

## SOYAL TECHNOLOGY CO., LTD

RFID solutions / Proximity & Smart cards  
/ Hardware & Software / OEM/ODM Service



*Creating a Vision  
for Smart Life*



Application



Industry Standard



Quality



Certificates



Customization



Service



OEM/ODM



Peripherals



Website



YouTube

# 701ServerSQL & 701ClientSQL

## 701ServerSQL

Access Control and TCP-Link Server



701ServerSQL

701ServerSQL not only manages access control & I/O device's communication and parameter setting, it is also built-in cross-platform bridge (SOYAL-LINK) that offers Json / Xml / Modbus / ODBC Database communication interfaces, which can facilitate the seamless integration of software developer and SI system integrator with Property Management / SCADA / Visitor Appointment / BMS System and various APPs.

## 701ClientSQL

Access Control and Graphic Animation Control Software

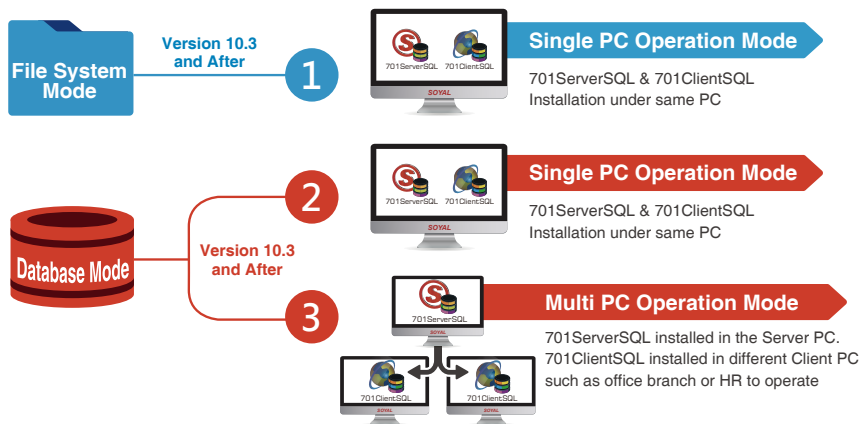


701ClientSQL

701ClientSQL is access control & attendance and graphic animation control software under multi-workstation operation mode, it features door group control, time control, historical data query, user data setting, daily report, monthly report, statistical report and other setting and query functions.

## 701ServerSQL & 701ClientSQL Installation

The new software allows the user to select three different installation ways.



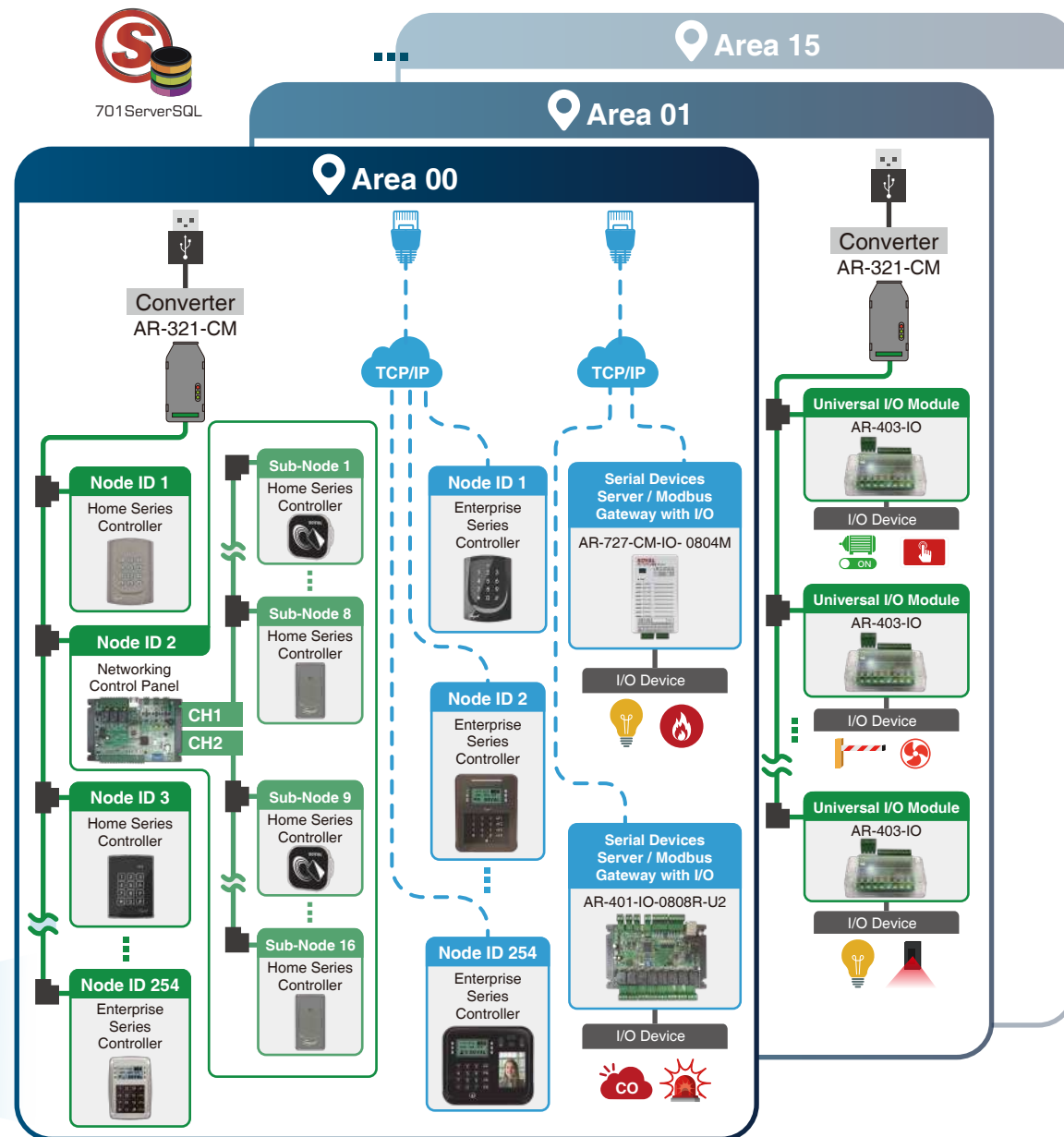
## Cross-System Integration Bridge

SOYAL-LINK is a cross-platform bridge and a high-speed passageway that assists integration with SOYAL hardware devices. When choosing SOYAL hardware devices, you can integrate all devices through SOYAL-LINK function that is built-in SOYAL 701ServerSQL software for various applications.



## Area

701ServerSQL support 16 Areas include Area00~Area15, 254 controllers per area, totally support 4064 controllers in 16 areas and 4906 I/O points per controller. Each area has independent Com Port and TCP/IP communication interface that allows it to connect and manage various Access Control devices and I/O devices from 16 different areas at the same time, in which can greatly improve the communication speed.





## 701ServerSQL Access Control and TCP-Link Server



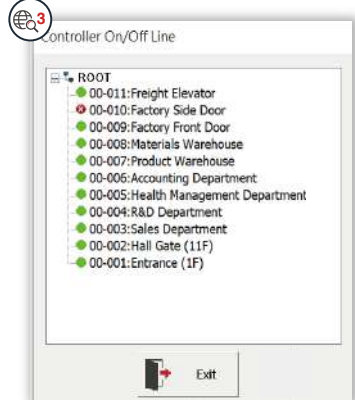
### COM: Communication Port Setting

Select different communication ports via COM Port or via TCP/IP for each Area; Enable / Disable Event Polling and adjust polling interval; Enter **TCP-LINK Address and Port number**.



### LAN: Hardware Setting

Select the corresponding model name for the device of each node ID in each area and also enter the correct IP address and port number for TCP/IP communication.



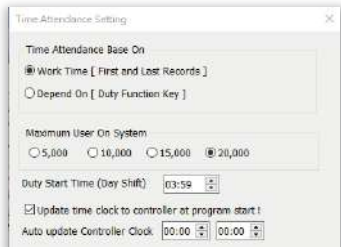
### LINE: Connection Status

Check the devices connection status by different symbols. Y (Blue) means the device is Online well. R (Red) means the device is Offline.



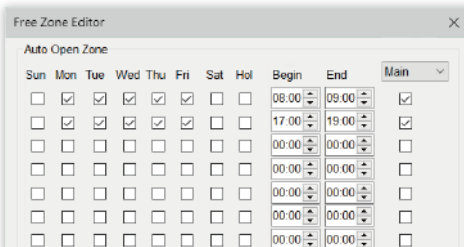
### Home & Enterprise Series Controller Parameter Setting

Set Controller Parameter such as door number, door relay time, arming delay, anti-passback, alarming condition, UART port device selection, and for biometric controller to read and write data.



### Time Attendance Setting

The relevant parameters of time attendance report can be set via the window such as select Time attendance type, set up Duty Shift time and other functions for backup and so on.



### Free Zone

Set Controller and Reader Auto Open Free Zone to allow user enter without presenting access credential during specific period of time. Set up to 16 free time zones for weekday, weekend, and holiday for Main access controller and reader.

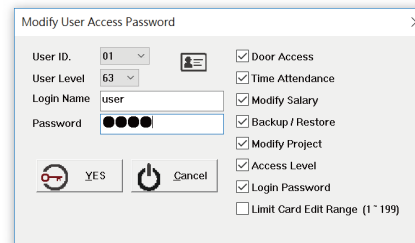


## 701ClientSQL Access Control and Graphic Animation Control Software



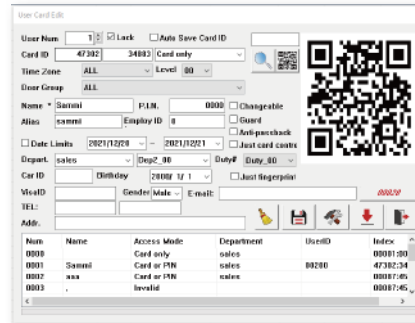
### Graphic Animation

Displaying real-time status of various DI/DO states of devices in the monitoring screen through visual images, customizable screens with dynamic graphics, toggle dialog windows, remote monitoring of elevator/mailbox controls, and more.



### Access Level/Password

After initialing login with the default account (the highest level), the user can set their own favorite [Login Name] and [Password] with particular Access functions.



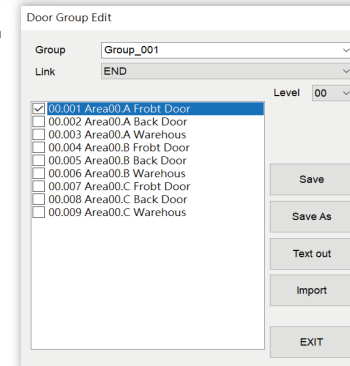
### User Card Edit

Can proceed to set the user data, including the card ID, access mode, and other relevant settings.

Index	Time	Station	Num	Name	Department	Departmen...	UserID	Status	Detail
0040	12:06:20	WGDoor1	0002	Julia	sales	Dept_00		(M11)Normal Access	00007-05021
0047	12:06:24	WGDoor1	0003	Julia	sales	Dept_00		(M11)Normal Access	65126-44438
0048	12:06:29	WGDoor1	0001	Sammir	sales	Dept_00	0	(M11)Normal Access	18838-00722
0049	12:06:34	WGDoor1						(M11)Normal Access	12321-42912
0050	13:04:25	WGDoor1						(M11)Normal Access	18838-00722
0051	13:04:33	WGDoor1	0001	Sammir	sales	Dept_00	0	(M11)Normal Access	00007-05021
0052	13:04:49	WGDoor1	0003	Julia	sales	Dept_00		(M11)Normal Access	65126-44438
0053	13:05:09	WGDoor1	0002	Julia	sales	Dept_00		(M11)Normal Access	00007-05021
0054	13:05:13	WGDoor1	0003	Julia	sales	Dept_00		(M11)Normal Access	65126-44438
0055	13:05:21	WGDoor1	0001	Sammir	sales	Dept_00	0	(M11)Normal Access	18838-00722

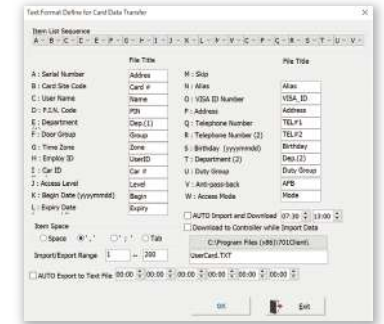
### Event Log

When the user swiping card or pressing PIN code on controller, the software will automatically generate a daily transaction report, each transaction record includes the data of access time, station, user name/ID, department, card ID, access status.



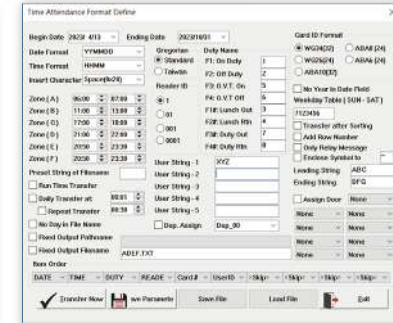
### Assigned Door Group Setting

Door group management provides a perfect solution to that requirement by setting different doors as a door group and only particular users are allowed to access designated door group.



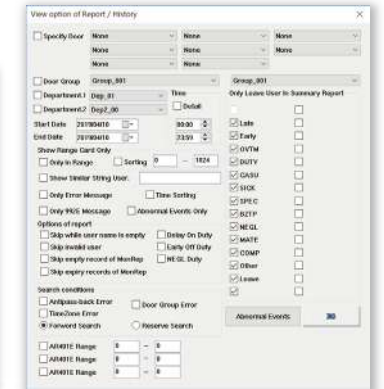
### Import/Export Format of Card

You can modify personnel card data through text files, making it convenient to create or modify personnel data all at once.



