

WEINTEK LABS., INC.

Connecting HMI to iR-ETN40R

Weintek Remote IO (MODBUS TCP/IP)

Demo Project

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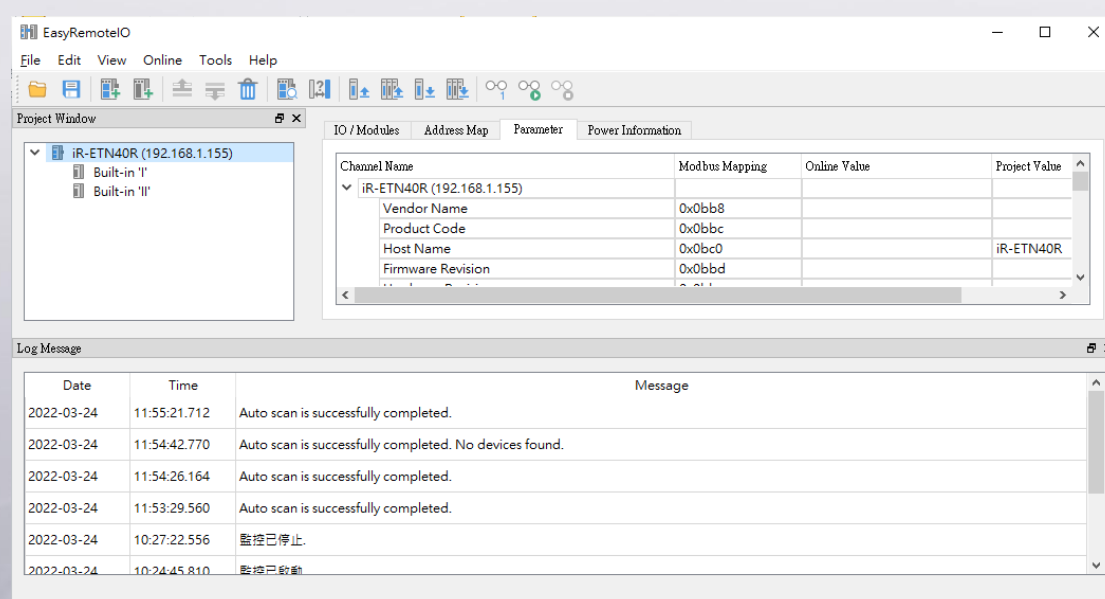
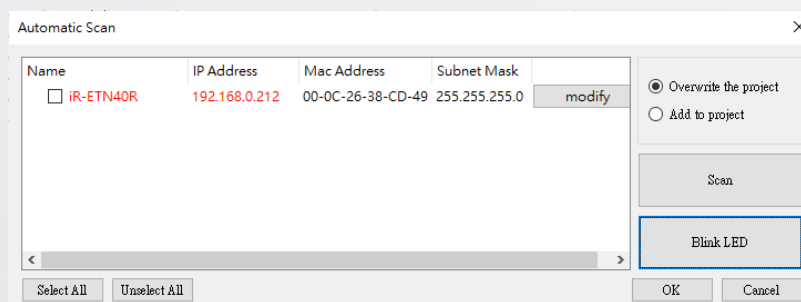
1. Overview & Operation

Overview

This demo project explains how to connect HMI with iR-ETN40R via Weintek Remote IO (MODBUS TCP/IP), how to control the state of inputs/outputs, how to use high-speed counters, and how to set related parameters.

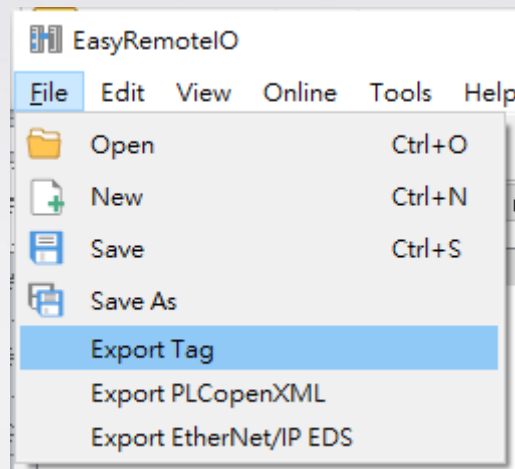
Operation

Step 1. Install EasyRemote IO software. Power up iR-ETN40R and connect it to the network. Launch EasyRemote IO and click [Scan] to find iR-ETN40R's IP settings. Click [modify] to change to an IP address in local network and then click [OK] to open EasyRemote IO's main menu.

