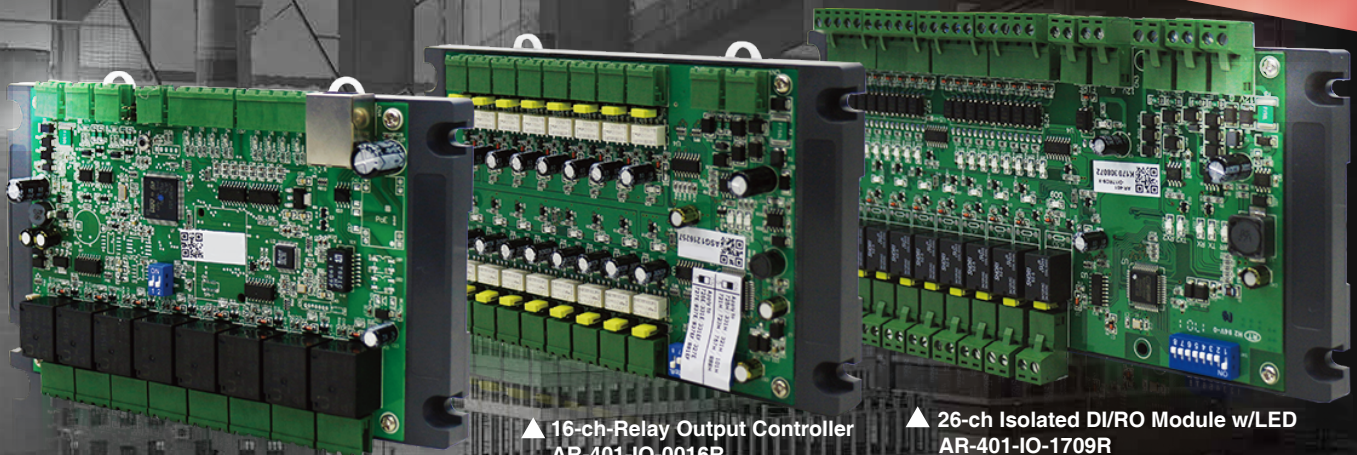


SOYAL[®]

I/O Module AR-401-IO

Serial-to-Ethernet Server with I/O Module /
16-ch-Relay Output Controller / 26-ch Isolated DI/RO Module w/LED

AR-403-IO Universal I/O Module



▲ Serial-to-Ethernet Server with I/O Module
AR-401-IO-0808R-U2

▲ 16-ch-Relay Output Controller
AR-401-IO-0016R

▲ 26-ch Isolated DI/RO Module w/LED
AR-401-IO-1709R



▲ Universal I/O Module
AR-403-IO-0404M-E

▲ Universal I/O Module
AR-403-IO-0001M-IR

▲ Universal I/O Module
AR-403-IO-0202M
AR-403-IO-0404M

▲ Universal I/O Module
AR-403-IO-0202M-IR

Features

Modbus

Multi-Modbus Protocol Supported

TCP/IP to Wiegand, TCP/IP to Serial
To get status of on board I/O, Modbus TCP or
Modbus RTU over TCP are supported
Modbus TCP to Modbus RTU Auto Conversion
(Applicable for Ethernet & WIFI)



IoT Application

Wide applications in IoT monitoring,
Factory Automation or remote monitoring
equipment.



Customizable Firmware

In-field firmware update to support
customized firmware per conditional logic
control



Diversity of Timer Output

Remote control & program digital ON/OFF
timer (1-600 secs & Inverted Output & time-in-
tegration Output) to substitute traditional timer.



