QR-6619

Dynamic QR Code

Integrated Access Control Machine

Version V1.0

I   Introduction

This QR code + IC card access control machine is used in conjunction with our "QROPEN" WeChat Mini program, using dynamic QR code as the user's identity certificate (also supports IC card), and the dynamic QR code used by the owner has a time-limited validity period. There is no need to worry about it being copied or stolen, so the security level is high! When a guest visits, the owner can also use the Mini program to generate a time-limited, chance-limited QR code screenshot to send to the guest's mobile phone, and the guest can use it to open the door. Those who have not received the QR code can also ask the front desk/security guard to use the "QROPEN" PC version or Mini program which are connected to the small ticket printer to print out the QR code temporary ticket for them to open the door, which effectively solves the visiting problem!

The access control machine runs completely offline, does not connect to the network, does not require WIFI or SIM card, etc... It adopts the traditional integrated access control management mode, and the parent card (added card) and delete card to manage the user's QR code/IC card permissions. WeChat Mini program is also extremely simple, which requires no user registration, no user personal information, only to follow it on WeChat.

This product can also read QR code, mobile phone NFC, IC card, second-generation ID card, bank card with chips, etc., the user does not need to bring the card, only the mobile phone. It can support 20,000 users at maximum.

Application:

1. The owner does not need to bring a card/key when going out. Just bring the mobile phone. When entering the door, display a 10-minute valid QR code by simply tapping the WeChat Mini program, and then put the phone screen near the reading head. The door will open afterwards.

2. Honorable guests are already at the door, but the owner is not at home / company, just click on the WeChat Mini program (generate a valid QR code for ten minutes by default) and then send the screenshot to the guests' mobile phones (by WeChat / QQ / MMS, etc.). It can be used to open the door, and is only valid for ten minutes which is very safe.

3. When a guest agrees to come over soon, the user only needs to use the Mini program to set

a 8-hour,1-time valid QR code, and then send the screenshot of it to the mobile phone of the guest. Within the set time, it can open the door once. If the guest used it once in the valid period, it will turn to invalid one.

