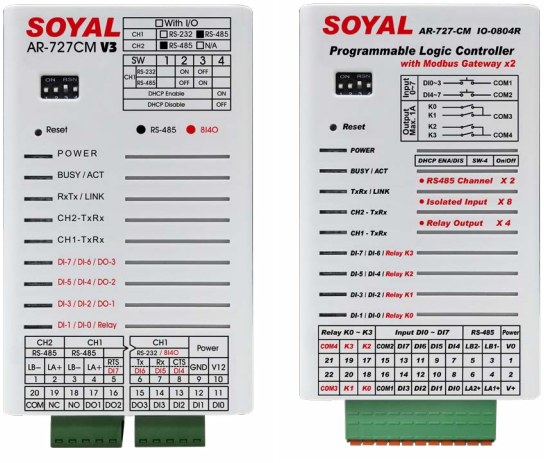
Serial-to-Ethernet Server & Modbus RTU Over TCP / Modbus Gateway with I/O

AR-727-CM / 485 / 232 / IO-0804R / IO-0802R / PLC-0804R



1. Product Features

AR-727-CM / AR-727-CM-485

- Dual-channel transparent transmission, enabling RS485/ RS232 devices to have TCP/IP communication capabilities through upgrades.
- Support for standard industrial communication protocols Modbus/TCP & Modbus/RTU over TCP.
- Provides dual-channel transparent transmission, enabling RS485/RS232 devices to have TCP/IP communication capabilities through upgrades.

AR-727-CM-IO-0804R

- Instantly uploads DI status to a remote server via TCP/IP
- Serial-to-Ethernet Server with RS485 CH1/CH2, 8 DI, 4DO built-in for Ethernet to Wiegand conversion feature and works under SOYAL, Modbus protocol
- Support is provided for converting Modbus TCP to Modbus RTU protocol. (Control Port needs to be set to 502)

AR-727-CM-IO-0802R

- Universal TCP to WG Converter, applicable for SOYAL LPR license plate recognition.
- Instantly uploads DI status to a remote server via TCP/IP

AR-727-CM-232

- Dual-channel transparent transmission, enabling RS232 devices to have TCP/IP communication capabilities through upgrades.

AR-727-CM-PLC-0804R

- Built-in HTTP server allows direct programming through a web page using a browser,eliminating the need for a human-machine interface.
- Added unique intelligent building logic scheduling functionality, greatly simplifying automatic management configuration for large buildings.
- Input point events can proactively notify the cloud monitoring system via TCP and automatically execute offline emergency linkage processes.
- Programmable logic controller with calendar time, holiday conditions, counters, timers, DI, and DO function

Note :

- It is recommended to connect a maximum of 8 controllers per channel for optimal connectivity.
  (1 AR-727-CM or AR-727-CM-IO-0804M contains two RS485 channels, allowing a total of 16 controllers to be connected.)

2.Application

- **Fire Alarm Auto Release Doors**
  - Introduction of 4 methods to configure the access control system to release all door locks in fire alarm event
- SOYAL 727APP
  - SOYAL APP Manual
  - 《SOYAL APP & WEB》SOYAL 727 APP Introduction

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SOYAL®

AR-727-CM / 485 / 232 / IO-0804R / IO-0802R / PLC-0804R

Product Feature Comparison Table

Product Model		AR-727-CM AR-727-CM-485	AR-727-CM-232	AR-727-CM-IO-0802R AR-727-CM-IO-0804R	AR-727-CM-PLC-0804R
Product Images					
Switching between Gateway Mode and PLC Mode		—	—	—	●
CH1 Communication Mode	Gateway Mode	Transparent Transmission / Modbus	Transparent Transmission / Modbus	Transparent Transmission / Modbus	Transparent Transmission / Modbus
CH2 Communication Mode	Gateway Mode	Transparent Transmission / Modbus	Transparent Transmission / Modbus	Transparent Transmission / Modbus	Transparent Transmission / Modbus
	PLC Mode	—	—	—	PLC I/O Expansion Board Dedicated Communication Port
TCP to Wiegand		—	—	● (※Applicable to AR-727-CM-IO-0802R)	—
Inputs		—	—	DI x 8(Optical Isolation)	DI x 8(Optical Isolation)
Outputs		—	—	Relay Output x4	Relay Output x4
Bulit-in RTC		—	—	—	●

(※**The factory default mode is Gateway Mode. To upgrade to PLC Mode, you need to manually update the firmware.**)

How to Order

Dual-Channel Gateway with I/O (AR-727-CM-IO-0804R) / WEB PLC (AR-727-CM-PLC-0804R)

AR-727-CM | **-X X-** | **08** | **XXR** | **-R**

Product
727-CM = Converter Series

Controller Option
IO=I/O Module Series
PLC=WEB PLC Series

Input Qty
08 = Input x 8

Output Qty
02R = Relay Output x2
04R = Relay Output x4

Output Type
R = Built-in Real-Time Clock (RTC) (WEB PLC)

