

NPort IA5000A 系列

用於工業自動化的 1、2 和 4 埠串列設備伺服器



特色與優點

- 2 個乙太網路埠，可使用相同的 IP 或雙 IP 位址來實現網路冗餘
- 通過 C1D2、ATEX 和 IECEx 認證，適用於嚴苛的工業環境
- 串連乙太網路埠，易於佈線
- 強化的區域網路、串列和電力突波保護
- 用於安全電源/串列連接的螺絲式接線端子模組
- 支援備援直流電源輸入
- 透過繼電器輸出和電子郵件發出警告和警報
- 串列訊號具備 2 kV 隔離保護功能（隔離型號）
- -40 至 75°C 操作溫度範圍（-T 型號）

認證

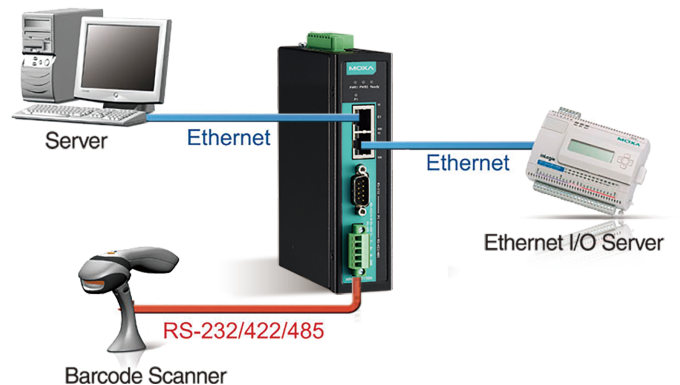


簡介

NPort IA5000A 設備伺服器專為連接工業自動化串列設備所設計，例如 PLC、感測器、儀表、馬達、驅動器、條碼掃描器及操作員顯示器。此設備伺服器結構堅固，採用金屬外殼與螺絲連接器，並提供完整的突波保護。NPort IA5000A 設備伺服器相當易用，為您提供穩定可靠的串列轉乙太網路解決方案。

串聯乙太網路埠使佈線更輕鬆

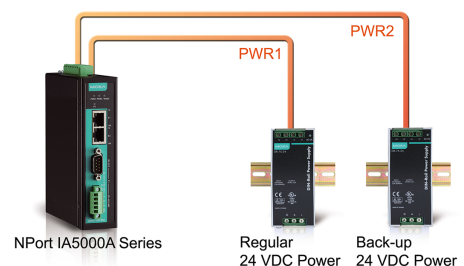
每個 NPort IA5000A 設備伺服器均具有兩個乙太網路埠，可做為乙太網路交換器埠使用。一個埠直接連至網路或伺服器，另一個埠則可連接至另一個 NPort IA 設備伺服器或另一個乙太網路設備。雙乙太網路埠無需將每個裝置個別連接到單獨的乙太網路交換器，即可協助降低接線成本。



備援電源輸入

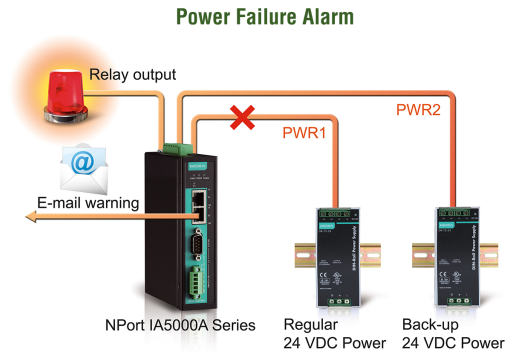
NPort IA5000A 系列設備伺服器具備兩路電源輸入，可同時連接至多個直流電源。若其中一路電源失效，另一路電源將自動接手。備援電源輸入有助於確保設備伺服器運作不中斷。

Dual Power Inputs



繼電器輸出警告與電子郵件警報

內建的繼電器輸出可用於在網路斷線、電源失效或 DCD/DSR 串列訊號變更時提醒網管人員。偵測到異常時，系統也可發出電子郵件警告。這些功能是維護工程師在緊急情況下能夠迅速做出反應的利器。



串列、乙太網路和電源的突波保護

Moxa 領先的突波保護技術，為串列、乙太網路和電源線提供完整的保護，並通過 IEC 61000-4-5 認證標準。此款進階突波保護功能提供了強韌的串列轉乙太網路解決方案，可保護電氣設備免受電壓尖峰影響，並抵禦電氣干擾，適用於石油、天然氣及電力自動化等應用場景。

工業級認證

為確保在工業環境中安全且可靠地運作，NPort® IA5000A 設備伺服器已取得多項工業認證，包括機械防護的 IP30 等級，以及工業控制設備的 UL 508 安全認證。此外，這些設備伺服器符合 UL/cUL 列名（適用於 Class 1, Division 2, Groups A, B, C, D）、ATEX Class 1 Zone 2，並符合 IECEx 標準，可於危險位置使用。

