

Modbus Server

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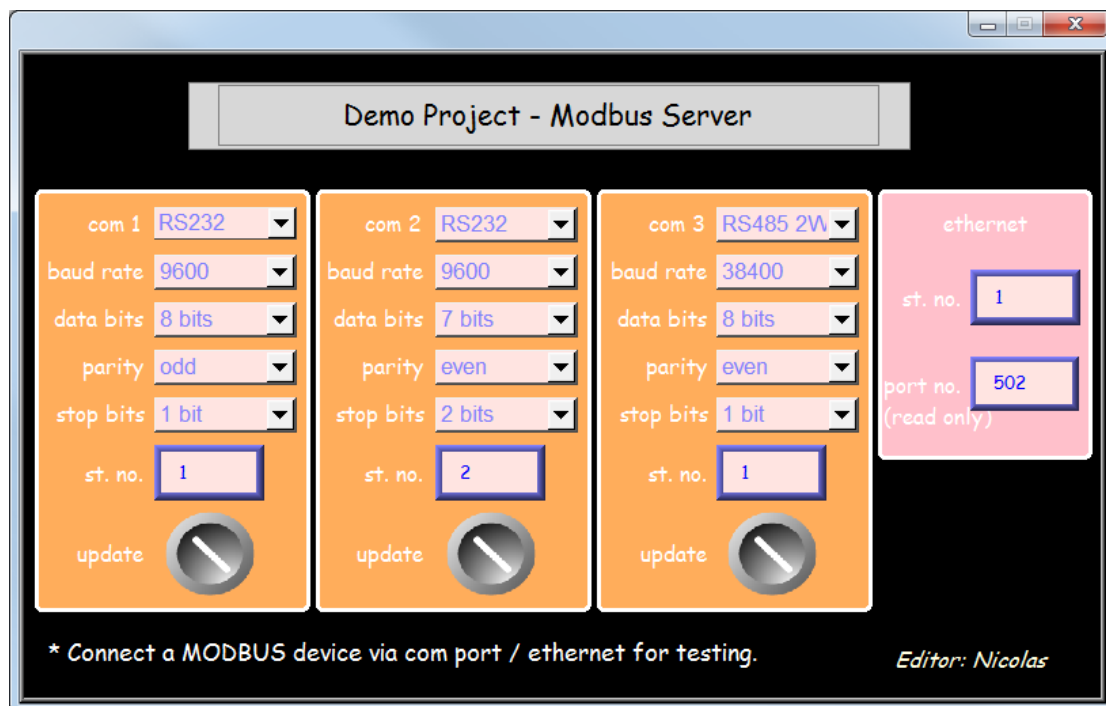
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1. Overview and Operation

Overview

This demo project is for testing Modbus slave communication when connecting via COM Port or Ethernet.

With Option List Object the communication parameters can be updated and tested easily and directly on HMI.



Operation

Select the COM Port to be tested and set the relevant communication parameters:

Demo Project - Modbus Server

com 1	com 2	com 3	ethernet
RS232	RS232	RS485 2W	
baud rate: 9600	baud rate: 9600	baud rate: 38400	st. no.: 1
data bits: 1200	data bits: 7 bits	data bits: 8 bits	port no.: 502 (read only)
parity: 4800	parity: even	parity: even	
stop bits: 9600	stop bits: 2 bits	stop bits: 1 bit	
st. no.: 38400	st. no.: 2	st. no.: 1	
update	update	update	

* Connect a MODBUS device via com port / ethernet for testing. Editor: Nicolas



After setting, push update button to update communication parameters.

Demo Project - Modbus Server

com 1	com 2	com 3	ethernet
RS232	RS232	RS485 2W	
baud rate: 9600	baud rate: 9600	baud rate: 38400	st. no.: 1
data bits: 8 bits	data bits: 7 bits	data bits: 8 bits	port no.: 502 (read only)
parity: odd	parity: even	parity: even	
stop bits: 1 bit	stop bits: 2 bits	stop bits: 1 bit	
st. no.: 1	st. no.: 2	st. no.: 1	
update	update	update	

* Connect a MODBUS device via com port / ethernet for testing. Editor: Nicolas



To test Ethernet communication, set Ethernet Modbus Server station number. Please note that the port no. here is read only and can't be modified on HMI.