Dual-Channel Gateway (AR-727-CM / AR-727-CM-485 / AR-727CM-232)

AR-727-CM | **-XXX**

Product
727-CM = Converter Series

Communication Interface
232 = CH1/CH2 (RS232 / RS232)
485 = CH1/CH2 (RS485 / RS485)
Blank = CH1/CH2 (RS232 / RS485)

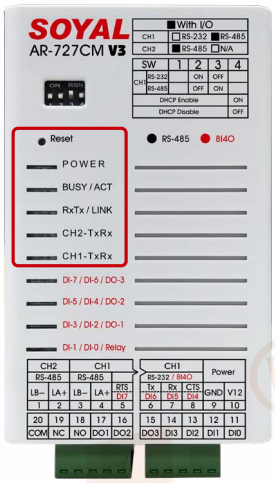
Indicator

Dual-Channel Gateway (AR-727-CM / AR-727-CM-485 / AR-727-CM-232)

＊The position of the LED indicator for input and output terminal is equivalent to the text description

AR-727-CM / AR-727-CM-232

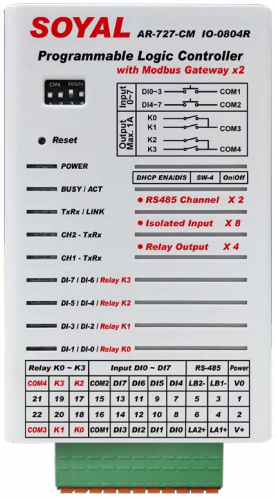
Power	Power Supply Indicator(Green Light)
BUSY	Reset Factory Setting / Update Firmware(Blinking Red LED)
ACT	Connect with PC by Software(Green Light)
RxTx	Ethernet Receive/ Transmit(Green/Red flash)
LINK	RJ45 network cable plug status(Green Light)
CH2 TxRx	RS485(Reader)Polling Status(Red/Green Flash)
CH1 TxRx	RS485 or RS232(Reader) Polling Status(Red/Green Flash)



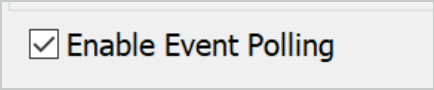
Dual-Channel Gateway with I/O (AR-727-CM-IO-0804R/0802R) / WEB PLC (AR-727-CM-PLC-0804R)

＊The position of the LED indicator for input and output terminal is equivalent to the text description

Power	Power Supply Indicator(Green Light)
BUSY	Reset Factory Setting / Update Firmware(Blinking Red LED)
ACT	Connect with PC by Software(Green Light)
RxTx	Ethernet Receive/ Transmit(Green/Red flash)
LINK	RJ45 network cable plug status(Green Light)
CH2 TxRx	RS485(Reader)Polling Status(Red/Green Flash)
CH1 TxRx	RS485 or RS232(Reader) Polling Status(Red/Green Flash)
DI-7 / DI-6 / Relay-K3	
DI-5 / DI-4 / Relay-K2	
DI-3 / DI-2 / Relay-K1	
DI-1 / DI-0 / Relay-K0	

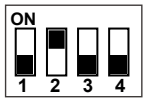
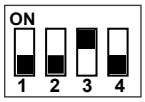
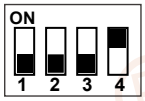
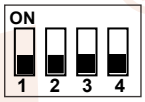


※ **Note:** To enable RxTx indicator lights, check the **"Enable Event Polling"** option in the [COM] function of 701ServerSQL software.



DIP Switch

※ CH1 only can select either RS-485 or RS-232. / ※ RS-232 is requested by order.

DIP Switch		Debug UART Output	Select CH1 Communication Interface RS-232 / RS-485	Select CH1 Communication Interface RS-232 / RS-485	Select DHCP Enable or Disable	
		1	2	3	4	
CH1	RS-232		ON	OFF		
	RS-485		OFF	ON		
DHCP Enable (Auto IP Address Configuration)					ON	
DHCP Disable (Auto IP Address Configuration)					OFF	

