NPort® 5200A Series

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

> World's lowest power consumption
> 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. With the MiiNe inside, the NPort® 5200A series becomes the lowest power consumption device server in the world. 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.
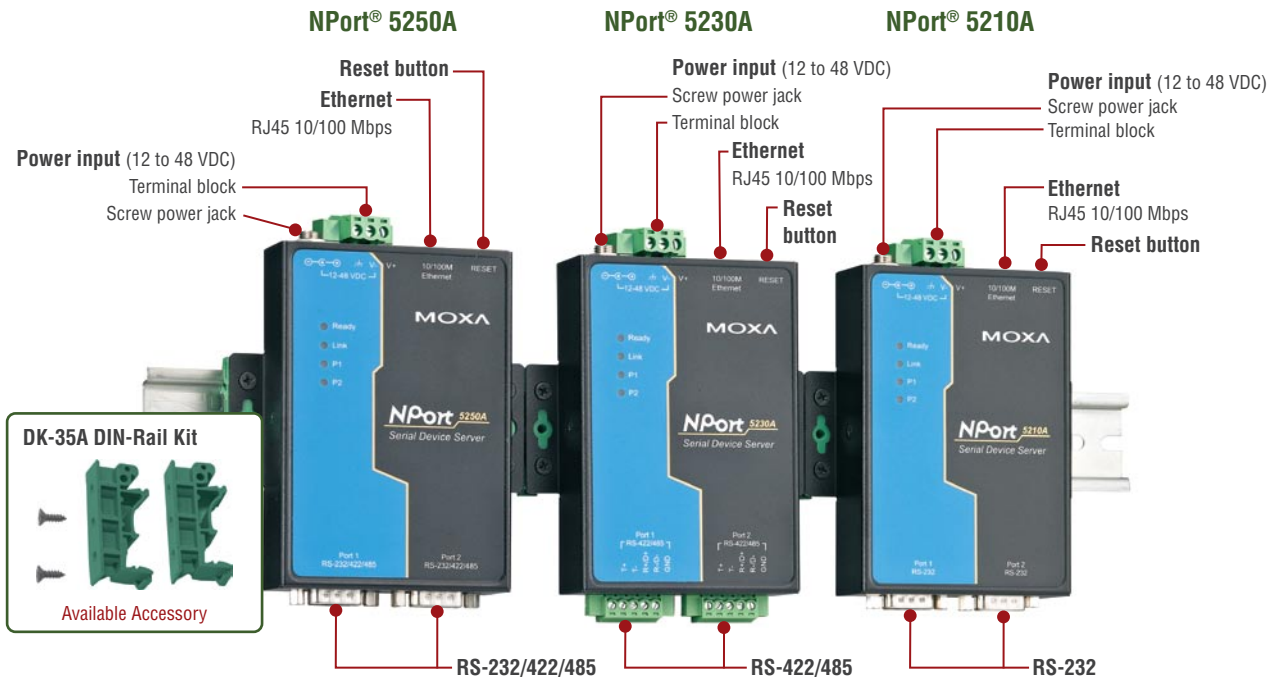
COM Port Grouping

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

NPort® 5250A

Reset button
Ethernet
RJ45 10/100 Mbps

Power input (12 to 48 VDC)
Terminal block
Screw power jack

NPort® 5230A

Power input (12 to 48 VDC)
Screw power jack
Terminal block
Ethernet
RJ45 10/100 Mbps
Reset button

NPort® 5210A

Power input (12 to 48 VDC)
Screw power jack
Terminal block

Ethernet
RJ45 10/100 Mbps
Reset button

DK-35A DIN-Rail Kit

Available Accessory

RS-232/422/485   RS-422/485   RS-232

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: Level 2 Surge, EN61000-4-5

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, Level 1 Surge, EN61000-4-5
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, IP, 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 x86/x64
Fixed TTY Drivers: SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac 10.3
Linux Real TTY Drivers: Linux kernel 2.4.x, 2.6.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)
Operating Humidity: 5 to 95% RH
Storage Temperature: -40 to 85°C (-40 to 185°F)

