DAUDIN CO., LTD.

iO-GRID $\mathcal{C}$

& SIEMENS PLC PROFINET Connection Operating Manual

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1. Example Remote I/O Module System Configuration List

Part No.	Specification	Remarks
GF2-C004T	PROFINET Coupler	
GF2-DI01T	16-channel digital input module, Sink, 24VDC	
GF2-DQ01T	16-channel digital output module, Sink, 24VDC	
GF2-AI01T	4-channel analog input module (-10… 10VDC, 0…10VDC，0...5VDC)	
GF2-AQ01T	4-channel analog output module (-10… 10VDC, 0…10VDC，0...5VDC)	
GFPS-0202	Power 24V / 48W	

1.1 Product Description

I. **The coupler connects to the communication port (PROFINET) on Siemens S7-120**

II. **The coupler is in charge of the management and dynamic configuration of I/O parameters and so on.**

III. **The power module is standard for remote I/Os and users can choose the model or brand of power module they prefer.**

2. Coupler Parameter Settings

This chapter explains how a coupler connects to Siemens S7-1200, detailed introduction on iO-GRID $\mathcal{C}$, please refer to the i-Designer User Manual

2.1   Preceding Operation of Software Setup

Connect with the <u>coupler module</u> using a Micro-USB cable
Plug your Micro-USB cable to the Micro-USB port on your <u>coupler module.</u>
Make sure the fieldbus is powered and then open the <u>i-Designer</u> setup program
Coupler Module Parameters Setup

<u>Coupler module</u> connection illustration:

i-Designer software   Micro-USB cable
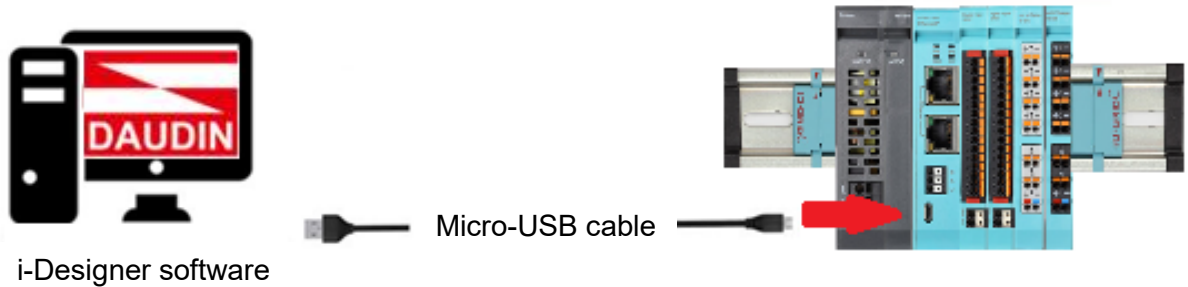
※Before setting up the <u>coupler module,</u> please confirm that the <u>I/O modules</u> are lined up closely on the <u>fieldbus</u>

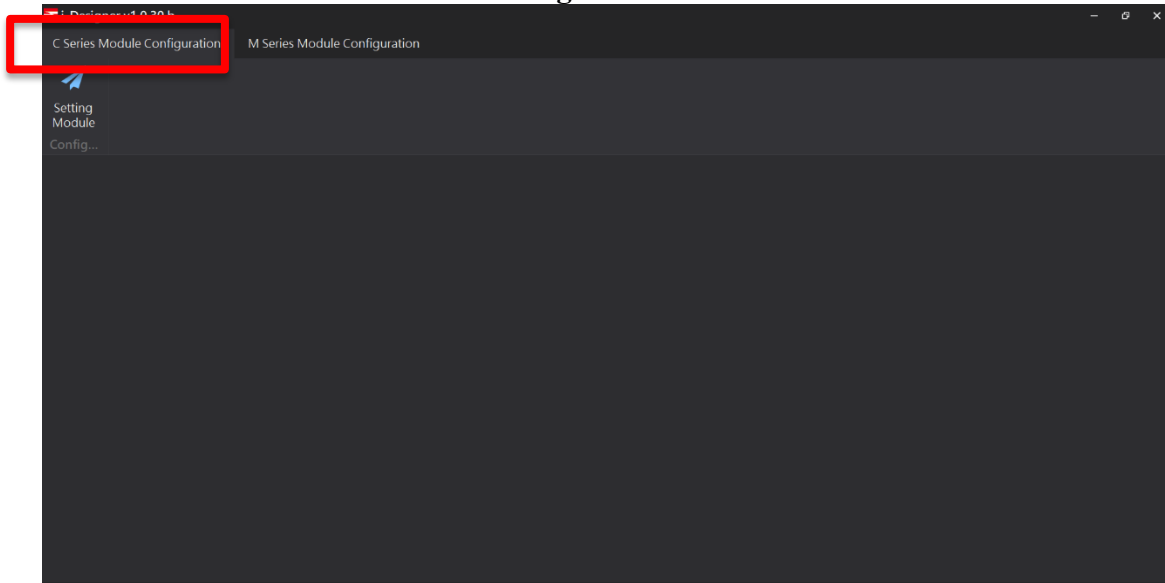Coupler module connection image:
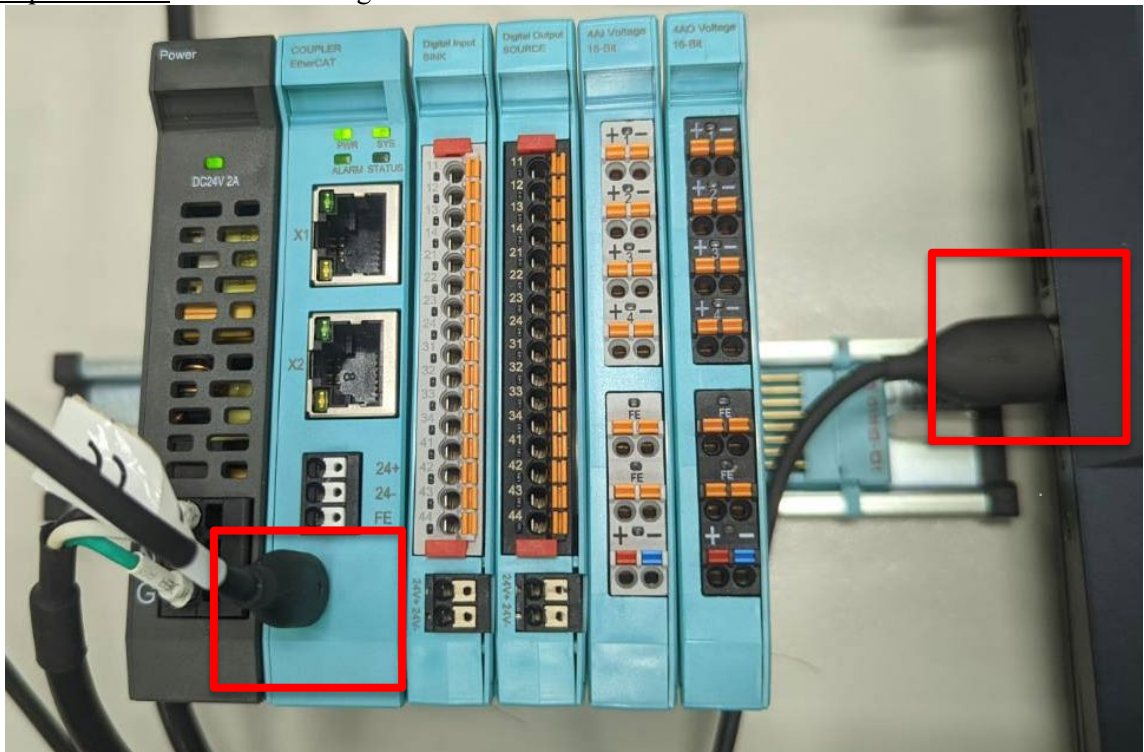
2.2 Coupler Software Setup

