ioLogik E2242

Active Ethernet micro controller with 4 analog inputs and 12 configurable DIOs

- **Front-end intelligence that supports 24 Click&Go™ rules**
- **Active Messaging with real-time stamp, including SMS, SNMP Trap with I/O status, TCP, and email**
- **Supports SNMPv1/v2c/v3 protocol**
- **I/O peer-to-peer function**
- **Built-in web console**
- **PC utility: Auto detection of installed modules**
- **Windows/WinCE VB/VC.NET and Linux C APIs**
- **-40 to 75°C operating temperature range (T model)**

Introduction

Moxa's ioLogik E2242 is a new type of active micro controller that can be used as an RTU (Remote Terminal Unit). Active Ethernet micro controllers are a kind of PC-based data acquisition and control device that use proactive, event-based reporting to control I/O devices. Unlike traditional RTUs, which are passive and must poll for data, Moxa's Active OPC Server makes seamless connection with SCADA systems a reality. In addition, SNMP is used for communicating with an NMS (Network Management System) for IT field users. The I/O status of an Active Ethernet micro controller can be reported and controlled automatically on-site based on user specified conditions. This report-by-exception approach, which is new to PC-based monitoring, requires far less bandwidth than traditional polling methods.

Specifications

LAN

Ethernet: 1 x 10/100 Mbps, RJ45
Protection: 1.5 KV magnetic isolation
Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, Bootp, SNMP, HTTP, CGI, SNTP

Serial Communication

Interface: RS-485-2w: Data+, Data-, GND
Serial Line Protection: 15 KV ESD for all signals

Serial Communication Parameters

Parity: None
Data Bits: 8
Stop Bits: 1
Flow Control: None
Baudrate: 1200 to 115200 bps
Protocol: Modbus/RTU

Analog Input

Channels: 4 analog inputs with differential input
Resolution: 16 bits
I/O Mode: Voltage / Current
Input Range: ±150 mV, 0 to 150 mV, ±500 V, 0 to 500 mV, ±5 V, 0 to 5 V, ±10 V, 0 to 10 V, 0 to 20 mA, 4 to 20 mA
Accuracy:
±0.1% FSR @ 25°C
±0.3% FSR @ -10 and 60°C
Sampling Rate (all channels): 100 samples/sec
Input Impedance: 200K ohms (min.)
Built-in Resistor for Current Input: 102 ohms

DI/DO Configurable Channels

Channels: 12
I/O Mode:
• DI or Event Counter (up to 900 Hz)
• DO or Pulse Output (up to 100 Hz)

Digital Input

Channels: Up to 12, source/sink selectable
Sensor Type: NPN, PNP, and Dry contact
I/O Mode: DI or event counter (up to 900 Hz)
Dry Contact:
• Logic 0: short to GND
• Logic 1: Open
Wet Contact:

DI Type / Status	Source	Sink
ON	0 to 3 VDC	10 to 30 VDC
OFF	10 to 30 VDC	0 to 3 VDC

Common Type: 6 points per COM
Isolation: 3K VDC or 2K Vrms
Counter/Frequency: 900 Hz, power off storage
Digital Filtering Time Interval: Software selectable
Over-voltage Protection: 36 VDC
Poweroff Counter: Supports poweroff counter storage function

Digital Output

Channels: Up to 12, sink type, 36 VDC, 200 mA
I/O Mode: DO or Pulse Output (up to 100 Hz)
Pulse Wave Width/Frequency: 10 ms/100 Hz
Over-voltage Protection: 45 VDC
Over-current Limit: 400 mA (typical)
Over-temperature Shutdown: 175°C (min.)
Output Current Rating: Max. 200 mA per channel
Isolation: 2K Vrms or 3K VDC (Magnetic)

Power Requirements

Power Input: 24 VDC nominal, 12 to 36 VDC
Power Consumption: 282 mA typical @ 24 VDC

Physical Characteristics

Wiring: I/O cable max. 14 AWG
Dimensions: 115 x 79 x 45.6 mm (4.53 x 3.11 x 1.80 in)
Weight: under 250 g

Environmental Limits

Operating Temperature:
Standard Models: -10 to 60°C (14 to 140°F)
Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Regulatory Approvals

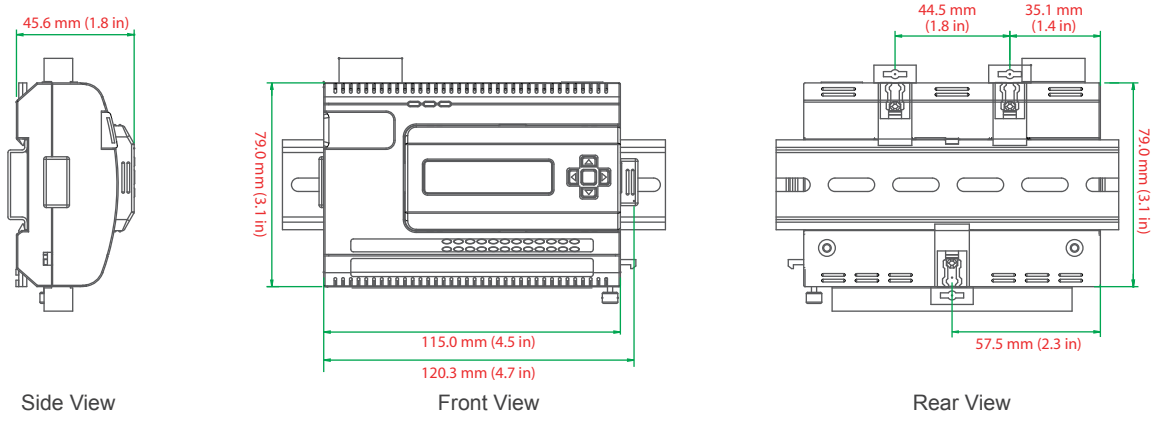
EMI: FCC Part 15, CISPR (EN55022) class A
EMS: IEC 61000-4, IEC 61000-6
Safety: UL508
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6

Note: Please check Moxa's website for the most up-to-date certification status.

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions



Side View | Front View | Rear View

Ordering Information

Available Models

ioLogik E2242: Active Ethernet micro controller with 4 analog inputs and 12 configurable DIOs, -10 to 60°C operating temperature
ioLogik E2242-T: Active Ethernet micro controller with 4 analog inputs and 12 configurable DIOs, -40 to 75°C operating temperature

Accessories (can be purchased separately)

LDP1602: LCD module with 16 x 2 text and 5 buttons

LDP1602 LCD Module

Snap-on module for the ioLogik E2200/R2100 series

- Hot-pluggable display module for ioLogik Active Ethernet micro controllers
- Easy, portable configuration kit for IP display and configuration
- Direct display for analog value and digital input, counter status
- No battery required (powered through the I/O)

Installing the LCD Module

1. Remove the ioLogik's top cover.

2. Plug in the LCD module.

3. Check and configure the IP address.

4. Check IP and I/O status.

Specifications

LCD Screen: 16 x 2 text display (in English)
Operating Temperature: 0 to 55°C (32 to 131°F)
Storage Temperature: -20 to 70°C (-4 to 158°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Ordering Information

LDP1602: LCD module with 16 x 2 text display and 5 buttons