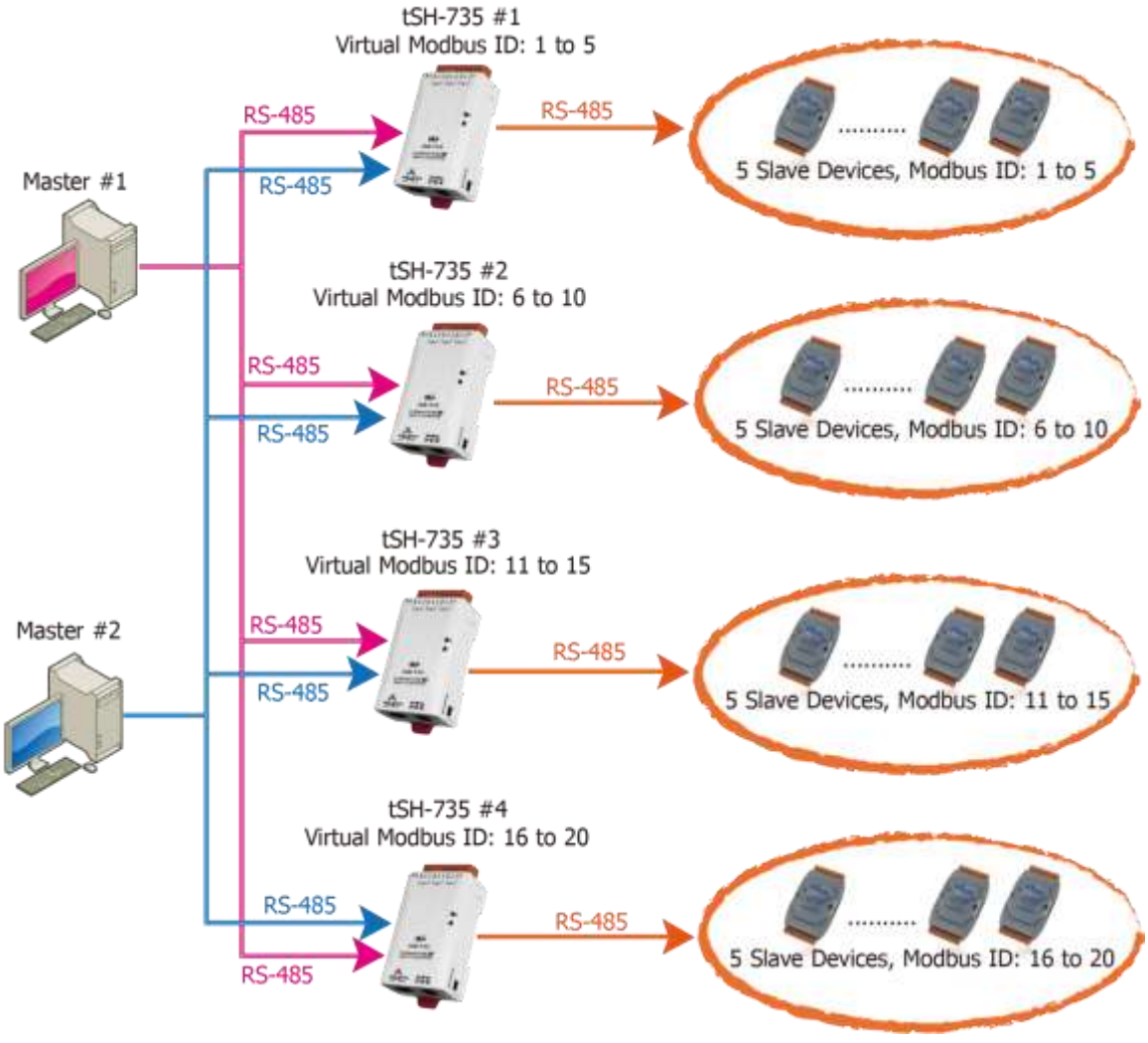
Classification	☑ tDS/tGW/tSH	☐ PETL/tET/tPET	☐ DS/PDS/PPDS	☐ tM-752N
	☐ I/O Card	☐ VXC Card	☐ TouchPAD/HMIWorks	☐ VxComm

Author	Tammy	Date	2018-07-09	No.	FAQ049

Q: How do I connect tSH-735 sharers with two masters?



