KEYKING DPU1000 Serires

System configure

Keyking Group

Catalog

Chapter 1 KEYKING Overview

1.1 Basic Composition of Access Control System

KEYKING access control system, including DPU1000, DPU3000, DPU3000POE and DGS500 series. In this manual, we focus on the DPU1000 access control system.

Model Identification：

DPU 10 2 4 NT

NT: 10/100M based network controller
4： Number of Reader Socket
2: Number of Door
10： 1000 series
DPU: Door Process Unit

DPU1000 access control system consists of DPU1012, DPU1022, DPU1044, DPU1012NT, DPU1024NT, DPU1044NT,Reader, Lock, Proximity Card、Sphinx4.4 software and some product accessories.

System Diagram：

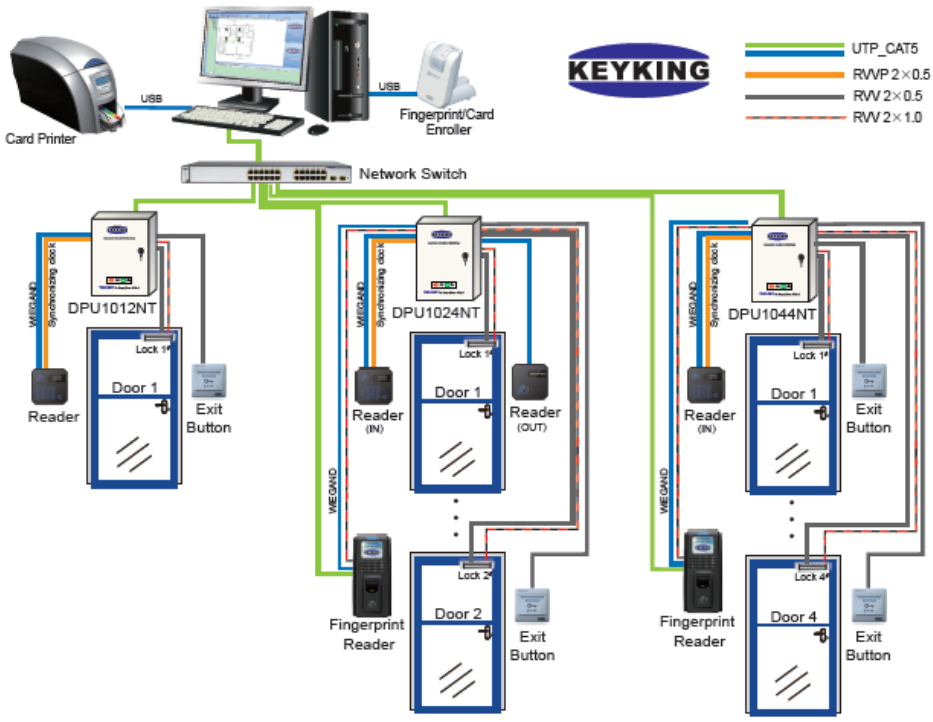


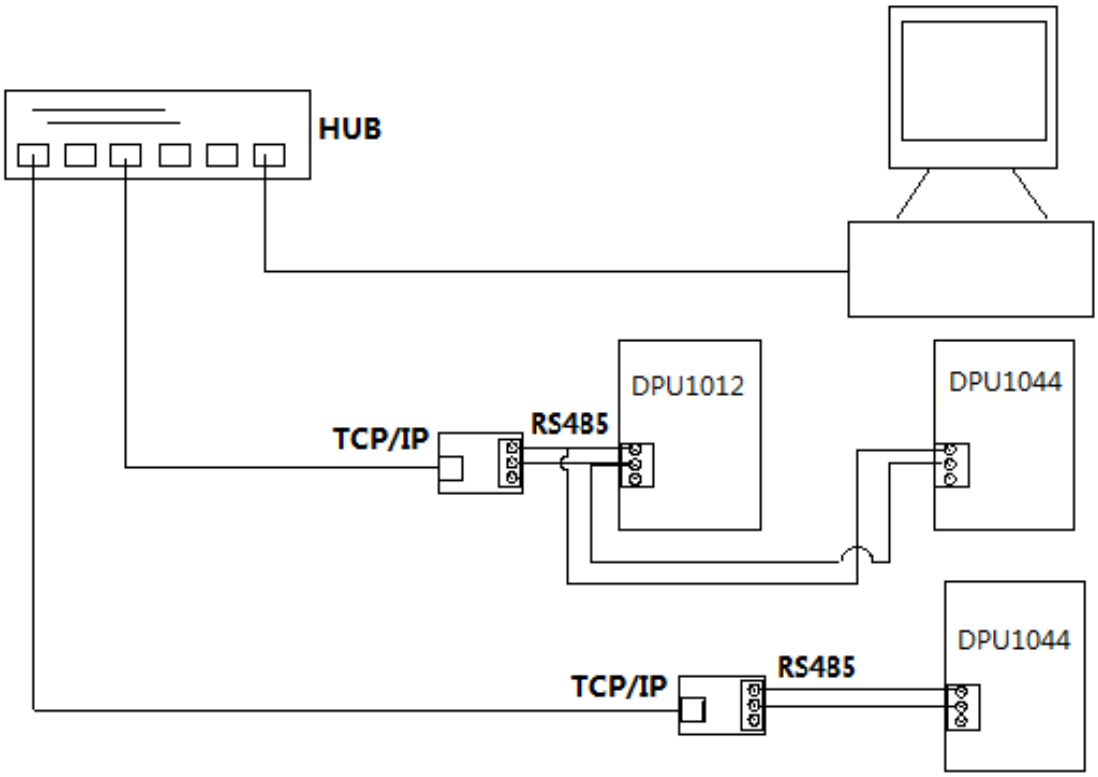
Figure 1-1-1 DPU1000 series connection diagram

Chapter 2 PCB Layouts & Connection

DPU1000 series are new design and state-of-the-art 1\2\4 doors access controllers made by KEYKING, it's the most effective solution for today's intelligent building. Perfectly designed to work with the Sphinx Software. The DPU1000 series allows wide range of security levels, according to the security level required at the location of the DPU1000, which can be used to control and record employee entry\exit inside or outside of restricted areas. The recorded data may be automatically fed into Sphinx security software.

DPU1000 Order Information:

Model		DPU1012	DPU1022	DPU1044	DPU1012NT	DPU1024NT	DPU1044NT
Doors		1 (double)	2 (single)	4(single)	1（double）	2（double）	4（single）
Reader Sockets	**Wiegand**	2	2	4	2	4	4
	RS485	2	2	4	2	4	4
Aux-Input		2	2	2	2	2	2
Aux-Output		2	2	2	2	2	2



Chapter 3 Hardware configure

3.1 Controller ID Setting

Disconnect the power supply before setting the address, then set the DIP switch 1-7 bit to the appropriate location, the address number cannot be repeated, otherwise it will cause 485 network communication failure.