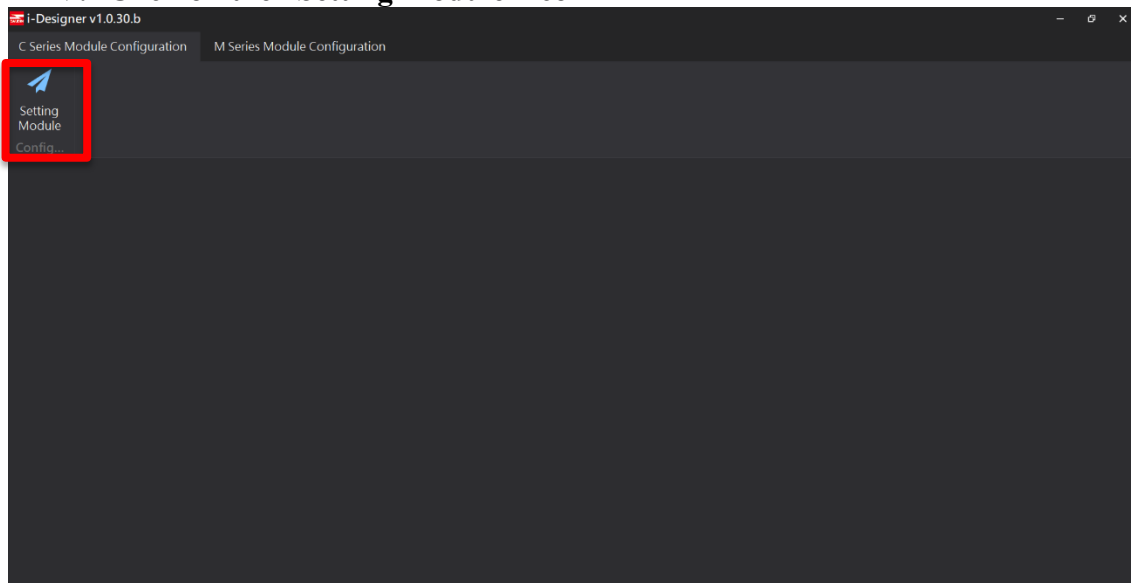I. **Make sure that the module is powered and connected to the USB port**
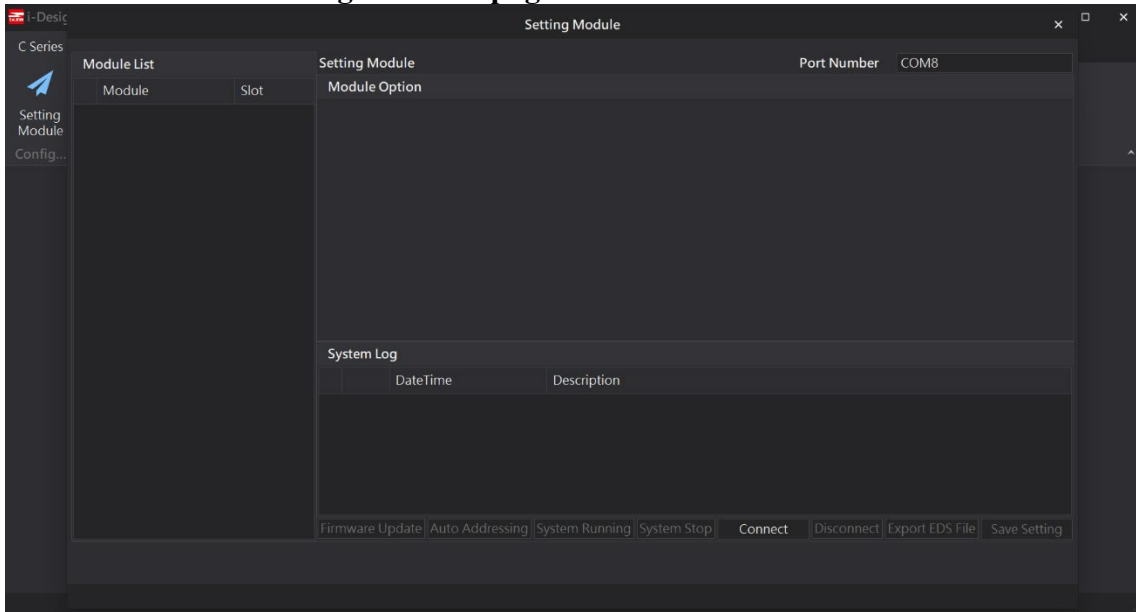

II. **Click to launch the software**

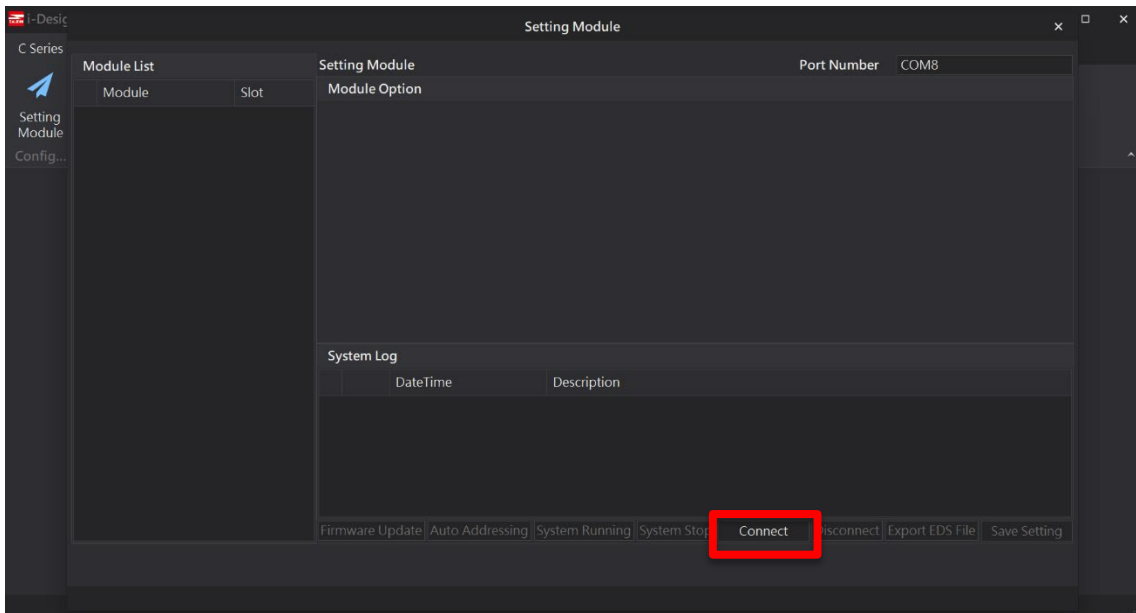### III. Select "C Series Module Configuration"
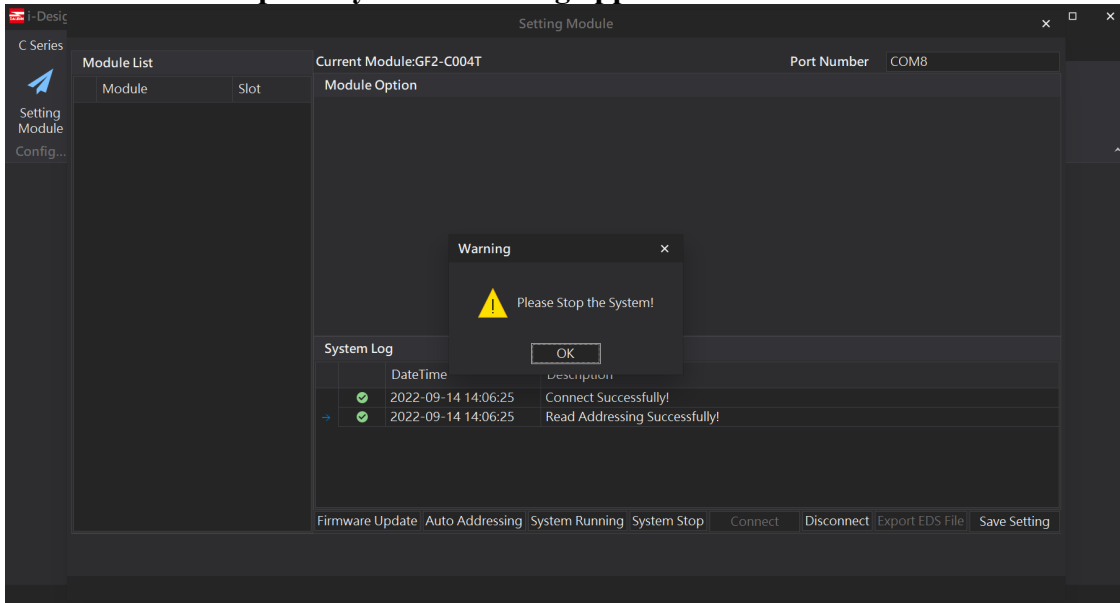

