

BL2000-CIC-V4.1-TF

**Elevator IC Card Control System
(Separate Antenna)**

User Manual

Version: 1.1

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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

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

Table 2.1 COP Terminal IC Card Controller Connection Definition

Terminal	Pin No.	Label	Description
Power Terminal Port PW	1	24V	24V Power
	2	GND	System ground
	3	CANH	CAN Communication H
	4	CANL	CAN Communication L

2. Installation Layout Diagram

IC card controller has two components, main control board and sensing end. Main control board is installed inside of COP and sensing end can installed on COP surface.

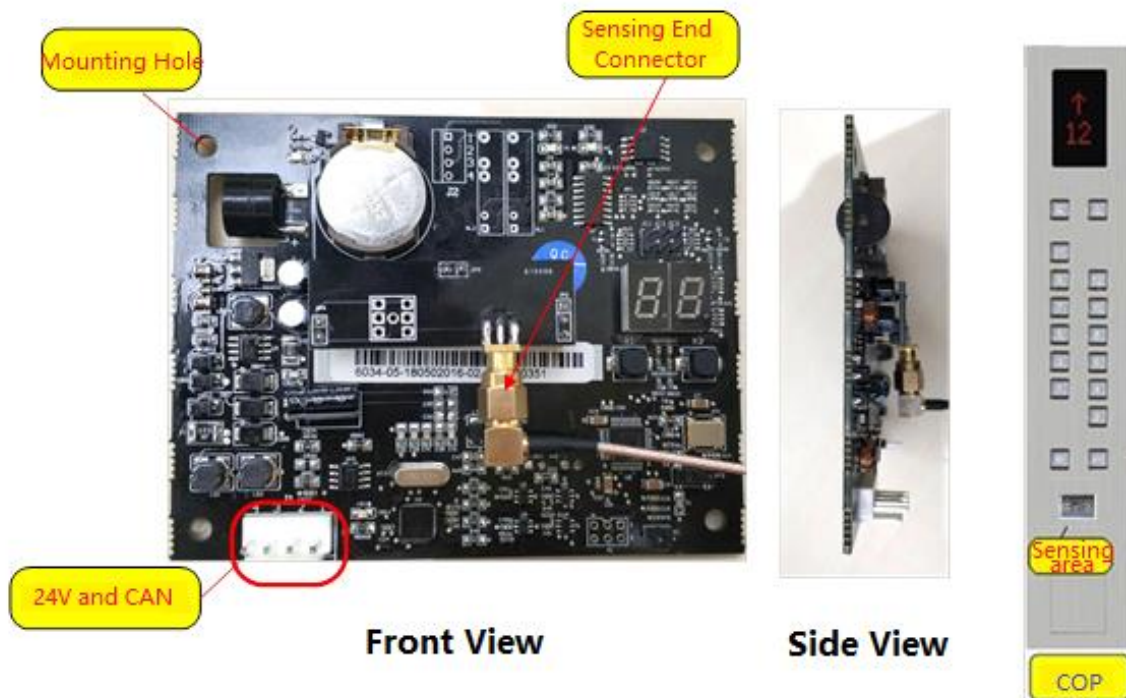


Figure 2.1 Photo of Elevator COP Terminal BL2000-CIC-V4.1-TF Controller