Clear the memory RAM of the controller (if necessary). If you want to remove the RAM memory in the controller, set the SW 8 of the DIP switch to ON, By pressing the Reset button when power is on, the data in the controller RAM will be cleared.

3.2 Controller IP Configuration

Set DIP1 of SW2 to the ON position so that the IP and network parameters of the controller are configurable.

3.3 Security Check

- To ensure safety, please make sure that the ground terminal in the control box has been connected to the equipment GND of the building before the first power is delivered
- Make sure that all cables are securely connected and that they are energized.
- Cut off the power supply if the wire needs to be reconnect to avoid charging plug.

3.4 Controller Light Condition

- **The Power Indicator：**

The power indicator light is yellow (normally flashing every second).

- **TCP/IP Communication Indicator：**

LINK lights are always on, DATA lights flashing fast after communication is normal.

- **RS485 Communication Indicator：**

RX：Data receive indicator, red (as received data will flash fast).

TX：The data sending indicator, green (if data is being sent out, LED will flash fast).

3.5 Buzzer & LED Instructions

In order to distinguish different events. the reader will make some specific responses in daily operation,. The following table shows the response of the reader's LED indicator and buzzer to different events

Event	Parameters	LED	Buzzer	Frequency
Invalid card	NULL	Flash 3 times	Di Di Di	2.5HZ
Invalid date or time	NULL	Flash 3 times	Di Di Di	2.5HZ
Door open unnormal	☑Door Forced Open	Follow Buzzer	Di Di	1HZ
	☐ Door Forced Open	NONE	NONE	1HZ
DOTL	☑Door Opened too Long	Follow Buzzer	Di Di Di	2HZ
	☐Door Opened too Long	Normal	NONE	
Door closed	NULL	Back to Normal	Back to Normal	
Valid Card	☑Valid Card	Follow Relay	Diiiii(1s)	1HZ
	☐Valid Card	Follow Relay	Di	

Chapter 4 Software configure

4.1 Condition before configuration

Please make sure below conditions are existing. If not, please create these conditions.