Web Console

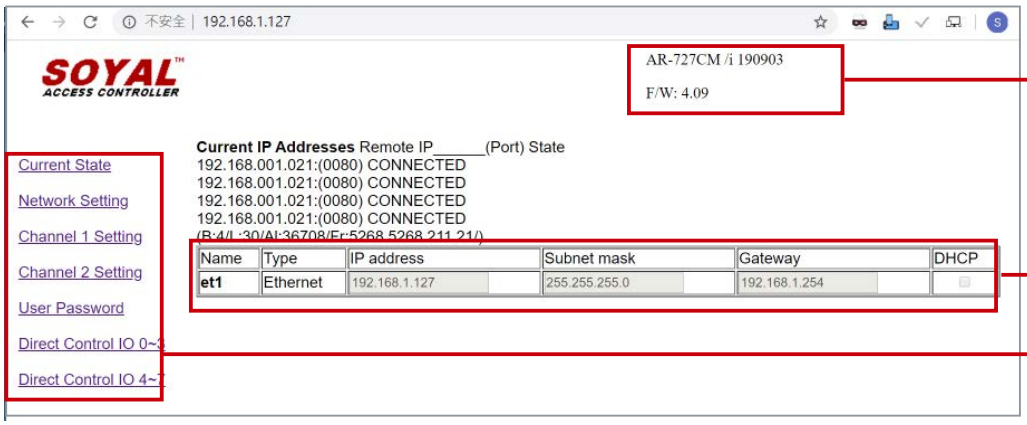
Set up IP Address:

1.Connect the device to a computer, Then turn on your Web Browser and type "http://192.168.1.127" on IP address to start web console.



※http://192.168.1.127 is the factory default, if the IP address has been changed, the new IP address may be entered.

2. When you type the IP address, you will see the [Current State] page.



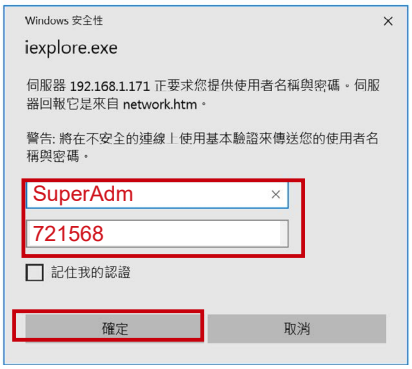
The version of ISP Firmware

Current IP address

Main Menu

3. Login : Type "User name" & "Password" on the pop up login window.

※ Factory Default :
User name: SuperAdm
Password: 721568

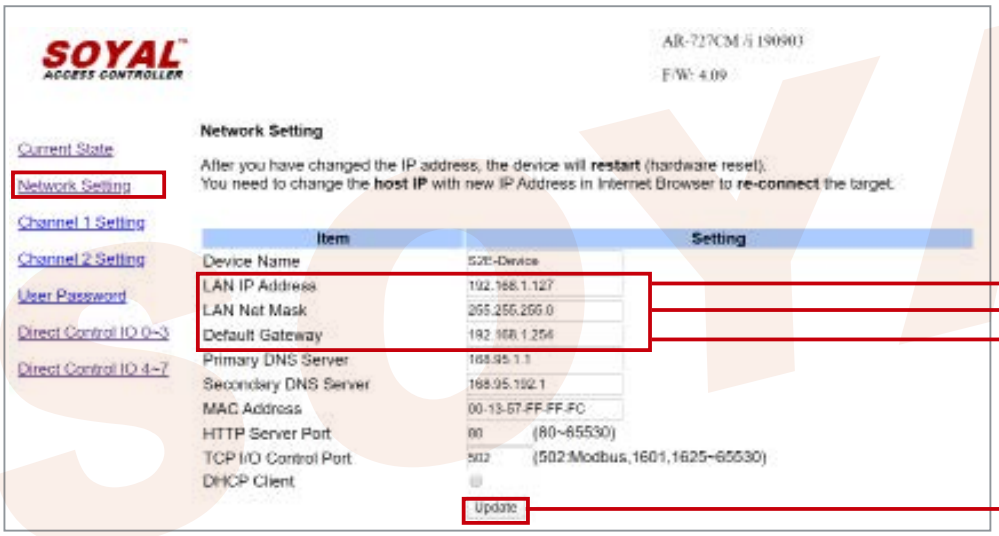


NOTE :

- User Name is different from old and new version, password can be modify via [User Password] setting on the list but will not be change from updating new version. If you forgot the password, the solution is pressing Reset Button to reset it as default value.

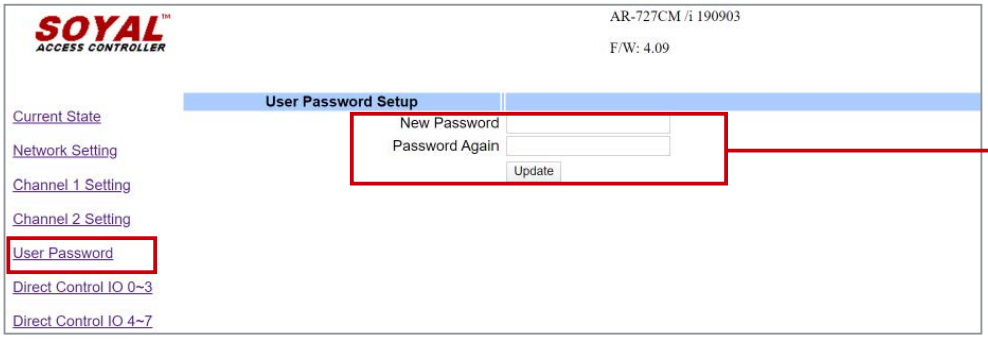
Firmware Version	User name	Password (changeable)
After 2020/01/21	SuperAdm	Default Password : 721568 or self-definition
Before 2020/01/21	admin	Default Password : admin/ password not required or self-definition