As illustrated in the application diagram above, two monitoring computers (master devices) connected to Port1 and Port3 of four tSH-735 sharers, and multiple slave devices are connected to Port2 of four sharers. However, this means that the Modbus IDs are duplicated. To reduce the possibility of adverse interactions between the four sharers, we need to configure them so that they are composed of four individual **"Virtual Modbus ID"** ranges. This means that sharer #1 will process the requests addressed to Modbus ID range #1, sharer #2 will process requests addressed to Modbus ID range #2, sharer #3 will process requests addressed to Modbus ID range #3 and sharer #4 will process requests addressed to Modbus ID range #4.

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The following is a detailed description of the configuration process, together with recommended precautions that should be taken when establishing this form of configuration:

1. Ensure that you use a **DC power supply**. Using a PoE power supply may cause current loop problems in this application. Note, however, that isolated tSH-735i modules can be used with a PoE power supply in this example application.
2. Note that **raw data mode is not supported** in this example application.
3. The Masters Response timeout value should be set to twice the Response Timeout value of the sharer (tSH-735), refer to FAQ: How to set the Timeout value in tSH-700? for more details.

➢ Configure tSH-735 module #1:

Step 1: Before beginning, confirm that both the Ethernet connection and the tSH-735 module are functioning correctly. For detailed information regarding how to install, configure and operate your tSH-735 module, refer to the tSH-700 Quick Start Guide, which can be downloaded from:

Download the Quick Start Guide.

Step 2: Execute the eSearch Utility to search for any tSH-700 modules connected to the network, and then click the name of the tSH-735 module #1 to select it.

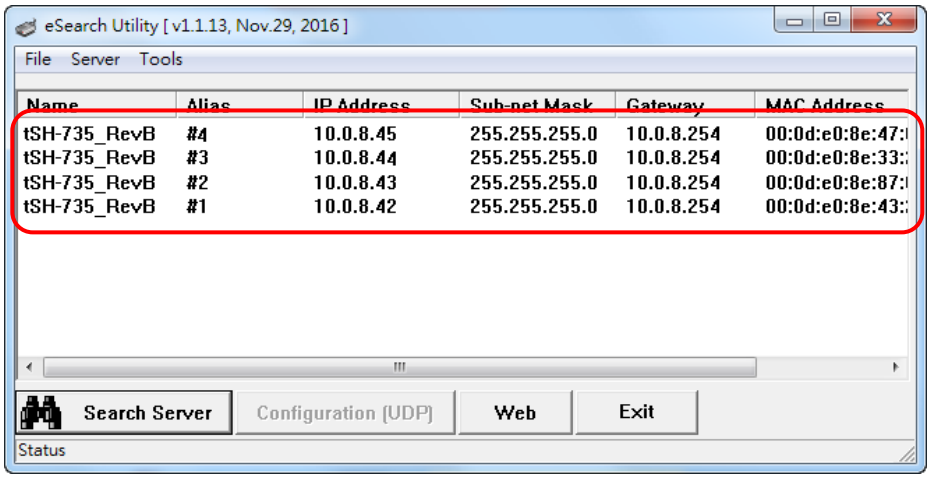


Figure 1-1

Step 3: Click the **"Web"** button to log in to the web configuration pages for tSH-735 module #1 (use the default password **"admin"**), or enter the URL of tSH-735 module #1 in the address bar of the browser.



Figure 1-2

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Step 4: Once you have successfully logged into the web configuration pages for tSH-735 module #1, click the **"Application Mode"** tab to display the **Application Mode Settings** page.

Step 5: On the **Application Mode Settings** page, check the **"Mode 2: Modbus Sharer"** option and then select the appropriate radio button for the COM Port (e.g., Port2) on tSH-735 module #1 that the slave devices are connected to from the **"Slave Device Connected on:"** options.

Step 6: Enter **"1 to 5"** in the relevant **Virtual Modbus ID** fields, and click the **"Submit"** button to save your settings.