### Time Attendance Export Format

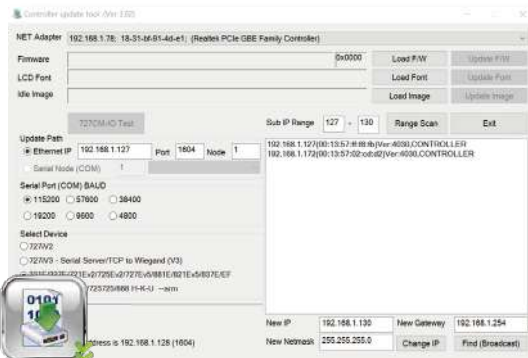
Convert historical records into text files for use with other attendance software that has a three-shift or multi-shift system. The arrangement order for converting log files into text files can be set by the user.



### View option of Report

This window function allows the user to select the different view options for door access control daily report by sorting via specify door, door group, time, department and user range or Time Attendance Daily /Multiday/Summary Reports.

Others supported software tools for fingerprint enrollment, auto lift, Mifare and DESFire encryption, software development tool, and firmware update to achieve different functions over same hardware.

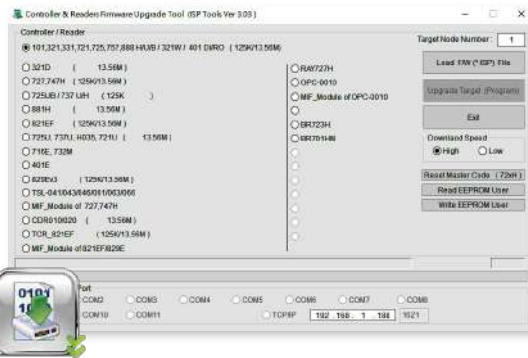


UDP UPDATER

## UDP UPDATER

### Firmware Update Program

- In-Field Firmware Upgrade for Enterprise E series controller
- Load Font and Change Customized Display Image for LCD Screen Controller
- Broadcast All IP Devices under the Same Network

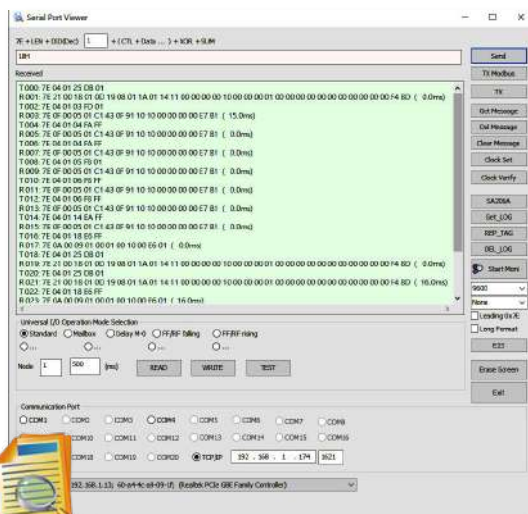


ISP Tools

## ISP Tools

### Firmware Update Program

- In-Field Firmware Upgrade of Home H Series Controller
- Reset Master Code for Home H series Controller
- Read / Write EEPROM User Data for Home H Series controller

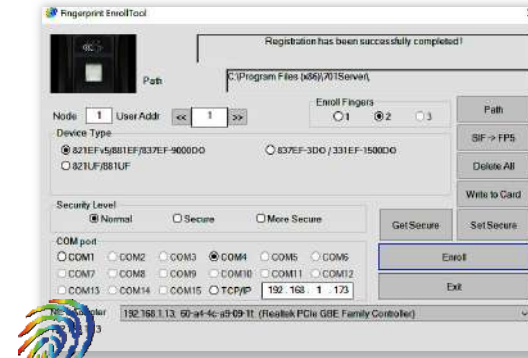


COMM VIEW

## CommView

### Assistant Software Program Tools

- Support Sending Protocol Commands to SOYAL Controllers for Parameters Setting and Functions Test, In Which can Assist the Developer for Quickly Software Integration and Develop
- Read and Clear Controller's Memory (HEX Code)
- Observe Main Control (Host-Slave) Devices and Communication Data (Troubleshooting)
- Set and Change the Operation Mode and Node ID of Universal I/O module AR-403-IO Series

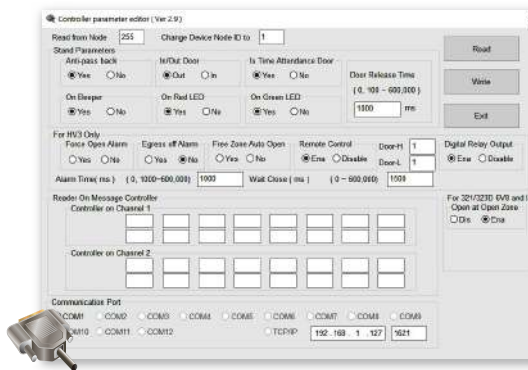


Enroll Tool

## Enroll Tool

### Enroll / Read & Write User's Fingerprint Data between PC and devices

- Directly Collect Fingerprint Data via Enroll Tool Software on Computer through USB or TCP/IP Interface
- The collected Fingerprint Data Can be Written to Other Fingerprint devices through 701Server Software, In Which is Suitable for Office HR that can Quickly Collect Fingerprints for Employees and Users.

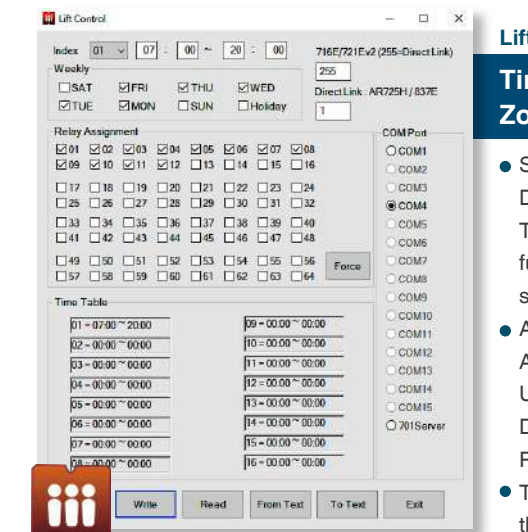


Node737

## Node737

### Set up Node ID and Parameters for Keypadless Controller

- Set up Node ID / Door Relay Time and Other Functions Such As Auto Free Zone, Force Open Alarm and So On for Keypadless Controller via COM Port Communication
- Enable / Disable Green / Red Led / Beeper for RFID Proximity WG Reader

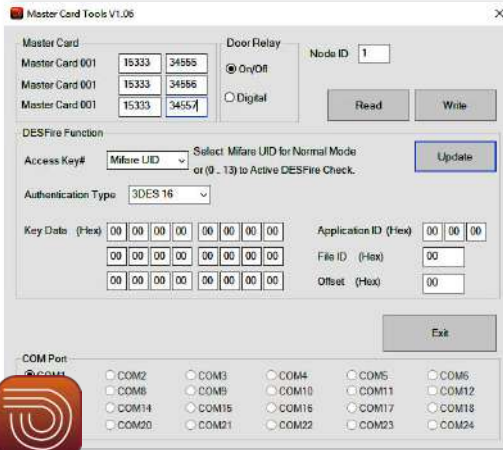


Lift Control

## Lift Control

### Time Scheduling, Auto-Scheduled Lift Free Zone, and Remote Activation of Lift Button

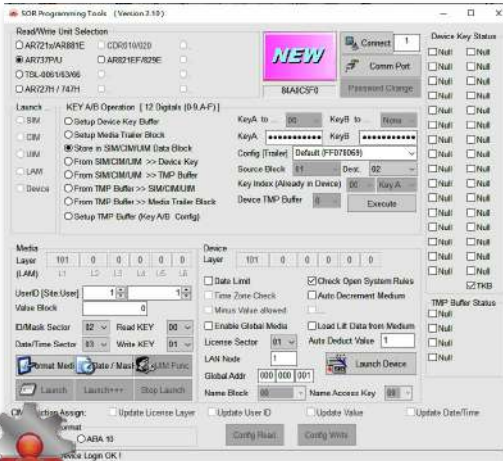
- Set Schedule According to the Days of the Week up to 16 Different Timed Periods Each Day that will Automatically Turn Devices On/Off that is suitable for energy saving function well-suited for use in public environmental control scheduling for lighting, air conditioning, and sprinklers.
- Allow the Designated Lift Floors to Set Up to 16 Sets of Auto-open Zone, during the period of Auto-Open Zone; The User can Directly Press the Floor buttons to Access the Designated Floor without Swiping the Valid Card during the Period of Auto-Open Zone.
- The Manager can also remotely Release the Floor Buttons through the software for Visitor to Access the Designated Floor.



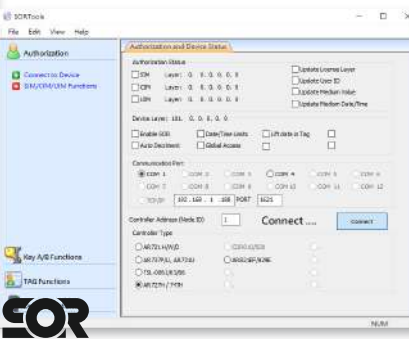
## 323D Master Program DESFire Controller & Master Card

- Set 3pcs of Master Cards for Controller and Use Mater Card to Quickly Add / Delete User Card when the Controller working on Standalone Mode
- Encrypt DESFire Encoder AR-837-P and DESFire Controller; then User Encrypted DESFire Encoder to Encrypt DESFire User Cards on Standalone Mode

323D Master



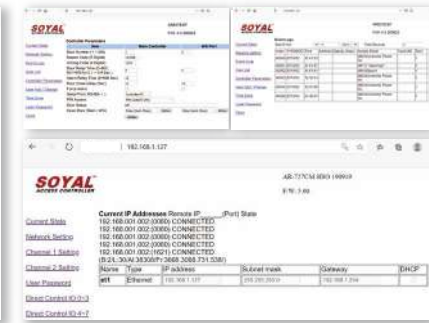
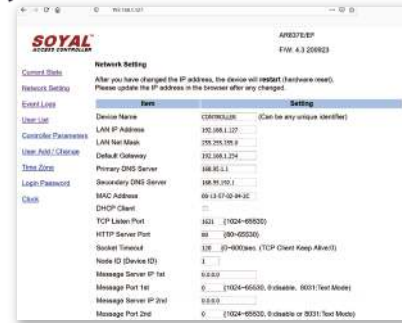
## Mifare Key (SOR) & SOR Tools Mifare Card SOR Encryption & Read / Write Block Data



Mifare KEY

- Encrypt Mifare Card and Mifare Device
- Program New UID and Write Time Limit / Value/ Global Address to Mifare Card for Various Applications
- Offline Command Card Can Set up Parameters and User Card Data for Standalone Controller
- 6-Layer Distributor Structure for Efficient Clients Management
- SOR Tools Allows the Developer to Directly Read / Write Mifare Card Data in Hex Format
- Patent No: I 365414

## WEB Parameter Setting



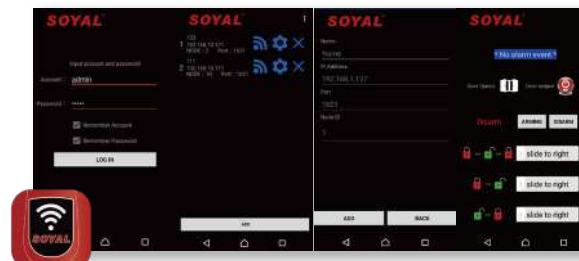
## IP Parameter Setting & User Data Program via Web Browser

- Easy Set up IP-Based Controller and Converter's IP Address and Parameters by Entering IP Address on Web Browser via Smartphone, Tablet or PC Anywhere and Anytime.
- Online Review Event Log from Controller
- Add / Delete / Modify User Card Data
- Remote Release Door Relay Time
- Manually Set Access Controller's Time Clock

## IP Parameter, Modbus Converter, Direct I/O Control, and Fire Alarm Release Setting via Web Browser

- Easy Set up IP-Based Controller and Converter's IP Address and Parameters Web Browser via Smartphone, Tablet or PC Anywhere and Anytime.
- Direct control and monitor I/O on-board recent status.
- Setting Fire Alarm automatically notified designated controller to release door open through UDP or RS485 mode.
- Establish a Server-Client connection bridge to extend wiring, limitless wiring distance, or to provide wireless connection.

## SOYAL APP



721APP

## Remote Open Door & Monitor Controller

- Remote Control Door Relay in two Mode of Pulse and Latch via Mobile Phone
- Remote Set up Arming / Disarm
- Get Event When Alarm Occurs
- Compatible with IP-Based Controller or RS485 Controller Connected via TCP/IP Converter



727APP

## Remote Monitor and Control I/O Devices

- Remote Monitor DI Devices Open / Close Status such as Monitoring Door Window Sensor, Carbon Monoxide Detector in Your Room
- Adjust DO Trigger Time and Remote Control DO Devices On / Off Such As Controlling Lighting, Air Conditioner in Your Room

# Multiple Door Controller with RS485 or TCP/IP

- ▶ Multiple choices: 2 doors/14 doors/16 doors/18 doors/32 doors and large user capacity 3000~65000 for centralized control requirements in large-scale architecture.
- ▶ Support fallback Mode of Emergency User list to open the door when the reader is disconnected from control panel; Built-in multiple sets of DI/DO and I/O extension board for higher security door access control that the door lock won't be unlocked even if the door is force open; Built-in DI Fire alarm contact that can be connected with fire alarm input detector and all door locks can be released in case of Fire or emergency accident occurs; Support UPS that ensure the device running during power outage.
- ▶ Support Multi-door Anti-pass back that is suitable for management in Car Parking, Entrance / Exit Turnstile and so on.

