card Information Page

4.2.2 Report Lost Card/Lost Card Recover and Delete Card

After requested card is found, its information is listed in the right column. Click【Loss to report this card as a lost card. Click【Reco】to recover this card from lost and cancel the lost card report. Click【Delete】to delete this card registration and information.

Card ID	Owner	Mobile	Householder	Remain	Card Type	Manipulation
CA62BD33	Allen	0430708	Vanke City-B1-Unit 2-2-1	0 Times	User Card	Loss Delete
919F2E37	Taylor	0436254	Vanke City-B1-Unit 1-1-1	2 Times	User Card	Reco Delete

Figure 4.9 Lost Card Report /Lost Card Recover and Delete Card Page

4.2.3 Connect to Serial Communication Device (IC card read/write device)

Connect IC card read/write device through serial communication port before issue new card, read card and write card. Follow instructions below: check connection state at the bottom left corner. If it indicates 'off-line', click 【Serial Ports】 and select the port that IC card read/write device connects to, for example 'COM3'. The connection state changes to related serial port number after connection succeed. Click【Disconnect】to disconnect communication if need.

Figure 4.10 Serial Communication Port Connection

4.2.4 Read Card

Make sure serial communication is successfully connected, put a card into the slot of card read/write device and click【READ】at the upper right corner of system window, then card information can be read by the device. If a 'Card Not Found' message prompts, please check the card is in the correct position or if the card is damaged. If an 'Unregistered Card!' message prompts, which means this card is an unwritten new card or the card has been rewritten by other devices. After a card is correctly read meanwhile the system has already stored this card's information, all details of this card will be displayed and can be edited by operations.

4.2.5 Issue New Card

Make sure serial communication is successfully connected, select a household (door) and click it in the left column, put a new card into the slot of device, then click【NEW】at the upper right corner of system window. The IC Card Manage window will show up in the right side of system window. Fill in and edit the information window with card information accordingly, then click【WRITE】at the bottom to save it.

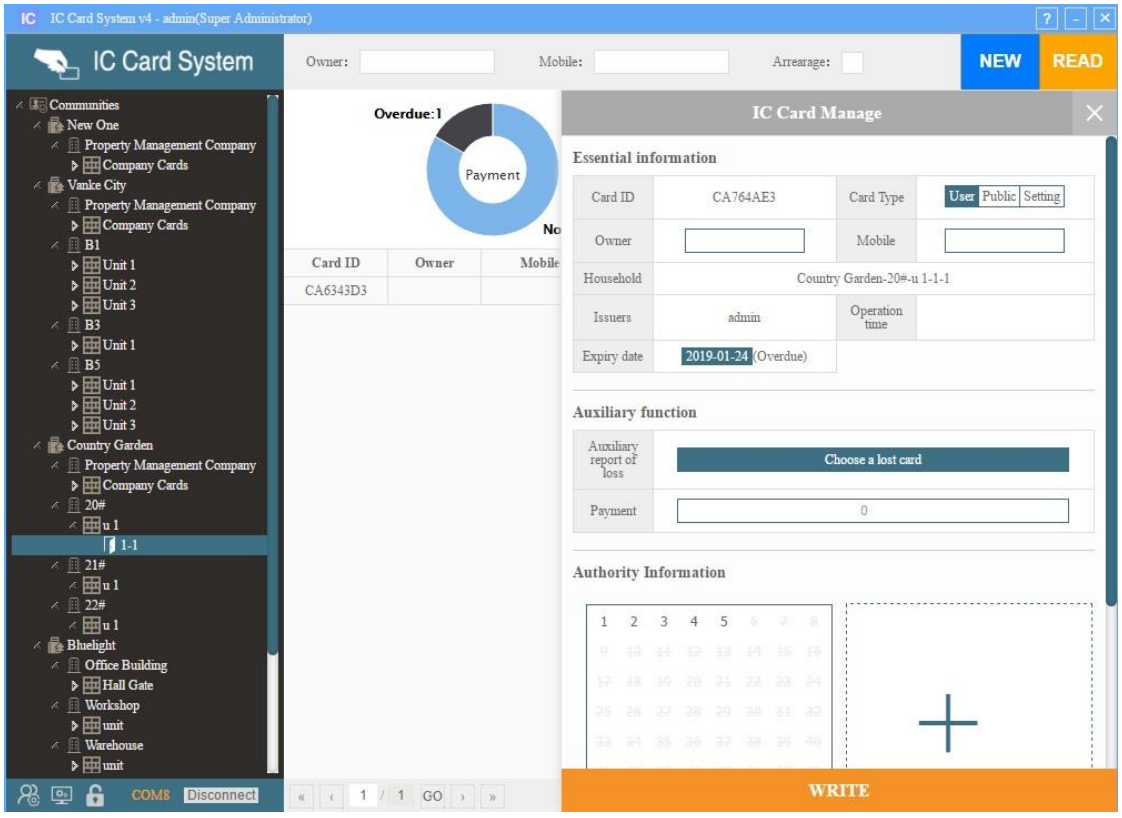


Figure 4.11 Read Card and Issue New Card Page

4.2.6 Write Card

When applying read card operation or simply click to select a card from display list, the IC Card Manage window will show up in the right side of system window.