(1) PC Sphinx will work as the server (Host).

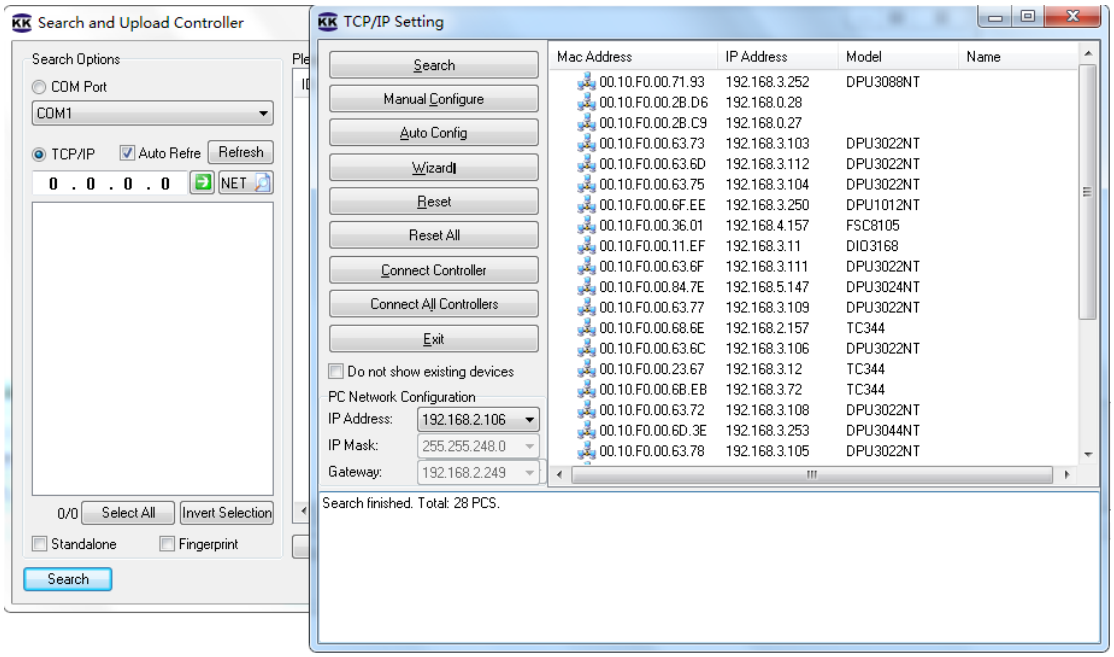
(2) Panel will work as Client.

