



User Manual

## ***iR-ETN EtherNet/IP Connection Guide***

This guide walks through the steps to connect iR-ETN with PLC.

UM020006E\_20200724

## Table of Contents

Overview.....	1
Chapter1. How to Generate EDS File using EasyRemoteIO.....	1
Chapter2. CODESYS .....	3
Chapter3. Rockwell CompactLogix/ControlLogix .....	9
Chapter4. Panasonic FP7 .....	16

## Overview

iR-ETN firmware V1.0.3.0 (or later) supports EtherNet/IP protocol. In EasyRemote IO software, the description file (EDS) of the EtherNet/IP device can be exported. By scanning the iR-ETN device in EasyRemote IO software, the EDS file can be generated according to the current module configuration. The EDS file is then used by PLC or other EtherNet/IP Scanners for users to complete network configuration in no time.

Eligible product: iR-ETN V1.0.3.0

Applicable software: EasyRemoteIO V1.3.2.0 or later

For more information on updating iR-ETN firmware, please see

[UM019005E iR Series Firmware Update UserManual eng.pdf](#)

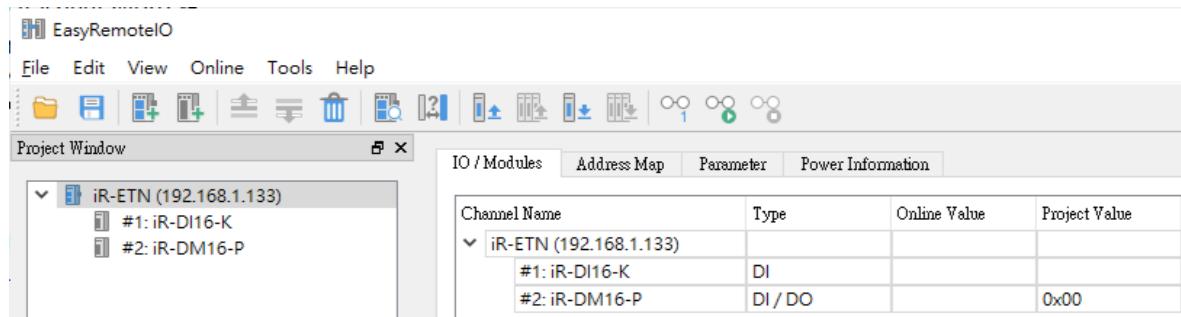
This user manual explains how to generate iR-ETN's EtherNet/IP EDS File, and how to connect PLC to iR-ETN via EtherNet/IP.

## Chapter1. How to Generate EDS File using EasyRemoteIO

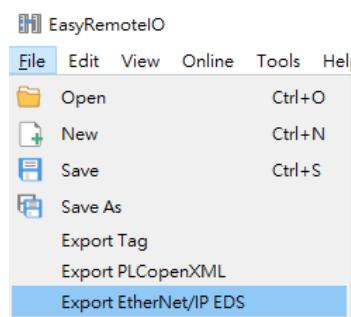
For more information on EasyRemoteIO, please see

[UM018004E EasyRemoteIO UserManual eng.pdf](#)

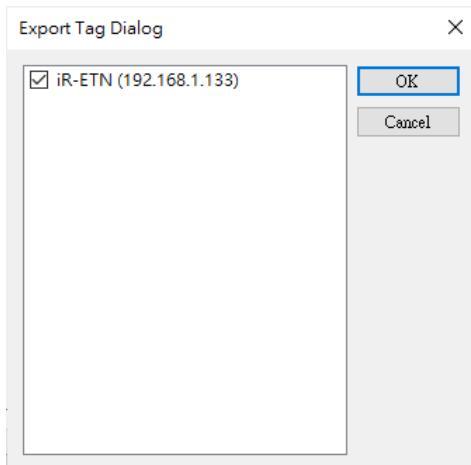
Step 1. Launch EasyRemoteIO, click [Automatic scan] to scan network for iR-ETN. The information of iR-ETN and the connected modules is shown as below.



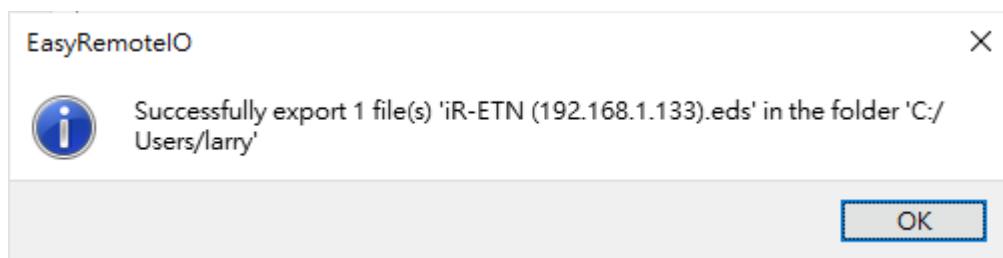
Step 2. Click [File] » [Export EtherNet/IP EDS] and select the file to export tags.



Step 3. Select the iR-ETN and click OK.



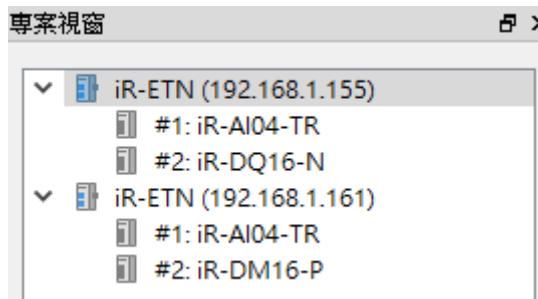
EDS file is successfully exported.



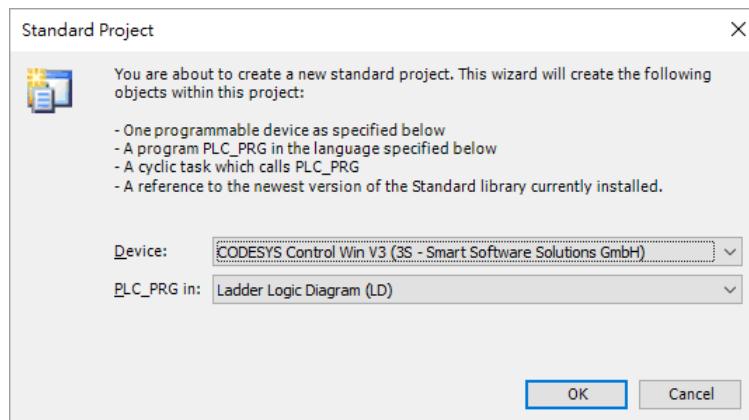
## Chapter2. CODESYS

This chapter explains how to connect two iR-ETN and iR Remote I/O in CODESYS.

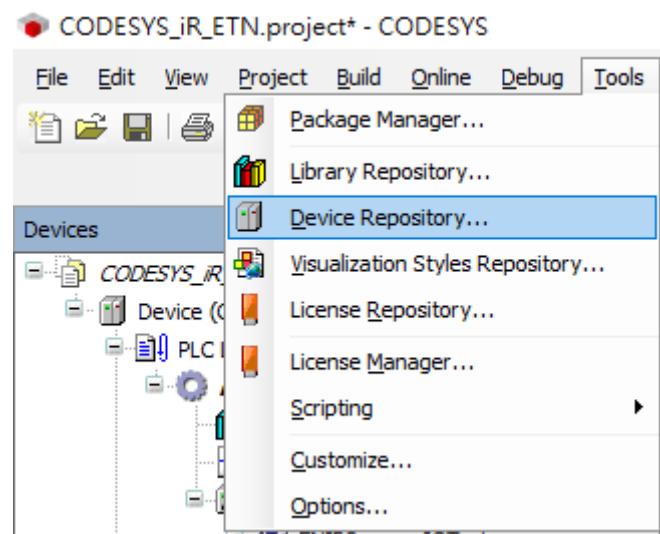
Step 1. In EasyRemoteIO scan and export EtherNet/IP EDS.



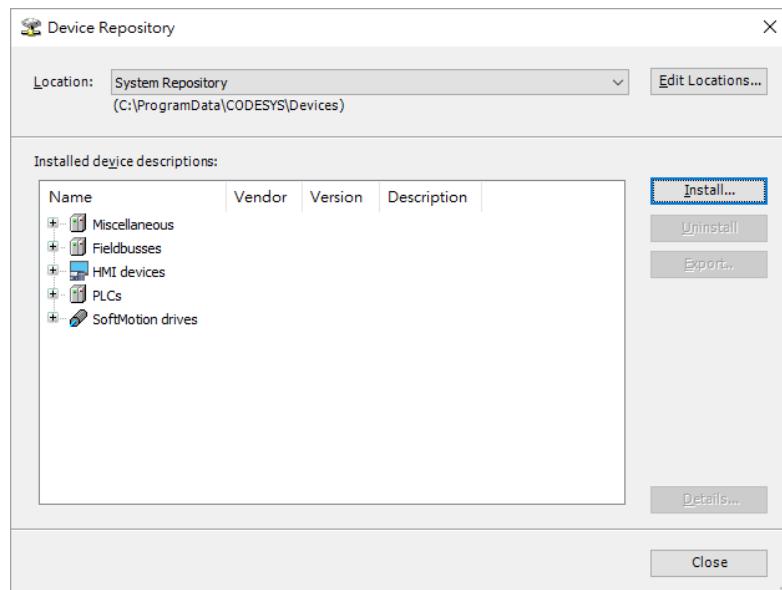
Step 2. Open a new project in CODESYS and select a device.



