



# tDS-718i-D Quick Start

v1.0, Aug. 2018

## What's in the box?

The package includes the following items:



tDS-718i-D x 1



Quick Start x1  
(This Document)



CA-002 Cable x1

## Related Information

- tDS Series Product Page:  
[http://www.icpdas.com/root/product/solutions/industrial\\_communication/pds/tds-700.html](http://www.icpdas.com/root/product/solutions/industrial_communication/pds/tds-700.html)
- Documentation & Firmware:  
<http://ftp.icpdas.com/pub/cd/tinymodules/napdos/tds-700/>  
<http://ftp.icpdas.com/pub/cd/tinymodules/napdos/software/>
- NS-205/NS-205PSE 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-205.html)  
[http://www.icpdas.com/root/product/solutions/industrial\\_ethernet\\_switch/ns-105pse.html](http://www.icpdas.com/root/product/solutions/industrial_ethernet_switch/ns-105pse.html)  
[http://www.icpdas.com/root/product/solutions/accessories/cable/cable\\_selection.html](http://www.icpdas.com/root/product/solutions/accessories/cable/cable_selection.html)  
[http://www.icpdas.com/root/product/solutions/pc\\_based\\_io\\_board/daughter\\_boards/dn-09-2.html](http://www.icpdas.com/root/product/solutions/pc_based_io_board/daughter_boards/dn-09-2.html)

