

ioLogik R1200 系列

RS-485 遠端 I/O



特色與優點

- 雙 RS-485 串口遠端 I/O，內建中繼器
- 支援多點通訊參數安裝
- 可透過 USB 安裝通訊參數及升級韌體
- 可透過 RS-485 連結升級韌體
- 支援 -40 至 85°C (-40 至 185°F) 的寬溫環境

認證



簡介

ioLogik R1200 系列 RS-485 串列遠端 I/O 裝置相當適合建立符合成本效益、可靠且易於維護的遠端製程控制 I/O 系統。遠端串列 I/O 產品為製程工程師提供簡化接線的好處，只需要兩條線就可以與控制器和其他 RS-485 裝置進行通訊，同時採用 EIA/TIA RS-485 通訊協定長距離高速傳輸和接收資料。除了透過軟體或 USB 進行通訊配置和雙 RS-485 連接埠設計，Moxa 的遠端 I/O 裝置也不需要耗費大量人力設定和維護資料擷取和自動化系統。Moxa 也提供達到更大彈性的不同 I/O 組合，而且這些組合與許多不同的應用程式相容。

易於使用的軟體介面，便於維護

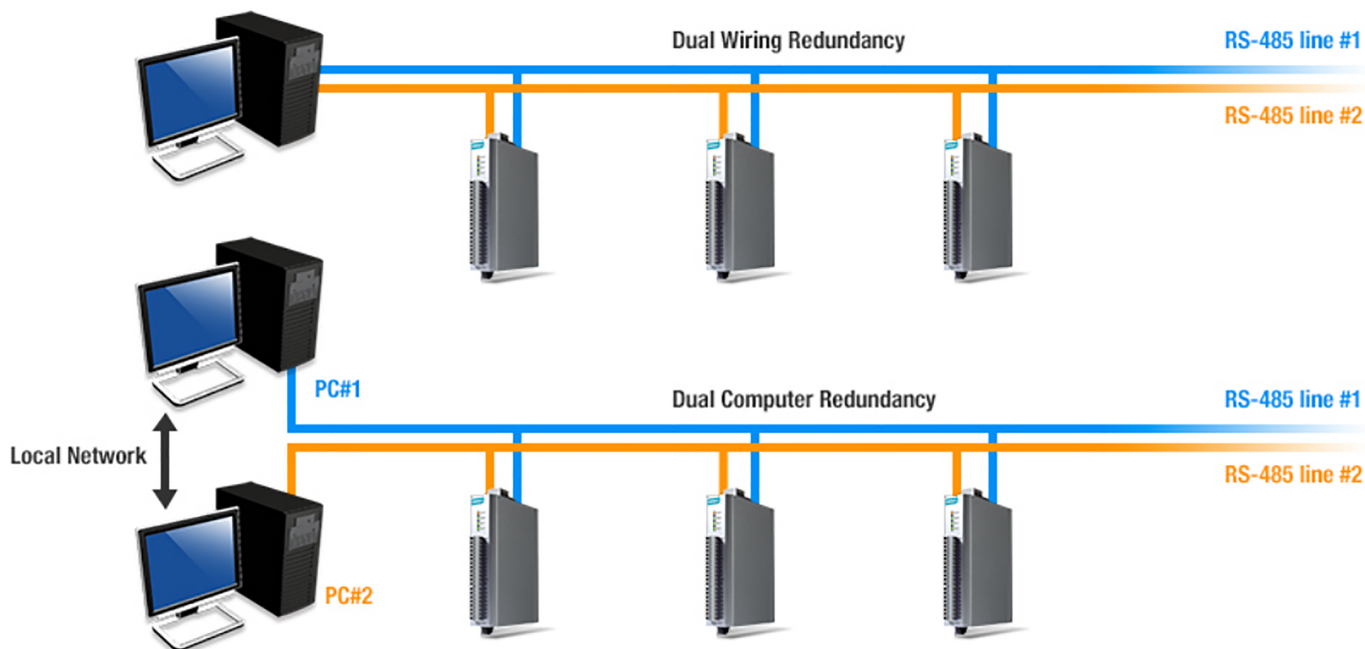
藉由 Moxa 易於使用的 ioSearch 軟體，您可以透過圖形化使用者介面快速存取 ioLogik R1200 裝置的所有狀態資訊和設定。此外，ioSearch 也提供透過 RS-485 網路為所有 ioLogik R1200 裝置更新韌體的簡單方法，使您可以遠端更新韌體。免費且易於使用的 ioSearch 軟體減少設定通訊介面所需的維護時間和人力。多個 ioLogik R1200 位於同一個 RS-485 網路上時，您不再需要在設定過程中進行數百次設定。其實只需要透過圖形化使用者介面配置和複製各個 ioLogik R1200 的傳輸率和模式。相較於較傳統的方法，這種方便的軟體功能可減少維護工程師的工作量，並大幅簡化裝置配置的升級過程。