- Standard
- ◎ Optional By Order

## AR-716-E18

18 Doors Networking Control Panel



Optional By Order :



I/O Extension Board (AR-716-E-818O)

## AR-716-E16

16 Doors Networking Control Panel



Optional By Order :



I/O Extension Board (AR-401-IO-0608R)

## AR-716-E16-1608R-PU

IP 10-door centralized backup power controller



\* back up battery (sold separately)

## AR-716-PU-M

Backup Power System (Suitable for AR-716-E16)



\* back up battery (sold separately)

## AR-716-E-TC-M

Uninterruptible Power Supply



\* back up battery (sold separately)

Interface	Host	RS-485	RS-485: 9600 bps or TCP/IP: 10/100M Base T (External Module) ◎		9600bps(N,8,1)	RS485 X1, Baud Rate 9600 bps - 19200 bps(N,8,1) RS485 X1
		TCP/IP			10/100M Base T ◎	
	Slave Reader	CH2(RS-485)	8 Readers	8 Readers		
		CH1(RS-485)	8 Readers	8 Readers (Node ID 1, 2 and WG Port 0, 1 share the same Door Number)	—	
		Wiegand	2 Readers	2 Readers (WG Port 0, 1 and Node ID 1, 2 share the same Door Number)		
Door Numbers		18		16	10	
User Capacity		15,000		16,000 (Default value) / 32,000 / 65,000		
Event Log		11,000		32,000		
On-Board I/O	Input	Egress	Wiegand X2		Wiegand X2	
		Door Status	Wiegand X2		Wiegand X2	
		Fire Alarm	●		●	
		Reserved	X1		—	
	Output	Lock Output	Relay for Wiegand X2		Relay for Wiegand X2	
		Alarm Output	Relay for Public Alarm X1		Relay for Public Alarm X1	
Reserved		Relay X1		—		
Wiegand	Data In	Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1				
	LED Out	Red LED Output X1 / Green LED Output X1				
	Buzzer Out	X1				
External I/O	Input (Egress, Door Sensor)	X8		X16		
	Output (Lock)	Relay X8		Relay X8		
Watchdog Function		●				
Power Supply		9-24 VDC				
Power Consumption		< 2.5W		< 3W	< 4W	
Communication Redundancy		No		Host port		
Anti-Passback		16 Doors		16 Doors	10 Doors	
Door Group		●		●		
Access Time Zone / Auto Open Zone		63 / 16		63 / 16		
Dimension (mm)	PCB	150(H)X163(W)X20(D)		100(H)X147(W)X20(D)	117(H)X148(W)X20(D)	
	Panel Mounting Base	—		103(H)X175(W)X32(D)	117(H)X175(W)X30(D)	
	Metal Casing	—		180(H)X231(W)X62(D)	330(H)X250(W)X80(D)	
Net Weight (g)	PCB	approx. 250g		approx. 164g	approx. 100g	
	Panel Mounting Base	—		approx. 244g	approx. 282g	
	Metal Casing	approx. 1840g		approx. 1,754g	approx. 1,760g	
Environment	Operating Temperature	-20°C to +70°C				
	Storage Temperature	-40°C to +75°C				
	Operating Humidity	0%~90% (non-condensing)				
	Storage Humidity	0%~95% (non-condensing)				

Input Voltage	13.8-15VDC
Output Voltage	When source from External PSU (Power Supply Unit: 12~15VDC), Output voltage is the same as input voltage. When source from Back-up Battery (9~12VDC), Output voltage is the same as battery voltage.
Output Current	3A max
Relay output	2 Form C, 10A/250VAC / 12A / 28VDC
Relay control	Low trigger (trigger device must have 25V/25mA puncture capability).
voltage of supply	AC90-264V/47~440HZ
Power output	35W(max)
Dimension (mm)	PU-M:330(H)x250(W)x80(D) / TC-M:180(H)x231(W)x62(D)
Net Weight (kg)	PU-M:approx. 3.35 / TC-M:approx. 2.41

## AR-716-E-818O

Lock Relay and Door Sensor Extension Board for AR-716-E18



- ▶ 8 optical isolation inputs, replacing the door open buttons of door node up to 8 nodes.
- ▶ 8 relay outputs of Form C, replacing the door relays of door node up to 8 nodes.
- ▶ Door open time can be set by software.

## AR-401-IO-1608R

Lock Relay, Egress, and Door Sensor Extension Board for AR-716-E16



- ▶ 16 optical isolation inputs for 8 readers egress and door status.
- ▶ 8 relay output module form C for 8 readers lock output.
- ▶ Door relay open time and delay time can be set by software.

# RFID Multi Functional Access Controller (Enterprise Edition)

- Multi-Function Controller works as standalone and networking mode with multiple communication interface options: RS485 and TCP/IP, and HTTP Web Server for access control management.
- Support 125KHz, 13.56MHz, and Dual-Band 125KHz+13.56MHz; works as Main Access Controller or as Wiegand Reader
- Built-in 16,000/32,000/65,000 user capacity, 63 groups of scheduled access time zone, 16 groups of scheduled auto time zone, and set user access date and time limit.
- Built-in UART Port expansion enabling integration with mailbox control, auto-scheduled I/O module, LED display board, voice module, etc.

SSC (SOYAL SECURITY COMMUNICATION)

To enhance security of communication

- Standard
- Optional By Order



Frequency	125KHz 13.56MHz	ISO18000-2: EM4001 and EM4095 compatible ISO14443/ISO 7816-4 Mifare Ultralight, Classic, Plus / DESFire EV1, EV2 / NFC (card simulation) / ISO15693 / Felica												
I/O	Input	Egress Door status Main Controller X1 / Wiegand X1												
	Output	Lock Output Alarm Output Main Controller X1(Open Collector) Main Controller X1(Relay) / Wiegand X1(Open Collector) Main Controller X1(Relay)												
Wiegand	Data In	Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1												
	LED Out	Red LED Output X1 / Green LED Output X1												
Security	Arming Output/ Security Relay Output	● (Open Collector)												
	Duress Output	● (Open Collector)												
Tamper Switch	Type C (1000mA/30VDC)													
Doorbell	—													
Antipassback	●													
Door Group	●													
Access Time zone / Auto Open Zone	63 / 16													
Wiegand Format / UID Bits	Wiegand Data 0, Data 1 and Arming Output, Duress Output share the same terminal / 24-64(adjustable)													
RF Reading Range	125KHz	3-7 cm	1-7 cm	PC : 10-15 cm / Metal : 5-9 cm	3-7 cm	5-15 cm	3-7 cm	3-7 cm	3-7 cm	3-7 cm	3-7 cm			
	13.56MHz	1-3 cm	1-5 cm	PC : 2-8cm / Metal : 2-5 cm	1-5 cm	2-5 cm	1-5 cm	1-5 cm	1-5 cm	1-5 cm	1-5 cm			
QR Code Scan Distance	—													
RFID Crypto	CC Certification: AES Crypto comply with EAL5+ (13.56Mhz & Dual Band)													
Host	RS-485(9600 bps)	●	●	●	●	●	●	●	●	●	●			
	TCP/IP	○	○	○	○	○	○	○	○	○	○			
	POE	○	○	○	○	○	○	○	○	○	○			
	*SSC	●	●	●	●	●	●	●	●	●	●			
Serial	TTL UART(4800~115200 bps) half-duplex	X2	X2	X2	X2	X2	X2	X2	X1	X1	X1			
Wiegand Input	Wiegand 26-64													
Wiegand Output	Wiegand Data 0, Data 1 and Arming Output, Duress Output share the same terminal													
User Capacity / Floors Number	16,000 Users/64 Floors (Default value);32,000 Users/32 Floors;65,000 Users/16 Floors													
Event Log	32,000													
Power Voltage	9-24VDC													
Flash memory	Capacity 16Mb (The user data and event logs can be stored for more than 10 years after power off)					Capacity 32Mb(The user data and event logs can be stored for more than 10 years after power off)								
RTC	RTC clock can be maintained for 14 days after power off, and the time error per week is within 1 minute (vary depending on the installation environment)													
CPU	ARM Cortex M3 (32 bits)													
Power Consumption	<5W													
Indicator	LED	2 Bi-Color LED (Blue/Orange;Green/ Red)			1 Bi-Color LED (Green/Red)			1			6 LED (Green/ Red)			
	Buzzer	Limit switch (1 Form C/ 1000mA / 30VDC)												
TAMPER	Limit switch (1 Form C/ 1000mA / 30VDC)													
LCD Panel	128*64 (4 line messages, 16 Characters each line)													
Housing Material	PC / Zinc Alloy		Metal Housing	PC / Metal Housing ( PC+Zinc Alloy)		Zinc Alloy	ABS (Fire-proof level: 94V0)		PC	ABS (Fire-proof level: 94V0)				
Color	● Chrome		● Champagne ● Space Black	● Black		● Chrome	● Gray	Edge: ● Black/ ● Silver		Hairline texture printing; Edge: ● Black / ● Orange		Edge: ● Black/ ● Silver		
Keypad	Illuminated Touch-Panel / Invisible Keypad Function		Push button style keypad	Illuminated Touch-Panel / Invisible Keypad Function		Electroplated Rubber Keyboard	Illuminated Rubber		Illuminated Touch-Panel		Illuminated Rubber			
Dimension (mm)	158(H)X55(W)X30(D)		118(H)X68(W)X30(D)	PC Housing: 110(H)X79(W)X26(D) ; Metal Housing: 125(H)X89(W)X30(D)		140(H)X 92(W)X40(D)	126(H)X91(W)X46(D)	AR-837-E: 128(H)X94(W)X40(D) AR-837-EE: 128(H)X147(W)X60(D)		135(H)X103(W)X30(D)	128(H)X147(W)X60(D)	128(H)X147(W)X73(D)	Roof Type: 128(H)X147(W)X73(D) ;Standard Type: 128(H)X147(W)X65(D)	
Net Weight (g)	PC: approx. 140 / Zinc Alloy: approx. 245		approx. 300	PC Housing: approx. 120 / Metal Housing: approx. 470		approx. 430	approx. 240	AR-837-E: approx. 230 / AR-837-EE: approx. 395		approx. 255	AR-837-EA: approx. 340 AR-837-EA-T: approx. 370		approx. 320	approx. 320
Ingress Protection	IP65		IP66	IP55		IP56	IP65	IP65		IP66	AR-837-EA: IP65; AR-837-EA-T: No		IP65	IP65
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%~90% (non-condensing) / Storage Humidity: 0%~95% (non-condensing)													









	AR-331-EF	AR-837-EF9DO
FP Sensor Type	Optical Sensor	Optical Sensor
FRR	<0.1%	<1%
Image Resolution	450dpi	500dpi
Fingerprint Capacity	1500FP	9000FP
Total Users with FP Capacity	500 User (1-3 fingerprints for each user)	4500 User (1-2 fingerprints for each user)
Identification Speed (1:1000)	<1.5sec	<0.7sec
Sensible Temperature	+38. C-39. C	+30. C-31. C

	AR-837-EA
Verification Speed	1:3000 < 3.0 Sec
Face Capacity	3,000(User address must be within range 0-2999)
Image Screen	2.8 TFT LCD Screen (320*240)
Camera	RGB(640*480) + IR(640*480)
LCD Screen for Programming	128*64 Menu LCD Screen
Assistant Exposure Light	White LED / IR high brightness LED
FAR (False Accept Rate)	≤ 0.001%
FRR (False Rejection Rate)	≤ 0.4%
TAR ( True Accept Rate)	≥ 99.6%

	Body Temperature Measurement Module
Operating Temperature	+10 ~+35°C (Operating in indoor and windless environment )
Measurement Accuracy	0.1°C
Temperature Measurement Range	35.6 ~ 42.0°C
Response Time	2-3 Sec.
Measuring Angle of View	38 FOV X&Y
Wavelength Range	6.5-9.5 μm
Tolerance Scope	±0.5°C
Optimal Measurement Distance	50 cm(measurement result. The measurement result within ±10CM measuring distance can be accurate to ±0.5C range)

# RFID Multi Functional Access Controller (Home Edition)

- ▶ Economical access controller, available with standalone mode and networking
- ▶ Built-in 1024 or 3000 user capacity, 11 groups of scheduled access time zone, and 2 groups of scheduled auto time zone.
- ▶ Support Cascade Structure for easy scaling, under multi-door control panel scale up user capacity into 16000, scheduled access time zone into 63 groups, and scheduled auto time zone into 63 groups.
- ▶ In-field firmware upgrade for more varieties of applications : starting from standard application such as access controller, lift control, time attendance, payroll, and SCADA: graphic monitoring & remote control function; into automatic deduction charging station, interlock, mailbox management system, parking lot, and many more.












