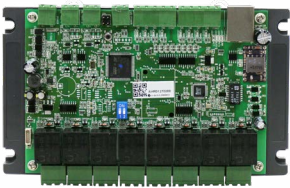
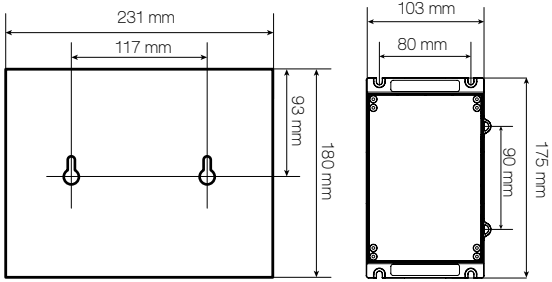
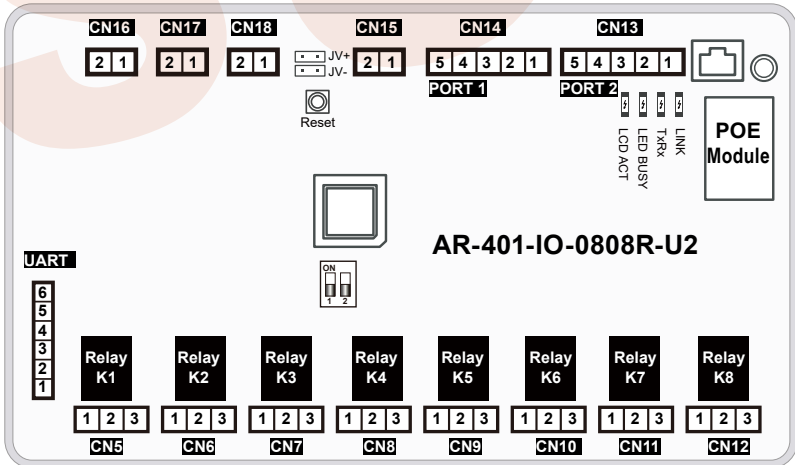


Contents	Features	Installation(mm)
<p>1 Product</p>  <p>AR-401-IO-0808R-U2</p>	<ul style="list-style-type: none"> • 32 bits/72MHz ARM CPU, upgrade serial device to TCP/IP device • Dual UART port supported and 4K/4K Rx/Tx buffer. • 10/100 Mbps Base T Ethernet • Independent power supply design for I/O • Optical coupling isolation for Digital Inputs • Two DI for Independent Positive Trigger & Negative Trigger • High power output Relay directly trig high-load device • POE module is optional 	 <p>(Front View) (Side view)</p>

Specification	
Type	Ethernet to Serial Port Device
Input Voltage	12 VDC (±5%)
Power Consumption	<2W
Dimensions	Panel Mounting Base : 127(H)x175(W)x30(D)
Port 1	RS-485 (A+, B-)
Port 2	RS-485 (A+, B-)
RS-485 Transmission	-
Interface	10/100M Base T Ethernet ↔ RS-485
Active Distance	300M/RS-485
Surge protection	16KV
N.W.(g)	approx. 232
Thunder Protection	1.5KV
Data Bits	7, 8
Stop Bits	1, 2
Parity Check	None, Even, Odd
Baudrate	4800-115200 bps
Protocol	ModBus-TCP, ARP, IP, TCP Client,UDP, ICMP, HTTP, DHCP, NetBIOS
Software Configuration	Web Console
Operating Temperature	-20°C~+70°C
Operating Humidity	0%~90% (non-condensing)
DI input	Positive Trigger or Negative Trigger
DO relay output	5A/250VAC,5A/30VDC
POE (optional)	POS needs to provide more than 12V / 2W power

PIN Assignments



AR-401-IO-0808R-U2

CN5~CN12		
Function	Pin	Description
Relay output K1~K8	1	N.O.
	2	COM
	3	N.C.

