



tGW-700 Series Quick Start

IPv6 version 1.2, Oct. 2020

What's in the box?

The following items are included in the package:



tGW-700 Module x 1



CA-002 Cable x1



Quick Start x1

Related Information

- tGW Series Product webpage:

https://www.icpdas.com/en/product/guide+Industrial_Communication+Gateway+tGW_Modbus_Gateway#1063

- Document & Firmware:

<https://www.icpdas.com/en/download/index.php?nation=US&kind1=&model=&kw=tGW-700>

- NS-205/NS-205PSE/M-7000 Product webpage (optional):

https://www.icpdas.com/en/product/guide+Industrial_Communication+Ethernet_Communication+Ethernet_Switch

https://www.icpdas.com/en/product/guide+Remote_I_O_Module_and_Unit+RS-485_I_O_Modules+I-7000#467

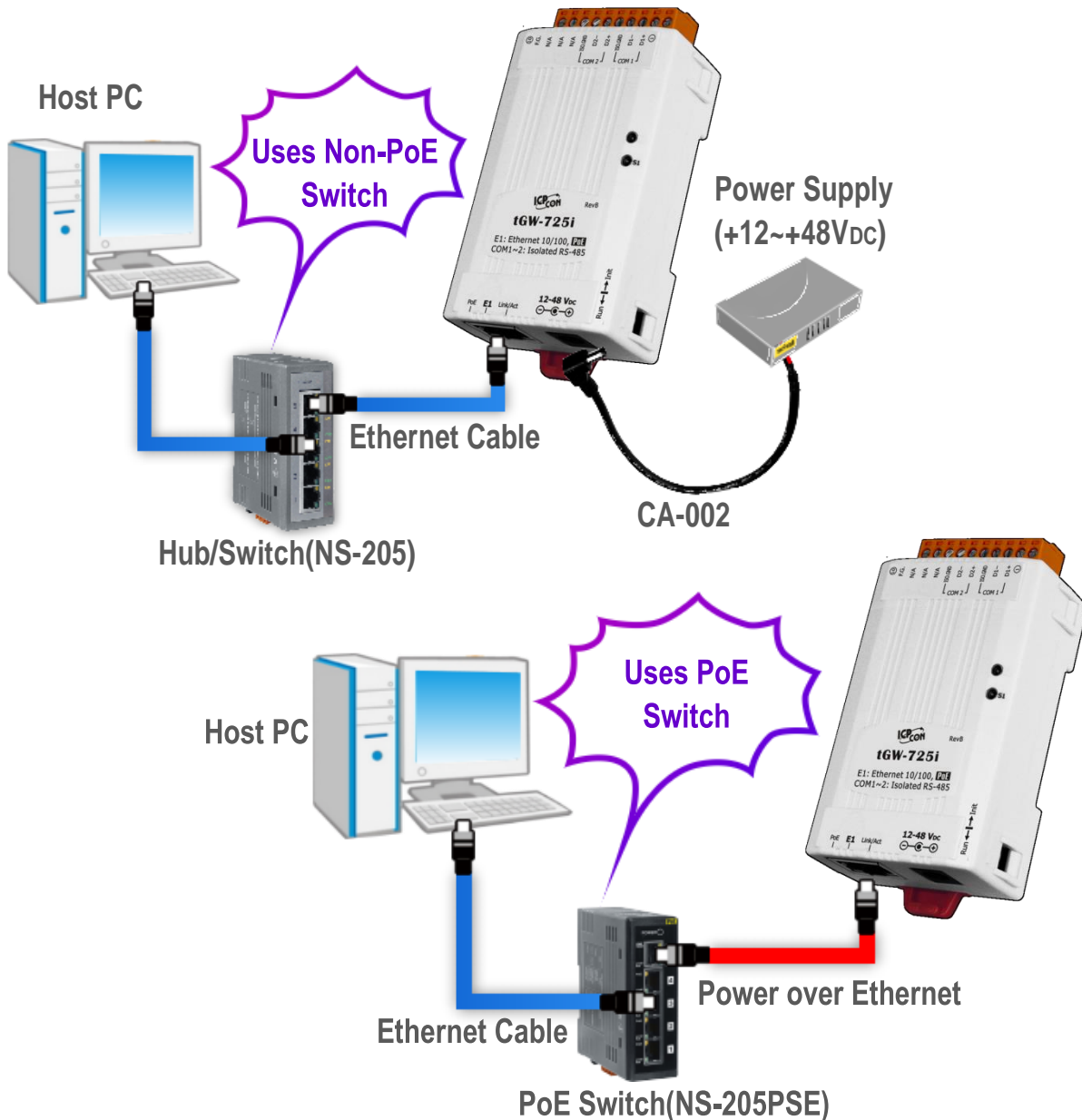
1 Connecting the Power and Host PC

1) Make sure the network of your PC is functioning appropriately.