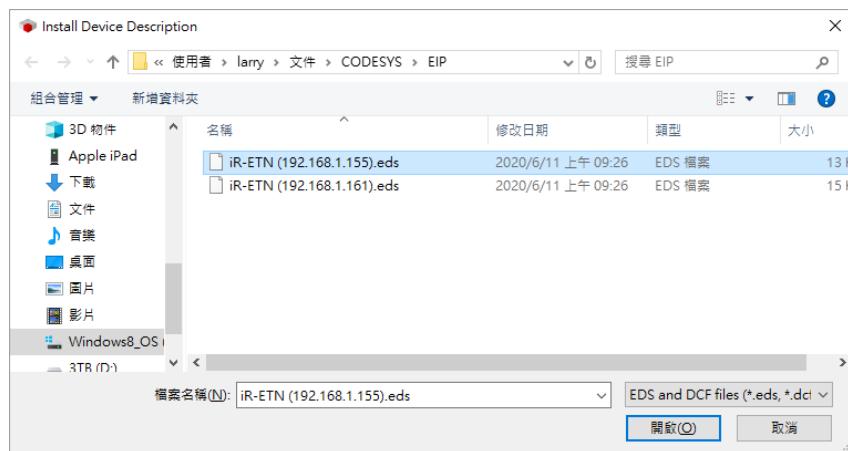
Step 3. Click [Tools] » [Device Repository...].



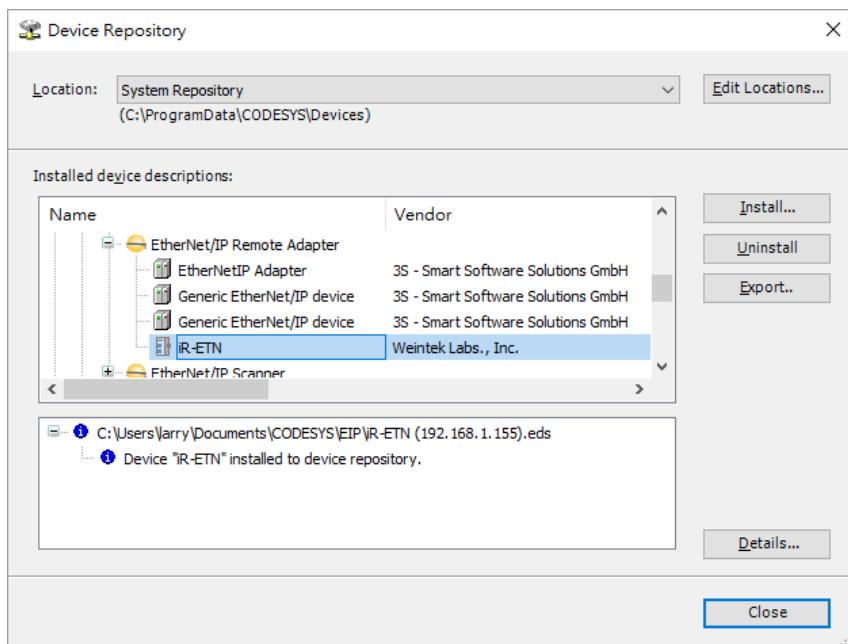
Step 4. Click [Install...].



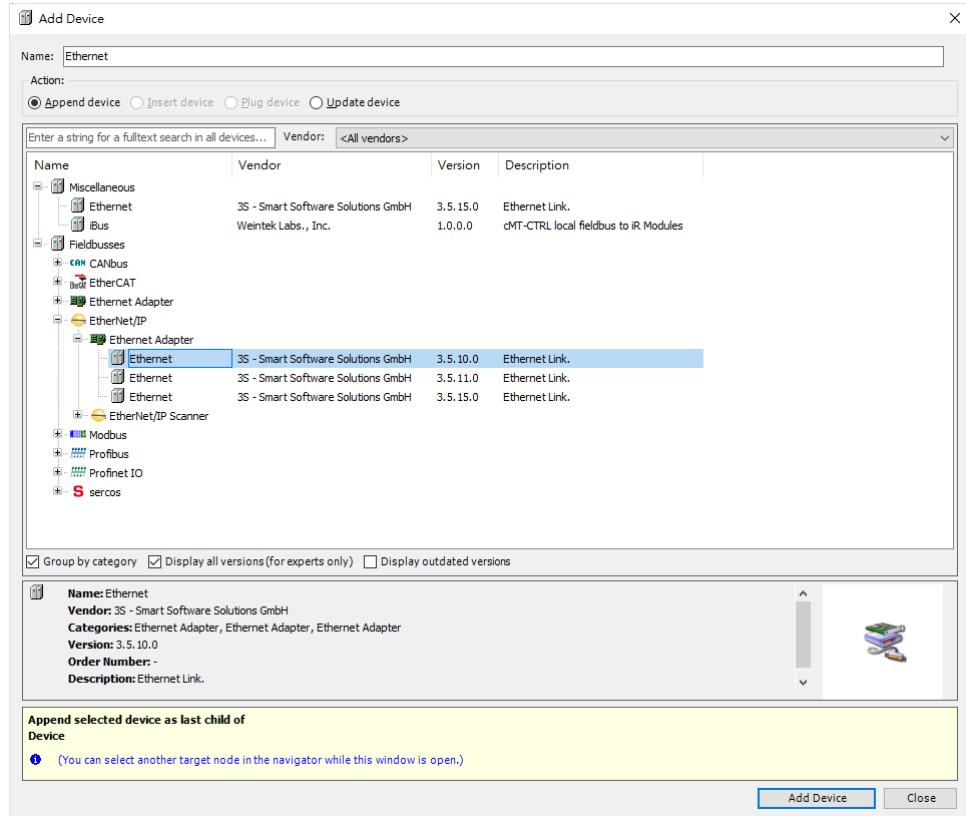
Step 5. Select [EDS and DCF files (\*.eds, \*.dcf)] and then select the first \*.eds file.



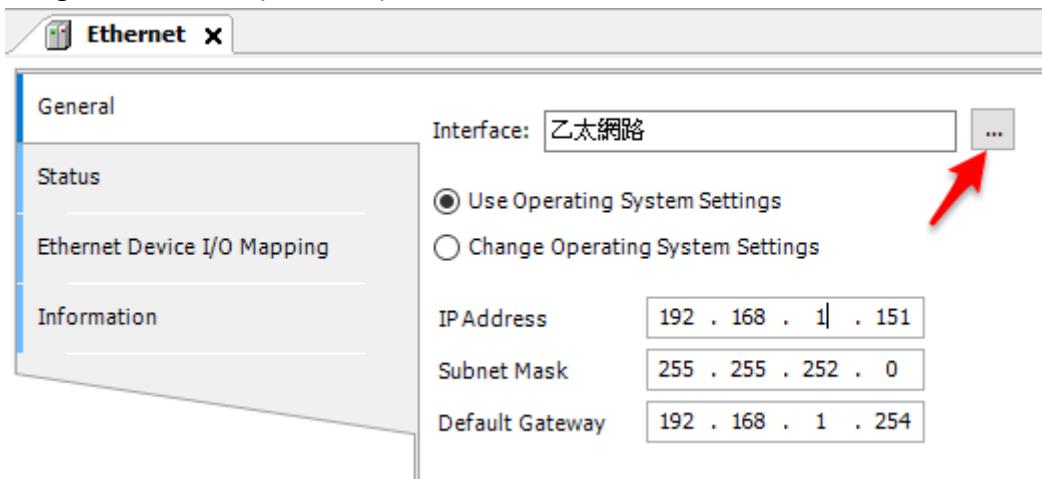
Step 6. After importing the file, the iR-ETN is added under EtherNetIP Remote Adapter.