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

Regulatory Approvals
Power Line Protection: Level 2 Burst (EFT), EN61000-4-4, Level 3 Surge, EN61000-4-5
EMC: CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A
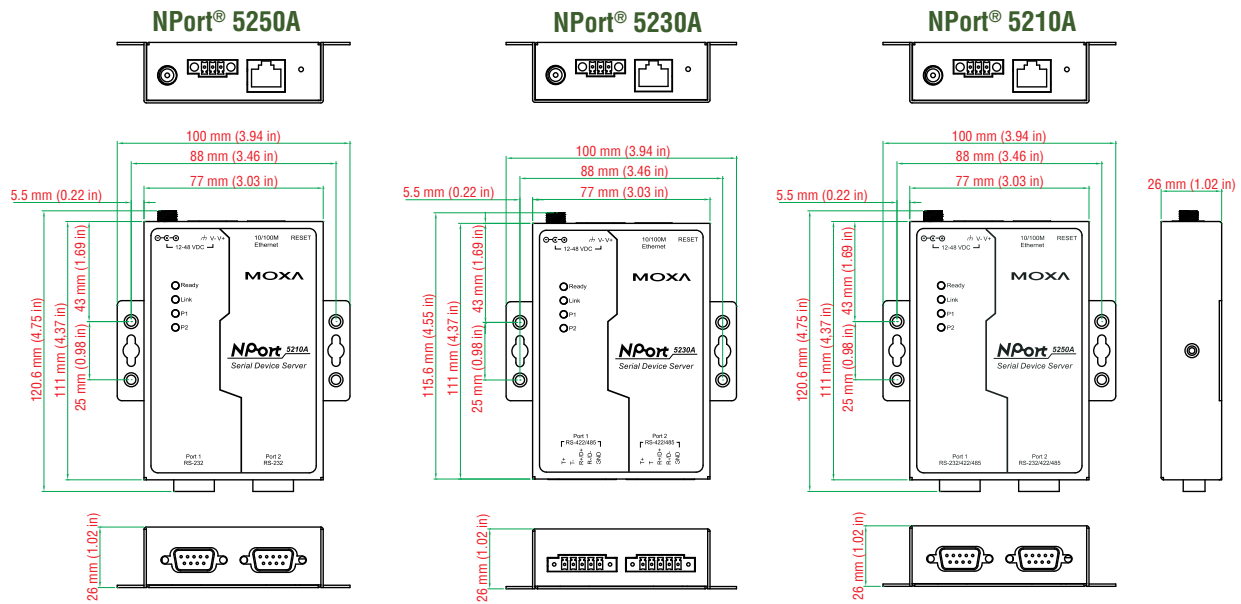**Safety:** UL (UL60950-1), LVD (EN60950-1)

Reliability
Automatic Reboot Trigger: Built-in WDT (watchdog timer)

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

Dimensions

NPort® 5250A

NPort® 5230A

NPort® 5210A

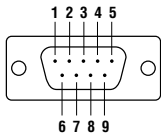### NPort® 5250A (RS-232/422/485)

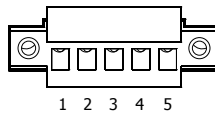| PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–

DB9 male connector

NPort® 5230A (RS-422/485)

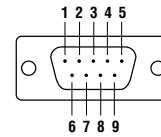| PIN	RS-422/485-4w	RS-485-2w
1	TxD+(B)	–
2	TxD-(A)	–
3	RxD+(B)	Data+(B)
4	RxD-(A)	Data-(A)
5	GND	GND

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

Optional Accessories (can be purchased separately)

DK-35A: Mounting Kit for 35-mm DIN-Rail

Package Checklist

- NPort® 5200A series device server
- Power Adaptor (only for non-T models)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card