Make sure your Windows firewall and Anti-Virus firewall is set accurately (or you can temporarily disable the Windows firewall or Anti-Virus firewall). The “Search Servers” on Chapter 5 may not work if the settings are incorrect. (Please contact your system Administrator if you have problem)

2) Connect the tGW-700 and your PC to the same sub network or the same Ethernet switch.

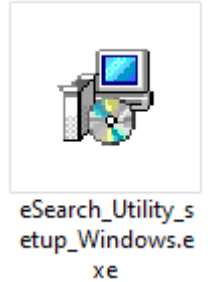
3) Connect power supply (PoE or +12 to +48 V_{DC}) to the tGW-700.



2

Installing Software on Your PC

Install eSearch Utility (it can be obtained from the web site as below):



⚠ Note: The version of the eSearch Utility must be v1.2.5 or later.

 https://www.icpdas.com/en/product/guide+Software+Utility_Driver+eSearch_Utility

3

Wiring Notes

Wiring Notes for RS-232/485/422 Interfaces:

: The following RS-232 and RS-485 wiring deployment as an example.

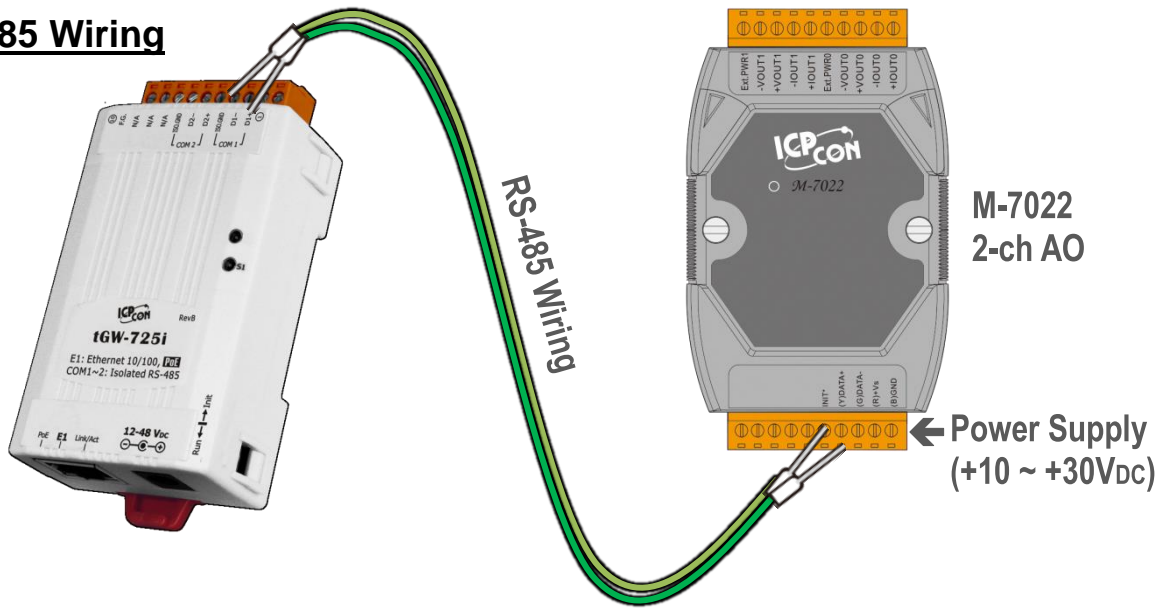
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4 Connecting the Modbus Devices