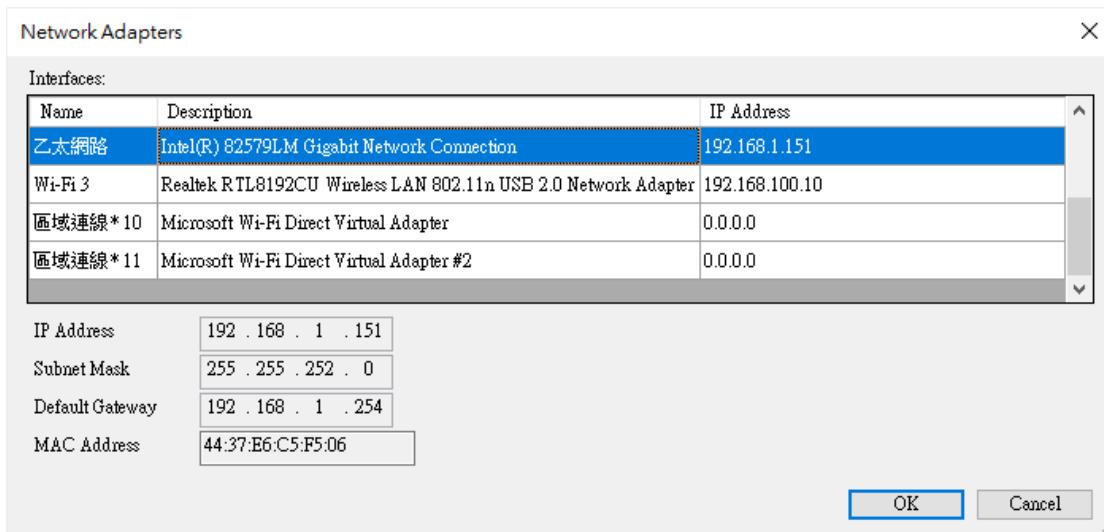


## Step 7. Add an Ethernet device.

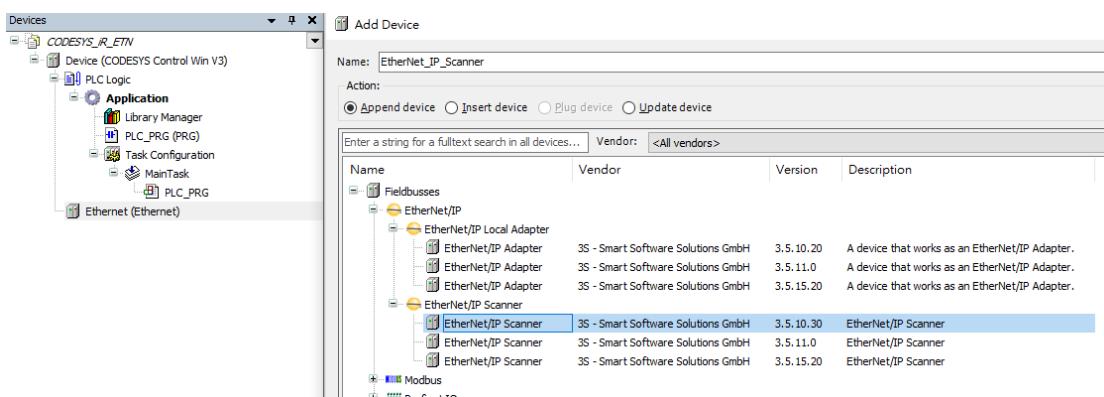


## Step 8. Assign an interface (Ethernet).

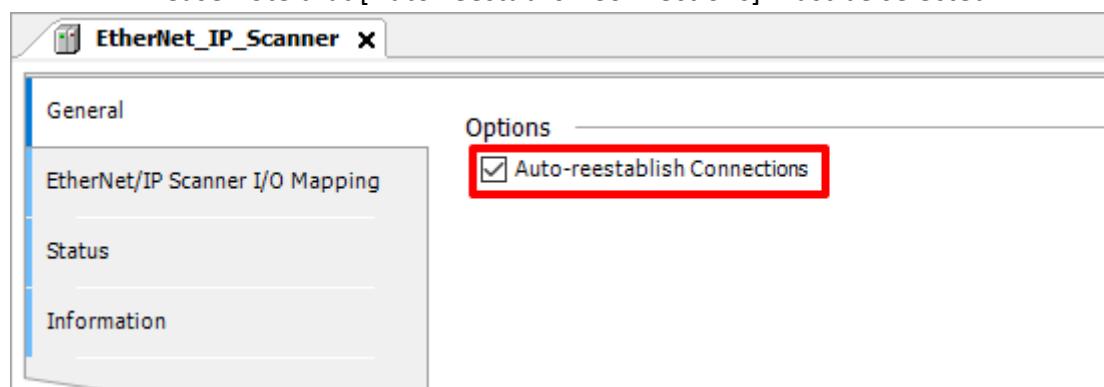




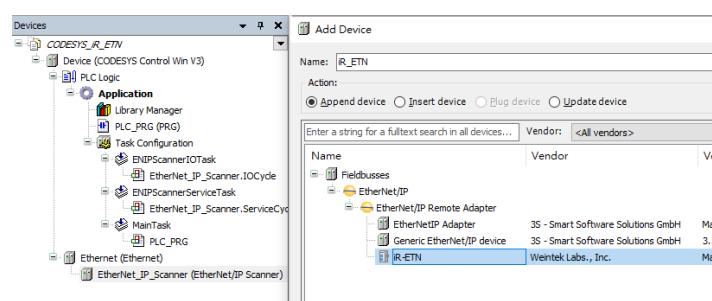
### Step 9. Add an EtherNet/IP Scanner.



\*Please note that [Auto-reestablish Connections] must be selected.

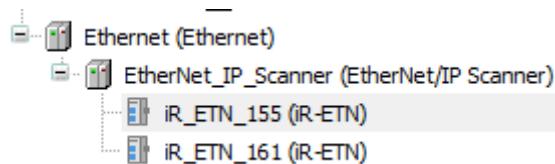


### Step 10. Add the first iR-ETN.

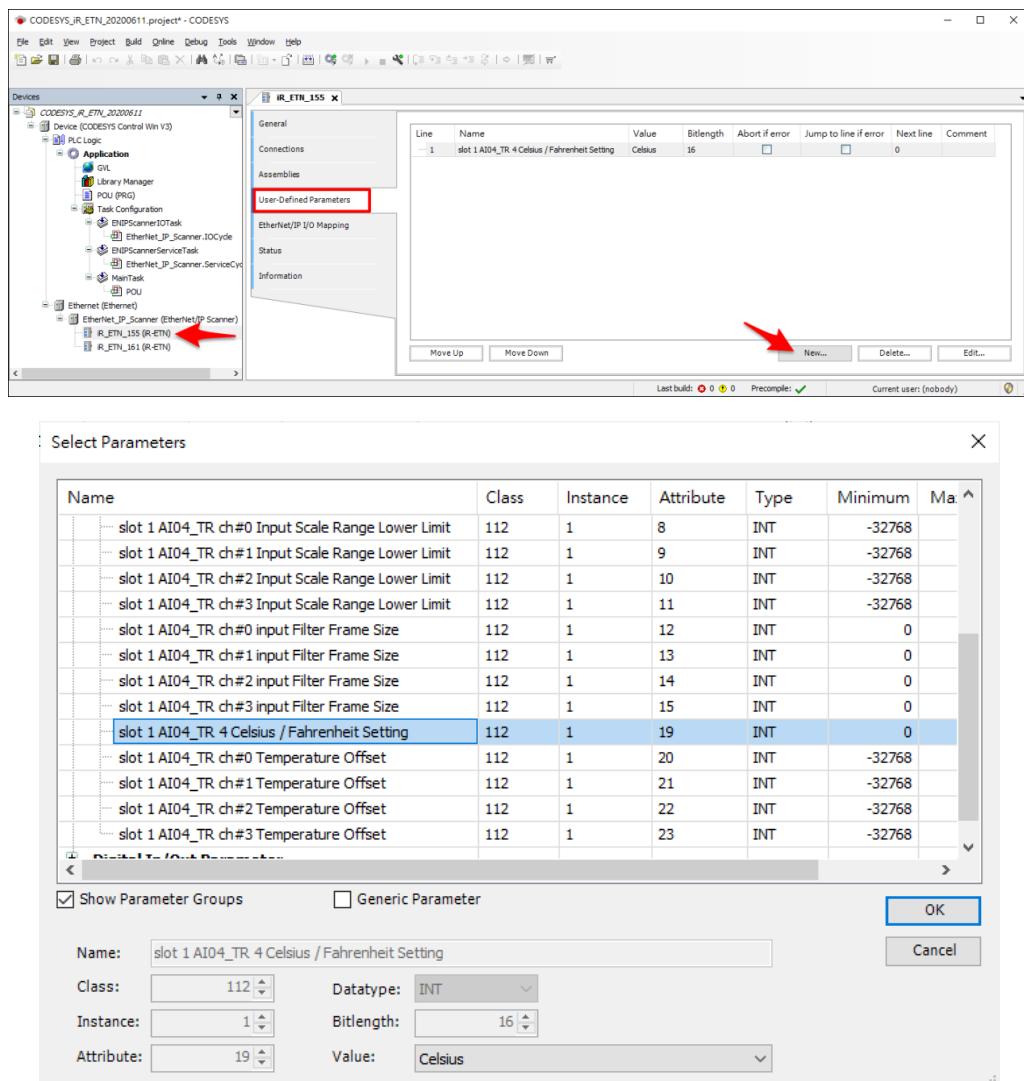


Start from step 3 again to add the second iR-ETN's \*.eds file. This will overwrite the \*.eds file of the first iR-ETN.

Add the second iR-ETN.



Step 11. The default iR module setting is shown. Add new parameters in User-Defined Parameters tab.



Line	Name	Value	Bitlength	Abort if error	Jump to line if error	Next line	Comment
-1	slot 1 AI04_TR 4 Celsius / Fahrenheit Setting	Celsius	16	<input type="checkbox"/>	<input type="checkbox"/>	0	

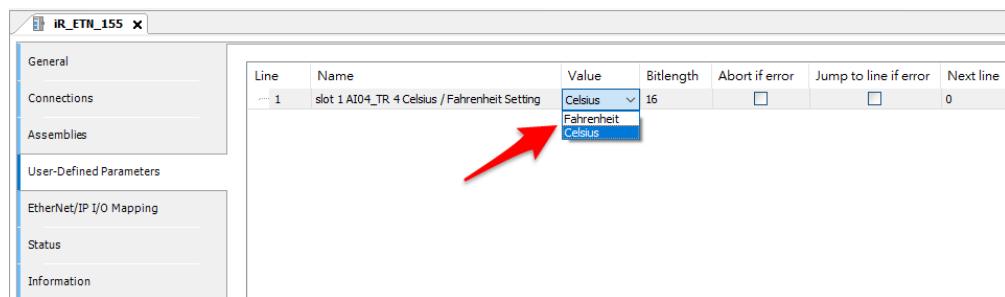
Name	Class	Instance	Attribute	Type	Minimum	Maximum
slot 1 AI04_TR ch#0 Input Scale Range Lower Limit	112	1	8	INT	-32768	
slot 1 AI04_TR ch#1 Input Scale Range Lower Limit	112	1	9	INT	-32768	
slot 1 AI04_TR ch#2 Input Scale Range Lower Limit	112	1	10	INT	-32768	
slot 1 AI04_TR ch#3 Input Scale Range Lower Limit	112	1	11	INT	-32768	
slot 1 AI04_TR ch#0 input Filter Frame Size	112	1	12	INT	0	
slot 1 AI04_TR ch#1 input Filter Frame Size	112	1	13	INT	0	
slot 1 AI04_TR ch#2 input Filter Frame Size	112	1	14	INT	0	
slot 1 AI04_TR ch#3 input Filter Frame Size	112	1	15	INT	0	
<b>slot 1 AI04_TR 4 Celsius / Fahrenheit Setting</b>	<b>112</b>	<b>1</b>	<b>19</b>	<b>INT</b>	<b>0</b>	
slot 1 AI04_TR ch#0 Temperature Offset	112	1	20	INT	-32768	
slot 1 AI04_TR ch#1 Temperature Offset	112	1	21	INT	-32768	
slot 1 AI04_TR ch#2 Temperature Offset	112	1	22	INT	-32768	
slot 1 AI04_TR ch#3 Temperature Offset	112	1	23	INT	-32768	

