



Modbus Solutions | Modbus/TCP

Not Just Modbus/TCP Connectivity to Serial and Ethernet TCP/IP Devices

Loaded with Modbus/TCP firmware, the DeviceMaster UP is the most innovative Modbus to raw/ASCII gateway available today.

The Modbus/TCP firmware has been designed to provide maximum functionality and flexibility with an emphasis on raw/ASCII device support. Its feature-rich platform also supports both slave and master serial Modbus devices.

While simultaneously supporting multiple Ethernet, Modbus/TCP and serial Modbus controllers, the Modbus/TCP firmware provides flexible connectivity to serial Modbus slave devices and both serial and Ethernet TCP/IP raw/ASCII devices. Not found in other gateways, the detailed diagnostic capabilities greatly simplify setup and improve maintenance capabilities. Whether you need to connect your PLC, SCADA system, HMI, or OPC Server to a raw/ASCII device, such as a barcode scanner, or a Modbus serial device such as a temperature sensor, the DeviceMaster UP will provide the solution.

Driven to provide additional connectivity options and advanced functionality for today's most demanding Modbus environments, Control continues to provide enhancements to the Modbus/TCP firmware.

Recent advancements include:

- Modbus message **Alias Device ID** conversions. Modbus masters can eliminate device ID conflicts by using alternate device IDs to communicate to Modbus slaves and raw/ASCII devices.
- An industry first Command/Response Mode that allows multiple controllers of different types to communicate independently to serial and Ethernet TCP/IP raw/ASCII devices.
- Up to six Ethernet TCP/IP Application connections can be made to serial and Ethernet TCP/IP raw-ASCII devices.
- Both Modbus/RTU and Modbus/ASCII serial slaves are fully supported.
- Modbus/RTU and Modbus/ASCII serial masters are fully supported. Serial Modbus masters can communicate to Modbus slaves as well as serial and Ethernet TCP/IP raw/ASCII devices. You can connect your serial Modbus PLC to such devices as barcode scanners, vision systems, weigh scales, networked printers and RFID readers.

The DeviceMaster UP configures in just minutes via embedded web pages. The included PortVision DX remote management and configuration software makes it a simple task to detect and manage every DeviceMaster UP on the network, facilitating firmware updates, troubleshooting, and remote administration.

Modbus/TCP firmware **supports the following controllers:**

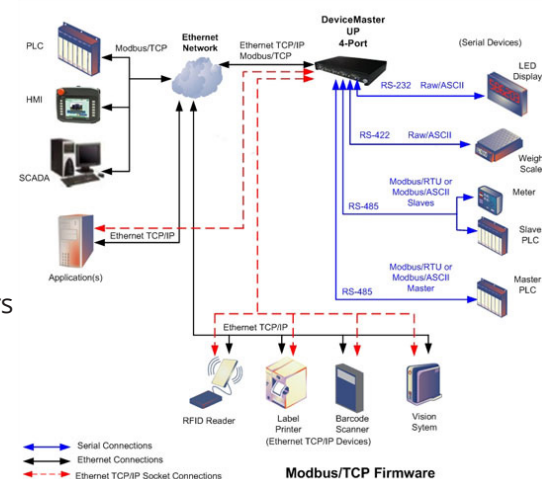
- Modbus/TCP masters and slaves
- Modbus/RTU and Modbus/ASCII serial masters and slaves
- Applications over Ethernet TCP/IP connections (raw/ASCII only)

Modbus/TCP firmware **supports the following devices:**

- Raw/ASCII devices, both serial and Ethernet TCP/IP, such as barcode scanners, vision systems, RFID readers, weigh scales, encoders and printers
- Modbus/RTU and Modbus/ASCII serial slaves

Modbus/TCP firmware is **recommended in installations that require:**

- Connectivity to serial and/or Ethernet TCP/IP raw/ASCII devices
- Connectivity to Modbus/RTU and/or Modbus/ASCII serial devices
- Connecting single or multiple Modbus masters and/or applications to the devices
- Automatic Modbus protocol translations (if needed)



Supported Interfaces:

- **Modicon** Quantum, Premium, Momentum, Compact, and Micro PLCs
 - **GE Fanuc** Rx3i, Rx7i, 90-30, 90-70 and Versamax PLCs
 - Numerous other PLCs, HMIs, OPC Servers, and SCADA Systems
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Ethernet highlights:

- Up to 64 Modbus/TCP connections
- Supports up to six Ethernet TCP/IP Application connections per raw/ASCII serial port and Ethernet TCP/IP device interface
 - One TCP/IP connection can be created with the “Connect To” connection method
 - The “Listen” connection method accepts up to five or six connections, depending if the “Connect To” connection is active

Raw/ASCII device highlights:

- **True Peer-to-Peer Modbus/TCP messaging** – Both receive and transmit channels on each serial port and Ethernet TCP/IP interface can be independently configured to Master (client) or Slave (server)
- Industry first **Command/Response** mode that allows multiple Modbus and Ethernet TCP/IP controllers to independently communicate to a raw/ASCII device
- **Alias Device ID** conversions provide communication to raw/ASCII devices via alternate device IDs in place of the defined 255 (serial) and 254 (Ethernet) device IDs
- **PLC programming flexibility** – Unmatched by any other gateway
- **Low-latency updates** of received packets to PLC memory (even with large packets exceeding 1K bytes). Typically less than 10 ms
- **Connectivity to high-speed devices** – Provides connectivity to devices not normally associated with Modbus/TCP. Supports message rates as high as 50 updates per second when receive channel is configured to Master mode.
- **Large received packet support** – up to 1518 bytes serial and 2048 bytes Ethernet TCP/IP
- **Received packet size control** – truncate or drop oversized packets
- **Intelligent packet identification** – start and end of transmission character detection/appending
- **Message Throttling** – ensures PLC can process each received data packet

Modbus Master to Modbus Slave highlights:

- Up to **247 Modbus/RTU slave devices per gateway**
- **No limit** on number of slave devices per serial port
- **Automatically locates slave devices and routes messages**
- **Alias Device ID** conversions provide communication to Modbus slave devices via alternate device IDs in place of configured slave device IDs
- Advanced slave device specific **diagnostic capabilities** via embedded web pages

CONTACT AND SUPPORT INFORMATION

Warranty Information

Control offers a 30-day satisfaction guarantee and 5-year limited warranty.

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