Multi-Function Ethernet Networking Server

Two RS485 port for ModBus RTU over TCP or
HEX to connect I/O module or SOYAL Access
Control for releasing all doors when fire alarm.
(AR-401-IO-0808R-U2)



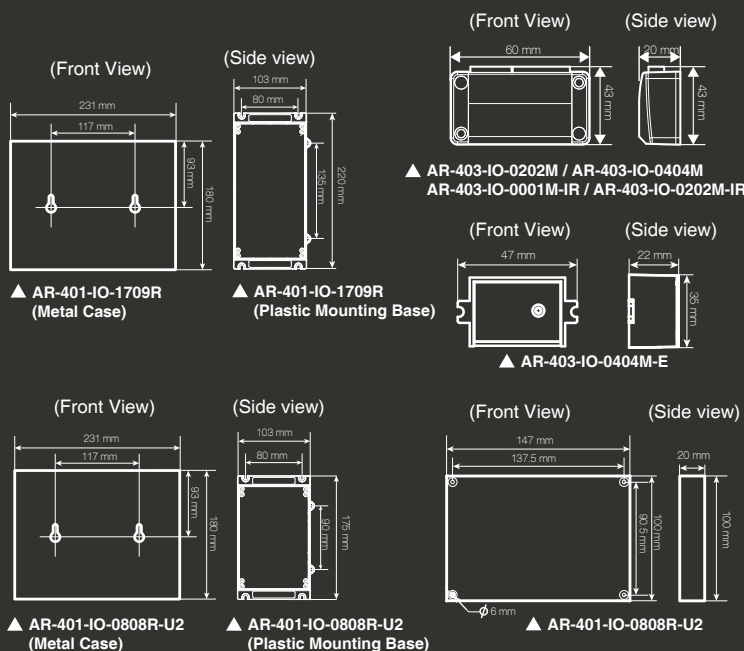
SCADA Software Supported

701Server/701Client support SCADA
and Data-Based System.

SPECIFICATION

Model No.		401-IO-0808R-U2	401-IO-0016R	401-IO-1709R	403-IO-0202M	403-IO-0202M-IR	403-IO-0404M 403-IO-0404M-E	403-IO-0001M-IR
Interface	Ethernet	support TCP/Server 、 TCP/Client 、 UDP Mode	—					—
	Serial port (CH1/CH2)	RS485 * 2 support TCP/Server 、 TCP/Client 、 UDP Mode	RS485 * 1					—
	Digital Inputs/ Outputs or WG port	Baud Rate 2400 bps - 115200 bps	9600 bps (N,8,1)					
Digital Inputs / Outputs		8 Digital Input 8 Relay Output	16 Relay Output (Form C)	17 Digital Input 9 Relay Output (Form C)	2 Digital Input 2 Digital Output (MosFET)	2 Digital Input (with 1 IR) 2 Digital Output (MosFET)	4 Digital Input 4 Digital Output (MosFET)	1 Digital Output (IR)
PoE		PoE option,12W/1A	—					—
Protocol		Modbus, Soyal						—
LED Indicator		Power, Tx/Rx, Input: Close/Open, Relay: On/Off	Power: Tx/Rx, Relay On/Off	Power, Tx/Rx, Input: Close/Open, Relay: On/Off	Power: Tx/Rx, D.O./D.I			Red LED indicate DO active 1 DO infrared output
Watchdog Function		Yes						Yes
Surge Suppression		400W peak power dissipation. Clamping time < 1 picosecond (theoretical) Power: bi-directional avalanche breakdown device. RS485 bi-directional avalanche breakdown device.						—
Fuses		Dual PTC Protection For Power & RS485						—
Isolation		Optical 5kv	—	Optical 5kv	—			—
Power Supply		9-24 VDC						9-24 VDC or DC 0V
Power Consumption		<2W	<8W	<4W	<1W			<0.5W
Dimension(mm)		PCB: 191(W)x100(H)x20(D) Panel Mounting Base : 225(W)x97(H)x44(D) Metal Box: 231(W)x180(H)x62(D)	PCB: 150(W)x100(H)x20(D) Panel Mounting Base : 175(W)x100(H)x20(D) Metal Box: 231(W)x180(H)x62(D)	PCB: 191(W)x100(H)x20(D) Panel Mounting Base : 225(W)x97(H)x44(D) Metal Box: 231(W)x180(H)x62(D)	403-IO-0202M 、 403-IO-0202M-IR: 60(W)x20(H)x43(D) 403-IO-0404M-E: 48(W)x24(H)x35(D)			60(W)x20(H)x43(D)
Weight (g)		232±5	1780±10	455±10(PCB Only)	403-IO-0202M 、 403-IO-0202M-IR: 31±5 403-IO-0404M-E: 23±5			28±5
OS Supported		Windows 7/8/10, Win Server 2008/2012/2016						—
Network/Device setting		701Server, 701Client, Commview.exe						—
Enviroment		Operating Temperature:-20℃ ~ +65℃	Storage Temperature: -25℃ to +70℃		Operating Humidity: 20%~90%		Storage Humidity: 5%~95%	