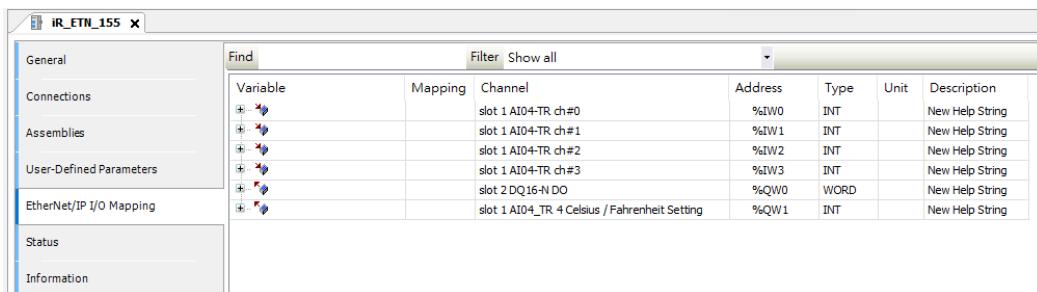
Show Parameter Groups     Generic Parameter

Name: slot 1 AI04\_TR 4 Celsius / Fahrenheit Setting  
 Class: 112    Datatype: INT  
 Instance: 1    Bitlength: 16  
 Attribute: 19    Value: Celsius

The initial values can be set after adding new parameters.



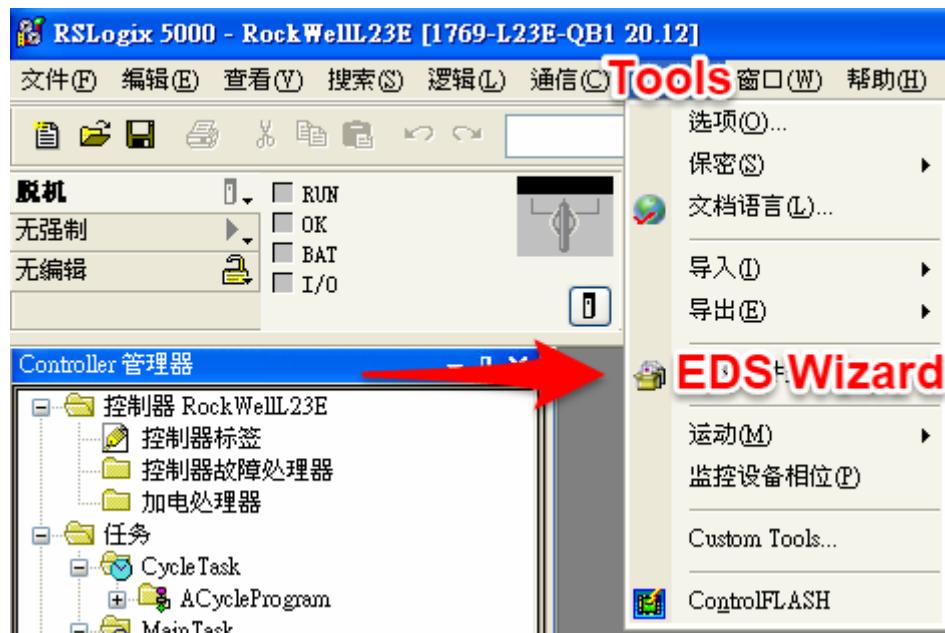
Step 12. In EtherNet/IP I/O Mapping tab find the IO address and start editing the program.



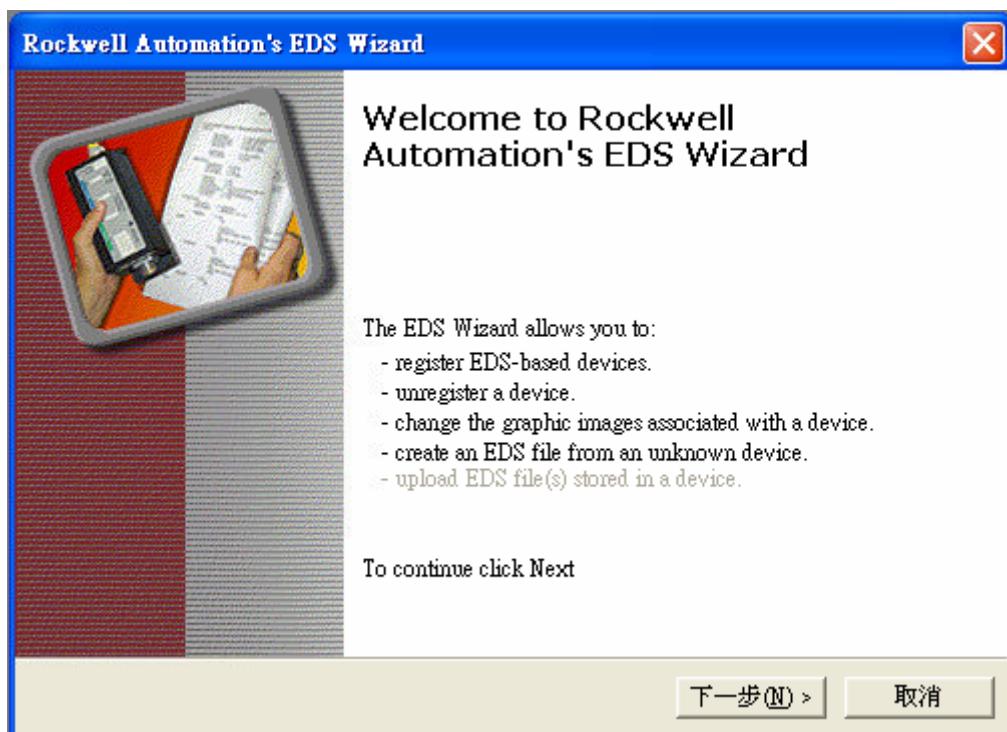
### Chapter3. Rockwell CompactLogix/ControlLogix

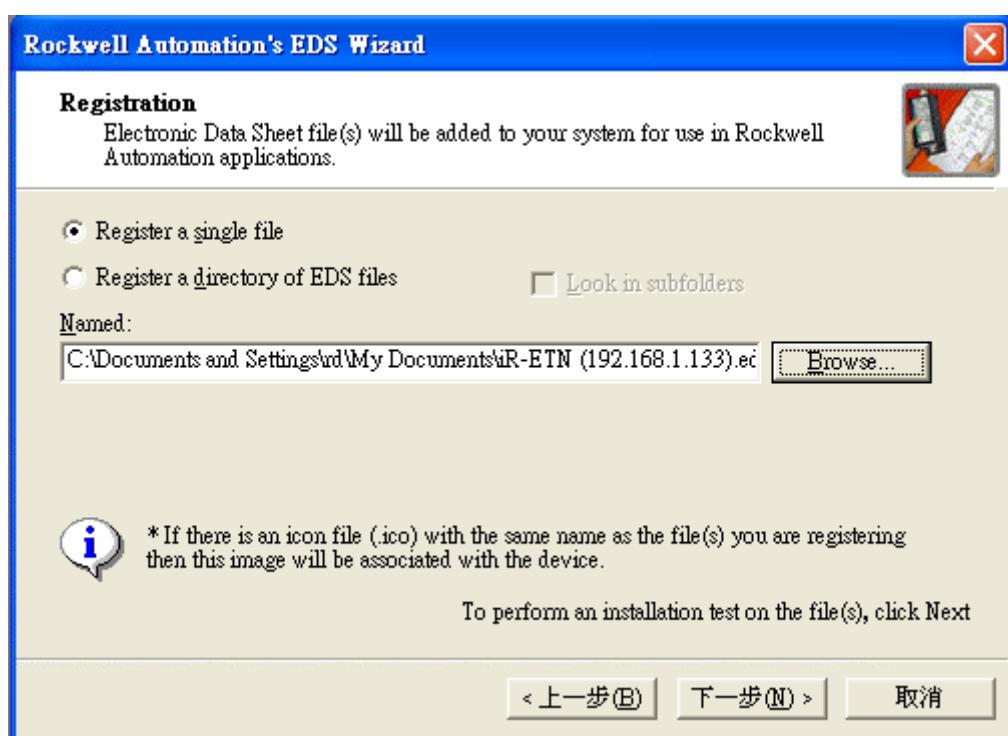
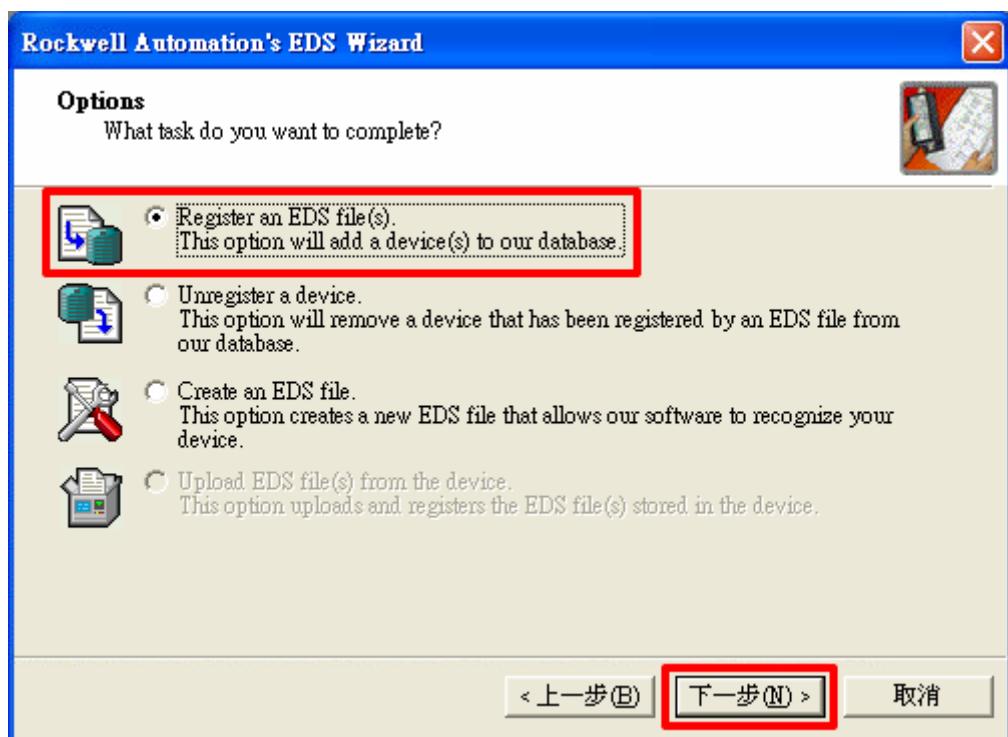
Rockwell CompactLogix and ControlLogix can be edited using RSLogix 5000.

