

ioLogik E1200H Series

Ethernet remote I/O for offshore wind power applications



- > User-definable Modbus/TCP Slave addressing
- > 2-port Ethernet switch for daisy-chain topologies
- > Active communications with MX-AOPC UA Server
- > Easy mass deployment and configuration with ioSearch utility
- > Friendly configuration via web browser
- > Simplify I/O management with MXIO library on either Windows or Linux platform
- > IEC 60945 approval for harsh offshore environments
- > Wide operating temperature range: -40 to 75°C (-40 to 167°F)



Introduction

Industry-Proven Rugged Design

Installation of remote Ethernet I/O in offshore environments is a real challenge. It is critical to find devices properly designed for protected, safe use in these environments. Moxa's ioLogik E1200H series with IEC 60945 certifications fulfills the need for devices suitable for such demanding industrial applications. Compactly packaged in a metal housing, this rugged hardware supports operating temperatures

ranging from -40 to 75°C, meeting the stringent demands of IEC 60945 for harsh offshore applications.



Daisy-Chain Topology Reduces Deployment Costs

Thanks to its two embedded Ethernet switch ports, the ioLogik E1200H remote Ethernet I/O allows you to create daisy-chain topologies for easy cabling. In distributed Ethernet data acquisition applications, panels, units, and cabinets are often located at remote sites where

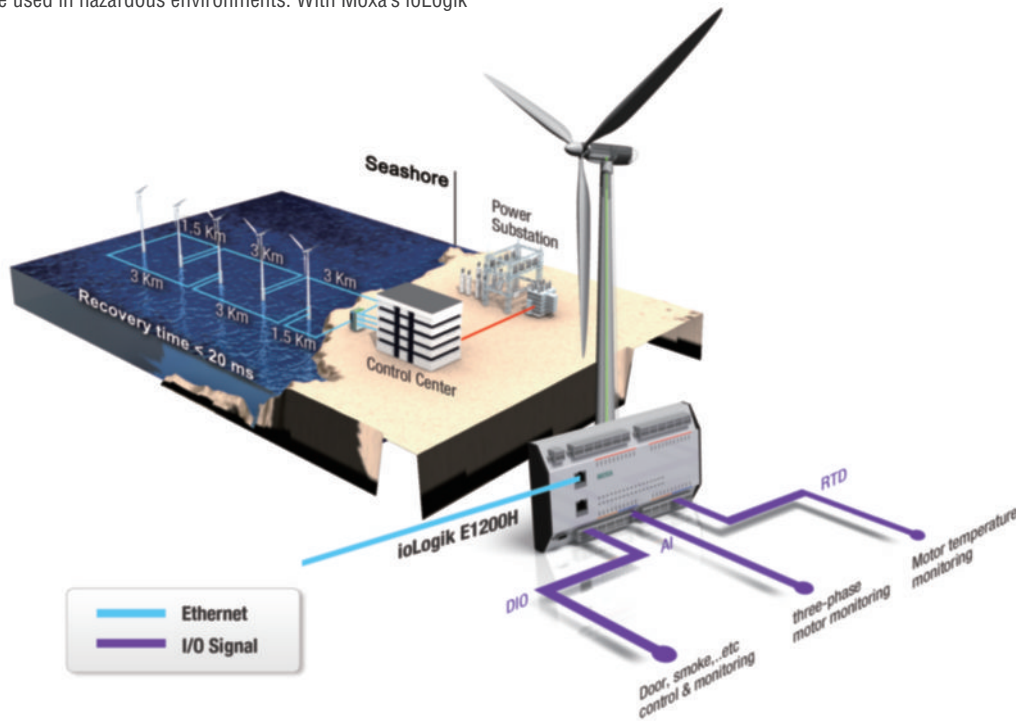
space is limited. The daisy-chain capability of the ioLogik E1200H series allows ioLogik E1200H units to connect in series either to each other or to other nearby Ethernet devices, drastically saving on both space and wiring costs.



