

DeviceMaster® UP Modbus/TCP Technology



Innovative Modbus Solutions

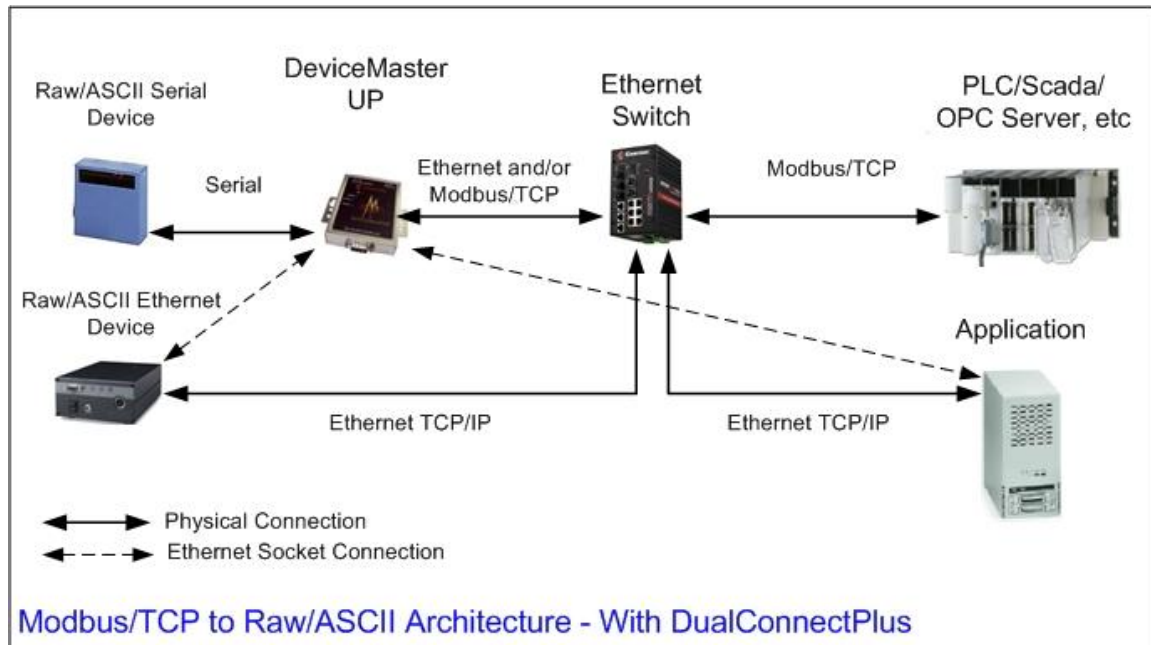
General Feature Description



General Modbus/ TCP Features

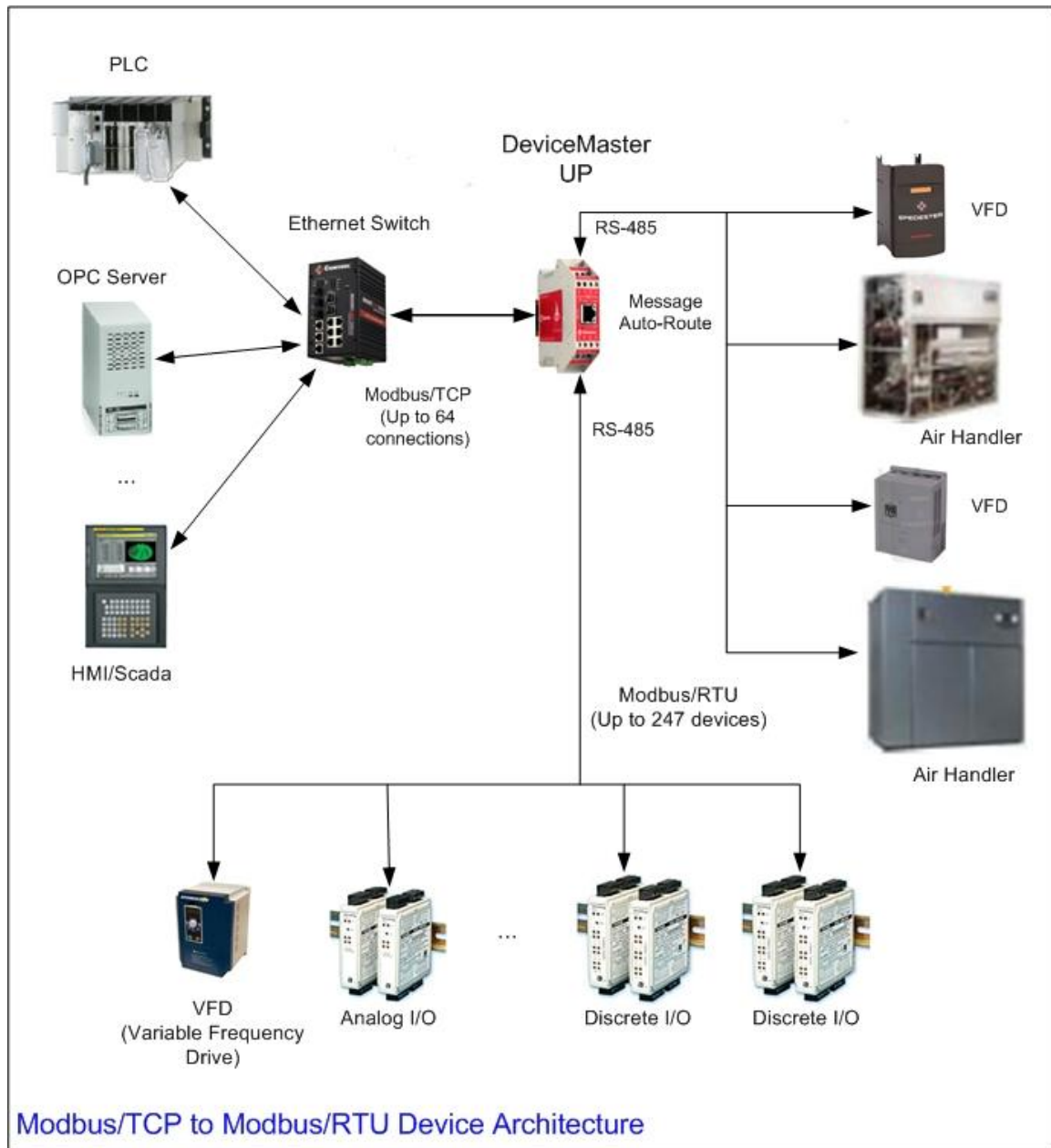
- Simple configuration via embedded web pages.
- A maximum of 64 Modbus/TCP connections per gateway (slave and/or master).
- Advanced Modbus/TCP Master to Modbus/RTU slave functionality. Up to 247 Modbus/RTU devices per gateway with no limit on each serial port.
- Highly advanced Modbus/TCP to Raw/ASCII data device connectivity. Support for both serial and Ethernet TCP/IP devices.
- Serial and Ethernet ports are individually configurable.
- DualConnect Plus technology provides data to PLC and Application simultaneously.
- Detailed status, diagnostic, and statistics web pages help monitor devices and diagnose problems.
- PortVision Plus save/restore configuration to file capabilities.

Raw/ASCII Data Devices:



- Supports such devices as barcode scanners, RFID readers, printers, decoders, and weigh scales.
- Supports both serial and Ethernet TCP/IP devices.
- Supports up to 64 Modbus/TCP connections.
- Peer-to-Peer transport:
 - Receive mode (to PLC) can operate as Slave or Master.
 - Transmit (from PLC) can operate as Slave or Master.
- Dual-Connect feature simultaneously provides connectivity to a Modbus/TCP master/slave and an Ethernet TCP/IP application. (Patent Pending).
- Built-in String, Barcode, and RFID filtering and data extraction. (Patent pending.)
- Large packet size capability for master mode.
 - Maximum serial packet size of 1518 bytes.
 - Maximum Ethernet TCP/IP packet size of 2048 bytes.
- Intelligent start and end of packet identification capabilities.
- Throttling of received data to the PLC in the Master receive mode.
 - Ensures data received by the PLC is not overwritten before it can be processed.