# 1

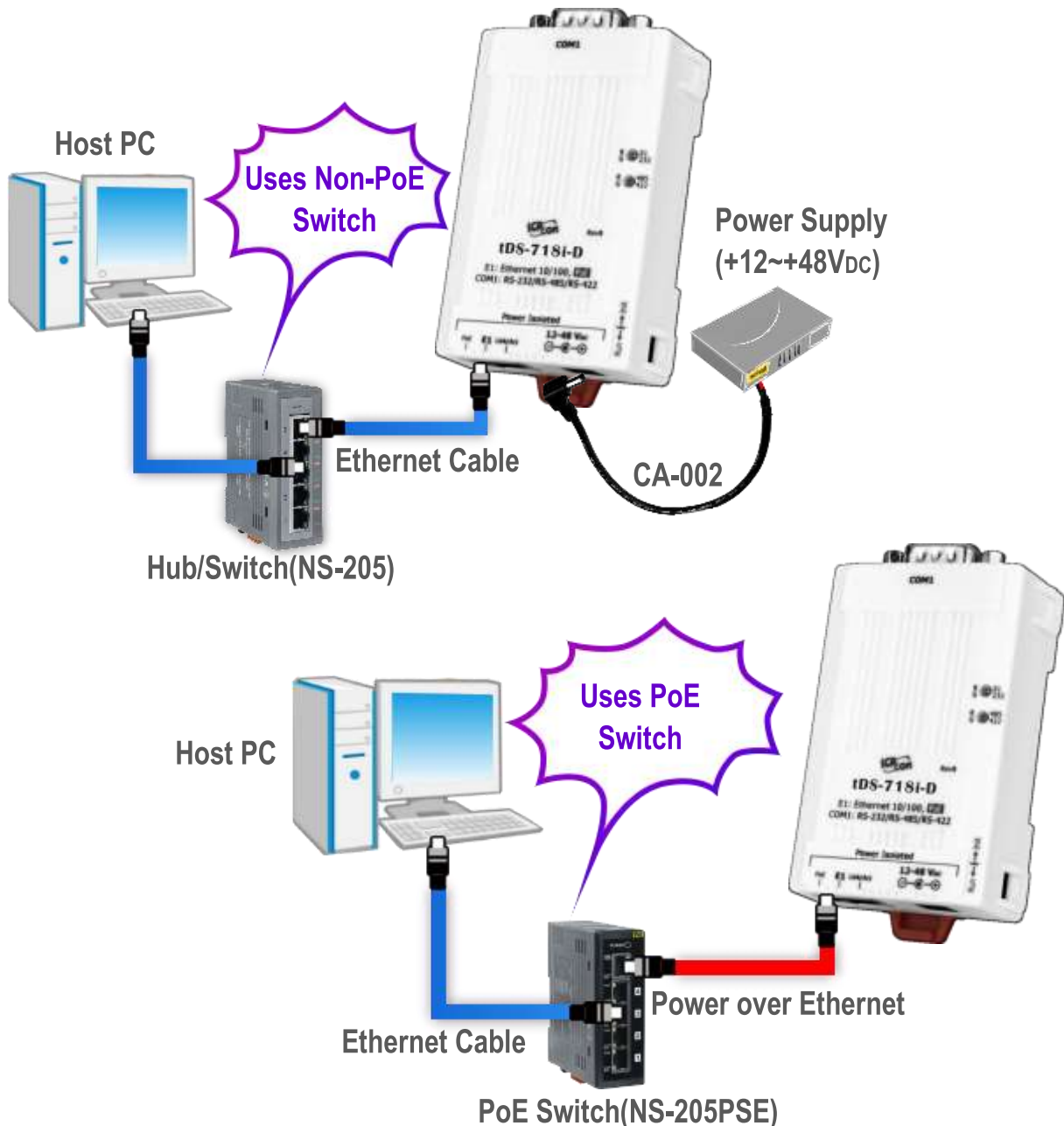
## Connecting the Power and Host PC

### 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 4** may not work. (Please contact with your system Administrator)

### 2) Connect both the tDS-718i-D and your PC to the same sub network or the same Ethernet switch.

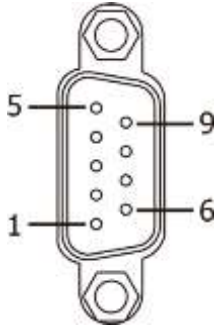
### 3) Supply power (PoE or +12~+48 VDC) to the tDS-718i-D.



# 2

## Pin Assignments & Wiring Notes

### ➤ Pin Assignments of tDS-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-232 wiring is used as an example.

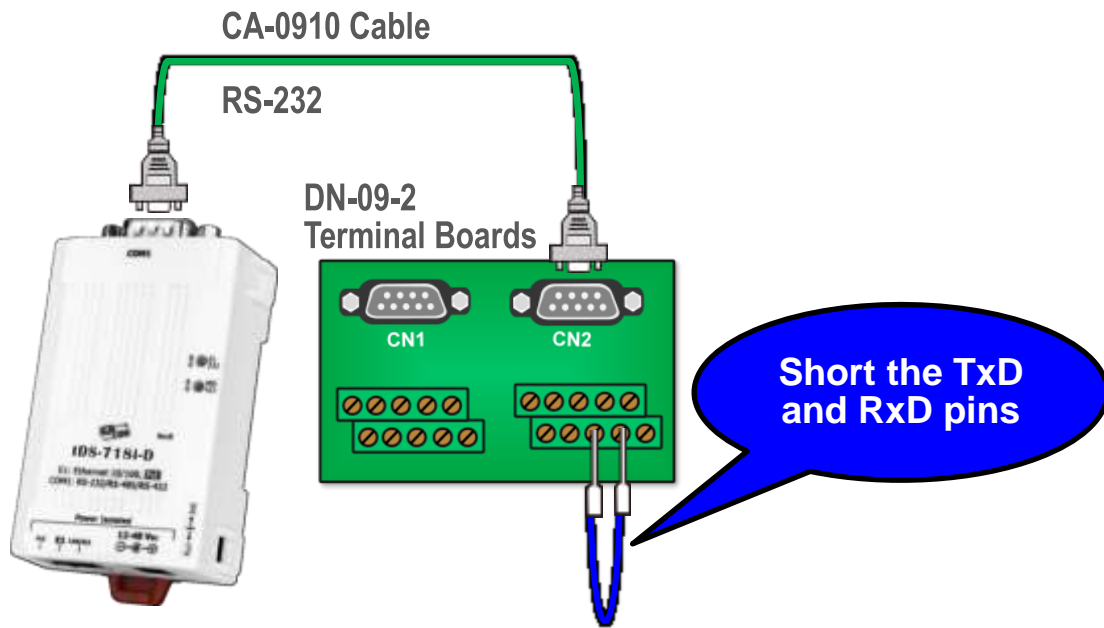
| <input checked="" type="checkbox"/> RS-232 Wiring (Default Settings)  | <input type="checkbox"/> RS-422 Wiring |               |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
|---|--|---------------|---------------|-------|---|-------|-------|---|-------|-----|---|-----|---|---|-----|-----|---|-----|---|------------|--|---------------|------|---|------|------|---|------|------|---|------|------|---|------|-----|---|-----|
| <table border="1"> <thead> <tr> <th>tDS-718i-D</th> <th></th> <th>RS-232 Device</th> </tr> </thead> <tbody> <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> </tbody> </table> | tDS-718i-D                             |               | RS-232 Device | RxD   | ← | TxD   | TxD   | → | RxD   | GND | — | GND | RTS   | → | CTS | CTS | ← | RTS | <table border="1"> <thead> <tr> <th>tDS-718i-D</th> <th></th> <th>RS-422 Device</th> </tr> </thead> <tbody> <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> </tbody> </table> | tDS-718i-D |  | RS-422 Device | TxD+ | → | RxD+ | TxD- | → | RxD- | RxD+ | ← | TxD+ | RxD- | ← | TxD- | GND | — | GND |
| tDS-718i-D  |  | RS-232 Device |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| RxD   | ←                                      | TxD           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| TxD   | →                                      | RxD           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| GND   | —                                      | GND           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| RTS   | →                                      | CTS           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| CTS   | ←                                      | RTS           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| tDS-718i-D  |  | RS-422 Device |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| TxD+  | →                                      | RxD+          |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| TxD-  | →                                      | RxD-          |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| RxD+  | ←                                      | TxD+          |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| RxD-  | ←                                      | TxD-          |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| GND   | —                                      | GND           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| <table border="1"> <thead> <tr> <th>tDS-718i-D</th> <th></th> <th>RS-485 Device</th> </tr> </thead> <tbody> <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> </tbody> </table>   | tDS-718i-D                             |               | RS-485 Device | Data+ | ↔ | Data+ | Data- | ↔ | Data- | GND | — | GND | <p><b>⚠ Note: The default serial interface of tDS-718i-D is RS-232. You can change the serial interface depending on your device type through the web server (see Chapter6, P7)</b></p> |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| tDS-718i-D  |  | RS-485 Device |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| Data+   | ↔                                      | Data+         |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| Data-   | ↔                                      | Data-         |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |
| GND   | —                                      | GND           |               |       |   |       |       |   |       |     |   |     |   |   |     |     |   |     |   |            |  |               |      |   |      |      |   |      |      |   |      |      |   |      |     |   |     |