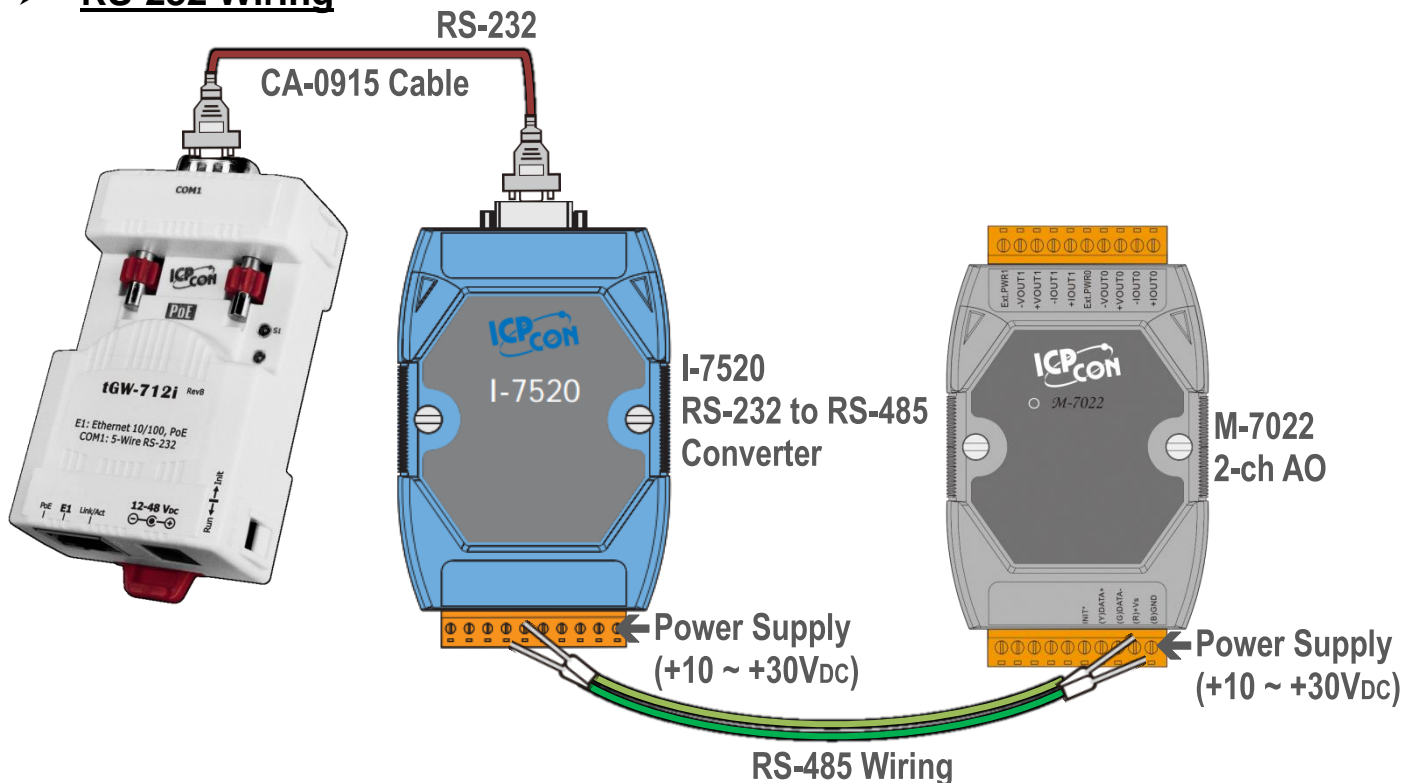
- 1) Connect the Modbus device (e.g., M-7022, optional) to the COM1 on tGW-700.
- 2) Supply power to the Modbus device (e.g., M-7022, Device ID:1).

⚠ Note: The wiring deployment of the device and power supply may vary depends on your Modbus device.

