

Packing List

In addition to this guide, the package includes the following items:



tGW-700-UL X 1



CA-002-UL

Resources

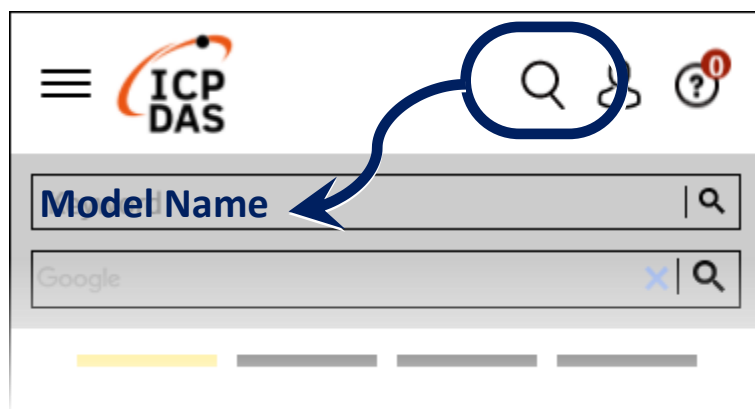
Technical Support

service@icpdas.com

www.icpdas.com

How to search for drivers, manuals and spec information on ICP DAS website.

- For Mobile Web



- For Desktop Web



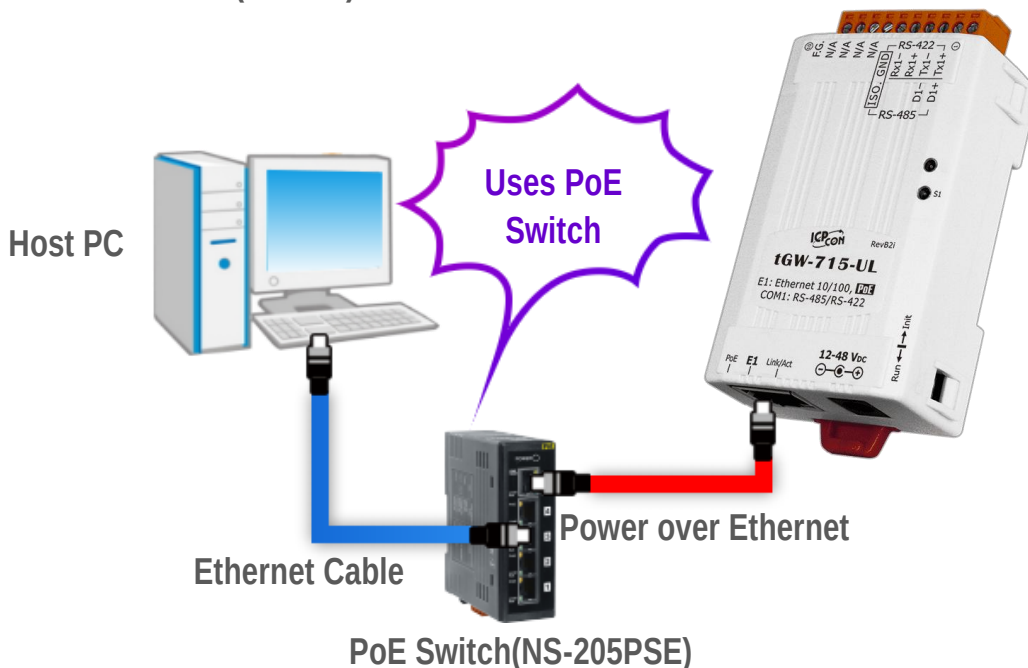
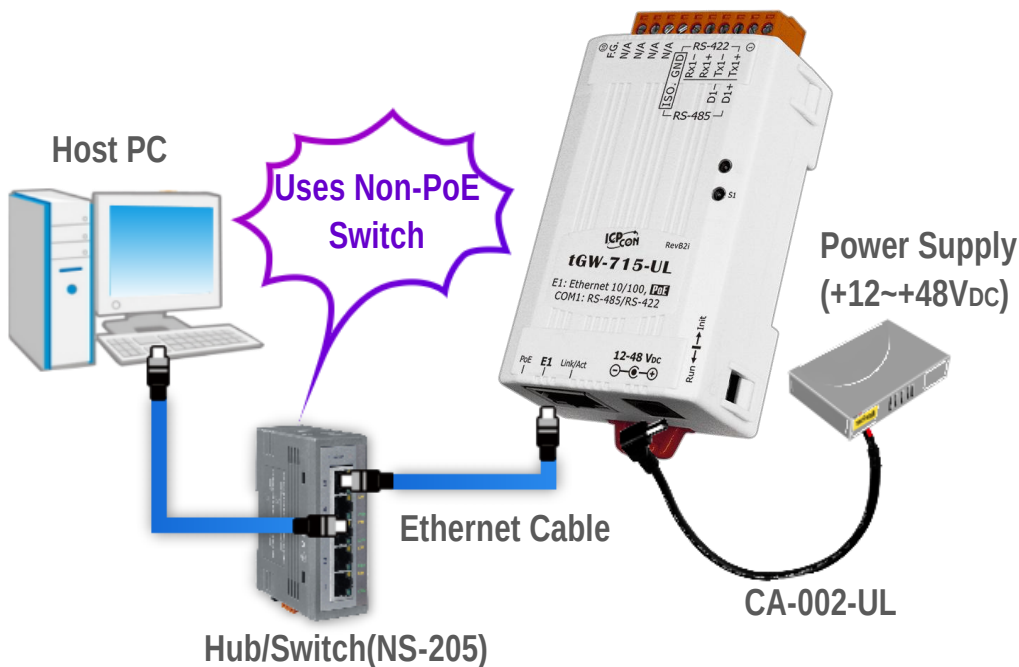
1 Connecting the Power and Host PC

