

# ioLogik E1200W Series

Ethernet remote I/O for wind power applications



## Features and Benefits

- User-definable Modbus TCP Slave addressing
- Active communications 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
- Wide operating temperature range: -40 to 75°C (-40 to 167°F)

## Certifications



## Introduction

Moxa's ioLogik E1200W Series is designed for Ethernet-based remote condition monitoring systems. With 3 RTD, 5 AI, and 12 DIO channels, it features an I/O combination that is ideal for monitoring wind turbines and environmental conditions. Unlike other remote I/O products, which are passive and must poll for data, the ioLogik E1200W Series supports active communication with Moxa's patented Active OPC Server to seamlessly connect with SCADA systems in real time. This report-by-exception approach, which is new to PC-based monitoring, requires far less bandwidth than traditional polling methods.

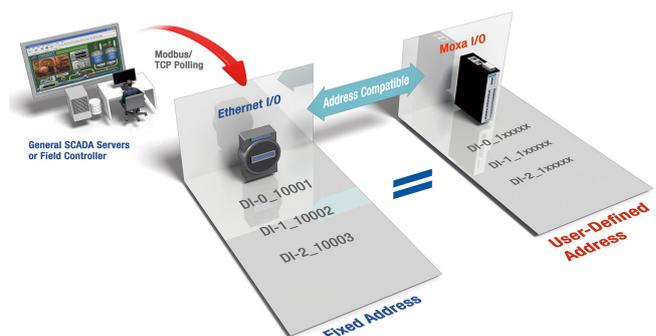
## Push Technology for Events

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.



## Specifications

### Input/Output Interface

Analog Input Channels	5
Configurable DIO Channels (by software)	12
Isolation	3k VDC or 2k Vrms
RTD Channels	3
Buttons	Reset button

### Digital Inputs

Connector	Screw-fastened 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	Screw-fastened 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

Accuracy	±0.1% FSR @ 25°C ±1.0% FSR @ -40 and 75°C
Built-in Resistor for Current Input	120 ohms
Connector	Screw-fastened Euroblock terminal
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)
Resolution	16 bits
Sampling Rate	All channels: 12 samples/sec Per channel: 2.4 samples/sec

#### RTDs

Accuracy	±0.1% FSR @ 25°C ±1.0% FSR @ -40 and 75°C
Connector	Screw-fastened Euroblock terminal
Input Connection	2- or 3-wire
Input Impedance	625 kilo-ohms (min.)
Sensor Type	PT50, PT100, PT200, PT500 (-200 to 850°C)
Sampling Rate	All channels: 12 samples/sec Per channel: 4 samples/sec
Resolution	16 bits

#### Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1
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, Serial
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#### Serial Interface

Baudrate	1200 bps to 115.2 kbps
Connector	Terminal block
Data Bits	8
Flow Control	None
Serial Standards	RS-485
Stop Bits	1

#### Serial Signals

RS-485-2w	Data+, Data-, GND
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#### 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	Screw-fastened Euroblock terminal
No. of Power Inputs	1
Input Voltage	12 to 36 VDC
Power Consumption	143 mA @ 24 VDC

## Physical Characteristics

Housing	Plastic
Dimensions	115 x 79 x 40.4 mm (4.53 x 3.11 x 1.59 in)
Weight	250 g (0.55 lb)
Installation	DIN-rail mounting, Wall mounting
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 <sup>1</sup>

## Standards and Certifications

EMC	EN 55032/24
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: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	UL 508
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

## Declaration

Green Product	RoHS, CRoHS, WEEE
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## MTBF

Time	367,508 hrs
Standards	Telcordia SR332

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

## Warranty

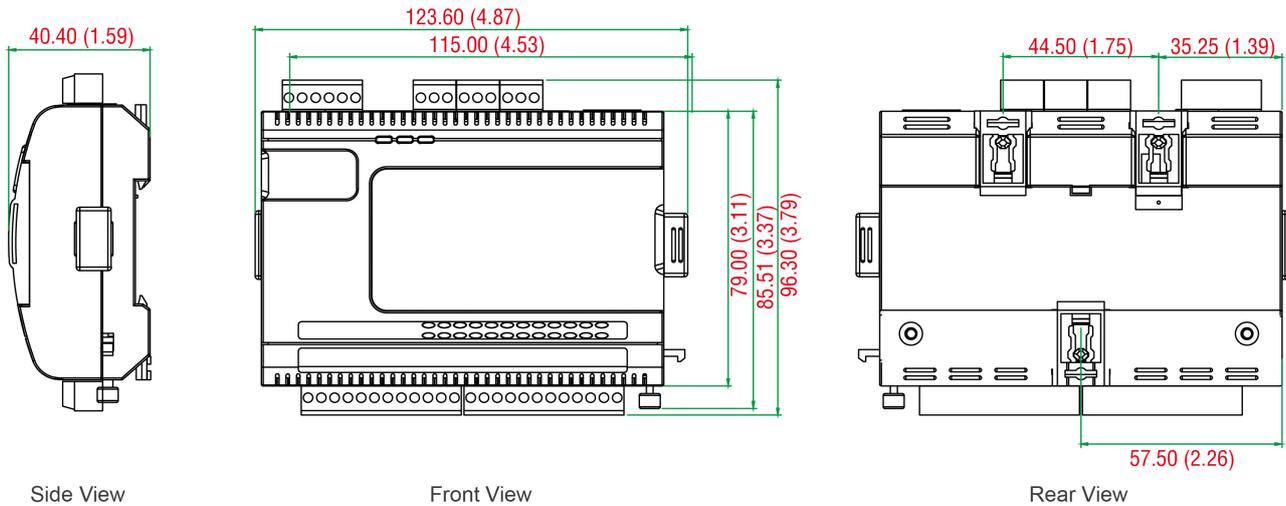
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x ioLogik E1200W Series remote I/O
Installation Kit	1 x terminal block, 6-pin, 3.81 mm 1 x terminal block, 3-pin, 3.81 mm
Documentation	1 x warranty card

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	Input/Output Interface
ioLogik E1261W-T	12 x DIO, 5 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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