IEC 60870-5-104 IEC 104 Server

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	IEC 60870-5-104 IEC 104 Server		
PLC I/F	Ethernet		
Port no.	2404		
Sector	257	0 ~ 65535	*note1
Timing (T3)	10		*note2
Timing (K)	12	1 ~ 32767	*note3

*Note1: only one client can be connected at a time.

*Note2: When there's no data transfered from server or client, a keep -alive package will be sent in the specified interval of time.

*Note3: Communication will stop when the number of not received APDU reaches 12.
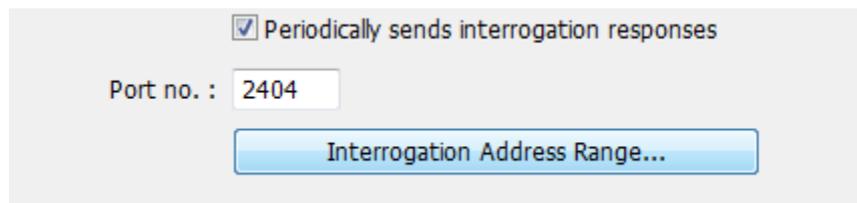
Device Address:

Bit/Word	Device type	Format	Range	Memo
B	Single Point	DDDDD	0 ~ 65535	
B	Single Command	DDDDD	0 ~ 65535	
B	Double Point	DDDDD	0 ~ 65535	
B	Measured Scaled	DDDDD	0 ~ 65535	
B	Measured Float	DDDDD	0 ~ 65535	
B	Integrated Totals	DDDDD	0 ~ 65535	
B	Step Position	DDDDD	0 ~ 65535	
B	Bitstring 32bit	DDDDD	0 ~ 65535	
W	Double Command	DDDDD	0 ~ 65535	
W	SetPoint Scaled Command	DDDDD	0 ~ 65535	
W	SetPoint Float Command	DDDDD	0 ~ 65535	
W	Regulating Step Command	DDDDD	0 ~ 65535	
W	Bitstring 32bit Command	DDDDD	0 ~ 65535	

Application:

Upper computer IEC 104 Client------HMI (IEC 104 Server) -------Modbus RTU

Periodically sends interrogation responses:

Select [Periodically sends interrogation responses] checkbox and then click [Interrogation Address Range] to set address ranges of interrogations.
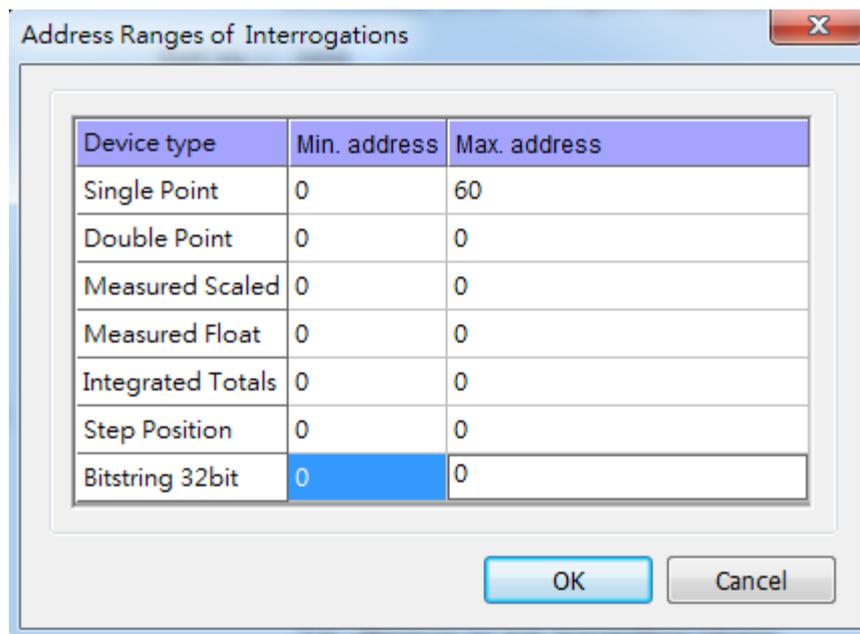

As shown below, Single Point device type in addresses range from 0 to 60 will be sent to the Client.