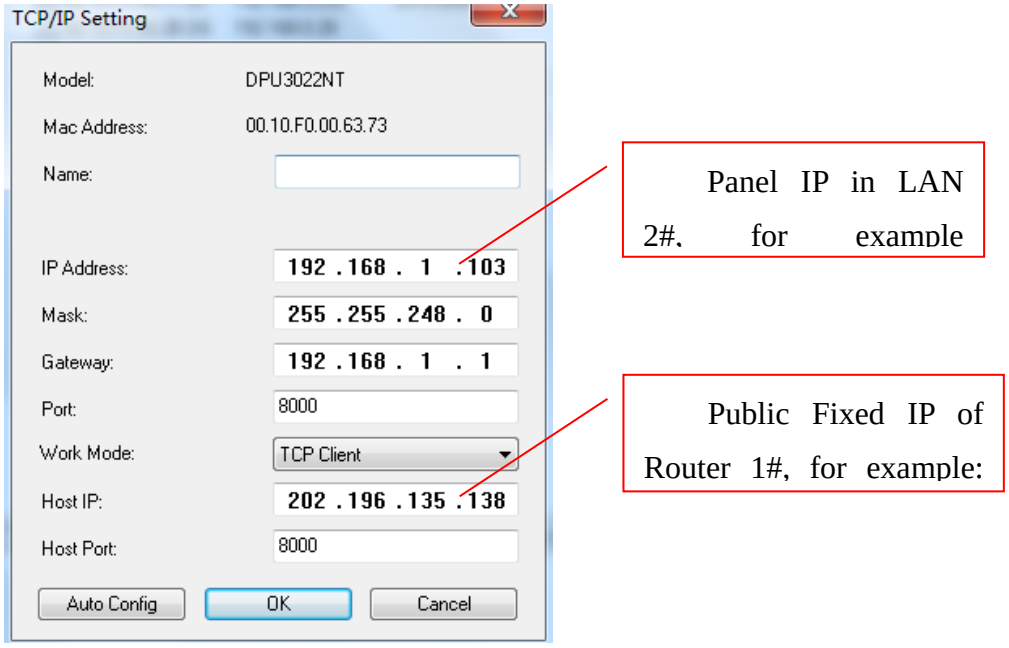
4.2 Setup panels in local place

4.2.1 Setup panel

Configure panel through TCP/IP Setting:TCP/IP Setting is a tool for local network, so you cannot setup this panel through TCP/IP Setting from any PC

Run TCP/IP Setting from any PC, you will see below picture.





Mac Address: Physical address of the controller, an unchanged and unique TCP Mark.

Name: Controller's network identity, can be identified by users.

IP Address: The IP of NT controller, the unique mark on LAN 2#.

Port: Input the network monitor port in this part, and TCP\IP module monitors the connection request of data server in this TCP port. Normally, the port is 8000,you can choose the other free ports when the port 8000 be used.

Server IP: In this part, you should input the public IP Address which manage the computer server.

Server Port: Input the data server's monitor port in this part, and the server is waiting TCP\IP module's connection request at the port. The common port is 8000.This port should be mapped though LAN 1#, and transferred by router.

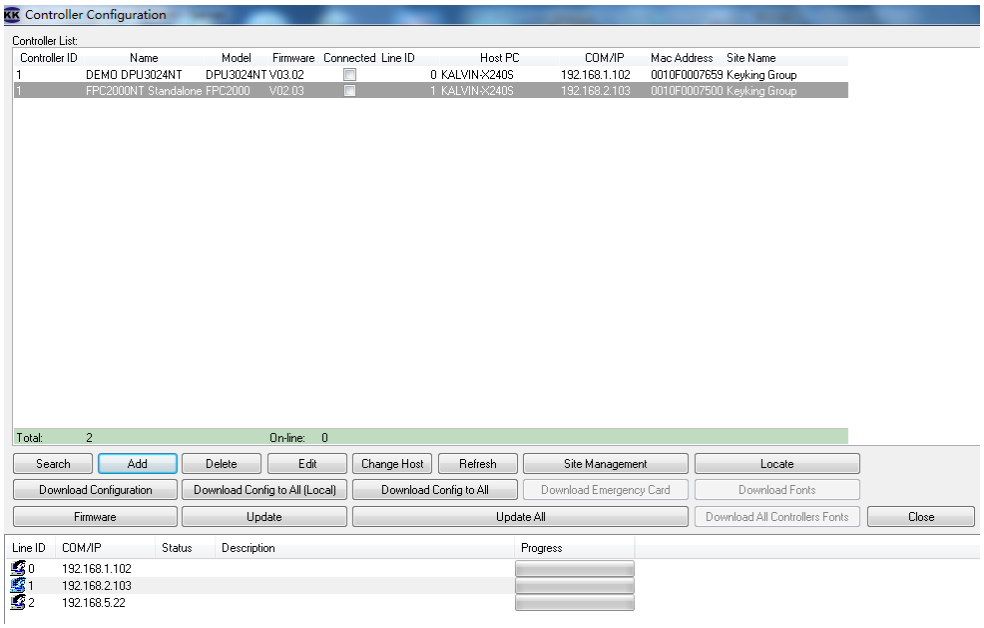
You can add panel by adding the controller's Mac address or IP address, instead of using "search" in the software, and Controller parameters should setup before adding.

Of course you can setup this panel through IE browser also, but I will not introduce it here.