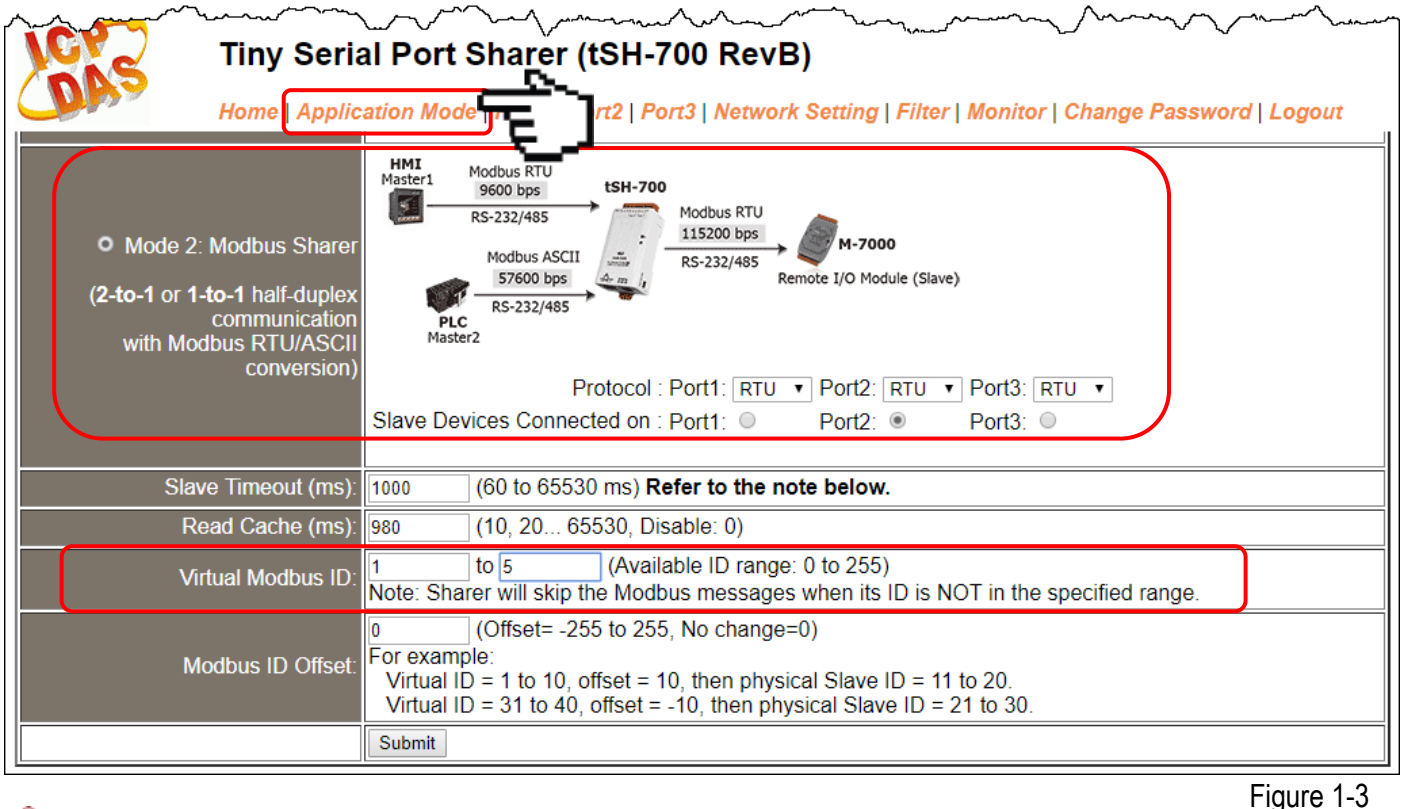


Figure 1-3

Note: Remember to check that the Baud Rate and data format settings for each serial port on the tSH-700 module are the same as those for your master and slave devices.

➢ Configure tSH-735 module #2:

Step 7: In the eSearch Utility, click the name of tSH-735 module #2 to select it, and then click the **"Web"** button to log in to the web configuration pages for tSH-735 module #2 (use the default password **"admin"**), or enter the URL of tSH-735 module #2 in the address bar of the browser.

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Step 8: Once you have successfully logged into the web configuration pages for tSH-735 module #2, click the **"Application Mode"** tab to display the **Application Mode Settings** page.

Step 9: On the **Application Mode Settings** page, check the **"Mode 2: Modbus Sharer"** option and select the appropriate radio button for the COM Port (e.g., Port2) on tSH-735 module #2 that the slave devices are connected to from the **"Slave Device Connected on:"** options.

Step 10: Enter **"6 to 10"** in the relevant **Virtual Modbus ID** fields, and click the **"Submit"** button to save your settings.

