Generic ASCII Serial Enhanced Communication Module
MVI56E-GSC/GSCXT

The Generic ASCII Serial Enhanced Communication Modules allow Rockwell Automation® ControlLogix® Programmable Automation Controllers (PACs) to easily interface with serial devices using non-specific ASCII character text string or byte value serial communication protocols.

MVI56E-GSC enhancements include local and remote diagnostics through the module's Ethernet port, and CIPconnect® technology for bridging though Rockwell Automation ControlNet™and EtherNet/IP™ networks.

The module is a single-slot, backplane-compatible solution. Each port can send and receiving large ASCII character strings or byte streams of up to 4096 characters or bytes. Multiple serial communication devices can be integrated into the ControlLogix platform by building upon the sample ladder logic provided for this module.

The MVI56E-GSCXT is designed for the Logix-XT™ control platform, allowing it to operate in extreme environments. It can tolerate higher operating temperatures and has conformal coating to protect it from harsh or caustic conditions.

Features	Benefits
Backward-Compatible	♦ MVI56E products are backward-compatible with existing ladder logic, allowing for a smooth transition when upgrading from the earlier version MVI56-GSC product.
RSLogix™ 5000 Integrated	♦ Module communication is integrated within RSLogix 5000 using a sample Add-On Instruction (AOI), or sample ladder logic file ♦ The module is configured with the sample ladder logic controller tags
Graphical User Interface Software	♦ Prosoft Configuration Builder provides online diagnostics using the high-speed Ethernet port ♦ CIPconnect®-enabled, allows remote diagnostic access across multiple bridged EtherNet/IP™ and ControlNet™ networks using Rockwell Automation 1756-ENxT and 1756-CNB network interface modules
ProSoft Discovery Service	♦ ProSoft Discovery Service, a software utility to locate MVI56E modules on the network and assign a temporary IP address for easy configuration

Configuration

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

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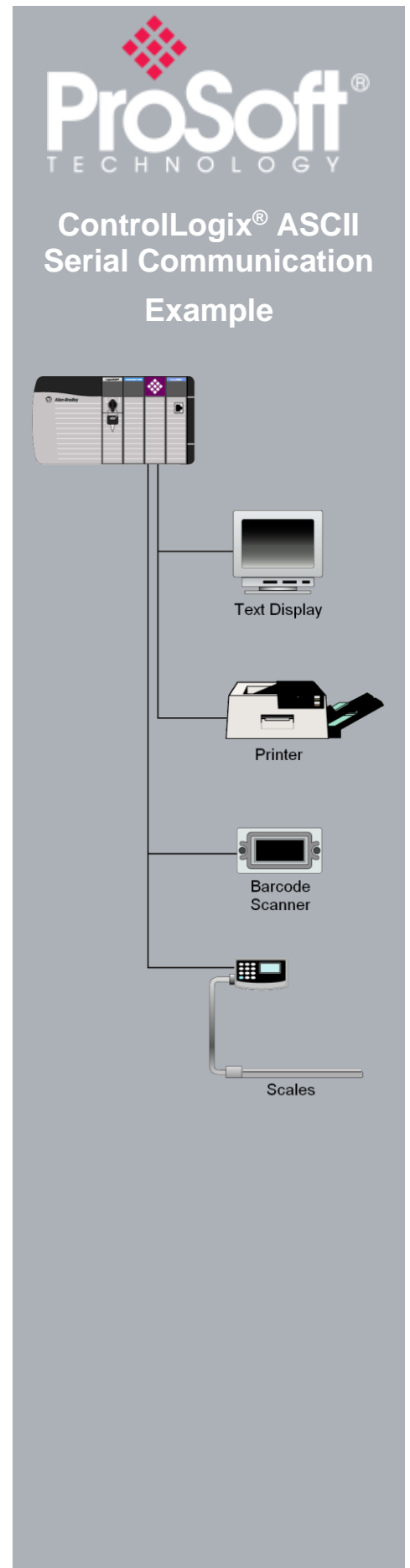
General Specifications

- Backward-compatible with previous MVI56-GSC version
- Single Slot - 1756 ControlLogix® backplane compatible
- 10/100 MB Ethernet port for network configuration and diagnostics with Auto Cable Crossover Detection
- User-definable module data memory mapping of up to 5000 16-bit registers
- CIPconnect®-enabled network diagnostics and monitoring using ControlLogix 1756-ENxT modules and EtherNet/IP® pass-thru communications
- Sample Ladder Logic or Add-On Instruction (AOI) used for data transfers between module and processor and for module configuration
- 4-character, scrolling, alphanumeric LED display of status and diagnostic data in plain English
- ProSoft Discovery Service (PDS) software finds the module on the network and assigns a temporary IP address to facilitate module access

Functional Specifications

The MVI56E-GSC/GSCXT will operate on a Local or Remote rack.

- The MVI56E-GSC/GSCXT transfers data in the largest possible I/O image block sizes, which optimizes data through-put and update time.
- The MVI56E-GSC/GSCXT appears to the ControlLogix processor as input/output (I/O) modules, rather than communication modules.
- Two ASCII serial communication ports:
  - Can independently transmit and/or receive ASCII character strings and serial byte streams
  - Each port is individually configurable

- Receive ASCII character strings or byte streams up to 4096 characters in length
- Received packet termination types:
  - Stream mode (no packet termination)
  - Receipt of specified character or characters
  - Message length timeout
  - Inter-character spacing timeout
  - Packet size limit (number of received characters/bytes)

- Module configuration and communication configuration data is transferred to the module via predefined sample ladder logic
- Module error and status conditions returned to processor for diagnostic purposes
  - Module status
  - Port error status word (bit mapped)
  - Port receive state
  - Port receive character count
  - Port receive block count
  - Port transmit state
  - Port transmit character count
  - Port transmit block count

ControlLogix® ASCII Serial Communication Example

Text Display

Printer

Barcode Scanner

Scales

Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 VDC 3 mA @ 24 VDC
Operating Temperature	32°F to 140°F (0°C to 60°C) - MVI56E-GSC
	-13°F to 158°F (-25°C to 70°C) - MVI56E-GSCXT
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Extreme/Harsh Environment	MVI56E-GSCXT comes with conformal coating
Shock	30 g operational 50 g non-operational Vibration: 5 g from 10 Hz to 150 Hz
Relative Humidity	5% to 95% RH, with no condensation
LED Indicators	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
Debug/Configuration/Application Ethernet port (E1)	
Ethernet Port	10/100 Base-T, RJ45 Connector, for CAT5 cable
	Link and Activity LED indicators
	Auto-crossover cable detection
Serial Application ports (P1 & P2)	
Software configurable communication parameters	Baud rate: 110 baud to 115.2 kbps RS-232, RS-485, and RS-422 Parity: none, odd or even Data bits: 5, 6, 7, or 8 Stop bits: 1 or 2 RTS on/off delay: 0 to 65535 milliseconds Full hardware handshaking control (optional) Radio and modem support
Application Ports (P1, P2)	RJ45 (DB-9M with supplied adapter cable) Configurable RS-232 hardware handshaking 500V Optical isolation from backplane
	RS-232, RS-422, RS-485 jumper-select, each port
	RX (Receive) and TX (Transmit) LEDs, each port
Shipped with Unit	RJ45 to DB-9M cables for each serial port

Agency Approvals & Certifications

Please visit our website: www.prosoft-technology.com