IV. Click on the "Setting Module" icon
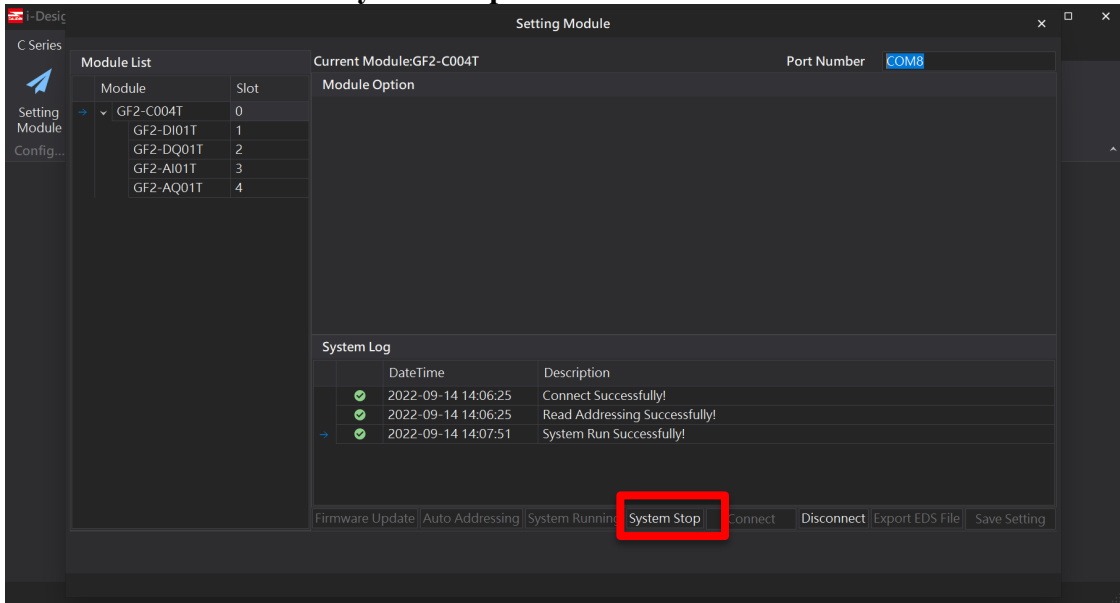
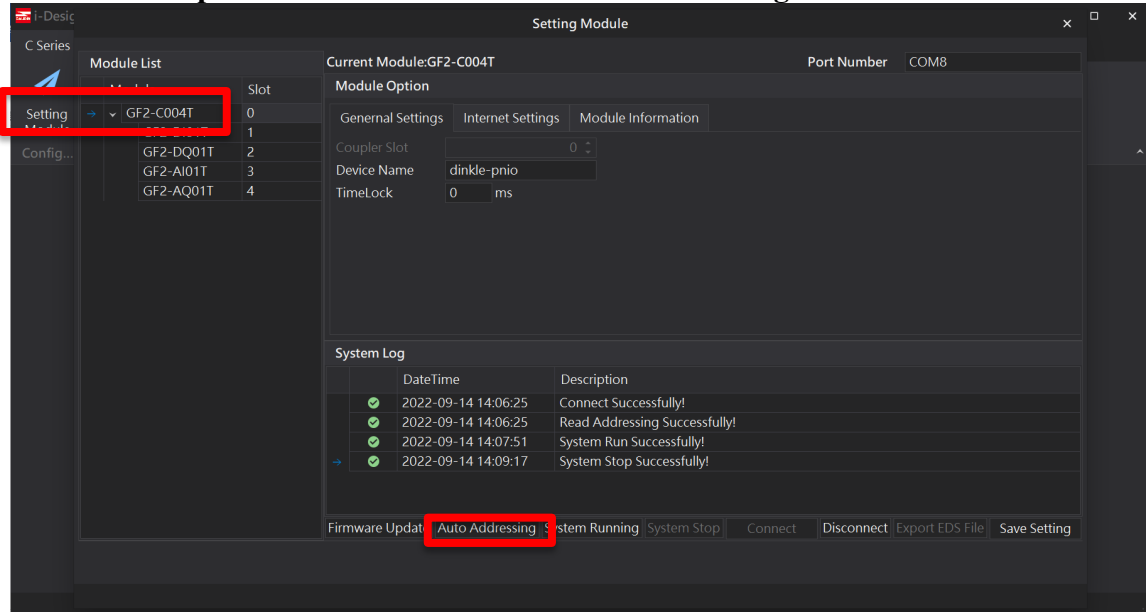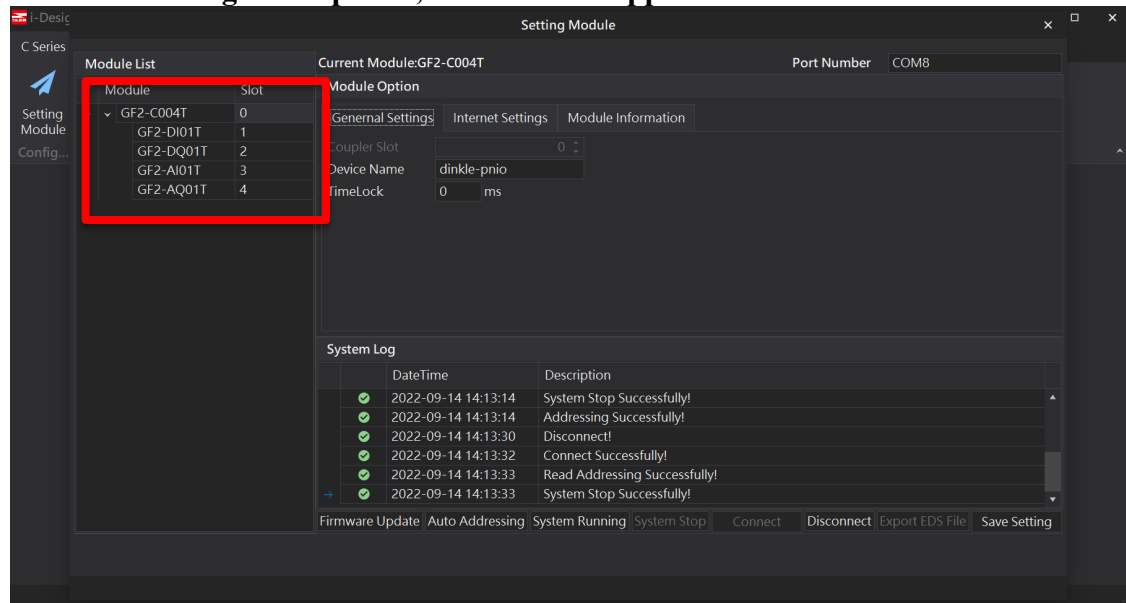## V. Enter the "Setting Module" page for C-series

