



tGW-718i-D Quick Start

v1.0, Aug. 2018

What's in the box?

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



tGW-718i-D x 1



Quick Start x 1
(This Document)



CA-002 Cable x1

Related Information

- tGW Series Product Page:
http://www.icpdas.com/root/product/solutions/industrial_communication/pds/tgw-700.html
- Documentation & Firmware:
<http://ftp.icpdas.com/pub/cd/tinymodules/napdos/tgw-700/>
- NS-205/NS-205PSE/M-7000/DN-09-2 Product Page (optional):
http://www.icpdas.com/root/product/solutions/industrial_ethernet_switch/ns-205.html
http://www.icpdas.com/root/product/solutions/industrial_ethernet_switch/ns-105pse.html
http://www.icpdas.com/root/product/solutions/remote_io/rs-485/i-7000_m-7000/i-7000_m-7000_selection.html
http://www.icpdas.com/root/product/solutions/pc_based_io_board/daughter_boards/dn-09-2.html

1

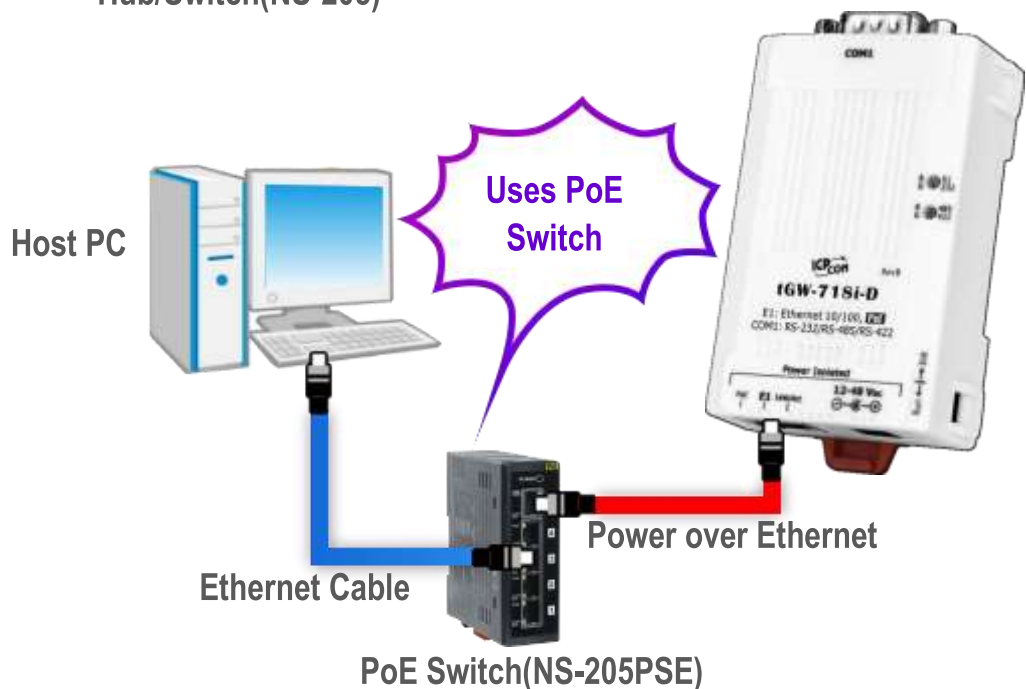
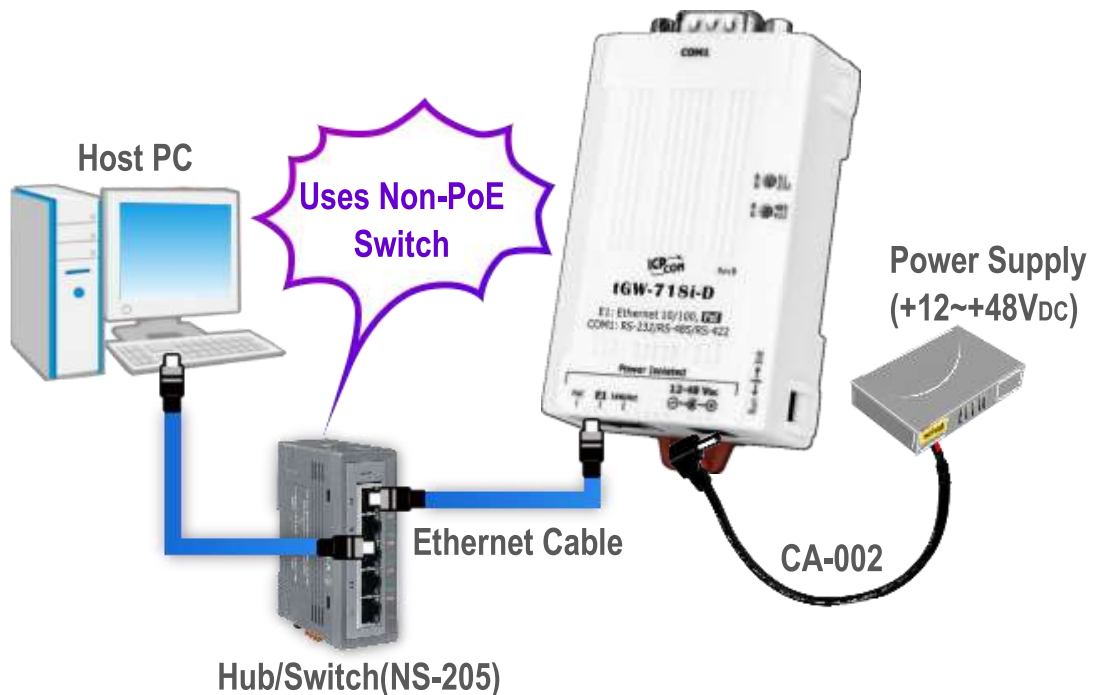
Connecting the Power and Host PC

