

ioLogik E1200H Series

Ethernet remote I/O for offshore wind power applications



Features and Benefits

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

Certifications



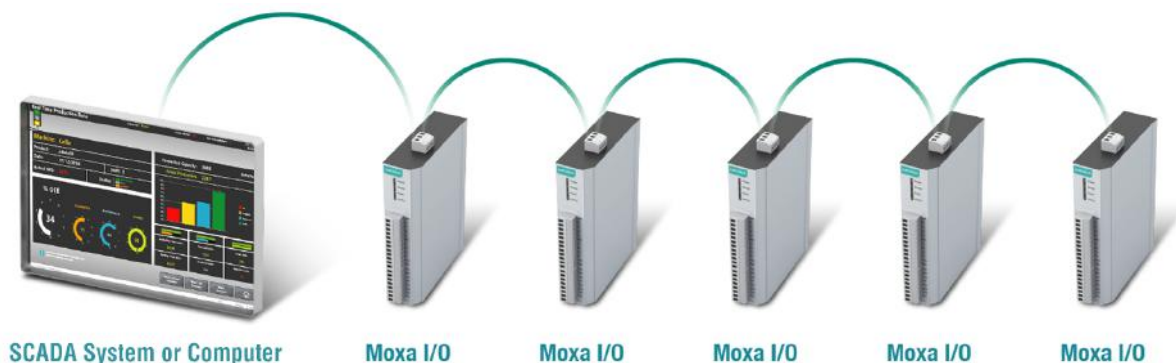
Introduction

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 IEC 60945-certified ioLogik E1200H Series is ideal for these kinds of demanding industrial applications. Packaged in a compact metal housing, this rugged hardware supports operating temperatures ranging from -40 to 75°C, meeting the stringent demands of IEC 60945 needed for harsh offshore applications.

Daisy-Chain Ethernet I/O Connection

This industrial Ethernet remote I/O comes with two switched Ethernet ports to allow for the free flow of information downstream to another local Ethernet device, or upstream to a control server via expandable daisy-chained Ethernet I/O arrays. Applications such as factory automation, security and surveillance systems, and tunneled connections can make use of daisy-chained Ethernet for building multidrop I/O networks over standard Ethernet cables. Many industrial automation users are familiar with multidrop as the configuration most typically used in fieldbus solutions.

The daisy-chain capabilities supported by ioLogik Ethernet remote I/O units not only increase the expandability and installation possibilities for your remote I/O applications, but also lower overall costs by reducing the need for separate Ethernet switches. Daisy-chaining devices in this way will also reduce overall labor and cabling expenses.



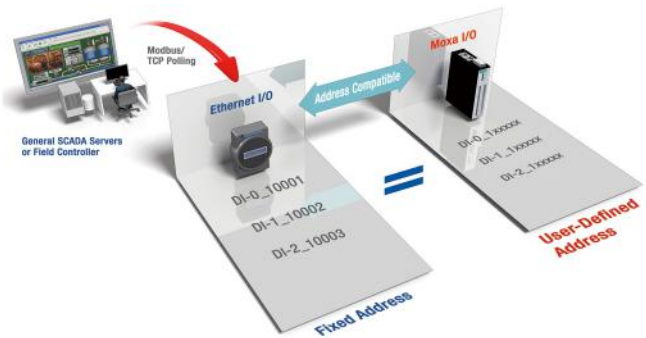
Push Technology for Events

When used with MX-AOPC UA Server, devices can use active push communications when communicating changes in state and/or events to a SCADA system. Unlike a polling system, when using a push architecture for communications with a SCADA system, messages will only be delivered when changes in state or configured events occur, resulting in higher accuracy and lower amounts of data that need to be transferred.