VI. Click on "Connect"

VII. "Please Stop the System" warning appears
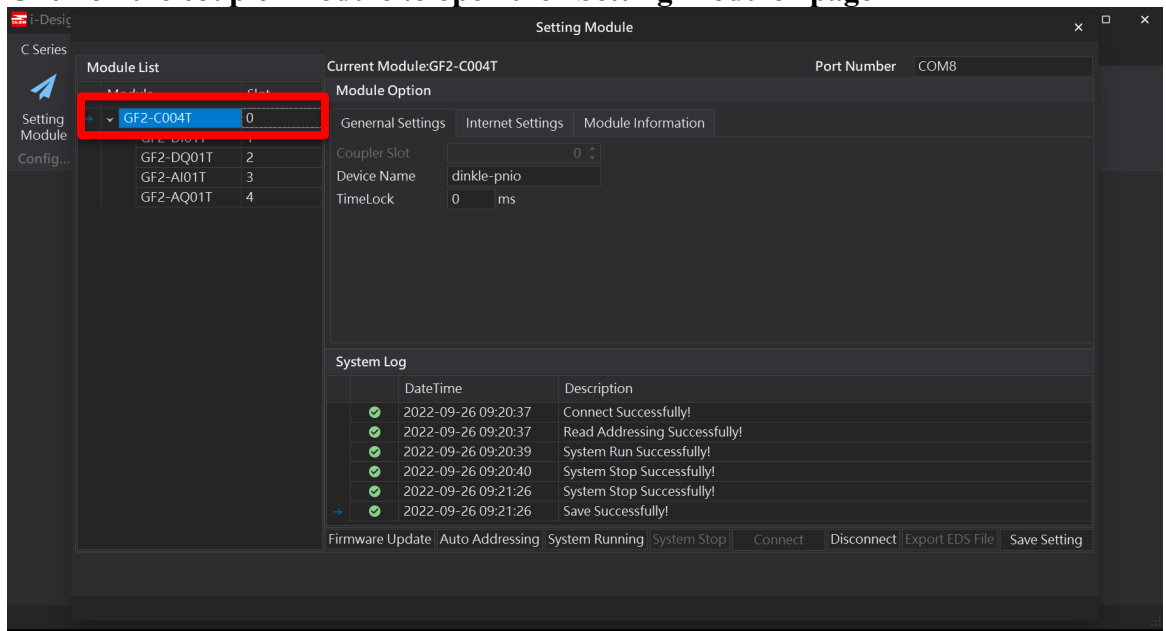

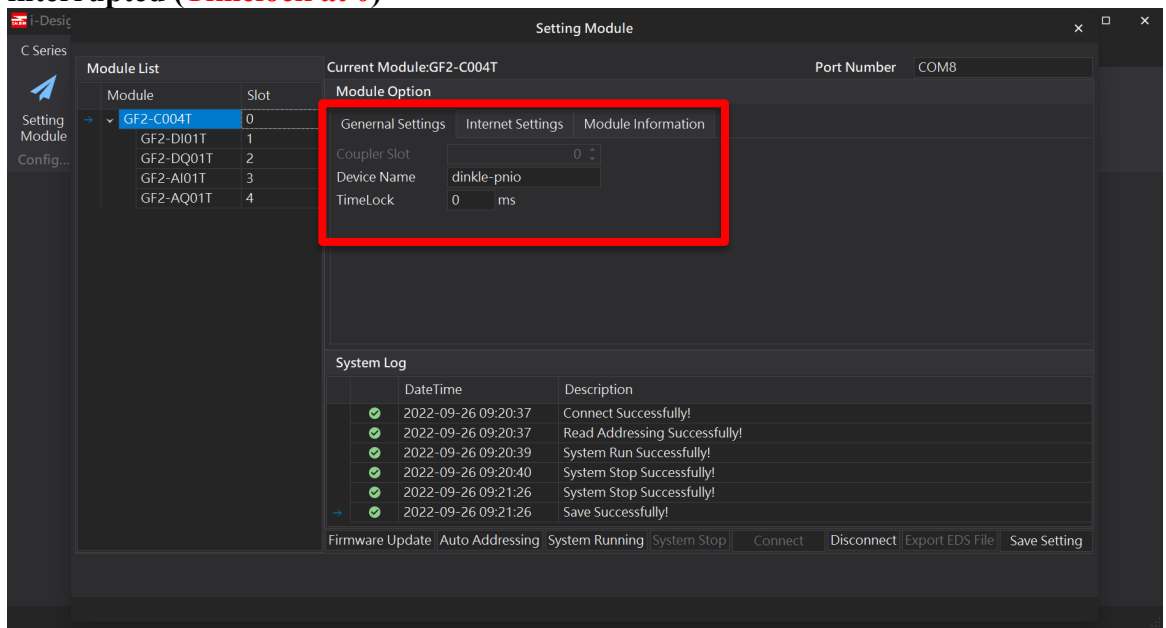## VIII. Click on "System Stop"

IX. **Select the coupler module and click on "Auto Addressing"**

X. **Once addressing is completed, modules will appear on the "Module List" on the left**
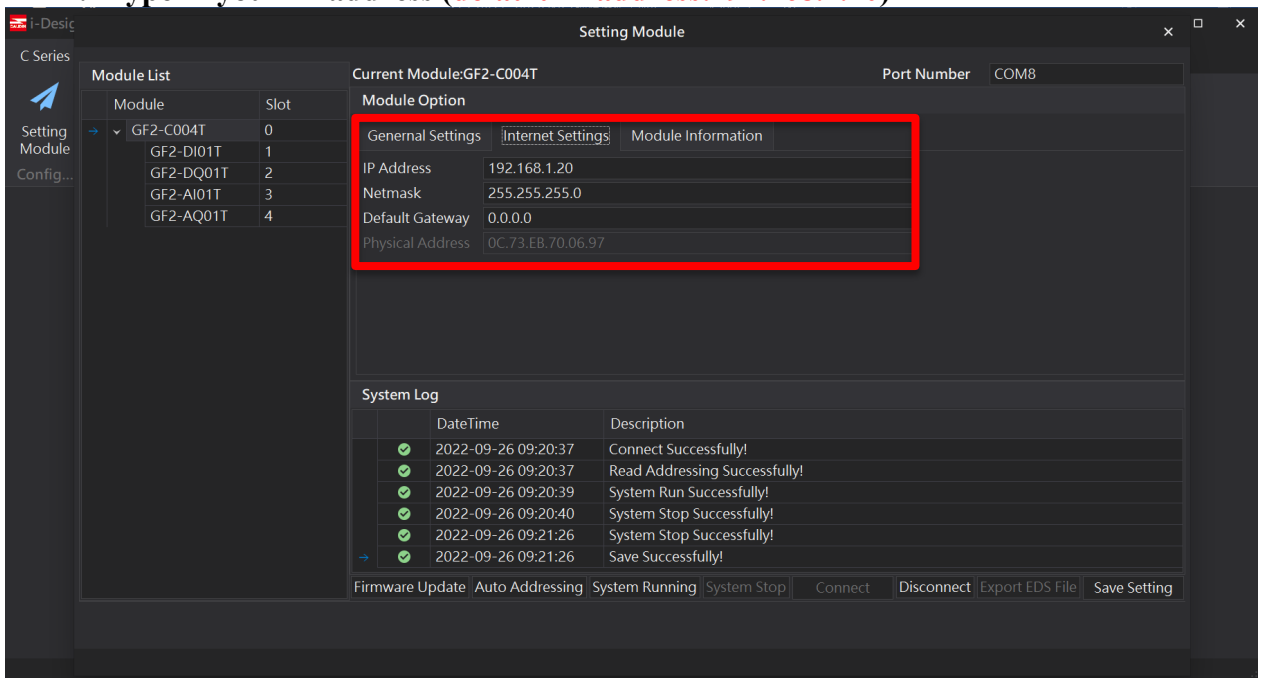
XI. Click on the coupler module to open the "Setting Module" page

XII. Type in the device name and if transmission should continue once connection is interrupted (Timelock at 0)

## XIII. Type in your IP address (default IP address:192.168.1.20)
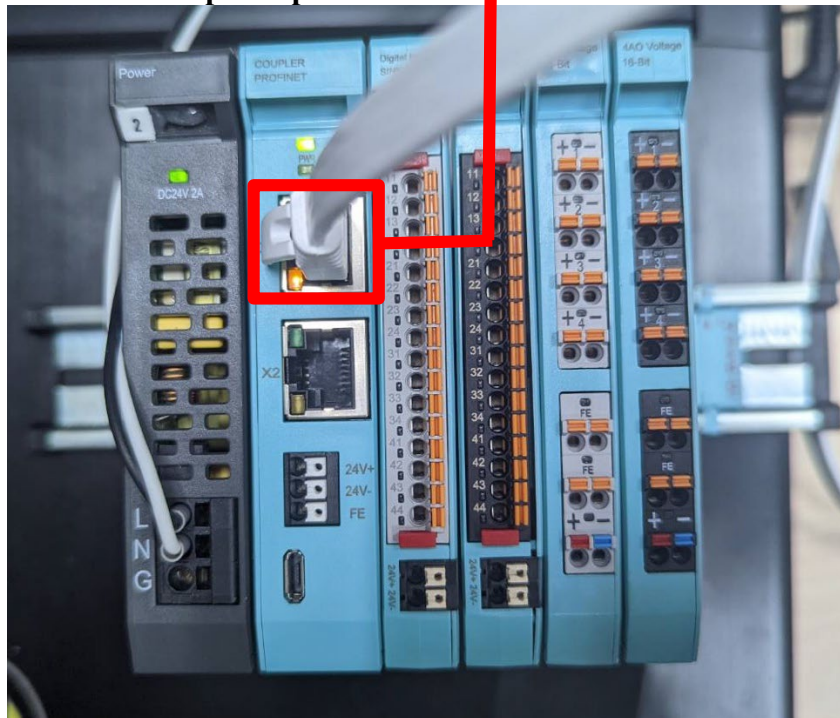
3. Siemens S7-1200 Connection Setup

