

**UNIVERSAL
COMMUNICATIONS MODULE
for Allen-Bradley SLC 500**



- **Powerful add-on module to MARC™ modems for the SLC 500**
- **Protocol Conversion**
- **Polling Master**
- **UL Listed, Class 1 Division 2 (166-203 and 166-206 only)**

- **Asynchronous, Synchronous and Iso-synchronous protocol emulation**
- **Multi-protocol compatible Emulates over 50 protocols**
- **Dual RS-232/422/485 serial ports**
- **Optional FSK or Dial-up modem or additional RS232 port**
- **Remote Configuration and debug**



The MARC™ Model 166-200 OMNII-COMM™ is a powerful microprocessor based communications option for the MARC Dial-up and FSK modem modules for the SLC 500 PLCs. The complete unit (Modem and Communications module) plugs into one slot of an Allen-Bradley SLC 500 PLC (Programmable Logic Controller) to provide greatly enhanced communications capability.

The OMNII-COMM™ provides protocol conversion functions to allow the SLC 500 to be connected to communication networks that use protocols other than Allen-Bradley protocol. This feature could be used, for instance, to permit the use of a standard SLC 500 PLC as a Remote Terminal Unit (RTU) in an existing Supervisory Control and Data Acquisition (SCADA) system. The 166-200 emulates many communication protocols. New protocols are continuously being added.



The module can also be configured as a polling master that can connect to other devices to read data from them and issue controls using the standard protocol of the device.

The module is configured using a PC connected to port 1. A configuration program, supplied with the module, guides the user through the configuration process. The configuration mode is entered by pressing a small push-button switch on the front of the module. The module will return to the operational mode when a "RUN" command is received from the configuration PC or power is cycled. The configuration program selects the mode of operation and the protocol to use on each port as well as all other data required for operation.

Configuration information is stored in on-board Serial EEPROM memory that will retain the data in the event of a power failure.

The 166-200 OMNII-COMM™ plugs into expansion sockets of the 166-10X, SLC 500 Base Module to provide

a complete communications package.

Standard cable assemblies are available for connecting to many types of devices. Contact the factory for a current list.

MARC also manufactures a complete line of plug-in, stand-alone DIN-rail mounted protocol conversion modules, polling masters, data concentrators and modems for other applications. Call, fax, E-mail or visit MARC's Web-site for information on these products.

ORDER INFORMATION:

- 166-201 Omnii-Comm with 2 serial ports and 1 leased line modem
- 166-202 Omnii-Comm with 2 serial ports and 1 dial up modem
- 166-203 Omnii-Comm with 2 serial ports, no modem
- 166-206 Omnii-Comm with 3 serial ports, no modem (includes RJ11 to DB-9 adapter cable)

Specifications

Physical:

3.7" x 3.8" plug in expansion module for either 166-100 Dial-up or 166-101 FSK Leased line modem

Operating Environment:

0° to 60° Celsius
10% to 90% relative humidity (non-condensing)

Protocols Supported (partial list):

Slave Emulations:

Modbus ASCII or RTU
Allen-Bradley DF-1Half Duplex
Square D
Teledyne/CA
with Report by Exception and Satellite Extensions
SCI CSNET
Leeds & Northrup Conitel 2020
CDC Type II
TEJAS III and IV
Johnson Controls Metasys N2

Master Emulations (partial list):

Modbus ASCII or RTU
Square D Symax (point-to-point) or Multi-drop
Allen-Bradley DF-1Full Duplex or Half Duplex
Caterpillar M5X with support for EMCPII & ADEM III
Sullair Supervisor, Supervisor II Delux and IE

Power Requirements:

Nominal 100 mA @ +5 VDC from PLC backplane

LED Indicators (8):

Located on Modem module. Provides status of the following signals: P1TXD, P1RXD, P2TXD, P2RXD, Modem TXD, Modem RXD, On Line and Error

Serial Ports (on modem):

Port 1

9-pin "D" connector (male) for connection of configuration PC during configuration and for serial data link to units served. Select RS-232, RS-422 or RS-485 operation with jumpers inside the modem case.

Port 2

9-pin "D" connector (male) for serial asynchronous data link to units served. Select RS-232, RS-422 or RS-485 operation.

Modem Connection:

Standard RJ11 Telephone line jack.

Dial-up connections: Pin 3 (tip), Pin 4 (ring)

FSK connections: Pins 3 and 4 (transmit)

Pins 2 and 5 (receive)

Pins 1 and 2 (PTT Contact)

RS232 connections: Pin 3 TXD (output)

Pin 4 RXD (input)

Pin 6 GND

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