



## Modbus Master/Slave to PROFIBUS DPV1 Master Gateway

### 5104-MCM-PDPM

*The MCM-PDPM modules are the ideal solution for the many applications where Modbus connectivity can be used to integrate a PROFIBUS DP Slave device into a system. The Modbus Master/Slave gateway is a powerful module designed with Client and Server support, enabling easy connection to Rockwell Automation PLCs (CLX, SLC, PLC, CPLX, and similar devices). In combination with the PROFIBUS DP Slave device support, the module provides a very powerful interface to the many PROFIBUS devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.*

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## Modbus Master/Slave to PROFIBUS DPV1 Master Gateway

### 5104-MCM-PDPMV1

The ProLinx Modbus Master/Slave to PROFIBUS Master Gateway creates a powerful connection between devices on a Modbus network and a PROFIBUS DP Slave device. This stand-alone DIN-rail mounted protocol gateway provides one serial port and one PROFIBUS Master DB9F port. The Modbus protocol driver supports Master and Slave implementations of the protocol. All Modbus serial ports are individually configurable, providing a very powerful and flexible host or device interface solution.

The PROFIBUS DP Master protocol driver supports complete Master specifications according to IEC 61158 on either a Mono-Master or Multi-Master network. The module supports the DPV1 specification.

### Modbus Master/Slave

The Modbus driver provides extensive support for both the Master and the Slave implementations of the protocol. The serial port(s) on the gateway can be individually configured to support the Modbus protocol (Master or Slave, RTU or ASCII, Baud rate, etc.).

#### General Parameters - Modbus Protocol

Communication parameters	Baud Rate: 110 to 115K baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 milliseconds
Error Checking	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking
Floating Point	Floating point data movement supported, including configurable support for Enron implementation
Function Codes	1: Read Output Status 2: Read Input Status 3: Read Multiple Data Registers 4: Read Input Registers 5: Write Single Bit 6: Write Single Data Register 15: Write Multiple Bits 16: Write Multiple Data Register

#### Modbus Master

Command List	Up to 100 command per master port, each fully configurable for function, slave address, register to/from addressing and word/bit count.
Polling of command list	Configurable polling of command list, including continuous and on change of data, and dynamically user or automatic enabled.

#### Modbus Slave

Node address	1 to 247 (software selectable)
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### PROFIBUS DP Master V1

The module supports complete Master specifications according to IEC 61158. Acyclic parameter data can be transferred with Class 1 or Class 2 DPV1 services, allowing processors to easily communicate with slave devices supporting PROFIBUS DPV0/V1 protocol.

The ProLinx PDPMV1 PROFIBUS Master module acts as a PROFIBUS network scanner, transferring Input and Output data between PROFIBUS devices and the network.

- Master Busview configuration interface via included ProSoft Configuration Builder software (see PSW-PCB)
- Project-unique GSD file import library
- Monitoring and Modification of process data and DPV1 acyclic data
- Multi-drop on a PROFIBUS DPV1 network drop with other compatible devices
- Ability to be used with a repeater as a PROFIBUS Master with PROFIBUS PA slaves on the network
- Automatic project documentation
- Automatic Bus Parameter calculation
- Online slave diagnostics
- Supports all standardized baud rates, up to 12Mbps
- Supports extended diagnostic data (DPV1)
- Auto baud detection at all valid PROFIBUS DPV1 rates
- Multiple modules can be placed in a single rack
- CRC checksum determination of slave configuration consistency to processor
- Master Status LED Indicators for Operations, Network Drop Communication, Master Token-Hold
- FDT/DTM PROFIBUS master transport communication DTM software included (see PSW-CDTM-PDPM)

### PROFIBUS Master Specifications

- Up to 125 Slaves can be connected with a repeater
- Up to 1536 cyclic bytes (768 words) input and 1536 bytes (768 words) output data
- Supports Extended Diagnostic Data
- RS-485 optically isolated PROFIBUS Interface with on board DC-DC converter
- Acyclic communications (DPV1), Read and Write
- Alarm Handling (DPV1)
- Supports Sync and Freeze commands
- Supports PROFIdrive 3.1 compliant parameter read and write operations
- Supports Multicast and Broadcast telegrams (DPV1)

### PROFIBUS Master Port

- DB-9F Optically Isolated RS-485
- Ready, Run, Error and Token LED Indicators
- PROFIBUS DPV1 RS-485 interface with a 9-pin D shell female connector and isolated Opto-Couplers

### General Specifications

The ProLinx Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

### Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 32 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 32 VDC max
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5% to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)

Specification	Description
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet modules only)	RJ45 Connector Link and Activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Application Serial Ports	RS-232/422/485 RS-232 handshaking configurable RS-422/485 screw termination included
Serial Port Isolation	2500V RMS port signal isolation per UL 1577 3000V DC min. port to ground and port to logic power isolation
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)

### ProSoft Configuration Builder

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files customized to meet your application needs. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

### Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.

### Ordering Information

To order this product, please use the following:

**5104-MCM-PDPM** Modbus Master/Slave to PROFIBUS DPV1 Master Gateway

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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