SOYAL® ACCESS CONTROL SYSTEM

AR-727iV2 / AR-727CM V2

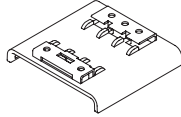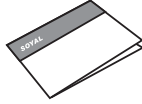## Contents

AR-727iV2

❶ Product

- AR-727iV2 Supports varies Ethernet protocol (TCP server/TCP), which is a Serial-to-Ethernet device to connect to networking.
- Small volume with compact design, 45mm*28mm size less than a semi credit card, easily connect to Serial device to get on networking with 10/100M.

AR-727CM V2

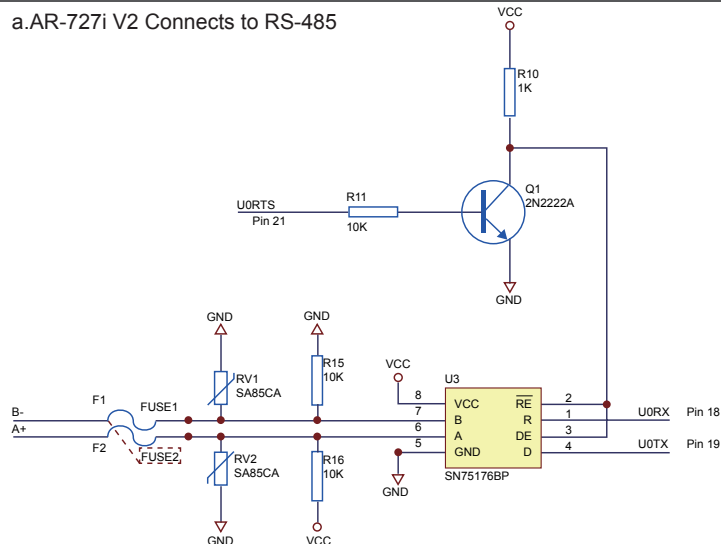❶ Product   ❷ User Guide   ❸ Accessories

- 32 bits/50MHz ARM CPU upgrades serial device to networking device.
- Compatible with 5V and 3V system.
- Dual UART port supported and 4K/4K Rx/Tx buffer.
- Easy to use with compact volume. Need for external components.
- 10/100 Mbps auto-negotiation Ethernet interface.
- The Virtual COM software builds 1-255 virtual series communication ports onto your computer.
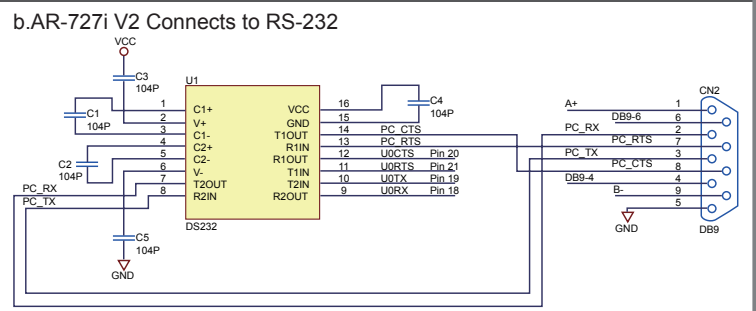
Specification

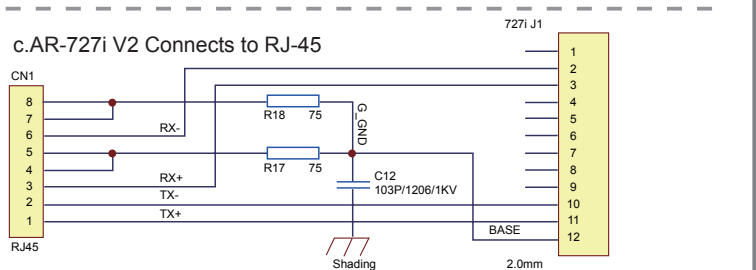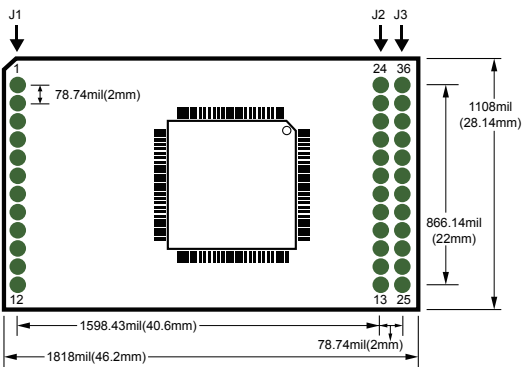| Part NO.	AR-727i V2	AR-727CM V2	
Type	36-pin 2mm compact package	Ethernet to Serial Port Device	
Input Voltage	5 VDC (±5%)	9-24 VDC (±5%)	
Power Consumption	<0.5W	<2W	
Dimensions	45(L)x28(W)x14(H)	106.5(L)x66(W)x27.7(H)	
Port 1	TTL 3.3VDC (Rx, Tx, RTS, CTS)	RS-232 (Rx, Tx, RTS, CTS)	RS-485 (A+, B-)
Port 2	TTL 3.3VDC (Rx, Tx, RTS, CTS)	RS-485 (A+, B-)	
RS-485 Transmission Direction Control	RTS pin	-	
Interface	10/100M Base T Ethernet ⟷ UART(TTL)	10/100M Base T Ethernet ⟷ RS-232/RS-485	
Active Distance	-	2M/RS-232	300M/RS-485
Surge protection	-	16KV	
N.W.(g)	15	86±5	
Thunder Protection	1.5KV		
Data Bits	7, 8		
Stop Bits	1, 2		
Parity Check	None, Even, Odd		
Baudrate	4800-115200 bps		
Network Protocols	ARP, IP, TCP Client, UDP, ICMP, HTTP, DHCP, NetBIOS, SNMP V1, V2, V3,		
Software Configuration Interface	Web Console		
Operating Temperature	-20℃~+75℃		
Operating Humidity	5 to 95% RH		