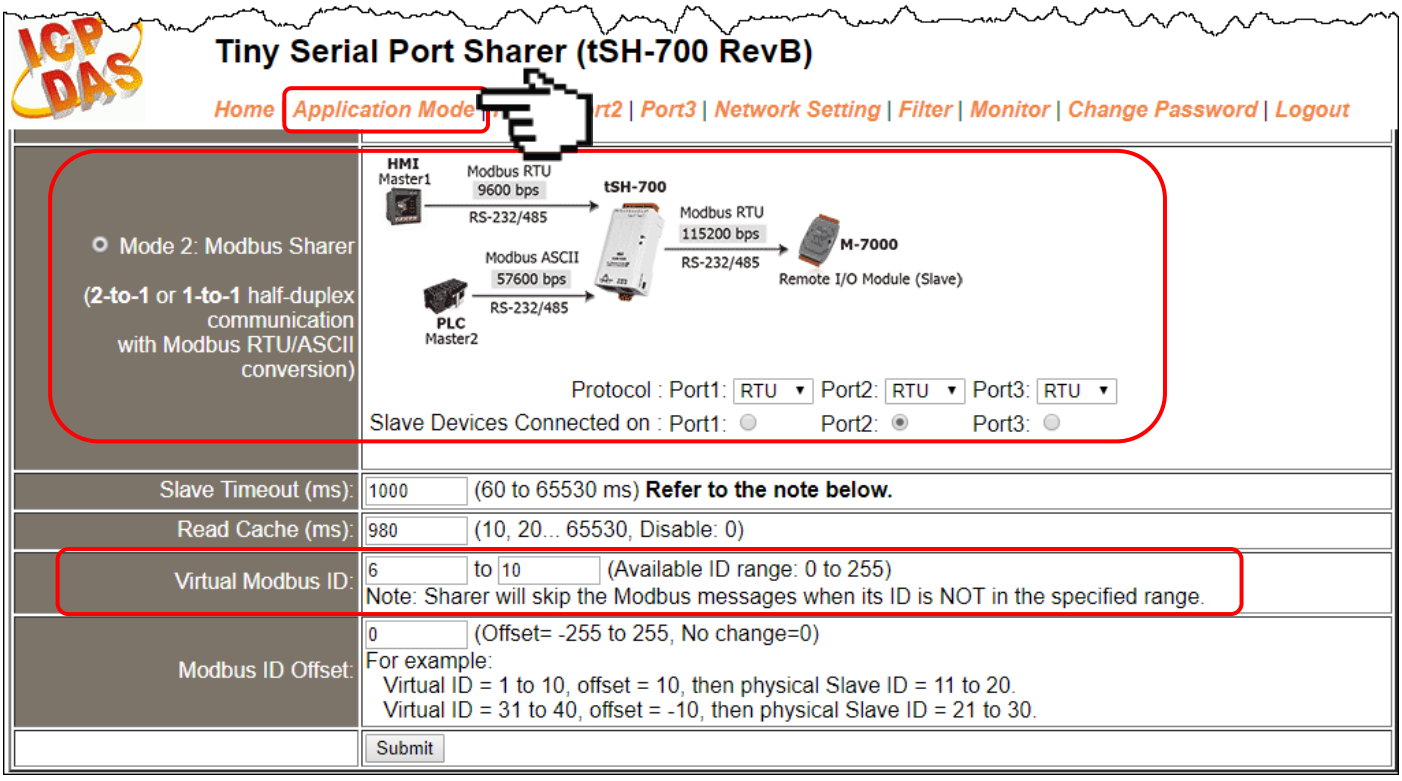


Figure 1-4

Note: Remember to check that the Baud Rate and data format settings for each serial port on the tSH-700 module are the same as those for your master and slave devices.

➢ Configure tSH-735 module #3:

Step 11: In the eSearch Utility, click the name of tSH-735 module #3 to select it, and then click the **"Web"** button to log in to the web configuration pages for tSH-735 module #3 (use the default password **"admin"**), or enter the URL of tSH-735 module #3 in the address bar of the browser.

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Step 12: Once you have successfully logged into the web configuration pages for tSH-735 module #3, click the **"Application Mode"** tab to display the **Application Mode Settings** page.

Step 13: On the **Application Mode Settings** page, check the **"Mode 2: Modbus Sharer"** option and select the appropriate radio button for the COM Port (e.g., Port2) on tSH-735 module #3 that the slave devices are connected to from the **"Slave Device Connected on:"** options.