①Select a 'Card Type' from three options:

User: choose from time limit or count limit, limited access to specific elevators and floors (maximum 6 elevators), featured with payment, lost-card auxiliary function and other operations.

Public: no count limit, choose to use times limit.

Setting: no time limit or count limit, can update setting types: Default, Report lose/Shield by address, Report lose/Shield totally (all addresses), Recover.

②Fill in Owner (card holder) name and Mobile number.

③Set Expiry date (one at most) or Remainder times (not used often) as need.

④For User card to fill in Payment amount, do not fill in if not paid.

⑤Using 'Auxiliary report of loss' function, click 'Choose a lost card' if the current owner's unit has lost card record, then write this card to recover from a lost card.

⑥For User card to update 'Authority Information': click 'Add a new elevator authority' to add an elevator and select floors to give card accessibility. Move the mouse arrow to an elevator station box, click the circle on the upper left corner of box to select all stations, click the red cross mark on the upper right corner of box to delete this elevator from card. It can add up to 6 elevators.

⑦After filling in this window, click【WRITE】to write information to the card. System will indicate 'Write Success' when finish.

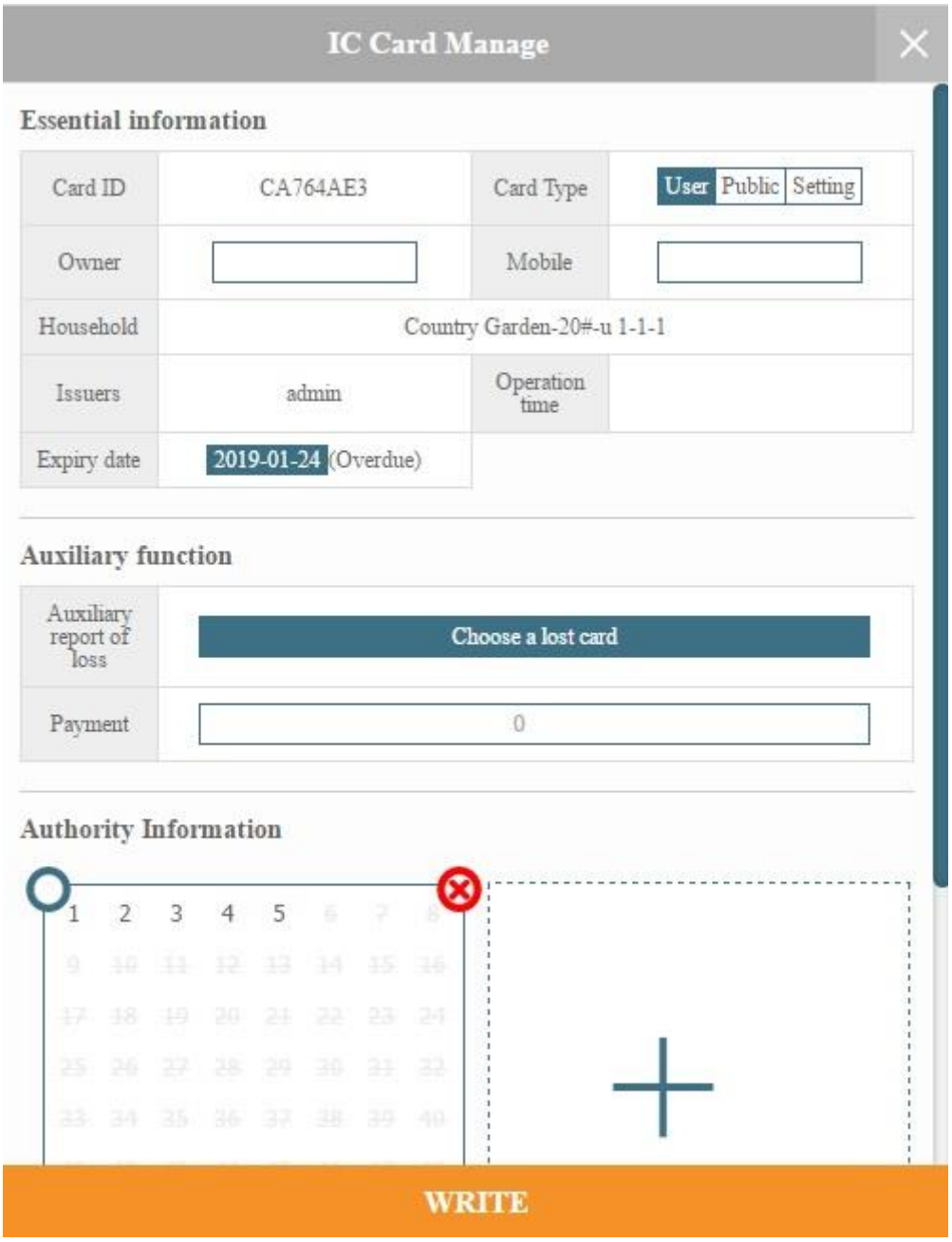


Figure 4.12 Write Card Page

4.3 Data Management

4.3.1 Data Statistic

IC cards overdue statistic, administrator IC card handle history.

Figure 4.13 Data Statistic Page

4.3.2 Data Backup

Click【Data Backup】at the bottom right corner of system window, choose a Disk as backup address to store backup data (a removable storage device such as USB drive is recommended, please keep it safe).

If system does not backup for more than one week, it will give a reminder after login.

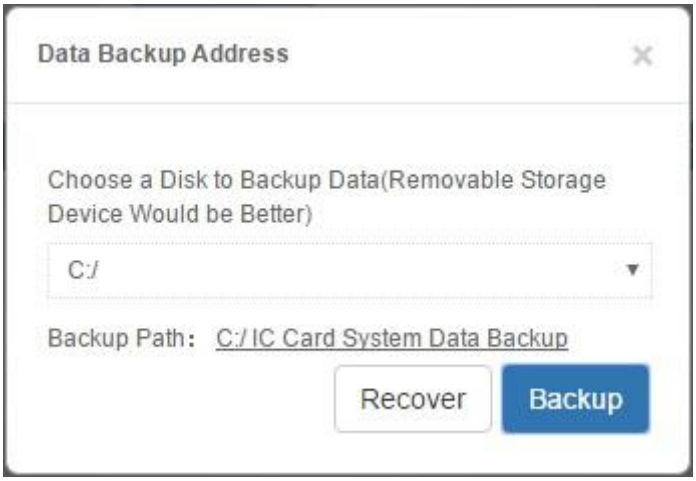


Figure 4.14 Data Backup Page

5 Mobile phone (NFC) swiping card to take the elevator

Our IC system supports mobile phones (with NFC function) to swipe cards and take the elevator. The specific steps are as follows.