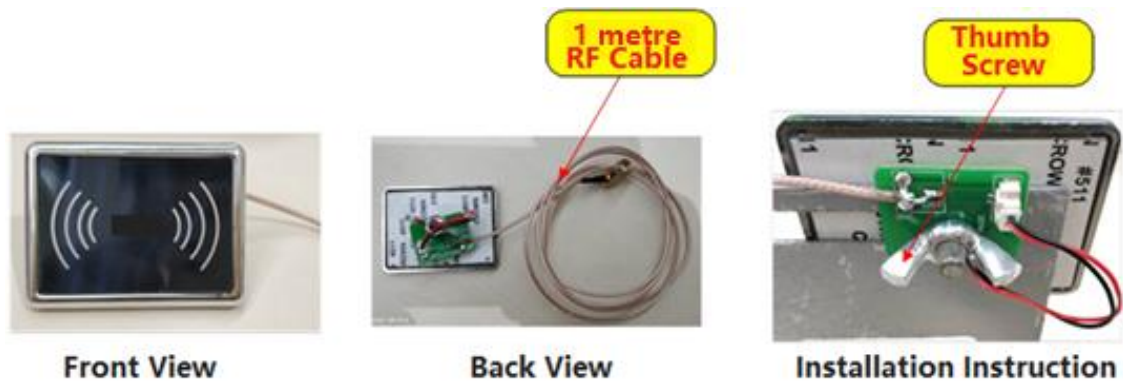


Figure 2.2 Photo of Elevator Car Terminal Controller Sensing End

3. Dimensions

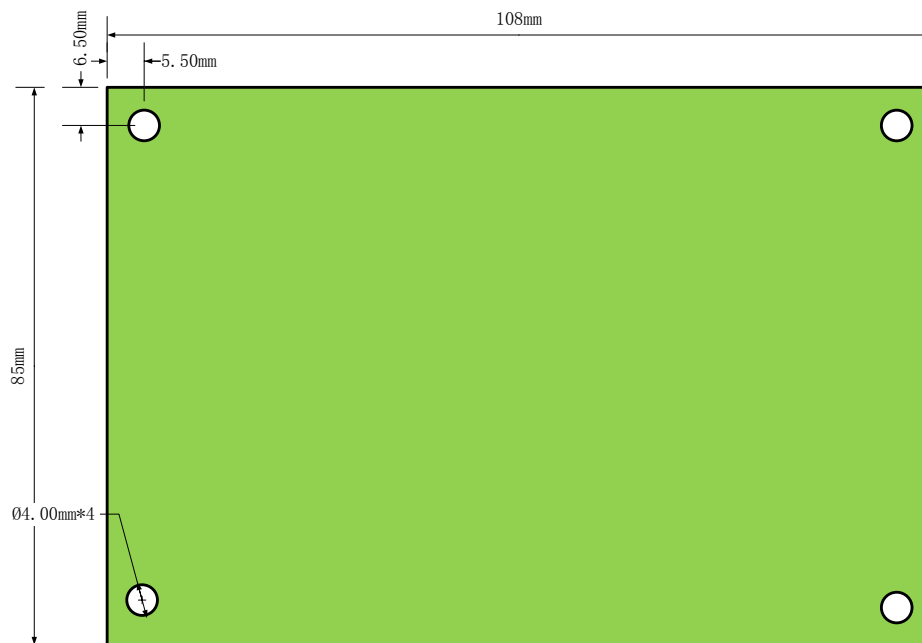


Figure 2.3 Dimensions of Elevator COP Terminal BL2000-CIC-V4.1-TF Controller

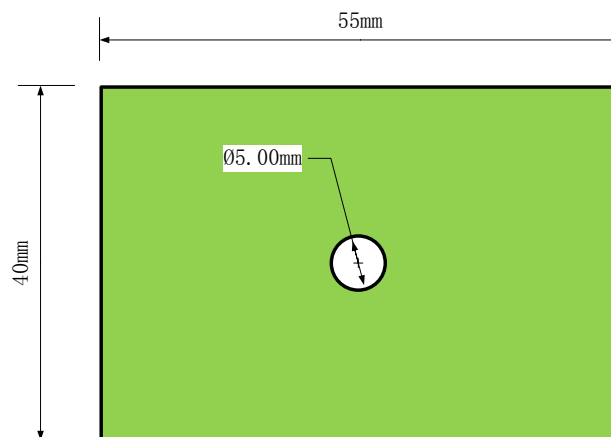


Figure 2.4 Dimension of Elevator Car Terminal Controller Sensing End

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

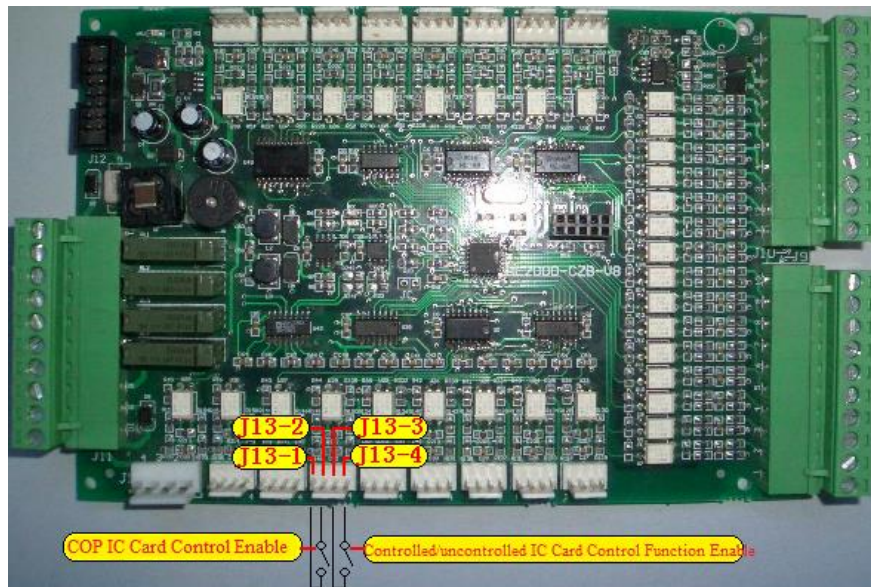


Figure 2.5 COP IC Card Control Enable and Control Function Setting Instruction

Two input ports of the COP car control board terminal J13 are used as the input terminals for both IC Card Control Enable and Controlled/uncontrolled IC Card Control Function Enable. In practical, connect these two input terminals to two spare switches on COP for easy accessing.