		AR-101-H Access Controller	AR-321-H Metal Controller	AR-331-H Multion Touch Keypad Controller	AR-721-H Keypad Controller	AR-723-H Access Controller	AR-725-H Touch Keypad Controller (Metal Housing)	AR-888-H Flush-Mount Touch Keypad Controller (US) (Glass)(Acrylic) (EU) (Glass)(Acrylic)	AR-323-D Smart Digital Door Lock Illuminated Touch Panel
Standard									
Frequency	125KHz 13.56MHz	ISO18000-2: EM4001 and EM4095 compatible ISO 14443/ISO 7816-4 Mifare Ultralight, Classic, DESFire EV1, NFC (card simulation)							
I/O	Egress	Main Controller X1(Wiegand share with main controller)							
	Input	Main Controller X1(Wiegand share with main controller)							
	Door status	Main Controller X1(Relay)(Wiegand share with main controller)							
	Output	Main Controller X1(open collector, share with lift control function, Wiegand share with main controller)							
Wiegand	Data In	Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1		Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1		Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1		Wiegand Data 0 Input X1 / Wiegand Data 1 Input X1	
	LED Out	Red LED Output X1 / Green LED Output X1		Red LED Output X1 / Green LED Output X1		Red LED Output X1 / Green LED Output X1		Red LED Output X1 / Green LED Output X1	
	Buzzer Out	Beeper Output X1		Beeper Output X1		Beeper Output X1		Beeper Output X1	
Security	Arming Output/ Security Relay Output	● (Open Collector)		● (Open Collector)		● (Open Collector)		● (Open Collector)	
	Duress Output	● (Open Collector)		● (Open Collector)		● (Open Collector)		● (Open Collector)	
Tamper Switch	Type C (1000mA/30VDC)		Type C (1000mA/30VDC)		Type C (1000mA/30VDC)		Type A (50mA/30VDC)		
Antipassback	●								
Door Group	●								
Access Time zone / Auto Open Zone	11 / 2								
Wiegand input / UID Bits	Yes / 24~32 (Adjustable) and 64								
RF Reading Range	125KHz 13.56MHz	— 1-3 cm	3-7 cm 1-3 cm	3-7 cm 1-3 cm	10-18cm 2-8cm	5-12 cm 2-8 cm	PC: 10-15 cm / Metal : 5-9 cm PC : 3-8 cm / Metal : 3-5 cm	5-15 cm 2-5 cm	
RFID Crypto	CC Certification: 3DES Crypto comply with EAL4+ (13.56MHz)								
Host	RS-485 (4800 bps)	●							
	*SSC	●							
Serial	UART PORT (Only Output)	●							
User Capacity / Floors Number	1,024 Users / 32 Floors	3,000 Users / 32 Floors	3,000 Users / 32 Floors	1,024 Users / 32 Floors	1,024 Users / 32 Floors	3,000 Users / 32 Floors	3,000 Users / 32 Floors	3,000 Users / 32 Floors	
Event Log	1,100	1,500	1,500	1,100	1,100	1,500	1,500	1,500	
Power Voltage	9-24VDC								
Flash memory	Capacity 256kb	Capacity 512kb			Capacity 256kb		Capacity 512kb		
RTC	RTC clock can be maintained for 14 days after power off, and the time error per week is within 1 minute (vary depending on the installation environment)								
CPU	8051series (8 bits)								
Power Consumption	<3W								
Indicator	LED	Bi-Color LED Frame (Green/Red)	3 Bi-Color LED (Blue/Red)	2 Bi-Color LED(Blue/ Yellow; Green/ Red)	Bi-Color LED (Green/Red)	Bi-Color LED (Green/Red)	Bi-Color LED (Green/Red)	3 LED (White) ;Bi-Color LED Frame (Green/Red)	
	Buzzer	1							
Tamper	No	Type C/ 1000mA / 30VDC			No	Type C/ 1000mA / 30VDC		Type A/50mA/30VDC	
Housing Material	ABS	Zinc Alloy	Zinc Alloy / PC		ABS (Fire-proof level: 94V0)		PC / Metal Housing (PC + Zinc Alloy)	Anti-Scratch PC+ABS / Tempered Glass Panel+ABS	
Color	● Black Label Sticker	● Chrome	● Chrome	● Black/ ● Gray/ ● Silver		● Black		● Black	
Keypad	No (External WG Keyboard for operation)	Illuminated Touch-Panel / Invisible Keypad Function			Rubber	No (External WG Keyboard for operation)	Illuminated Touch-Panel / Invisible Keypad Function		Illuminated Touch-Panel / Invisible Keypad Function
Dimension (mm)	37(H)X 37(W)X31(D)	114(H)X78(W)X33(D)	158(H)X55(W)X30(D)		111(H)X77(W)X26(D)	81(H)X43(W)X18(D)		PC Housing: 110(H)X79(W)X26(D) Metal Housing: 125(H)X89(W)X30(D)	EU: 88(H)X86(W)X34(D) US: 118(H)X81(W)X34(D)
Net Weight(g)	approx. 30	approx. 290	PC: approx.140 Zinc Alloy: approx. 245		approx. 100	approx. 40		PC Housing: approx. 120 Metal Housing: approx. 470	EU: approx. 110 US: approx. 120
Ingress Protection	No	IP56	IP56		No	IP56 / IP66(Epoxy)		IP55	IP65 (Surface)
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%~90% (non-condensing) / Storage Humidity: 0%~95% (non-condensing)								

Frequency	13.56Mhz	
Supported Tags	ISO 14443 /ISO 7816-4 Mifare Ultralight, Classic, DESFire EV1, NFC (card simulation)	
UID Bits	24~32 (Adjustable)	
RFID Reading Range	2-8cm	
Crypto	CC Certification: 3DES Crypto comply with EAL4+	
Host	RS-485 (9600 bps)	●
	*SSC	●
Serial	UART PORT (Only Output)	●
Door Type	Lock Type	US
	Door Thickness	40mm ~ 80mm *If do not have fitting size welcome to contact us. *If installation door thickness is 5cm or thicker, please give note when placing the order to provide compatible sparepart
	Opening Method	RH: Right Push / LH: Left Push / RHR: Right Pull / LHR: Left Pull
	Unlock Operation	13.56MHz tags, PIN CODE, and mechanical key
DI	Bolt detection	
User Capacity / Floors Number	1,024 Users	
Event Log	NO	
Power Supply	9-24VDC	
Power Consumption	<3W	
Indicator	1 Bi-Color LED (Green/Red) / 1 Buzzer	
Housing	Zinc Alloy	
Keypad	Illuminated Touch Panel	
Color	● Black	
Dimension (mm)	276(H)X26(W)X75(D)	
Net Weight(kg)	approx. 3.9	
Environment	Operating Temperature: -20°C ~ +70°C Storage Temperature: -40°C to +75°C Operating Humidity: 0%~90% (non-condensing) Storage Humidity: 0%~95% (non-condensing)	



# Proximity Reader

- ▶ Providing 2 frequencies for option: 125kHz or 13.56MHz, output format Wiegand and ABA etc adjustable per controller specification.
- ▶ RS485 Security Communication, long distance; built-in watchdog to prevent halting.
- ▶ Suited to external controller, easy integration with SOYAL or other brand's Access Control system.

		AR-101-U Mini Proximity Reader	AR-321-K/U Metal Proximity Reader	AR-331-K/U Mullion Proximity Reader	AR-721-K Keypad Proximity Reader	AR-723-U Tiny Proximity Reader	AR-725-K/U Proximity Reader	AR-888-K/U Flush-Mount Proximity Reader	AR-888-UL QR Code Proximity Reader	AR-661U RFID Long Range Proximity Reader	AR-661UG UHF Long Range Reader	AR-661UG-L RFID LCD Scanner
Standard												
Frequency	125KHz 13.56MHz	EM ISO 14443/ISO 7816-4 Mifare Ultralight, Classic, DESFire EV1, NFC (card simulation)										
Wiegand Output / UID Bits	Yes / 24-32 (Adjustable) and 64											
Input	Red LED X1 Green LED X1 Buzzer X1											
Output	Card Present X1											
RF Reading Range	125KHz	—	3-7 cm	3-7 cm	10-18 cm	6-12 cm	PC Housing: 10-15 cm Metal Housing: 5-9 cm	5-15 cm	—			
	13.56MHz	—	1-3 cm	1-3 cm	3-8 cm	3-8 cm	PC Housing: 3-8 cm Metal Housing: 3-5 cm	2-5 cm	—			
	Dual Band	1-3 cm	—	—	—	—	—	—	—	2-15 cm		
QR Code Scan Distance	—	—	—	—	—	—	—	—	5-20 cm			
Read/Write	125kHz: Read Only / 13.56MHz: Read/Write											
RFID Crypto	CC Certification: 3DES Crypto comply with EAL4+ (13.56MHz)											
Host	RS-485 (4800 bps)											●
	*SSC											●
Serial	UART PORT (Only Output)											●
Power Voltage	9-24VDC											
Power Consumption	<1W											
Indicator	LED	Bi-Color LED Frame (Green/Red)	3 Bi-Color LED (Blue/Red)	2 Bi-Color LED (Blue/Yellow; Green/ Red)	Bi-Color LED (Green/Red)	Bi-Color LED (Green/Red)	Bi-Color LED (Green/Red)	3 LED (White) / Bi-Color LED Frame (Green/Red)	Bi-Color LED Frame (Green/Red)			
	Buzzer	1										
Tamper	No	Type C/ 1000mA / 30VDC			No	Type C/ 1000mA / 30VDC	Type A/50mA/30VDC	No				
Housing Material	ABS	Zinc Alloy	PC / Zinc Alloy	ABS			PC / Metal Housing (PC+Zinc Alloy)	Anti-Scratch PC+ABS / Tempered Glass Panel+ABS				
Color	Black Label Sticker	● Chrome	● Chrome	● Black / ● Gray / ● Silver			● Black	● Black				
Keypad	No	AR-321-K & AR-331-K : Illuminated Touch-Panel AR-321-U & AR-331-U: No			Rubber	NO	AR-725-K / AR-888-K : Illuminated Touch-Panel AR-725-U / AR-888-U: No			No		
Dimension (mm)	37(H)X37(W) X31(D)	114(H)X78(W) X33(D)	158(H)X55(W) X30(D)	111(H)X77(W) X26(D)	81(H)X43(W) X18(D)	PC Housing: 110(H)X79(W)X26(D) Metal Housing: 125(H)X89(W)X30(D)		EU: 88(H)X86(W)X34(D) US: 118(H)X81(W)X34(D)				
Net Weight(g)	approx. 30	approx. 290	PC: approx. 140 Zinc Alloy: approx. 245	approx. 100	approx. 40	PC Housing: approx. 120 Metal Housing: approx. 470		EU: approx. 110 US: approx. 120				
Ingress Protection	No	IP56	IP56	No	IP56 / IP66(Epoxy)	IP55		IP65 (Surface)				
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%-90% (non-condensing) / Storage Humidity: 0%-95% (non-condensing)											

	AR-661U RFID Long Range Proximity Reader	AR-661UG UHF Long Range Reader	AR-661UG-L RFID LCD Scanner
Frequency	125KHz	902- 928 MHz / 865-868 MHz	TW: 902- 928 MHz US: 902- 928 MHz EU: 865- 868 MHz (Adjustable)
Standard	EM Standard	ISO18000-6C	
Supported Tag	125KHz EM tags	H3,4 chip tags can be used Vehicle tags and Hand-held tags	
Communication Interface	Wiegand / 34+4, ASYNC	Wiegand, RS485	Micro USB
Baud Rate	9600 bps (N, 8, 1)	9600 bps (N, 8, 1)	No
Reading Range	33-60 cm	4-6 Meters	> 50 cm
Read/Write	Read only	Read only	Read only
Watchdog function	Yes	Yes	Yes
Power Consumption	<3W	<18W	23 dBm
Power Supply	9-24 VDC	12VDC	12VDC
Indicator	3 LED, 1 Beeper	1 LED	No
Housing Material/ Color	ABS/Gray	ABS/Ivory	ABS/Ivory
Dimensions (mm)	230(L)x230(W) x39(H)	228(L)x228(W) x52(H)	112(L)x94(W) x31(H)
Weight(g)	approx. 1000	approx. 940	approx. 225
Ingress Protection	IP56	IPX6	No
Temperature	-20°C to +65°C		0°C to +45°C

# Industrial Control I/O Edition

- ▶ Support SOYAL and Modbus protocol, suited to the integration with IoT, SOYAL and general systems. Flexible choice, option with TCP/IP or RS485 connection per need.
- ▶ Suitable for Single Input Trigger Multiple Output, RS485/Modbus RTU Based Data Acquisition, Push Alert Notification for Cloud-Based Platform (TCP), etc.
- ▶ Works with environment sensor devices for Floor Plan Monitoring System and works with SOYAL Access Controller in 701ClientSQL Graphic Monitoring System.

Standard

## TCP

## RS485

### AR-727-CM-IO- 0804M

Programmable Logic Controller / Modbus Gateway with I/O (8 Digital Input/3 Digital Open Collector Output/1 Relay Output)



### AR-727-CM-IO- 0604R

Isolated Programmable Logic Controller / Modbus Gateway with I/O (8 Digital Input/3 Digital Open Collector Output/1 Relay Output)



### AR-401-IO-256256R-U2

DI256/DO256 Programmable Logic Controller / with Modbus Gateway X2 )



### AR-401-IO-0016R

16-ch-Relay Output Controller



### AR-401-IO-1709R

26-ch Isolated DI/RO Module



### AR-401-IO-1608R

RS485 Reader Lock Expansion Board (8 doors / including Door Lock Relay, Egress, Door Status)