727i V2 Diagram

a.AR-727i V2 Connects to RS-485

b.AR-727i V2 Connects to RS-232

c.AR-727i V2 Connects to RJ-45

AR-727i V2 PIN Assignments

J1

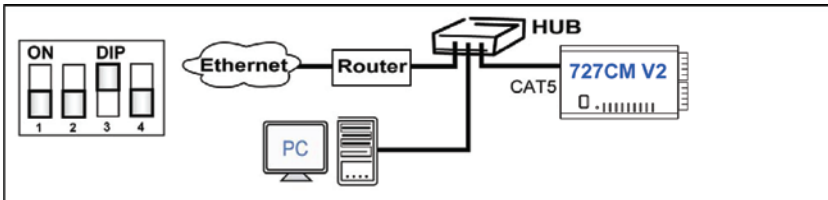| Pin No.	Signal	Description
1	5V	Power input.
2	NET RX(－)	Ethernet Network Receive Data(－).
3	NET RX(＋)	Ethernet Network Receive Data(＋).
4	5V	Power input
5	BUSY LED	Low active for external LED Driver to indicate busy status.
6	LINK LED	Low active for external LED Driver to indicate cable connected status.
7	ACT LED	Low active for external LED Driver to indicate TCP/UDP connect status.
8	RX/TX LED	Low active for external LED Driver to indicate Ethernet RX/TX status.
9	GND	Power input.
10	NET TX(－)	Ethernet Network Tranceive Data(－).
11	NET TX(＋)	Ethernet Network Tranceive Data(＋).
12	BASE	Connect to shading through 103P/2KV capacitor.

J2

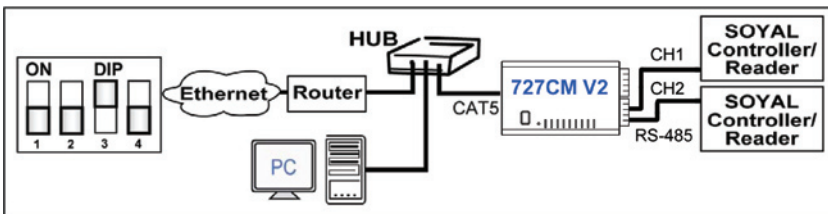| Pin No.	Signal	Description
24	GND	Power input.
23	Reserved	
22	Reserved	
21	U0 RTS	UART channel 0 Request to Send.
20	U0 CTS	UART channel 0 Clear to Send.
19	U0 TX	UART channel 0 Tranceive Data.
18	U0 RX	UART channel 0 Receive Data.
17	Factory Reset	Connect to ground more then 3 seconds will reset the module to Factory Default Value.
16	DHCP	AR-727i support Auto Configuration of the IP and gateway addresses and subnet mask function, but must make sure the DHCP Server is active.
15	50Hz	50Hz square ware output for external watchdog strobe use.
14	Reset	Low active. System reset input.
13	GND	Power input.