1) Make sure your PC has workable network settings.

Disable or well configure your Windows firewall and Anti-Virus firewall first, else the “**Search Servers**” on **Chapter 5** may not work. (Please contact with your system Administrator)

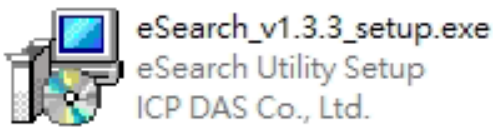
2) Connect both the tGW-700-UL and your PC to the same sub network or the same Ethernet switch.

3) Supply power (PoE or +12 ~ +48 V_{DC}) to the tGW-700-UL.



2 Installing Software on Your PC

Install eSearch Utility, which can be obtained from the web site:



 <https://www.icpdas.com/en/download/show.php?num=1327&nation=US&kind1=&model=&kw=esearch>

3 Wiring Notes

☒: Here, the **RS-485** wiring is used as an example.

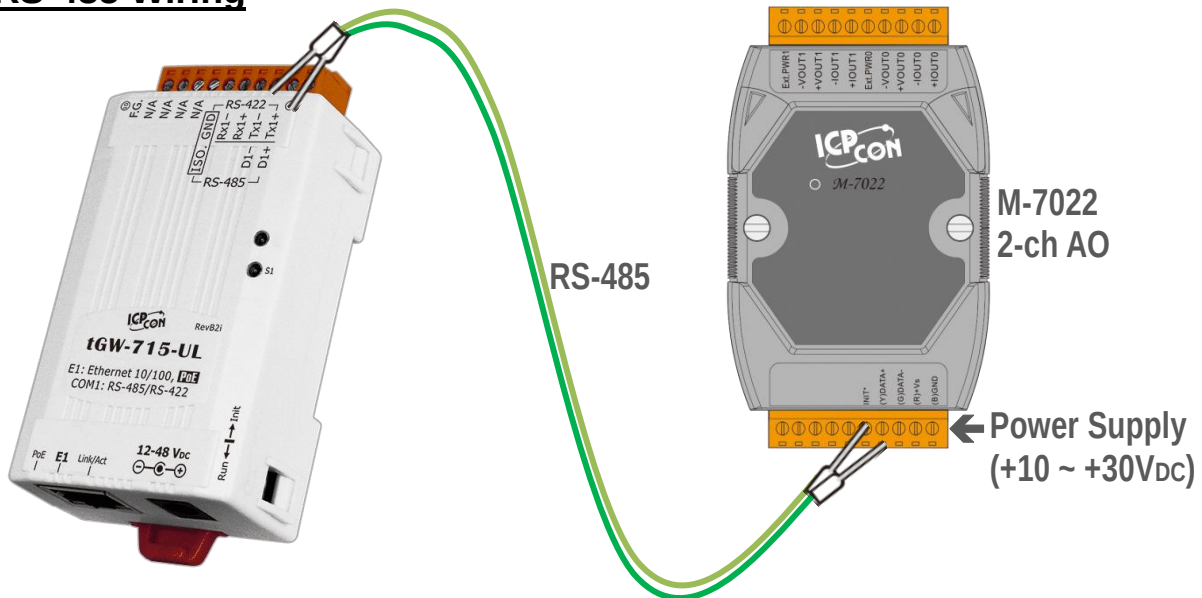
☐ RS-232 wiring	☐ RS-422 wiring																																
tGW-700-UL <table><tr><td>RxD</td><td>←</td><td>TxD</td></tr><tr><td>TxD</td><td>→</td><td>RxD</td></tr><tr><td>GND</td><td>—</td><td>GND</td></tr></table> RS-232 Modbus Device <table><tr><td>TxD</td></tr><tr><td>RxD</td></tr><tr><td>GND</td></tr></table>	