NPort® 5200A Series

2-port RS-232/422/485 serial device servers

- Speedy 3-step web-based configuration
- Surge protection for serial, Ethernet, and power lines
- COM port grouping and UDP multicast applications
- Screw connectors for secure installation
- Dual DC power inputs with power jack and terminal block
- Versatile TCP and UDP operation modes

Overview

The NPort® 5200A device servers are designed to make serial devices network-ready in an instant and give your PC software direct access to serial devices from anywhere on the network. The NPort® 5200A device servers are ultra lean, ruggedized, and user friendly, making simple and reliable serial to Ethernet solutions possible.

A Greener Serial-to-Ethernet Solution

The Moxa MiiNe is a small but powerful ARM-based serial-to-Ethernet SoC with RAM and Flash embedded. The NPort® 5200A series saves at least 50% on power consumption compared to existing solutions on the market, helping engineers meet the tough environmental compliance challenges found in today's industrial environments.

Surge-protected Serial, Ethernet, and Power Lines

Surge, which is typically caused by high voltages that result from switching and lightning transients, is a common threat to all electrical devices. Moxa's leading-edge surge immunity solution, which is applied to the NPort® 5200A's serial, power, and Ethernet lines, is tested and proven compliant with IEC 61000-4-5. This state-of-the-art surge protection provides a robust serial-to-Ethernet solution that can protect electrical devices from voltage spikes and withstand electrically noisy environmental conditions.

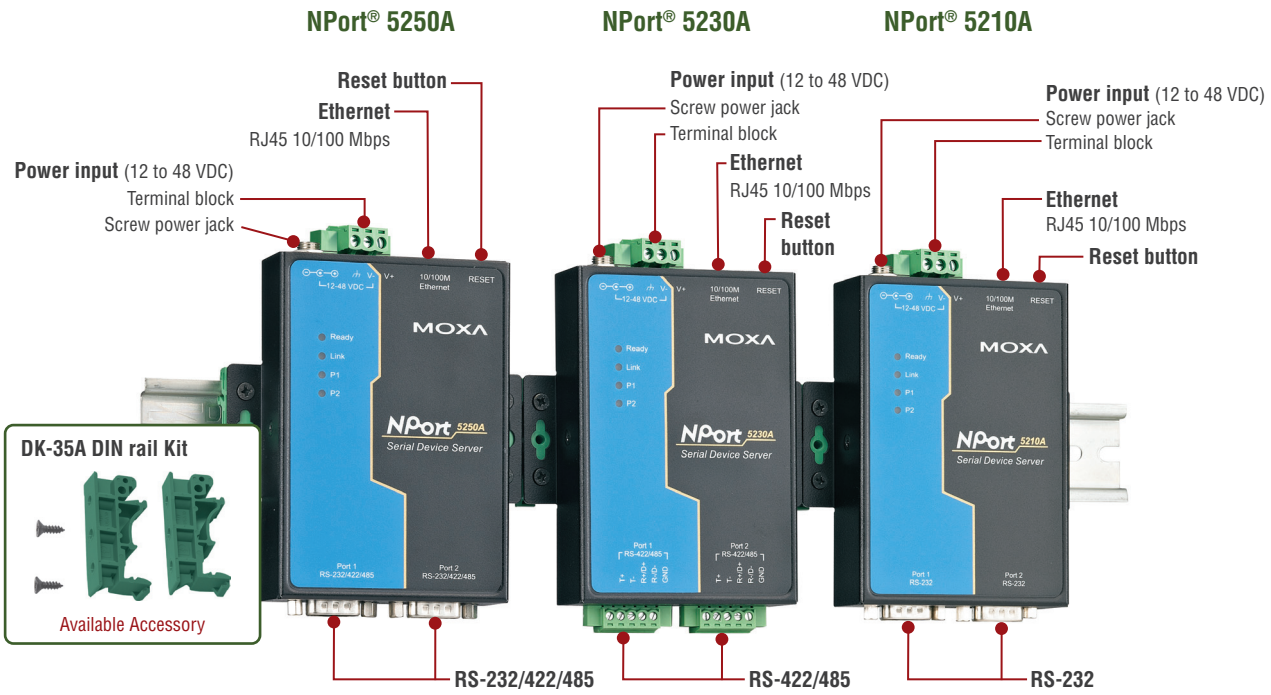
3-step Web-based Configuration

The NPort® 5200A's 3-step web-based configuration tool is straightforward and user-friendly. The NPort® 5200A's web console guides users through 3 simple configuration steps that are necessary to activate the serial-to-Ethernet application. With this speedy 3-step web-based configuration, a user only needs to spend an average of 30 seconds to complete the NPort® settings and enable the application, saving a great amount of time and effort.

COM Port Grouping

The NPort® 5200A's COM Grouping function allows you to create a COM Group and redirect data from it to several physical COM ports on NPort device servers. With COM Grouping, you will be able to control multiple physical serial ports simultaneously by operating only one COM port.