4. Owners who do not have a smartphone can still use the IC card to open the door. When they have a guest visit, they can register at the gate security and generate a temporary QR code from the phone of the security. The photo of that QR code can be used to open the door within the setting time. (You can also print it out for the guest with a small ticket printer)
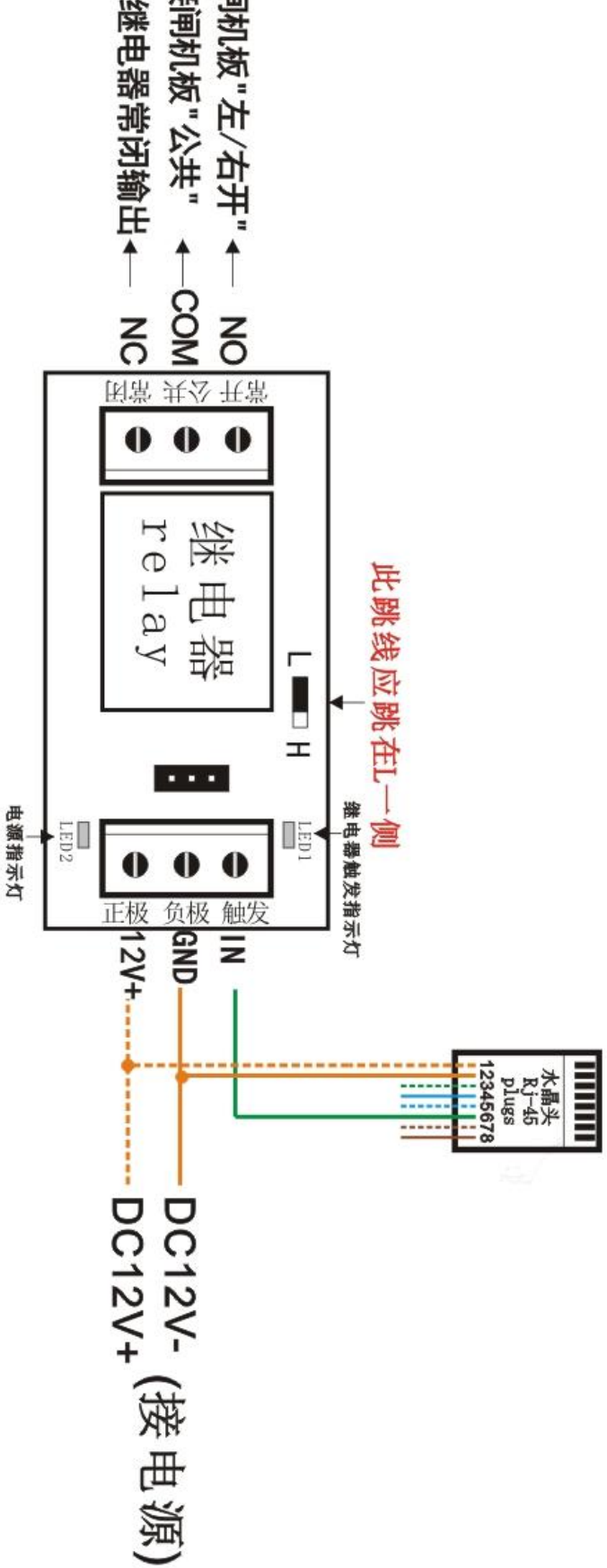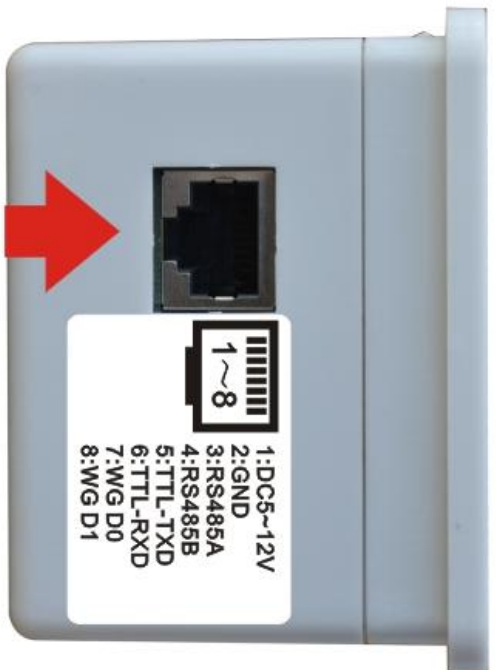
II Product Dimensions
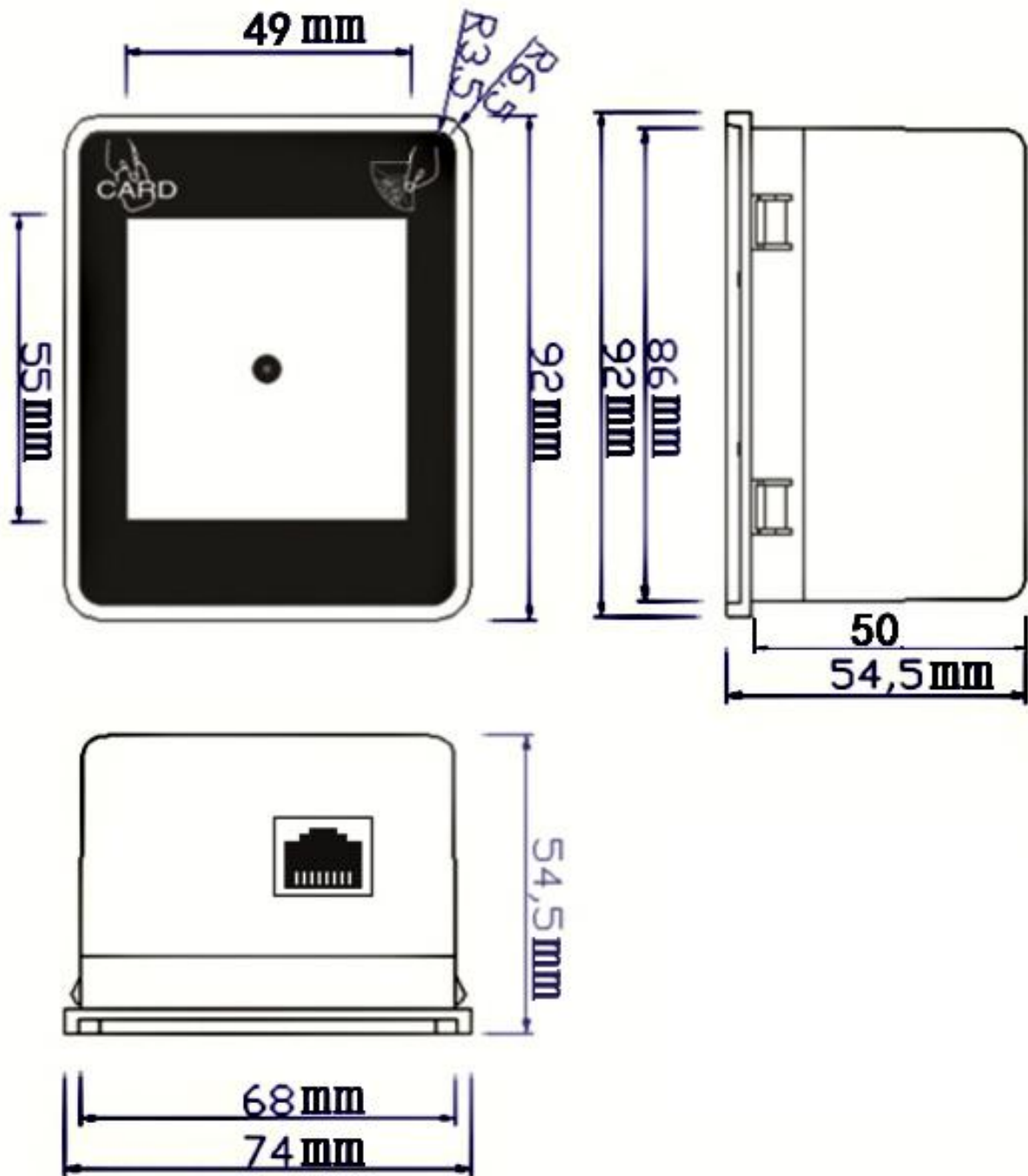
III   Device parameters:

