



Modbus Master/Slave to 'C' Programmable Application Development Module

5102-MCM4-ADM4

The ProLinx 'C' Programmable Application Development Module provides a powerful platform for bridging communications between your custom serial protocols. This stand-alone DIN-rail mounted protocol gateway provides four fully programmable serial ports.

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 ADM functionality allows the module to be programmed to accommodate devices with unique serial protocols. The module includes General Software Embedded DOS 6-XL. This operating system provides DOS compatibility along with real-time multitasking functionality. DOS compatibility allows user applications to be developed using standard DOS tools, such as DigitalMars and Borland compilers.

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.

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The 5102 MCM4-ADM4 module is the ideal solution for many applications where serial connectivity needs to be added to a Modbus Master/Slave platform. Example applications involving the 5102 MCM4-ADM4 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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General Parameters – Modbus Protocol

Polling of command list	Configurable polling of command list, including continuous and on change of data, and dynamically user or automatic enabled.
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Modbus Slave

Node address	1 to 247 – software selectable
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ADM

The ADM API Suite allows software developers to access the serial ports without needing detailed knowledge of the module's hardware design. The ADM API Suite consists of two distinct components: the Serial Port API and the ADM API.

Applications for the ADM module may be developed using industry-standard DOS programming tools and the appropriate API components.

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Development Environment

- Operating system: General software DOS 6-XL
- Compatible compiler (16-bit DOS target)
 - Digital Mars C++ V8.49 (included)
 - Borland C++ V5.02

Application Programming Interfaces (API)

- Serial Port API: serial port functions
- Backplane API: low level backplane functions
- ADM API debug port functions: debug port functions, database functions timer functions, high level backplane transfer functions, LED functions, flash read functions

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 (-4 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:

5102-MCM4-ADM4 Modbus Master/Slave to 'C' Programmable Application Development Module

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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