

NPort IA5000 系列

工業自動化的 1 和 2 埠串列設備伺服器



特色與優點

- 通訊端模式：TCP server、TCP client、UDP
- 用於 2 線和 4 線 RS-485 的專利 ADDC® (自動數據流向控制)
- 串聯乙太網路埠，方便佈線 (僅適用於 RJ45 連接器)
- 備援直流電源輸入
- 透過繼電器輸出和電子郵件發出雙重告警
- 10/100BaseTX (RJ45) 或 100BaseFX (單模或多模，配備 SC 連接器)
- IP30 防護等級外殼

認證

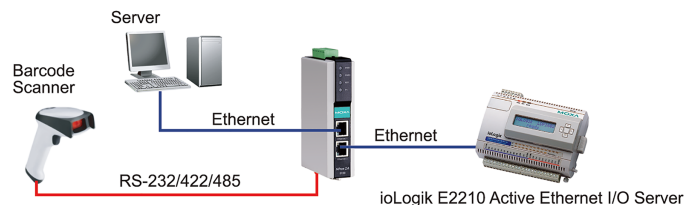


簡介

NPort® IA 設備伺服器為工業自動化應用提供簡單可靠的串列轉乙太網路連線。此設備伺服器可以將任何串列裝置連接至乙太網路，而且為了確保與網路軟體可相容，這些設備伺服器支援多種連接埠操作模式，包括 TCP Server、TCP Client 和 UDP。NPort® IA 設備伺服器的絕佳可靠性使其成為建立網路連線至 RS232/422/485 串列裝置 (例如：PLC、感測器、電表、馬達、驅動器、條碼掃描器和操作人員顯示器) 的理想選擇。所有型號都很輕巧，且有堅固的外殼，可安裝在 DIN 軌道上。

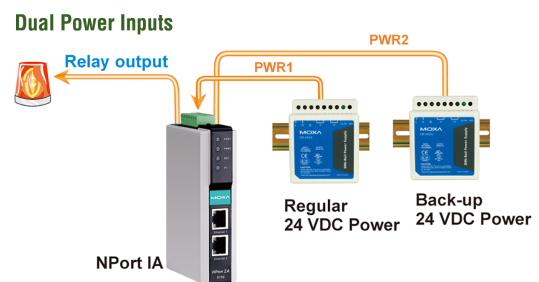
串聯乙太網路埠可簡化佈線 (10/100BaseTX 型號)

NPort® IA5150 和 IA5250 設備伺服器各有兩個乙太網路埠，可做為乙太網路交換器連接埠。其中一個連接埠可直接連接至網路或伺服器，另一個可以連接至另一台 NPort® 設備伺服器或乙太網路裝置。雙乙太網路埠您毋須將每個裝置單獨連接到一台乙太網路交換機，因此可降低佈線成本。



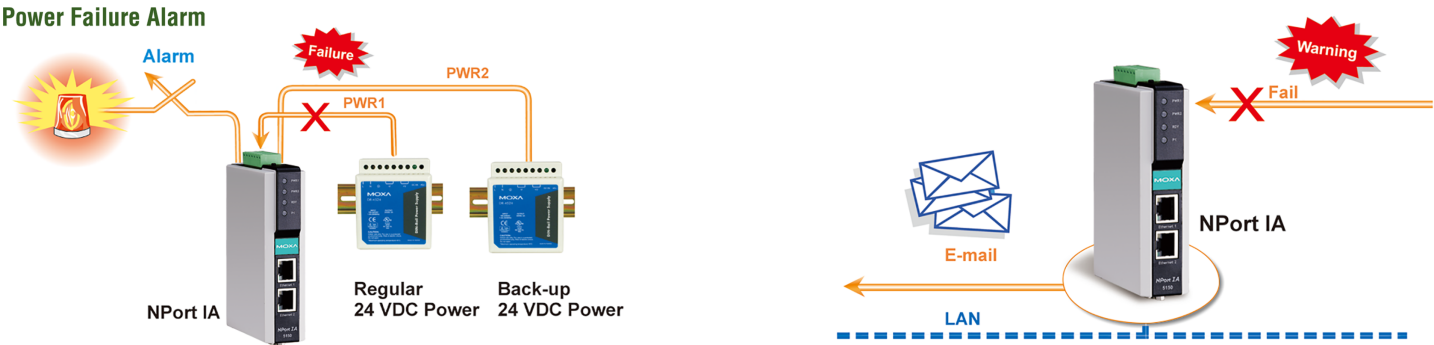
備援電源輸入

NPort® IA5000 設備伺服器支援兩個電源輸入，可同時連接兩台直流電源。如果一個電源發生故障，另一個電源會自動接替。備援電源輸入有助於確保設備伺服器運作不中斷。