2.2.1 COP IC Card Control Enable

When elevator is in auto mode without any error, the elevator IC Card Control is operative when the IC Card Control function is enabled. COP IC Card Control Enable input terminals are at J13-1 and J13-2; when J13-1 and J13-2 terminals are shorted, the IC Card Control is enabled; if J13-1 and J13-2 terminals are opened, then IC Card Control is disabled.

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

The Controlled/uncontrolled IC Card Control Function Enable input terminals are at J13-3 and J13-4; when elevator is in auto mode without any error and IC Card Control is enabled, while J13-3 and J13-4 are shorted, it enters to the mode of setting up Controlled/uncontrolled IC Card Control Function. During this mode, the COP calling buttons will show the setting status, if the calling button(s) is/are lightened, it means the particular calling button(s) is/are under controlled by IC Card Control; if the calling button(s) is/are not lightened, it means the particular calling button(s) is/are uncontrolled by IC Card Control, therefore, the particular floor(s) will not be restricted by the IC Card Control. By pressing the calling button(s) to set controlled or uncontrolled floor(s), the default, all calling buttons are initially set as controlled by IC Card. Disconnect the shorting of J13-3 and J13-4 to exit the setting mode as well as to save the setting, and resume to normal operation.

Note: By default, all COP calling buttons are controlled by IC Card, if the homing floor or evacuation floor shall not be controlled, then user shall do the setting before putting it into operation.

2.3 The Usage of IC Card Control Board

2.3.1 Jumper Settings

There are three jumpers on the IC Card Control Board, i.e. JC3, JC1 and JC2, please see the following jumper setting description:

Table 2.2 Inspection Setting

Enable	Short JC3, Open JC1, Open JC2
Function	To enter factory inspection program
Description	To support the device inspection, it is not open for user.

Table 2.3 IC Card Control Board Address Setting

Enable	Open JC3, Short JC1, Open JC2
Function	To set the address for IC Card Control Board
Description	After the control board is power up, the digital display will show the current address setting. Press K1 key or K2 key to increase or decrease the address, the setting range is 1~99. When the digital display shows the required address, remove or open the jumper JC1, the system will save the current setting, the digital display will flash and the system will reset.

Table 2.4 IC Card Control Board Date & Time Setting

Enable	Open JC3, Open JC1, Short JC2
Function	To set the date and time for IC Card Control Board
Description	<p>After the control board is power up, the digital display will show the function code 01, it enters the date setting mode, thereafter, pressing K1 key to show the IC Card Control Board current year "XX." (a unit's digit decimal point lights on), month "X.X" (a ten's digit decimal point lights on), date "X.X." (both ten's and unit's decimal points light on). During the date displaying mode, press K2 key to change the date setting (pressing K2 once to increase 1), during date setting mode, press again K1 key to show function code 02, to enter the time setting mode, thereafter, pressing K1 key to show the IC Card Control Board current hour "XX." (a unit's digit decimal point lights on), minute "X.X" (a ten's digit decimal point lights on), second "X.X." (both ten's and unit's decimal points light on). During the time displaying mode, press K2 key to change the time setting (pressing K2 once to increase 1), during second setting mode, press again K1 key to show function code 03, to enter real time displaying of date and time.</p> <p>Note: under the function codes 01 and 02, the values showing are for entering the setting modes, the values will not be refreshed, user can base on these to change the values by pressing K2 key to modify the date and time.</p> <p>When function code is 03, it displays the real time values, keep pressing K1 key to display the real time date of the IC Card Control Board, started with year "XX." (A unit's digit decimal point lights on), month "X.X" (A ten's digit decimal point lights on) and date "X.X." (both ten's and unit's decimal points light on). During the display of real time date, again pressing K1 key to show the function code 04, it displays the real time hour "XX." (A unit's decimal point lights on), minute</p>