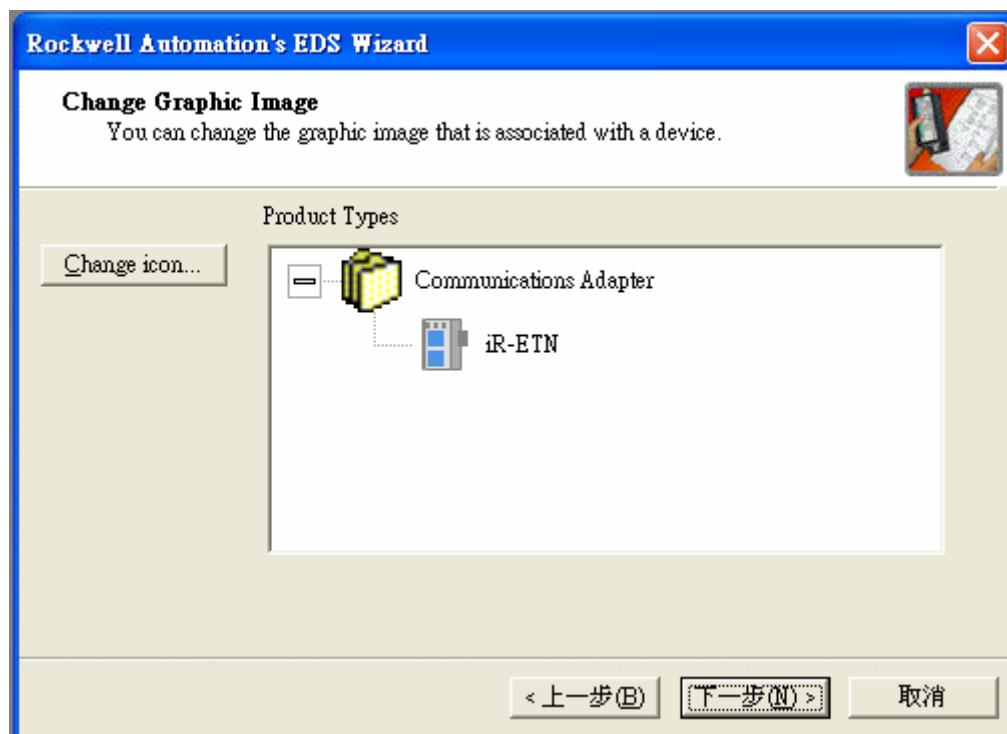
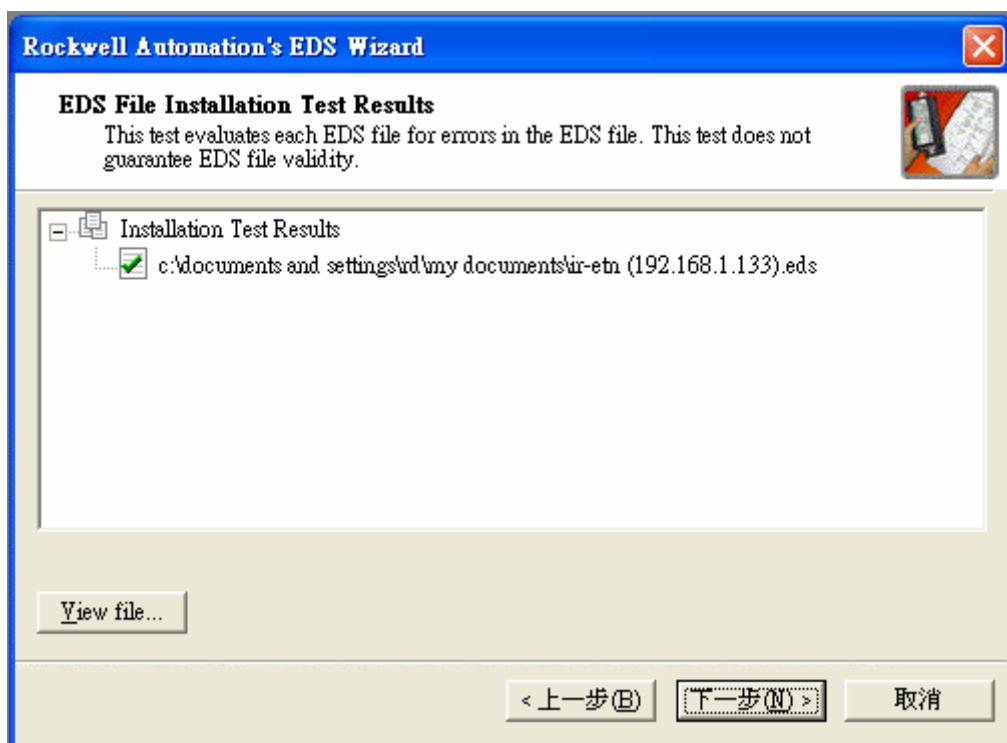
Step 1. Open [Tools] » [EDS Wizard] and import iR-ETN's EDS file.