# 3 Self-Test Wiring

## Prepare for device:

- A CA-0910 Cable (Optional)
- A DN-09-2 Terminal Board (Optional)

1) Short the RxD and TxD pins of the tDS-718i-D for self-test.



# 4 Configuring Network Settings

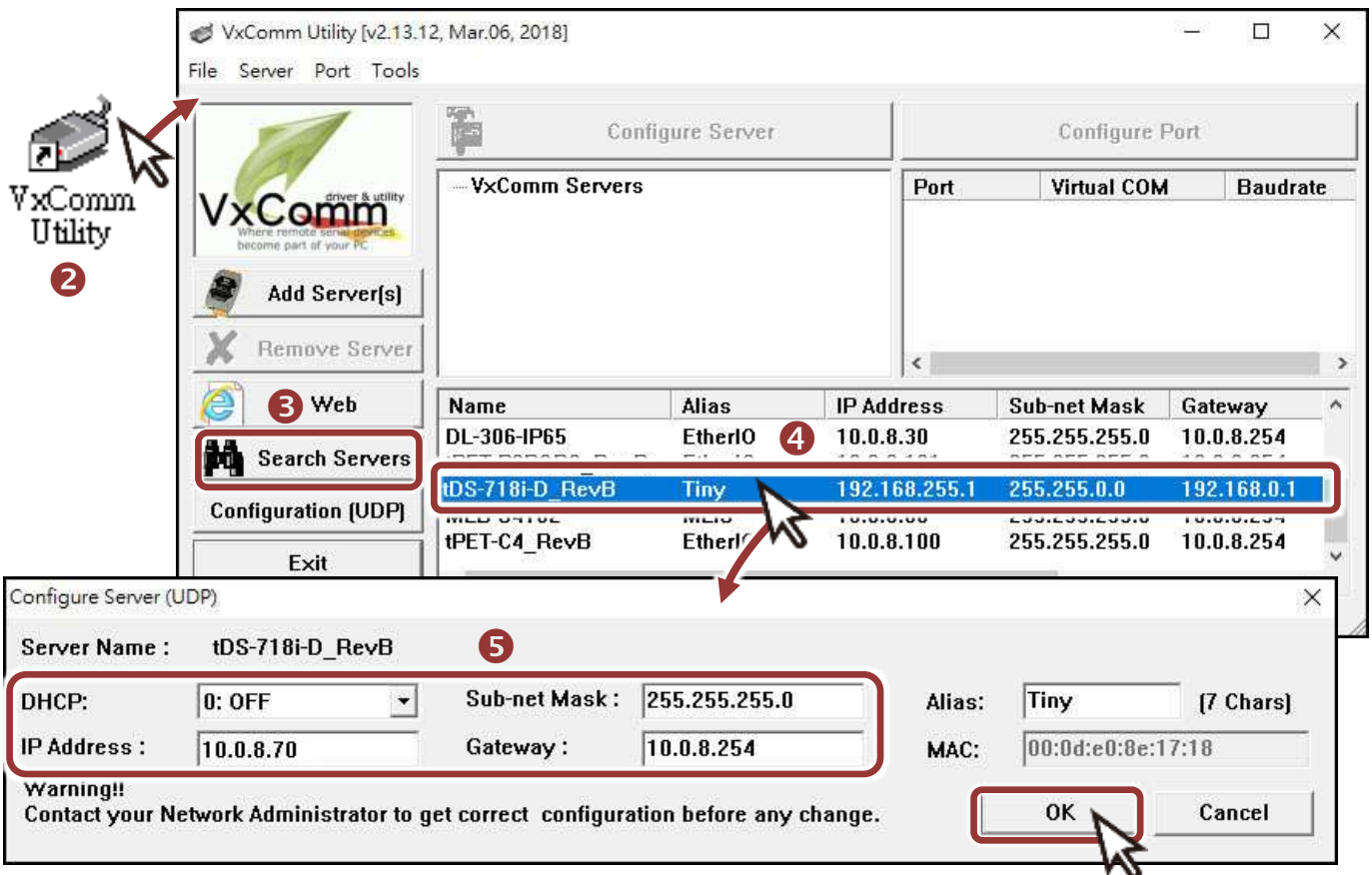


1) Install VxComm Utility, which can be obtained from the web site:

VxCommW7\_v2.  
13.12\_setup.exe

 [http://ftp.icpdas.com/pub/cd/tinymodules/napdos/software/vxcomm\\_driver/](http://ftp.icpdas.com/pub/cd/tinymodules/napdos/software/vxcomm_driver/)

- 2) Double-click the VxComm Utility shortcut on the desktop.
- 3) Click the “**Search Servers**” to search your tDS-718i-D.
- 4) **Double-click the name of tDS-718i-D** to open the “Configure Server (UDP)” dialog box.
- 5) Contact your Network Administrator to obtain a correct network configuration (such as **IP/Mask/Gateway**). **Enter the network settings** and click “**OK**”. **⚠ Note: The tDS-718i-D will use the new settings 2 seconds later.**

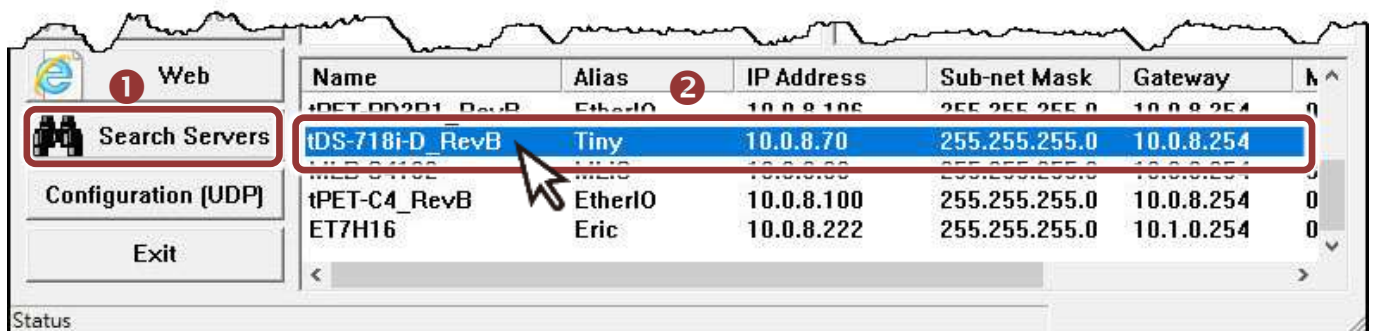


**Factory Default Settings of tDS-718i-D:**

| IP Address    | Subnet Mask | Gateway     |
|---------------|-------------|-------------|
| 192.168.255.1 | 255.255.0.0 | 192.168.0.1 |