4. Click on [Network Setting] on Main Menu to set up new IP address.



a.Type the new IP address
b.Type the new LAN Net Mask
c.Type the new Default Gateway
d.Click it to update

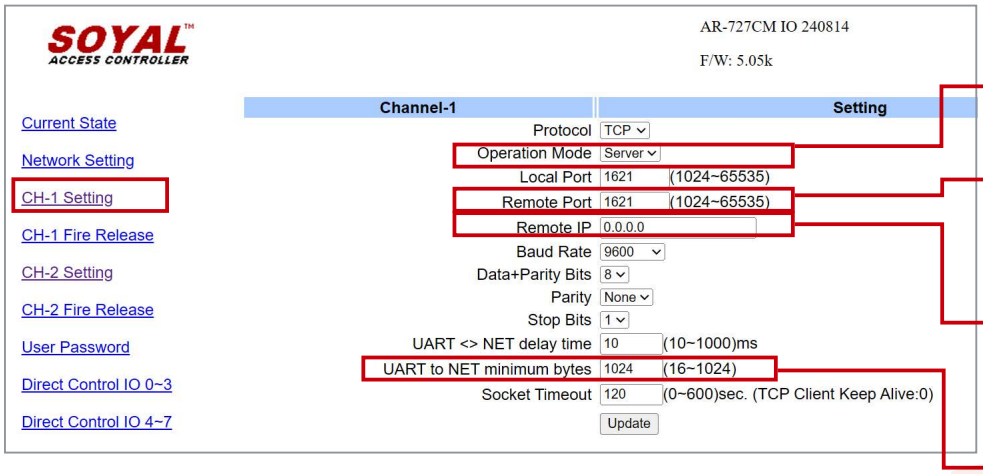
5. Click on [User Password] on Main Menu to change



Type the new Password.

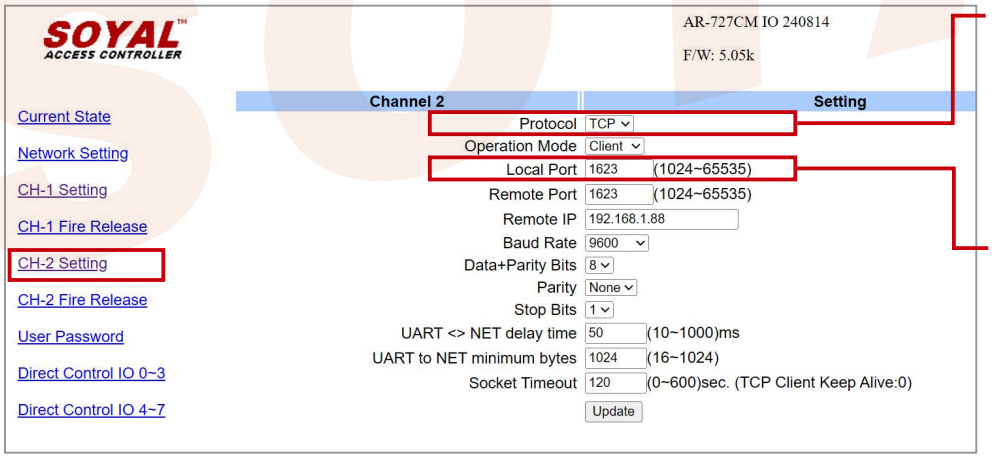
6. Click on [CH-1 Setting] or [CH-2 Setting] on Main Menu to set the port.

- **Channel 1 Setting ：**



- **Operation Mode:**
  Set the [Operation Mode] at the [Server] or the [Client].
- **Remote Port:**
  1. At the [Server]: [Remote Port] need to be set [0].
  2. At the [Client]: [Remote Port] need to be set as the server port.
- **Remote IP:**
  1. At the [Server]: [Remote IP] need to be set [0.0.0.0].
  2. At the [Client]: [Remote IP] need to be set as the server IP address.
- **UART to NET minimum bytes**:
  Proposes to set more than 900.

- **Channel 2 Setting ：**



- TCP / TCP / UDP — Factory default is set to [UDP]. (When 701ServerSQL needs to connect to the controller, please switch [UDP] to [TCP].)
- The Local Port must be set to [1623] to correspond with 701Server SQL communication port 1623.