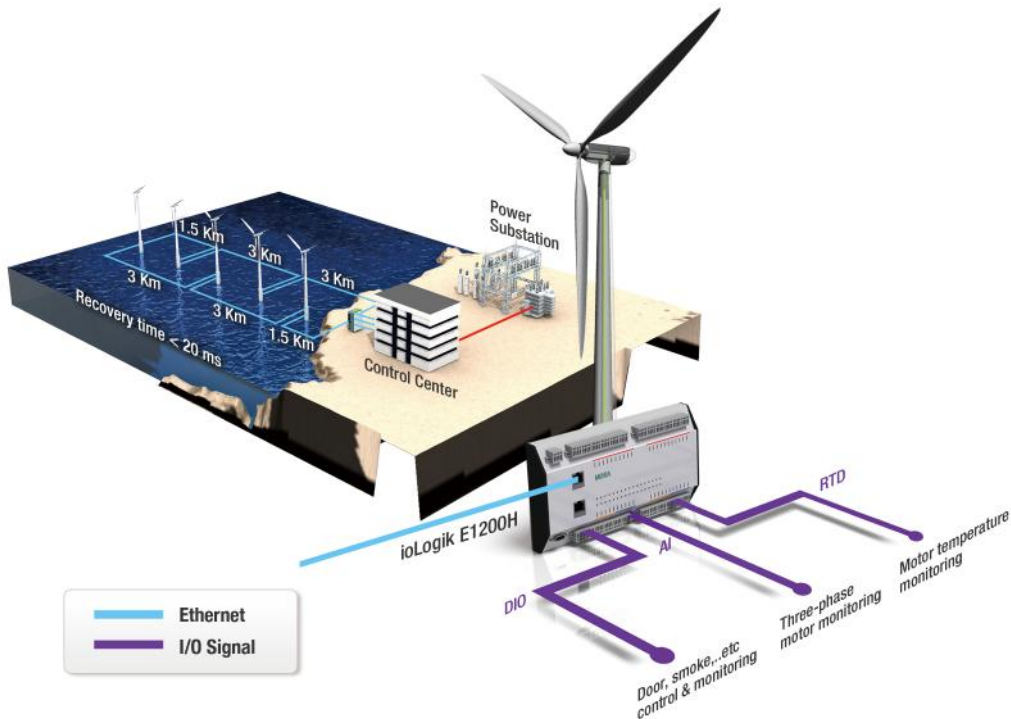
User-Definable Modbus TCP Addressing for Painless Upgrading of Existing Systems

For Modbus devices that are controlled and detected by fixed addresses, users need to spend a vast amount of time researching and verifying initial configurations. Users need to locate each device's networking details, such as I/O channels or vendor-defined addresses, to enable the initial or start address of a SCADA system or PLC. Devices that implement user-definable Modbus TCP addressing offer greater flexibility, and setup is easy. Instead of worrying about individual devices, users simply configure the function and address map to fit their needs.



Application: Offshore Remote Monitoring

Offshore facilities need rugged remote Ethernet I/O devices that have the ability to withstand extreme weather conditions and wide temperature changes, and that can be used in hazardous environments. Moxa's I/O with its robust design will meet your most stringent demands, ensuring your remote data acquisition applications are reliable, consistent, and safe.



Specifications

Input/Output Interface

Analog Input Channels	ioLogik E1261H-T: 5 ioLogik E1263H-T: 10
Configurable DIO Channels (by software)	ioLogik E1261H-T: 12 ioLogik E1263H-T: 24
Isolation	3k VDC or 2k Vrms
RTD Channels	3
Buttons	Reset button

Digital Inputs

Connector	Spring-type Euroblock terminal
Counter Frequency	250 Hz
Digital Filtering Time Interval	Software configurable
Dry Contact	On: short to GND Off: open
I/O Mode	DI or event counter
Points per COM	12 channels
Sensor Type	Dry contact Wet Contact (NPN or PNP)
Wet Contact (DI to GND)	On: 10 to 30 VDC Off: 0 to 3 VDC

Digital Outputs

Connector	Spring-type Euroblock terminal
Current Rating	200 mA per channel
I/O Mode	DO or pulse output
I/O Type	Sink
Over-Current Protection	0.65 A per channel @ 25°C
Over-Temperature Shutdown	175°C (typical), 150°C (min.)
Over-Voltage Protection	35 VDC
Pulse Output Frequency	500 Hz

Analog Inputs

Connector	Spring-type Euroblock terminal
Built-in Resistor for Current Input	120 ohms
I/O Mode	Voltage/Current
I/O Type	Differential
Input Impedance	10 mega-ohms (min.)
Input Range	0 to 10 VDC 0 to 20 mA 4 to 20 mA