# 5 Configuring Virtual COM Ports

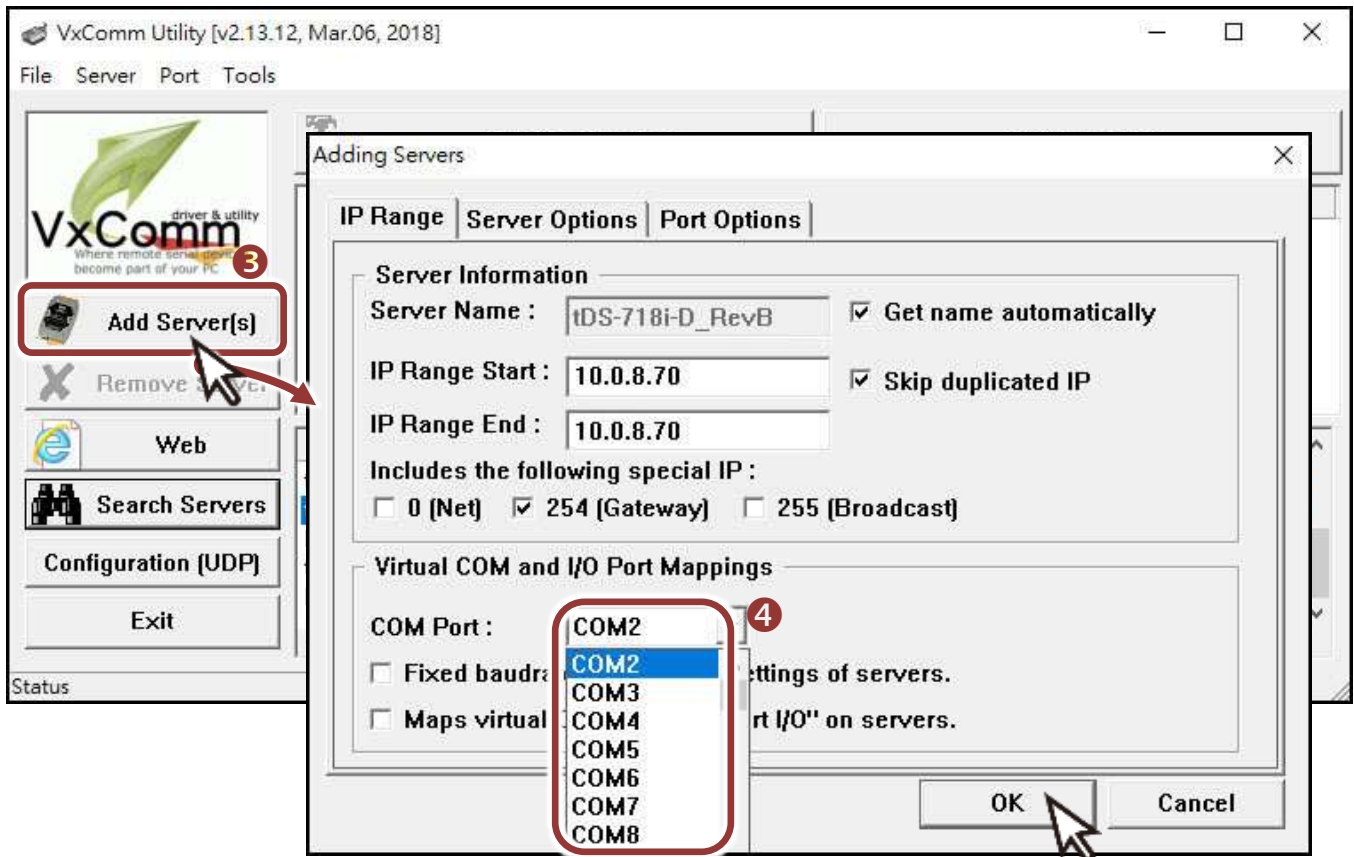
- 1) Wait 2 seconds and click “**Search Servers**” button again to ensure the tDS-718i-D is working well with new configuration.
- 2) Click the name of tDS-718i-D to select it.