INSTALLATION(mm)



HOW TO ORDER

AR-401-IO-XXXXR-XX-X-X

Input Qty / Output Qty

0016=16 Output
0808= 8 Input & 8 Output
1709=17 Input & 9 Output

Output Type
R=Really

Additional Features
N/A=No Additional Features
U2=UART * 2

Additional Module

N/A=No Additional Module
P=POE Features

Type

N/A=PCB
M=Metal Case
X=Plastic Mounting Base

AR-403-IO-XXXXM-XX

Input Qty / Output Qty

0001=1 Output
0202=2 Input & 2 Output
0404=4 Input & 4 Output

Output Type
M=Mosfet

Additional Features

N/A=No Additional Features
IR=1 Infrared Output

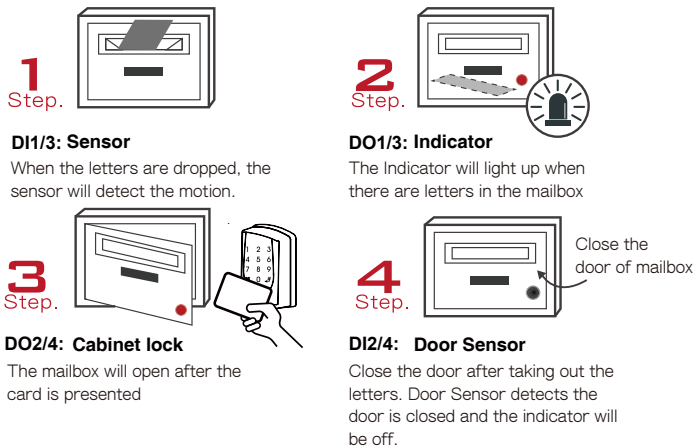
APPLICATION & STRUCTURE DIAGRAM

• Mail box/Storage Application

AR-403-IR I/O Infrared module integrated to send command via RS485. Saving labor cost from wiring. LED Indicators as reminder of letter arrival.

