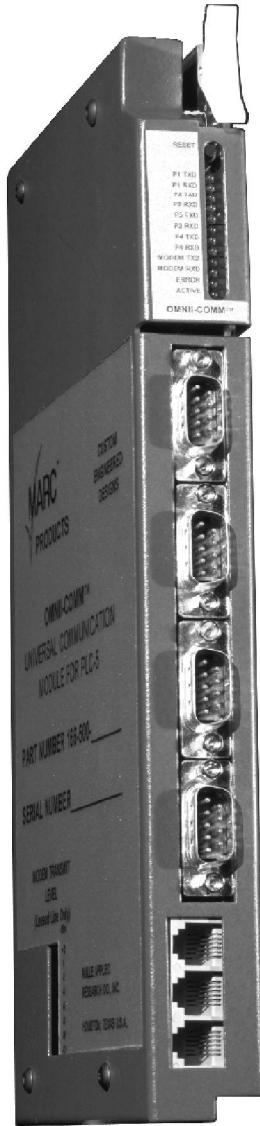


## UNIVERSAL COMMUNICATIONS MODULE for Allen-Bradley PLC-5



- 4 Independent serial I/O ports plus one configuration port
- Integral Dial-up and Leased Line Modems (up to 3 on-board modems)
- Protocol Converter, Polling Master, Protocol Bridge and Modem all in one slot
- User configurable using serial port of a personal computer or remotely via modem
- Master and Slave protocol emulations are user selectable for each port
- All ports can be active simultaneously
- Use to connect standard PLCs to communication networks using other protocols
- Collect data from other equipment using protocol of the external device
- Concentrate data from all devices in on-board memory or transfer to PLC memory
- **NO PLC PROGRAMMING REQUIRED**
- Our most powerful module yet

The MARC™ Model 166-500 Omnii-Comm™ is a powerful microprocessor based 4-port communications module that occupies only a single slot of an Allen-Bradley PLC-5 (Programmable Logic Controller) chassis connecting only to the +5V power rail. One of the serial ports is usually connected to the Allen-Bradley PLC using either Channel 0 on the processor for a single PLC connection, or to a 1785-KE for a Data Highway+ connection to multiple PLCs. The other ports are used to communicate with external devices using the protocol of the external device. Optional on-board leased line and dial-up modems can be added to three of the serial ports to provide extended communication capability for use over telephone lines, twisted pair and radio networks. The unit is completely user configurable using configuration software (included with each unit) that runs on any standard PC. **NO PLC PROGRAMMING IS REQUIRED.**

Typical applications include using the Omnii-Comm™ to permit the use of a standard A-B PLC as a Remote Terminal Unit (RTU) in Supervisory Control and Data Acquisition (SCADA) systems that use communication protocols that are not Allen-Bradley. The Omnii-Comm™ emulates the Host protocol exactly, making the A-B PLC look like any of the other devices on the network. The integral leased line modem can be used to provide communications to the host over leased telephone lines or radio. A second internal modem can be used to provide a redundant communications path over a dial-up circuit. A fourth port could also be configured to collect data from other equipment such as flow computers, chromatographs, intelligent valves, other PLCs, etc. for transfer to PLC data memory or to Omnii-Comm™ internal storage (or both).

Another popular application uses the Omnii-Comm™ as a data concentrator. From 1 to 3 ports are

set up as polling master ports that collect data from external devices connected on up to 3 separate networks using any of the standard protocols. Another port is set up as a slave port and connected to a host computer using the protocol of the host. Data from all remote devices is instantly available to the host at any time and the host can send control commands (write data back) to any of the external devices.

Configuration tables are stored in non-volatile memory on the Omnii-Comm. The tables define the location of the data to be moved and the frequency of update. All communication parameters such as protocol, I/O port, connector, baud rate, number of data bits, etc. are also selectable by the user. The tables are easily modified using the configuration diskette provided with each unit. Comprehensive error logging for all message transactions is a standard option.

## Specifications

### Physical

Standard Allen-Bradley module size (1.1"W x 10"H x 5.75"D) with A-B style metal shroud, 2 lb., 3 oz.

### Power Requirements

Nominal 1000ma @ 5 VDC from PLC backplane

### Operating Environment

0° to 60° Celsius, 10% to 90% relative humidity

### LED Indicators (12)

Provide status of the following signals: TXD and RXD for each port plus ERROR and ACTIVE

### Protocols Supported (partial list)

**MODBUS** Master and Slave, RTU and ASCII options  
32-bit and "string by flow" data types permitted

**Teledyne/Control Applications (CA)**, both standard and Report by Exception

**Allen-Bradley DF1 Full** Duplex and Half-Duplex with PLC 2, PLC 5, PLC5/250 and SLC 500 addressing

**Square D SY/MAX** Point-to-Point and Multidrop

**Omron Host Link**

**Reliance Automate** Single or Multiple Processor  
Custom protocol development available

Contact the factory for pricing

### I/O Ports

4 Asynchronous Serial Data Ports; 300 to 9600 baud

2 Universal Serial Data Ports

Synchronous or asynchronous

300 to 2400 baud

2 Dial-up Modem ports

1 Leased Line or Dial-up Modem port

1 Configuration/diagnostic port

All ports are equipped with modem control lines RTS, CTS, DCD, DTR and DSR

### Serial Port Connections

**Connector P1 to P4: 9-pin "D"** connector (male)

**RS232** 1-DCD, 2-RXD, 3-TXD, 4-DTR, 5-GND, 6-DSR, 7-RTS, 8-CTS

**RS422** 1-TXD+, 2-RXD+, 5-GND, 6-RXD-, 9-TXD-

**RS485** 1-TRD+, 5-GND, 9-TRD-

**Modem M1 to M3:** 6-pin RJ11 modular plug

**M1, M2** Dial-up only, 3-Tip, 4-Ring

**M3 Dial-up** 3-Tip, 4-Ring

**Leased Line** 1-PTT+; 2-RD, Tip; 3-TD, Tip; 4-TD, Ring; 5-RD, Ring; 6-PTT-

### Internal speaker

### Watch dog timer and Reset switch

## Miille Applied Research Company, Inc.

PO Box 87634, Houston, Texas 77287

(800) 729-0818 • (713) 472-6272 • Fax (713) 472-0318

World Wide Web Site • <http://www.miille.com>