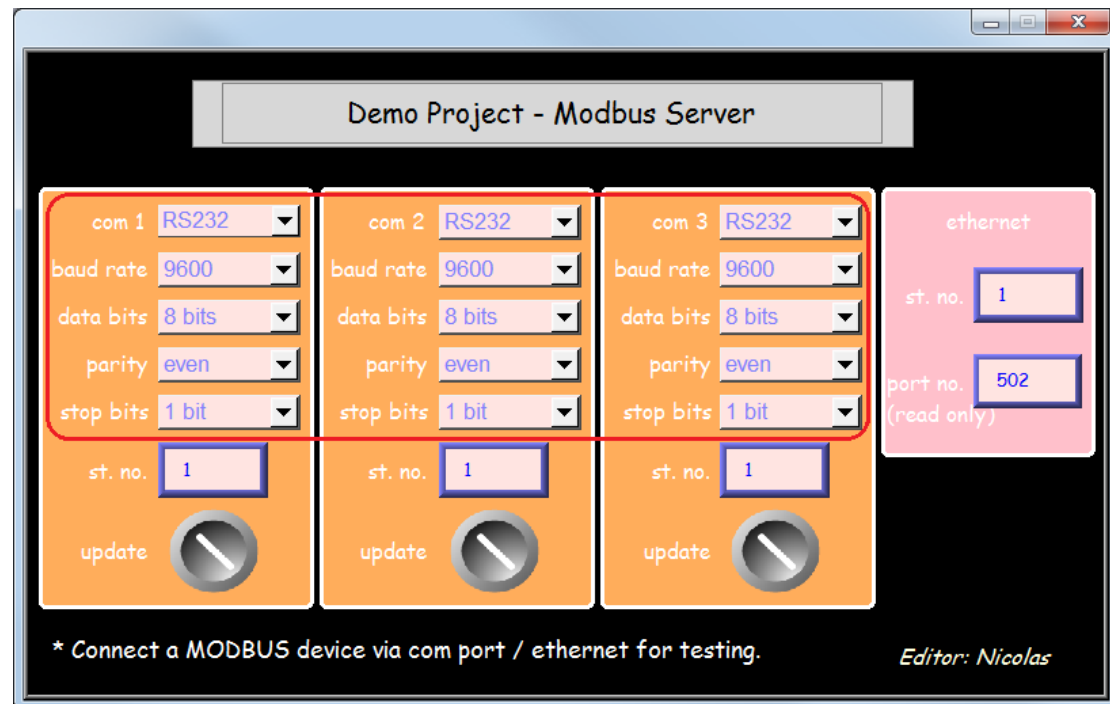
The screenshot shows the 'Demo Project - Modbus Server' configuration window. It contains three columns for COM port settings and one column for Ethernet settings.

com 1	com 2	com 3	ethernet
com 1 RS232	com 2 RS232	com 3 RS485 2W	ethernet
baud rate 9600	baud rate 9600	baud rate 38400	st. no. 1
data bits 8 bits	data bits 7 bits	data bits 8 bits	port no. 502 (read only)
parity odd	parity even	parity even	
stop bits 1 bit	stop bits 2 bits	stop bits 1 bit	
st. no. 1	st. no. 2	st. no. 1	
update	update	update	

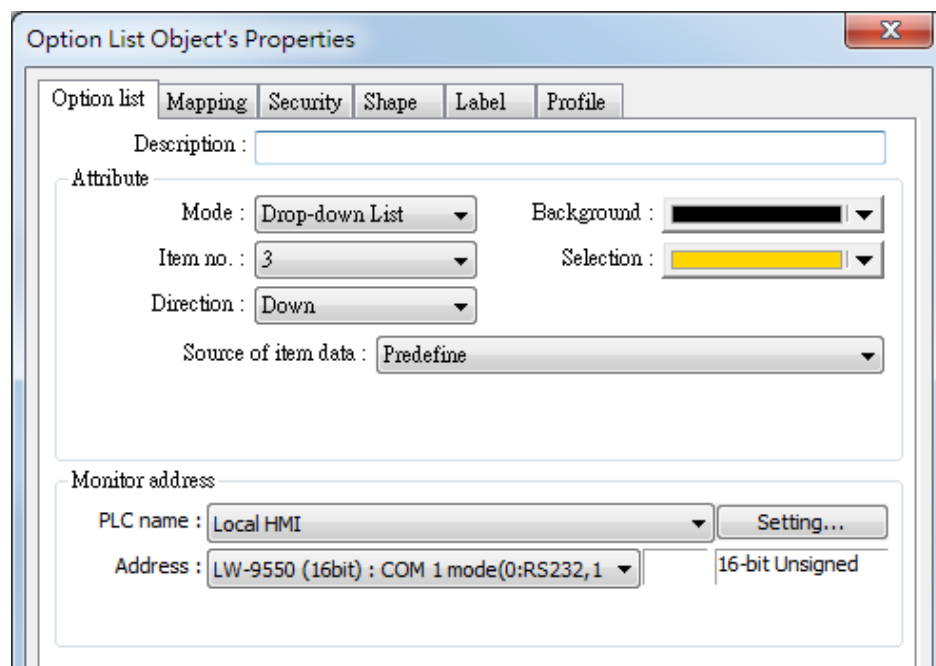
* Connect a MODBUS device via com port / ethernet for testing. Editor: Nicolas

2. Setting up the Screen

1. Create 15 Option List Objects, respectively set system registers from LW-9550 ~ LW-9564 to be monitor addresses. The following takes LW-9550 as an example.