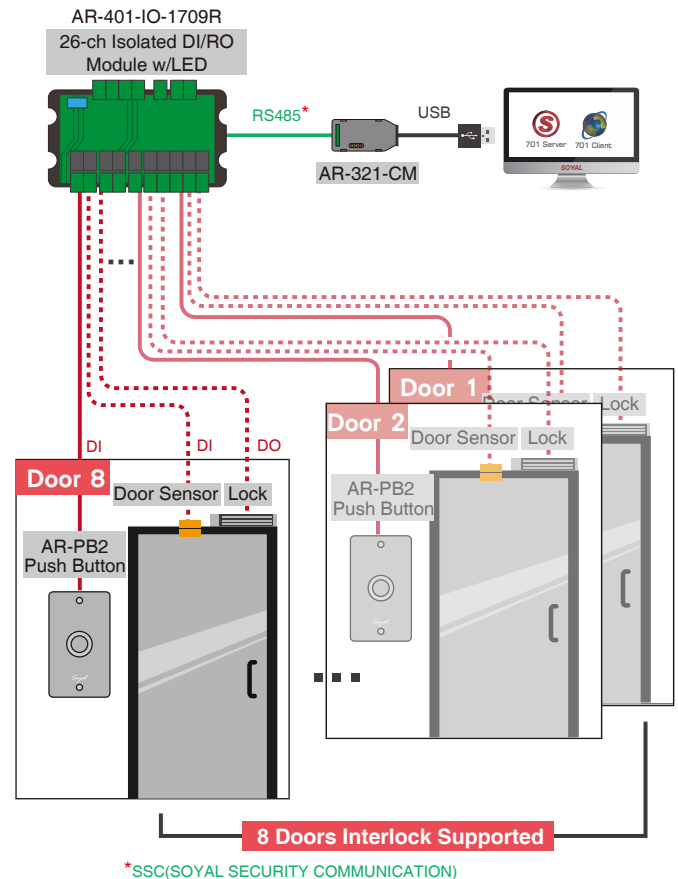


Direction for use



• Interactive logic control application

Customized logic control for various need, ig. 8 doors Interlock in clean room & Fire escape direction guide & Auto-unlock



*SSC(SOYAL SECURITY COMMUNICATION)

Universal I/O Module

MOSFET Gate Output. Up to 2000mA High power MOSFET output

01 Standard Modbus I/O Module

Remote Control

- Sequential Control - Frequency adjustable
- Continuous pulse output
- Support Modbus RTU/SOYAL Protocol

02 Mailbox Module

Input

- Letters coming detection (DI)
- Mailbox door contact detection

Output

- Indicator for letters inside
- Output trigger for mailbox door opening
- Output Alarm

When the letters are dropped the sensor will detect the motion.

The indicator will light up when there are letters in the mailbox.

The mailbox will lock the door after taking out the letters.

Door Sensor detects the door is closed and the indicator will be off.

03 Multiple delay function

Output 1: Rising edge trigger (DO1)

Output 2: Rising edge trigger (DO2)

Output 3: Toggle trigger (DO3)

Output 4: Non-inversion Pulse Delay (DO4)