1. Reading Mode: CMOS
2. Reading Code: QR Code (On screen/paper)
3. Reading accuracy: ≥ 5mil
4. Reading Distance: 1~8cm
5. Vertical Reading Angle: 360°

6. Camera Reading Range: Up and down\left and right 80°

7. Operating Voltage: DC 5~12V

8. Communication Interface: Standard TTL, RS485, Wiegand 26/34 (output)

9. Comes with a filling light, automatically fills light when dark

10. QR Code Recognition Time: Less than 0.5 second

11. Maximum Users: 20,000

12. Unlock Signal: 1 set of normally open contacts, 1 set of normally closed contacts

13. Signal Input: 1 set of open-door buttons

14. Applet-supported number of IC card Binding QR Code: 20,000

15. Card Reading Type: Mifare one (IC Card), Mobile Phone NFC, Second-generation ID card serial number

16. Card Reading Distance: 3~10cm

17. Card Reading Time: ≤0.3s

18. Machine Dimensions: 92mm*74mm*55mm,

19. Successful Reading Notification: Buzzer

IV   Interface Description:

闸机板"左/右开" ← NO
控闸机板"公共" ← COM
继电器常闭输出 ← NC

继电器
relay

此跳线应跳在L一侧

L ⬛
H

LED2
电源指示灯

LED1
继电器触发指示灯

正极 负极 触发
12V+ GND IN

DC12V+
DC12V-
DC12V+ (接电源)

