



'C' Programmable over Ethernet to Modbus Master/Slave Gateway

5201/5202-ADMNET(4)-MCM(4)

The ProLinx 'C' Programmable Application Development Module with Ethernet to Modbus Master/Slave creates a powerful platform for developing and running 'C' applications to communicate with Modbus Master/Slave networks and devices. The module provides one (ADMNET-MCM) or four (ADMNET4-MCM4) serial ports, each individually configurable as a Modbus or custom Master or Slave.

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The ADMNET-MCM module is the ideal solution for many applications where Ethernet and serial connectivity need to be added to a Modbus Master/Slave platform. Example applications involving the ADMNET-MCM module include:

- Bar code scanner interface
- Legacy ASCII protocol connections
- Terminal port emulation
- Printer driver (alarm/status printer)
- Customized protocol implementations

How to Contact Us: Sales and Support

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ADMNET

The ADM API Suite is provided to allow software developers access to the top layer of the serial ports. The ADMNET API suite accesses the Ethernet port.

Both APIs can be easily used without having detailed knowledge of the module's hardware design. The ADMNET API Suite consists of the Ethernet Port API. The Ethernet Port API provides access to the Ethernet network. Applications for the ADMNET module may be developed using industry-standard DOS programming tools and the appropriate API components.

General Protocol Specifications

- Allows software developers to access Serial/Ethernet ports without needing detailed knowledge of the module's hardware design
- API library functions are specified using the C programming language syntax
- Supports multi-threaded applications
- The following compiler versions are compatible with the MVI module API:
 - DigitalMars C++ V8.49 (included)
 - Borland C++ V5.02
- Operating System – General software DOS 6-XL
- Flash ROM program space: 896 KB
- RAM program and data space: 640 KB
- Compact Flash socket: Up to 64 MB

ADM API Libraries

Each API provides a library of function calls. This library supports any programming language that is compatible with the Pascal calling convention.

- Initialization – Open and close the API
- Debug Port – Debug port user interface
- Database – Read and write data to database
- Timer – Start and check timers
- Backplane – Transfer data over the backplane
- LED – Set user LED indicators
- Flash – Parse configuration files
- Miscellaneous – Configure the console

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 ms
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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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 36 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 24 VDC
Operating Temperature	-20 to 50°C (-40 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)



Specification	Description
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)
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
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)

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:

5201-ADMNET-MCM 'C' Programmable over Ethernet to
5202-ADMNET4-MCM4 Modbus Master/Slave 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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