NPort IA5000 Series

1 and 2-port serial device servers for industrial automation



Features and Benefits

- Socket modes: TCP server, TCP client, UDP
- Patented ADDC $\ensuremath{\mathbb{R}}$ (Automatic Data Direction Control) for 2-wire and 4-wire RS-485
- · Cascading Ethernet ports for easy wiring (applies only to RJ45 connectors)
- Redundant DC power inputs
- · Warnings and alerts by relay output and email
- 10/100BaseTX (RJ45) or 100BaseFX (single mode or multi-mode with SC connector)
- · IP30-rated housing

Certifications



Introduction

NPort® IA device servers provide easy and reliable serial-to-Ethernet connectivity for industrial automation applications. The device servers can connect any serial device to an Ethernet network, and to ensure compatibility with network software, they support a variety of port operation modes, including TCP Server, TCP Client, and UDP. The rock-solid reliability of the NPort® IA device servers makes them an ideal choice for establishing network access to RS-232/422/485 serial devices such as PLCs, sensors, meters, motors, drives, barcode readers, and operator displays. All models are housed in a compact, rugged housing that is DIN-rail mountable.

Cascading Ethernet Ports Make Wiring Easy (10/100BaseTX models)

The NPort® IA5150 and IA5250 device servers each have two Ethernet ports that can be used as Ethernet switch ports. One port connects directly to the network or server, and the other port can be connected to either another NPort® IA device server or an Ethernet device. The dual Ethernet ports help reduce wiring costs by eliminating the need to connect each device to a separate Ethernet switch.

Redundant Power Inputs

The NPort® IA5000 device servers have two power inputs that can be connected simultaneously to live DC power sources. If one power source fails, the other source takes over automatically. Redundant power inputs help assure that your device server will operate nonstop.





Relay Output Warning and Email Alerts

The built-in relay output can be used to alert administrators of problems with the Ethernet links or power inputs, or when there is a change in the DCD or DSR serial signals. The web console indicates which Ethernet link or power input has failed, or which serial signal has changed. An email warning can also be issued when an exception is detected. These functions are valuable tools that enable maintenance engineers to react promptly to emergency situations.





Optical Fiber for Ethernet Communication

The NPort® IA5000 Series includes 100BaseFX fiber models that support transmission distances up to 5 km for multi-mode models, and up to 40 km for single-mode models. Optical fiber is well-suited for industrial applications because it is immune to electromagnetic noise and interference. For environments that experience high ground loop voltages, fiber provides the best isolation protection, and because there is no danger of sparking, optical fiber is safer than copper wire to use in hazardous environments.

Industrial-grade Certification

To ensure safe and reliable operation in industrial environments, the NPort® IA5000 device servers have obtained various industrial certifications, including an IP30 rating for mechanical protection, UL 508 safety certification for industrial control equipment, and explosion-safe certifications for hazardous locations. Certifications include UL/cUL Class 1 Division 2 Groups A, B, C, D, as well as ATEX Class 1 Zone 2, and IECEX Zone 2.

Specifications

Ethernet I	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 Typical Distance Typical (nm) Wavelength TX Range (nm)		OM1 50/125 µm 800 MHz x km	50/125 μm	G.652
				800 MHz x km	0.002
			4 km	5 km	40 km
			1300		1310
			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 ar attenuator to prevent damage caused by excessive optical power. Note: Compute the "typical distance" of a specific fiber transceiver as follows: Li budget (dB) > dispersion penalty (dB) + total link loss (dB).			C C	