水晶头
Rj-45
plugs
1 2 3 4 5 6 7 8

1:DC5~12V
2:GND
3:GND
4:RS485A
5:TTL-TXD
6:TTL-RXD
7:WG D0
8:WG D1

1~8

Pin	Description	Color	Remarks
1	DC12V+	White+Orange	Access to dedicated power supply 12V Positive Electrode
2	GND	Orange	Access to dedicated power supply GND

3	**RS485A**	White+Green	1. Transmit through of QR code data.
4	**RS485B**	Blue	2. Communicate with the computer to complete parameter settings, data import / export, program upgrades, etc.
5	TTL-TXD	White+Blue	TTL Data transmission. Transmit QR code data
6	TTL-RXD	Green	TTL Data Reception/ Unlocking signal
7	WG D0	White+Brown	Wiegand output, can be used as a QR reader, output user card number
8	WG D1	Brown	

User Applet QR code or IC card Authorization/Deregistration:

1. "Add Card" and "Del Card" Making:

   Within 1 minute after the QR reader is powered on, read the "master card making QR code", and the QR reader will immediately enter the master card making state with a long voice, and then read the first IC card as the "Add card", read the second IC card as the "Del card".

Master card making QR code

2. Authorize User IC Card/User Applet QR Code Permission:

   First, swipe the add card on the access control, the access control indicator will turn red and green alternately, then let the reader scan the user IC card/applet QR code, and authorize multiple users at once (volume authorization). After the mother card is swiped again, the authorization status is completed and the indicator light returns to normal green light flashing. (Note: When authorizing the user's applet QR code, the access control does not check the valid time and chance of QR codes, so the timeout/chance used-up ones can also be authorized)

3. User applet QR code binding IC card operation:

The access control administrator can also authorize only the user's IC card for using the IC card to bind his/her own applet QR code. The operation is as follows: the user holds his/her own IC card and continuously swipes it on the access control machine five times (Complete within 10 seconds. Each time the access control machine reads the swiping, the door will beep once.) The door will immediately enter the binding mode, the indicator light will turn red and green alternately, and then let the QR reader scan the QR code. The buzzer will sound for a period. If the binding is successful, the access control automatically exits the binding mode.

If the user's card is lost\the wrong card is bound, just re-bind with the new card, you can overwrite the previous binding information.

If the user changes the WeChat account on the mobile phone (the applet card number is generated by the WeChat account), simply re-bind the new WeChat applet QR code with the IC card, and it can overwrite the previous binding information.

Delete the user IC card / applet QR code permission operation:

The administrator first swipes the "delete card" on the corresponding access control. The access control indicator will turn red and flashes. Then let the reader scan the user IC card/applet QR code, which also allows multiple users to be deleted at one time. Then the administrator swipes the "delete card" again after scanning, which completes the deleting and the card is deleted. The indicator light will return to the flashing green light. (Note: When deleting the applet QR code of the user, the access control does not check the valid time and number of the QR code, and the timeout/chance used-up ones can also be deauthorized).

In order to facilitate future management, the access control administrator collects the applet QR code of each user in advance, and rename each QR code image file into the users' room numbers and names, and then archives them on the computer. When one of the users needs to report the loss of his/her IC card, the administrator can call out the QR code and delete its permission with the delete card, then authorize a new card. The user only needs to re-bind the WeChat applet with the new card.

If a user moves away, which the user, the mobile phone and IC card are all absent, the access control administrator can also call out the specific QR code from the computer and delete its permission by using the delete card.

If the user loses his/her IC card, the Property Management Office can call out the applet QR code that is previously bound. First, swipe the delete card on the access control and then scan the QR code. After a second swipe of the delete card, the IC card will be successfully deauthorized. Then use the mother card to authorize a new card for the user, so that the user can bind the applet QR code on the access control on his own, by swiping a new IC card on the access control for 5 times.