規格

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	Supports 2 IP addresses Auto MDI/MDI-X connection
Magnetic Isolation Protection	1.5 kV (built-in)
Ethernet Software Features	
Configuration Options	Web Console (HTTP/HTTPS) Windows Utility Device Search Utility (DSU) MCC Tool Serial Console Telnet Console
Management	ARP BOOTP DHCP Client DNS HTTP HTTPS ICMP IPv4 LLDP Rtelnet SMTP SNMPv1/v2c TCP/IP Telnet UDP
Filter	IGMP v1/v2
Windows Real COM Drivers	Windows 11, 10, 8.1, 8, 7, Vista, XP, ME, 98 and 95 Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008, 2003, 2000 and NT Windows Embedded CE 5.0 and 6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 6.x, 5.x, 4.x, 3.x, 2.6.x and 2.4.x
Fixed TTY Drivers	macOS versions: 14, 13, 12, 11 and 10.1x
Virtual Machine	VMWare ESXi (Windows 11 / 10) VMware Fusion (Windows on macOS 14, 13, 12, 11 and 10.1x)

	Parallels Desktop (Windows on macOS 14, 13, 12, 11 and 10.1x)
Arm®-based Platform Support	Windows 11 Linux Kernel 6.x, 5.x and 4.x macOS 14, 13, 12 and 11
Android API	Android 3.1.x and later
Time Management	SNTP

Security Functions

Authentication	Local database
Encryption	HTTPS AES-128 RSA-1024 SHA-1 SHA-256
Security Protocols	HTTPS (TLS 1.2) IA5450A Models: SNMPv3

Serial Interface

Connector	NPort IA5150A Models: DB9 male (RS-232), Terminal Block (RS-422/485) NPort IA5250A/IA5450A Models: DB9 male (RS-232/422/485)
No. of Ports	NPort IA5150A Models: 1 NPort IA5250A Models: 2 NPort IA5450A Models: 4
Serial Standards	RS-232 RS-422 RS-485
Operation Modes	Disabled Ethernet Modem Pair Connection Real COM Reverse Telnet RFC2217 TCP Client TCP Server UDP
Baudrate	Supports standard baudrates (unit=bps): 50, 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230.4k, 460.8k, 921.6k
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None RTS/CTS (RS-232 only) DTR/DSR (RS-232 only) XON/XOFF
Isolation	NPort IA5150AI/IA5250AI/IA5450AI Models: 2 kV (I models)
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
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 Current	NPort IA5150A Models: 220 mA @ 12 VDC NPort IA5150AI Models: 225 mA @ 12 VDC NPort IA5250A Models: 250 mA @ 12 VDC NPort IA5250AI Models: 290 mA @ 12 VDC NPort IA5450A Models: 374 mA @ 12 VDC NPort IA5450AI Models: 512 mA @ 12 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	2
Power Connector	Terminal block

Physical Characteristics

Housing	Metal
Dimensions	NPort IA5150A/IA5250A Models: 36 x 105 x 140 mm (1.42 x 4.13 x 5.51 in) NPort IA5450A Models: 45.8 x 134 x 105 mm (1.8 x 5.28 x 4.13 in)
Weight	NPort IA5150A Models: 475 g (1.05 lb) NPort IA5250A Models: 485 g (1.07 lb) NPort IA5450A Models: 560 g (1.23 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

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 75°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: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m IEC 61000-4-8 PFMF IEC 61000-4-11
Hazardous Locations	NPort IA5100A/IA5200A Models: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2 NPort IA5100A-IEX/IA5200A-IEX Models: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2, IECEx NPort IA5400A Models: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2, IECEx
Safety	UL 508
Vibration	IEC 60068-2-6

Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

Declaration

Green Product	RoHS, CRoHS, WEEE
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MTBF

Time	NPort IA5150A/IA5250A Models: 262,805 hrs NPort IA5450A Models: 763,711 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

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

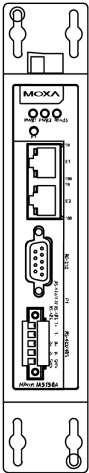
Package Contents

Device	1 x NPort IA5000A Series device server
Documentation	1 x quick installation guide 1 x warranty card

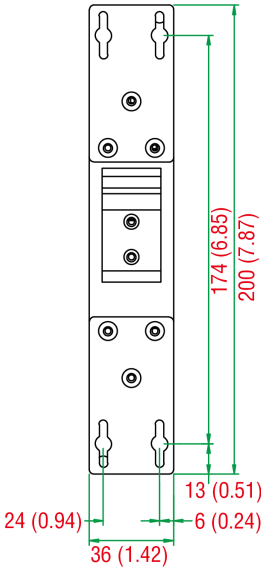
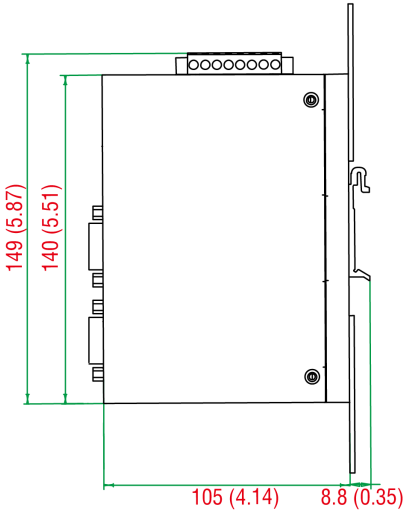
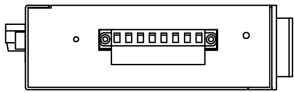
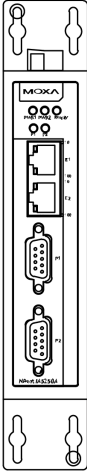
尺寸