RxD	←	TxD	TxD	→	RxD	GND	—	GND	TxD	RxD	GND	tGW-700-UL <table><tr><td>TxD+</td><td>→</td><td>RxD+</td></tr><tr><td>TxD-</td><td>→</td><td>RxD-</td></tr><tr><td>RxD+</td><td>←</td><td>TxD+</td></tr><tr><td>RxD-</td><td>←</td><td>TxD-</td></tr><tr><td>GND</td><td>—</td><td>GND</td></tr></table> RS-422 Modbus Device <table><tr><td>RxD+</td></tr><tr><td>RxD-</td></tr><tr><td>TxD+</td></tr><tr><td>TxD-</td></tr><tr><td>GND</td></tr></table>	TxD+	→	RxD+	TxD-	→	RxD-	RxD+	←	TxD+	RxD-	←	TxD-	GND	—	GND	RxD+	RxD-	TxD+	TxD-	GND
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GND	—	GND																															
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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-UL.
- 2) Supply power to the Modbus device (e.g., M-7022, Device ID: 1).

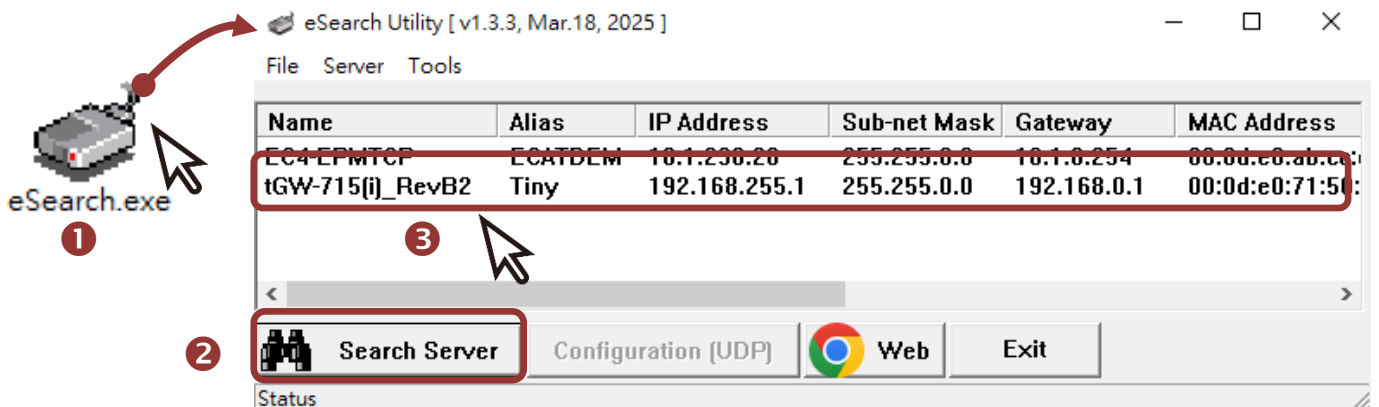
⚠ Note: The wiring and supply power method depend on your Modbus device.

➤ RS-485 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-UL.
- 3) Double-click the name of tGW-700-UL to open the “**Configure Server (UDP)**” dialog box.