Ethernet Software Features

Configuration Options Web Canacile (HTTP), Windows Utility, Teinet Console, Serial Console Management DHCP Cient, IP-4, SMTP, SMMP-1, Tolnet, APP, BOOTP, DNS, HTTP, TCP/IP, UDP, Windows 2008 Ph/2012/2017 2/2018/2019 / UA3L/2008/T/B13.1/10 (485/464), Windows 2008 Ph/2012/2019 2/2018/2019 / UA3L/2008/T/B13.1/10 (485/464), Windows 2008 Ph/2019/2019/2019/2019/2019/1043/ Windows Embedded CE 5.0040, Addroid API Android API Android 3.1 and later Time Management SRTP MB RF011A-510: DB male for RS-232 and terminal block for RS-422/485 No. of Ports NPort IA-510: DB male for RS-232 and terminal block for RS-422/485 No. of Ports NPort IA-510: DB male for RS-232 and terminal block for RS-422/485 No. of Ports Supports standard bardrate (unit=bog): 110, 131, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 6800, 1200, 1800, 24	Ethemet oonware readines	
ICMP, Reliet ICMP, Reliet Windows Reliet COM Drivers Windows SSSRME/NT/2000, Windows XP/2003/VR/81/10 (kBS/r64), Windows ZMP/2003/VR/81/10 (kBS/r64), ZMP/2000, KBS/r64, KBS/r64, KBS/r64, KBS/r64, KBS/r64, KBS/r64,	Configuration Options	Web Console (HTTP), Windows Utility, Telnet Console, Serial Console
Windows 2008 R22012/2018 R2/2018 (x64), Windows EmbeddedLinux Real TYD DriversKernel versions: 24.x, 26.x, 3.x, 4.x, and 5.xFixed TYD DriversSCO UNIX, SCO OpenServer, UnixWare 7, ONX 4.26, ONX 6, Solaris 10, FreeBSD, AIX 6, X, HP4.VX 111, Mac OS X, macOS 10.13, macOS 10.14, macOS 10.14, macOS 10.15Android APIAndroid 3.1.x and laterTime ManagementSNTPMIBPoort 14. S150, FDG 117Serial InterfaceConnectorConnectorNPort 14. S150, DBB male for R5-232 and terminal block for R5-422/485No. of PortsNPort 14. S150, DBB male for R5-232/422/485No. of PortsNPort 14. S150, Models: 1Strial StandardsR5-232, R5-422, R5-485BaudrateSupports standard baudrates (unit-brpi): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7320, 9800, 15200, 230400Step Bits1, 1, 5, 2ParityNone, Even, Odd, Space, MarkStep Bits1, 15, 2Flow ControlRT5/CTS (R5-232 only), TS/DDS (R5-232 only), XOWXOFFTerminator for R5-4851 kilo-chmsIcation2 KV (I models)ParityLow Resistor for R5-4851 kilo-chmsIcation2 KV (I models)R5-485 Data Direction Control2 KV (I models)R5-485 Data Direction Control2 KV (I models)R5-485 Cata Direction ControlToh, Ro, Rx, GNDR5-485 Cata Direction ControlToh, Rx, Rx, GNDR5-485 Cata Direction ControlToh, Rx, Rx, GNDR5-485 Cata Direction ControlToh, Rx, Rx, Rx, GNDR5-485 CataToh, Rx, Rx, Rx, GNDR5-485 CataToh	Management	
Fixed TYD Drivers SCO UNIX, SCO OpenServer, UnixWare 7, ONX 4.25, ONX 6, Solaris 10, FreeBSD, AKS, x, HP-UX 11I, Mac OS X, mac OS 10.13, mac OS 10.14, mac OS 10.15 Android API Android 3.1.x and later Time Management SNTP MIB RFC1213, RFC1317 Sorial Interfaco NPort IA-5100: DB9 male for RB-232 and terminal block for RB-422/485 No. of Ports NPort IA-5100: DB9 male for RB-232 442/485 No. of Ports NPort IA-5100: DB9 male for RB-232/422/485 Serial Standards RS-222, RB-422, RB-485 Baudrate Supports standard baudrates (unit-bps): 110, 134, 150, 300, 600, 1200, 1800, 38400, 57600, 15200, 38400, 57600, 15200, 38400 Data Bits S.6, 7, 8 Parity None, Even, Odd, Space, Mark Stop Bits 1, 1, 5, 2 Four Control RTS/CTS (RS-232 only), XDN/XOFF Terminator 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 Txx, Txx, Rxx, GND RS-485 Aut Txx, Txx, Rxx, GND RS-485 Aut Txx, Txx, Rxx, GND RS-485 -24V Datax, Data,	Windows Real COM Drivers	Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Embedded CE 5.0/6.0,