CN15		
Function	Pin	Description
DI/DO Power Supply (DC12V/1W)	1	V12
	2	V0

CN16		
Function	Pin	Description
Main Power Supply(Dual Power Mode) (DC12-24V/1W)	1	V12-24
	2	V0
Main Power Supply (Single Power Supply Mode) (DC12V/1W)	1	V12
	2	V0

CN17		
Function	Pin	Description
External Port 1 (RS-485 input)	1	B-
	2	A+

CN18		
Function	Pin	Description
External port 2 (RS-485 input)	1	B-
	2	A+

CN14		
Function	Pin	Description
DI input	1	COM
	2	DI.4
	3	DI.3
	4	DI.2
	5	DI.1

CN13		
Function	Pin	Description
DI input	1	COM
	2	DI.8
	3	DI.7
	4	DI.6
	5	DI.5

※ 701ClientSQL Graphic Animation I/O mapping starts from 00(Physical IO Address DI1 -->Symbol IO Nr.:00, Physical IO Address DI4 -->Symbol IO Nr.:03)

Power Supply Mode

Single/Dual Power Supply Mode Selection:

- Dual Power Supply Mode (JV+ & JV- Open Circuit):**

Two independent power supplies are required. In this mode, the main controller and I / O operate in power isolation mode to improve system safety and reliability. The main power supply can be selected from 12-24VDC, but the I / O side The power supply must be powered by 12VDC.



* JV+ & JV- both do not plug in jumper

- Single Power Supply Mode (JV+ & JV- Short Circuit):**

Only require one set of power supply, which is convenient for installation in small systems without power isolation. In this mode, the power supply is 12V