	<p>“X.X” (A ten’s digit decimal point lights) and second “X.X.” (both ten’s and unit’s decimal points light on). Again, pressing K1 key to show function code 01, it enters the setting of date.</p> <p>Note: under the function codes 03 and 04, the values showing are for the real time date and time, K2 key is inoperative, user cannot modify the date and time.</p> <p>Remove or open the jumper JC2 to save the setting of date and time, the digital display will flash and show “8.8.”, and the system will reset.</p>
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Table 2.5 Communicating with IC Card Management System Software

Enable	Open JC3, Short JC1, Short JC2
Function	To communicate with IC Card Management System Software
Description	After the control board is power up, the digital display will show “PC”, through the IC Card Management System Software it is possible to set the control board date and time, to read the date and time, to retrieve the usage of IC card history and control information, to initialize the usage information storage and the control information storage and etc. Please refer to section 4 for detail description of operation.

Table 2.6 Initialization on the Control Board “Usage Information Section” and “Control Information Section”

Enable	Short JC3, Short JC1, Short JC2
Function	To initialize the IC Card Control Board usage information and control information sections
Description	After the control board is power up, the digital display will show function code 01. In this function code, K1 key works as “function key” or “confirm key”, K2 key works as “Next” or “Cancel” switching key. Pressing K1 key to scroll through the function codes 01 → 02 → 03 → 01, and to enter the corresponding function code. Displaying 01 is to clear usage information and control information; displaying 02 is to clear control information; display 03 is to clear usage information. In this function code, pressing K2 key to scroll through the operation codes CO → CA → CO, where CO is to CONFIRM the operation and awaiting for K1 key for confirmation; and CA is to CANCEL the operation and awaiting for K1 key for confirmation.

2.3.2 Buzzer and LED Indicators of IC Card Control Board

IC Card Control Board is using buzzer, LED “WORK” to indicate operating, LED “ERROR” to indicate error occurs and digital displays SM2 and SM1 to show the card swiping operation and error codes.

Table 2.7 Responding to valid card swiping

IC Card Type	Valid Card Swiping Type	Digital Displays	Buzzer	LED ERROR	LED WORK
Setting Card	Setup system identification	Displaying "30"	Buzzer sounds once	LED "ERROR" Off	LED "WORK" flashes twice
	To report lost or disable specified IC Card of the IC Card Control Board	Displaying "31"			
	To report lost or disable all IC card of the IC Card Control Board	Displaying "32"			
	Resume lost or disable IC card	Displaying "33"			
Public Card	Valid public card	Displaying "11"	Buzzer sounds Twice	LED "ERROR" Off	LED "WORK" flashes twice
User Card	Valid user card	Displaying "00"			
	This user card is a copy card	Displaying "44"	Buzzer sounds Twice	LED "ERROR" Off	LED "WORK" flashes twice

Table 2.8 Responding to card copy protection function

Copy Protection Function	Operation	Digital Displays
Activate Copy Protection Function	Continuously swipe setting card 5 times	Displaying "55"
Inactivate Copy Protection Function	Continuously swipe setting card 5 times	Displaying "66"

Note: By default, copy protection function is off.

Table 2.9 Responding to invalid card swiping


Error Type	Error Code	Invalid Card Swiping Reason	Digital Displays (displays for 700ms)	Buzzer	LED ERROR	LED WORK
Error Handling Type 0	1	Invalid IC Card type	Displaying “E1”	Buzzer sounds three times	LED “ERROR” On for 1 second	LED “WORK” Off
	2	System identification error	Displaying “E2”			
	3	IC Card internal address and IC Card control board address is unmatched	Displaying “E3”			
	4	IC Card has been lost or disabled	Displaying “E4”			
Error Handling Type 1	5	IC Card is expired	Displaying “E5”	Buzzer sounds for twice		
	6	IC Card number of usage has reached “0”	Displaying “E6”			
	7	Setup Card internal address and the IC Card control board was unmatched during report lost or disable	Displaying “E7”			
	8	CAN communication sending has timed out	Displaying “E8”			
	9	IC Card writing error	Displaying “E9”			
	0	IC Card reading error	Displaying “E0”			

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.