This chapter explains how to use the TIA Portal program to connect S7-1200 and a coupler and add a remote I/O module. For detailed information, please refer to the "*SIMATIC STEP 7*" section in the user manual

3.1 Siemens S7-1200 hardware connection

I. The connection port is at the bottom of the middle section of the device
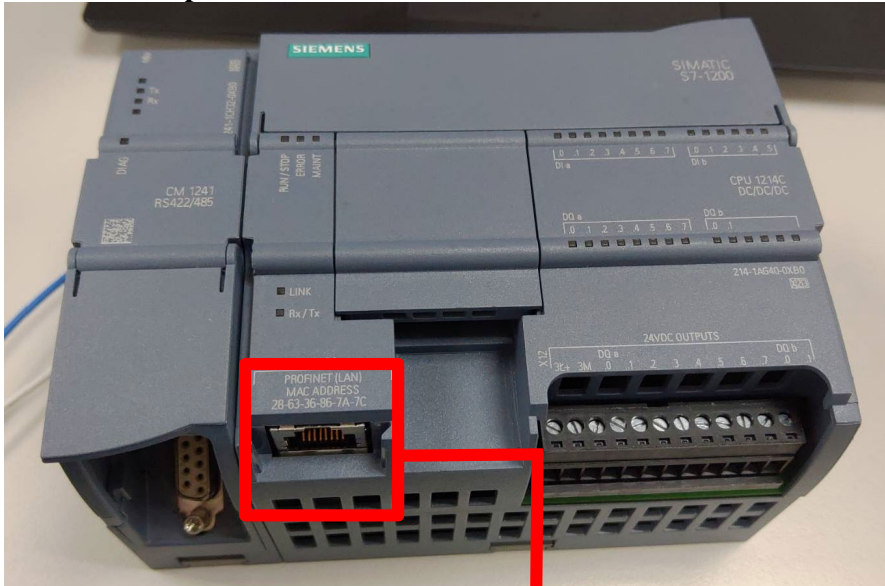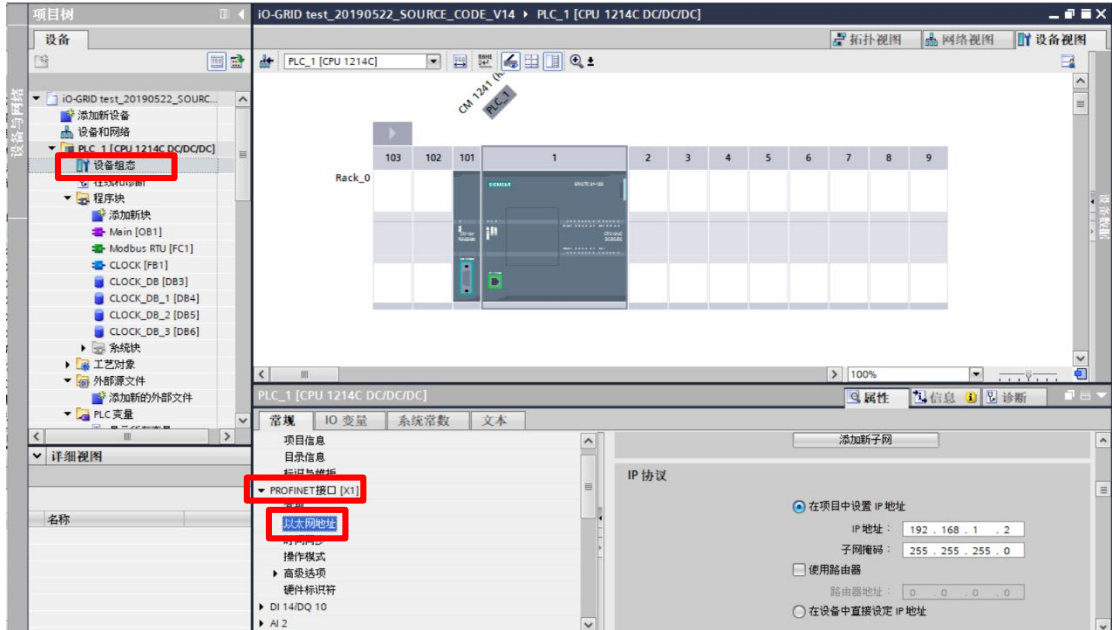

II. Connect it to the coupler's port

3.2 Siemens S7-1200 IP Address and Connection Setup

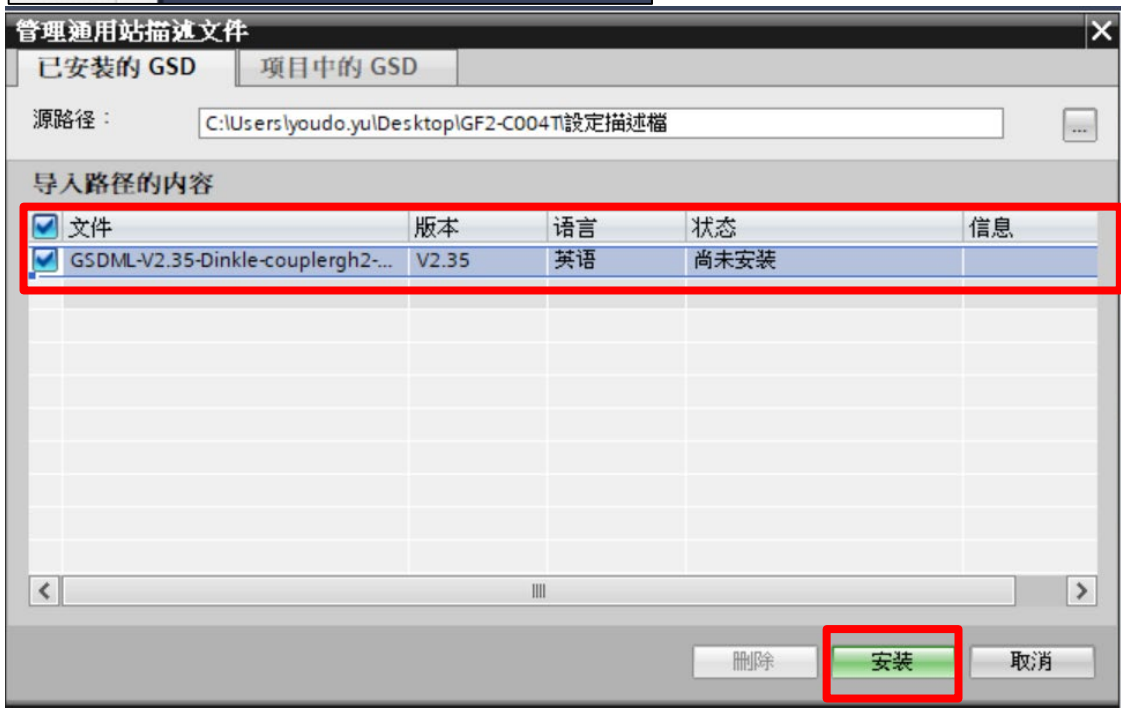I. Open the TIA Portal, click on "Device Configuration" and then the "PROFINET Port" menu
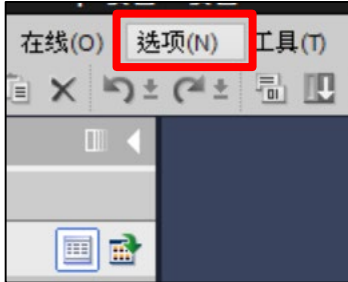