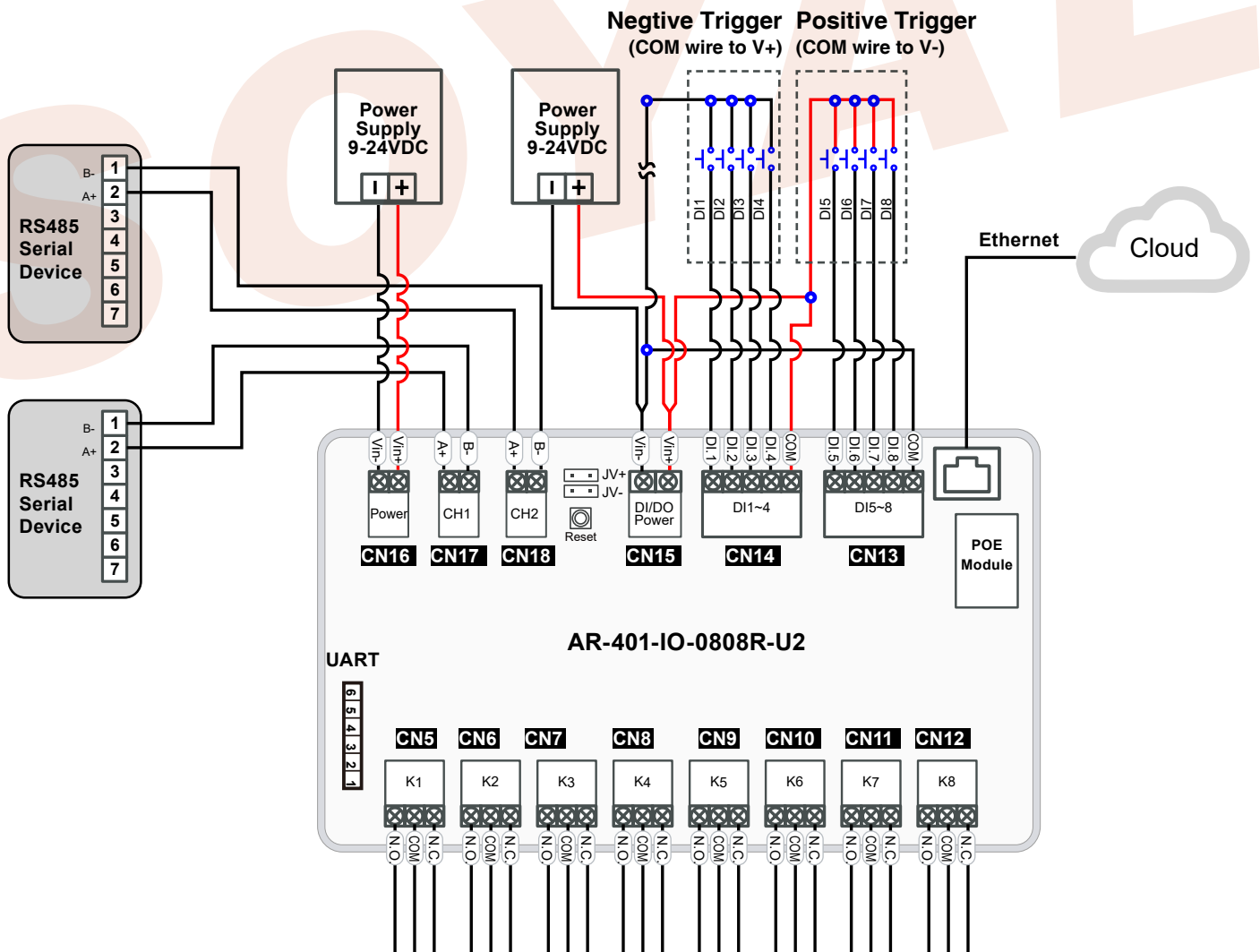


* JV+ & JV- both plug in jumper

Wiring Diagram

- When DI COM is connected to POWER I / O DC12V-, DI-Reference is POWER I / O DC12V +.
- When DI COM is connected to POWER I / O DC12V +, DI-Reference is POWER I / O DC12V-.

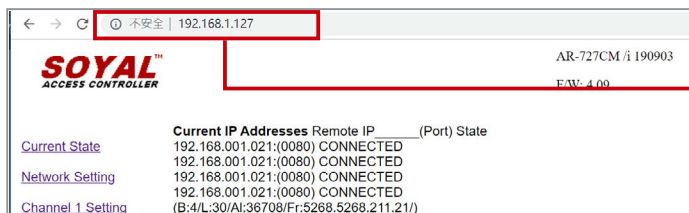
Wiring for Positive / Negative Trigger



Web Console

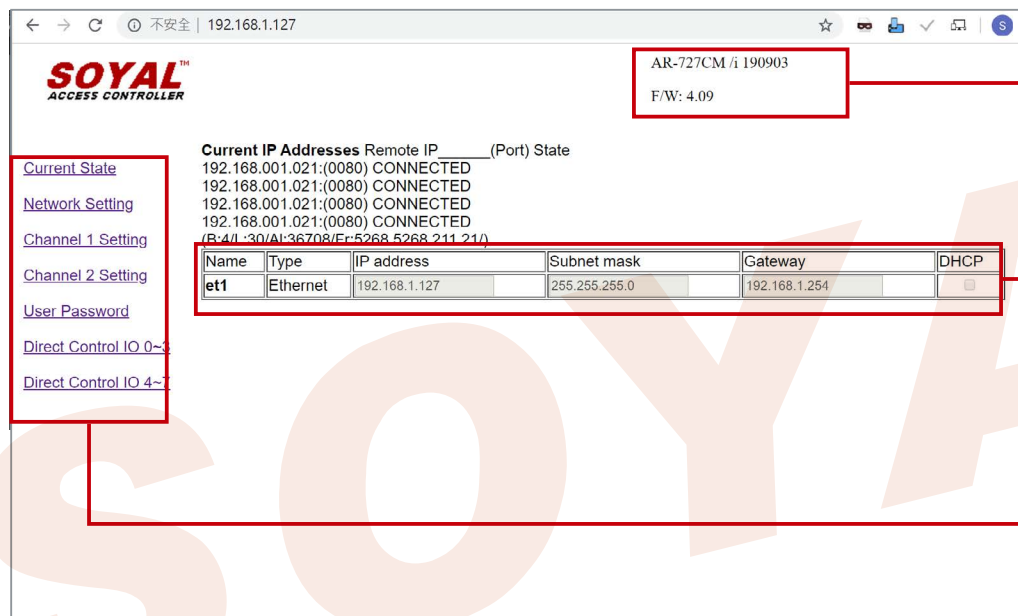
Set up IP Address:

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**



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

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F/W: 4.09

Network Setting

After you have changed the IP address, the device will **restart** (hardware reset).
You need to change the **host IP** with new IP Address in Internet Browser to **re-connect** the target.

Item	Setting
Device Name	S2E-Device
LAN IP Address	192.168.1.127
LAN Net Mask	255.255.255.0
Default Gateway	192.168.1.254
Primary DNS Server	168.95.1.1
Secondary DNS Server	168.95.192.1
MAC Address	00-13-57-FF-FF-FC
HTTP Server Port	80 (80~65530)
TCP I/O Control Port	502 (502:Modbus,1601,1625~65530)
DHCP Client	<input type="checkbox"/>

- 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

SOYAL™ ACCESS CONTROLLER AR-727CM /i 190903
F/W: 4.09

User Password Setup

New Password

Password Again

Type the new User Name & Password.

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

SOYAL™ ACCESS CONTROLLER AR-727CM /i 190903
F/W: 4.09

Channel 1 Setting

Protocol: TCP

Operation Mode: Server

Local Port: 1621 (1024~65535)

Remote Port: 1621 (1024~65535)

Remote IP: 0.0.0.0

Baud Rate: 9600

Data Bits: 8

Parity: None

Stop Bits: 1

UART to NET delay time: 10 (10~1000)ms

UART to NET minimum bytes: 1024 (16~1024)

Socket Timeout: 120 (0~600)sec. (TCP Client Keep Alive:0)

Fire Alarm (DI0) Open Doors: Disable (Available for TCP Server mode Only)

Door Open Mode: Just-Pulse (Available for TCP Server mode Only)

Selected Node ID: 0 (1~254, 255 for broadcast all, Set to 0 to disable this node)

Selected Node ID: 0 (1~254, Set to 0 to disable this node)

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Selected Node ID: 0 (1~254, Set to 0 to disable this node)

- Set the [Operation Mode] at the [Server] or the [Client].
- At the [Server]: [Remote Port] need to be set [0].
- At the [Client]: [Remote Port] need to be set as the server port.
- At the [Server]: [Remote IP] need to be set [0.0.0.0].
- 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.

7. Set up I/O: Click on [Direct Control IO 0~3]

AR-727CM / i 190903
F/W: 4.09

Function & Name	Status	Action																
Select Node	255	1~255, (Set to 255 for broadcast)																
Latch Open	<input type="button" value="Action"/>	Unlock and keep in open status																
Pulse Open	<input type="button" value="Action"/>	Unlock and lock automaticly																
Close	<input type="button" value="Action"/>																	
DI0	<input type="radio"/> Open	<table border="1"> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> </table>	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off
On	0		Sec.(0 for Latch)	Off														
On	0		Sec.(0 for Latch)	Off														
On	0		Sec.(0 for Latch)	Off														
On	0	Sec.(0 for Latch)	Off															
DI1	<input type="radio"/> Open																	
DI2	<input type="radio"/> Open																	
DI3	<input type="radio"/> Open																	
RelayOutput0	<input type="radio"/> Off	<input type="button" value="Update IO Status"/>																
DO1	<input type="radio"/> Off																	
DO2	<input type="radio"/> Off																	
DO3	<input type="radio"/> Off																	
<input type="button" value="Name Change"/>																		

Status Indicate for Digital Inputs (DI0~3) and Digital Outputs (DO0~3)

Status Control for Digital Outputs (DO0~3)