x. HP-UX 11i, Mac OS X, macOS 10.12, macOS 10.14, macOS 10.15 Android API Android 3.1.x and later Time Management SNTP MIB RFC1213, RFC1317 Serial Interface Nort IA-5160: DB9 male for RS-232 and terminal block for RS-422/485 No. of Ports NPort IA-5160: DB9 male for RS-232/422/485 No. of Ports NPort IA-5160 Models: 1 NPort IA-5260: DB9 male for RS-232/422/485 Serial Standards RS-232, RS-422, RS-485 Baudrate Supports standard baudrates (unit-bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4400, 7400, 98400, 7500, 15200, 38400, 57600, 15200, 38400, 5760, 1520, 38400 Data Bits 5, 6, 7, 8 Parity None, Even, Odd, Space, Mark Stop Bits 1, 15, 2 For Control RTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFF Partininator for RS-485 1 kilo-ohm, 150 kilo-ohm Isolation 2 kV (I models) RS-485 Data Direction Control ADDC@ (automatic data direction control) Serial Signals Txx, Txx, Rx+, Rx-, GND RS-485 Aut Txx, Txx, Rx+, Rx-, GND RS-485 Aut Txx, Txx, Rx+, Rx-, GND RS-485 Aut Tax, Txx, Rx+, Rx-, GND <td>Linux Real TTY Drivers</td> <td>Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x</td>	Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Time Management SNTP MIB RFC1213, RFC1317 Serial Interface Even Connector Connector NPort IA-5150; DBB male for RS-232 and terminal block for RS-422/485 No. of Ports NPort IA-5150; Models: 1 NPort IA-5250; DBB male for RS-232/422/485 Serial Standards RS-232, RS-422, RS-485 Baudrate Supports standard baudrates (unit=bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4400, 7200, 08400, 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), DTF//DSR (RS-232 only), XON/XOFF Terminator for RS-485 1 kilo-ohm, 150 kilo-ohms Isolation 2 kV (I models) RS-232 Txt, Tx, Rxt, Rxt, GND RS-485 Data Direction Control Xet, Tx, Rxt, Rxt, GND RS-485 Aw Txt, Tx, Rxt, Rxt, GND RS-485 Aw Txt, Tx, Rxt, Rxt, GND RS-485 Out-Sources Data, Data, GND Power Parameters Input Voltage Input Voltage 12 to 48 VDC NPort IA-550/IA-5500/IA-5550-TIA-550-AS SC/IA-5150-AS SC/IA-5150-AS SC/IA-5150-AS SC/IA-5150-	Fixed TTY Drivers	
NIB RFC1213, RFC1317 Serial Interface Connector NPort IA-5150: DB9 male for RS-232 and terminal block for RS-422/485 No. of Ports NPort IA-5150: DB9 male for RS-232/422/485 Noot IA-5150 Models: 1 Serial Standards RS-232, RS-422, RS-485 Supports standard baudrates (unit-hpps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4000, 7200, 9600, 15200, 38400, 57600, 115200, 204400 Data Bits S. 6, 7, 8 Supports standard baudrates (unit-hpps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4000, 7200, 9600, 15200, 204400 Data Bits S. 6, 7, 8 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 1.5, 2 None, Even, Odd, Space, Mark Stop Bits 1, 80 ohms None, Even, Odd, Space, Mark Station 2, 20 ohms NobC (automatic data direction control) Serial Signals 1, Kin-ohm, 150 Kin-ohms Noot Res-232	Android API	Android 3.1.x and later
Serial Interface Connector NPort IA-5150: DB9 male for RS-232 and terminal block for R5-422/485 No. of Ports NPort IA-5250: DB9 male for RS-232/422/485 No. of Ports NPort IA-5250 Models: 1 NPort IA-5250 Models: 2 Serial Standards RS-232, RS-422, RS-425 Baudrate Supports standard baudrates (unit=bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4400, 7200, 9600, 19200, 38400, 7500, 115200, 230400 Data Bits 5, 6, 7, 8 Partiy 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 ADDC9 (automatic data direction control) Serial Signals Tx+, Tx-, Rx+, Rx-, GND RS-485-4w Tx+, Tx-, Rx+, Rx-, GND RS-485-2w Data-, Data-, GND Power Parameters Input Voltage Input Voltage 12 to 48 VDC Input Voltage 12 to 48 VDC	Time Management	SNTP
ConnectorNPort IA-5150: DB9 male for RS-232 and terminal block for RS-422/485No. of PortsNPort IA-5150 Models: 1 NPort IA-5250 Models: 2Serial StandardsRS-232, RS-422, RS-485BaudrateSupports standard baudrates (unit=bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9800, 19200, 34400, 57600, 115200, 230400Data Bits5, 6, 7, 8ParityNone, Even, Odd, Space, MarkStop Bits1, 1, 5, 2Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFTerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-232TxD, RXD, RTS, CTS, DTR, DSR, DCD, GNDRS-232TxD, RXD, RTS, CTS, DTR, DSR, DCD, GNDRS-425Txe, Tx~, Rx+, Rx~, GNDRS-426Txe, Tx~, Rx+, Rx~, GNDRS-485-4wTxe, Tx~, Rx+, Rx~, GNDRS-485-2wData+, Data-, GNDPower ParametersIz0 to 48 DDCInput Voltage12 to 48 VDCNPort IA-5150/LA-5150-T/IA-5520/TA-5150-TA-5150-MS-SC/IA-5150-MSRD-485-2wData+, Data-, GNDPower ParametersNPort IA-5150/LA-5150-T/IA-5520/TA-5150-T/IA-5150-MS-SC/IA-5150-MSInput Voltage12 to 48 VDCNPort IA-5150/LA-5150-T/IA-5520/TA-5150-T/IA-5150-MS-SC/IA-5150-MSNPort IA-5150/LA-5150-T/IA-5150-SC/IA-5150-MS-SC/IA-5150-MSNPort IA-5150/LA-5150-T/IA-5150-SC/IA-5150-MS-SC/IA-5150-MSSC-TIA-5150/LA-5150-MS-SC/IA-5150-MS-SC/IA-5150-MSNPORT IA-5150/LA-5150/TIA-5150-MS-SC/IA-5150-MSNPORT IA-5150/LA-	MIB	RFC1213, RFC1317