More Detail: [Software Manual - AR-727-CM HTTP Server]

Information on instructional manuals, videos, and FAQs

FAQ

- Modifying IP when E-series Controller and AR-727-CM are connected to a computer with different network segments.
- What is difference between 727CM Server mode and Client mode?
- If you don't remember the IP address of AR-727CM, how to reset it?

Youtube

- 《SOYAL APP & WEB》SOYAL 721 APP
- 《SOYAL APP & WEB》SOYAL 727 APP Introduction

Applications

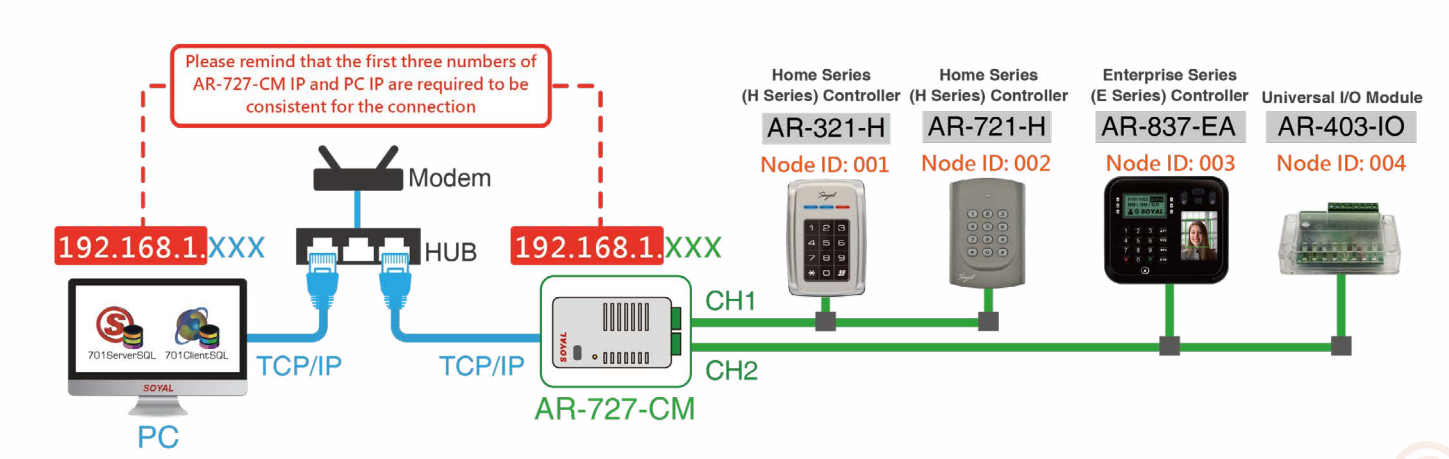
- Introduction of 4 methods to configure the access control system to release all door locks in fire alarm event
- Communication Protocol Converter / Serial Device Server
- Serial-to-Ethernet Networking AR-727CM-IO Multiple Application

Manual / Related Documents

- AR-727-CM HTTP Server Manual
- SOYAL APP Manual
- INTEGRATION SOLUTIONS-TCP IP to WIEGAND
- Instantly upload DI status to a remote server via TCP/IP

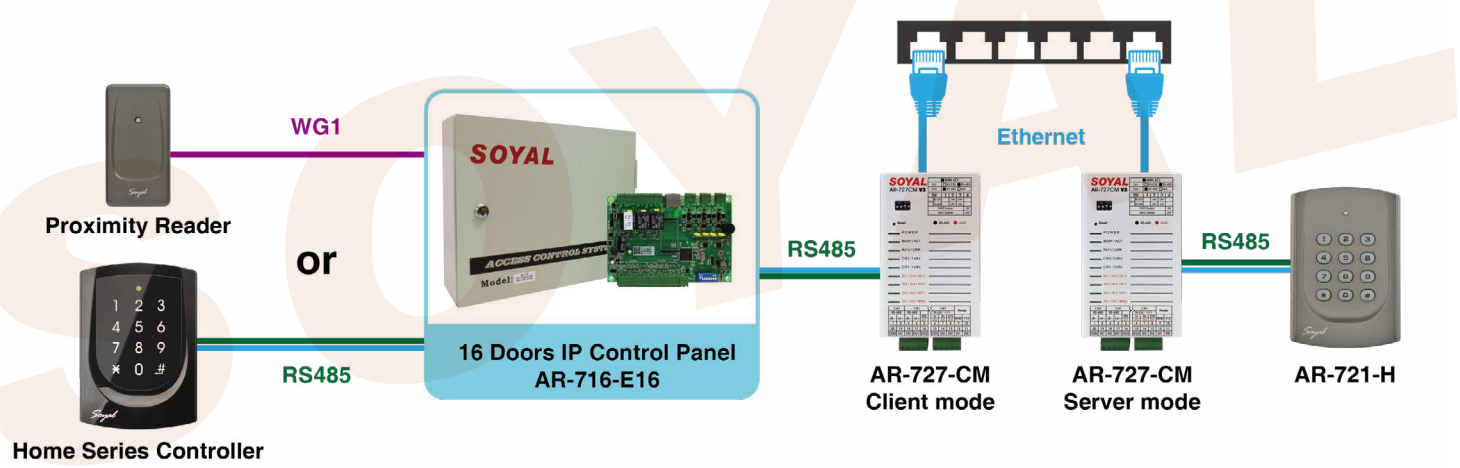
IP Setting

A.RS485 convert TCP/IP → Connection of SOYAL ALL Series Controller via TCP/IP / RS485 Converter AR-727-CM