Step 14: Enter **"11 to 15"** in the relevant **Virtual Modbus ID** fields, and click the **"Submit"** button to save your settings.

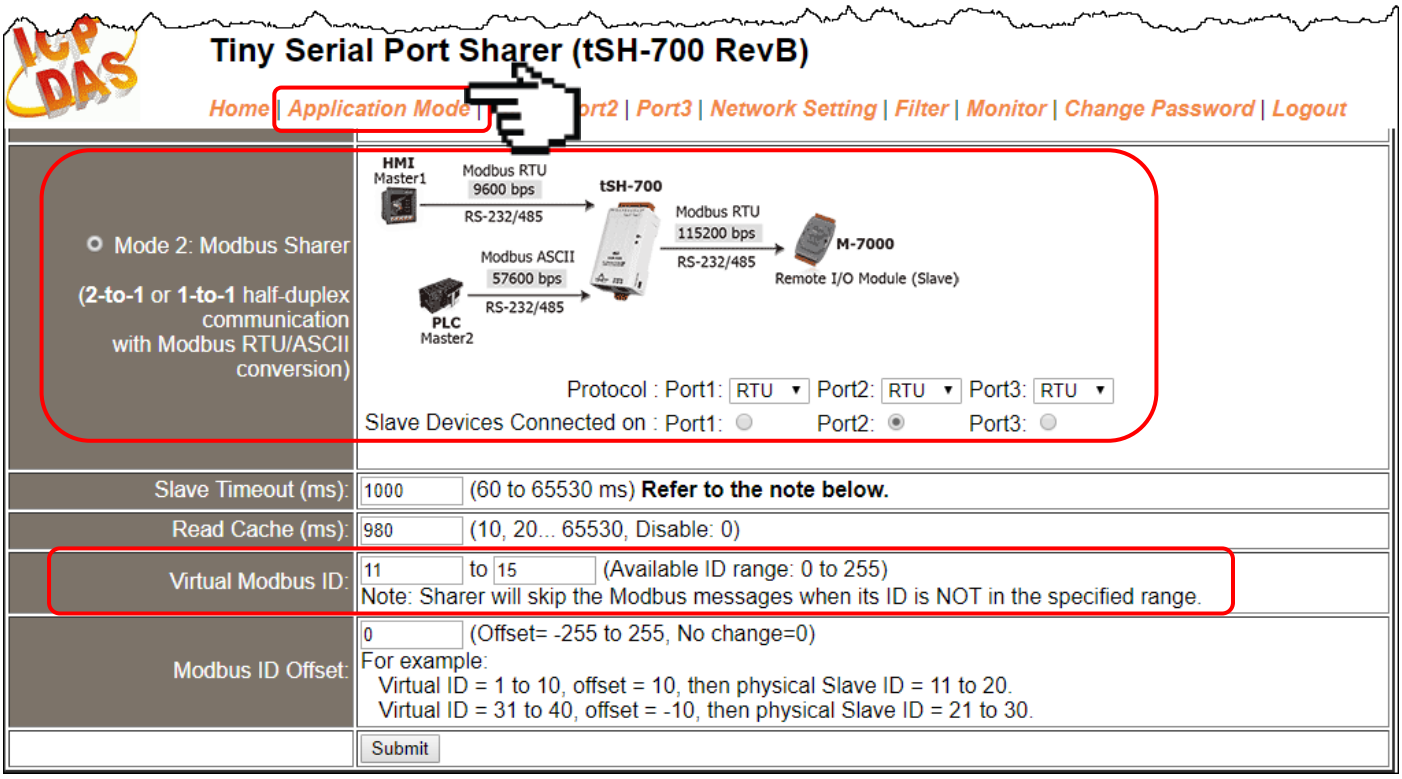


Figure 1-5

Note: Remember to check that the Baud Rate and data format settings for each serial port on the tSH-700 module are the same as those for your master and slave devices.

➢ Configure tSH-735 module #4:

Step 15: In the eSearch Utility, click the name of tSH-735 module #4 to select it, and then click the **"Web"** button to log in to the web configuration pages for tSH-735 module #4 (use the default password **"admin"**), or enter the URL of tSH-735 module #4 in the address bar of the browser.

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Step 16: Once you have successfully logged into the web configuration pages for tSH-735 module #4, click the **"Application Mode"** tab to display the **Application Mode Settings** page.

