

# ioLogik E2240

**Active Remote I/O with Ethernet and 8 Analog Inputs, 2 Analog Outputs**



## Features

- Actively transfer I/O data in real-time over Ethernet
- Easy-to-use Click&Go™ Logic for local output control and messaging
- 8-channel analog input for mV, voltage, current signal with wire-off detection (at 4-20mA)
- 2-channel analog output for voltage, current actuator control
- Connects up to 10 hosts
- SNMP to I/O mapping that works with Network Management System
- Quick programming library for VB, VC, BCB
- NIST-traceable calibration



## Linking Analog Inputs and Outputs to TCP/IP Ethernet Networks

The ioLogik™ E2240 is designed for system integrators to acquire and control remote sensors and actuators remotely over TCP/IP and Ethernet networks. Types of sensors and actuators include pH, conductivity, temperature, humidity, pressure, flow, actuator, and valves. The ioLogik™E2240 supports Ethernet and can run multiple protocols, such as

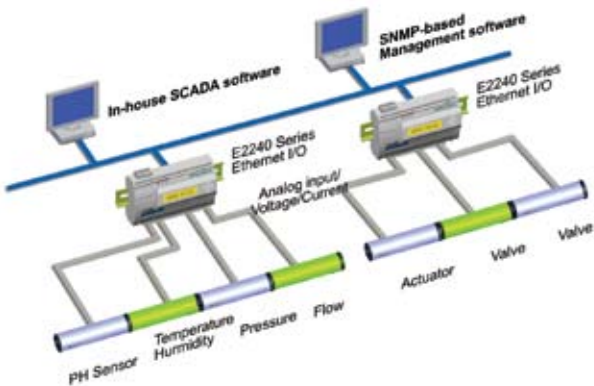
Modbus/TCP, SNMP, HTTP, TCP, UDP at 100 Mbps for high speed data acquisition. Data can be distributed to up to 10 host computers. Compared to a traditional field bus and serial interface, Ethernet-based I/O servers are more flexible with remote control and data exchange in a modern IT infrastructure.

## Independent Configuration for Multi-Functional AI and AO Channels

Each analog input can be independently configured by software to voltage or current mode. The analog input channels support various signals ranging from +/-150 mV to +/-10V at 16-bit resolution.

The analog output channels support 0 to 20 mA and 4 to 20 mA @ 12-bit resolution.

## Typical Application



## Easy On-site Management using LCD Display Module



The optional LCD display module is hot-pluggable and provides PC-free on-site management that substantially reduces configuration effort and time.

1 Active Remote I/O

## Specifications

### LAN

**Ethernet:** 10/100 Mbps, RJ45  
**Protection:** 1.5 KV magnetic isolation  
**Protocols:** Modbus/TCP, TCP/IP, UDP, DHCP, Bootp, SNMP(MIB for I/O and Network), HTTP, SNTP, Active I/O Messaging, IP filtering

### Serial

**Interface:** RS-485 (2-wire): 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  
**Speed:** 1200 to 115200 bps  
**Protocol:** Modbus/RTU  
**Built-in RTC:** Yes

### Power Requirements

**Power input:** 24 VDC nominal, 12 to 48 VDC  
**Power consumption:** 282 mA @ 24V DC (typ.)  
**Field power:** 24 VDC nominal, up to 48 VDC

### Mechanical Specifications

**Wiring:** I/O cable max. 14 AWG

### Environmental

**Operating temperature:** -10 to 60°C (14 to 140°F), 5 to 95%RH  
**Storage temperature:** -40 to 85°C (-40 to 185°F), 5 to 95%RH  
**Shock:** IEC60068-2-27  
**Freefall:** IEC60068-2-32  
**Vibration:** IEC60068-2-6

### Analog Input

**Input:** 8  
**Resolution:** 16-bit  
**Input range:** +/-150 mV, +/-500 mV, +/-5 V, +/-10 V, 0 to 20 mA, 4 to 20 mA  
**Data format:** 16-bit integer (2's complement)  
**Accuracy:** +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ 0, 60°C  
**Sampling rate:** 10 samples/sec (voltage)  
 6 samples/sec (current)  
**Input impedance:** 900k Ohm  
**Built-in resistor for current input:** 125 Ohm  
**Optical isolation:** 3K VDC  
**Overvoltage:** Can withstand continuous overvoltage (protection range -10V to 10V)

### Analog Output

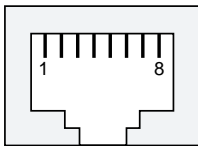
**Outputs:** 2  
**Resolution:** 12-bit  
**Output range:** 0 to 10V, 4 to 20 mA  
**Drive voltage:** 15 VDC for current output  
**Data format:** 16-bit integer (2's complement)  
**Accuracy:**  
 +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ 0, 60°C (current)  
 +/- 0.2%, FSR @ 25°C, +/- 0.4%, FSR @ 0, 60°C (voltage)  
**CMR @ 50/60 Hz:** 95 dB min.  
**Zero drift:** +/- 9 µV/°C  
**Span drift:** +/- 25 ppm/°C  
**Load resistor:** < 250 Ohm

### Agency Approvals

**EMI:** FCC Part 15, CISPR (EN55022) Class A  
**EMS:** IEC61000-4-2 (ESD), level 2/3, IEC61000-4-3 (RS), level 2, IEC61000-4-4 (EFT), level 2, IEC61000-4-5 (Surge), level 3, IEC61000-4-6 (CS), level 2, IEC61000-4-8 (PM), level 1, IEC61000-4-11 (Dip)  
**Safety:** UL 508 (pending)  
**Warranty:** 2 years

## Pin Assignment

### Ethernet



PIN	Signals
1	Tx+
2	Tx-
3	Rx+
6	Rx-

### Power / RS-485

Pin	1	2	3	4	5	6
Signal	V+	V-	FG	D+	D-	SG

### I/O (left to right)

Pin	1	2	3	4	5	6	7	8	9	10	11	12
Signal	Vin0+	Vin0-	Vin1+	Vin1-	Vin2+	Vin2-	Vin3+	Vin3-	Vin4+	Vin4-	Vin5+	Vin5-
Pin	13	14	15	16	17	18	19	20	21	22	23	24
Signal	Vin6+	Vin6-	Vin7+	Vin7-	Vout0+	Vout0-	Iout0+	Iout0-	Vout1+	Vout1-	Iout1+	Iout1-

## Ordering Information

**ioLogix E2240:** Active remote I/O server with 8 analog inputs and 2 analog outputs  
**LDP1602:** LCD display module with 16 x 2 text and 5 buttons

## Wiring Example