8. Set up I/O: Click on [Direct Control IO 4~7]

AR-727CM / i 190903
F/W: 4.09

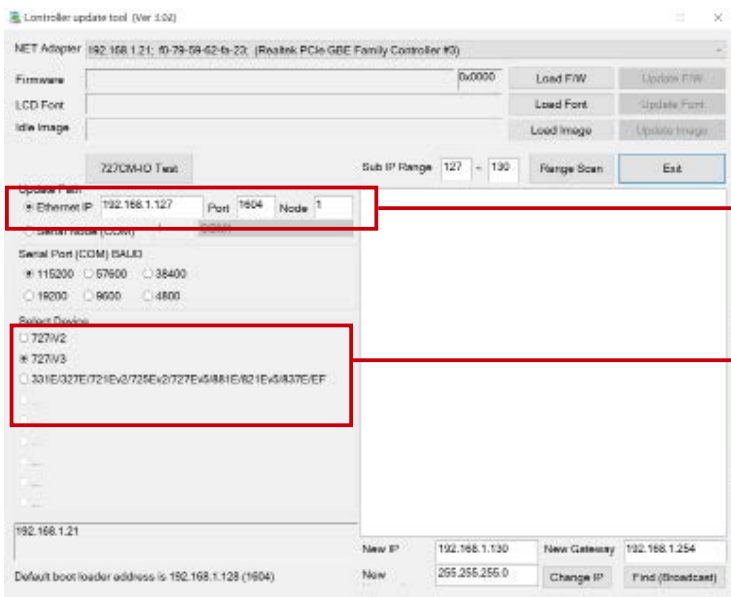
Function & Name	Status	Action																
Select Node	255	1~255, (Set to 255 for broadcast)																
Latch Open	<input type="button" value="Action"/>	Unlock and keep in open status																
Pulse Open	<input type="button" value="Action"/>	Unlock and lock automaticly																
Close	<input type="button" value="Action"/>																	
DI4	<input type="radio"/> Open	<table border="1"> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> <tr> <td>On</td> <td>0</td> <td>Sec.(0 for Latch)</td> <td>Off</td> </tr> </table>	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off	On	0	Sec.(0 for Latch)	Off
On	0		Sec.(0 for Latch)	Off														
On	0		Sec.(0 for Latch)	Off														
On	0		Sec.(0 for Latch)	Off														
On	0	Sec.(0 for Latch)	Off															
DI5	<input type="radio"/> Open																	
DI6	<input type="radio"/> Open																	
DI7	<input type="radio"/> Open																	
DO4	<input type="radio"/> Off	<input type="button" value="Update IO Status"/>																
DO5	<input type="radio"/> Off																	
DO6	<input type="radio"/> Off																	
DO7	<input type="radio"/> Off																	
<input type="button" value="Name Change"/>																		

Status Indicate for Digital Inputs (DI4~7) and Digital Outputs (DI4~7)

Status Control for Digital Outputs (DI4~7)

Update the ISP Firmware

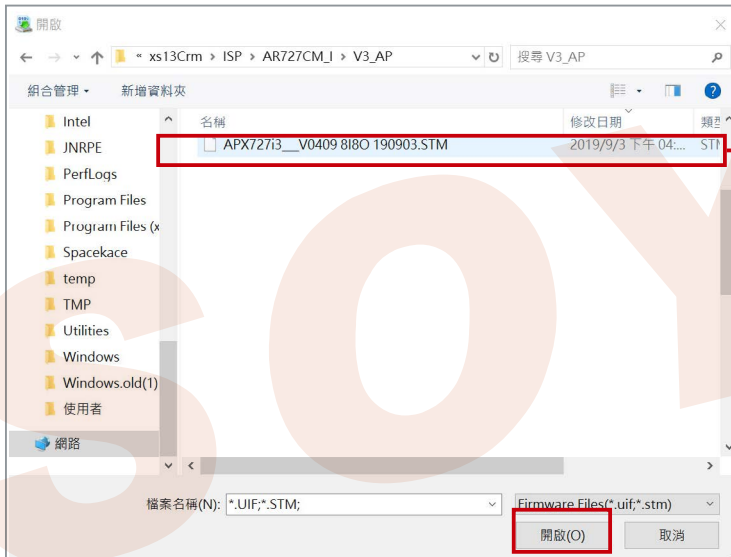
Way 1: Normal Ethernet Connection



Step 1: Execute the software [ UdpUpdater.exe] that please login the SOYAL website to download