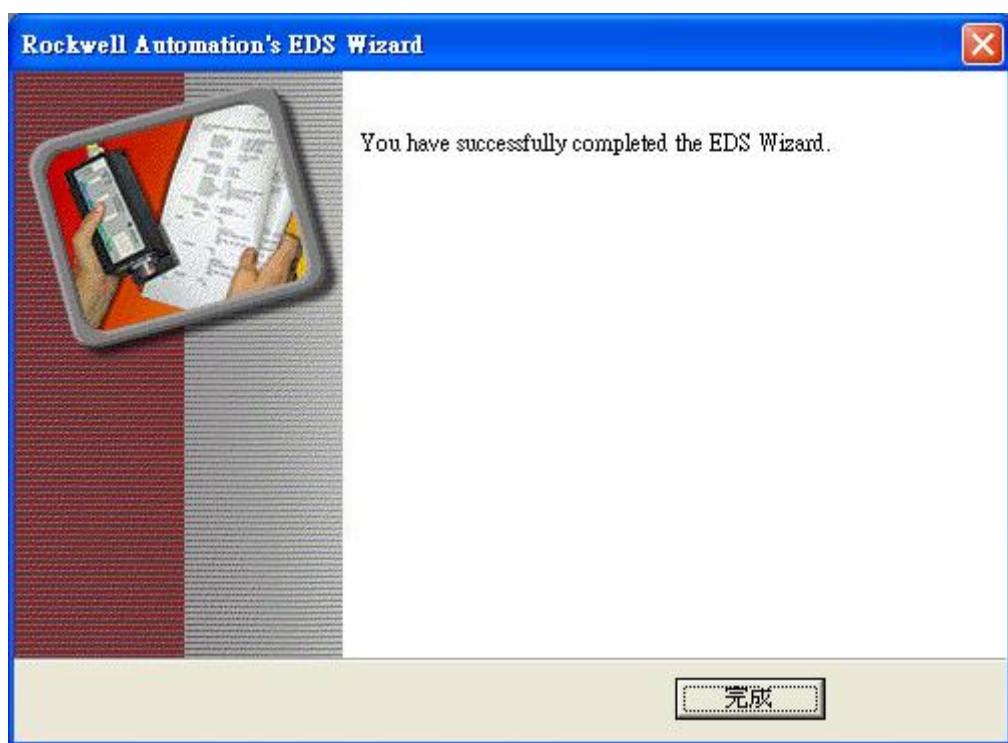
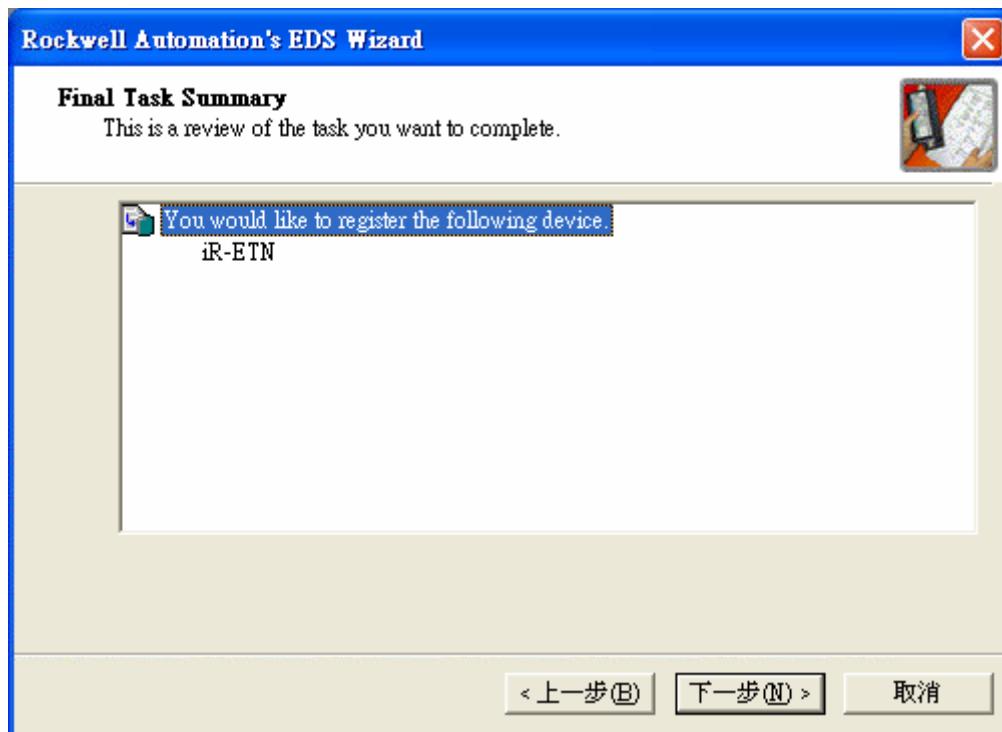


Import EDS file following the on-screen instructions.