繼電器輸出警告和電子郵件警示

當網路斷線、電源故障，或者當 DCD 或 DSR 串列訊號發生變化時，內建繼電器輸出可向管理員發出警示。Web 主控台會顯示哪個乙太網路連線或電源輸入發生故障，或者哪個串列訊號發生變化。偵測到異常狀況時，也可以發出電子郵件警告。這些實用的功能，讓維運工程師可以迅速回應緊急狀況。



乙太網路通訊光纖

NPort® IA5000 系列包括 100BaseFX 光纖型號，多模型號最遠可達 5 公里傳輸距離，以及單模型號最遠可達 40 公里的傳輸距離。光纖相當適合工業應用，因為其不受電磁雜訊干擾的影響。對於出現高接地迴路電壓的環境，光纖提供最好的隔離保護，而且，由於不會產生火花，因此光纖在危險環境中使用比銅線更安全。

工業級認證

為了確保在工業環境中安全可靠運作，NPort® IA5000 設備伺服器已獲得多項工業認證，包括 IP30 防護等級、工業控制設備的 UL 508 安全認證和危險場所防爆認證。認證包括 UL/cUL Class 1 Division 2 Groups A、B、C、D，以及 ATEX Class 1 Zone 2 和 IECEx Zone 2。

規格

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2 (1 IP, Ethernet cascade, NPort IA-5150/5150I/5250/5250I)
Magnetic Isolation Protection	1.5 kV (built-in)
100BaseFX Ports (multi-mode SC connector)	NPort IA-5000-M-SC Models: 1 NPort IA-5000-M-ST Models: 1
100BaseFX Ports (single-mode SC connector)	NPort IA-5000-S-SC Models: 1

Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 μm	G.652
			800 MHz x km	
Typical Distance		4 km	5 km	40 km
Wavelength	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360		1280 to 1340
	RX Range (nm)	1100 to 1600		1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34
	Link Budget (dB)	12		29
	Dispersion Penalty (dB)	3		1

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Ethernet Software Features

Configuration Options	Web Console (HTTP), Windows Utility, Telnet Console, Serial Console
Management	DHCP Client, IPv4, SMTP, SNMPv1, Telnet, ARP, BOOTP, DNS, HTTP, TCP/IP, UDP, ICMP, Rtelnet
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X, macOS 10.12, macOS 10.13, macOS 10.14, macOS 10.15
Android API	Android 3.1.x and later
Time Management	SNTP
MIB	RFC1213, RFC1317

Security Functions

Authentication	Local database (password only)
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Serial Interface

Connector	NPort IA-5150: DB9 male for RS-232 and terminal block for RS-422/485 NPort IA-5250: DB9 male for RS-232/422/485
No. of Ports	NPort IA-5150 Models: 1 NPort IA-5250 Models: 2
Serial Standards	RS-232, RS-422, RS-485
Baudrate	Supports standard baudrates (unit=bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230400
Data Bits	5, 6, 7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2
Flow Control	RTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFF
Terminator for RS-485	120 ohms
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Isolation	2 kV (I models)
RS-485 Data Direction Control	ADDC® (automatic data direction control)

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND

Power Parameters

Input Voltage	12 to 48 VDC
Input Current	NPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC

	NPort IA-5150I/IA-5150I-T/IA-5150-S-SC/IA-5150-S-SC-T/IA-5150I-M-SC/IA-5150I-M-SC-T/IA-5150I-S-SC/IA-5150I-S-SC-T: 555 mA @ 12 VDC NPort IA-5250I/IA-5250I-T/IA-5150-M-SC/IA-5150-M-SC-T/IA-5150-M-ST/IA-5150-M-ST-T: 510 mA @ 12 VDC
No. of Power Inputs	2
Power Connector	Terminal block

Relays

Contact Current Rating	Resistive load: 1 A @ 30 VDC
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Physical Characteristics

Housing	Plastic
IP Rating	IP30
Dimensions	29 x 89.2 x 118.5 mm (0.82 x 3.51 x 4.57 in)
Weight	NPort IA-5150: 360 g (0.79 lb) NPort IA-5250: 380 g (0.84 lb)
Installation	DIN-rail mounting

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11
Safety	IEC 60950-1, EN 60950-1, EN 62368-1, UL 508
Maritime	DNV
Hazardous Locations	ATEX, Class I Division 2, IECEx
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6, IEC 60068-2-64

Declaration

Green Product	RoHS, CRoHS, WEEE
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MTBF

Time	NPort IA-5150/IA-5150I Models: 1,349,710 hrs NPort IA-5150-M-SC/M-ST/S-SC Models: 1,175,887 hrs NPort IA-5150I-M-SC Models: 768,343 hrs NPort IA-5150I-S-SC Models: 763,707 hrs NPort IA-5250/IA-5250I Models: 1,236,384 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

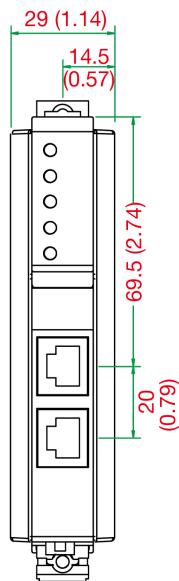
Package Contents

Device	1 x NPort IA-5000 Series device server
Documentation	1 x quick installation guide 1 x warranty card