J3

Pin No.	Signal	Description
36	V33	3.3V voltage output.(max 20mA)
35	Reserved	
34	U1 RTS	UART channel 1 Request to Send.
33	U1 CTS	UART channel 1 Clear to Send.
32	U1 RX	UART channel 1 Receive Data.
31	U1 TX	UART channel 1Tranceive Data.
30	Reserved	
29	Reserved	
28	Reserved	
27	Reserved	
26	Reserved	
25	Reserved	

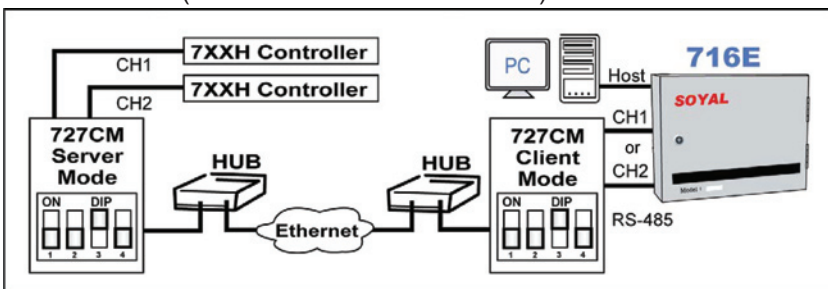## AR-727CM V2 (2 UART Ports): Connection and Configuration
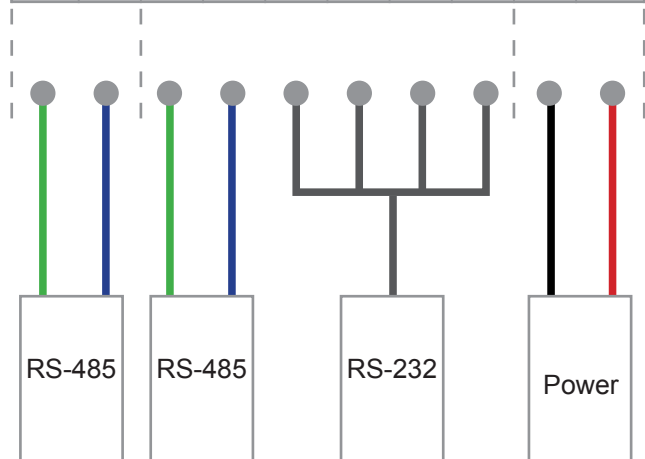
A. IP setting

B. Normal use

C. Remoe use (Server mode and client mode)

D. DIP Switch Settings

DIP Switch		1	2	3	4
Normal Run Mode and Networking Setup	RS-232		ON	OFF	
	Two RS-485 Wires		OFF	ON	
DHCP Enable (Auto IP Address Configuration)					ON
DHCP Disable (Auto IP Address Configuration)					OFF

CH2		CH1						POWER	
RS-485		RS-485		RS-232					
LB-	LA+	LB-	LA+	RTS	Tx	Rx	CTS	GND	V12
1	2	3	4	5	6	7	8	9	10
20	19	18	17	16	15	14	13	12	11
COM	N.C.	N.O.	DO1	DO2	DO3	DI3	DI2	DI1	DI0

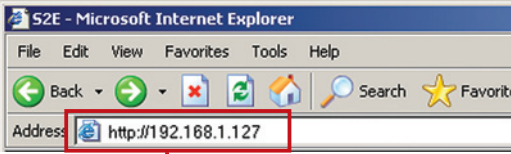

RS-485 RS-485 RS-232 Power

※ CH1 only can select either RS-485 or RS-232.

Web Console
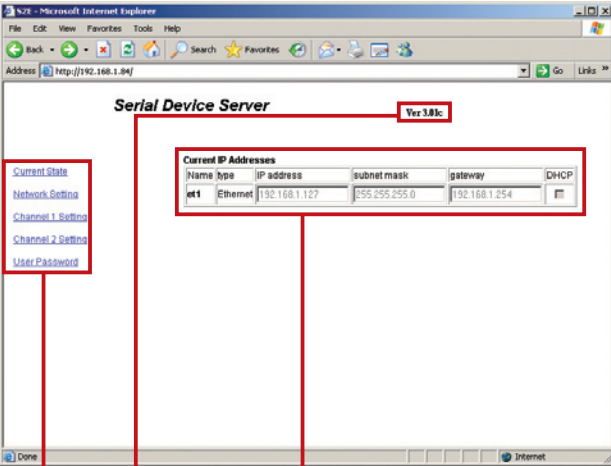
Set up IP Address:

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 factory default webbrowser.