II. Click on "Ethernet Address" and type in the IP address (same as the coupler at 192.168.1.XXX)
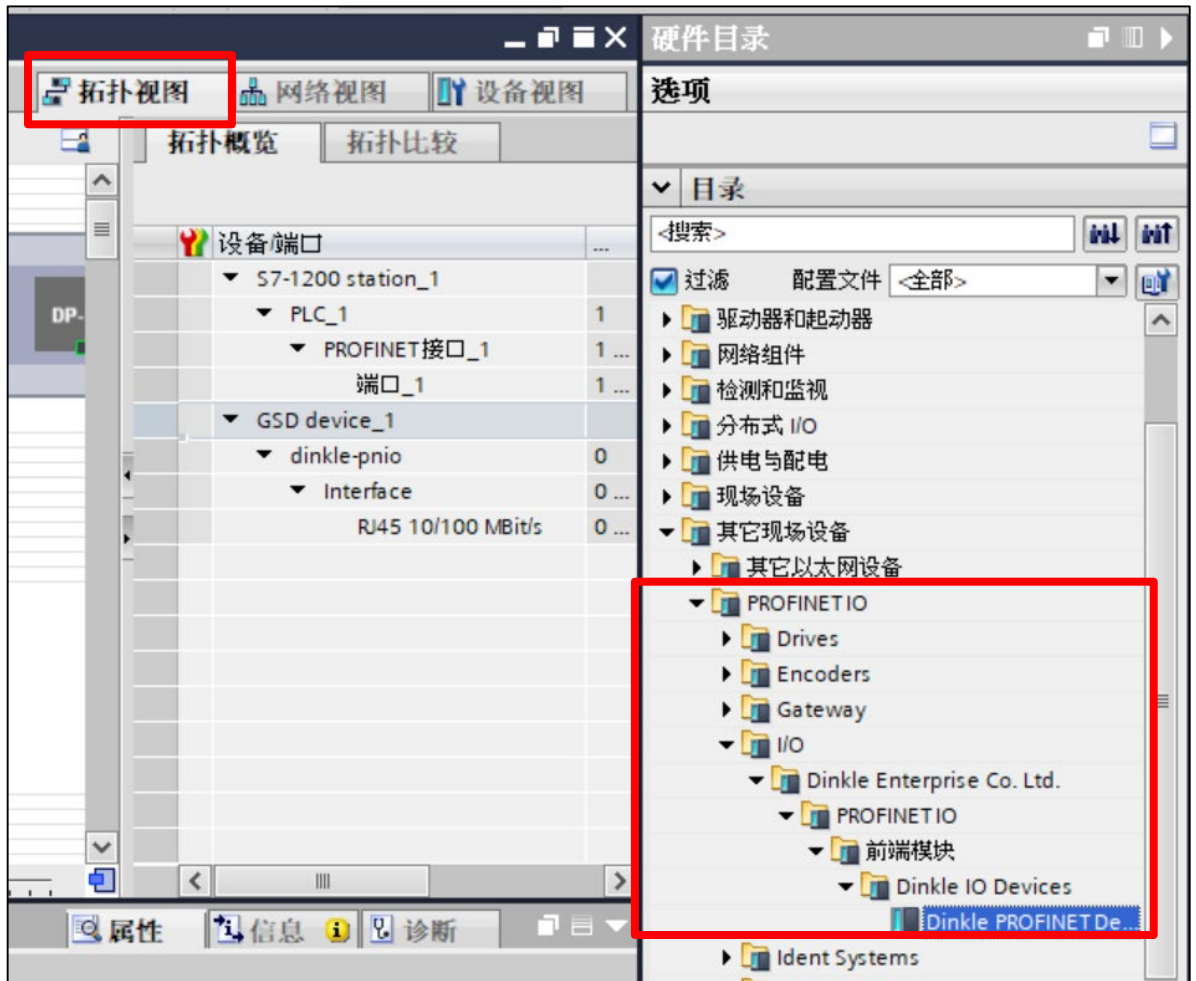
III. GSDML Document Installation
- ➢ Click on "Options" on the menu bar
- ➢ Select "Manage GSD File" from the drop-down menu
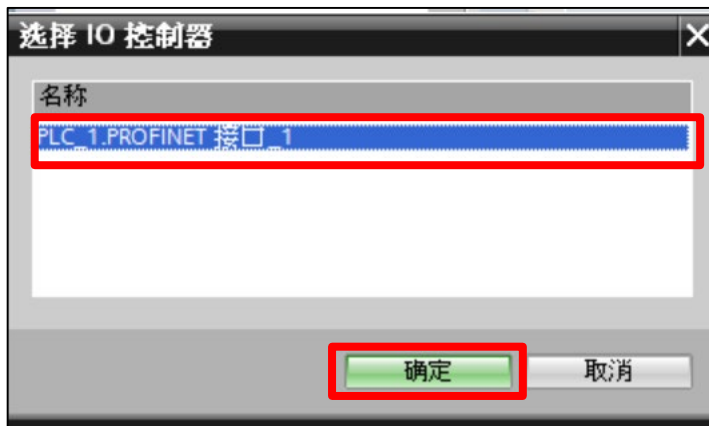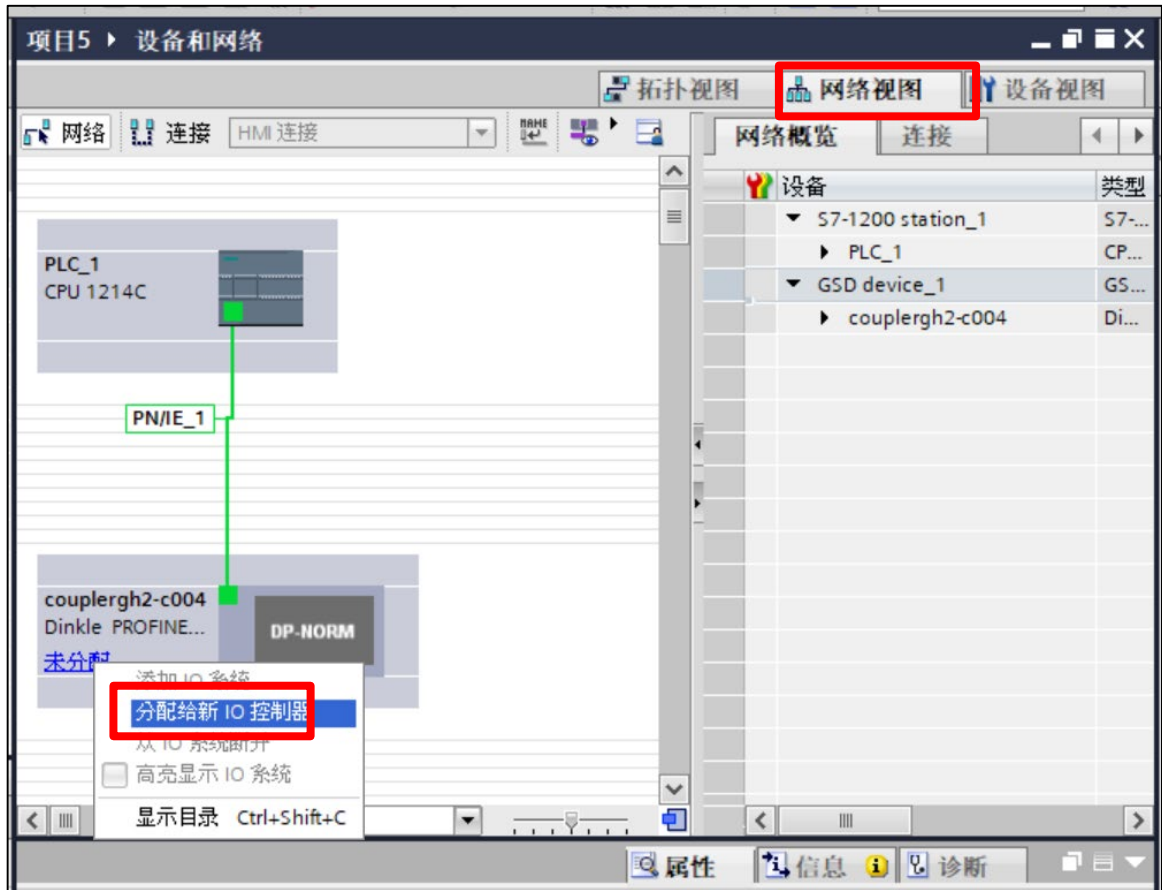- ➢ Choose the GSDML file you want and click on "Install"

