

# DATASHEET

## Modbus TCP/IP Multi Client Enhanced Communications Module for Remote Chassis MVI56E-MNETCR

The MVI56E Modbus TCP/IP Multi Client Enhanced Communication Module for Remote Chassis allows Rockwell Automation ControlLogix Programmable Automation Controllers (PACs) to easily interface with multiple Modbus TCP/IP server-compatible instruments and devices. The Multi Client module improves performance when controlling multiple servers on a Modbus TCP/IP network, by supporting up to 30 clients.

MVI56E enhancements include configuration and management through the module Ethernet port, and has a web server to access on-board documentation, Add-On Instructions, and sample program files.

The MVI56E-MNETCR utilizes a reduced Input/Output (I/O) data block for transferring data to and from a ControlLogix processor. This reduced data block makes it ideal for use in remote rack applications over ControlNet™. For EtherNet/IP™ applications where bandwidth is not an issue, it is strongly recommended to use the MVI56E-MNETC.



Features	Benefits
Supports up to 30 Clients	<ul style="list-style-type: none"> <li>◆ Faster response for multi-server applications</li> <li>◆ Reduces network traffic</li> <li>◆ Minimizes impact to other server communications when one server device goes off-line</li> </ul>
RSLogix™ 5000 Integrated	<ul style="list-style-type: none"> <li>◆ The module communication is integrated with RSLogix 5000 using a supplied Add-On Instruction (AOI) or ladder file</li> <li>◆ No additional PAC/PLC programming required</li> </ul>
Enable/Disable commands easily from ladder logic.	<ul style="list-style-type: none"> <li>◆ Programmatically enable various networked devices and their functions to support multiple applications or recipes, without having to reconfigure the module</li> </ul>
Remotely configure and diagnose problems	<ul style="list-style-type: none"> <li>◆ Easy-to-use Windows-based configuration software connects through remote racks using EtherNet/IP and/or ControlNet via a 1756-EnxT and/or 1756-CNB interface module without requiring RSLinx, saving you money</li> <li>◆ Allows support of IT and Automation network segmentation</li> </ul>
MVI56 backward compatible	<ul style="list-style-type: none"> <li>◆ Assists in extending current MVI56 applications by using newer technology that supports existing MVI56 ladder logic and module configuration</li> </ul>

### Configuration

ProSoft Configuration Builder (PCB) provides a graphical configuration tool for quick and easy management of module configuration files, as well as viewing module diagnostic information.

Route connections over multiple EtherNet/IP or ControlNet paths with CIPconnect technology, allowing you to manage the module from remote locations.

The MVI56E-MNETCR Setup Guide, with the sample configuration, provides step-by-step instructions on how to move data through the module from the Modbus TCP/IP network to the processor.

## General Specifications

- Backward compatible with previous MVI56-MNETCR versions
- Single-slot 1756 ControlLogix backplane compatible
- 10/100 Mbps auto crossover detection Ethernet configuration and application port
- User-definable module data memory mapping of up to 5000 16-bit registers
- CIPconnect-enabled network configuration and diagnostics monitoring using ControlLogix 1756-ENxT and 1756-CNB modules
- ProSoft Configuration Builder (PCB) software supported, a Windows-based graphical user interface providing simple product and network configuration
- Sample ladder logic and Add-On Instructions (AOI) are used for data transfer between module and processor
- 4-character, alpha-numeric, scrolling LED display of status and diagnostics data in plain English – no cryptic error or alarm codes to decipher
- ProSoft Discovery Service (PDS) software used to locate the module on the network and assign temporary IP address
- Personality Module - a non-volatile industrial-grade Compact Flash (CF) card used to store network and module configuration for easy disaster recovery, allowing quick in-the-field product replacement by transferring the CF card