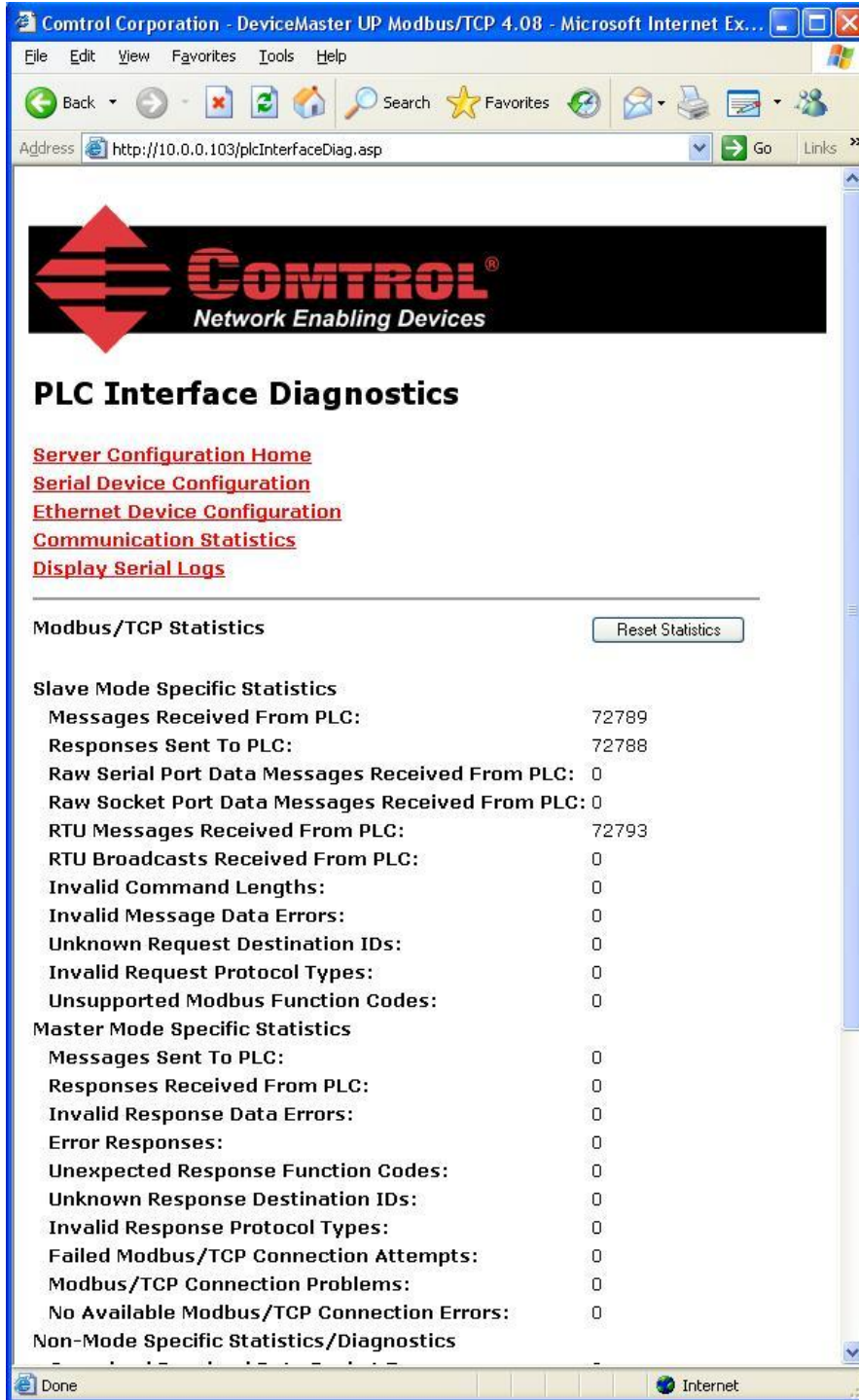
Modbus/RTU Slave Devices:



- Up to 247 Modbus/RTU devices per gateway.
- No limit on number of devices per serial port.
- Automatically locates devices and routes messages.
- Automatically re-locates lost devices due to re-cabling.
- Configurable response timeouts.
- Thorough diagnostics including message logging and device status.

Informational Embedded Web Pages:

- **PLC Interface Diagnostics page:**
 - Provides statistics and error messages to monitor and help diagnose PLC interface problems.



DeviceMaster UP Modbus/TCP Feature Summary

- **Modbus/RTU device statistics page:**
 - A comprehensive status/statistics page for all known Modbus/RTU devices. Provides active/inactive status, timeouts, response times, transmit and receive message statistics.

The screenshot displays the 'Known Modbus/RTU Device List' page in a Microsoft Internet Explorer browser window. The page features the CONTROL logo and navigation links for 'Server Configuration Home', 'Serial Device Configuration', and 'Communication Statistics'. The data is organized into four sections based on ports: Port 1, Port 2, Port 3, and Port 4. Each section contains a table with columns for DeviceId, Active?, Tx Requests, Rx Responses, Timeouts, Last Rsp Time, Avg Rsp Time, Min Rsp Time, Max Rsp Time, Tx Broadcasts, and Invalid Responses.