IV. Click on the "Topology View"

➢ Select "PROFINET IO" on the right-side menu

➢ Select "I/O" and choose to add "Dinkle I/O" to the PLC network
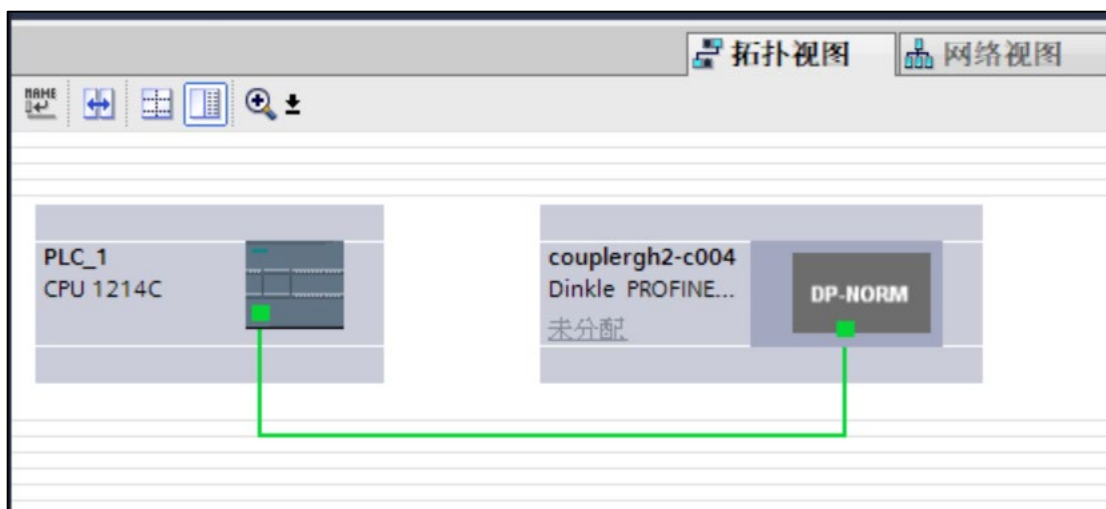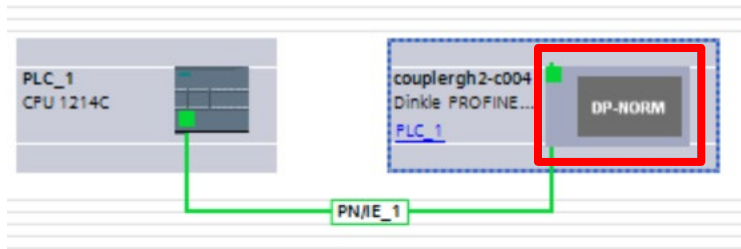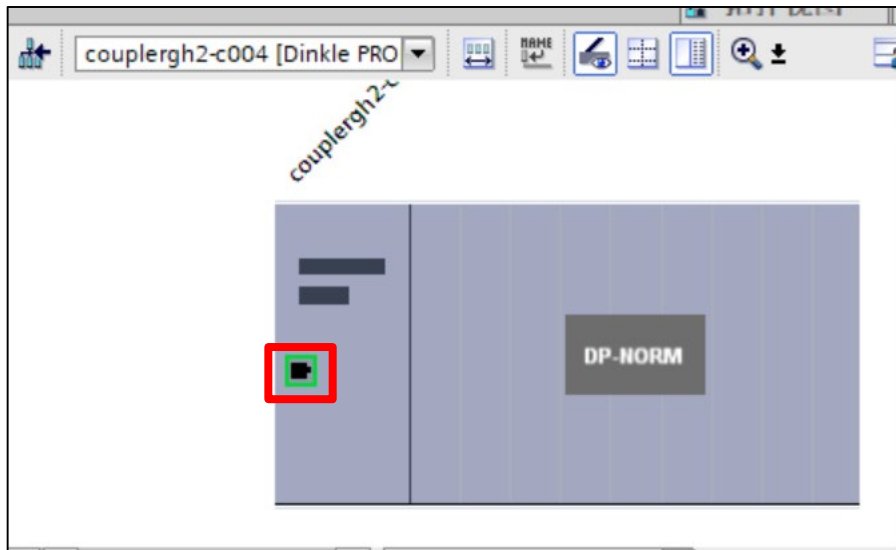
V. Select "Network View"

➢ Right-click on the I/O port and select "Assign to a new I/O controller"

VI. Double-click on the icon of GF2-C004T

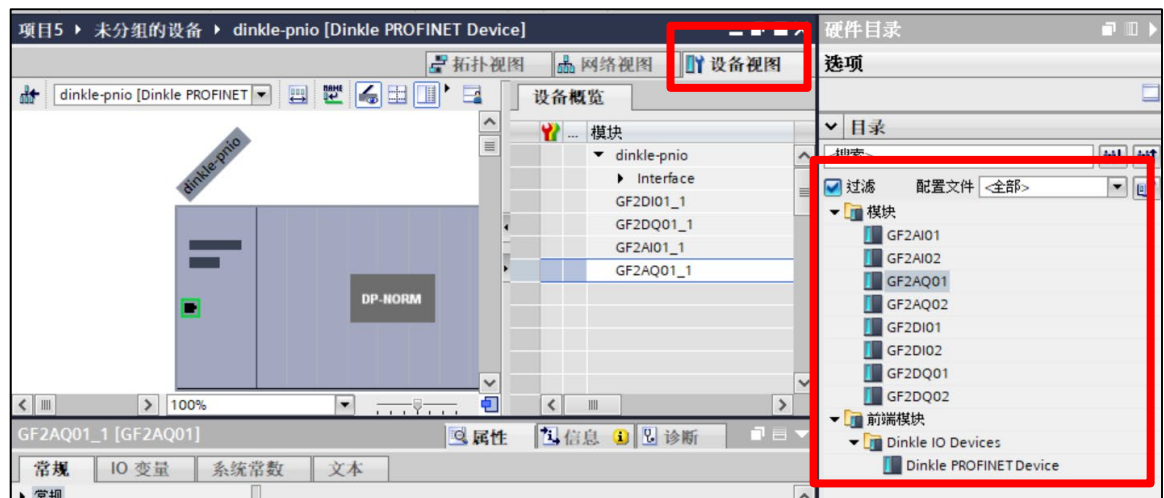**VII. Select the IP address to connect to (module default IP address is 192.168.1.20)**