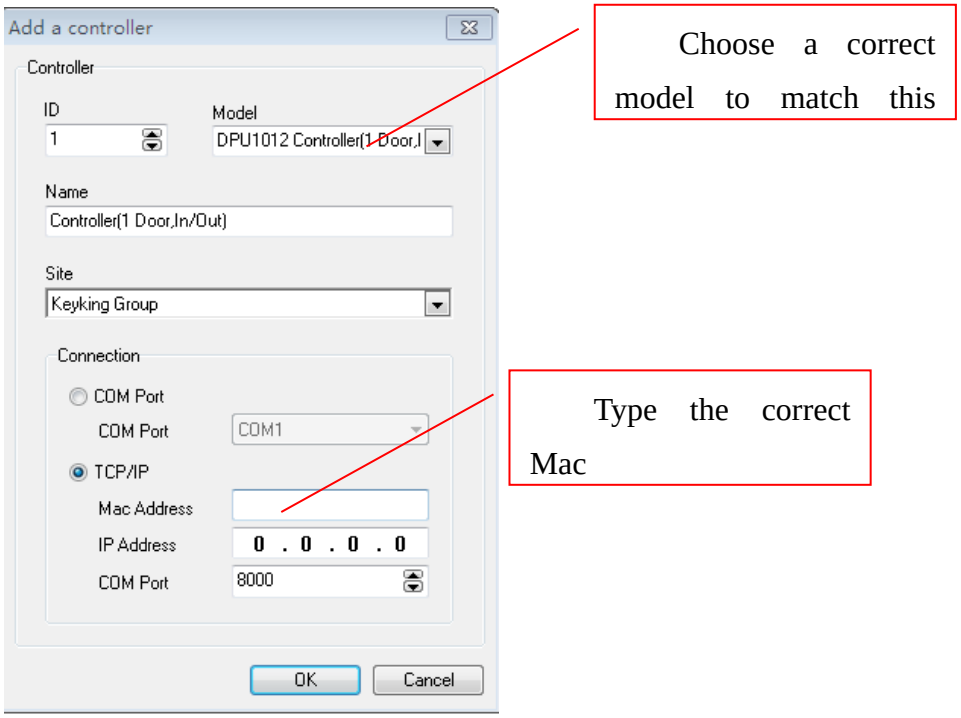
4.3 Add panel in Sphinx software

Please add a panel in "Setup/Hardware/Panel", and click "Add" to finish this step. Don't use

"search", because "Search" is not available for WAN, just for LAN.



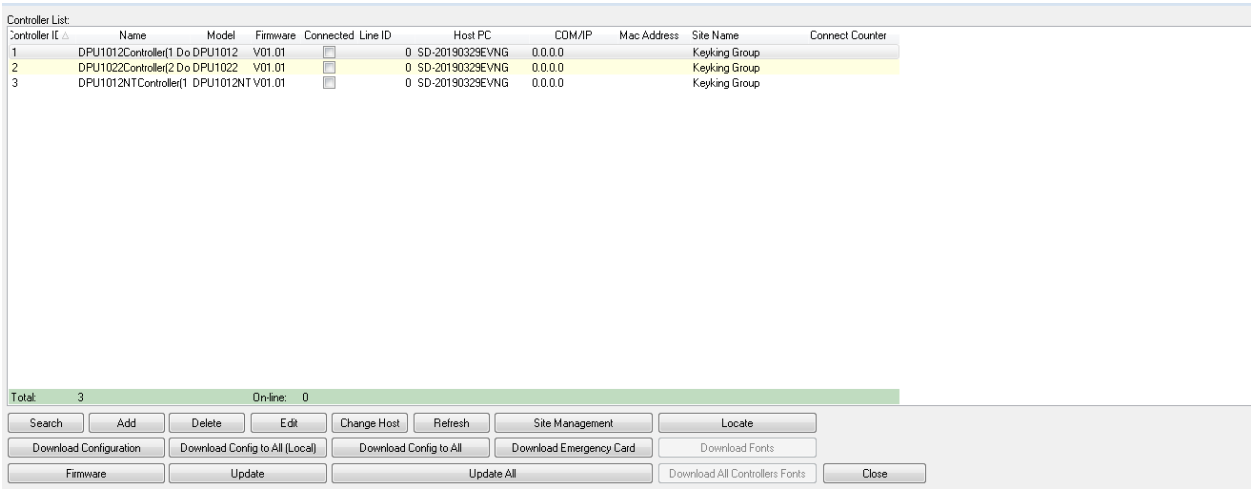
Click Add, and type all information needed for this controller you would like to add to system.



Choose a correct model to match this

Type the correct Mac

Click Ok, you will see below picture, and if the controller is power on, and everything work well, it will show you "Connected".