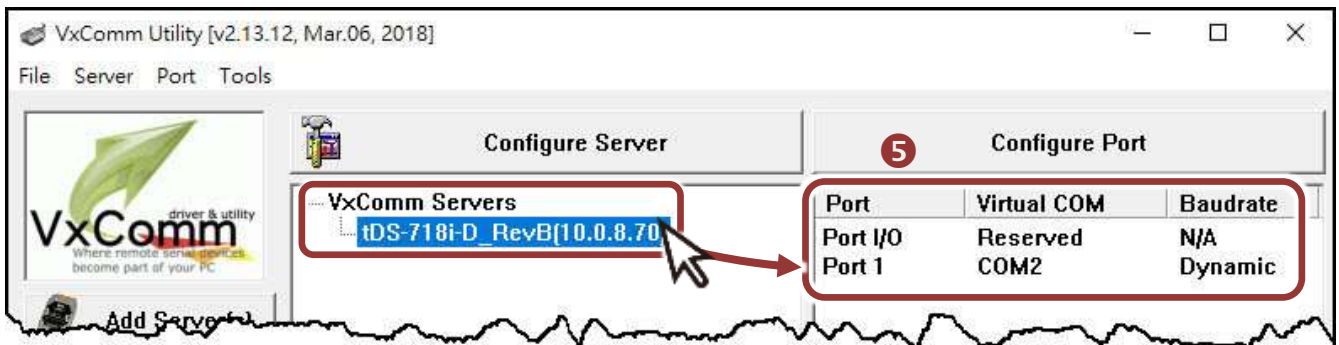


3) Click the “Add Server[S]” button.

4) Assign a COM Port number and click “OK” to save your settings.

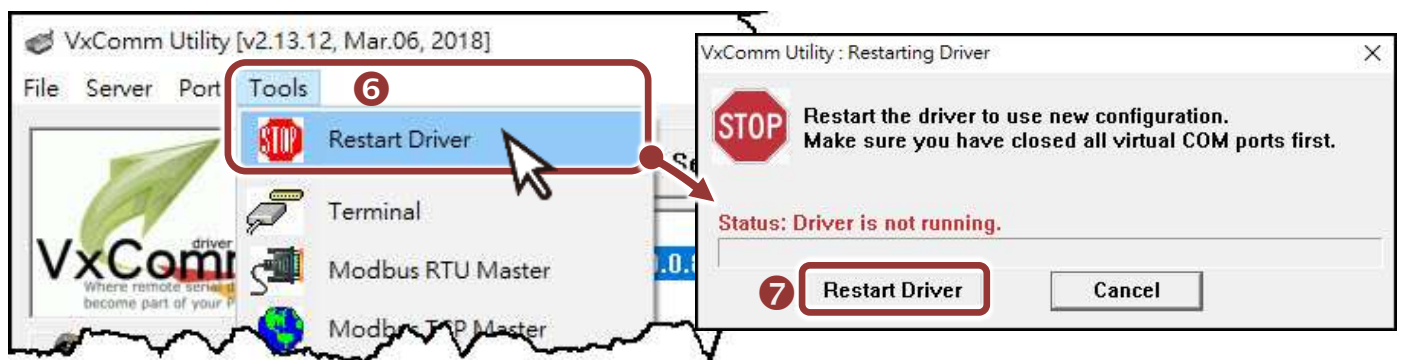


5) Click on tDS-718i-D name and check the virtual COM Port mappings on the PC.



6) Click the “Restart Driver” item in the “Tools” menu to display the “VxComm Utility: Restarting Driver” dialog box.