Appearance



Specifications

Ethernet Interface

Number of Ports: 1
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: 8-pin RJ45
Magnetic Isolation Protection: 1.5 kV built-in
Ethernet Line Protection: EN 61000-4-5 (Surge) Level 2

Serial Interface

Number of Ports: 2
Serial Standards:
NPort 5210A: RS-232
NPort 5230A: RS-422/485
NPort 5250A: RS-232/422/485
Connector:
NPort 5210A/5250A: DB9 male
NPort 5230A: Terminal Block (5 pins per port)
Serial Line Protection: 15 kV ESD protection for all signals, EN 61000-4-5 (Surge) Level 1
RS-485 Data Direction Control: ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485: 1 kΩ, 150 kΩ

Serial Communication Parameters

Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF
Baudrate: 50 bps to 921.6 kbps

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

Software

Network Protocols: ICMP, IPv4, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, IGMP V1/2
Configuration Options: Web Console (with new Quick Setup), Serial Console (NPort 5210A/5250A only), Telnet Console, Windows Utility
Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
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
Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x

Physical Characteristics

Housing: Metal
Weight: 340 g
Dimensions:
Without ears: 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)
With ears: 100 x 111 x 26 mm (3.94 x 4.37 x 1.02 in)

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: -40 to 75°C (-40 to 167°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 to 48 VDC
Power Consumption: 119 mA @ 12V, 65 mA @ 24V

Standards and Certifications

Safety: UL 60950-1, EN 60950-1
EMC: CE, FCC
EMI: EN 55022 Class A, FCC Part 15 Subpart B Class A
EMS: EN 55024
Power Line Protection:
EN 61000-4-4 (EFT) Level 2,
EN 61000-4-5 (Surge) Level 3

Reliability

Automatic Reboot Trigger: Built-in WDT (watchdog timer)
MTBF (mean time between failures): 847,750 hrs

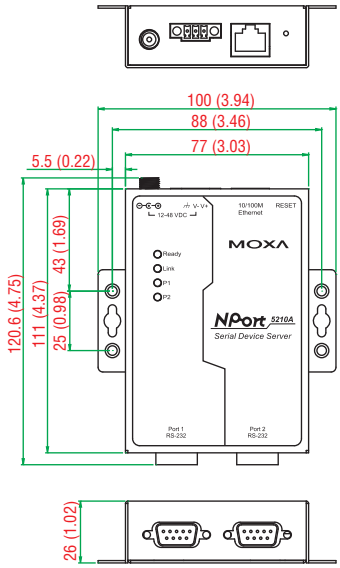
Warranty

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

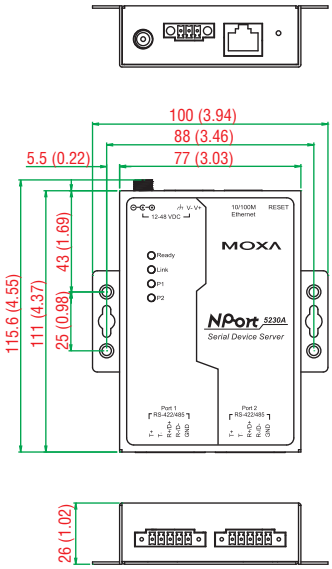
Dimensions

Unit: mm (inch)

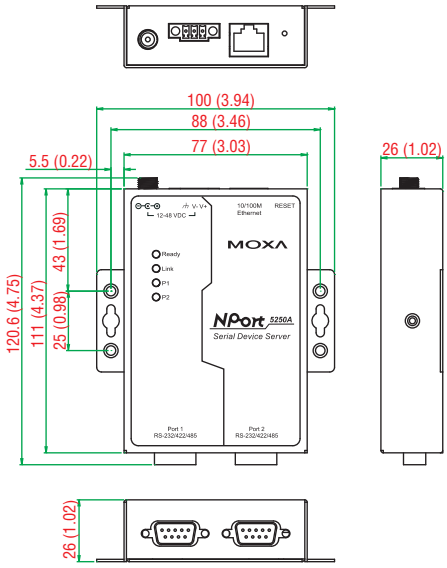
NPort® 5210A



NPort® 5230A



NPort® 5250A

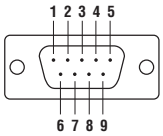


Pin Assignment

NPort® 5250A (RS-232/422/485)

PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–

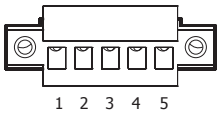
DB9 male connector



NPort® 5230A (RS-422/485)

PIN	RS-422/485-4w	RS-485-2w
1	TxD+(B)	–
2	TxD-(A)	–
3	RxD+(B)	Data+(B)
4	RxD-(A)	Data-(A)
5	GND	GND

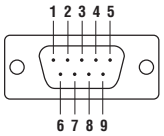
5-contact terminal block



NPort® 5210A (RS-232)

PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

DB9 male connector



Ordering Information

Available Models

NPort 5210A: 2-port RS-232 device server, 0 to 60°C operating temperature
NPort 5230A: 2-port RS-422/485 device server, 0 to 60°C operating temperature
NPort 5250A: 2-port RS-232/422/485 device server, 0 to 60°C operating temperature
NPort 5210A-T: 2-port RS-232 device server, -40 to 75°C operating temperature
NPort 5230A-T: 2-port RS-422/485 device server, -40 to 75°C operating temperature
NPort 5250A-T: 2-port RS-232/422/485 device server, -40 to 75°C operating temperature

Package Checklist

- NPort 5200A device server
- 100 to 240 VAC power adapter (excluding T models)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

Optional Accessories (can be purchased separately)

DK-35A: Mounting kit for 35-mm DIN-Rail
PWR-12150-USJP-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, US/JP Plug
PWR-12150-EU-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, EU Plug
PWR-12150-UK-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, UK Plug
PWR-12150-CN-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, CN Plug
PWR-12150-AU-SA-T: 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, AU Plug
Mini DB9F-to-TB Adapter: DB9 female to terminal block adapter for RS-422/485 applications

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