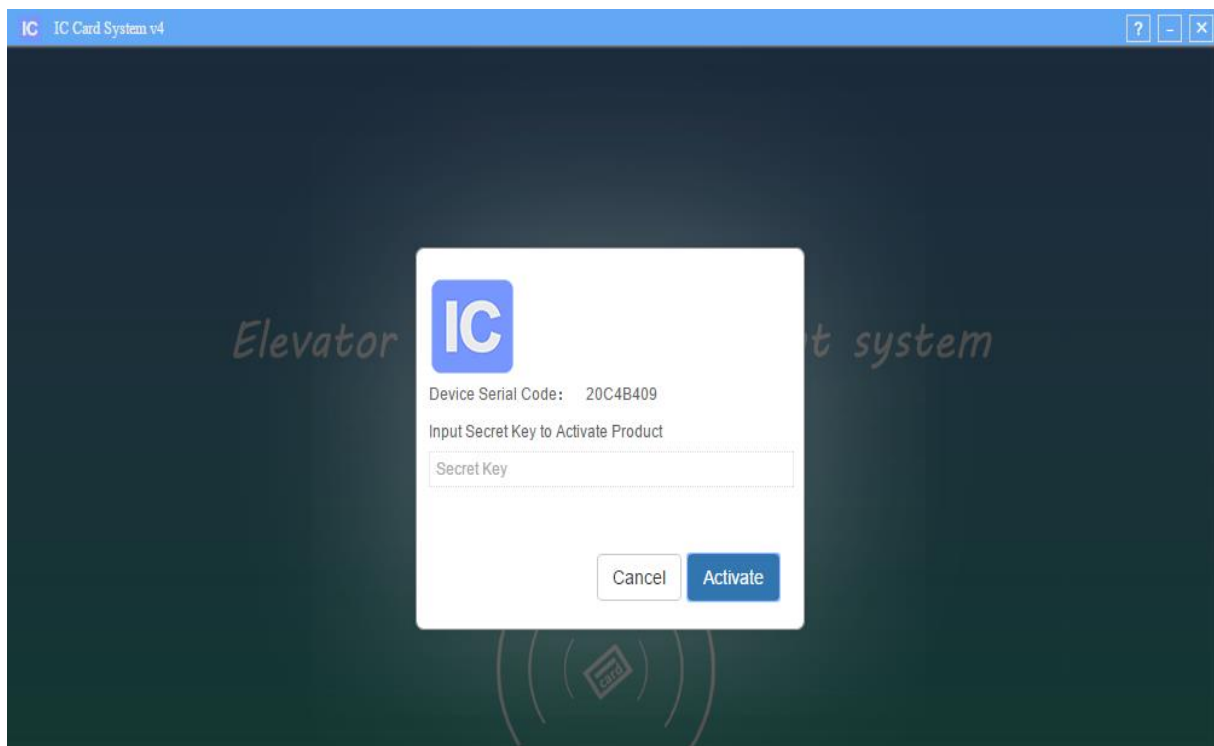


Figure 3.1 Program has not been activated

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

The screenshot shows two side-by-side panels. The left panel features a blue 'IC' logo, the text 'Device Serial Code: 20C4B409', and a prompt 'Input Secret Key to Activate Product' with a text box containing 'EXAMPLE1|'. At the bottom are 'Cancel' and 'Activate' buttons. The right panel has 'Username' and 'Password' labels above empty text boxes, and a 'Login' button at the bottom right.

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  PL2303_Prolific_DriverInstaller_v1.7.0.exe  usb-to-serial-win10.zip 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.

	Username	Password	
1	Building Manager	manager	+
2	Staff A	staffA	-
3	Staff B	staffB	-
4	Staff C	staffC	-
5	Cleaner	cleaner	-

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.

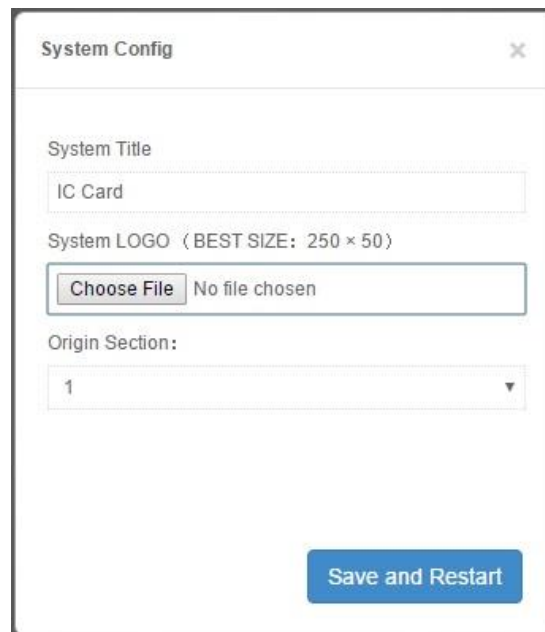
The image shows a 'System Config' dialog box with a close button (X) in the top right corner. Inside the dialog, there are three main sections: 1. 'System Title' with a text input field containing 'IC Card'. 2. 'System LOGO (BEST SIZE: 250 x 50)' with a 'Choose File' button and a text area showing 'No file chosen'. 3. 'Origin Section:' with a dropdown menu currently set to '1'. At the bottom right of the dialog is a blue button labeled 'Save and Restart'.

