Modbus Plus Network Browser

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Help version 1.005

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Overview

The Modbus Plus Network Browser provides a reliable way to connect Modbus devices to client applications, including HMI, SCADA, Historian, MES, ERP and countless custom applications. It is intended for use with a ModiconSA85 Network card. The program also requires the Modicon MBPLUS.SYS driver for Windows NT or the Modicon MBPLUS.VXD driver for Windows 95. These drivers can be acquired from Modicon. The Modbus Plus Network Browser driver must be installed and configured using the Modicon software before this program can work.

The Modbus Plus Network Browser is configured to work only with Adapter 0. If access to Adapter 1 is necessary, contact Technical Support.

The program queries the network using the Modbus Function code 08 (Get Network Statistics).

For more information about the Modbus Function code 08, refer to Appendix F of the Modicon IBM Host-Based Devices User's Guide.

Main View

The program's main display shows two panes of information.

The left pane displays bridges with the Local Network Address (LAN) and the address of the bridge on the Bridged Network. The left pane starts with a root node called the local network that does not have an address. If there are no bridges on the local network, the root node is the only node shown. Bridges can be expanded and collapsed, allowing for the traversal of any network.

The right pane shows all of the devices on the network currently selected in the left pane. For more information on a particular device, right-click on an item in the right pane and choose the selection from the pop-up menu.

Error Statistics

The error statistic dialog displays error statistic information for an individual node on the network.

To access the dialog, right-click on an item in the and select **Error Statistics**.
The statistic counters can be reset by clicking **Reset**.

For more information, refer to the Modicon publication IBM Host-Based Devices User's Guide.

Node Personality

The Node Personality dialog displays additional information about a node on the network.

To access, right-click on an item and select **Personality**.

For more information, refer to the Modicon publication IBM Host-Based Devices User's Guide.

Path Transaction

The Path Transaction dialog displays the count of transactions processed by each of the internal paths of the selected node.

To access, right-click on an item and select **Path Transaction**.

For detailed information on the meaning of these values you should consult the Modicon publication IBM Host-Based Devices User's Guide.

Global Data

The Global Data dialog displays the global data that the selected node is providing.

To access, right-click on an item and select **Global Data**.

Although up to 32 words of data is available from each node on the local network, the node may not provide all 32 words.

If the data is not available for a global register, question marks are displayed for that data register. Global data is not available from nodes accessed through a bridge unit.

Tip: Data can be viewed in decimal or hexadecimal format by selecting or deselecting the **View in Hex** check box.

Options

The network search parameters can be customized using the **Network Search Settings** dialog.

To access, click **Options | Search Settings**.

Poll token stations only

If checked, the program polls only stations found in the token station bitmap of the first device that responds, starting at address 1 for each network. If not checked, the program polls addresses 1 through 64 for each network it searches.

Poll wait

This is the poll timeout value. The minimum value is 10 ms and the maximum is 5000 ms. This value is scaled based on the network depth of the current search. When searching the local network, this value is used directly. When searching a network one network away from the local one, this value is multiplied by two. For a network two networks away, the value is multiplied by three and so on. Lowering this value speeds the search, but increases the chance that a node will not be found if it does not respond quickly enough.

Adapter Status

To access information about the adapter, select **Options | Adapter Status**. This menu invokes a dialog that shows the personality of the adapter similarly to the personality dialog displayed when a device is right-clicked and **Personality** is selected from the pop-up menu. The data displayed in the dialog is taken directly from the card driver. NoMBnetwork path is used.

If multiple computers have SA85 cards on the local network, use the network address displayed in the dialog to identify the computer's network address.

Tip: If the card and system driving are operating correctly, the diagnostic pattern displayed should be 0xAA 0x55.

Save Network

The Modbus Plus Network Browser is able to save the Modbus Plus network configuration to a text file in CSV format. The file can later be opened in a word processor or spreadsheet program for viewing and printing. Two of the formats can also be used as input to create a server project.

The option is available from the **File | Save Network** menu. When this menu is selected, you will be prompted for a format and then a file name. Only networks that have been searched are output, so the network should be fully expanded at least once before saving. The output can be saved in one of three formats.

1. **MBX Program Display** - This format consists of three columns of data: the node type, the path to the node from the host PC, and the reverse path from the node back to the host PC. All searched nodes are output to the file.
2. **Modbus Plus Driver** - This format saves the network in a file that can be opened as a server project using the Modbus Plus driver. Default names are given to the channel and each of the nodes. If the node is not a PLC, the device appears invalid when initially opened in the server project. This is a flag to warn that the device is not a PLC and that the properties may need to be adjusted. Opening the property dialog and clicking **OK** sets the device to a valid state. Host computer and bridge nodes are not output to the file.
3. **Modbus RTU Server Serial Driver** - This format saves the network in a file that can be opened as a server project using the Modbus RTU Server Serial driver. Default names are given to the channel and each of the nodes. Host computer and bridge nodes are not output to the file.

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