Factory Default

※ 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.
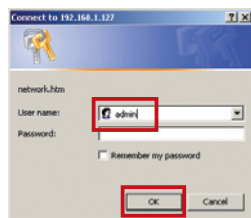

Current IP address

The version of ISP Firmware
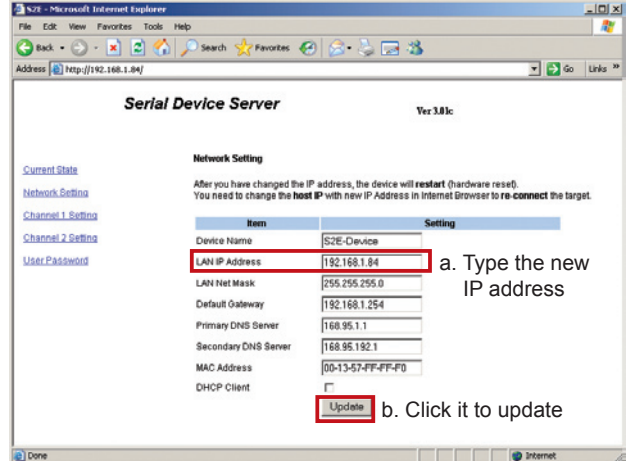
Main Menu

3. Login

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

※ Factory Default :
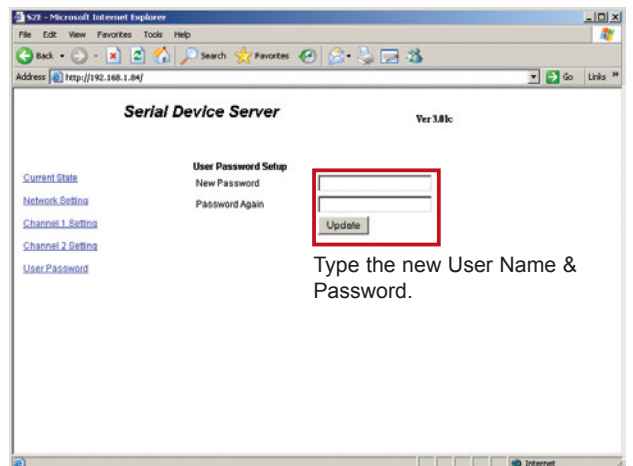   User name: admin
   Password:(NO need to type)

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

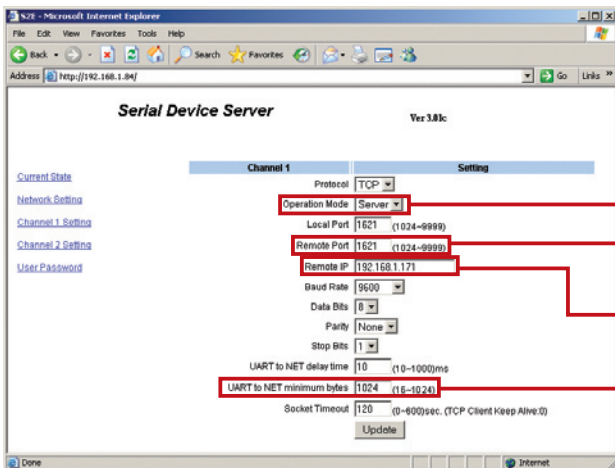a. Type the new IP address

b. Click it to update

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

Type the new User Name & Password.

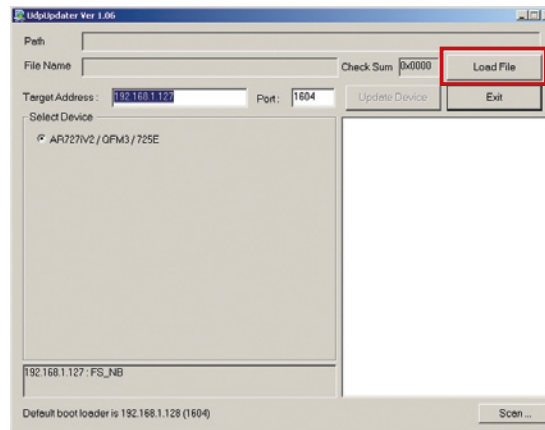6. Click on [Port 0 Setting] or [Port 1 Setting] on Main Menu to set the port.

● 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.

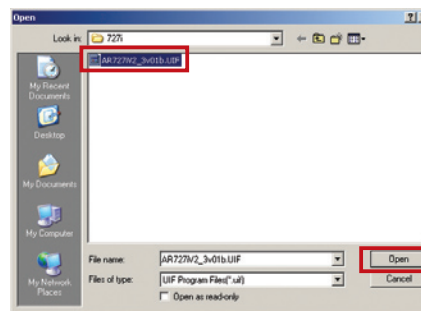● [UART to NET minimum bytes]: Proposes to set more than 900.

Update the ISP Firmware

Step 1: Execute the software [UdpUpdater.exe] provided by **SOYAL**.

Step 2: Click on [Load File] to open the Firmware

Step 3: Click on the lastest firmware, and click on [Open].

Step 4: Then follow the steps:

1. Type the IP address and COM Port

2. Click on [Update Device]

3. Until the screen appears [Program Completed]

4. It mean the upgrade is successed, and click on

[Exit] to leave.