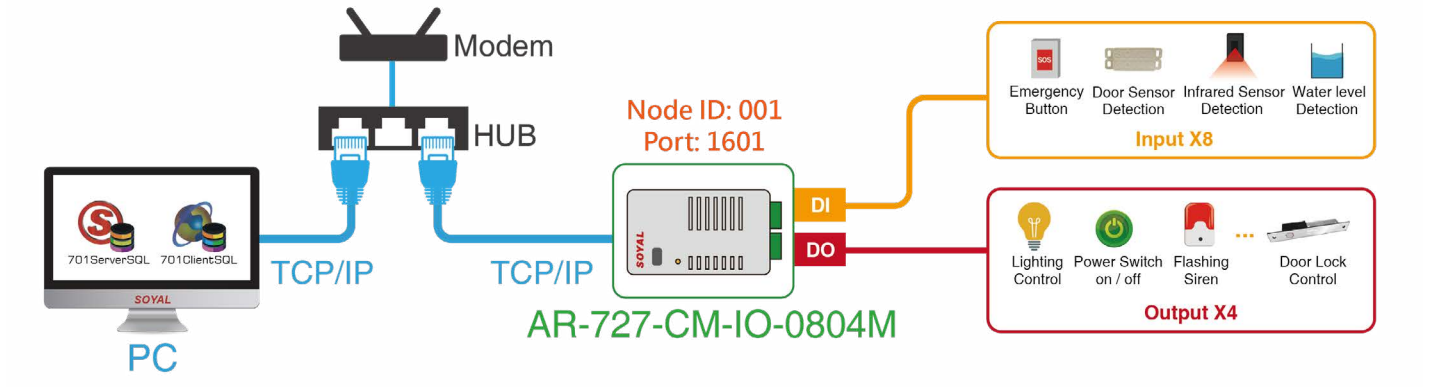


- For detailed configuration instructions, please refer to : 701ServerSQL Manual

B. Server-Client Mode Communication Bridge



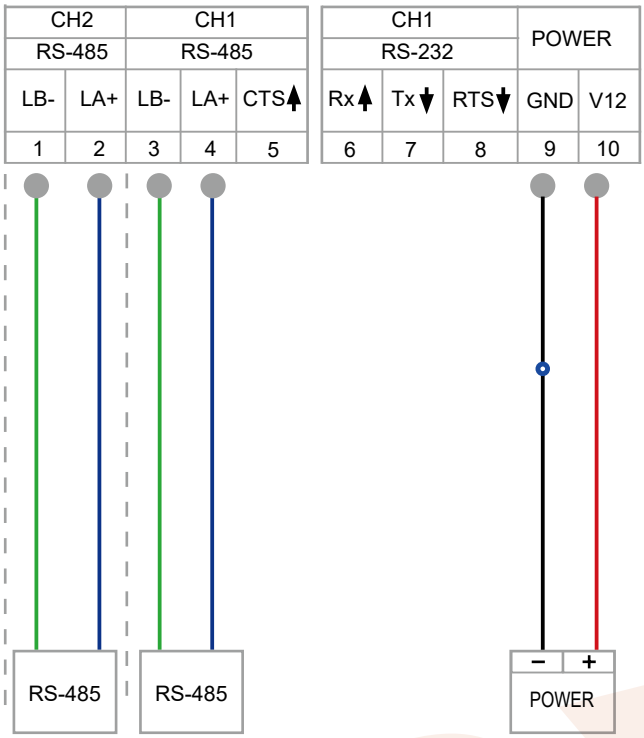
C.TCP/IP directly → Remotely control electricity equipment via TCP/IP with Industry Series I/O Module