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.

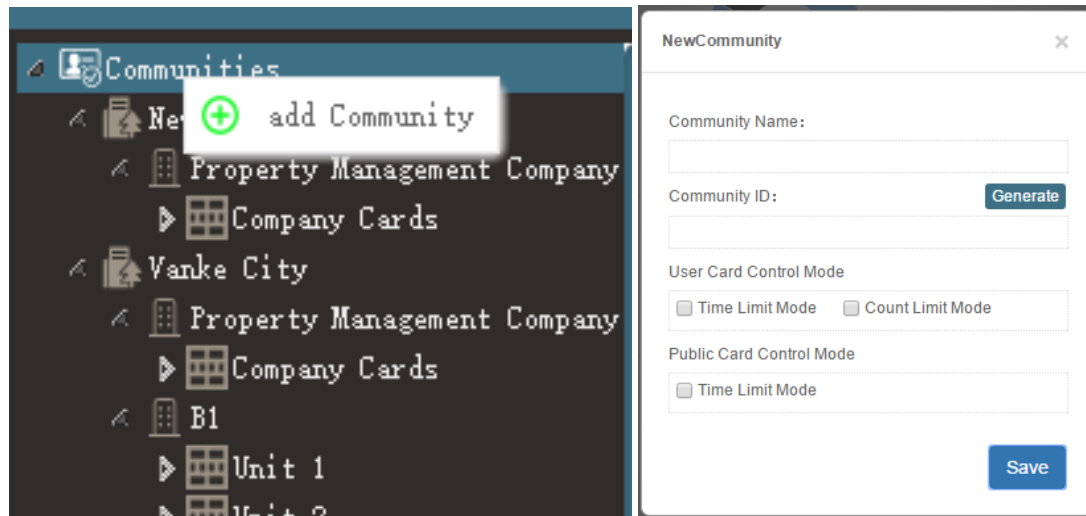


Figure 4.4 Add Community Pages

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.

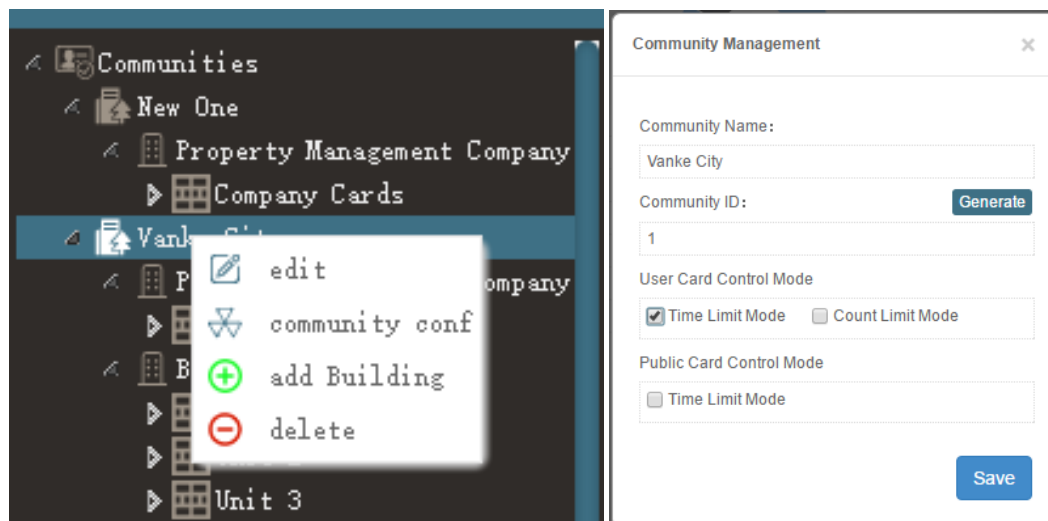


Figure 4.5 Community Management Pages

- 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'.