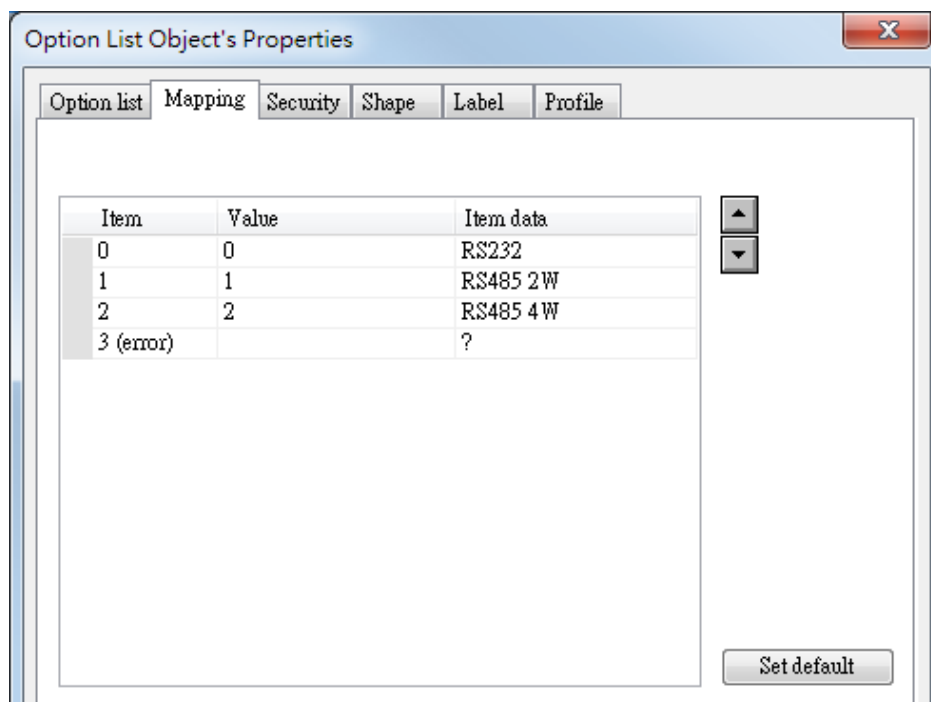


Option list tab:



[Source of item data] set to Predefine; [Monitor address] set to LW-9550; [Item no.] must be set according to the range of the register, for LW-9550, the available value range is 0 ~ 2, which means 3 states in total, therefore set to 3, and adjust the relevant properties as required.

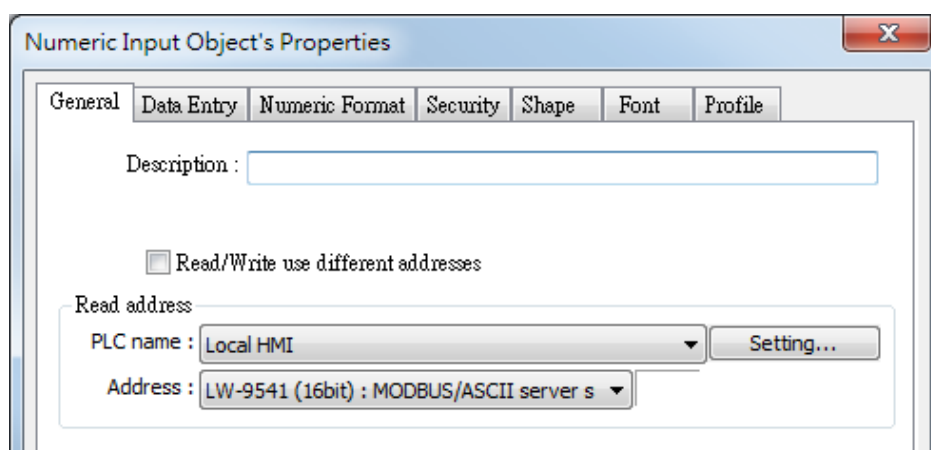
Mapping tab:



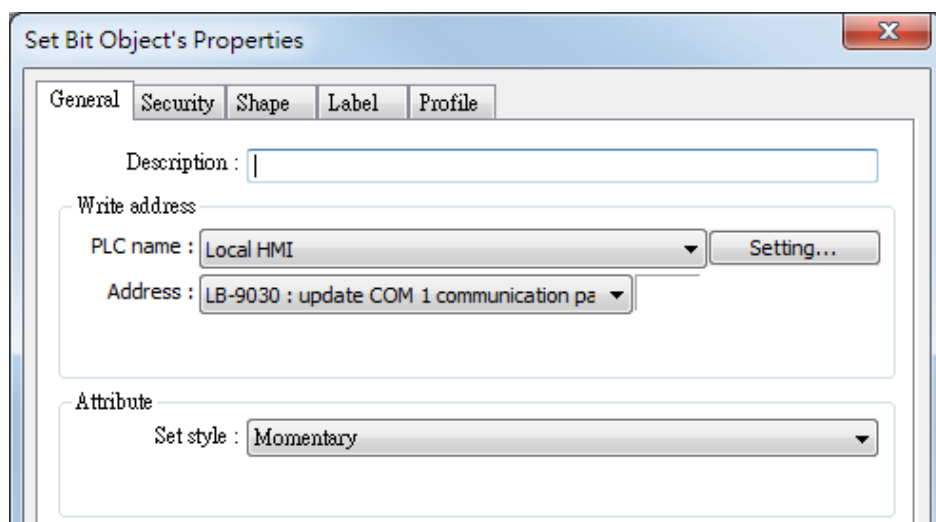
Since the available value range for LW-9550 is 0 ~ 2, please fill in 0, 1, 2 respectively in [Value] column. In [Item data] column, fill in the corresponding usage: RS232, RS485 2W, RS485 4W.

Please refer to the demonstration above to set the rest 14 Options List Objects

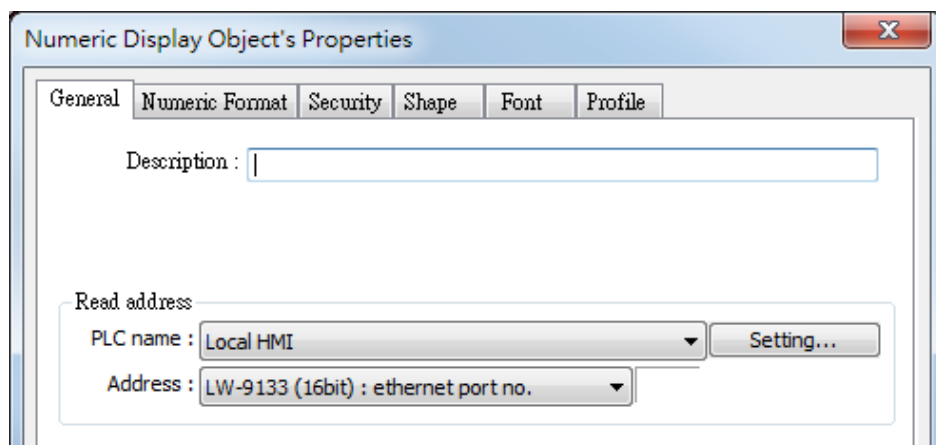
2. Create 4 Numeric Input Objects, respectively set [Read address] to LW-9541 ~ LW-9544, for setting Modbus Server station number.



3. Create 3 Set Bit Objects, respectively set [Write address] to LB-9030 ~ LB-9032 for updating COM port 1 ~ 3 communication parameter settings. Set [Attribute] to Momentary.



4. Create a Numeric Display Object, set [Read address] to LW-9133 for reading Ethernet port number.



3. Addresses

The addresses of objects used in this demonstration are listed below.

Object	Address	Object ID	Description
Window 4			
Option List	LW-9550	OL_0	COM1 mode
	LW-9555	OL_1	COM2 mode
	LW-9560	OL_2	COM3 mode
	LW-9551	OL_3	COM1 baud rate
	LW-9556	OL_4	COM2 baud rate
	LW-9561	OL_5	COM3 baud rate
	LW-9552	OL_6	COM1 databits
	LW-9557	OL_7	COM2 databits
	LW-9562	OL_8	COM3 databits
	LW-9553	OL_9	COM1 parity
	LW-9558	OL_10	COM2 parity
	LW-9563	OL_11	COM3 parity
	LW-9554	OL_12	COM1 stop bits
	LW-9559	OL_13	COM2 stop bits
	LW-9564	OL_14	COM3 stop bits
Set Bit	LB-9030	SB_0	Update COM1 com. parameters
	LB-9031	SB_1	Update COM2 com. parameters
	LB-9032	SB_2	Update COM3 com. parameters
Numeric Input	LW-9541	NE_0	Modbus server sta. no. (COM1)
	LW_9542	NE_1	Modbus server sta. no. (COM2)
	LW-9543	NE_2	Modbus server sta. no. (COM3)
	LW-9544	NE_3	Modbus server sta. no. (Ethernet)
Numeric Display	LW-9133	ND_0	Ethernet port no.