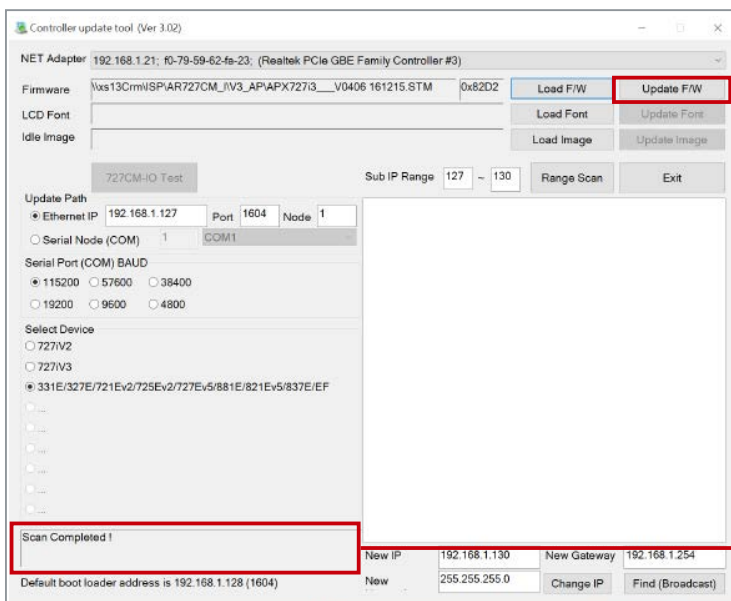
Step 2: Type IP Address

Step 3: Select Device [727IV3]



Step 4: [Load F/W] open the documents that have the new ISP Firmware

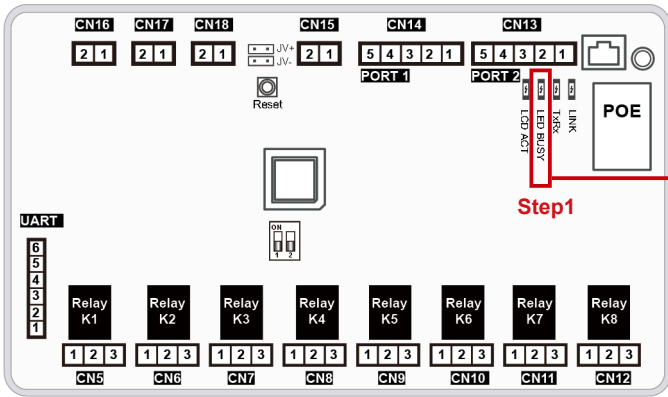
Step 5: Click the new ISP Firmware, for example [APX727i3_V0409 8180190903.STM] and click [Open]



Step 6: Click [Update F/W] to start the firmware update

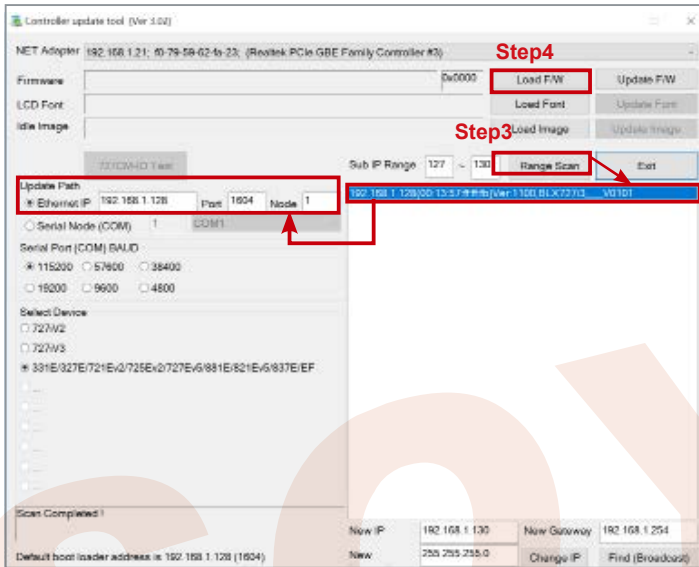
Step 7: Done when the screen shows "Scan Completed". Click [Exit] to finish.