(So users who use the IC card are required to bind their own/their family members' applet QR code!)

4. Applet QR Code Binding Card Number Data and Access Authorization Card Number Data Import and Export:
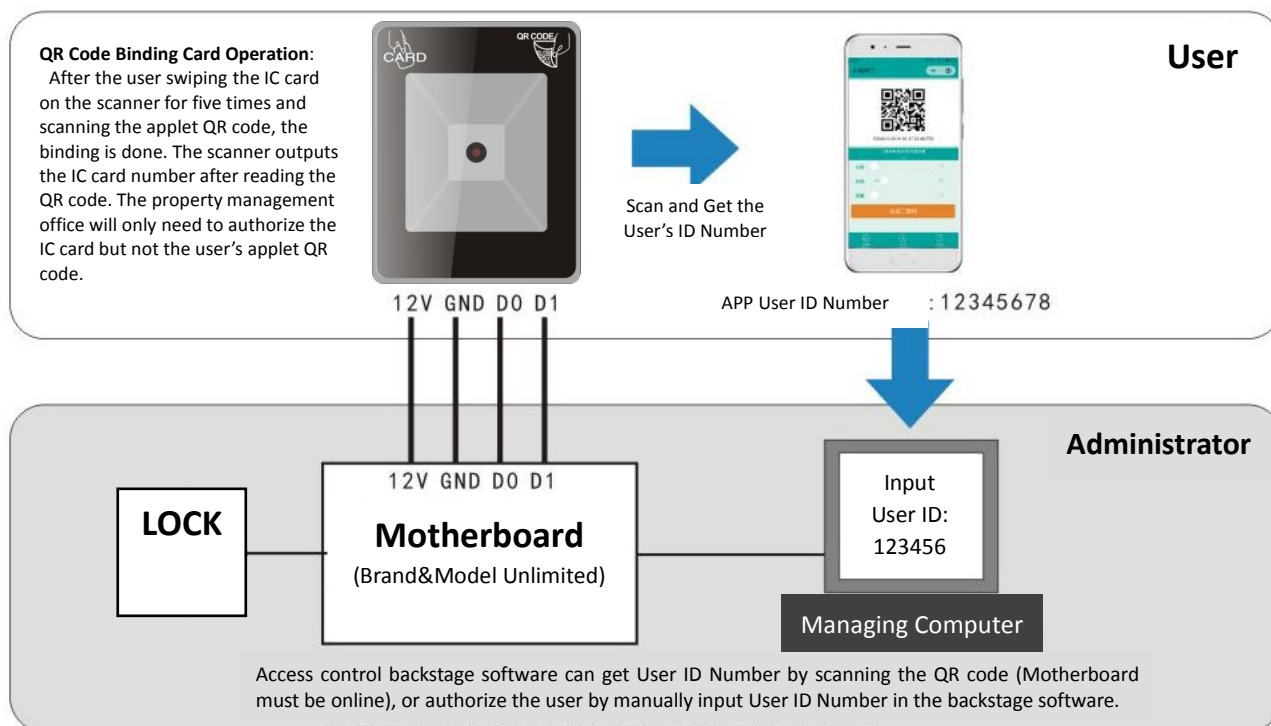
The access control administrator can use the access control setting software to export the authorization card number and the QR code binding data in the access control to the computer backup.

The administrator can use EXCEL to modify/delete the data. With the applet card numbers of all users be collected in advance, the administrator can input them into the backup form in the specified format, and then imported them into the access control device at one time which accomplishes the authorization of the user applet QR code. The administrator can also create multiple forms according to the user's permission level and import them into different access control.

The administrator can also set up a IC card issuer with the USB interface, and then read the ten-figure full number of the IC card distributed to the user to store them in the roster (or the original owner's roster of the Property Management Office), thereby realizing the correspondence between the card number and the user's name.

