

# ioLogik R2140

**RS-485 remote I/O with 8 analog inputs and 2 analog outputs**



- > 8 analog input channels for millivolts (mV), voltage, and current signal with wire-off detection (at 4 to 20 mA)
- > 2-channel analog outputs for voltage, current actuator control
- > 16-bit resolution analog inputs, 12-bit resolution analog output
- > Easy-to-use, quick programming library for VB, VC++, BCB, .NET
- > NIST-Traceability calibration for analog I/O channels
- > Firmware upgradable over RS-485



## Specifications

### 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:** 8, sink type, 45 VDC, 200 mA  
**Resolution:** 16 bits  
**I/O Mode:** Voltage / Current  
**Input Range:** ±150 mV, ±500 mV, ±5 V, ±10 V, 0 to 20 mA, 4 to 20 mA  
**Data Format:** 16-bit integer  
**Accuracy:**  
 ±0.1% FSR @ 25°C  
 ±0.3% FSR @ -10 and 60°C  
**Sampling Rate (all channels):**  
 10 samples/sec (voltage)  
 6 samples/sec (current)  
**Built-in Resistor for Current Input:** 106 ohms  
**CMR @ 50/60 Hz:** 95 dB min.  
**Isolation:** 3K VDC or 2K Vrms

### Analog Output

**Channels:** 2  
**Resolution:** 12 bits  
**Output Range:** 0 to 10 V, 4 to 20 mA  
**Drive Voltage:** 15 VDC for current output  
**Accuracy:**  
 ±0.1% FSR @ 25°C,  
 ±0.3% FSR @ -10 and 60°C  
**Zero Drift:** ±9 µV/°C  
**Span Drift:** ±25 ppm/°C  
**Load Resistor:** Less than 250 ohms

### Power Requirements

**Power Input:** 24 VDC nominal, 12 to 48 VDC  
**Power Consumption:** 282 mA typical @ 24 VDC

### Physical Characteristics

**Wiring:** I/O cable max. 14AWG  
**Dimensions:** 115 x 79 x 45.63 mm (4.53 x 3.11 x 1.8 in)  
**Weight:** 200 g

### Environmental Limits

**Operating Temperature:** -10 to 60°C (14 to 140°F)  
**Storage Temperature:** -40 to 85°C (-40 to 185°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

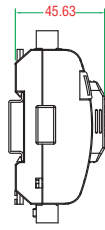
### Regulatory Approvals

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

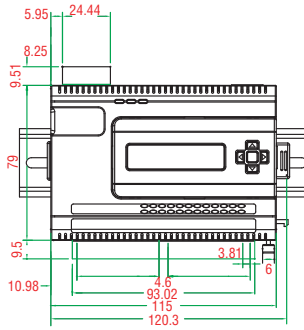
### Warranty

**Warranty Period:** 2 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

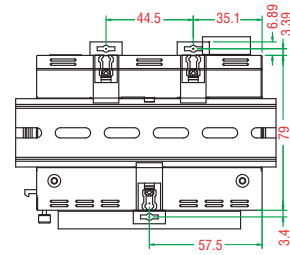
**Dimensions (unit = mm)**



Side View



Front View



Rear View

**Pin Assignment**

**I/O (left to right)**

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

**Ordering Information**

**ioLogik R2140:** RS-485 remote I/O with 8 analog inputs and 2 analog outputs

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