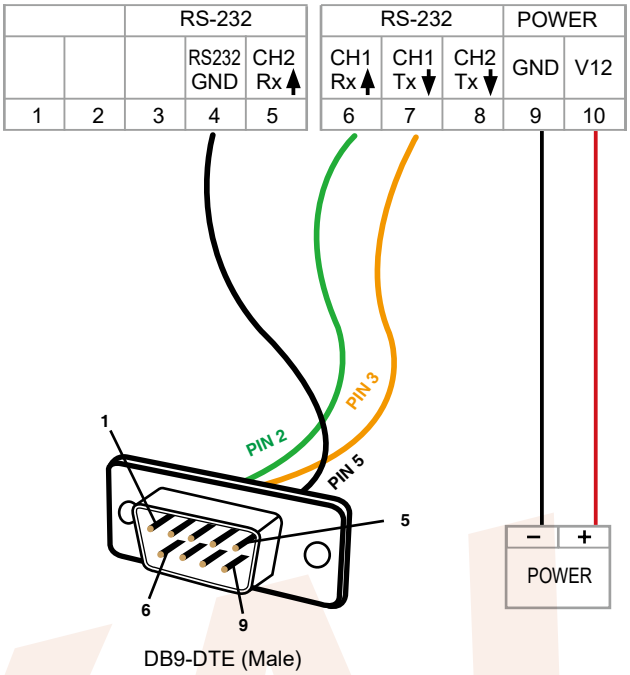
- For detailed configuration instructions, please refer to : 701ServerSQL Manual

Wiring Diagram

AR-727-CM / AR-727-CM-485



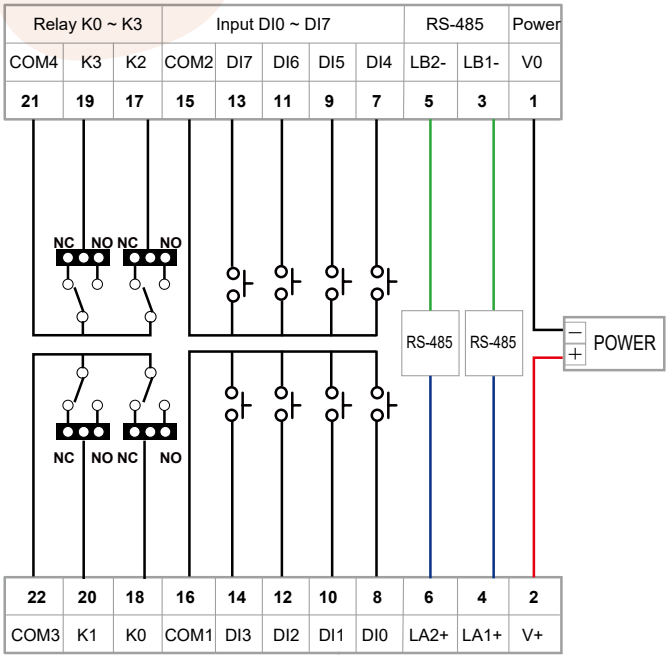
AR-727-CM-232



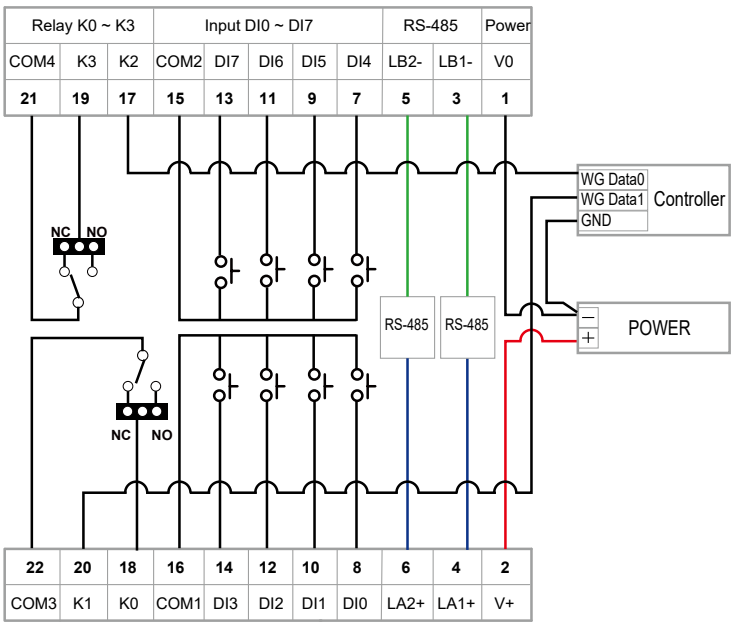
DB9-DTE (Male)