- 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-718i-D and your PC to the same sub network or the same Ethernet switch.

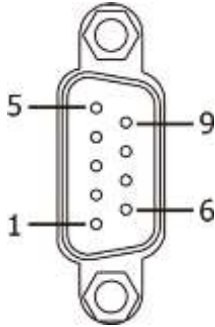
- 3) Supply power (PoE or +12~+48 Vdc) to the tGW-718i-D.



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Pin Assignments & Wiring Notes

➤ Pin Assignments of tGW-718i-D:



Terminal No.	RS-232	RS-422	RS-485
PIN9	-	-	-
PIN8	CTS	-	-
PIN7	RTS	-	-
PIN6	-	-	-
PIN5	GND	GND	GND
PIN4	-	RxD-	-
PIN3	TxD	RxD+	-
PIN2	RxD	TxD+	Data+
PIN1	-	TxD-	Data-

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

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

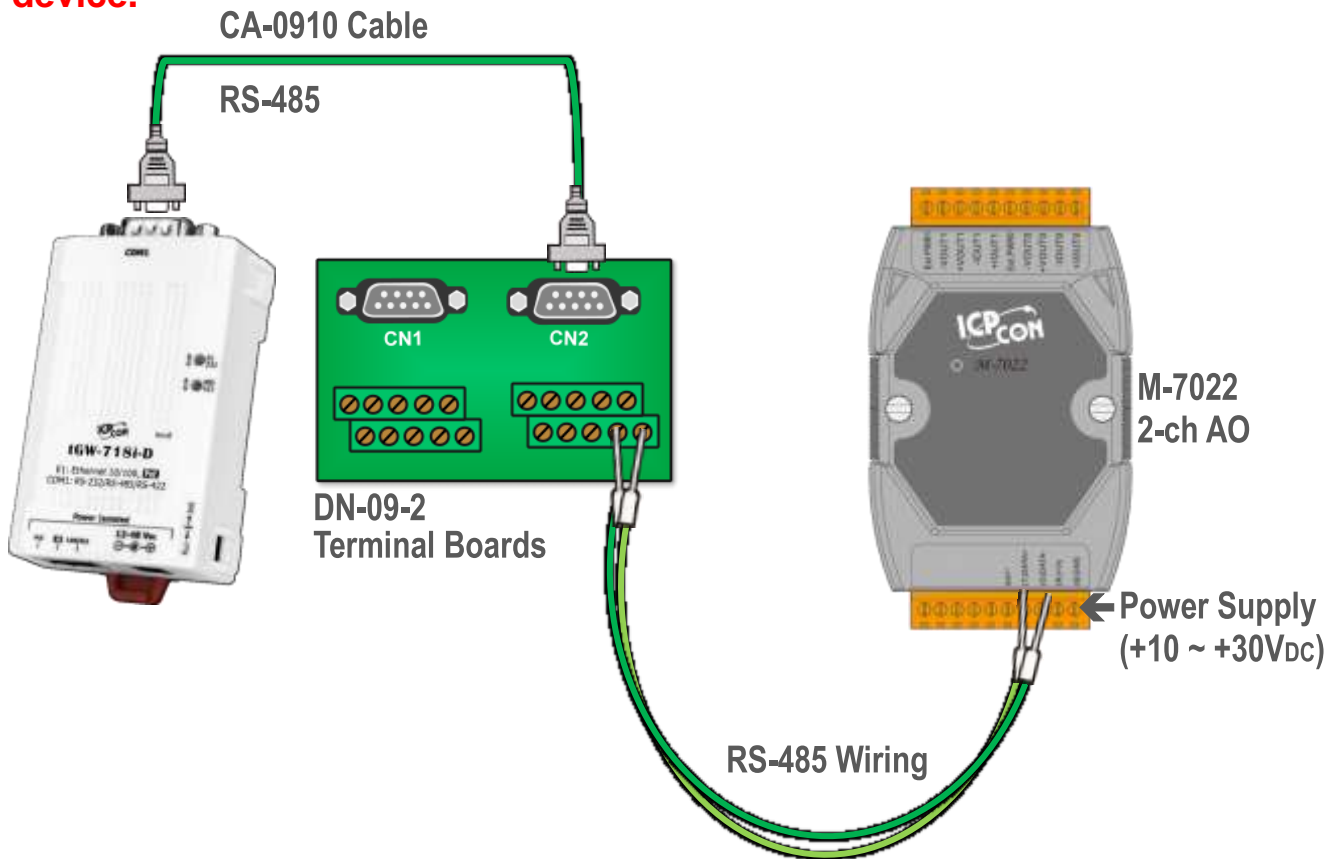
<input type="checkbox"/> RS-232 Wiring (Default Settings)	<input type="checkbox"/> RS-422 Wiring																														
<p>tGW-718i-D RS-232 Modbus Device</p> <table border="1"> <tr> <td>RxD</td> <td>←</td> <td>TxD</td> </tr> <tr> <td>TxD</td> <td>→</td> <td>RxD</td> </tr> <tr> <td>GND</td> <td>—</td> <td>GND</td> </tr> <tr> <td>RTS</td> <td>→</td> <td>CTS</td> </tr> <tr> <td>CTS</td> <td>←</td> <td>RTS</td> </tr> </table>	RxD	←	TxD	TxD	→	RxD	GND	—	GND	RTS	→	CTS	CTS	←	RTS	<p>tGW-718i-D RS-422 Modbus Device</p> <table border="1"> <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>	TxD+	→	RxD+	TxD-	→	RxD-	RxD+	←	TxD+	RxD-	←	TxD-	GND	—	GND
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TxD	→	RxD																													
GND	—	GND																													
RTS	→	CTS																													
CTS	←	RTS																													
TxD+	→	RxD+																													
TxD-	→	RxD-																													
RxD+	←	TxD+																													
RxD-	←	TxD-																													
GND	—	GND																													
<p><input checked="" type="checkbox"/> RS-485 Wiring</p> <p>tGW-718i-D RS-485 Modbus Device</p> <table border="1"> <tr> <td>Data+</td> <td>↔</td> <td>Data+</td> </tr> <tr> <td>Data-</td> <td>↔</td> <td>Data-</td> </tr> <tr> <td>GND</td> <td>—</td> <td>GND</td> </tr> </table>	Data+	↔	Data+	Data-	↔	Data-	GND	—	GND	<p>⚠ Note: The default serial interface of tGW-718i-D is RS-232. You can change the serial interface depending on your Modbus device type through the web server (see Chapter 6, P7).</p>																					
Data+	↔	Data+																													
Data-	↔	Data-																													
GND	—	GND																													