➤ RS-485 Wiring



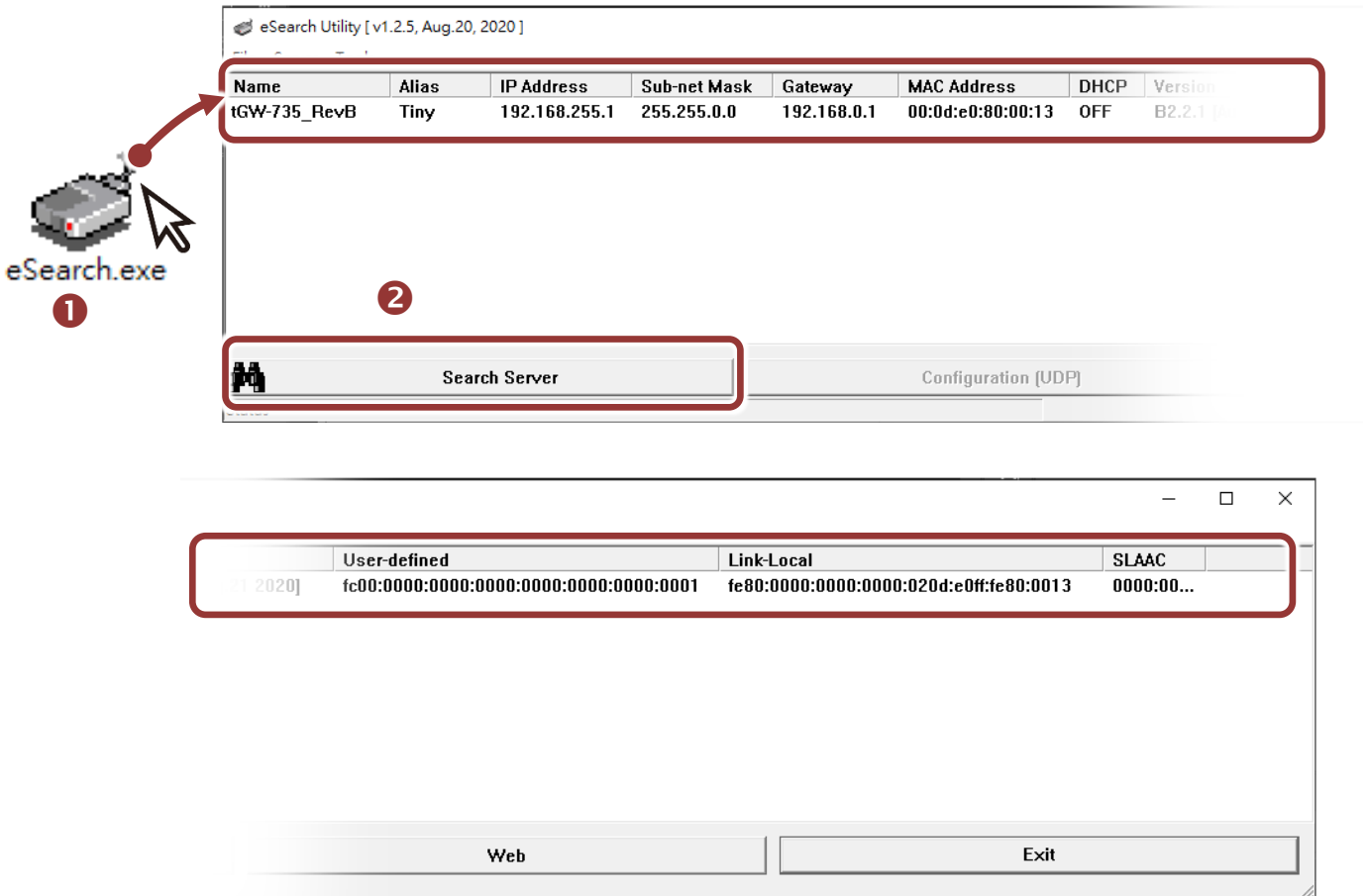
➤ RS-232 Wiring



5

Configuring Network Settings

- 1) Double-click the eSearch Utility shortcut on the desktop.
- 2) Click the “Search Servers” to search your tGW-700.