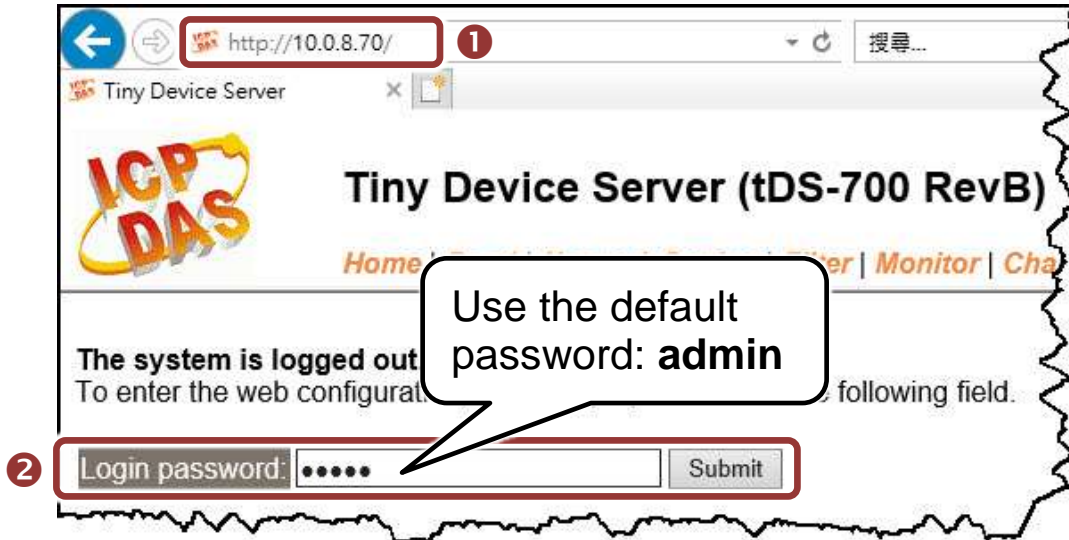
7) Click the “Restart Driver” button.



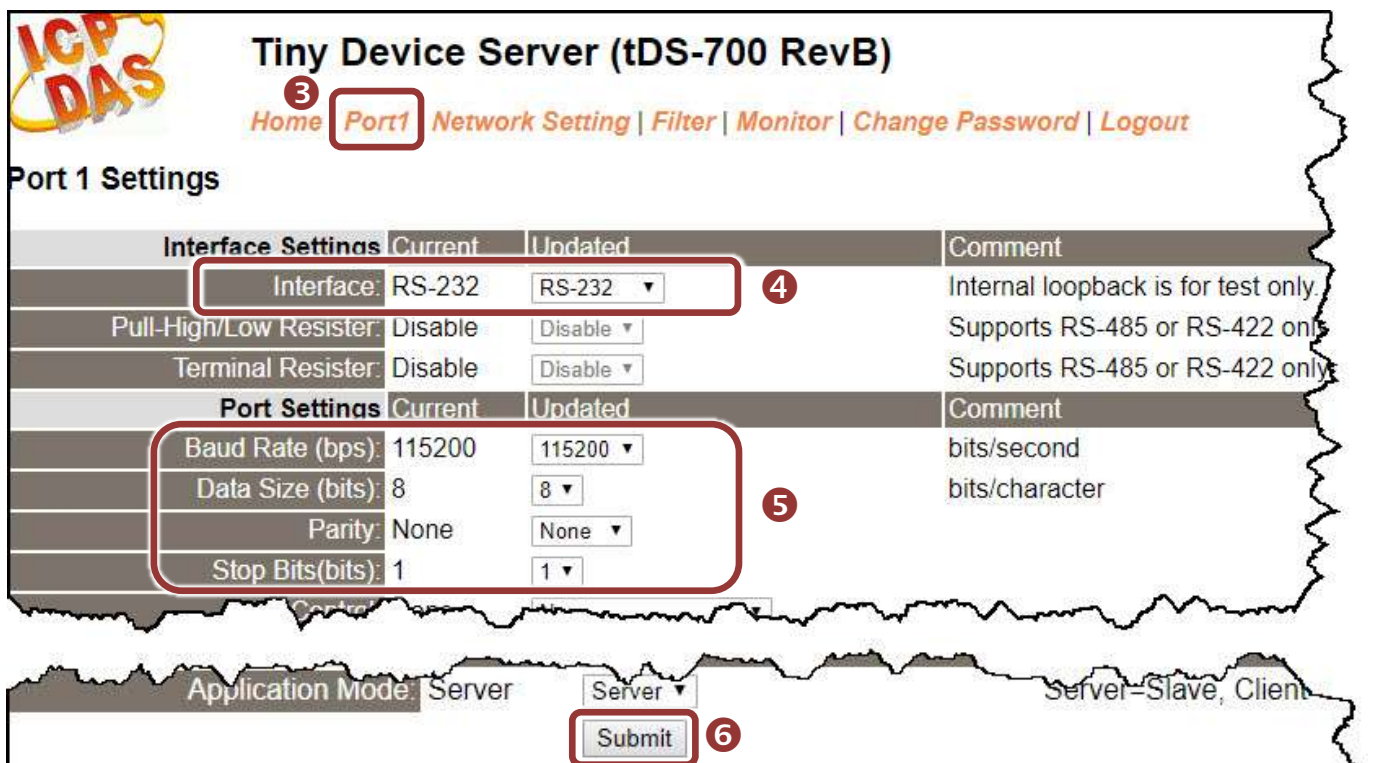
# 6

## Configuring the Serial Ports

- 1) Enter the **URL address of the tDS-718i-D** in the address bar of the browser.
- 2) Enter the **password** in the login password field and click **“Submit”**.