3

Connecting the Modbus Devices

- 1) Connect the Modbus device (e.g., M-7022, optional) to the COM1 on tGW-718i-D.
- 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.



4

Installing Software on Your PC

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



eSearch_y1.1.19
_setup.exe

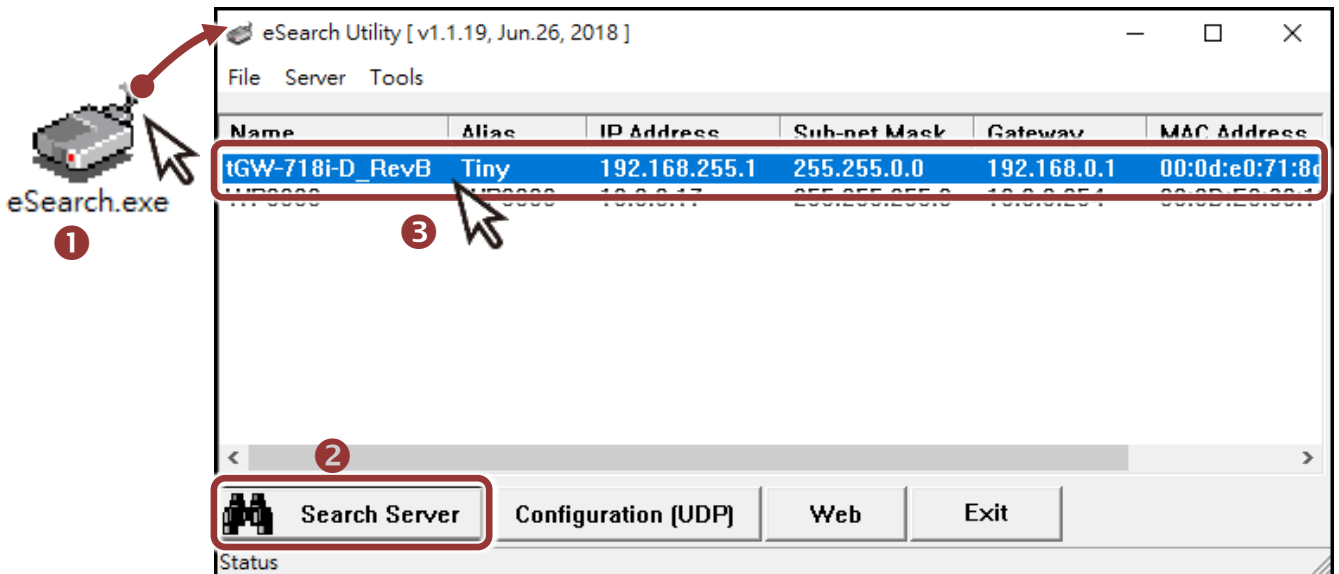


<http://ftp.icpdas.com/pub/cd/tinymodules/napdos/software/eseach/>

5

Configuring Network Settings