IEC104 Gateway

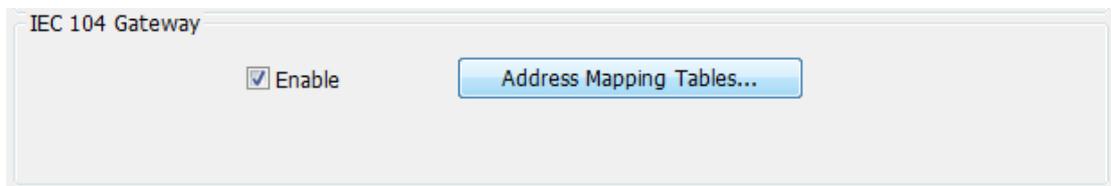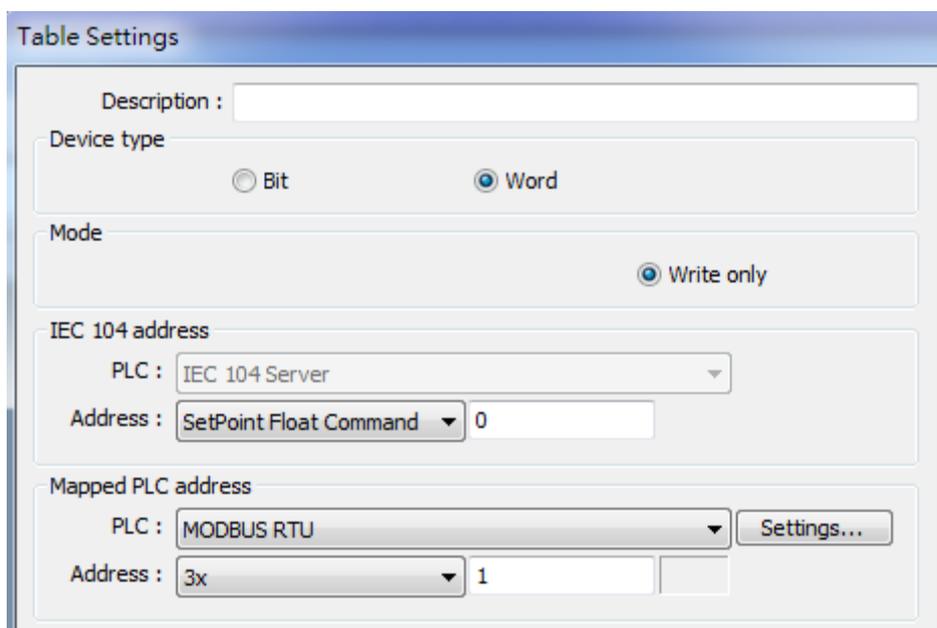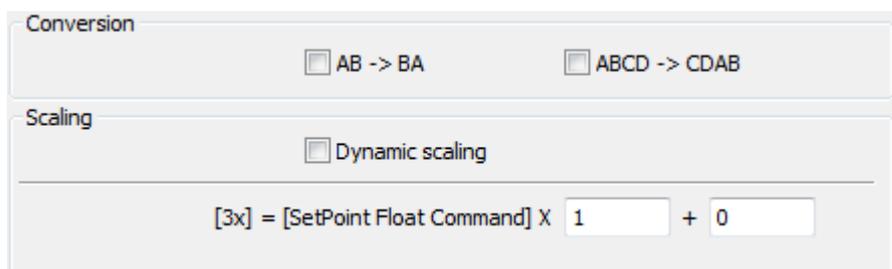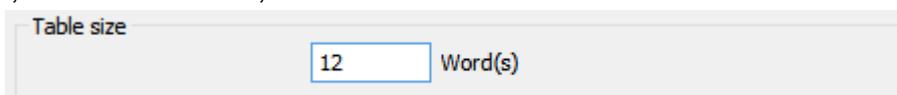Set address mapping tables: Select [Enable] checkbox in IEC104 Gateway group box.

Click [Address Mapping Tables] to open Table Settings window, and map IEC 104 addresses with the ones of other devices. The applicable devices are local or Modbus PLCs.

Set scaling:

Set table size, as shown below, 12 words will be read at a time.

Wiring Diagram:

Diagram 1

Ethernet cable:

W/Orange	1		1	W/Orange
Orange	2		2	Orange
W/Green	3		3	W/Green
Blue	4		4	Blue
W/Blue	5		5	W/Blue
Green	6		6	Green
W/Brown	7		7	W/Brown
Brown	8		8	Brown