VI The Scanner Mode and The Third-Party Access Controller (Wiegand Interface) Connection Indication

The integrated access control also supports the scanner mode. The standard Wiegand 26/34 format is used to output the user IC card number/applet card number. When the user needs complex functions, an extra access controller can be added. The connection method is as follows:

QR Code Binding Card Operation:
 After the user swiping the IC card on the scanner for five times and scanning the applet QR code, the binding is done. The scanner outputs the IC card number after reading the QR code. The property management office will only need to authorize the IC card but not the user's applet QR code.

User

12V GND D0 D1

Scan and Get the User's ID Number

APP User ID Number   : 12345678

Administrator

12V GND D0 D1

LOCK

Motherboard
(Brand&Model Unlimited)

Input
User ID:
123456

Managing Computer

Access control backstage software can get User ID Number by scanning the QR code (Motherboard must be online), or authorize the user by manually input User ID Number in the backstage software.

VII   Introduction of the user WeChat Mini program (common for Android and iPhone):

1. WeChat Mini program："QROPEN"

"QROPEN" is an open and shared QR code generating software, which is designed to provide a dynamic QR code generating platform with time and chance limits for major access control manufacturers and users. Users can pull down the "WeChat list" or add the Mini program to the desktop, which can quickly display the QR code to open the door.

◆ This Mini program must be used in conjunction with our dynamic QR code reader. After registering the Mini program, it will generate a fixed unique card number; simply submit the card number to the access control administrator to quickly upgrade the original access control system to Mobile phone access. The original user card is still usable.

◆ Each time the user opens the Mini program, it will immediately display an encrypted time-limited dynamic QR code (10 minutes/no chance limit by default), and the door will open once the QR code reader gets the corresponding QR code.

◆ The QR code displayed by the mobile phone can be forwarded to the visitor to open the door, and the effective time of the QR code (1 minute to 24 hours) and the number of times of use in the same scanner (0~9 times, 0 means unlimited) can be set. It has a very high level of security and greatly facilitates the management of visitors.

"QROPEN" WeChat Mini program Main Page

QR code Display Area
Double tap to zoom in
Then double tap to send out
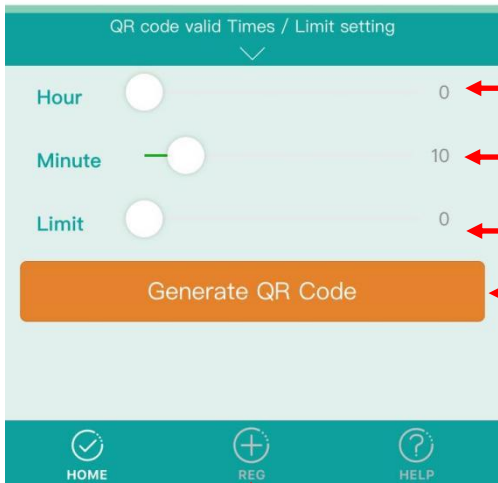
QR code Usable Time/Chance Setting
(10 minutes/no chance limit by default)
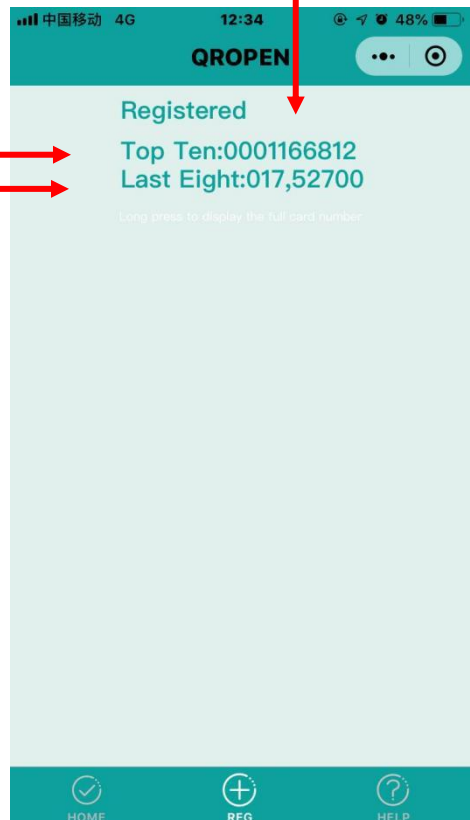
Tap to regenerate a QR code by
settings above

