tGW-700

Tiny Modbus/TCP to RTU/ASCII Gateway

Quick Start

What’s in the box?

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

- tGW-700 Module x 1
- Quick Start x 1 (This Document)
- CA-002 Cable x 1

Model: tGW-700 Series
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 and your PC to the same sub network or the same Ethernet switch.

3) Supply power (PoE or +12~+48 VDC) to the tGW-700.
2 Installing Software on Your PC

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


3 Wiring Notes

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

☑️: Here, the RS-232 and RS-485 wiring is used as an example.

<table>
<thead>
<tr>
<th>☑️ RS-232 Wiring</th>
<th>☐ RS-422 Wiring</th>
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<tbody>
<tr>
<td><strong>tGW-700</strong></td>
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<tr>
<td><strong>RS-232 Modbus Device</strong></td>
<td><strong>RS-422 Modbus Device</strong></td>
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<tr>
<td>RxD</td>
<td>TxD+</td>
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<tr>
<td>TxD</td>
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<td>GND</td>
<td>RxD+</td>
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<tr>
<td>RTS</td>
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<td>CTS</td>
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<table>
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<tr>
<th>☑️ RS-485 Wiring</th>
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<td><strong>RS-485 Modbus Device</strong></td>
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<td>GND</td>
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</table>
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 and supply power method 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.
3) Double-click the name of tGW-700 to open the “Configure Server (UDP)” dialog box.

Factory Default Settings of tGW-700:

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>192.168.255.1</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>255.255.0.0</td>
</tr>
<tr>
<td>Gateway</td>
<td>192.168.0.1</td>
</tr>
</tbody>
</table>

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 will use the new settings 2 seconds later.
5) Wait 2 seconds and click “Search Servers” button again to ensure the tGW-700 is working well with new configuration.

6) Click the name of tGW-700 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 in the address bar of the browser.)

6 Configuring the Serial Port

Note that if you intend to use Internet Explorer, ensure that the cache function is disabled in order to prevent browser access errors. Please disable your Internet Explorer cache as follow: (If you are not using IE browser, please skip this step.)

Step 1: Click “Tools” >> “Internet Options…” in the menu items.

Step 2: Click “General” tab and click the “Settings…” button in Temporary Internet files frame.

Step 3: Click “Every visit to the page” and click the “OK” in Settings box and Internet Options box.

For more detail, refer to “FAQ: How to avoid a browser access error that causes a blank page to be displayed when using Internet Explorer”
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 Baud Rate, Data Format and Modbus protocol settings depends on your Modbus device.

4) Click “Submit” to save your settings.
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 and click “Connect” to connect the tGW-700.

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 depends on your Modbus device.