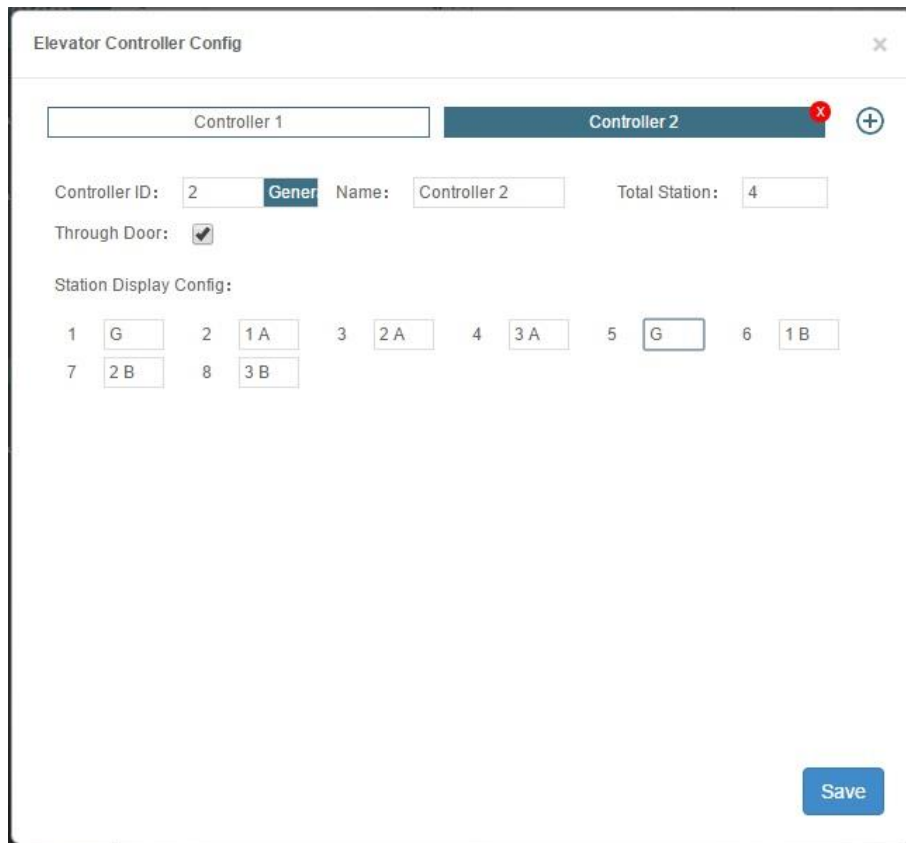


Figure 4.7 Unit Management Page

- ④ Household (Door) Management: right click on a unit name in the left column, in the menu, select 'add Household' can create a household configure under this unit and then assign the household with a room number, such as '12-3'. If this building is a property management company, users can define room numbers such as 'cleaner card' or 'manager card', to explicitly classify building staffs' IC card types. Right click on a household room number in the left column, in the menu, select 'edit' can change household room number, select 'delete' can delete this household configure.
- ⑤ Change List Order: click and hold an item, no matter which class it is in, this item can then be dragged to any place inside of the current class. Thus, users can change list order.

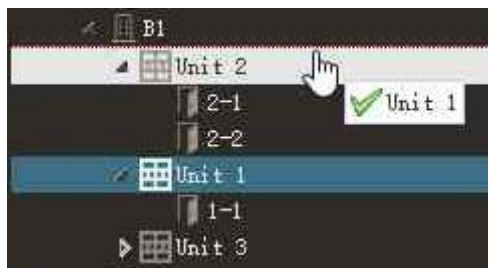


Figure 4.8 Change List Order

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.