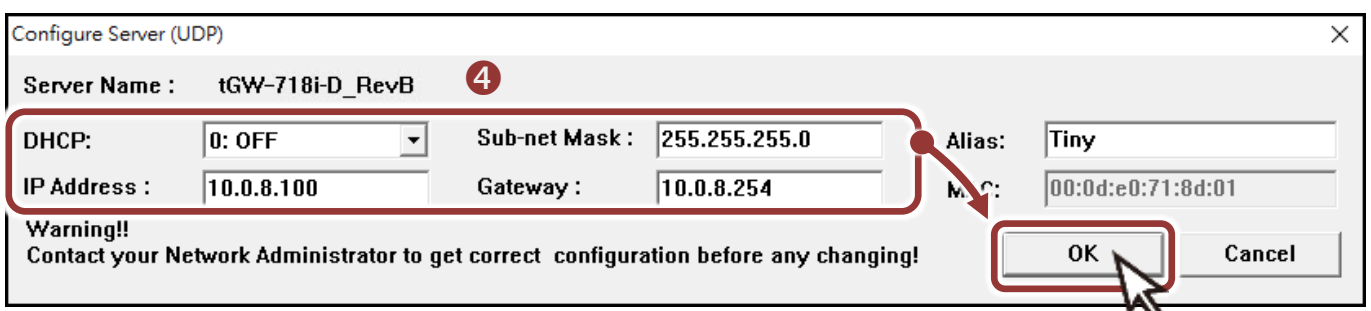
- 1) Double click the eSearch Utility shortcut on the desktop.
- 2) Click the “**Search Servers**” to search your tGW-718i-D.
- 3) Double click the **name of tGW-718i-D** to open the “Configure Server (UDP)” dialog box.



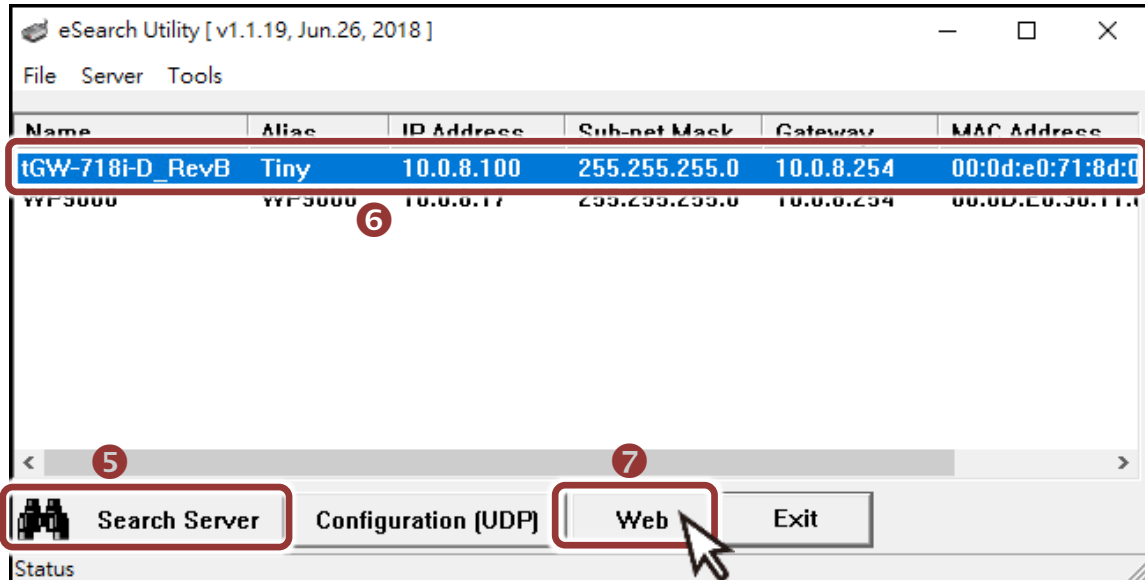
Factory Default Settings of tGW-718i-D:

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-718i-D will use the new settings 2 seconds later.**