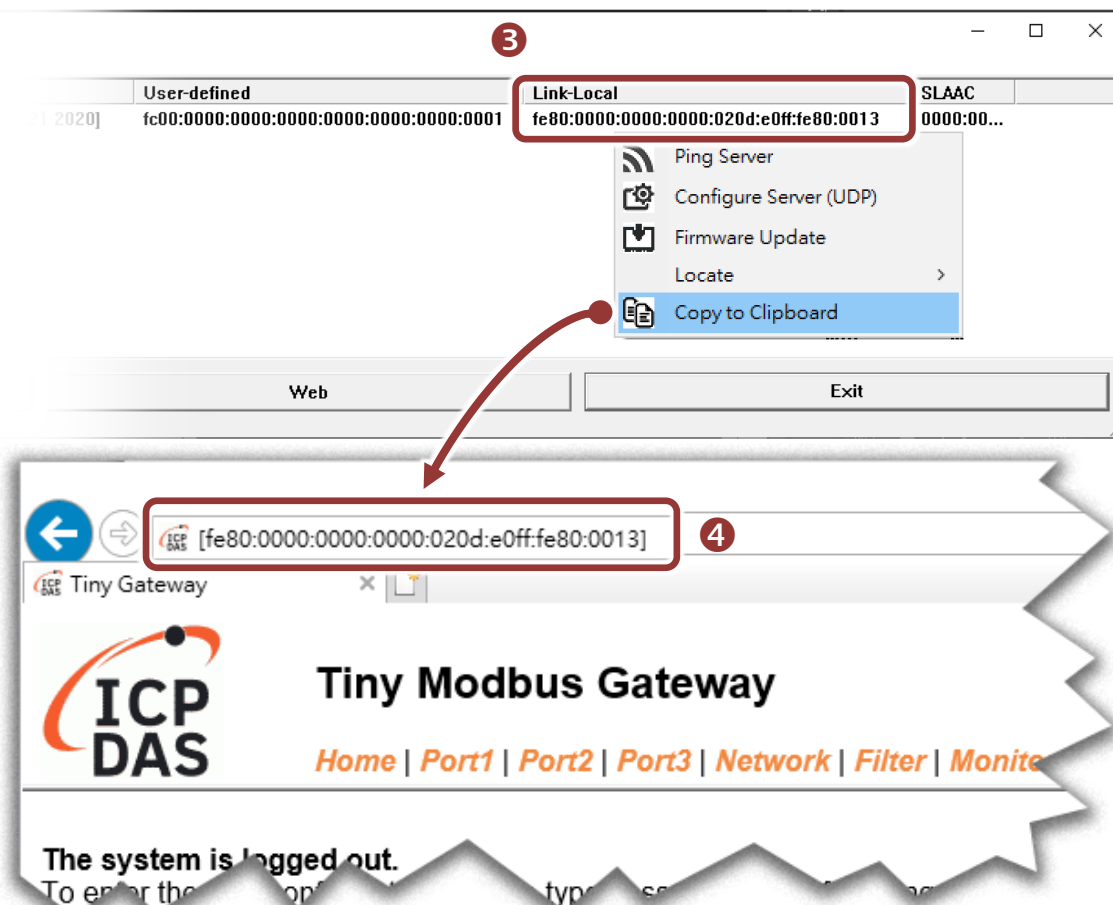


Factory Default Settings of tGW-700:

IPv4 settings		Writable
IP Address	192.168.255.1	✓
Subnet Mask	255.255.0.0	✓
Gateway	192.168.0.1	✓
IPv6 settings		Writable
User-defined	fc00::1	✓
Link-Local	EUI-64 format	✗
SLAAC	Auto-Configure	✗

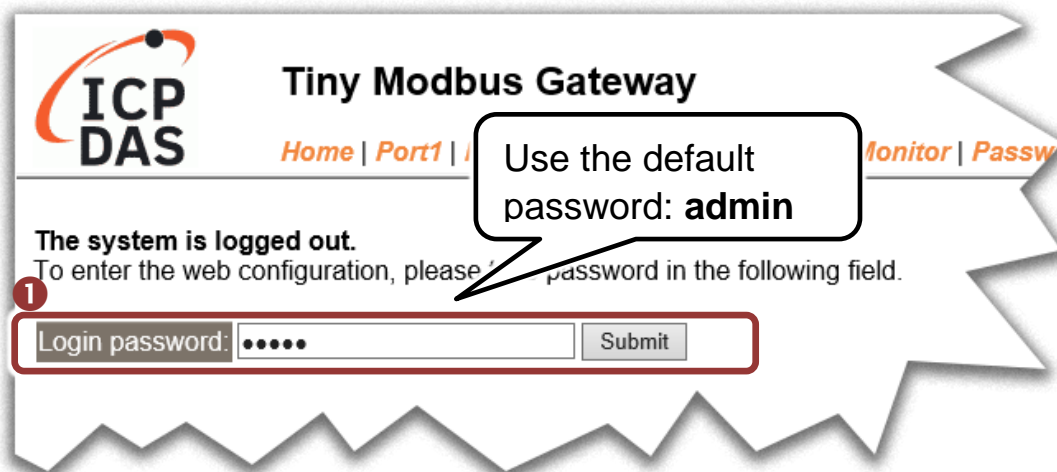
- 3) Right Click on the Link-Local field and click the “Copy to Clipboard” to copy the “Link-Local address” of the tGW-700 module.
- 4) Paste the “Link-Local address” of the tGW-700 module in the address bar of the browser and add the brackets, i.e., [Link-Local address].