NPort IA-5250: DB9 male for RS-232/422/485No. of PortsNPort IA-5150 Models: 1 NPort IA-5200 Models: 2Serial StandardsRS-232, RS-422, RS-485BaudrateSupports standard baudrates (unit-tops): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 67600, 115200, 230400Data Bits5, 6, 7, 8ParityNone, Even, Odd, Space, MarkStop Bits1, 1, 5, 2Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFTerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsTx+, Tx-, Rx+, Rx-, GNDRS-422Tx0, Rx0, RTS, CTS, DTR, DSR, DCD, GNDRS-435-2wData+, Data+, GNDPower Parameters120 of MSInput Voltage12 to 48 VDCNport IA-5150/IA-5150-T/IA-5520/TA-5150-T-MS-50-T/IA-5150-M-SC/	Serial Interface	
NPort IA-S250 Models: 2 Serial Standards RS-232, 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, 15, 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 TxJ, RxD, RTS, CTS, DTR, DSR, DCD, GND Rs-232 TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND Rs-485-4w Tx+, Tx-, Rx+, Rx-, GND Rs-485-2w Data+, Data-, GND Power Parameters Input Voitage Input Voitage 12 to 48 VDC NPort IA-S150/IA-S150-T/IA-S150-S-SC-TIA-S150-H-SC/IA-S150-H	Connector	
BaudrateSupports standard baudrates (unit=bps): 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9800, 19200, 38400, 57600, 115200, 230400Bat Bits5, 6, 7, 8ParityNone, Even, Odd, Space, MarkStop Bits1, 1.5, 2Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFTerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsTxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-482TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData-, Data-, GNDPower Parameters12 to 48 VDCInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5150-IM-SC/IA	No. of Ports	
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 Tx+, Tx-, Rx+, Rx-, GND RS-485-4w Tx+, Tx-, Rx+, Rx-, GND RS-485-2w Data -, Data , GND Power Parameters 12 to 48 VDC Input Voltage 12 to 48 VDC Nort IA-5150/IA-5150-T/IA-5150-T/IA-5150-M-SC/IA-	Serial Standards	RS-232, RS-422, RS-485
ParityNone, Even, Odd, Space, MarkStop Bits1, 1.5, 2Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFTerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)Rs-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsRs-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRs-485-4wTx+, Tx-, Rx+, Rx-, GNDRs-485-4wTx+, Tx-, Rx+, Rx-, GNDRs-485-2wData+, Data-, GNDPower Parameters12 to 48 VDCInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5150-M-SC-T/IA-515	Baudrate	
Stop Bits1, 1.5, 2Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFTerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsRS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150I-T/IA-5150I-M-SC/IA-5150I-M	Data Bits	5, 6, 7, 8
Flow ControlRTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFFFerminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsTxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower Parameters12 to 48 VDCInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5150-S-SC-T/IA-5150-M-SC	Parity	None, Even, Odd, Space, Mark
Terminator for RS-485120 ohmsPull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC® (automatic data direction control)Serial SignalsRS-232RS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower Parameters12 to 48 VDCInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5150-SS-CT/IA-5150-M-SC/IA-5150-IM-SC/IA-5150-IT/IA-5150-IX-S150-SS-CT/IA-5150-M-ST/IA-5150-IX-S150-IT/IA-5150-IX-S150-IT/IA-5150-IX-S150-IT/IA-5150-IX-S150-IT/IA-5150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/IA-S150-IX-SC/I	Stop Bits	1, 1.5, 2