單位：公釐（英吋）

NPort IA5150A
NPort IA5150AI

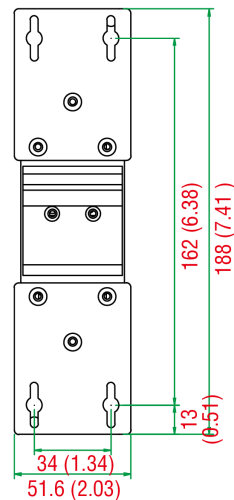
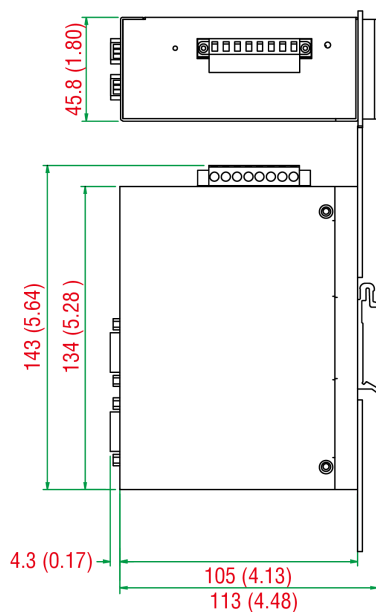
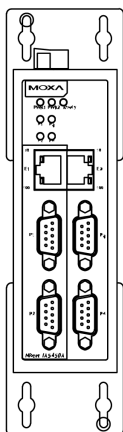


NPort IA5250A
NPort IA5250AI



單位：公釐（英吋）

NPort IA5450A
NPort IA5450AI



訂購資訊

Model Name	Operating Temp.	Serial Standards	Serial Isolation	No. of Serial Ports	Certification: Hazardous Locations
NPort IA5150A	0 to 60°C	RS-232/422/485	–	1	ATEX, C1D2
NPort IA5150A-T	-40 to 75°C	RS-232/422/485	–	1	ATEX, C1D2
NPort IA5150AI	0 to 60°C	RS-232/422/485	2 kV	1	ATEX, C1D2
NPort IA5150AI-T	-40 to 75°C	RS-232/422/485	2 kV	1	ATEX, C1D2
NPort IA5150A-IEEX	0 to 60°C	RS-232/422/485	–	1	ATEX, C1D2, IECEx
NPort IA5150A-T-IEEX	-40 to 75°C	RS-232/422/485	–	1	ATEX, C1D2, IECEx
NPort IA5150AI-IEEX	0 to 60°C	RS-232/422/485	2 kV	1	ATEX, C1D2, IECEx
NPort IA5150AI-T-IEEX	-40 to 75°C	RS-232/422/485	2 kV	1	ATEX, C1D2, IECEx
NPort IA5250A	0 to 60°C	RS-232/422/485	–	2	ATEX, C1D2
NPort IA5250A-T	-40 to 75°C	RS-232/422/485	–	2	ATEX, C1D2
NPort IA5250AI	0 to 60°C	RS-232/422/485	2 kV	2	ATEX, C1D2
NPort IA5250AI-T	-40 to 75°C	RS-232/422/485	2 kV	2	ATEX, C1D2
NPort IA5250A-IEEX	0 to 60°C	RS-232/422/485	–	2	ATEX, C1D2, IECEx
NPort IA5250A-T-IEEX	-40 to 75°C	RS-232/422/485	–	2	ATEX, C1D2, IECEx
NPort IA5250AI-IEEX	0 to 60°C	RS-232/422/485	2 kV	2	ATEX, C1D2, IECEx
NPort IA5250AI-T-IEEX	-40 to 75°C	RS-232/422/485	2 kV	2	ATEX, C1D2, IECEx
NPort IA5450A	0 to 60°C	RS-232/422/485	–	4	ATEX, C1D2, IECEx
NPort IA5450A-T	-40 to 75°C	RS-232/422/485	–	4	ATEX, C1D2, IECEx
NPort IA5450AI	0 to 60°C	RS-232/422/485	2 kV	4	ATEX, C1D2, IECEx
NPort IA5450AI-T	-40 to 75°C	RS-232/422/485	2 kV	4	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 DB9 female 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

Power Cords

CBL-PJTB-10	Non-locking barrel plug to bare-wire cable
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Power Supplies

HDR-60-24	60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature
NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature

Wall-Mounting Kits

WK-36-02	DIN-rail/wall-mounting kit, 2 plates, 6 screws Applicable Models: NPort IA5150A NPort IA5250A
WK-51-01	Wall mounting kit with 2 plates (51.6 x 67 x 2 mm) and 6 screws Applicable Models: NPort IA5450A

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