⚠ Note: The Web button only use the IPv4 address to access the Web Server.



6 Configuring the Serial Port

- 1) Enter the password in the login password field and click “Submit”.



- 2) Click the “Port1” tab to display the “Port1 Settings” page.
- 3) Select the appropriate **Baud Rate, Data Format and Modbus Protocol** (e.g., 19200, 8N2 and Modbus RTU) from the relevant drop down options.

⚠ Note: The settings of Baud Rate, Data Format or Modbus protocol will depend on your Modbus device.

- 4) Click “Submit” to save your settings.

Tiny Modbus Gateway

Home | **Port1** | Port2 | Port3 | Network | Filter | Monitor | Password | Logout

Port 1 Settings

Port Settings	Current	Updated	Comment
Baud Rate	115200	19200 (select [v])	bps (bits/second)
Data Size	8	8 [v]	bits :char
Parity	None	None [v]	
Stop Bits	1	2 [v]	
Flow Control	None	None [v]	
Remove Errors	FE BE	<input type="checkbox"/> Parity Error <input checked="" type="checkbox"/> Framing Error <input checked="" type="checkbox"/> Break Error	Clear RX FIFO data when serial errors.

Modbus Settings

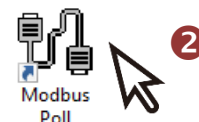
Modbus Settings	Current	Updated	Comment
Slave Timeout	300	300	10 - 65000 ms (step 10), Default: 300
Char Timeout	4	4	4 - 15 bytes, Default: 4
Silent Time	0	0	0 - 65000 ms (step 10), Default: 0
Protocol	Modbus RTU	Modbus RTU [v]	
Virtual ID Range	1 - 247	1 to 247	range: 1 to 247. Note: Gateway skips the Modbus messages if its ID is NOT in the specified range.
ID Offset	0		Offset: -246 to 246, No change=0. For example: Slave ID 1 to 2

Pair-Connection Settings (Master/Slave Mode)

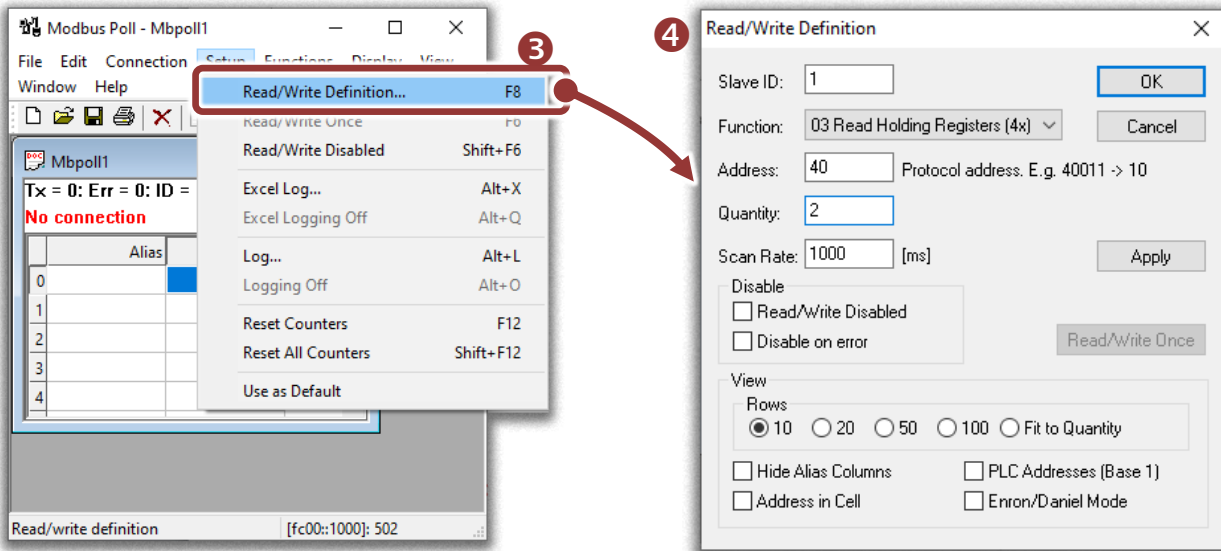
Pair-Connection Settings (Master/Slave Mode)	Current	Updated	Comment
Application Mode	Server	Server [v]	Server=Slave, Client=Master