Pull High/Low Resistor for RS-4851 kilo-ohm, 150 kilo-ohmsIsolation2 kV (I models)RS-485 Data Direction ControlADDC@ (automatic data direction control)Serial SignalsRS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150-T/IA-5250/IA-5150-M-SC/TA-5150I-M-SC/IA-5150-M-ST/IA-5150-M-	Flow Control	RTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFF
Inc.Inc.Isolation2 kV (I models)RS-485 Data Direction ControlADDC® (automatic data direction control)Serial SignalsRS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150-S-SC/IA-5150-M-SC/I	Terminator for RS-485	120 ohms
RS-485 Data Direction ControlADDC® (automatic data direction control)Serial SignalsRS-232RS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150/IA-5150-T/IA-5150-S-SC-T/IA-5150I-M-SC/IA-5150I-M	Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Serial SignalsRS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5150-S-SC/IA-5150-S-SC/IA-5150I-M-SC/IA-5150	Isolation	2 kV (I models)
RS-232TxD, RxD, RTS, CTS, DTR, DSR, DCD, GNDRS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput VoltageInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150I-T/IA-5150-S-SC/IA-5150-S-SC-T/IA-5150I-M-SC/IA-51	RS-485 Data Direction Control	ADDC® (automatic data direction control)
RS-422Tx+, Tx-, Rx+, Rx-, GNDRS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower Parameters12 to 48 VDCInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150I-T/IA-5150-S-SC/IA-5150-S-SC-T/IA-5150I-M-SC/IA-5150	Serial Signals	
RS-485-4wTx+, Tx-, Rx+, Rx-, GNDRS-485-2wData+, Data-, GNDPower ParametersInput VoltageInput Voltage12 to 48 VDCInput CurrentNPort IA-5150/IA-5150-T/IA-5250/IA-5250-T: 435 mA @ 12 VDC NPort IA-5150/IA-5150I-T/IA-5150-S-SC/IA-5150-S-SC-T/IA-5150I-M-SC/IA-515	RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-485-2w Data+, Data-, GND Power Parameters Input Voltage 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	RS-422	Tx+, Tx-, Rx+, Rx-, 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/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-ST/IA-5150-M	RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
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-S-SC/IA-5150I-S-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-S-SC/IA-5150I-S-SC-T/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150-M-SC/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-ST/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-SC/IA-5150-M-ST/IA-5150-ST/IA-50-ST/IA-50-ST/IA-50-ST/IA-50-ST/IA-50-ST/IA-50-ST/IA-50-ST/IA-50-S	RS-485-2w	Data+, Data-, GND
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-S-SC/IA-5150I-S-SC-T/IA-5150I-M-SC/IA-5150I-M-SC/IA-5150I-S-SC-T/IA-5150-M-SC/IA-5150-M-ST/IA-5150-ST/IA-50-ST/	Power Parameters	
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-	Input Voltage	12 to 48 VDC
	Input Current	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-



No. of Power Inputs	2
Power Connector	Terminal block
Relays	
Contact Current Rating	Resistive load: 1 A @ 30 VDC
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
МТВF	
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/warranty
Package Contents	
Device	1 x NPort IA-5000 Series device server
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)

NPort IA5150 NPort IA5150I NPort IA5250





NPort IA5150-M-SC

NPort IA5150-S-SC

NPort IA5150I-M-SC









NPort IA5150 NPort IA5150I NPort IA5150-M-SC NPort IA5150-S-SC NPort IA5150I-S-SC NPort IA5150I-M-SC



NPort IA5250

Ordering Information

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



Model Name	No. of Ethernet Ports	Ethernet Port Connector	Operating Temp.	No. of Serial Ports	Serial Isolation	Certification: Hazardous Locations
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

Accessories (sold separately)

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

© Moxa Inc. All rights reserved. Updated Nov 11, 2021.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.

