COMTROL
Pepperl+Fuchs

DeviceMaster® UP 16 Modbus

Part Number: 99582-1

MADE IN USA

KEY FEATURES AND BENEFITS

- Flexible and robust **Modbus** connectivity for PLCs, SCADA systems, HMIs, and OPC servers
  - Supports up to 96 Modbus/TCP connections
  - Support for up to 255 Modbus slave devices
  - Master-to-Master and master-to-slave connectivity
  - Automatic local device location and routing
  - Alias device IDs
  - Device ID offsets for communication t o devices with identical device IDs
  - Advanced security with Read-Only-Mode and Private Serial Bus support
  - Modbus RTU and Modbus ASCII specific message handling
  - Comprehensive support and diagnostics available via on-board web server
- **Low profile** – compact housing facilitates easy installation and mounting
- 16 RS-232/422/485 software selectable ports with termination resistors
- Dual 10/100 Fast Ethernet ports
- **PortVision® DX** Windows software for quick setup and remote management
- RoHS2 compliant under CE

PRODUCT DESCRIPTION

The DeviceMaster® UP 16 Modbus device server is designed for connectivity between a vast array of Modbus controllers and devices. The Modbus Router application supports any PLC, SCADA System, HMI, OPC Server or Application that requires Modbus communications over Modbus/TCP, Com ports or Ethernet TCP/IP connections. With sixteen RS-232/422/485 software selectable ports, the DeviceMaster UP 16 Modbus provides connectivity from multiple Modbus master types to both local and remote Modbus slaves.

The DeviceMaster UP 16 Modbus provides a simple set up and easy configuration. The extensive web server configuration and Windows PortVision DX remote management and configuration software make it a straightforward task to detect and commission single or multiple DeviceMaster UP devices. The comprehensive configuration pages, innovative master and slave functionality, and comprehensive diagnostics all make for quick and easy set-up of even the most complex Modbus installations.

Modbus Router was designed to greatly enhance system maintenance capabilities. Included are comprehensive local and remote slave device and port specific diagnostic web pages displaying status, message response timing, error counts, and overall message statistics. A serial log is also included to provide message level diagnostics.

DEVICEMASTER SPECIFICATIONS

HARDWARE
Bus Interface Specification
10/100BASE-T Ethernet
Memory
SDRAM	16MB
Flash	8 MB

Enclosure
Black Finished Steel
Installation Method
Panel mountable
LED Indicators
Power, Status, Ethernet Link/Activity per port, Serial Link/Activity per port
Dimensions
11.5" x 1.5" x 5.5"
292 x 38 x 140 mm
Product Weight
2.45 lbs
1.11 kg

ELECTRICAL SPECIFICATIONS
Input Voltage Requirements
9-30VDC
Power Consumption
4.5 Watts
Comtrol External Power Supply　(Included)
Input
90-264VAC @ 47-63Hz
Output
24VDC @ 500mA
ESD Surge Protection
Provides a minimum of 15KV protection on all serial lines. All Ethernet components are rated to 1.5KV magnetic surge protection.

ENVIRONMENTAL SPECIFICATIONS
Air Temperature
System On	0° to 60°C
System Off	-40° to 85°C

Operating Humidity
(non-condensing)	0% to 95%

Altitude
0 to 10,000 feet
0 to 3,048 m
Mean time between failures (MTBF)
39.1 years

SERIAL COMMUNICATIONS
Connector Type
RJ45
Number of Ports
16
Serial Interfaces
RS-232
RS-422
RS-485, 4-wire, Master
RS-485, 4-wire, Slave
RS-485, 2-wire
Terminator Resistor for RS-422/485
Software controllable 120Ω termination resistors available for each transmit and receive differential pair on every port. The 120Ω termination resistors can be enabled between TX+ and TX- OR RX+ and RX- or both on every port.
Baud Rate
300bps to 230Kbps
Receive Buffer
4.5 KB
Transmit Buffer
4.5 KB

Device Driver Data Control
Data Bits*	5, 6, 7, or 8
Parity**	
Odd, Even, Mark, Space, or none	
Stop Bits***	1, 1.5, or 2

*　Data bits 5, 6 are supported only in RFC2217 and socket mode
**　Mark, Space parity are supported only in RFC2217 and socket mode
***　Stop bit 1.5 is supported only when used with 5 data bits

COMMUNICATION MODES: MODBUS ROUTER
Supported Controllers
Modbus/TCP masters
Modbus/RTU and Modbus/ASCII serial masters
Modbus/RTU and Modbus/ASCII over Ethernet TCP/IP masters
Supported Devices
Modbus/TCP slaves
Modbus/RTU and Modbus/ASCII serial slaves
Both remote Modbus serial slaves and raw/ASCII devices (with additional gateways)

ETHERNET SPECIFICATION
Number of Ports
2
Speed
10/100Mbps
Connector Type
RJ45 Auto MDI/MDI-X
Ethernet specific features
Ethernet packet swtiching, auto negotiation, Link/Activity Status LED
Network Protocols
ARP, BOOTP, DHCP/RARP, HTTP, HTTPS, SSH, SSL/TLS, ICMP, RFC 1006 (ISO over TCP), SNMP (MIB-II), TCP/IP & UDP socket services, Telnet, and TFTP, and supports IP multicast data transmission

FEATURES
SNMP Support
Monitoring only
Other Software Features
Lowest latency
NS-Link COM/TTY port redirector
TCP/IP & UDP socket services
Telnet/RFC2217 COM Port control
PortVision DX remote management
Manufacturer's Warranty
5 years

EXPORT INFORMATION
Packaged Shipping Weight
4.85 lbs
2.2 kg
Package Dimensions
14.9" x 4" x 10.9"
379 x 102 x 277 mm
UPC Code
7-56727-99582-1
Country of Origin
USA
ECCN
5A992
Schedule B Number
8471.80.1000

REGULATORY APPROVALS
Emissions
FCC Part 15 Subpart B
Class A limit
Canadian EMC Requirements
ICES-003
European Standard EN55022

Immunity
European Standard EN55024:
IEC61000-4-2/EN61000-4-2: ESD
IEC61000-4-3/EN61000-4-3: RF
IEC61000-4-4/EN61000-4-4: Fast Transient/Burst
IEC61000-4-5/EN61000-4-5: Surge
IEC61000-4-6/EN61000-4-6: Conducted Disturbance
IEC61000-4-8/EN61000-4-8: Magnetic Field
IEC61000-4-11/EN61000-4-11: Voltage dips and variations
Safety
IEC 60950/EN60950 (LISTED)
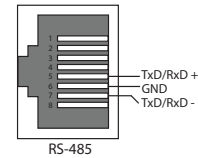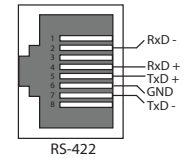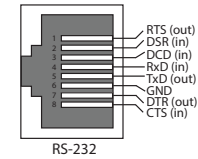CSA C22.2 No. 60950/UL60950 Third Edition
Other
RoHS2 Compliant

Regulatory Approvals

CE FC cULus

PINOUTS

RS-232
RTS (out)
DSR (in)
DCD (in)
RxD (in)
TxD (out)
GND
DTR (out)
CTS (in)

RS-422
RxD -
RxD +
TxD +
GND
TxD -

RS-485
TxD/RxD +
GND
TxD/RxD -

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Warranty Information
Comtrol offers a 30-day satisfaction guarantee and 5-year limited warranty.

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