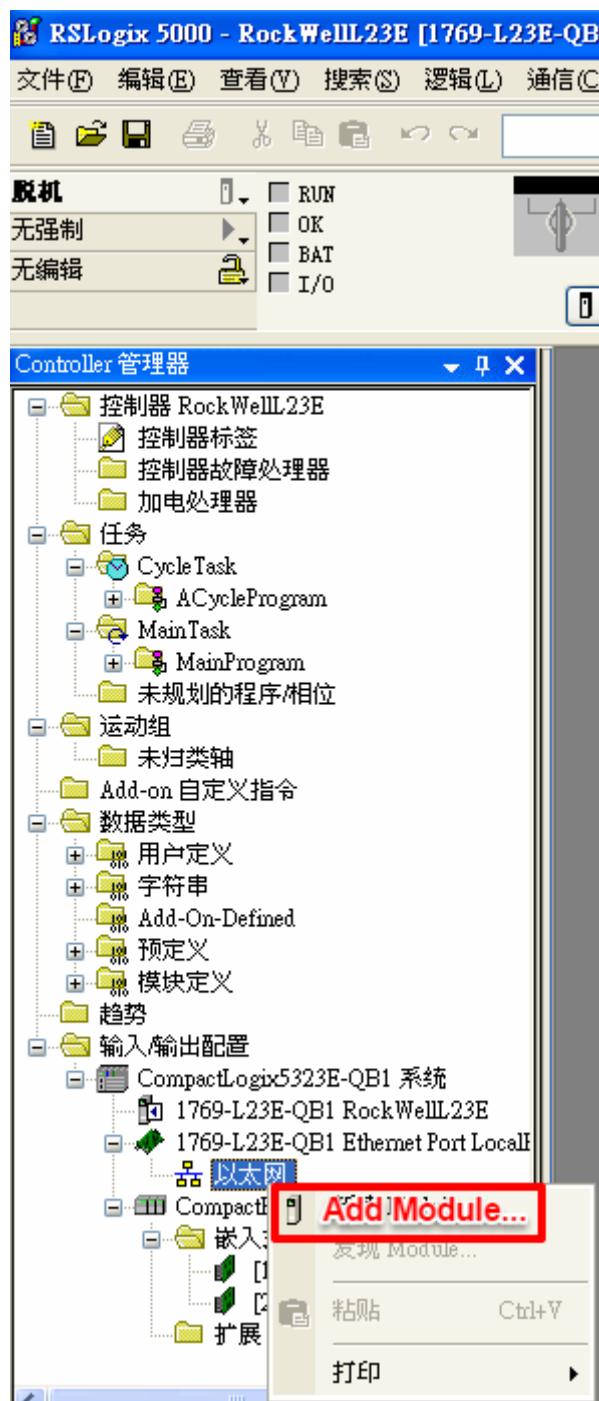


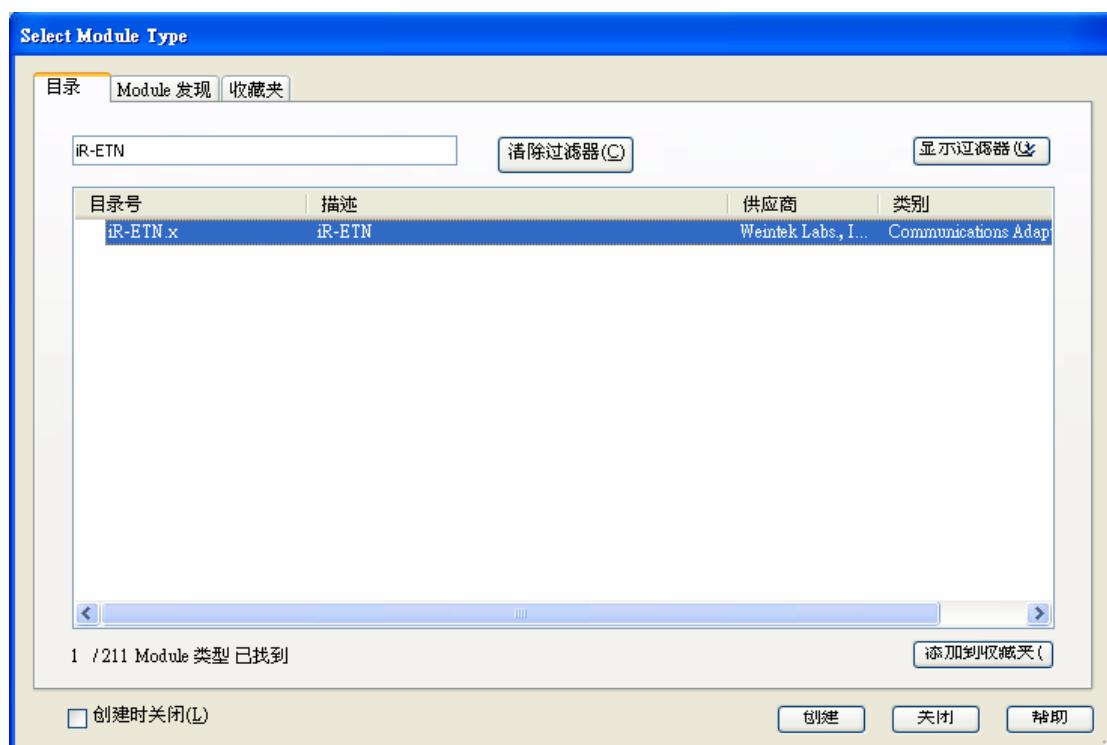




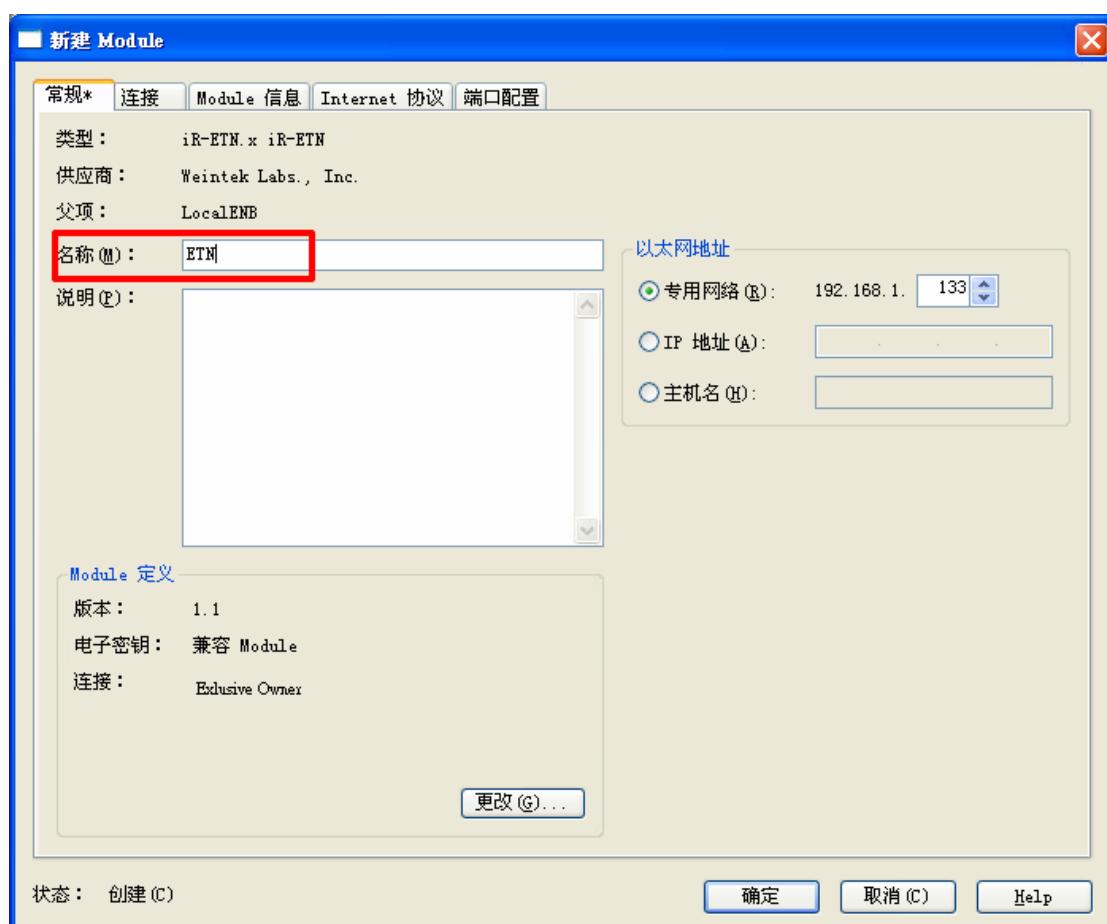


Step 2. Right-click on [Ethernet] and select [Add Module...].

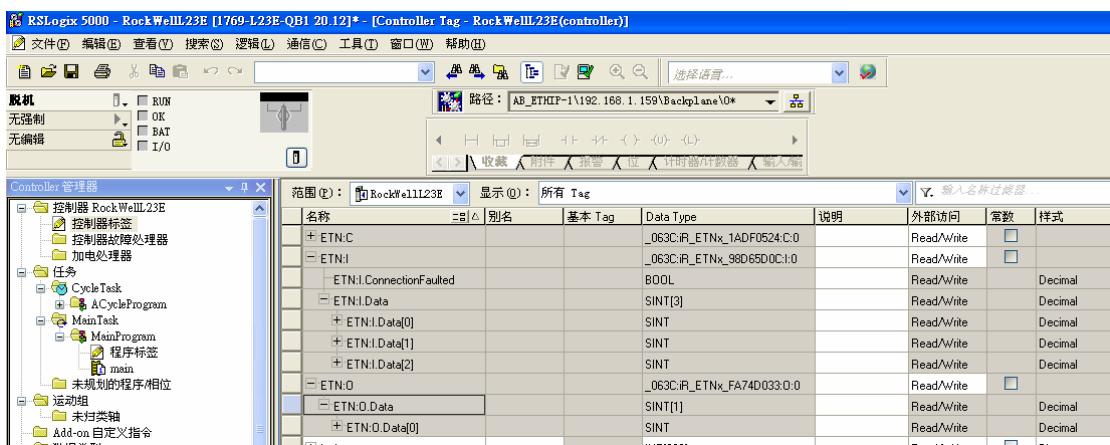




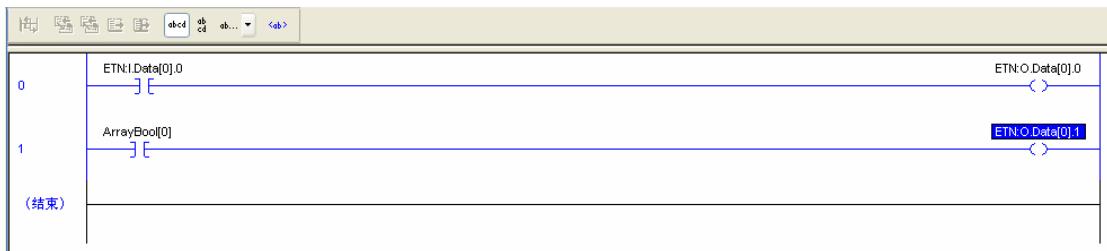
Enter iR-ETN's IP address and device name. The device name will be used in the tags.



Step 3. iR-ETN's Input/Output Data can be found in the tag.



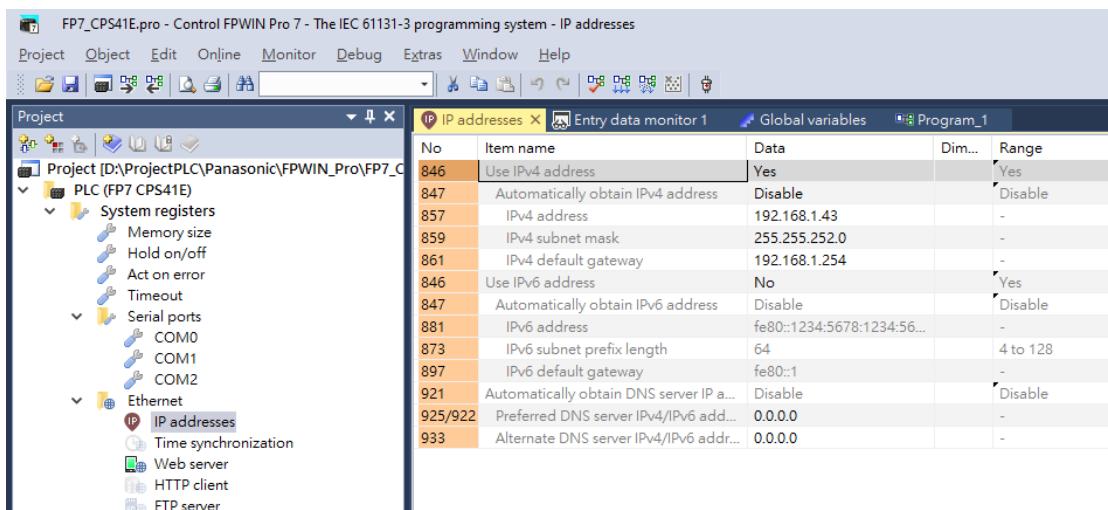
Select the corresponding bit when programming.



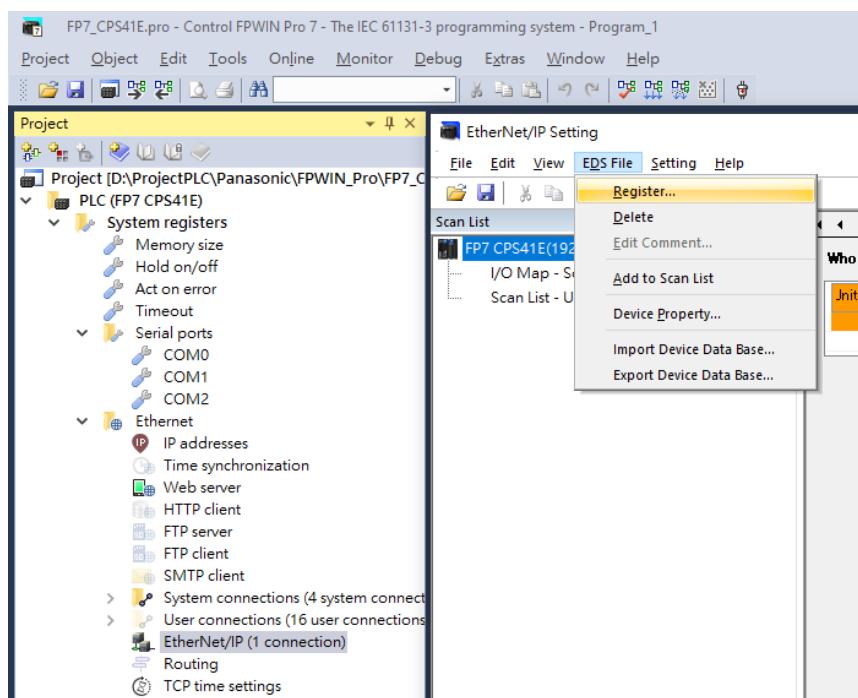
## Chapter4. Panasonic FP7

Panasonic FP7 CPS41E CPU supports EtherNet/IP, please use Control FPWIN Pro 7 software to edit the program.

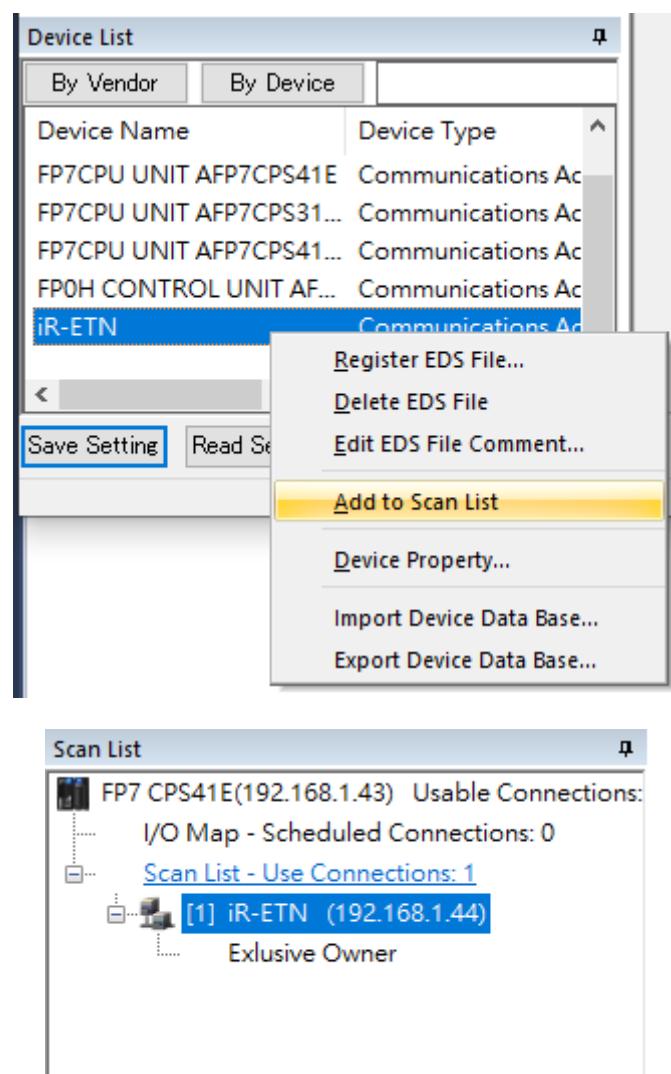
Step 1. Use static IP for PLC.