### AR-403-IO-0202M-IR

Universal I/O Module



### AR-403-IO-0404M

Universal I/O Module



### AR-403-IO-0404P



Isolated Universal I/O Module










Protocol	ModBus-TCP, ARP, IP, TCP Client,UDP, ICMP, HTTP, DHCP, NetBIOS			Modbus RTU, Soyal							
Interface	Ethernet	10/100 Mbps Base T Ethernet <-> RS485 Support TCP Server, TCP Client, and UDP Mode			—						
	PoE	—	—	PoE (Optional) 12W/1A	—	—	—	—	—	—	
	Serial port	RS485 X2,Baud Rate 2400 bps - 115200 bps(N,8,1),1K/1k Tx/Rx Buffer			RS485 X1,Baud Rate 9600 bps - 19200 bps(N,8,1)			RS485 X1,Baud Rate 9600 bps(N,8,1)			
I/O	Input	Digital Input	X8	—	—	—	—	X2	X4	—	
		Isolated Input	—	X8	X8	—	X17	X16	—	—	
		Optocoupling	—	●	●	—	●	●	—	—	
	Output	Fire Input	●	●	●	—	●	—	—	—	
		Mosfet Output	X3	X3	—	—	—	—	X2	X4	X4
		Relay Output	X1	X1	X8	X16	X9	X8	—	—	—
	Infrared	—	—	—	—	—	—	—	—	—	
Independent Power Supply	—	●	●	—	●	—	X1	—	—		
Wiegand port	DO-1 & DO-2 Output WG 128bits maximum, supporting user defined format, auto add even parity bit and odd parity bit and various format, etc.			—	—	—	—	—	—	—	
Watchdog	●	●	●	●	●	●	●	●	●		
Power Voltage	9-24 VDC			9-24 VDC							
Power Consumption	<2W			<4W	<4W			<1W			
Surge Suppression	400W peak power dissipation. Clamping time < 1 picosecond (theoretical) Power: bi-directional avalanche breakdown device. RS485 bi-directional avalanche breakdown device.			400W peak power dissipation. Clamping time < 1 picosecond (theoretical) Power: bi-directional avalanche breakdown device. RS485 bi-directional avalanche breakdown device.							
Power Fuse	Power & RS485 both with PTC Protector			Power & RS485 both with PTC Protector							
Dimension	PCB	106.5(H)x66(W)x27.7(D)			127(H)x148(W)x20(D)	120(H)x190(W)x20(D)	117(H)x148(W)x20(D)	60(H)x43(W)x20(D)			
	Panel Mounting Base				127(H)x175(W)x30(D)	117(H)x175(W)x30(D)	120(H)x220(W)x30(D)	117(H)x175(W)x30(D)			
	Metal Box				180(H)x231(W)x62(D)	180(H)x231(W)x62(D)	180(H)x231(W)x62(D)	180(H)x231(W)x62(D)			
Net weight	PCB	approx. 120			approx. 100	—	approx. 100	approx. 31			
	Panel Mounting Base				approx. 232	approx. 182	approx. 455	approx. 182			
	Metal Box				approx. 1760	—	approx. 1760	approx. 1760			
Operating Temperature	20°C ~ +70°C			20°C ~ +70°C							
Certifications	LVD	EN 62368-1			EN 62368-1						
	EMC	En 55032			En 55032						
	EMS	IEC 61000-4-2 ESD: Contact 6kV; Air: 8kV IEC 61000-4-3 RS: 80MHz to 2.7GHz: 10V/m			IEC 61000-4-2 ESD: Contact 6kV; Air: 8kV IEC 61000-4-3 RS: 80MHz to 2.7GHz: 10V/m						

# Energy Saver / Card Encoder / Card Register Reader / Fingerprint Enroller

- ▶ Support Mifare/DESFire Read/Write / encryption for anti-cloning to enhance usage security.
- ▶ Support USB interface Card and Fingerprint enrollment; after enrolling on computer, the card or fingerprint data can be downloaded to other devices for usage.
- ▶ Two Mifare Energy Saver for choice, applied to card encryption and consumption places such as hotel, cashless vending, POS machine, Public transportation, student dormitories.







		Energy Saver	
		AR-837-W LCD Card Energy Saver	AR-888-W Card Energy Saver
<ul style="list-style-type: none"> <li>● Standard</li> <li>◎ Optional By Order</li> </ul>			
Frequency	13.56MHz	ISO14443 / ISO 7816-4 Mifare Ultralight, Classic, Plus / DESFire EV1, EV2 / NFC (card simulation) / ISO15693 / Felica	ISO 14443/ISO 7816-4 Mifare Ultralight, Classic, DESFire EV1, NFC (card simulation)
RF Reading Range	Card Holder Type		
Crypto	CC Certification: AES Crypto comply with EAL5+		CC Certification: 3DES Crypto comply with EAL4+
Host	RS-485	●	●
	TCP/IP	9600 bps	4800 bps
	POE	◎	—
	*SSC	●	●
Serial	TTL UART (4800~115200 bps) X2 (half-duplex)		UART PORT (Only Output)
Wiegand Input	Wiegand 26~64		—
Wiegand Output	Wiegand Data 0, Data 1 and Arming Output, Duress Output share the same terminal		—
Wiegand Output / UID Bits	Yes / 24-32(adjustable) and 64		—
Wiegand	Input	Red LED X1 Green LED X1 Buzzer X1	
	Output	Card Present X1	
Door/User Capacity/ Floors Number	2 Door / 16,000 Users/64 Floors (Default value); 32,000 Users/32 Floors; 65,000 Users/16 Floors		3,000
Event Log	32,000		1,500
Power Voltage	9-24VDC		
Flash memory	Capacity 32Mb		—
RTC	RTC clock can be maintained for 14 days after power off, and the time error per week is within 1 minute		—
CPU	ARM Cortex M3 (32 bits)		—
Power Consumption	<5W		<3W
Indicator	LED	6 LED (Green/ Red)	Bi-Color LED Frame (Green/Red)
	Buzzer	1	
LCD Panel	128*64 (4 line messages, 16 Characters each line)		—
Housing Material	ABS		
Color	Edge: ● Black / ● Silver		● Black
Keypad	Illuminated Rubber		
Dimension (mm)	128(H)x147(W)x68(D)		EU: 88(H)x86(W)x34(D) US: 118(H)x81(W)x34(D)
Net Weight(g)	approx. 395		EU: approx. 110 US: approx. 120
Ingress Protection	No		
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%~90% (non-condensing) / Storage Humidity: 0%~95% (non-condensing)		


	DND&MUR Switch AR-888-CPO AR-888-CPI	DESFire Card Encoder AR-837-P	MIFARE Card Programmer AR-725-P
		 Included DESFire Launch Card	 Authorization Cards (Optional By Order)
Frequency	—	13.56MHz	13.56MHz (Using for Encryption, Mifare only)
Standard	—	ISO14443A (3DES)	—
Supported Tag	—	DESFire Tag (EV1, EV2)	MIFARE Tag
Finger Capacity	—	—	USB Com Port
Communication Interface	—	RS485(9600, N, 8, 1)	USB
Reading Range	—	1-3 cm	1-3 cm
Read / Write	—	Read / Write	Read / Write
Watchdog function	—	Yes	—
Power Supply	—	<5W	<0.5W
Power Supply	9-24VDC	9-24VDC	Power supplied via USB 5VDC
Relay	24VDC/7A , 240AC / 7A	—	—
Do Not Disturb/ Make Up Room LED	Low Active / 20mA max (AR-888-CPI)	—	—
Indicator	CPO : 3 Bi-color LED / CPI : 2 Bi-color LED	6 LED / 1 Buzzer	1 Bi-color LED / 1 Buzzer
Switch button	CPO : 2 (DND&MUR) / CPI : 1 (Doorbell)	—	—
	ABS+PC Panel	ABS	ABS
	88(H)x86(W)x34(D)	128(H)x147(W)x60(D)	110(H)x79(W)x26(D)
Net Weight (g)	approx. 90	approx. 470	approx. 90
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%~90% (non-condensing) / Storage Humidity: 0%~95% (non-condensing)		

	Illuminated Backlight Access Reader AR-725-U-USB	USB Dual-Band Quick Card Registration Reader (for 701Client) AR-725-R	USB Dual-Band Reader (Support NFC/ Keyboard Simulation) AR-725-N	Mullion Fingerprint Enroller AR-331-UF
				
Frequency	13.56MHz	Dual Band (125kHz + 13.56MHz)	Dual Band (125kHz + 13.56MHz)	Fingerprint Capacity 1,500
Supported Tags	MIFARE Tag	EM Tag, MIFARE / DESFire Tag	EM Tag, MIFARE / DESFire Tag / 15693	Communication Interface USB 2.0 Virtual COM Port
RFID Reading Range	3-8 cm	1-3 cm	1-3 cm	Power Supply 5VDC
Interface	USB / RS485 / RS232	USB	USB	Relay <5W
Read / Write	Read Only	Read Only	Read Only	Indicator 2 Bi-Color LED (Blue/Yellow; Green/ Red) / 1 Buzzer
Indicator	1 Bi-color LED / 1 Buzzer			Housing Material ABS
Power Voltage	Power supplied via USB 5VDC			Dimension (mm) 158(H)x55(W)x30(D)
Power Consumption	<0.5W			Net Weight (g) approx. 140
Interface	USB Com Port	USB Plug & Play		
Function Details	USB Mifare reader, used for transfer card UID only	Quick RFID tags enrollment reader on 701Client software	Keyboard simulation, quick RFID card enrollment in TXT and excel document	
Housing Material	Desktop Type: PC / Wall-mounted Type: ABS	ABS	ABS	
Color	Desktop Type: ● Black / Wall-mounted Type: ● Black / ● Gray / ● Silver / ● Pearl White	● Black	● Black	
Weight (g)	Desktop Type: approx. 90 / Wall-mounted Type: approx. 150	approx. 90	approx. 90	
Dimension (mm)	110(H)x79(W)x26(D)	110(H)x79(W)x26(D)	110(H)x79(W)x26(D)	
Environment	Operating Temperature: -20°C ~ +70°C / Storage Temperature: -40°C to +75°C / Operating Humidity: 0%~90% (non-condensing) / Storage Humidity: 0%~95% (non-condensing)			

# Signal / Interface Converter

- ▶ Adjustable baud rate (4800-115200 bps) with multi-signal conversion: RS-232/RS485 to TCP/IP (TCP Server/TCP Client/UDP/Virtual COM/TCP Keep alive), USB to RS45, TTL to RS485.
- ▶ LED indicators for power supply and communication RX/TX for debugging and status display. Surge protection: 3kV, low power consumption: <1w, Active distance: 300 meters.
- ▶ Support 12V or 5V devices respectively. Expandable with peripherals devices, ex: LED display, lift control, PLC, printer, etc.






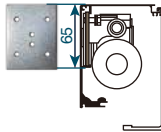
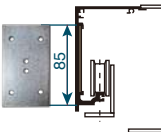
	<b>AR-727-CM</b> Serial-to-Ethernet Server 	<b>AR-321-CM</b> Isolated USB to RS485 Converter  	<b>AR-321-CM-485232</b> Isolated RS-232 / RS-485 Converter  	<b>AR-321L485-12V / 5V</b> TTL to RS485 Converter <b>AR-321L232-5V</b> TTL to RS232 Converter 
Interface	10/100 Mbps BaseT Ethernet <--> RS485 (By order: RS232,RS232+RS485) Auto detect	USB <--> RS485	RS485 <--> RS232	TTL <--> RS485 TTL <--> RS232
Baud Rate	4800 bps - 115200 bps	4800 bps - 115200 bps		
Protocol	ARP, IP,TCP Client,UDP, ICMP,HTTP, DHCP,NetBIOS	—	—	—
Serial Buffer	1K each channel	—	—	—
LED Indicator	9 LEDs for Power, Communication	3 LEDs for Power, Communication	3 LEDs for Power, Communication	—
Watchdog Function	Yes			
Active Distance	300m~1200m (RS485)	300m (RS485)		300m (RS485) / 50m (RS232)
Surge Suppression	Power: 30 Volt, bi-directional avalanche breakdown device. RS485 6.5 Volt, bi-directional avalanche breakdown device. 400W peak power dissipation. Clamping time < 1 picosecond(theoretical)	—		—
Fuses	Power PTC 150mA , RS485 PTC 30mA	—		—
Isolation	Optical 5 kV	Electric 2.5 kV	Electric 2.5 kV	—
Power Supply	9-24 VDC	5 VDC	12 VDC	12 VDC / 5 VDC
Power Consumption	<2W	<1W	<1W	<0.1W (RS232) <1W (RS485)
Dimension(mm)	106.5(H)x66(W)x27.7(D)	76(H)x37(W)x16.4(D)	76(H)x37(W)x16.4(D)	RS485:52(H)x14(W)x11(D) RS232:50(H)x20(W)x11(D) Cabling: TTL 20cm / RS232 15cm
Net Weight (g)	approx. 90	approx. 60	approx. 60	RS485:approx. 14 RS232:approx. 20
OS Supported	Windows 7/8/10, Win Server 2008/2012/2016			
Network/ Device setting	HTTP Web browser, UDP Updater change IP address	—		
Operating Temperature	-20°C to +70°C			










<b>AR-485REP-V3</b> Dual Isolated Half-Duplex RS-485 Repeater 	
Features :	
Dual Isolated Half-Duplex RS485 Repeater The two sides of the communication and the power supply adopt triple-layerisolation design , which can provide RS485 clean transmission completely isolated from the system power supply	
<ul style="list-style-type: none"> <li>●9-24VDC wide input, Triple-Zone DC/DC power isolation, built-in antisurge,static electricity, and lightning protection.</li> <li>●The signal isolation strength of automatic direction detection can reach 3.0KV.</li> <li>●Fully transparent data transmission; Support communication protocols such as MODBUS RTU and encrypted transmission.</li> <li>●Industrial-grade RS-485 signal repeater and amplifier distance extender.</li> </ul>	
Operating Voltage	9-24V
rated power	0.4W (9V/46mA : 12V/34mA : 24V15mA)
Communication rate	300~11500 bps
Surge Protection	3KV
Responsibility	1-64 nodes
Communication distance	0-1000 meters (theoretical value)
Housing Material	ABS
Dimension (mm)	106.5(H)x66(W)x27.7(D)
Weight(g)	approx. 50
Operation Temperature	-20°C to +75°C

<b>AR-WGREP</b> Wiegand Repeater 	
<ol style="list-style-type: none"> <li>1. Enhance Wiegand Output signal transmission range</li> <li>2. Support WG24 to WG64</li> </ol>	

# Electric Bolt Lock

- ▶ Designed to pursue high security, strong lock body, and easy installation; makes your access controller automation safer and high in durability.
- ▶ Made with all-electronic optocoupler and hall sensor elements, no mechanical switch structure for endless usage that never wears out.
- ▶ Compact in size, support 12-24VDC full range voltage
- ▶ Wide range of electric bolt lock selections to provide low to high security based on requirements.