Factory Default Settings of tGW-700-UL:

IP Address	192.168.255.1
Subnet Mask	255.255.0.0
Gateway	192.168.0.1

- 4) Contact your Network Administrator to obtain a correct network configuration (such as **IP/Mask/Gateway**). Enter the network settings and click **“OK”**.

⚠ Note: The tGW-700-UL will use the new settings 2 seconds later.

Configure Server (UDP)

Server Name : tGW-715(j)_RevB2 IPv6 Address : fe00:0:0:0:0:0:1

DHCP: 0: OFF Sub-net Mask : 255.255.0.0 Alias: Tiny

IP Address : 10.1.0.58 Gateway : 10.1.0.254 MAC: 00:0d:e0:71:50:ab

Warning!!
Contact your Network Administrator to get correct configuration before any changing!

OK Cancel

- 5) Wait 2 seconds and click **“Search Servers”** button again to ensure the tGW-700-UL is working well with new configuration.
- 6) Click the name of tGW-700-UL to select it.
- 7) Click the **“Web”** button to log in to the web configuration pages.
(Or enter the URL address of the tGW-700-UL in the address bar of the browser).

eSearch Utility [v1.3.3, Mar.18, 2025]

File Server Tools

Name	Alias	IP Address	Sub-net Mask	Gateway	MAC Address
tGW-715(j)_RevB2	Tiny	10.1.0.58	255.255.0.0	10.1.0.254	00:0d:e0:71:50:ab

Search Server Configuration [UDP] Web Exit

6 Configuring the Serial Port

1) For the first time using the module, you have to change the password and click the “**Submit**” button.

Tiny Modbus Gateway

Home | Port1 | Password | Logout

Change Password
The length of the password is 12 characters.

Current password:
New password:
Confirm new password:
Submit

2) Enter the new password in the “Login password” field and click the “**Submit**” button.

The system is logged out.
To enter the web configuration, please type password in the following field.

Login password:
Submit

3) Click the “**Port1**” tab to display the “**Port1 Settings**” page.

4) Select the appropriate **Baud Rate**, **Data Format** and **Modbus Protocol** (e.g., 115200, 8N1 and Modbus RTU) from the relevant drop down options.

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

5) Click “**Submit**” to save your settings.

Tiny Modbus Gateway

Home | **Port1** | Network | Filter | SNMP | Monitor | Password | Logout

Port 1 Settings

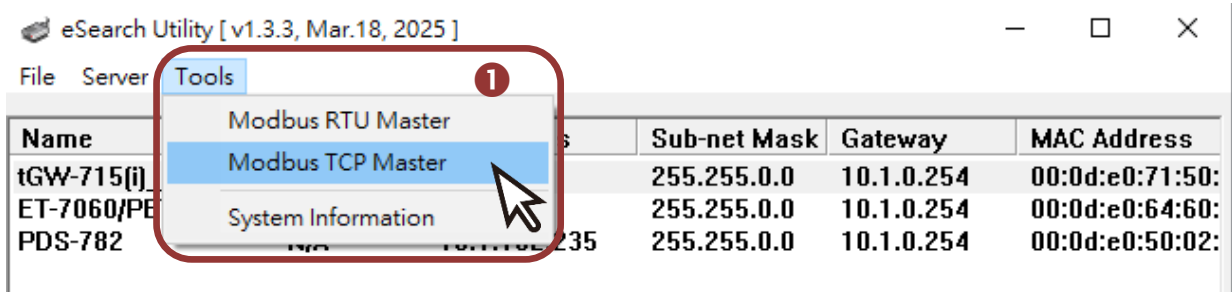
Port Settings	Current	Updated	Comment
Baud Rate	115200	115200 (select)	bps (bits/second)
Data Size	8	8	bits/char
Parity	None	None	
Stop Bits	1	1	
Flow Control	None	None	