	4 to 20 mA (with burn-out detection)
Sampling Rate	ioLogik E1261H-T: All channels: 12 samples/sec Per channel: 1.5 samples/sec ioLogik E1263H-T: All channels: 12 samples/sec Per channel: 0.9 samples/sec
Accuracy	±0.5% FSR @ 25°C ±1% FSR @ -40 and 75°C
Resolution	16 bits

RTDs

Connector	Spring-type Euroblock terminal
Input Connection	2- or 3-wire
Input Impedance	625 kilo-ohms (min.)
Sampling Rate	ioLogik E1261H-T: All channels: 12 samples/sec Per channel: 1.5 samples/sec ioLogik E1263H-T: All channels: 12 samples/sec Per channel: 0.9 samples/sec
Accuracy	±0.5% FSR @ 25°C ±1.0% FSR @ -40 and 75°C
Sensor Type	PT100 (-200 to 850°C)
Resolution	0.5°C

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2, 1 MAC address (Ethernet bypass)
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Configuration Options	Web Console (HTTP), Windows Utility (ioSearch)
Industrial Protocols	Modbus TCP Server (Slave), Moxa AOPC (Active Tag), MXIO Library
Management	BOOTP, DHCP Client, HTTP, IPv4, TCP/IP, UDP

LED Interface

LED Indicators	PWR, RDY, EXP, P1, LAN 1, LAN2, AI channels, DIO channels, RTD channels
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Serial Interface

Baudrate	300 bps to 115.2 kbps
Connector	Terminal block
Data Bits	8
Flow Control	None
Serial Standards	RS-232/422/485
Stop Bits	1

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND

Serial Software Features

Industrial Protocols	Modbus RTU Server (slave)
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Modbus TCP

Functions Supported	1, 2, 3, 4, 5, 6, 15, 16, 23
Mode	Client

Power Parameters

Power Connector	Spring-type Euroblock terminal
No. of Power Inputs	1
Input Voltage	12 to 48 VDC
Power Consumption	ioLogik E1261H-T: 235 mA @ 24 VDC ioLogik E1263H-T: 343 mA @ 24 VDC

Physical Characteristics

Housing	Aluminum
Dimensions	ioLogik E1261H-T: 140 x 113 x 36.3 mm (5.51 x 4.45 x 1.43 in) ioLogik E1263H-T: 204 x 113 x 36.3 mm (8.03 x 4.45 x 1.43 in)
Weight	ioLogik E1261H-T: 825 g (1.82 lb) ioLogik E1263H-T: 945 g (2.08 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Wiring	I/O cable, 16 to 26 AWG Power cable, 12 to 24 AWG

Environmental Limits

Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Altitude	2000 m ¹

Standards and Certifications

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 PFMF
Environmental Testing	IEC 60068-2-1, IEC 60945 IEC 60068-2-2, IEC 60945
Safety	UL 508

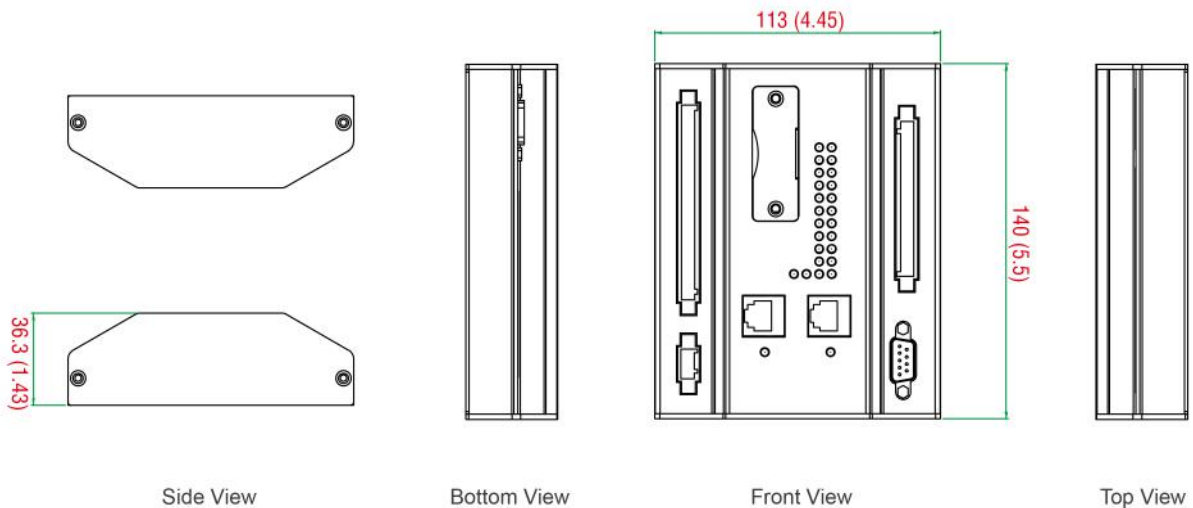
1. Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Declaration	
Green Product	RoHS, CRoHS, WEEE
MTBF	
Time	ioLogik E1261H-T: 296,094 hrs ioLogik E1263H-T: 180,390 hrs
Standards	Telcordia SR332
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x ioLogik E1200H Series remote I/O
Installation Kit	1 x terminal block, 3-pin, 3.81 mm 1 x terminal block, 20-pin, 3.81 mm
Documentation	1 x warranty card

