Modbus Master/Slave Network Interface Module
MVI69-MCM

The MVI69 Modbus Master/Slave Network Interface Module allows Rockwell Automation® CompactLogix™ Programmable Automation Controllers (PACs) and MicroLogix™ 1769-LRP Programmable Logic Controllers (PLCs) to interface with Modbus-compatible devices. Compatible devices include not only Modicon® PLCs but also a wide assortment of third-party devices found in nearly every industry.

Features	Benefits
Licensed Backplane Technology	♦ Manufactured under license from Rockwell Automation ♦ High-speed data transfer between MVI69 module and CompactLogix / MicroLogix processor ♦ Installs as a Generic 1769 module, sample ladder logic included ♦ View module data and status in RSLogix 5000 controller tags and UDTs
Modbus Master/Slave protocol interface	♦ Emulate Modbus Master or slave device on each individually-configurable application port ♦ Supports Modbus RTU and Modbus ASCII protocol versions ♦ Floating point data movement supported, including support for Enron, Daniel®, and other implementations ♦ Suitable for SCADA and field device interface applications
ProSoft Configuration Builder software included	♦ Graphical drag-and-drop configuration tool for simple module configuration ♦ Easy to use diagnostics window with menu-driven hardware and protocol diagnostics ♦ View module database contents through serial connection to a desktop PC
Backed by ProSoft Technology	♦ 20-year history of delivering high-quality, reliable solutions designed with you in mind ♦ Free, unlimited, worldwide Technical Support by phone for pre-sale, set-up, or troubleshooting support helps you get going sooner and stay running longer ♦ Three-Year Warranty ensures reliability and protects against equipment failures ♦ Free ProSoft Software tools tightly integrate with our hardware...a simple and quick, total solution to help you make our products fit your applications

Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for quick and easy management of module configuration files, as well as viewing communication and network diagnostics.

PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations into new projects.

inRAx®

General Specifications

- Single-Slot, 1769 backplane-compatible
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module
- Ladder Logic is used for data transfer between module and processor. Sample ladder file included.
- Configuration data obtained from configuration text file downloaded to module. Sample configuration file included.
- Supports CompactLogix™ processors with 1769 I/O bus capability and at least 800 mA of 5 VDC backplane current available.
- Also supports MicroLogix™ 1500 LRP

General Specifications - Modbus Master/Slave

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
Modbus Modes	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking
Floating Point Data	Floating point data movement supported, including configurable support for Enron, Daniel®, and other implementations
Modbus Function Codes Supported	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil 6: Preset (Write) Single Holding Register 8: Diagnostics (Slave Only, Responds to Subfunction 00)	15: Force(Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers 17: Report Slave ID (Slave Only) 22: Mask Write Holding Register (Slave Only) 23: Read/Write Holding Registers (Slave Only)

Functional Specifications

Modbus Master

A port configured as a virtual Modbus Master actively issues Modbus commands to other nodes on the Modbus network, supporting up to 100 commands on each port. The Master ports have an optimized polling characteristic that polls slaves with communication problems less frequently.

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.
Status Data	Error codes available on an individual command basis. In addition, a slave status list is maintained per active Modbus Master port.

Modbus Slave

A port configured as a Modbus slave permits a remote Master to interact with all data contained in the module. This data can be derived from other Modbus slave devices on the network, through a Master port, or from the CompactLogix / MicroLogix processor.

Node address	1 to 247 (software selectable)
Status Data	Error codes, counters and port status available per configured slave port

Hardware Specifications

Specification	Description
Dimensions	Standard 1769 Single-slot module
Current Load	800 mA max @ 5 VDC Power supply distance rating of 2 (L43 and L45 installations on first 2 slots of 1769 bus)
Operating Temp.	32° F to 140° F (0° C to 60°C)
Storage Temp.	-40° F to 185° F (-40° C to 85° C)
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	Battery and Module Status Application Status Serial Port Activity CFG Port Activity
CFG Port (CFG)	RJ45 (DB-9F with supplied cable) RS-232 only No hardware handshaking
App Ports (P1,P2) (Serial modules)	RS-232, RS-485 or RS-422 (jumper selectable) RJ45 (DB-9F with supplied cable) RS-232 handshaking configurable 500V Optical isolation from backplane
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration Cable

Agency Approvals & Certifications

Agency	Applicable Standard(s)
CE	EMC, LVD, EN50081-2:1993, EN50082-2:1993
cULus	UL 508, UL 1604, CSA 22.2 No. 142 & 213 (Class I, Division 2, Groups A, B, C, D)
DNV	DET NORSKE VERITAS
CB Safety	CA/10171/CSA, IEC 61010-1 Ed. 2, CB 243333-2056722 (2090408)
GOST-R	n/a