5.1 Mi phones

step 1: Turn on the NFC function of the phone.

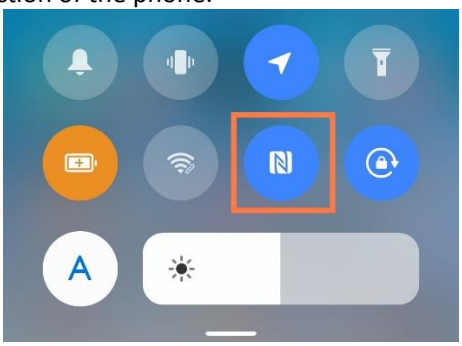


Figure 5.1 Open NFC interface

Step 2: Open an APP wallet that comes with your mobile phone, and click the door card key.

Figure 5.2 Click the door card key interface

Step 3: Create a blank card. Click Add after the custom blank card. The phone starts to create a blank card. You need to wait patiently for a few seconds.

Figure 5.3 Add blank card interface

Step 4: After the card data is written in, the user-defined card interface appears. You can name the card and select a personalized card face, and then click Finish to create a blank card.

Figure 5.4 Add blank card success interface

Step 5: The computer logs in to the elevator IC card management system and plugs in the card writer. After the card writer is successfully connected with the IC card management system, the NFC sensing area of the mobile phone is closely attached to the card writer and the card is issued (the card issuing process is consistent with the IC card process). It is recommended that you click Read Card on the IC card management system to see if you can read the blank card. If you can't read it, please confirm again whether the NFC sensing area of the mobile phone is correct, There should be no metal objects on the card writer. The NFC sensing area of the mobile phone should be close to the card writer.

Figure 5.5 Interface for writing blank cards to mobile phones

5.2 Huawei mobile phone

Step 1: Open the wallet APP and click the key.

Figure 5.6 Key interface

Step 2: Click the access card and create a blank card.

Figure 5.7 Create blank card interface

Step 3: Click the bottom of the screen to directly create a blank card.

Figure 5.8 Create blank card interface

Step 4: Press this prompt to enter the card writing interface, place the card on the card writer, and write the card. (The card issuing process is consistent with the IC card issuing process).

Figure 5.9 Blank card creation success interface