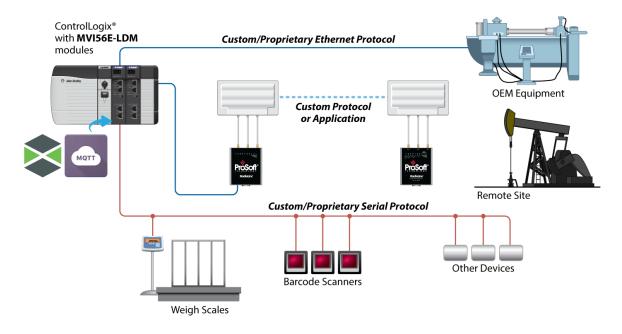# DATASHEET

MVI56E-LDM

Linux Development Module for ControlLogix™

❖ **ProSoft Technology**®

The MVI56E-LDM module allows users to develop and deploy C/C++ custom algorithm applications for ControlLogix® systems. Users are also able to create drivers for specialty Ethernet and Serial end-devices. The Linux Development module comes with a built-in API for backplane communications to the processor. With the separate development kit DVD, you are the developer who controls exactly what this module can and cannot do.

Features

- ❖ Ideal for custom algorithm applications
- ❖ Two independent Ethernet ports, and two independent, isolated, serial ports (RS232/422/485)
- ❖ Scrolling LED display for custom messages (alarms, status, etc.)
- ❖ Industrial fan-less design
- ❖ Built-in API included for backplane communications to the processor
- ❖ Linux Virtual Machine (VM) and development environment provided on our website
- ❖ VM contains preinstalled toolchain and libraries
- ❖ VM contains the popular Eclipse IDE
- ❖ Multiple Ethernet and serial port example applications provided

CPU, Memory and OS Specifications

Specification	Description
CPU	400 MHz ARM9 G20
Operating System	Linux (kernel 2.6.33.7)
Linux Distribution	Timesys
System Memory	64 MB SD RAM
Flash Memory	256 MB NAND Flash
Compact Flash	16 GB max supported (not provided)

General 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	30 g operational 50 g non-operational Vibration: 5 g from 10 to 150 Hz
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	(ERR) Application driven (APP) Application driven (OK) Application driven
4-Character, Scrolling, Alpha-Numeric LED Display	Application driven – Possible uses are: Module Version, IP, Application Port Setting, Status/Error
Ethernet ports	
2 Ethernet Ports	10/100 Mbps ports, RJ45 Connector Link and Activity LED indicators Auto-sensing crossover cable detection
Serial ports	
Full hardware handshaking control, providing radio, modem, and multi-drop support	
Serial Applications Ports	RJ45 (DB-9M with supplied adapter cable) Configurable RS-232 hardware handshaking 500 V Optical isolation from backplane RS232/422/485 jumper-select, each port RX (Receive) and TX (Transmit) LEDs, each port
Shipped with Unit	RJ45 to DB-9M cables for each serial port DB9 to screw terminal adapter
Not Shipped with Unit	LDMdevKit – Linux Development Module (Available as a Virtual Machine (VM) for download from our website)

The sample ladder and LDM development kit can be downloaded from our website: www.prosoft-technology.com

Specification	Description
Sample code included in VM	
Ethernet Client and Server	Sample code showing how to interact with the onboard Ethernet ports
Serial	Sample on how to interact with the serial port, transmit/receive ASCII
LED	Sample code to control the module's LEDs
Backplane	Example code, used with the sample ladder, shows how to interact with the backplane. It performs block transfer communication, and interacts with the LEDs.
Sample code available on ProSoft website	
ThingWorx (Sample Code)	Sample code to enable direct Thingworx connectivity
MQTT (Sample Code)	Sample code to enable connectivity to a generic-type MQTT enabled system

Agency Approvals & Certifications

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