Dimensions

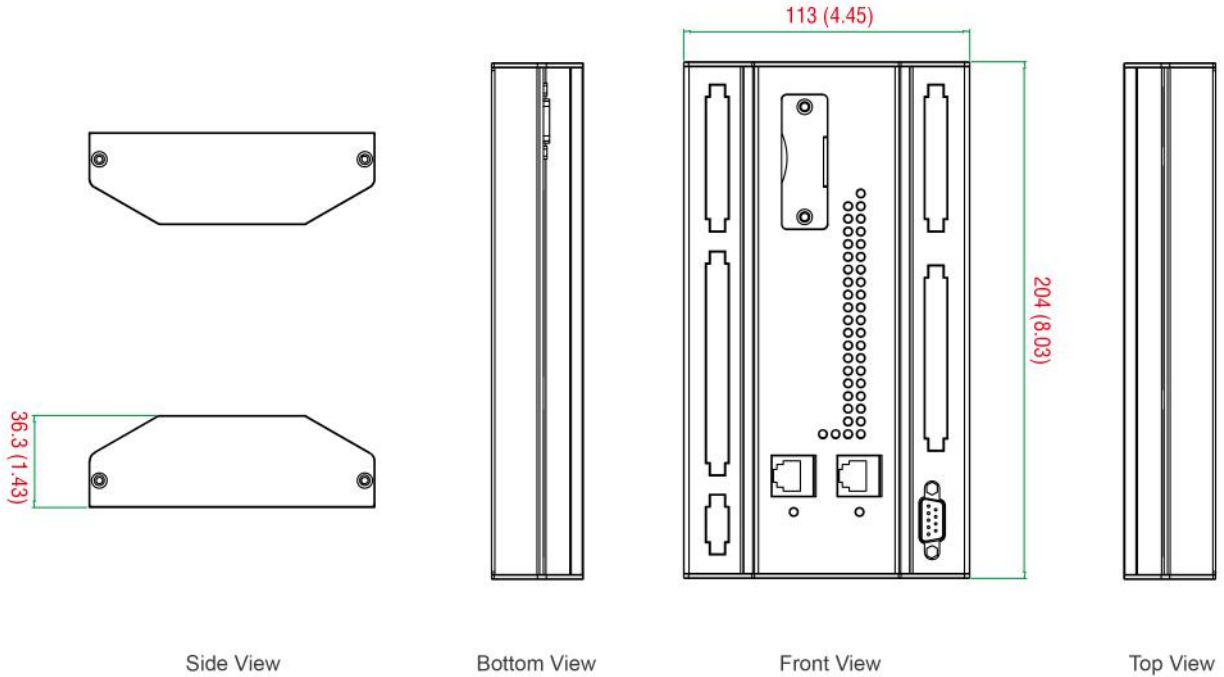
ioLogik E1261H

Unit: mm (inch)



ioLogik E1263H

Unit: mm (inch)



Ordering Information

Model Name	Input/Output Interface
ioLogik E1261H-T	12 x DIO, 5 x AI, 3 x RTD
ioLogik E1263H-T	24 x DIO, 10 x AI, 3 x RTD

Accessories (sold separately)

Software

MX-AOPC UA Server	OPC UA Server software for converting fieldbus to the OPC UA standard
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Wall-Mounting Kits

WK-90-01	Wall-mounting kit, 2 plates, 6 screws, 90 x 62 x 2.5 mm
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