- 5) Wait 2 seconds and click “**Search Servers**” button again to ensure the tGW-718i-D is working well with new configuration.
- 6) Click the name of tGW-718i-D to select it.
- 7) Click the “**Web**” button to log in to the web configuration pages.
(Or enter the URL address of the tGW-718i-D 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.)**

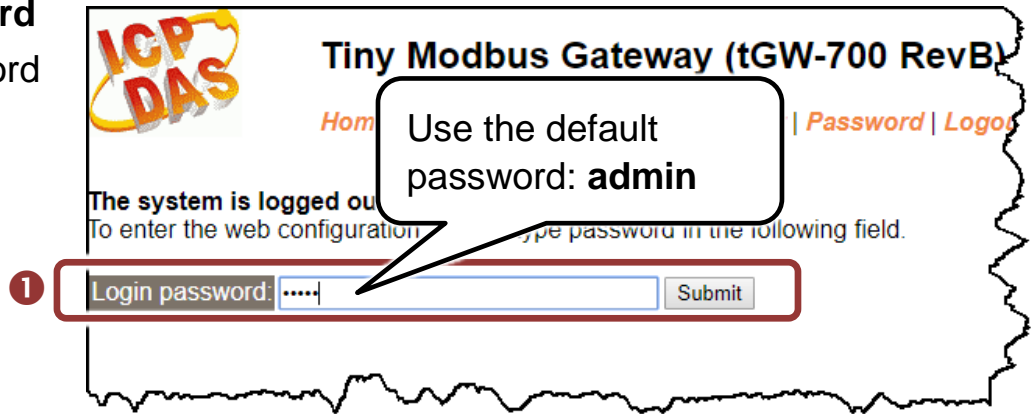
Step1: Click “**Tools**” >> “**Internet Options...**” in the menu items.

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

Step3: 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”.



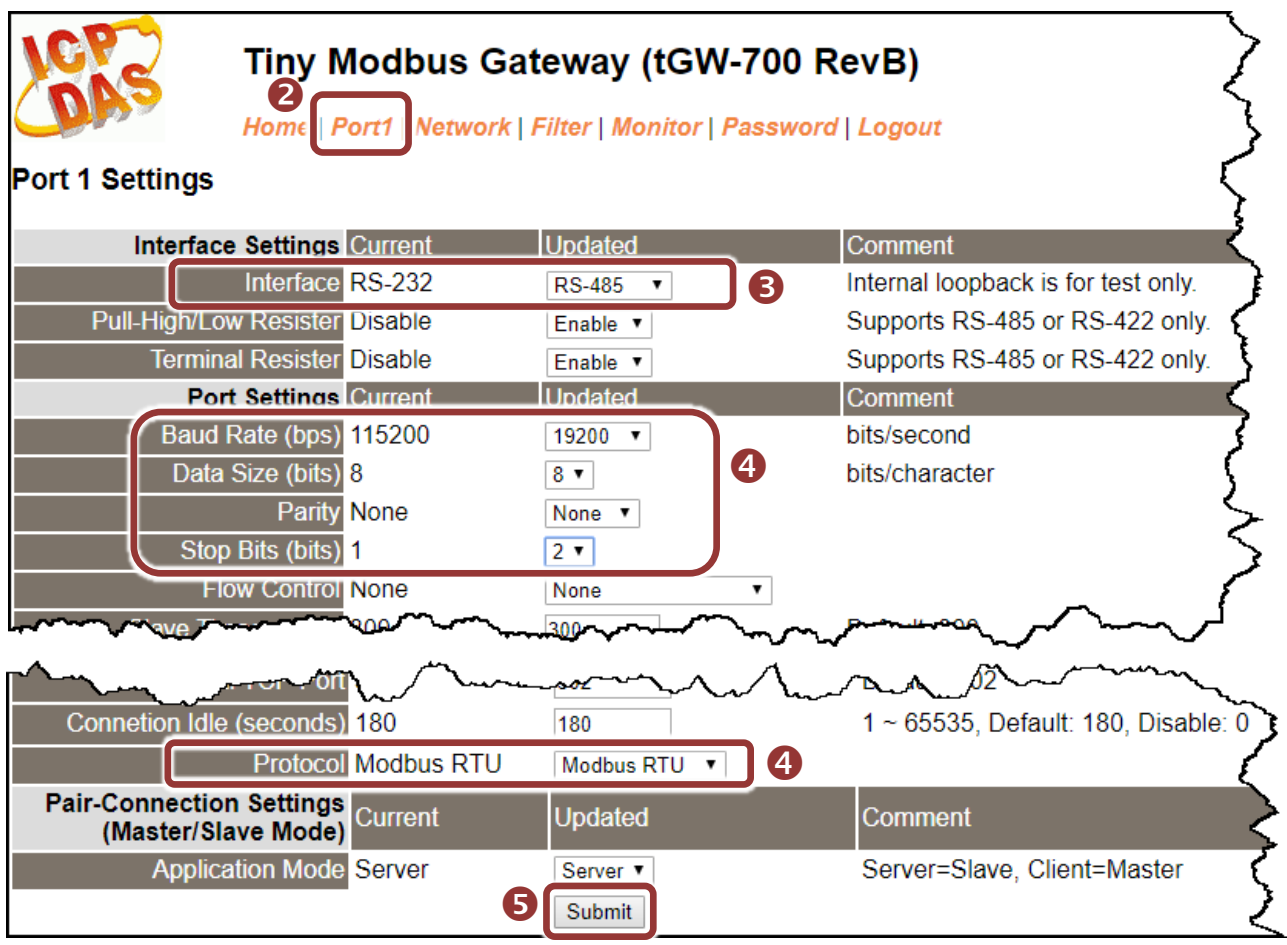
- 2) Click the “Port1” tab to display the “Port1 Settings” page.
- 3) Select the “RS-485” from the “Interface” drop down options.