創新的硬體設計減少部署工作並提高維護效率

Moxa 擁有業界首創採用 USB 設計的 RS-485 串列遠端 I/O，為升級和配置 RS-485 遠端 I/O 通訊裝置和韌體提供創新的解決方案。只需要將配置上傳到 USB 隨身碟，並且將 USB 隨身碟插入現場裝置，所有配置和韌體更新就會自動上傳到現場裝置。

節約備分和冗餘接線成本的硬體設計

Moxa ioLogik R1200 系列提供雙 RS-485 連接埠，以便 RS-485 連接埠損壞時，您可以快速切換到另一個 RS-485 連接埠，以便進行快速測試或維修。RS-485 遠端 I/O 裝置被視為低成本技術，然而 Moxa 的 RS-485 連接埠可節省更多成本。藉由 ioLogik R1200，您可以使用我們的雙 RS-485 連接埠來設定接線、提供冗餘或使用兩種網路拓樸。對於冗餘接線，當電腦偵測到其中的一個 RS-485 連線沒有回應時，這可以快速切換到另一條 RS-485 線路，藉以確保現場感測器與中央電腦之間的通訊。此外，使用者可以自由定義設定。對於冗餘方面，ioLogik R1200 會在系統發生故障時為系統操作人員提供安全備份。



規格

Input/Output Interface

Buttons	Reset button
Analog Input Channels	ioLogik R1240 Series: 8
Analog Output Channels	ioLogik R1241 Series: 4
Configurable DIO Channels (by software)	ioLogik R1212 Series: 8
Digital Input Channels	ioLogik R1210 Series: 16 ioLogik R1212 Series: 8 ioLogik R1214 Series: 6
Isolation	3k VDC or 2k Vrms
Relay Channels	ioLogik R1214 Series: 6

Digital Inputs

Connector	Screw-fastened Euroblock terminal
Counter Frequency	2.5 kHz
Digital Filtering Time Interval	Software configurable
Dry Contact	On: short to GND Off: open
I/O Mode	DI or event counter
Points per COM	ioLogik R1210/R1212 Series: 8 channels ioLogik R1214 Series: 6 channels
Sensor Type	Dry contact Wet Contact (NPN or PNP)
Wet Contact (DI to COM)	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
Pulse Output Frequency	5 kHz
Over-Current Protection	0.65 A per channel @ 25°C
Over-Temperature Shutdown	175°C (typical), 150°C (min.)
Over-Voltage Protection	45 VDC (typical)

Relays

Breakdown Voltage	500 VAC
Connector	Screw-fastened Euroblock terminal
Contact Current Rating	Resistive load: 5 A @ 30 VDC, 250 VAC, 110 VAC
Contact Resistance	100 milli-ohms (max.)
Electrical Endurance	100,000 operations @ 5 A resistive load
Initial Insulation Resistance	1,000 mega-ohms (min.) @ 500 VDC
Mechanical Endurance	5,000,000 operations
Pulse Output Frequency	0.3 Hz at rated load
Type	Form A (N.O.) power relay
Note	Ambient humidity must be non-condensing and remain between 5 and 95%. The relays may malfunction when operating in high condensation environments below 0°C.

Analog Inputs

Accuracy	ioLogik R1240: ±0.1% FSR @ 25°C ±0.3% FSR @ -10 to 60°C ioLogik R1240-T: ±0.1% FSR @ 25°C ±0.3% FSR @ -10 to 60°C ±0.5% FSR @ -40 to 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: 1.5 samples/sec Only one channel enabled: 12 samples/sec

Analog Outputs

Accuracy	ioLogik R1241: ±0.1% FSR @ 25°C ±0.3% FSR @ -10 to 60°C ioLogik R1241-T: ±0.1% FSR @ 25°C ±0.3% FSR @ -40 to 75°C
Connector	Screw-fastened Euroblock terminal
Output Range	0 to 10 VDC 0 to 20 mA 4 to 20 mA
Resolution	12-bit
Voltage Output	10 mA (max.)
Load (Current Mode)	Internal power: 400 ohms (max.) 24 V external power: 1000 ohms (max.)

LED Interface

LED Indicators	PWR, RDY, P1, P2
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Serial Interface

Baudrate	1200 bps to 921.6 kbps
Connector	Terminal block
No. of Ports	2
Parity	None Even Odd
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Serial Standards	RS-485
Stop Bits	1, 2
Surge	1 kV
ESD	15 kV
Data Bits	8
Flow Control	None XON/XOFF

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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Power Parameters

Power Connector	Screw-fastened Euroblock terminal
No. of Power Inputs	1
Input Voltage	12 to 48 VDC
Power Consumption	ioLogik R1210 Series: 154 mA @ 24 VDC ioLogik R1212 Series: 187 mA @ 24 VDC ioLogik R1214 Series: 207 mA @ 24 VDC ioLogik R1240 Series: 216 mA @ 24 VDC ioLogik R1241 Series: 343 mA @ 24 VDC

Physical Characteristics

Housing	Plastic
Dimensions	27.8 x 124 x 84 mm (1.09 x 4.88 x 3.31 in)
Weight	200 g (0.44 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	Standard Models: -10 to 75°C (14 to 167°F) Wide Temp. Models: -40 to 85°C (-40 to 185°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
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: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 3 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	1,239,293 hrs
Standards	Telcordia SR332