Controller List:
Controller ID
Name
Model
Firmware
Connected
Line ID
Host PC
COM/IP
Mac Address
Site Name
Connect Counter
1 DPU1012Controller(1 Do DPU1012 V01.01 0 SD-20190329EVNG 0.0.0.0 Keyking Group
2 DPU1022Controller(2 Do DPU1022 V01.01 0 SD-20190329EVNG 0.0.0.0 Keyking Group
3 DPU1012NTController(1 DPU1012NT V01.01 0 SD-20190329EVNG 0.0.0.0 Keyking Group
Total: 3
On-line: 0
Search
Add
Delete
Edit
Change Host
Refresh
Site Management
Locate
Download Configuration
Download Config to All (Local)
Download Config to All
Download Emergency Card
Download Fonts
Firmware
Update
Update All
Download All Controllers Fonts
Close

Chapter 5 Trouble Shooting

List of conventional instrument tools used to installing and diagnosing the system:

- ☐ Standard Screwdriver
- ☐ 6mm Corss Screwdriver
- ☐ Digital Multimeter
- ☐ Oblique Pliers
- ☐ Electric Iron and Solder Wire

Symptom	Possible Cause	Remedy
Yellow power LED dead	No power or low power	Check the input voltage at the terminals on the bottom of the PCB. It should be between 12V and 14VDC.
LED on reader dead	No power or low power	Check voltage at reader, it should be approximately 12v DC between red and black. Check that the total current draw from the controller is within limits.
Reader range is too short.	There is a magnetic field near the reader	Remove the item which produces the magnetic field.
	The reader cable is not shielded.	Use the shielded cable. Confirm there is at least 100mm between the reader cable and any high voltage cables.
	The reader has been mounted on a metallic surface.	Remount the reader on a non metallic surface
Cannot open the door when flashing the cards. (Check review event on PC first)	The card is invalid for the door.	Use software to enable the card for the door
	Time zone of the card is invalid.	Use software to set the user time zone to valid
	Communication problem between reader and the controller.	Check to see if the problem is caused by electromagnetic interference If so increase the distance between the reader cable and the interference or use shielded cable
	Lock problem	Check if the lock is working correctly

With power on, the reader goes “BEEP” but the controller cannot process the information.	Wrong connection between controller and readers.	Check the connection is correct.
	Wiegand format is not correct.	Please check your reader and card formats. As a test place all bits as 1 in the Wiegand Format Setup screen in the software for that particular bit format.
	Losing data from the controller.	Download the data again from the PC.
The controller cannot communicate with the converter.	Converter power is off.	Supply power.
	The baud rate setting is incorrect.	Set the baud rate the same as the software
	The RS-485 wires are reversed	Use the correct connections
Converter cannot communicate with PC.	The COM port setting is incorrect.	Correct the Com Port setting. Note use Windows Device Manager to find the correct comm. port.
	The RS-232 connections are reversed	Use the correct connections.
	The power supply of the converter is not sufficient.	The 9v PSU must be able to supply at least 300mA. If you use a USB cable as a PSU, please use a 2nd USB socket for the PSU or use a 12V 300mA PSU.
Some of the controllers on the RS-485 LAN cannot communicate.	Duplicate addresses	Make sure controllers have unique addresses
	The data in the RAM of the controller is corrupted.	Download the configuration again by using the software.
	RS485+ and RS485- reversed	Use the correct connections
The lock cannot be locked.	No power or low power for the lock.	Check the power supply for lock. Check that the output relay operates
The card number is different to what is expected	The reader output is set to 26 when 34 is required or the other way around	Reset reader output
Communication with the controllers intermittent	On a busy network the communication to the controllers may time out	Increase the “Network Delay Time” to 200ms
No communication with controllers	The software uses Port 8000 to communicate with the controllers. Make sure that no other software is using port 8000.	Change the Sphinx software to use another port
No communication with RS-232 or RS-485	The Desktop reader software could be using the same port as	Check and change the Desktop reader port

controllers	the controller communication	

Notes：

Please see the following functions, if the user does not know, may be considered to be faulty.

- **Boss Card：**

(1)can open all the door alltime without setting access level；

(2)door stay opened once swipe the boss card twice.；

(3)door status back to normal when double swipe the boss card again .

- **Manager Card (No Anti-PassBack)：**

(1) door stay opened once swipe the card twice；

(2) door status back to normal when double swipe the card again。