Application: Offshore Remote Monitoring

Have you ever wondered where to find a rugged remote Ethernet I/O device for offshore facilities? You need something with the ability to withstand extreme weather conditions, wide temperature changes, and that can be used in hazardous environments. With Moxa's ioLogik

E1200H, you get a robust design that will meet your most stringent demands, ensuring your remote data acquisition applications are reliable, consistent, and safe.



ioLogik E1261H Specifications

Inputs and Outputs

Configurable DIOs (by software): 12 channels

Analog Inputs: 5 channels

RTDs: 3 channels

Isolation: 3k VDC or 2k Vrms

Digital Input

Sensor Type: Wet Contact (NPN or PNP), Dry Contact

I/O Mode: DI or Event Counter (channels 0 to 3)

Dry Contact:

- On: short to GND
- Off: open

Wet Contact (DI to GND):

- On: 0 to 3 VDC
- Off: 10 to 30 VDC

Common Type: 12 points per COM

Counter Frequency: 250 Hz

Digital Filtering Time Interval: Software Configurable

Digital Output

Type: Sink

I/O Mode: DO or Pulse Output (channels 0 to 3)

Pulse Output Frequency: 500 Hz

Over-Voltage Protection: 45 VDC

Over-Current Protection: 2.6 A (4 channels @ 650 mA)

Over-Temperature Shutdown: 175°C (typical), 150°C (min.)

Current Rating: 200 mA per channel

Analog Input

Type: Differential input

Resolution: 16 bits

I/O Mode: Voltage / Current (software selectable)

Input Range: 0 to 10 V, 0 to 20 mA, 4 to 20 mA, 4 to 20 mA (burnout detection)

Accuracy:

- ±0.5% FSR @ 25°C
- ±1.0% FSR @ -40 and 75°

Sampling Rate (all channels):

- All channels: 12 samples/sec
- Per channel: 1.5 samples/sec

Input Impedance: 10 mega-ohms (min.)

Built-in Resistor for Current Input: 120 ohms

RTDs

Sensor Type:

PT100 (-200 to 850°C)

Input Connection: 2- or 3-wire

Sampling Rate:

- All channels: 12 samples/sec
- Per channel: 1.5 samples/sec

Resolution: 0.5°C

Accuracy:

- ±0.5% FSR @ 25°C
- ±1.0% FSR @ -40 and 75°C

Input Impedance: 625 kilo-ohms

Power Requirements

Input Voltage: 12 to 48 VDC

Input Current: 235 mA @ 24 VDC

Physical Characteristics

Dimensions: 140 x 113 x 36.3 mm (5.51 x 4.45 x 1.43 in)

Weight: 825 g (1.82 lb)

MTBF (mean time between failures)

Time: 296,094 hrs

Standard: Telcordia SR332

: ioLogik E1263H Specifications

Inputs and Outputs

Configurable DI/Os (by software): 24 channels

Analog Inputs: 10 channels

RTDs: 3 channels

Isolation: 3k VDC or 2k Vrms

Digital Input

Sensor Type: Wet Contact (NPN or PNP), Dry Contact

I/O Mode: DI or Event Counter (channels 0 to 7)

Dry Contact:

- On: short to GND
- Off: open

Wet Contact (DI to GND):

- On: 0 to 3 VDC
- Off: 10 to 30 VDC

Common Type: 12 points per COM

Counter Frequency: 250 Hz

Digital Filtering Time Interval: Software configurable

Digital Output

Type: Sink

I/O Mode: DO or Pulse Output (channels 0 to 7)

Pulse Output Frequency: 500 Hz

Over-Voltage Protection: 45 VDC

Over-Current Protection: 2.6 A (4 channels @ 650 mA)

Over-Temperature Shutdown: 175°C (typical), 150°C (min.)

Current Rating: 200 mA per channel

Analog Input

Type: Differential input

Resolution: 16 bits

I/O Mode: Voltage / Current (software selectable)

Input Range: 0 to 10 V, 0 to 20 mA, 4 to 20 mA, 4 to 20 mA (burnout detection)

Accuracy:

- $\pm 0.5\%$ FSR @ 25°C
- $\pm 1.0\%$ FSR @ -40 and 75°C

Sampling Rate (all channels):

- All channels: 12 samples/sec
- Per channel: 0.9 samples/sec

Input Impedance: 10 mega-ohms (min.)

Built-in Resistor for Current Input: 120 ohms

RTDs

Sensor Type:

- PT100 (-200 to 850°C)

Input connection: 2- or 3-wire

Sampling Rate:

- All channels: 12 samples/sec
- Per channel: 0.9 samples/sec

Resolution: 0.5°C

Accuracy:

- $\pm 0.5\%$ FSR @ 25°C
- $\pm 1.0\%$ FSR @ -40 and 75°C

Input Impedance: 625 kilo-ohms

Power Requirements

Input Voltage: 12 to 48 VDC

Input Current: 343 mA @ 24 VDC

Physical Characteristics

Dimensions: 204 x 113 x 36.3 mm (8.03 x 4.45 x 1.43 in)

Weight: 945 g (2.08 lb)

MTBF (mean time between failures)