AR-727-CM-IO-0804R / AR-727-CM-PLC-0804R

Type C



AR-727-CM-IO-0802R



Contents

1 Product



Dual-Channel Gateway
AR-727-CM / AR-727-CM-485
AR-727-CM-232

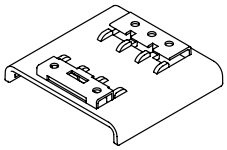


Dual-Channel Gateway with I/O
AR-727-CM-IO-0802R
AR-727-CM-IO-0804R



Dual-Channel Gateway with I/O
--Mini PLC
AR-727-CM-PLC-0804R

2 Accessories

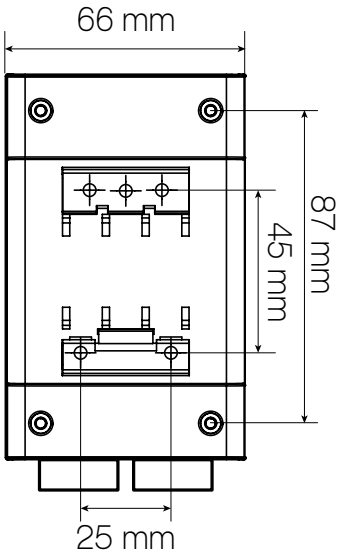


Specification

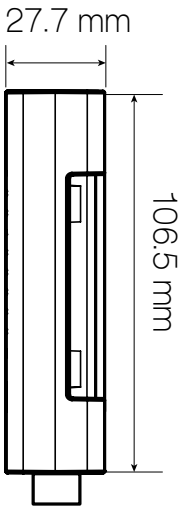
	Dual-Channel Gateway [CH1:RS232+ CH2:RS485] **AR-727-CM**	Dual-Channel Gateway [RS485] **AR-727-CM-485**	Dual-Channel Gateway [RS232] **AR-727-CM-232**	Dual-Channel Gateway with I/O **AR-727-CM-IO-0802R AR-727-CM-IO-0804R**	Dual-Channel Gateway with I/O--Mini PLC **AR-727-CM-PLC-0804R**
Ethernet	10/100 Mbps BaseT Ethernet <--> UART	10/100 Mbps BaseT Ethernet<--> RS485	10/100 Mbps BaseT Ethernet<--> RS232	10/100 Mbps Base T Ethernet <--> RS485	
Serial port	Baud Rate 2400 bps - 115200 bps Support TCP/Sever, TCP/Client, UDP Mode				
Baud Rate	4800 bps - 115200 bps				
Inputs	--			8 Digital Input	
Outputs	--			4 Relay Output (Form C)	4 Relay Output (Form C)
WG port	--			Applicable to AR-727-CM-IO-0802R: 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.	--
Protocol	ARP, IP,TCP Client,UDP, CMP, HTTP, DHCP, NetBIOS			ModBus-TCP, ARP, IP, TCP Client,UDP, ICMP, HTTP, DHCP, NetBIOS	
Serial Buffer	1K each channel				
LED Indicator	9 LED : Power ,Tx/Rx, D.O./D.I			Power ,Tx/Rx, D.O./D.I	
Watchdog Function	YES				
Active Distance	300m~1200m (RS485)				
Bulit-in linkage function	--			YES	
Surge Suppression	400W peak power dissipation.Clamping time < 1 picosecond(theoretical) Power: 30 Volt, bi-directional avalanche breakdown device. RS485 6.5 Volt, bi-directionalavalanche breakdown device.			400W peak power dissipation. Clamping time < 1 picosecond (theoretical) Power: bi-directional avalanche breakdown device. RS485 bi-directional avalanche breakdown device.	
Fuses	Power PTC 150mA , RS485 PTC 30mA			Power & RS485 both with PTC Protector	
Isolation	--			--	DI Opto-isolation
Power Supply	9-24 VDC				
Power Consumption	<2W				
Network/Device setting	701ServerSQL, 701ClientSQL, HTTP Web page for any browser				
OS Supported	Windows 7/8/10, Win Server 2008/2012/2016				

產品尺寸

Dual-Channel Gateway
(**AR-727CM / AR-727CM-485 / AR-727CM-232**)

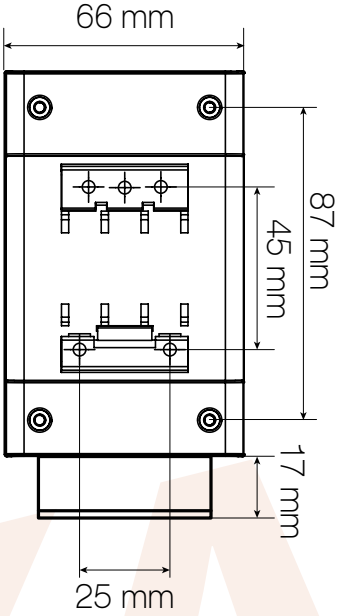


(Front View)

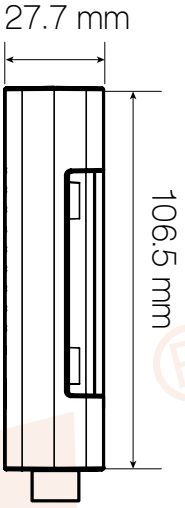


(Side View)

Dual-Channel Gateway with I/O
(**AR-727-CM-IO-0804R**)
WEB PLC
(AR-727-CM-PLC-0804R)



(Front View)



(Side View)