VIII. Under the 【Equipment View】&【Hardware Menu】

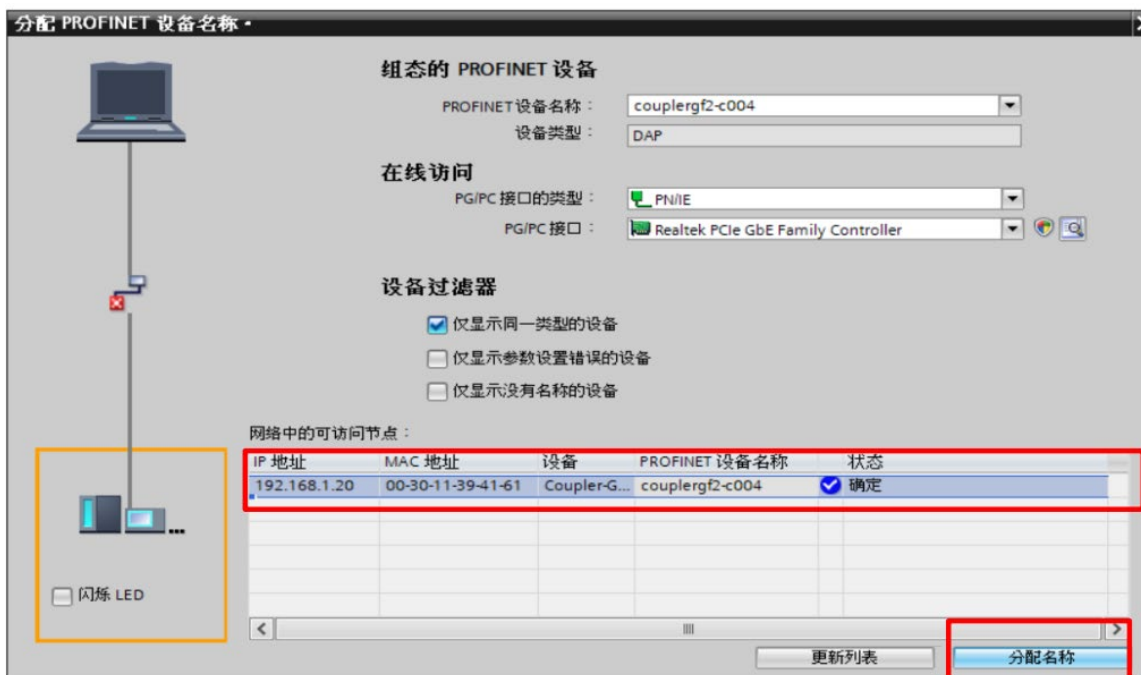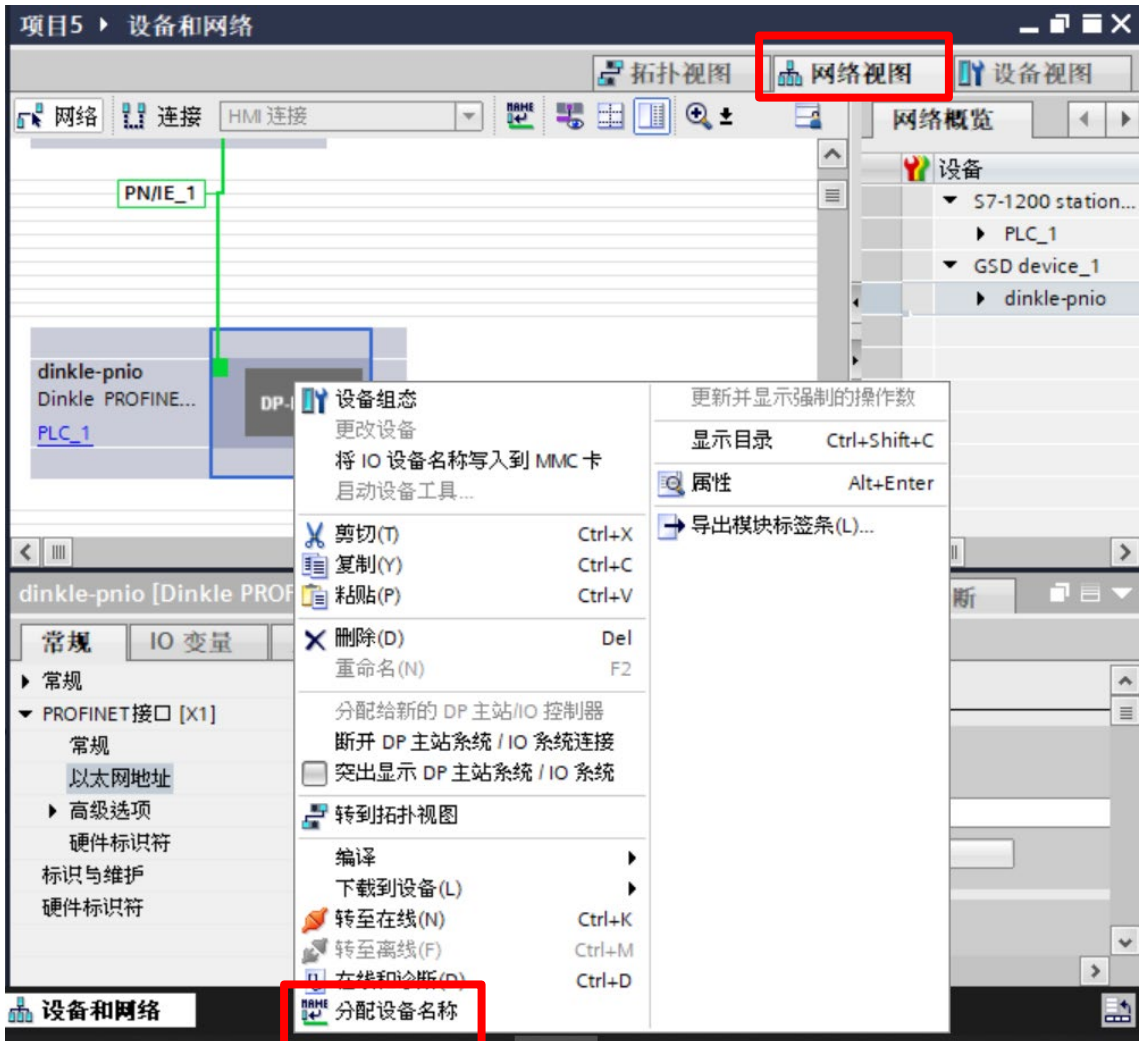➢ Add modules in the same sequence as UI's addressing

※Attention! The sequence must be the same as UI's addressing. Otherwise the device cannot communicate normally.

IX. Click on "Network View"

> ➢ Assign device names

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X. Right click on the device, select "Compile" and download it to PLC

- ➢ Hardware (completely rebuilt)
- ➢ Software (fully rebuilt)
- ➢ Download to equipment (hardware configuration)
- ➢ Download to equipment (download all of the software)
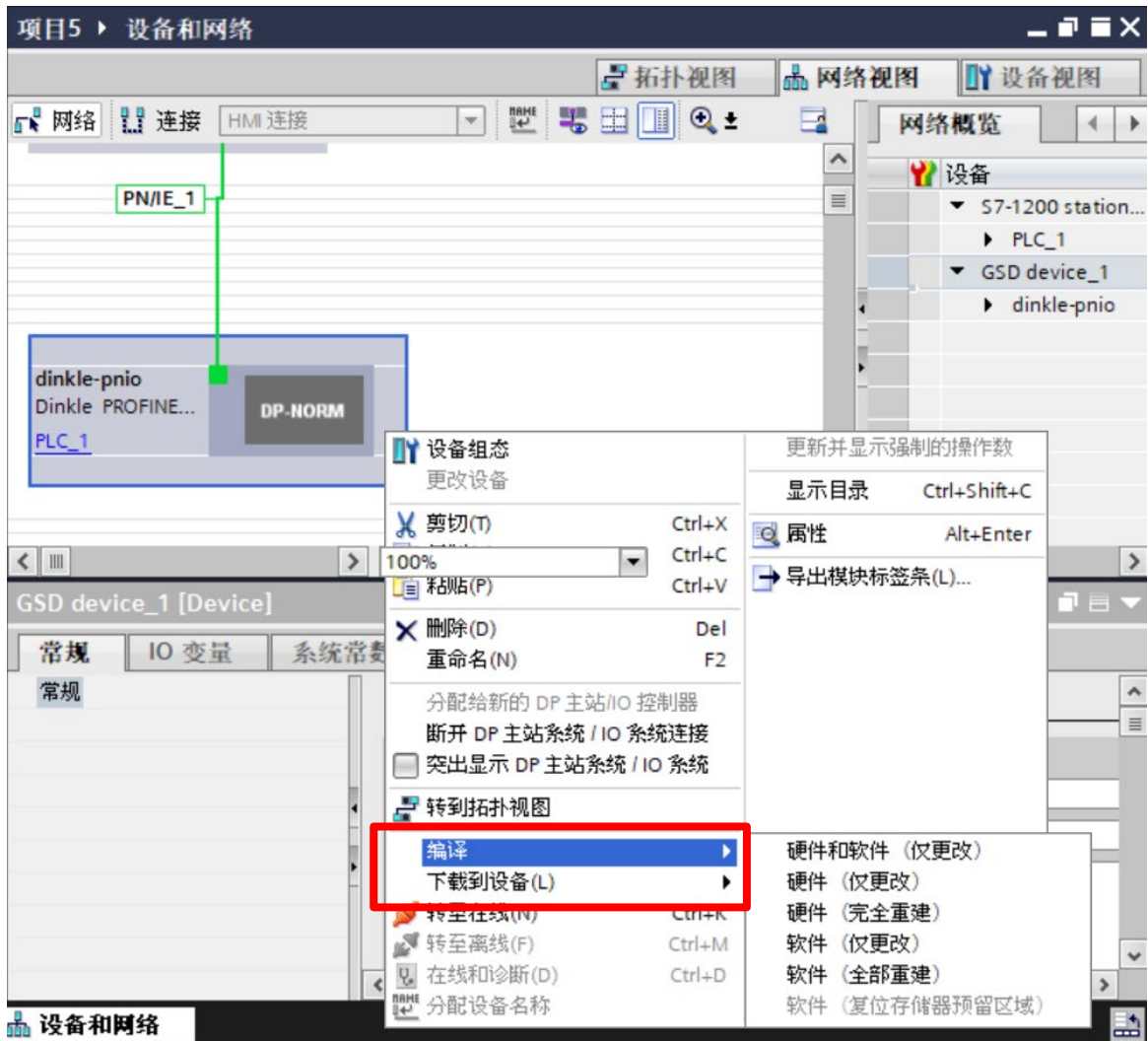
XI. Register addresses are assigned based on the modules added

模块		机架	插槽	I 地址	Q 地址
▼ dinkle-pnio		0	0		
	▶ Interface	0	0 X1		
	GF2DI01_1	0	1	68...69	
	GF2DQ01_1	0	2		64...65
	GF2AI01_1	0	3	2...9	
	GF2AQ01_1	0	4		2...9
		0	5		

EX: %I168.0 at first DI, %I168.1 at second DI, %IW2 at first channel of AI and %IW4 at second channel of AIC