Step 17: On the **Application Mode Settings** page, check the **"Mode 2: Modbus Sharer"** option and select the appropriate radio button for the COM Port (e.g., Port2) on tSH-735 module #4 that the slave devices are connected to from the **"Slave Device Connected on:"** options.

Step 18: Enter **"16 to 20"** in the relevant **Virtual Modbus ID** fields, and click the **"Submit"** button to save your settings.

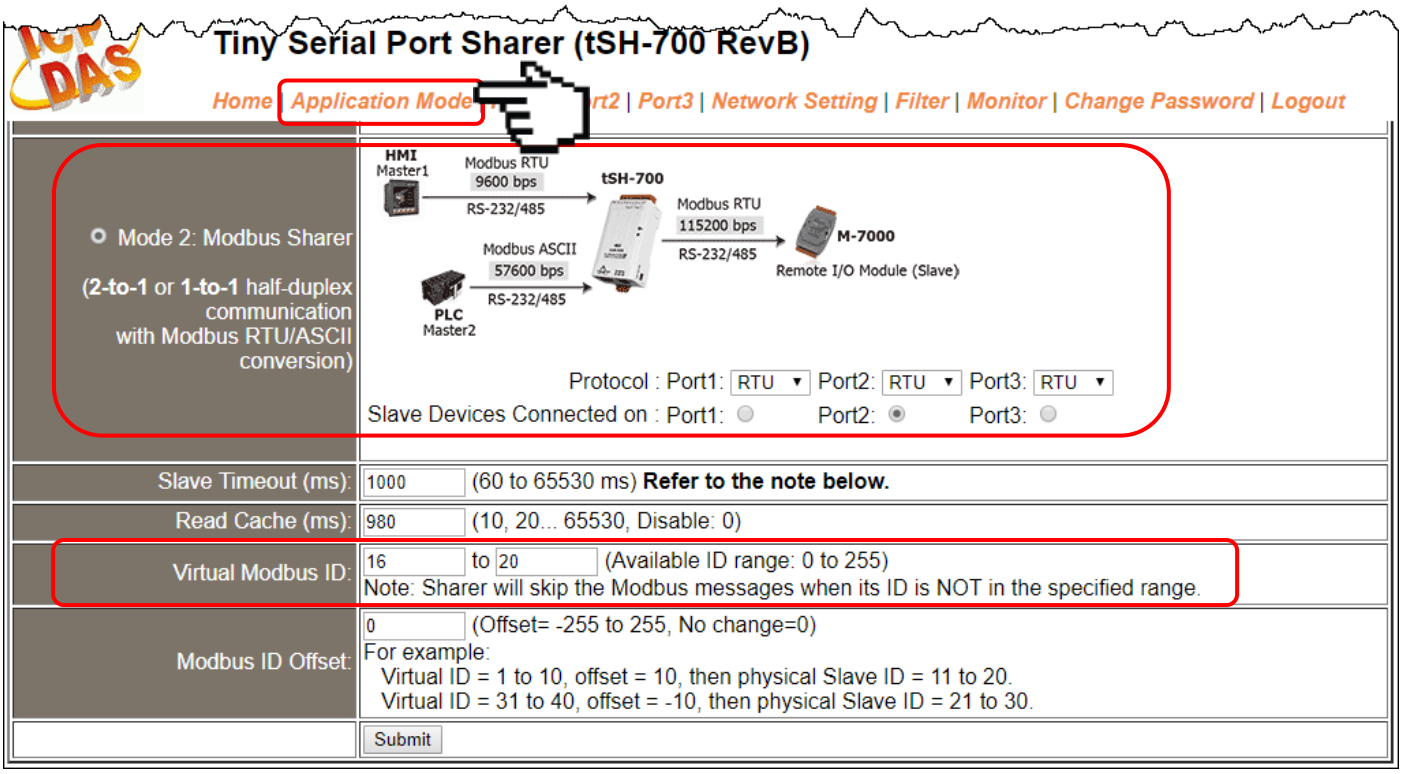


Figure 1-6

Notes:

1. **Remember to check that the Baud Rate and data format settings for each serial port on the tSH-700 module are the same as those for your master and slave devices.**
2. **Once the two Modbus masters have been correctly configured, they will then be able to access the slave devices using the specified Virtual Modbus IDs, rather than the physical Modbus IDs, thereby avoiding any problems with duplicated Modbus IDs.**

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