		Intelligent & Vandal resistant Electric Dropbolt Lock (Patent No. I682093)				Electric Bolt Lock for Automatic Door
		(Best choice of personnel security, unlocking electric lock immediately while power off.)		(Best choice of assets security, remaining locking while power off.)		(Best choice of personnel security, unlocking electric lock immediately while power off.)
		<b>AR-1207A</b> Electric DropBolt Lock - Fail-Safe 	<b>AR-1207A-F</b> Electric Drop Bolt Lock with Cylinder - Fail-Safe 	<b>AR-1207B</b> Electric Drop Bolt Lock - Fail-Secure 	<b>AR-1207B-F</b> Electric Bolt Lock with Cylinder - Fail-Secure 	<b>AR-1207A-5065</b> <b>AR-1207A-5085</b> Electric Bolt Lock for Automatic Door  AR-1207A-5065 AR-1207A-5085 Select automatic sliding door bracket based on extrusion track's dimension.   Narrow Extrusion Track      Wide Extrusion Track
Suitable Installation		Public Space	High Authorization Area	Private Space	Private Space	Automatic Slide Door
Distance between screw hole and bolt	29mm	AR-1207A-29	AR-1207A-29-F	AR-1207B-29	AR-1207B-29-F	AR-1207A-29-0565 / AR-1207A-29-0585
	36mm	AR-1207A-36	AR-1207A-36-F	AR-1207B-36	AR-1207B-36-F	AR-1207A-36-0565 / AR-1207A-36-0585
Operating Voltage		DC12V-24V				
Current Draw		1A(12V) / 0.5A(24V)				
Power Saving Mode		220mA (12V) / 110mA (24V)				
Material	Lock Body	Union Body Zinc Alloy				
	Strike Plate	Stainless Steel				
	Bracket	Alluminium Alloy				
Lock Surface Temperature		Low Temperature				
Operating Temperature		-20°C to +70°C				
Solenoid test		Over 500,000 times				
Humidity		0~90%(non-condensing)				
Dimension (mm)	AR-1207A/B-29	Lock Body: 200(H) x 32(W) x 32(D) / Strike Plate: 104(H) x 32(W) x 3.5(D) / Dropbolt Length: 16 mm				
	AR-1207A/B-36	Lock Body: 205(H) x 32(W) x 32(D) / Strike Plate: 104(H) x 32(W) x 3.5(D) / Dropbolt Length: 16 mm				
Net Weight (g)		approx. 550	approx. 770	approx. 770	approx. 500	approx. 500
Time Delay		0s, 3s, 9s				
LED Indicator		YES				

	U Bracket		BR Bracket		BR Bracket (Electric Bolt Lock with Cylinder)		C Bracket	Bracket for Automatic Door	
	AR-BU-180	AR-BU-078	AR-BE-180	AR-BE-078	AR-BE-240	AR-BE-242	MMET-120XI01	AR-BA-5065	AR-BA-5085
									
					(Applicable AR-1207A/B-29-F)	(Applicable AR-1207A/B-36-F)			
Dimension (mm)	50(H) x 210(W) x 22(D)	50(H) x 110(W) x 22(D)	44(H) x 210(W) x 50(D)	44(H) x 110(W) x 50(D)	45(H) x 276(W) x 50(D)	45(H) x 276(W) x 50(D)	24(H) x 95(W) x 23.5(D)	50(H) x 65(W) x 2(D) 40(H) x 40(W) x 16(D) 57(H) x 28(W) x 38(D)	50(H) x 85(W) x 2(D) 40(H) x 40(W) x 16(D) 57(H) x 28(W) x 38(D)
Net Weight (g)	approx. 537	approx. 272	approx. 386	approx. 228	approx. 460	approx. 460	approx. 81	approx. 186	approx. 186

# Electronic Magnetic Lock

- ▶ Anti-vandalism, sturdy, and high durability magnetic locks with bi-color LED status indicator
- ▶ Wide product range from a minimum holding force of 90pounds to a maximum 1500pounds. Provide selections for outdoor use with waterproof
- ▶ **AR-0600M-270** Three Registered International Patent : Anti Residual Magnetism Design (Patent no. : Taiwan M597321 / EP 20168850.4-1005 / China 202010170047.8)  
Anti Falling Design (Patent no. : USA 16/828.910 / Taiwan I679336/ EP 20168852.0-1005 /China 202010227686.3)  
Strong Lock Design (Patent no. : USA 16/828.931 / Taiwan I679336 / EP 20168852.4 / China 202010227687.8)

## \*Z&L Bracket

Z and L Bracket can be purchased separately

		Indoor Type						Outdoor Type			Digital Relay Output Module	Programmable Trigger Delay & Motion Delay Module
		AR-0090M	AR-0180M	AR-0200M	AR-0300M	AR-0600M	AR-1200M	AR-0400WF (Face Mount)	AR-600M-WPF (Face Mount)	AR-1500WF (Face Mount)	AR-721RB	AR-403-IO-0404M
Operating Voltage		12VDC/24VDC						12VDC/24VDC			<b>Features:</b> Supports Egress button input Supports security mode Support 4 delay time: 0.1, 3, 6, 9 sec. Easy Delay Time setting via DIP SW <b>Specification :</b> 721RB 403-IO 12VDC 40mA — 1W 1Form C, 12A at 125VAC, 7A at 250VAC, 7A at 30VDC Mosfet 33.6(H)x47.8(W)x22.6(D) 60(H)x43(W)x20(D) approx.40 approx.31 — ● — -20°C to +70°C	<b>Features:</b> Built-in 4 DI and 4 DO (Mosfet) Built-in RS485 interface for connection to PC, flexible setting of multiple output delay time Universal for four different modes such as Standard I/O Module (Modbus/SOYAL), Mailbox, Multiple-Delay Function, Rear Detection, and Front Detection.
Current Draw		60mA~130mA	12 VDC-200 mA 24VDC-100 mA	12VDC-200mA 24VDC-100mA	12VDC-370mA 24VDC-185mA	500mA/12VDC 250mA/24VDC	12VDC - 500mA 24VDC - 250mA	12VDC - 370mA 24VDC - 185mA	500mA/12VDC 280mA/24VDC	12VDC - 500mA 24VDC - 250mA		
Lock Type		Lock Housing: Alluminium Alloy, Armature Plate: Pure Iron, Bracket: Alluminium Alloy						Lock Housing : Stainless Steel , Armature Plate : Pure Iron , Bracket : Alluminium Alloy				
Holding Force(kg)		40	80	110	150	270	500	180	270	600		
Solenoid Test		Over 500,000 times						Over 500,000 times				
Lock Surface Temperature		≤ ambient temperature ± 20°C						≤ ambient temperature ± 20°C				
Operating Temperature		-10°C ~ +55°C						-10°C ~ +55°C				
Humidity		0~95% non-condensing						0~95% non-condensing				
Dimension (mm)	Magnet	35(H)X70(W)X20(D) (L Bracket included)	38(H)X100(W) X38(D)	28(H)X160(W) X17(D)	39(H)X166(W) X21(D)	AR-0600M 47(H) X 251(W) X 25(D) AR-0600M-270 51(H) X 250(W) X 27(D)	AR-1200M 74(H)X266(W)X40(D) AR-1200M-DB 74(H)X532(W)X40(D)	AR-0400WF 35(H)X164(W)X26(D) AR-0400WS 35(H)X164(W)X26(D)	AR-0600M-WPF 43(H)X261(W)X32.5(D) AR-0600M-WPS 44.6(H)X258(W)X32.5(D)	AR-1500WF 63(H)X203(W)X42(D) AR-1500WS 65(H)X225(W)X42(D)		
	Armature Plate	32(H)X62(W) X9(D)	32(H)X75(W) X52(D)	28(H)X130(W) X8(D)	32(H)X130(W) X10(D)	AR-0600M 40(H) X 185(W) X 15(D) AR-0600M-270 40(H) X 186(W) X 16(D)	AR-1200M 61(H)X185(W)X16(D) AR-1200M-DB 61(H)X185(W)X16(D)*2units	AR-0400WF 32(H)X130(W)X10(D) AR-0400WS 32(H)X130(W)X10(D)	AR-0600M-WPF 40(H)X185(W)X15(D) AR-0600M-WPS 40(H)X185(W)X15(D)	AR-1500WF 61(H)X185(W)X16(D) AR-1500WS 61(H)X185(W)X16(D)		
	Door Holder (included)	—	28(L)x100(W) x48(H)	—	—	—	—	—	—	—		
Bracket Type	*Z&L Bracket	L Bracket (included)	—	—	AR-0300MZL	AR-0600MZL	AR-1200MZL	AR-0400MZL	AR-0600MZL	AR-1500MZL-WF AR-1500MZL-WS		
	Armature Plate Bracket (MA Bracket)	—	—	—	—	AR-0600M-MA	AR-1200M-MA	—	—	—		
	U Bracket	—	—	—	AR-0300M/0400M-U	AR-0600M-U	—	AR-0300M/0400M-U	AR-0600M-U	—		
Electronic Magnetic Lock Net Weight (kg)		approx. 0.25kg	approx. 0.75kg	approx. 0.6kg	approx. 0.95kg	AR-0600M: approx. 1.2kg AR-0600M-DB: approx. 3.1kg	AR-1200M: approx. 3.2kg AR-1200M-DB: approx. 6.2kg	0400WF: approx. 0.90kg 0400WS: approx. 1.30kg	600M-WPF: approx. 1.85kg 600M-WPS: approx. 1.9kg	1500WF: approx. 3.10kg 1500WS: approx. 3.50kg		
Door Monitoring Output		NO			YES	YES	YES(All type)	—	YES	—		
LED indicator		NO						YES				
Igress Protection (IP)		—						IP66				
		Z&L Bracket						Armature Plate Bracket		U Bracket		
		AR-0300MZL	AR-0600MZL	AR-1200MZL	AR-0400MZL	AR-1500MZL-WF	AR-1500MZL-WS	AR-MA-46190	AR-1200M-MA	AR-0300M / AR-0400M-U	AR-0600M-U	AR-0600MZU
Dimension (mm)		L Bracket : 43(H)x166(W)x29(D) Z Bracket : 43(H)x166(W)x43(D)	L Bracket :50(H)x250(W)x33(D) L-bracket (outdoor type) : 51.5(H)x258(W)x40(D) Z Bracket :50(H)x190(W)x50(D)	L Bracket : 75(H)x266(W)x48(D) Z Bracket : 72(H)x190(W)x72(D)	L Bracket : 43(H)x166(W)x33(D) Z Bracket : 43(H)x166(W)x100(D)	L Bracket : 69(H)x198(W)x43(D) Z Bracket : 66(H)x184(W)x66(D)	L Bracket : 72(H)x190(W)x144(D) Z Bracket : 78(H)x225(W)x48(D)	46(H)x190(W) x19.5(D)	67.5(H)x190(W) x21(D)	50(H)x110(W) x22(D)	50(H)x210(W) x22(D)	185(H)x77(W) x43(D)














## Electronic Magnetic Lock










- ▶ Locks are designed with Fail-Secure type for more secure and reliable; door will not be opened during power failure.
- ▶ Strike lock structure is all-metal design, safe and durable, suitable for conventional
- ▶ Metal coated cabinet lock design compact and sturdy, meet requirements for cabinet, storage, and any integrated applications that require electric lock.

	Electric Strike		Cabinet Lock	
	AR-YS-130NO 	AR-YS-131NO 	AR-1213P 	AR-1211P 
Lock Type	Fail Secure	Fail Secure	Fail Secure	Fail Secure
Holding Force	500kg	500kg	600-650gram	100kg
Operating Voltage	12VDC	12VDC	12VDC	12VDC
Current Draw	450mA	450mA	2A	1A
Housing Material	Zinc Alloy (Strike: Stainless Steel)	Painted Stainless Steel (Strike: Stainless Steel)	Black Painted Stainless Steel (Strike: Stainless Steel)	Stainless Steel
Solenoid test	1,000,000 times	1,000,000 times	Over 500,000 times	Over 100,000 times
Operating Temperature	-10°C ~ +55°C	-10°C ~ +55°C	-20°C ~ +55°C	-40°C ~ +55°C
Dimension (mm)	28(H)x149(W)x34(D)	25(H)x160(W)x31(D)	73(H)x14(W)x67(D)	41(H)x55(W)x28(D)
Net Weight(g)	approx. 280	approx. 240	approx. 185	approx. 150

## Push Button

- ▶ LButton type: Push button, Infrared touchless button.
- ▶ Panel type: stainless steel panel, plastic panel with scratch resistance.
- ▶ Optional with LED: LED OFF or LED ON.
- ▶ Customizable logo with laser engraving on the stainless steel panel to enhance the overall image quality of the building or community.