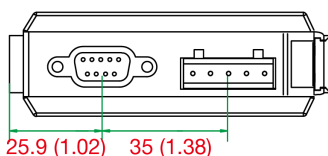
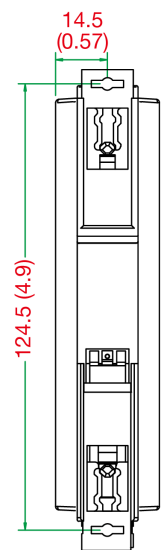
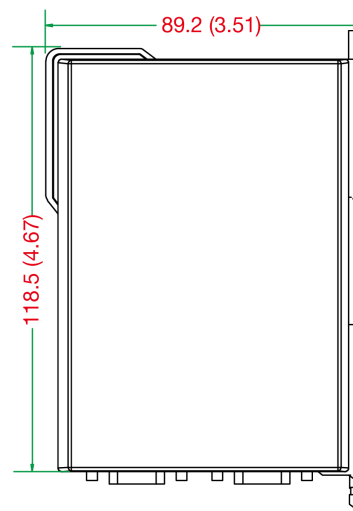
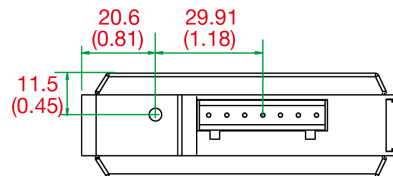
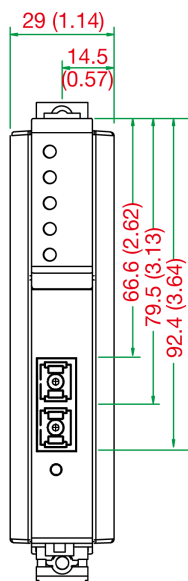
尺寸

單位：公釐（英吋）

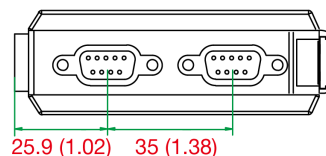
NPort IA-5150
NPort IA-5150I
NPort IA-5250
NPort IA-5250I



NPort IA-5150-M-SC
NPort IA-5150-S-SC
NPort IA-5150I-M-SC
NPort IA-5150I-S-SC
NPort IA-5150-M-ST



NPort IA-5150
NPort IA-5150I
NPort IA-5150-M-SC
NPort IA-5150-S-SC
NPort IA-5150I-S-SC
NPort IA-5150I-M-SC
NPort IA-5150-M-ST



NPort IA-5250
NPort IA-5250I

訂購資訊

Model Name	No. of Ethernet Ports	Ethernet Port Connector	Operating Temp.	No. of Serial Ports	Serial Isolation	Certification: Hazardous Locations
NPort IA-5150	2	RJ45	0 to 60°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-T	2	RJ45	-40 to 75°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-M-SC	1	Multi-mode SC	0 to 60°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-M-SC-T	1	Multi-mode SC	-40 to 75°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-M-ST	1	Multi-mode ST	0 to 60°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-M-ST-T	1	Multi-mode ST	-40 to 75°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-S-SC	1	Single-mode SC	0 to 60°C	1	-	ATEX, C1D2, IECEx
NPort IA-5150-S-SC-T	1	Single-mode SC	-40 to 75°C	1	-	ATEX, C1D2, IECEx
NPort IA-5250	2	RJ45	0 to 60°C	2	-	ATEX, C1D2, IECEx
NPort IA-5250-T	2	RJ45	-40 to 75°C	2	-	ATEX, C1D2, IECEx
NPort IA-5150I	2	RJ45	0 to 60°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5150I-T	2	RJ45	-40 to 75°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5150I-M-SC	1	Multi-mode SC	0 to 60°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5150I-M-SC-T	1	Multi-mode SC	-40 to 75°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5150I-S-SC	1	Single-mode SC	0 to 60°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5150I-S-SC-T	1	Single-mode SC	-40 to 75°C	1	2 kV	ATEX, C1D2, IECEx
NPort IA-5250I	2	RJ45	0 to 60°C	2	2 kV	ATEX, C1D2, IECEx
NPort IA-5250I-T	2	RJ45	-40 to 75°C	2	2 kV	ATEX, C1D2, IECEx

配件 (選購)

Cables

CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm
CBL-RJ458P-100	8-pin RJ45 CAT5 Ethernet cable, 1 m
CBL-RJ45SF9-150	8-pin RJ45 to DB25 male serial cable with shielding, 1.5m

Connectors

ADP-RJ458P-DB9F	DB9 female to RJ45 connector
Mini DB9F-to-TB	DB9 female to terminal block connector

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