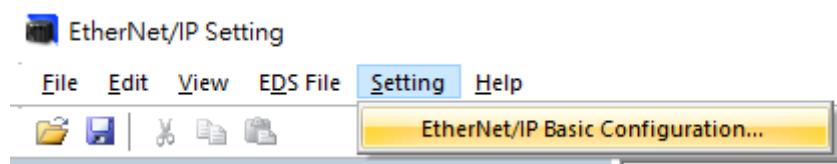
Step 2. Open EtherNet/IP Setting » [EDS File] » [Register...] and import iR-ETN's EDS file.



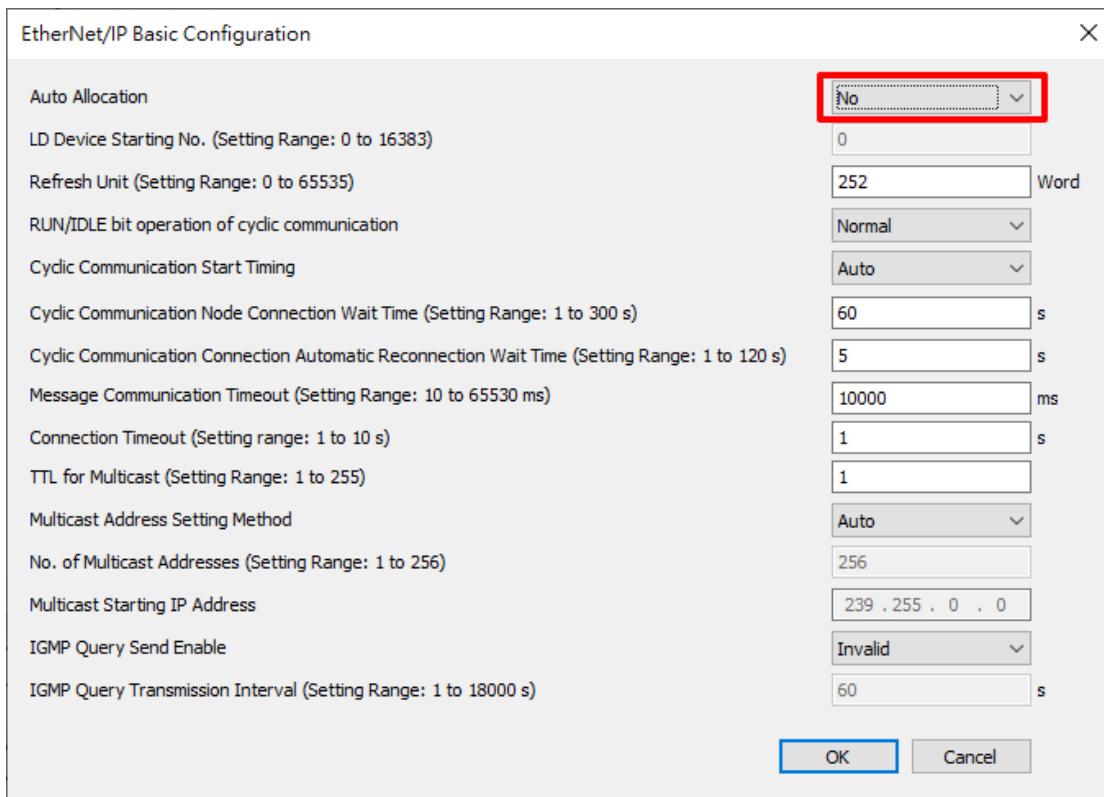
Step 3. Right-click on iR-ETN and select [Add to Scan List].



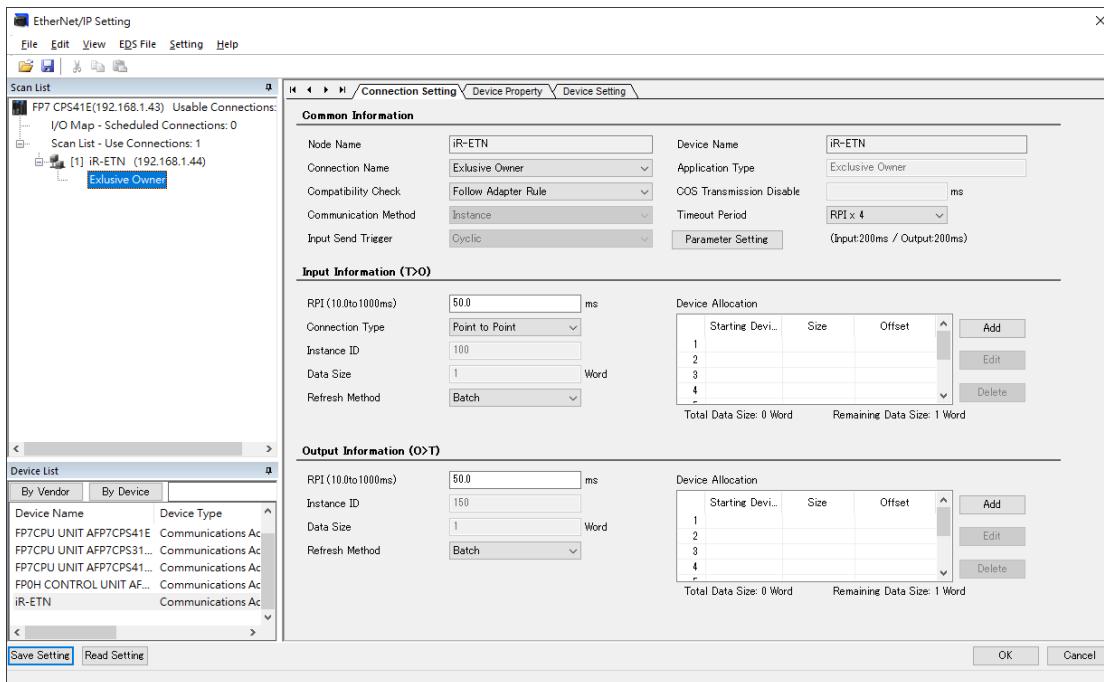
Step 4. [Setting] » [EtherNet/IP Basic Configuration...]



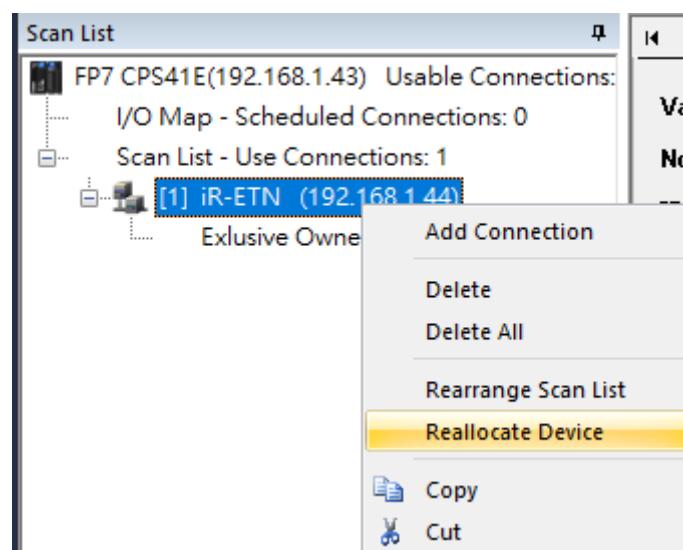
Set [Auto Allocation] to "No".



### Step 5. Device Allocation is currently empty.



Right-click on iR-ETN and select [Reallocate Device].



Settings can be saved for other projects to read by clicking [Save Setting].

Click [OK] to finish settings.

#### Step 6. Configure I/O mapping in [Global variables] tab for use in the program

	Class	Identifier	FP address	IEC address	Type	Initial
0	VAR_GLOBAL	bT1	LD0.0	%MX8.0.0	BOOL	FALSE
1	VAR_GLOBAL	bOut1	LD1.0	%MX8.1.0	BOOL	FALSE
2	VAR_GLOBAL	bOut2	LD1.8	%MX8.1.8	BOOL	FALSE
3	VAR_GLOBAL	bT2	LD0.8	%MX8.0.8	BOOL	FALSE

CODESYS® is a trademark of 3S-Smart Software Solutions GmbH.

Other company names, product names, or trademarks in this document are the trademarks or registered trademarks of their respective companies.

This document is subject to change without prior notice.

Copyright© 2020 Weintek Lab., Inc. All rights reserved.