1. 如果您需要產品能在高海拔地區正常運作，請與 Moxa 聯繫。

Warranty

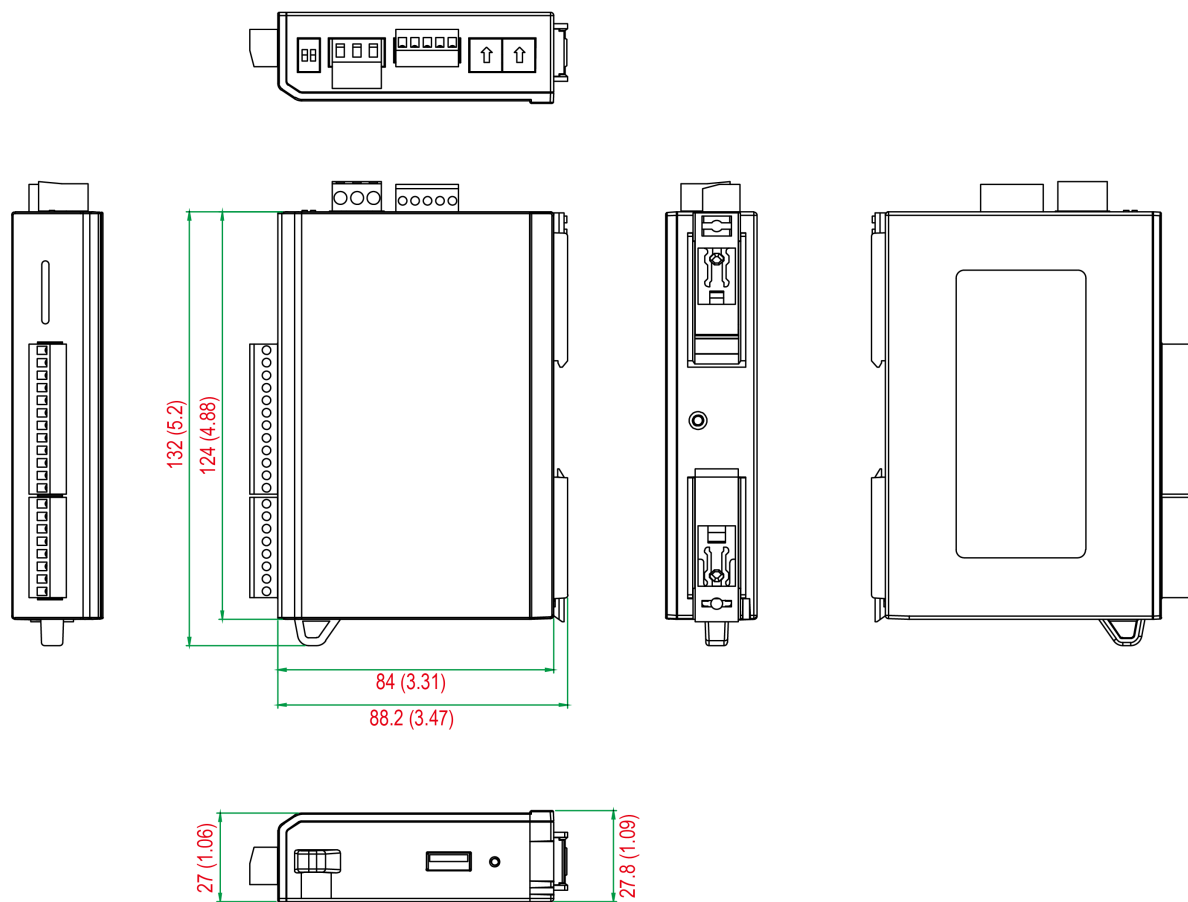
Warranty Period	ioLogik R1214: 2 years ² ioLogik R1210/R1212/R1240/R1241 Series: 5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x ioLogik R1200 Series remote I/O
Installation Kit	1 x terminal block, 12-pin, 3.81 mm 1 x terminal block, 3-pin, 5.00 mm 1 x terminal block, 8-pin, 3.81 mm
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	Input/Output Interface	Operating Temp.
ioLogik R1210	16 x DI	-10 to 75°C
ioLogik R1210-T	16 x DI	-40 to 85°C
ioLogik R1212	8 x DI, 8 x DIO	-10 to 75°C
ioLogik R1212-T	8 x DI, 8 x DIO	-40 to 85°C
ioLogik R1214	6 x DI, 6 x Relay	-10 to 75°C

2. 由於功率繼電器的使用壽命有限，使用此元件的產品享有 2 年保固。

Model Name	Input/Output Interface	Operating Temp.
ioLogik R1214-T	6 x DI, 6 x Relay	-40 to 85°C
ioLogik R1240	8 x AI	-10 to 75°C
ioLogik R1240-T	8 x AI	-40 to 85°C
ioLogik R1241	4 x AO	-10 to 75°C
ioLogik R1241-T	4 x AO	-40 to 85°C

配件（選購）

Software

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