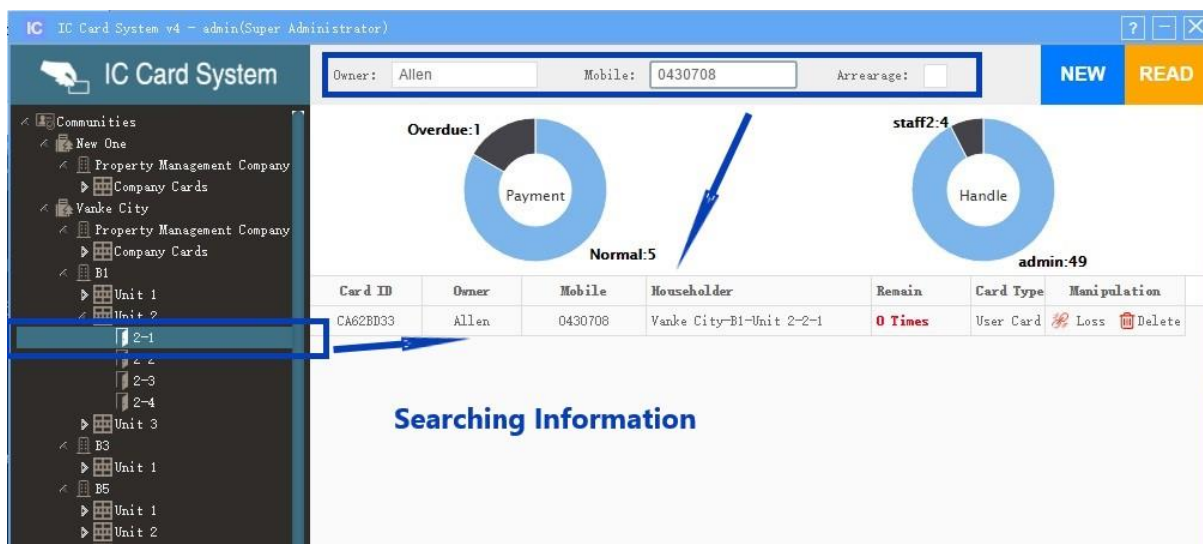


Figure 4.9 Search and Inquire Card Information Page

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 4.10 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 4.11 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.

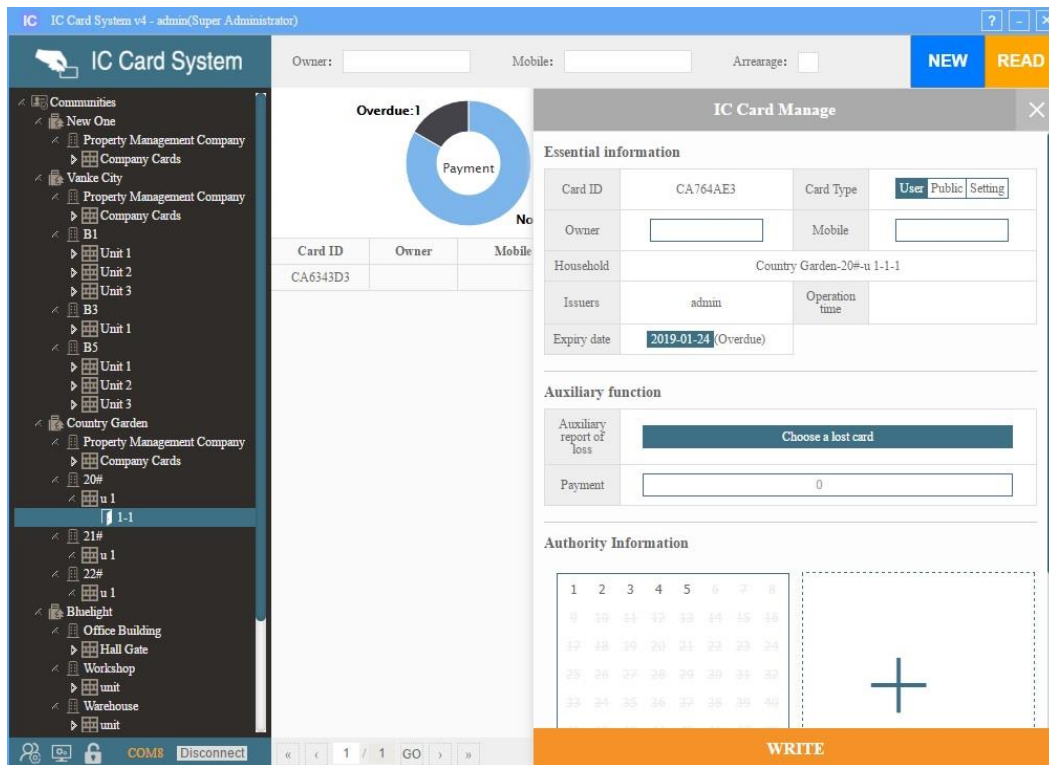


Figure 4.12 Read Card and Issue New Card Page

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.

- ① Select 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.

- ② Fill in Owner (card holder) name and Mobile number.
- ③ Set Expiry date (one at most) or Remainder times (not used often) as need.
- ④ For User card to fill in Payment amount, do not fill in if not paid.
- ⑤ Using '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.

- ⑥ For 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.
- ⑦ After filling in this window, click **【WRITE】** to write information to the card. System will indicate 'Write Success' when finish.

IC Card Manage

✕

Essential information

Card ID	CA764AE3	Card Type	<div>User</div> <div>Public</div> <div>Setting</div>
Owner	<div></div>	Mobile	<div></div>
Household	Country Garden-20#-u 1-1-1		
Issuers	admin	Operation time	
Expiry date	<div>2019-01-24</div> <div>(Overdue)</div>		

Auxiliary function

Auxiliary report of loss	<div>Choose a lost card</div>
Payment	<div>0</div>

Authority Information

○

✕

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40

+

WRITE

Figure 4.13 Write Card Page

4.3 Data Management

4.3.1 Data Statistic

IC cards overdue statistic, administrator IC card handle history.



Figure 4.14 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 4.15 Data Backup Page