Interval: 1ms, 10ms, 100ms, 1s, 10s, 100s, 1min, 1h, 1d, 1w, 1m, 1y

CommView to setup delay time

04 Rear Detection / Front Detection (Random direction recognition)

Rear Detection

Front Detection

Vehicle Detection

Barrier Detection

Barrier Closed

Barrier Open

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SOYAL ACCESS CONTROL SYSTEM

Universal I/O Modules

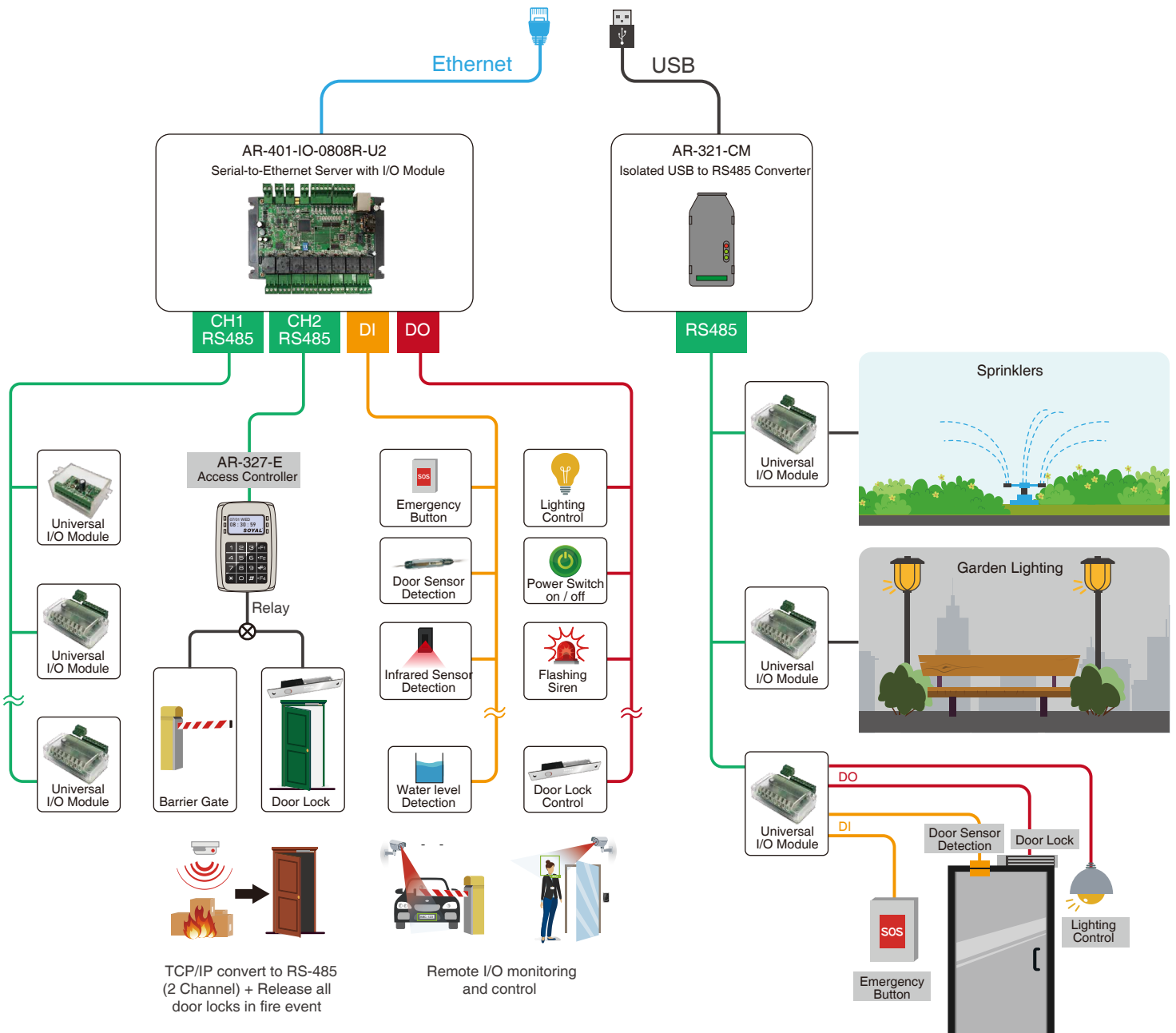
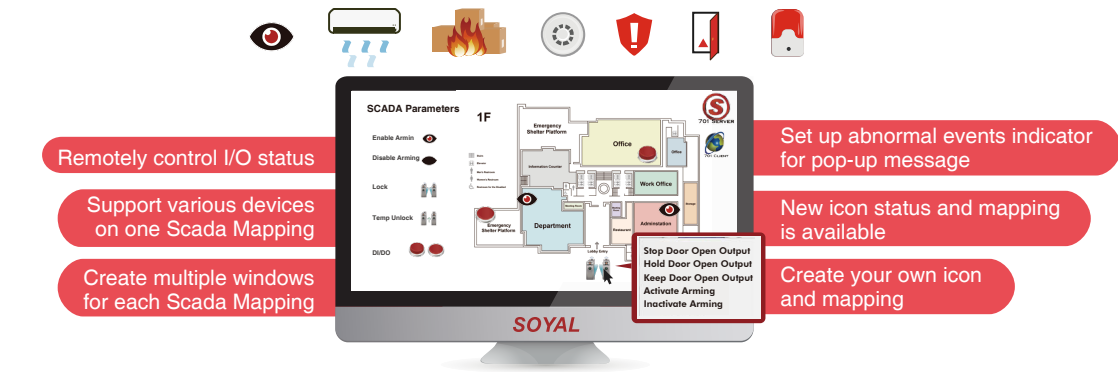
Customized logic control for various needs. ig traffic light in parking entrance or barrier auto-open. Compact size for installation anywhere. To replace traditional timer, program logic timer remotely to prevent incident touch.



Digital Module for Machinery Management

AR-403-IO-0404M has built-in RS485 interface and support Modbus protocol. Due to its compact size, it's perfectly mount on machinery without taking much space. With software or PLC, it enables security monitoring on machinery operation, also expansion applications, such as operation hours record, maintenance reminder.

PERIPHERALS / ACCESSORIES



More FAQ