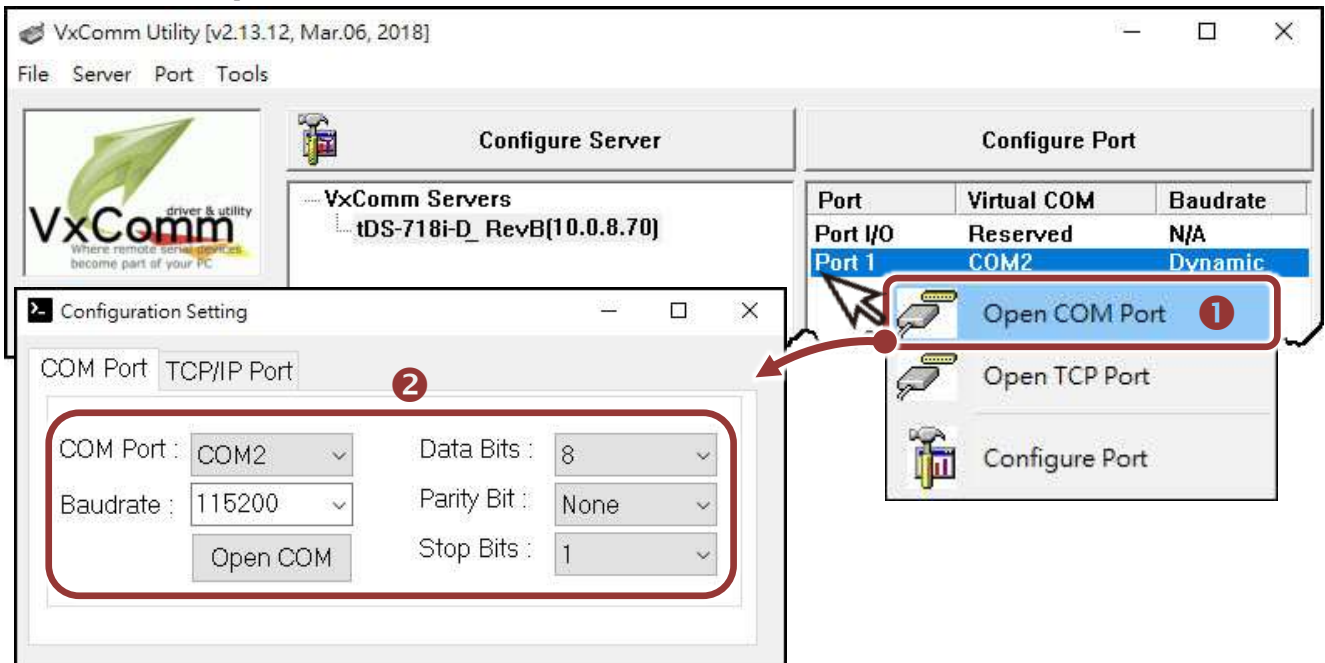


- 3) Click the **“Port1”** tab to display the **“Port1 Settings”** page.
- 4) Select the **“RS-232”** from the **“Interface”** drop down options.
- ⚠ Note: The interface settings depends on wiring method of your device.**
- 5) Select the appropriate **Baud Rate** and **Data Format** from the relevant drop down options.
- ⚠ Note: The Baud Rate and Data Format settings depends on your device.**
- 6) Click **“Submit”** to save your settings.



# 7 Self-Test

- 1) Back to VxComm Utility, **Right click** Port1 and choose the “**Open COM Port**” item.
- 2) Check that the configuration of the COM Port is correct and then click the “**Open COM**” button.



- 3) Type a string (e.g., \$01M) in the “**Send**” field.
- 4) Click the “**Hex/Text**” option in the “**Display**” section.
- 5) Click the “**Send**” button to send the message.
- 6) If a response is received, it will be displayed in the received field.