⚠ Note: The interface settings depends on wiring method of your Modbus device (see Chapter 3, P4).

- 4) Select the appropriate Baud Rate, Data Format and Modbus Protocol (e.g., 19200, 8N2 and Modbus RTU) from the relevant drop down options.

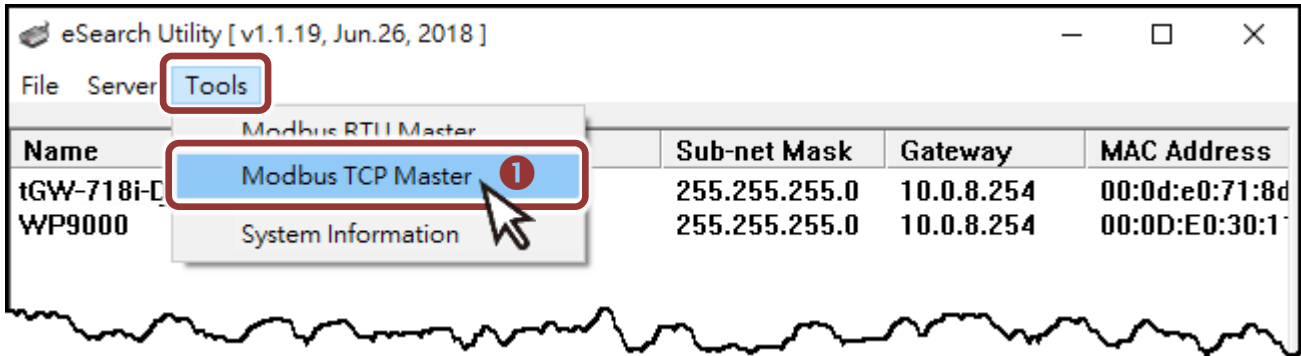
⚠ Note: The Baud Rate, Data Format and Modbus protocol settings depends on your Modbus device.

- 5) 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-718i-D and click “**Connect**” to connect the tGW-718i-D.
- 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.