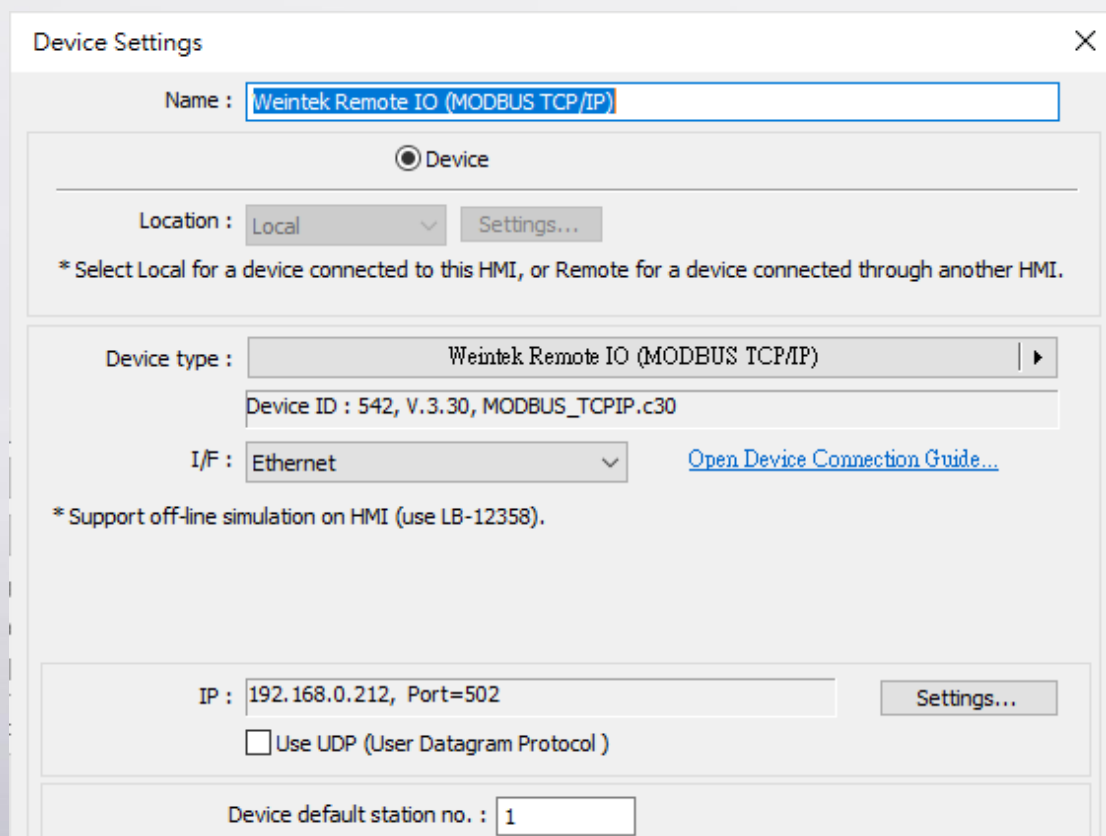


Connecting HMI to iR-ETN40R

Step 2. Go to [File] » [Export Tag] to export the csv file of tags of Weintek Remote IO (MODBUS TCP/IP).



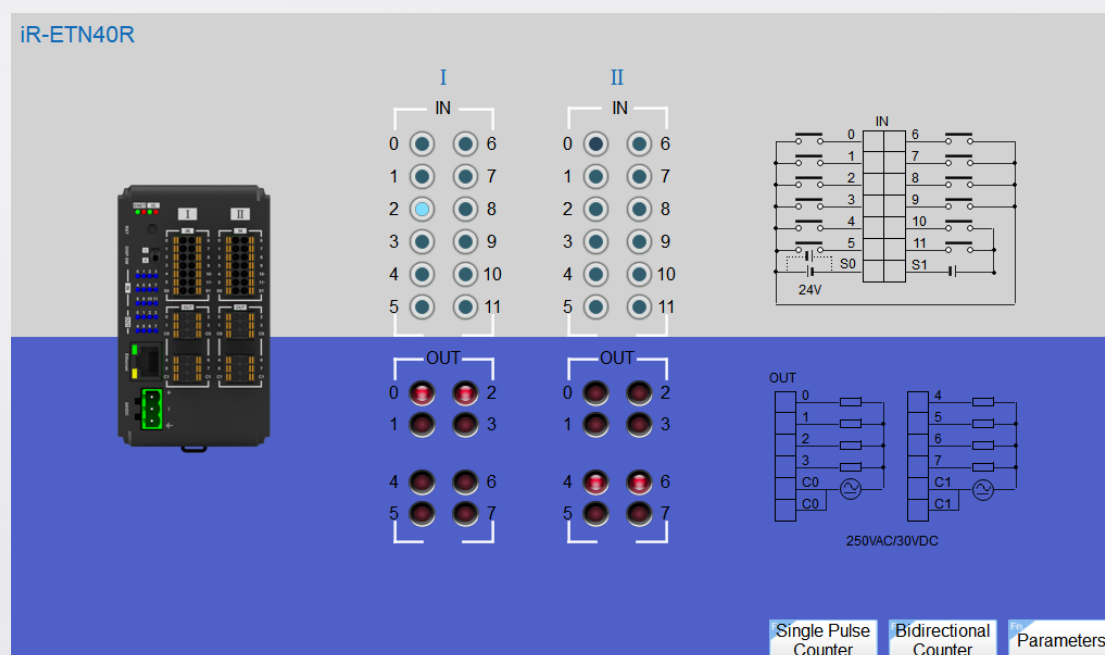
Step 3. Launch EasyBuilder Pro, add “Weintek Remote IO (MODEBUS TCP/IP)” into the device list, and then import the mentioned csv file.