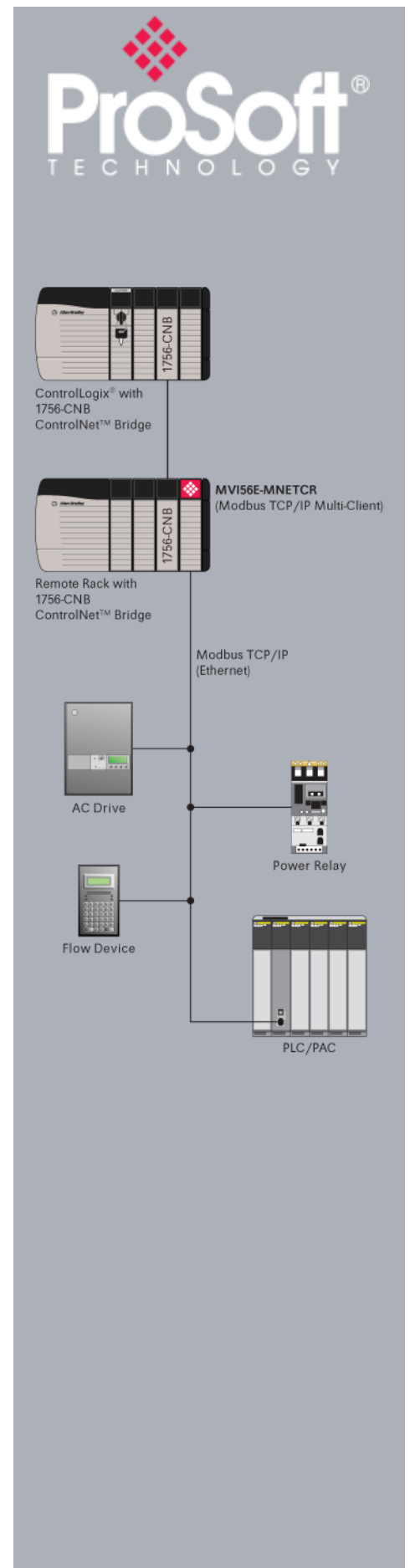
## Modbus TCP/IP Client (Master)

The MVI56E-MNETCR is a Client-only module that will operate on a local or remote rack. This module was created to improve performance when controlling multiple servers on a Modbus TCP/IP network.

- Offers 30 Client connections with up to 16 commands each to talk to multiple servers
- Actively reads data from and writes data to Modbus TCP/IP devices, using MBAP or Encapsulated Modbus message formats
- Transmits Modbus Function Codes 1, 2, 3, 4, 5, 6, 7, 15, and 16
- ControlLogix processor can be programmed to use special functions to control the activity on the Client by actively selecting commands to execute from the command list (Command Control) or by issuing commands directly from the ladder logic (Event Commands)

## Functional Specifications

- Modbus data types overlap in the module's memory database, so the same data can be conveniently read or written as bit-level or register-level data.
- Configurable floating-point data movement is supported, including support for Enron or Daniel<sup>®</sup> floating-point formats
- Special functions (Event Commands, Command Control, status, etc.) are supported by message transfer (unscheduled) using the MSG instruction
- Configurable parameters for the Client including a minimum response delay of 0 to 65535 ms and floating-point support
- Supports up to 30 Clients with up to 16 commands for each Client
- Error codes, counters, and module status available from module memory through the Clients, or through the ladder logic and controller tags in RSLogix 5000



## Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 Vdc 3 mA @ 24 Vdc
Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Shock	30g Operational 50g Non-operational Vibration: 5g from 10 Hz to 150 Hz
Relative Humidity	5% to 95% (without condensation)
LED Indicators	(ERR) Not Used Application Status (APP) Module Status (OK)
4-Character, Scrolling, Alpha-Numeric LED Display	Shows Module, Version, IP, Application Port Setting, Port Status, and Error Information
<b>Debug/Configuration/Application Ethernet port (E1)</b>	
Ethernet Port	10/100 Base-T, RJ45 Connector, for CAT5 cable Link and Activity LED indicators Auto-crossover cable detection

## Agency Approvals & Certifications

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MVI56E-MNETCR

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