Port 1 Devices:										
DeviceId	Active?	Tx Requests	Rx Responses	Timeouts	Last Rsp Time	Avg Rsp Time	Min Rsp Time	Max Rsp Time	Tx Broadcasts	Invalid Responses
1	Yes	5472	5471	0	0.15 sec	0.15 sec	0.14 sec	0.19 sec	0	0
2	Yes	5471	5471	0	0.15 sec	0.15 sec	0.14 sec	0.42 sec	0	0
3	Yes	5472	5472	0	0.16 sec	0.16 sec	0.14 sec	0.31 sec	0	0

Port 2 Devices:										
DeviceId	Active?	Tx Requests	Rx Responses	Timeouts	Last Rsp Time	Avg Rsp Time	Min Rsp Time	Max Rsp Time	Tx Broadcasts	Invalid Responses
6	Yes	5471	5471	0	0.14 sec	0.15 sec	0.14 sec	0.39 sec	0	0
7	Yes	5471	5471	0	0.15 sec	0.15 sec	0.14 sec	0.19 sec	0	0

Port 3 Devices:										
DeviceId	Active?	Tx Requests	Rx Responses	Timeouts	Last Rsp Time	Avg Rsp Time	Min Rsp Time	Max Rsp Time	Tx Broadcasts	Invalid Responses
4	Yes	5472	5472	0	0.14 sec	0.13 sec	0.05 sec	0.33 sec	0	0
5	Yes	5472	5472	0	0.14 sec	0.14 sec	0.12 sec	0.17 sec	0	0
75	Yes	878	878	0	0.14 sec	0.14 sec	0.05 sec	0.16 sec	0	0

Port 4 Devices:										
DeviceId	Active?	Tx Requests	Rx Responses	Timeouts	Last Rsp Time	Avg Rsp Time	Min Rsp Time	Max Rsp Time	Tx Broadcasts	Invalid Responses
8	Yes	1339	1339	0	0.14 sec	0.14 sec	0.12 sec	0.28 sec	0	0

DeviceMaster UP Modbus/TCP Feature Summary

- **Serial/Ethernet Device Communication Statistics page:**
 - A comprehensive statistics page for all serial and Ethernet device interfaces. Includes packet, byte, and error counts to the PLC(s) and Application(s) as well as comprehensive filtering statistics.

The screenshot shows a web browser window titled "Control Corporation - DeviceMaster UP Modbus/TCP 4.08 - Microsoft Internet Explorer". The address bar shows "http://10.0.0.103/displayCommStats.asp". The page features the Control Corporation logo and the text "Network Enabling Devices". Below the logo is the title "Serial/Ethernet Device Communication Statistics". There are several navigation links: "Server Configuration Home", "Serial Device Configuration", "Ethernet Device Configuration", "PLC Interface Diagnostics", "Display All Modbus/RTU Devices", "Display Serial Logs", and "Display Ethernet Device Logs". The main content area is titled "Serial Device Interface Statistics" and includes a "Yes/No" button and a "Reset Statistics" button. The statistics are presented in a table with columns for Port-1, Port-2, Port-3, and Port-4. The table includes rows for TX Byte Count, TX Pkt Count, RX Byte Count, RX Pkt Count, Parity Error Count, Framing Error Count, Overrun Error Count, To PLC Dropped Packet Count, To PLC Truncated Packet Count, Tx Unexpected Seq Errors, Invalid RTU Device Responses, and RTU Device Timeouts. Below this is a section for "Filtering Statistics" with rows for "Valid Data Items Sent to PLC Interface" and "Valid Data Items Filtered From PLC".

	Port-1	Port-2	Port-3	Port-4
TX Byte Count:	127632	85072	91904	298304
TX Pkt Count:	15954	10635	11489	37289
RX Byte Count:	398850	265850	287200	932225
RX Pkt Count:	15954	10635	11489	37290
Parity Error Count:	0	0	0	0
Framing Error Count:	0	0	0	0
Overrun Error Count:	0	0	0	0
To PLC Dropped Packet Count:	0	0	0	0
To PLC Truncated Packet Count:	N/A	N/A	N/A	N/A
Tx Unexpected Seq Errors:	N/A	N/A	N/A	N/A
Invalid RTU Device Responses:	0	0	0	0
RTU Device Timeouts:	0	0	0	0
Filtering Statistics				
Valid Data Items Sent to PLC Interface:	N/A	N/A	N/A	N/A
Valid Data Items Filtered From PLC:	N/A	N/A	N/A	N/A

DeviceMaster UP Modbus/TCP Feature Summary

- **Serial/Ethernet Message Log pages:**
 - A simple message logging facility for both serial and Ethernet interfaces.