Way 2 : Entering Boot Load Mode (When the 401-IO-0808R-U2 program does not work, you can use this method to re-download)



Step 1: Entering Boot Load Mode

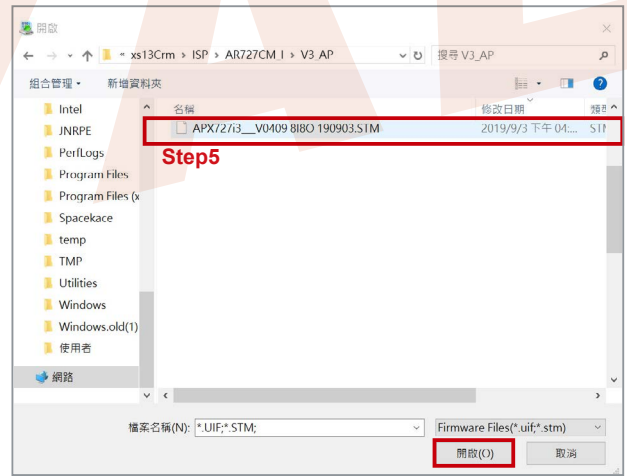
Cut off the power supply--> pressing the "Reset" button for a hold and then repower at the same time until BUSY/ACT led turns ON and keep blinking.



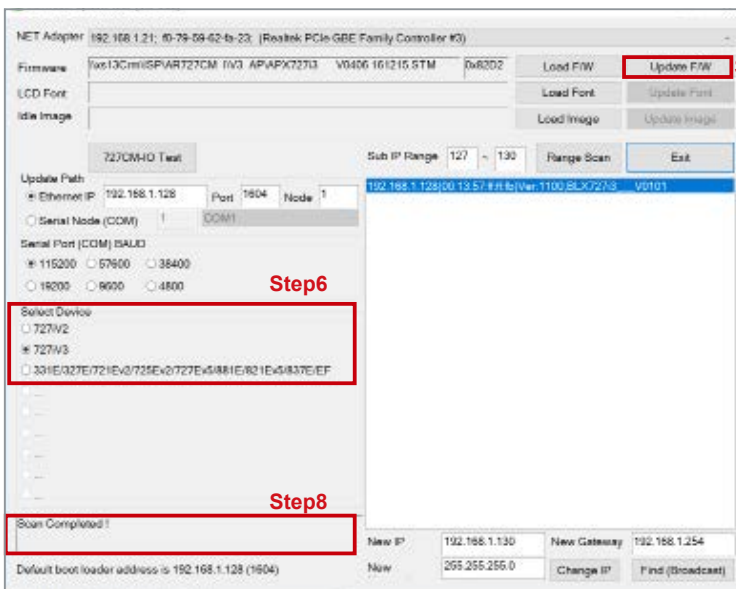
Step 2: Execute [ UdpUpdater.exe] that please login the SOYAL website to download

Step 3: Click on [Range Scan] to generate a set of IP address, double click to auto key-in this address to Ethernet IP box

Step 4: [Load F/W] open the documents that have the new ISP Firmware



Step 5: Click the new ISP Firmware, for example [APX727i3_V0409 8180190903.STM] and click [Open]



Step 7

Step 6: Select Device [727iV3]

Step 7: Click [Update F/W] to start the firmware update

Step 8: Done when the screen shows "Scan Completed". Click [Exit] to finish.