	Full Stainless Steel Push Button			Stainless Steel Push Button (No Power Supply Needed)			Stainless Mounting Panel			Plastic Panel		
	Bi-color LED :  * Available with Logo Customization			* Available with Logo Customization			Apply to Mini 101 Series (AR-101-H / AR-101-U / AR-101-PBI)			Apply to Mini 101 Series (AR-101-H / AR-101-U / AR-101-PBI)		
	<b>AR-PB2-041108</b> (Slim US Type) 	<b>AR-PB2-072122</b> (Rectangle Wide US Type) 	<b>AR-PB2-086086</b> (Square EU Type) 	<b>AR-PB5-041108</b> (Slim US Type) 	<b>AR-PB5-068108</b> (Rectangle US Type) 	<b>AR-PB5-086086</b> (Square EU Type) 	<b>DMET-101PJ01</b> (Slim US Type) 	<b>DMET-101PJ05</b> (Rectangle Wide US Type) 	<b>DMET-101PJ03</b> (Square EU Type) 	<b>DPLA-101PB-L-6A</b> (Slim US Type) 	<b>DPLA-101PB-L-7A</b> (Rectangle Wide US Type) 	<b>DPLA-101PB-L-8A</b> (Square EU Type) 
Voltage	DC 12V (LED)			None			—			—		
Current	LED : 12VDC / 10mA			—			—			—		
Contact capacity	30VDC / 100mA			30VDC / 100mA			—			—		
Output contact	N.O. / N.C.			N.O.			—			—		
Dimension(mm)	108(H)x41(W)x4/15(D)	122(H)x72(W)x4/15(D)	86(H)x86(W)x4/15(D)	108(H)x41(W)x2/13(D)	108(H)x68(W)x2/13(D)	86(H)x86(W)x2/13(D)	108(H)x41(W)x2(D)	122(H)x72(W)x2(D)	86(H)x86(W)x2(D)	116(H)x46(W)x6(D)	114(H)x69(W)x6(D)	86(H)x86(W)x6(D)







	Touch-less Infrared Sensor Push Button (Anti-Interference)		Touchless Infrared Button	
	<b>AR-101-PBI-S</b> Bi-color LED :    (Made by order)	<b>AR-101-PBI-L</b> Bi-color LED :    (Elevator Button Graphic)	<b>AR-888-PBI-S</b> Bi-color LED :   (US)  (EU)	
Active distance	0.5-15cm	0.5-8cm	4-stage adjustment within 2-20 cm	
Voltage	DC 9~24V	DC 9~24V	DC 9~24V	
Current	DC 12V Standby: 35mA / Max. during activation: 65mA	DC 12V Standby: 30mA / Max. during activation: 75mA	DC 12V Standby: 35mA / Max. during activation: 65mA	
Contact capacity	30VDC 1A / 125VAC 0.3A	30VDC 1A / 125VAC 0.3A	30VDC 1A / 125VAC 0.3A	
Output Contact	1 Form C (1A / VAC/VDC 30V)	1 Form C (1A / VAC/VDC 30V)	1 Form C (1A / VAC/VDC 30V)	
Dimension(mm)	37(H)x37(W)x31(D)	39(H)x39(W)x29(D)	US :118(H)x81(W)x34(D) ; EU :88(H)x86(W)x34(D)	
Others	physical push button	Physical Contact (How to use when power off): Allow access under no power supply situation by pressing any points on the button.	—	

# Peripherals / Accessories Modular




- ▶ Modular and flexible design, applied for various fields.
- ▶ Economical choice, purchased according to actual needs on site.
- ▶ RFID module, applied for Parking lot management or consumption management.



## Card / Keychain / Keyfob / Label Sticker





	ISO Thin Card	Thick Card	Round Keychain Inkjet Type	Round Keychain Laser Carved Type	Round Keychain (Small)	Square Keychain Inkjet Type (Patent No. : D 125398)	Epoxy Keyfob	Prime Keyfob	Label Sticker	Master Card
Dimension (mm)	54(H)X85.5(W)X0.8(D)	54(H)X85.5(W)X1.8(D)	38(H)X33(W)X4(D)	38(H)X33(W)X4(D)	36.4(H)X30(W)X7.45(D)	47(H)X28(W)X5(D)	45(H)x22(W)X4(D)	50(H)x30(W)x1(D)	100(H)X25(W)x0.1(D)	54(H)X85.5(W)X0.8(D)
Frequency	DESFire	Mifare		E-TAG860-928kHz UHF		EM	ISO-15693 NXP	Dual Band	Master Card	
Compatible Standard	ISO 14443-A ISO 7816-4	ISO 14443-A		860-928MHz FCC: 860-928Mz / NCC: 922-928MHz ISO 18000-6B		125kHz ISO18000-2	13.56MHz ISO 15693	125kHz+13.56MHz ISO18000-2 ISO 14443-A	13.56MHz ISO 14443-A	
Supported Tags	DESFire	Mifare (EV1, EV2,Classic, Mifare Pro,Ultralight)		EPC UHF Class 1 Gen 2		EM4001 and EM4095 compatible	ISO 15693	EM4001 and EM4095 compatible Mifare (EV1, EV2,Classic,Mifare Pro,Ultralight)	Mifare (EV1, EV2,Classic, Mifare Pro,Ultralight)	
Identifiers	7bytes	4byte / 7bytes		96bit(Thin Card ) / 128bit(Label Sticker )		64bits	128bits	7bytes	7bytes	4bytes / 7bytes
Printing Card Format	Sequential Printed UID < > WG32	Sequential Printed UID < > WG32		EPC		ABA < > WG32	Sequential Printed UID	Sequential Printed UID < > WG32	Sequential Printed UID < > WG32	Manufacturing Serial Number & WG32
Function	Read / Write	Read / Write		Read / Write		Read Only	Read / Write	Read / Write	Read / Write	Read and Write
Tags Selection	<b>ISO Thin Card :</b> AR-TAGCIDW50F-DF28	<b>Long UID type</b> (7 byte UID : enhance security on high-end card readers) <b>ISO Thin Card :</b> AR-TAGCI3W50F-MF18 <b>Square Keychain - Inkjet Type :</b> AR-TAGK73W20F-MF06 <b>Round Keychain - Inkjet Type :</b> AR-TAGK33W20F-MF06 <b>Round Keychain - Laser Carved Type :</b> AR-TAGK33W20F-MF18	<b>Universal UID</b> (4 byte UID : high compatibility and can be used on various brand card readers on the market) <b>ISO Thin Card :</b> AR-TAGCI3W50F-MF06 <b>Square Keychain - Inkjet Type :</b> AR-TAGK73W20F-MF06 <b>Round Keychain - Inkjet Type :</b> AR-TAGK33W20F-MF06 <b>Round Keychain - Laser Carved Type :</b> AR-TAGK33W20F-MF06 <b>Epoxy Keyfob - Laser Carved Type :</b> AR-TAGJ83W30F-MF06 <b>Prime Keyfob - Laser Carved Type :</b> AR-TAGF73W40F-MF06	<b>ISO Thin Card :</b> AR-TAGCI8W50F <b>Label Sticker :</b> AR-TAGT99WO1F	<b>Thick Card :</b> AR-TAGCT1R50F <b>ISO Thin Card :</b> AR-TAGCI1R50F <b>Square Keychain - Inkjet Type :</b> AR-TAGK71R20F <b>Round Keychain (Small)-Inkjet Type :</b> AR-TAGK11R20F	<b>Thick Card :</b> AR-TAGCT1W50F <b>ISO Thin Card :</b> AR-TAGCI1W50F <b>Square Keychain - Inkjet Type :</b> AR-TAGK71W20F <b>Round Keychain - Inkjet Type :</b> AR-TAGK31W20F	<b>ISO Thin Card :</b> AR-TAGCIBW50F-MFb (7Byte HEX) AR-TAGCIBW50F-MF93 (7Byte WG32) <b>Square Keychain - Inkjet Type :</b> AR-TAGK7BW20F-MFb (7Byte HEX) AR-TAGK7BW20F-MF93 (7Byte WG32)	<b>ISO Thin Card :</b> AR-TAGCICW50F-CB18	<b>ISO Thin Card :</b> AR-TAGCI3W50-MASTER	

	Wiegand Keyboard	Wall Mount Mounting Base	Uninterruptible Power Supply		Panel Mounting Base	
	<b>DMOD-WGKBA10</b> 	<b>MPLA-888XA18 / 19</b> <b>AR-HT-98128</b> 	<b>AR-716-PU-M</b> 	<b>AR-716-E-TC-M</b> 	<b>AR-701B-X</b> 	<b>AR-701B-XX</b> 
Compatible Device	AR-723-H / AR-101-H / AR-331-H	MPLA-888XA18: AR-888 Series US type MPLA-888XA19: AR-888 EU type AR-HT-98128: 321 Series / 327 Series / 725 Series / 888(US) Series / 757-H / 727-E / 721-H / 837-E	AR-401-IO-0808R-U2 / AR-401-IO-0016R / AR-716-E16 / AR-716-E02	Enterprise Edition Controller Home Edition Controllerr	AR-401-IO-0808R-U2 / AR-401-IO-0016R / AR-716-E16 / AR-716-E02	AR-401-IO-1709R
Dimension (mm)	88(H)X60(W)X3.6(D)	MPLA-888XA18/19: US :119(H)X84(W)X10(D) / EU :89(H)X88(W)X10(D) AR-HT-98128:136(H)X98(W)X15(D)	330(H)x250(W)x80(D)	180(H)x231(W)x62(D)	175(H)X109(W)X15.2(D)	225(H)X97(W)X44(D)



	Reader Module	
	<b>183U-Module</b> RS485 Reader Module	<b>G3-Module</b> USB Reader Module
		 
Power Supply	9-24VDC	5VDC
Power consumption	<1W	<1W
Frequency	13.56MHz	13.56MHz
Baud Rate	9600bps[N,8,1]	9600bps[N,8,1]
Communication Interface	RS-485	USB2.0 Virtual COM Port
Supported Tag	MIFARE	MIFARE
Standard	ISO14443A	ISO14443A
Indicator	4 LED & 1 Beeper	1 LED & 1 Beeper
I/O	1[DI]	2[DI]/2[DO]
Dimension (mm)	58(H)X90(W)X20(D)	69(H)X39(W)X10(D) USB line length :100cm
Net Weight(g)	approx. 32	approx. 57

	Ethernet Module		POE Module
	<b>DMOD-NETMA 11/14/15</b> Ethernet Module with Surge Protection	<b>AR-727i-V3</b> Bidirectional Serial to Ethernet UART to TCP/IP	<b>AR-MDL-RJ45-POE-12V12W</b>
			
Power Input	3.3VDC	5VDC	36V to 57V
Power Output	—	—	12V / 0.8A
Power consumption	<0.5W	<0.5W	
Protocol	IEEE 802. 3x	ARP, IP, TCP Client, UDP, ICMP, HTTP, DHCP, NetBIOS, SNMP V1, V2, V3	IEEE 802. 3af
Dimension (mm)	38.5(H)X20(W)X7(D)	52(H)X30(W)X14(D)	—
Net Weight(g)	approx. 20	approx. 15	—
Temperature	-20°C ~ +70°C		—
Compatible Controller	-DMOD-NETMA11=for AR-716-E16 -DMOD-METMA14=for AR-725-E, 327-E, 363-E, 727-E, 837-E/EE/ER/EF/EA/EL/W with AR-MDL-RJ45 -DMOD-METMA15 = for AR-331E/EF with AR-MDL-RJ45		Enterprise Series Access Controller

Comparison Table of SOYAL Relay				
	AR-721RB	AR-821RB	AR-829RB	Controller Home Series(H Series)/ Enterprise Series(E Series)
Product				
Functions & Features				
Positive Trigger Contact	✗	✗	✓	
Low Trigger Contact	✓	✓	✓	
Frequency	D11	✗	✗	
Voltage	12VDC	12VDC	12VDC	
Power Consumption	40mA	20mA/40mA	40mA	
Output Contact	1 Form C, 12A at 125VAC, 7A at 250VAC, 7A at 30VDC	1 Form C, 12A at 125VAC, 7A at 250VAC, 7A at 30VDC	2 Form C 1A at 125VAC, 2A at 24VAC	
Operating Temperature	-20°C ~ +70°C	-20°C to +70°C	-20°C to +70°C	
Dimension (mm)	33.6(H)X47.8(W) X22.6(D)	20(H)X32(W) X29(D)	55(H)X25(W) X17.5(D)	
N.W. (g)	approx.40	approx.20	approx.30	
Delay time by DIP switch (determined by the distance between push button and the door.)	0.1,3,6,9 sec.	✗	✗	
Support the digital opening signal to enhance the security	✓	✗	✗	
Enable Auto Relock	✗	✗	✗	✓

	Power Supply		Voice Module	Magnetic Door Sensor																																	
	<b>BP-W12-1500-EO</b> <b>BP-W12-2000-US</b> Power Adaptor (EU/US)	<b>BP-W15-2400-US</b> <b>BP-W15-2400-EO</b> Power Adaptor	<b>AR-721V</b>	<b>AR-MS-101-A</b> <b>AR-MS-101-C</b>																																	
	 (EU)  (US)	 (Included US Power Cord CA-AC2-US) (Included EU Power Cord CA-AC2-EO)		 																																	
Features	EU: 1. Input : 100-240 VAC 50/60Hz 2. Output : 12VDC 1500mA US: 1. Input : 100-240, 1.0A Max 2. Output : 12V, 2.0A	1. Input : 100~240VDC 2. Output: 15VDC, 2400mA	Compatible Controller : AR-327-E, 727-E, 837-E/EE/ER/EF/EA/EL/W	<table border="1"> <thead> <tr> <th>Contact Type</th> <th>AR-MS-101-A</th> <th>AR-MS-101-C</th> </tr> </thead> <tbody> <tr> <td>Contact</td> <td>2 PIN</td> <td>3 PIN</td> </tr> <tr> <td>Sensing Distance</td> <td colspan="2">15MM - 25MM</td> </tr> <tr> <td>Contact Capacity</td> <td colspan="2">1VA</td> </tr> <tr> <td>Maximum Switching Voltage</td> <td colspan="2">24Vdc</td> </tr> <tr> <td>Maximum Switch Current</td> <td colspan="2">0.1A</td> </tr> <tr> <td>Maximum Powered Current</td> <td colspan="2">0.3A</td> </tr> <tr> <td>Housing Material</td> <td colspan="2">ABS</td> </tr> <tr> <td>Color</td> <td colspan="2">Beige / Brown</td> </tr> <tr> <td>Dimension (mm)</td> <td colspan="2">12(H)X63.6(W)X14.5(D)</td> </tr> <tr> <td>Operating Temperature</td> <td colspan="2">-20°C ~ +70°C</td> </tr> </tbody> </table>	Contact Type	AR-MS-101-A	AR-MS-101-C	Contact	2 PIN	3 PIN	Sensing Distance	15MM - 25MM		Contact Capacity	1VA		Maximum Switching Voltage	24Vdc		Maximum Switch Current	0.1A		Maximum Powered Current	0.3A		Housing Material	ABS		Color	Beige / Brown		Dimension (mm)	12(H)X63.6(W)X14.5(D)		Operating Temperature	-20°C ~ +70°C	
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# SOYAL Versatile Product Solution



**AR-331-H**  
Access Controller



**AR-0600M-270**  
Magnetic Door Lock



**AR-PB2**  
Push Button

## Smart Access Control System

- Works standalone with keyless editing feature and networking
- Seamless system scalability without hardware replacement