Check the user card number here

Long press to display full card number

Two different card number rules, which you can choose considering of the access control manufacturer software card number rule
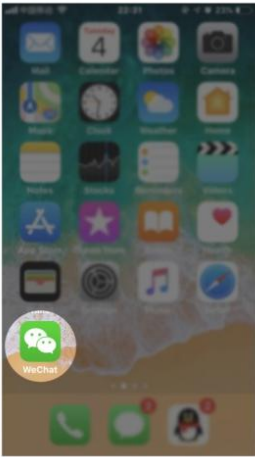Some use the top ten digits(WG34)
Some use the last eight digits(WG26)

Installation steps of WeChat Mini Programs

1

Download and install "Wechat"
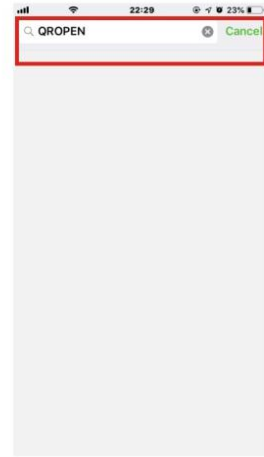
2

Click here.
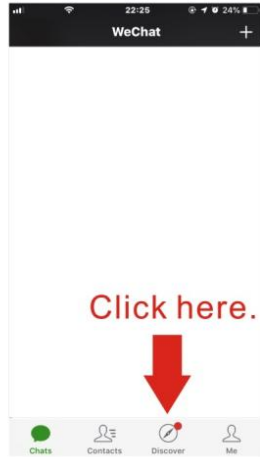
Click Discover
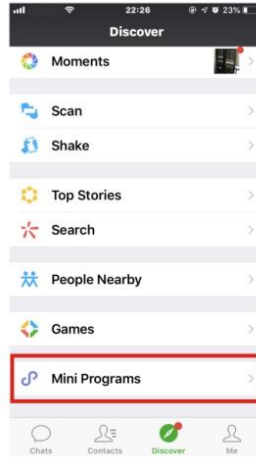
3

Click Mini Programs

4

Enter "QROPEN" and search

5

Click QROPEN

6

Click here.
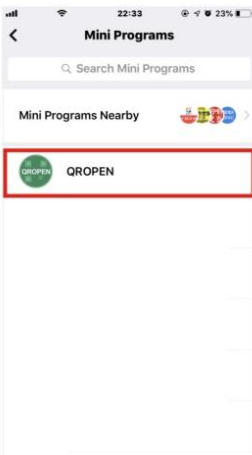
Open QROPEN and click REG

7

You can click here to close the program
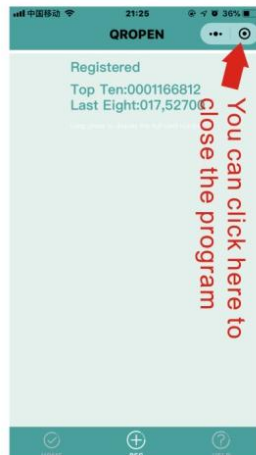
Registered user ID then give the ID to the Administrator of Access Control System

8

Scrolling down the screen
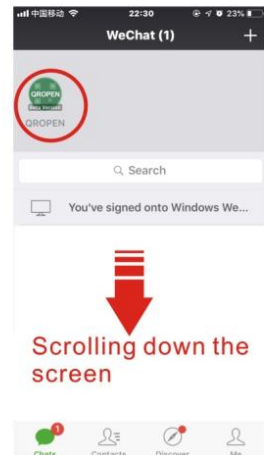
You can find "QROPEN" by scrolling down the screen in the chats interface.

www.S4A.com.cn