Time: 180,390 hrs

Standard: Telcordia SR332

: Common Specifications

LAN

Ethernet: 2 switched 10/100 Mbps RJ45 ports

Protection: 1.5 kV magnetic isolation

Protocols: Modbus/TCP (slave), TCP/IP, UDP, DHCP, BOOTP, HTTP

Serial

Interface: 1 RS-232/422/485 (software selectable) DB9 male port

Parity: None

Data Bits: 8

Stop Bits: 1

Flow Control: None

Baudrate: 300 to 115200 bps

Protocols: Modbus RTU (slave)

Physical Characteristics

Wiring: I/O cable max. 14 AWG

Mounting: DIN rail (standard), wall (with optional kit)

Environmental Limits

Operating Temperature: -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)

Shock: IEC 60068-2-27

Vibration: IEC 60068-2-6

Altitude: Up to 2000 m

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Standards and Certifications

Safety: UL 508

EMC: EN 55032/24, EN 61000-6-2/6-4

EMI: CISPR 32, FCC Part 15B Class A

EMS:

IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV

IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m

IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV

IEC 61000-4-5 Surge: Power: 2 kV

IEC 61000-4-6 CS: 3 V

IEC 61000-4-8

Maritime: IEC 60945

Green Product: RoHS, CRoHS, WEEE

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

Warranty

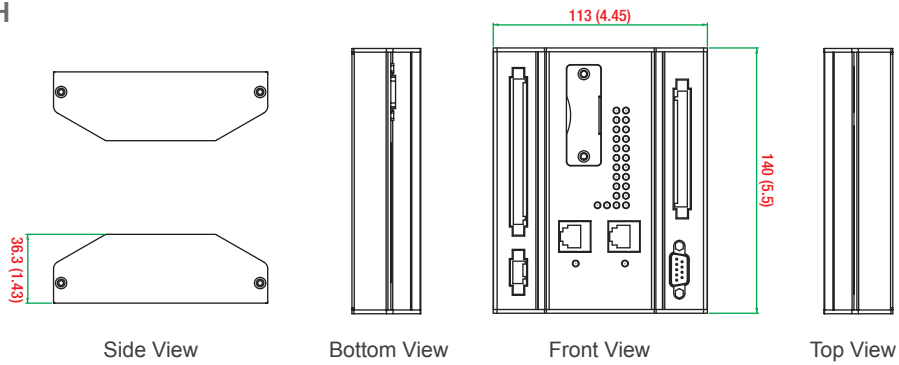
Warranty Period: 5 years

Details: See www.moxa.com/warranty

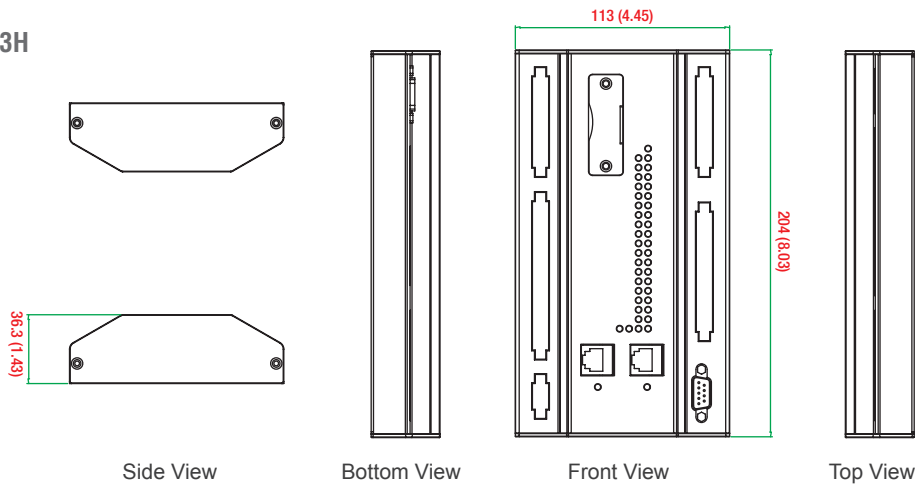
Dimensions

Unit: mm (inch)

ioLogik E1261H



ioLogik E1263H



Ordering Information

Available Models

ioLogik E1261H-T: Ethernet remote I/O with 2-port Ethernet switch, 12 DIos, 5 AIs and 3 RTDs, -40 to 75°C operating temperature.

ioLogik E1263H-T: Ethernet remote I/O with 2-port Ethernet switch, 24 DIos, 10 AIs and 3 RTDs, -40 to 75°C operating temperature.

Optional Accessories (can be purchased separately)

WK-90: Wall-mounting kit, BKTx2 FMSx6 NI Nylok M3x6

Package Checklist

- ioLogik E1200H-T