7 Self-Test

- 1) Download and install the “Modbus Poll” test program from the link as below: <https://www.modbustools.com/download.html>
- 2) Double-click the Modbus Poll shortcut to open.
- 3) Select the “Read/Write Definition...” from the “Setup” menu to open the “Read/Write Definition” dialog box.
- 4) Configure the settings for the Slave.

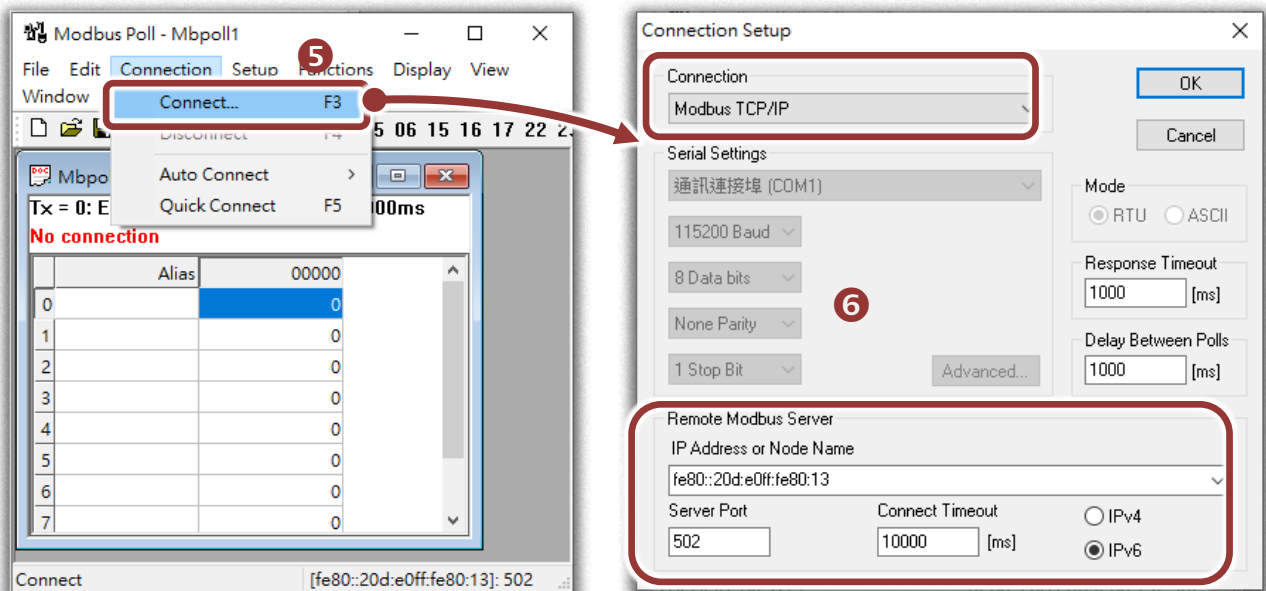


⚠ Note: The settings of the Modbus Slave will depend on your Modbus device.



5) Select the “Connect...” from the “Connection” menu to open the “Connection Setup” dialog box.

6) Configure the IPv6 address and TCP port (default : 502) of tGW-700 and click “OK” to connect the tGW-700 for testing.



7) If the response data is correct, it means the test is successful.