## Global Corporate Access Control System

- Centralized control system with max. 4064 nodes
- Multi-Client user operator in database mode, easy integration with third party integration such as visitor management and building management



**AR-716-E16**  
Control Panel



**AR-327-E**  
Proximity Controller



**AR-721-H**  
Access Controller



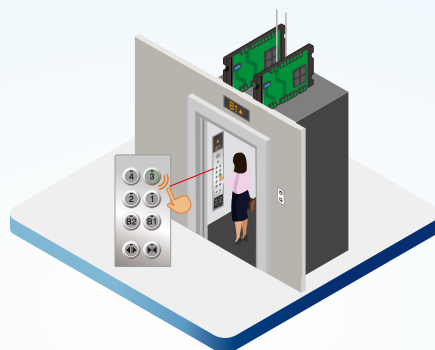
**AR-401-IO-0016R**  
Lift Controller



**AR-101-PBI-L**  
Infrared Touchless Button

## Contactless Anti-Epidemic Lift Control

- Lift floor access control and each user can only access the specified floors
- Contactless floor button replace traditional floor button to reduce infection risk



## Polling-Free Monitoring & Quick Alert Notification

- Real-time monitoring status suitable for home monitoring solution
- Auto Alert notification to act fast during abnormal situation



**AR-727-CM-IO-0804M**  
Serial Devices Server with I/O



**AR-403-IO**  
Universal I/O Module



**AR-101-H**  
Mini Controller

## Smart Locker & Mailbox Control

- Swipe RFID card to open mailbox & Indicator for Mailbox inside / open too long and abnormal event notification by E-mail
- Swipe RFID card to randomly choose vacant locker by checking locker status Indicator



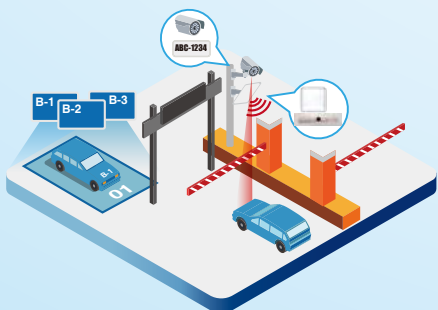
**AR-716-E16**  
Shared Parking Space Controller



**AR-661-UG**  
UHF Reader

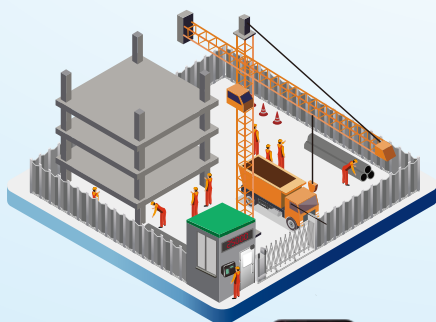
## Smart Parking Lot Management

- Dual-Identification UHF & Integrated ANPR Shared Parking Space Solution



## Site Management & Limited Space Control

- Maintain safety by limiting number of people on site at the same time
- Show number of people on-site via LED Display Board and alarming when on-site remain unclear during roll call



**AR-716-E16**  
Crowd Control Board



**AR-837-EA**  
Access Controller



**AR-401-IO-0808R-U2**  
Network Monitor Server / Modbus Gateway



**AR-401-IO-1709R**  
Escape Door I/O Module

## SCADA Monitor & Remote Door Control

- Real time monitor all access door / escape door / public door status
- Remote open door and alarm event notice in smart building



## Multi-Door Interlocking

- Access credential RFID, face recognition, QR Code, and fingerprint
- Setting-free 2/4/8 doors interlocking for clean room and laboratory



**AR-725-E**  
Access Controller



**AR-401-IO-1709R**  
2/4/8 Doors Interlocking Module



**AR-727-CM-IO-0804M**  
Fire Alarm Server / Modbus Gateway

## Fire Alarm Auto Open Doors

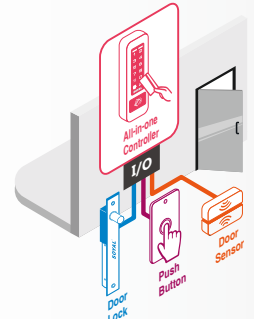
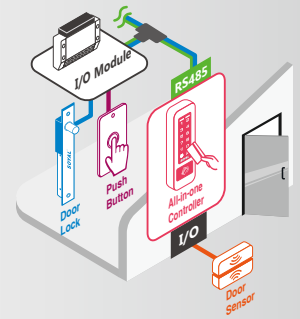
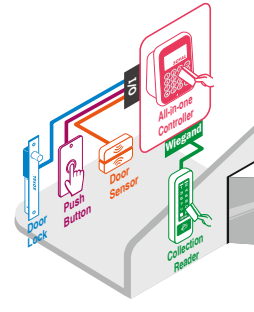
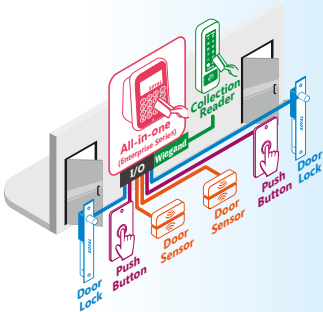
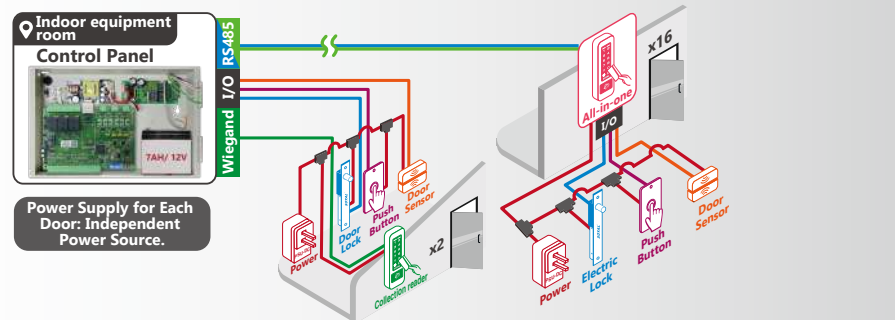
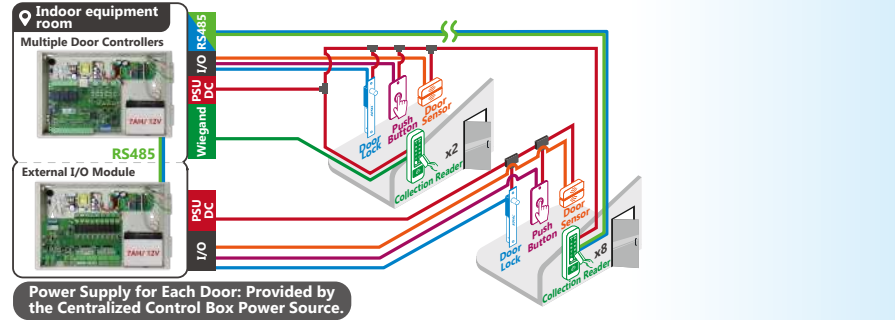
- Built-in fire alarm signal input and auto open all or designated doors
- Door controllers can be communicated via RS485 or UDP Boardcast



# SOYAL Access Control System Architecture and Selection Design Reference Table

Create an optimized access control system by flexibly combining a complete set of access control devices based on specific requirements

Flexible architecture combination, diverse functional applications, and multiple security safeguards

<p><b>Outdoor All-in-one Controller</b></p>	<table border="1"> <tr><td>Doors</td><td>1</td></tr> <tr><td>Anti-passback</td><td>×</td></tr> <tr><td>Multi in &amp; out</td><td>×</td></tr> <tr><td>Parking Space Sharing</td><td>×</td></tr> <tr><td>Offline Emergency List</td><td>×</td></tr> <tr><td>Control and Acquisition Communication Method</td><td>×</td></tr> <tr><td>Control and Acquisition Installation Distance</td><td>×</td></tr> <tr><td>Communication method between the control end and the computer</td><td>RS485</td></tr> <tr><td>TCP/IP</td><td>○</td></tr> <tr><td>Communication Redundancy</td><td>○ (Enterprise)</td></tr> </table>	Doors	1	Anti-passback	×	Multi in & out	×	Parking Space Sharing	×	Offline Emergency List	×	Control and Acquisition Communication Method	×	Control and Acquisition Installation Distance	×	Communication method between the control end and the computer	RS485	TCP/IP	○	Communication Redundancy	○ (Enterprise)	<p>Security Level ★★★★★</p> <table border="1"> <tr> <td>Data Collection</td> <td>Recognition</td> <td>I/O Control</td> </tr> <tr> <td>RFID * Fingerprint * Face</td> <td>List * Time Zone * Door Group</td> <td>Door Lock * Alarm</td> </tr> <tr> <td>Outdoor</td> <td>Outdoor</td> <td>Outdoor</td> </tr> </table>	Data Collection	Recognition	I/O Control	RFID * Fingerprint * Face	List * Time Zone * Door Group	Door Lock * Alarm	Outdoor	Outdoor	Outdoor	<p>SOYAL all-in-one controller comes with a complete access control system (identification, data collection, I/O control) in a simple and clear integrated architecture.</p> 	<p><b>Security Upgrade Solution</b></p> <p>SOYAL all-in-one controller comes with a complete access control system (identification, data collection, I/O control) in a simple and clear integrated architecture.</p> 
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Multi in & out	○																																
Parking Space Sharing	○																																
Offline Emergency List	×																																
Control and Acquisition Communication Method	RS485 / Wiegand																																
Control and Acquisition Installation Distance	Far																																
Communication method between the control end and the computer	RS485																																
TCP/IP	○																																
Communication Redundancy	○																																
Data Collection	Recognition	I/O Control																															
RFID * Fingerprint * Face	List * Time Zone * Door Group	Door Lock * Alarm																															
Outdoor	Indoor	Indoor																															

# SOYAL Versatile Product Solution



Supervisory Control And Data Acquisition System (SCADA)



Access Control User Interface and Graphic Animation Control Software



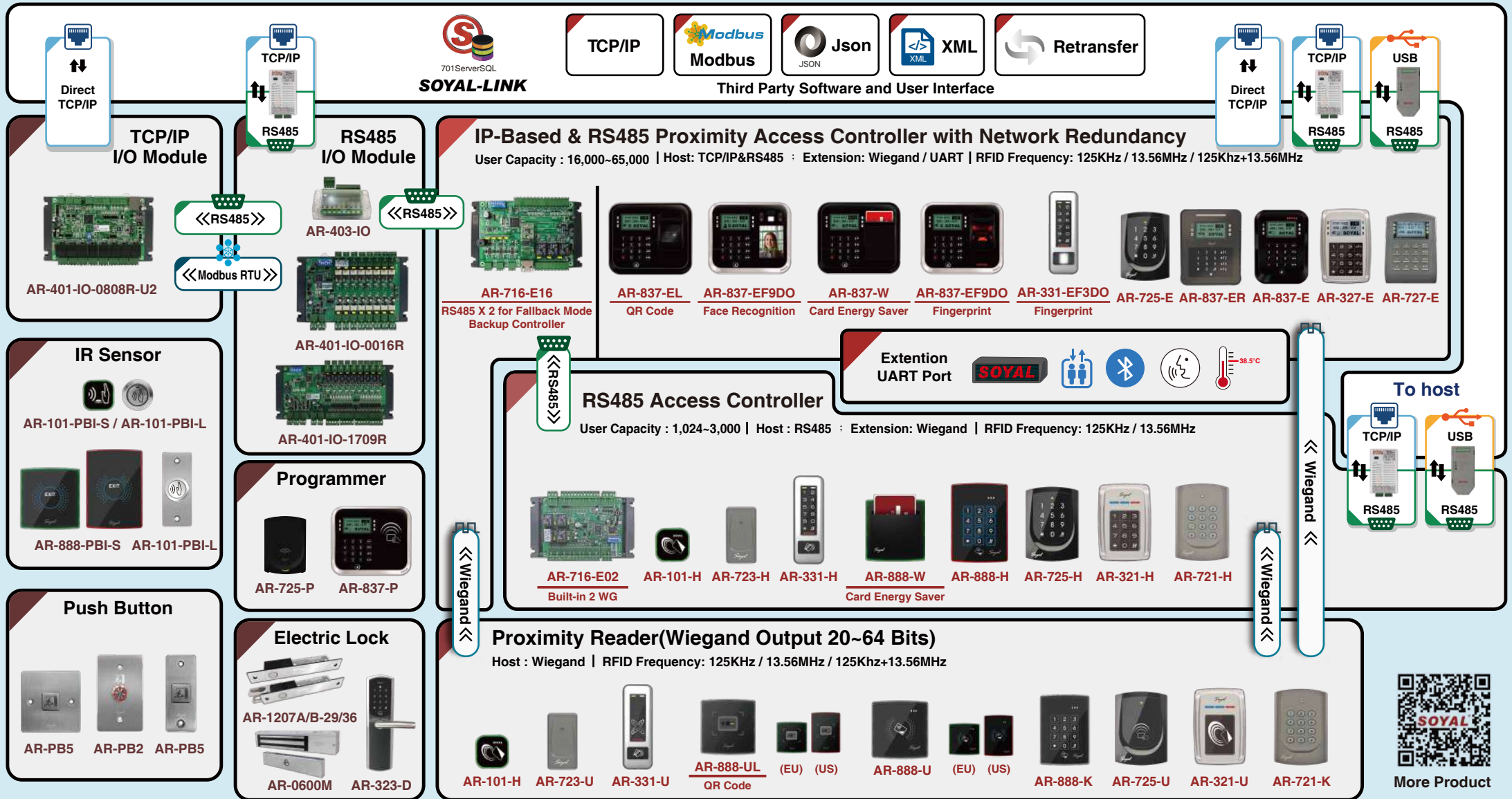
Access Control Configuration and Communication Gateway Software



LPR License Plate Recognition



On-Site Crowd Control and Reporting



More Product