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	

Submit

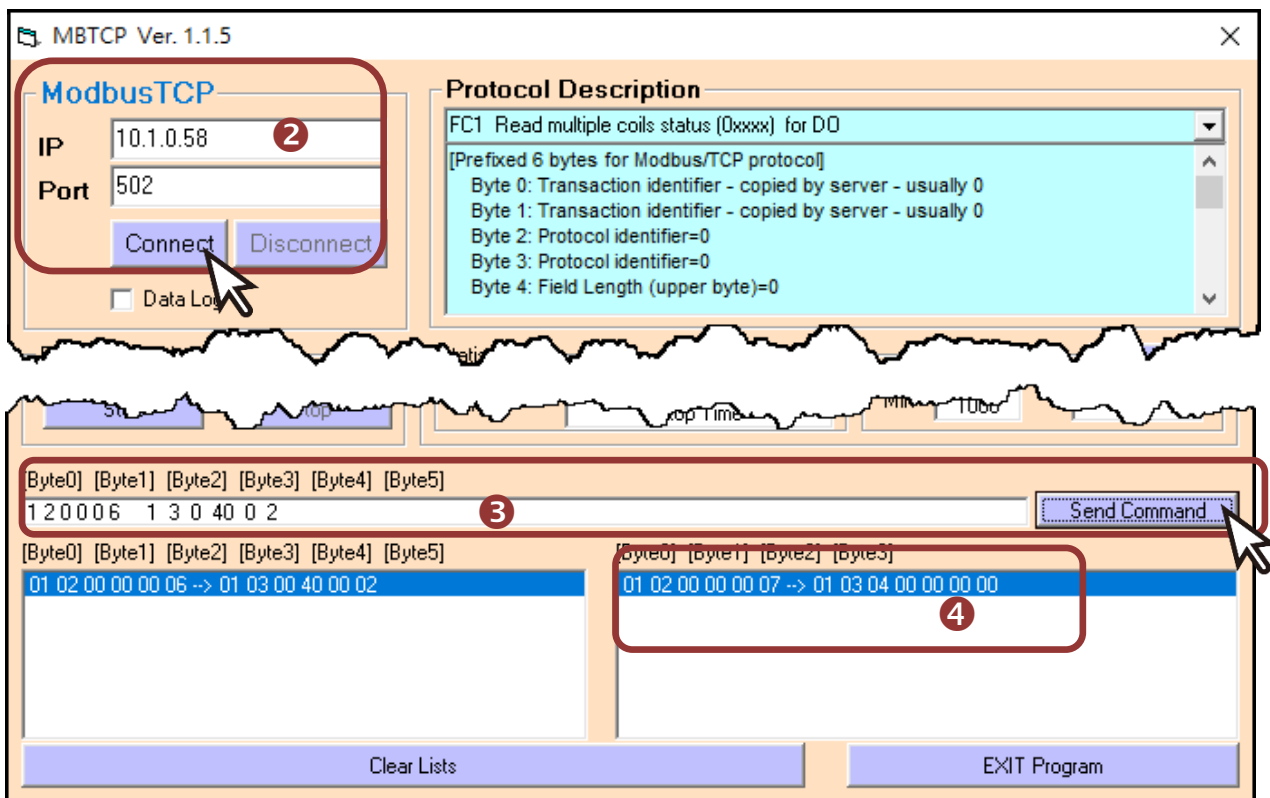
7 Self-Test

- 1) In the eSearch Utility, select the “**Modbus TCP Master**” item from the “**Tools**” menu to open the Modbus TCP Master Utility.



- 2) In the Modbus TCP Modbus Utility, enter the IP address of tGW-700-UL and click “**Connect**” to connect the tGW-700-UL.
- 3) Refer to “**Protocol Description**” section and type the Modbus command in the “Command” field then click “**Send command**”.
- 4) If the response data is correct, it means the test is success.

! Note: The Modbus command settings depend on your Modbus device.





Safety Instructions Consigns

To prevent possible electrical shock, fire, or personal injury and for safe operation of the product:



1. Power Supply

- Use only with the voltage and frequency specified on the product label.



2. Important Notes on Operating Environment

- Disconnect the power and network cables during thunderstorms to prevent damage.
- Do not use the product around explosive gas, vapor, or in damp or wet environments.



3. Ventilation and Cooling

- Do not block ventilation openings; ensure adequate space around the device for heat dissipation.



4. Avoid Liquid Contact

- This product is not waterproof; keep it away from liquids and humid environments.



5. Maintenance and Service

- Do not attempt to disassemble or repair the device.
- Do not use the product if it is damaged or operates incorrectly. Contact service centers.



6. Warranty Limitation

- Damages resulting from failure to follow safety instructions are not covered under warranty.
- This product is covered by a limited warranty according to the ICP DAS official warranty policy.

Contact Information

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