2. Setting up the Screen

Main Screen

This page displays the states of the inputs and outputs of iR-ETN40R. Click [Output] to switch to ON/OFF state.



Parameters

This page displays the firmware version, hardware version, and power consumption of the device.

In iBus information, the product codes in different slots are shown.

Disable Reset Button: Enter 5AA5h in 4x1014 address can prevent the Reset Button from being pressed by accident because pressing this button can restore network parameters to default.

Power Consumption 2.630 W	Product Code 0A73 h	Number of TCP/IP connections 0001	Device Error Code 00000000
Power Consumption 3.280 W	Firmware Revision 1001	MAC address 000C 2638 CD49	Bit Number Description Bit0 Low power alarm Bit1 iBus initialization fault Bit2 Hardware error Bit3 Module lost connection Bit4 Module alarm Bit5 Number of iBus exceeds 16 Bit6 Power consumption exceeded at iBus system Bit7~15 Reserved
Power Supply 10.000 W	Hardware Revision 1000	Disable Reset Button 5AA5h : Reset Button is ineffective.	
Life Guard Time 0 ms	RUN/STOP Disable	0000	
	RUN/STOP Input Point 0	Disable Enable	

Slot	0	1	2	3	4	5	6	7	8	9	10	11	12	~16
Product code	0A73	0351	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

iBus Continue Run
☒

Mode Indicator
☒

0: iBus stops when one of the modules is disconnected.
1: iBus continues running when one of the modules is disconnected.

0: Modbus
1: EtherNet/IP

Item Product Code
1 iR-DI16-K 0154h
2 iR-DM16-P 0351h
3 iR-DQ16-P 0251h
4 iR-DM16-N 0352h
5 iR-DQ16-N 0252h
6 iR-DQ08-R 0243h
7 iR-AQ04-VI 0525h
8 iR-AI04-VI 0425h
9 iR-AM06-VI 0635h
10 iR-AI04-TR 0426h
11 iR-ETN 0702h
12 iR-ETN40R 0A73h

Main

Single Pulse Counter

In this page, the high-speed inputs can be configured for 4 single pulse counters. The high-speed inputs DI 10 and DI 11 can be used to set an ON/OFF-trigger value so the outputs can be set ON/OFF when this value is reached.

In Rate Measurement, the accumulated value of the selected counter within a time interval is computed to get a rate value. When Time-Windows is set to 1000 ms, the unit of the rate value is Hz.

Counter
Terminal I Input Setting
1
1:Single pulse only
0: Counting
1: Stops Counting
0:Keep Counting
1: Stop Counting
2: Clear Count Value

	Counter value	State	Command	Upper limit	DO Point	ON trigger value	OFF trigger value	INPUT
Counter 0	0	0	0	4294901760	0	10	0	10
Counter 1	0	0	0	4294901760	1	4294967295	0	11
Counter 2	0	0	0	4294901760	2	10	0	10
Counter 3	0	0	0	10	3	5	2	11

Terminal II Input Setting
1
5:Up & down pulse

Rate Measurement
Time-Windows 1000 ms
Windows Channel 5
Bidirectional Counter 0
Rate Value 0

Frequency [Hz] = Rate Value/ Time-Window [sec.]

Main

Bidirectional Counter

In this page, the high-speed inputs can be configured for bidirectional counters. The high-speed inputs DI 10 and DI 11 can be used to configure a counter for count up or count down. After setting the ON/OFF-trigger value, the outputs can be set ON/OFF when this value is reached. This page also contains Rate Measurement.

Counter

Terminal I Input Setting

5

5:Up & down pulse

DO Point

ON trigger value

OFF trigger value

0

0

2

0

0

10

1

1

5

3

1

11

2

2

8

6

2

3

3

12

10

3

Bidirectional Counter 0

Counter value

0

Upper limit

2147483647

Lower limit

-2147483648

Upper limit Reload

0

Lower limit Reload

0

Terminal II Input Setting

5

5:Up & down pulse

DO Point

ON trigger value

OFF trigger value

0

4

2

2

4

10

1

5

5

3

5

11

2

6

8

6

6

3

7

12

10

7

Bidirectional Counter 1

Counter value

0

Upper limit

2147483647

Lower limit

-2147483648

Upper limit Reload

0

Lower limit Reload

0

Rate Measurement

Time-Windows

1000

ms

Windows Channel

5

Bidirectional Counter 0

Rate Value

0

Main

3. References

Manual	Link
iR-ETN40R User Manual	UM021002E_iR-ETN40R_UserManual_eng.pdf
EasyRemote IO User Manual	UM018004E_EasyRemoteIO_UserManual_eng.pdf
Weintek Remote IO (MODBUS TCI/IP) Connection Guide	Weintek_Remote_IO_MODBUS_TCP_IP.pdf