

# NPort 5200A Series

2-port RS-232/422/485 serial device servers with serial surge protection



## Features and Benefits

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

## Certifications



## Introduction

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 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 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 Protection for Serial, Ethernet, and Power

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.

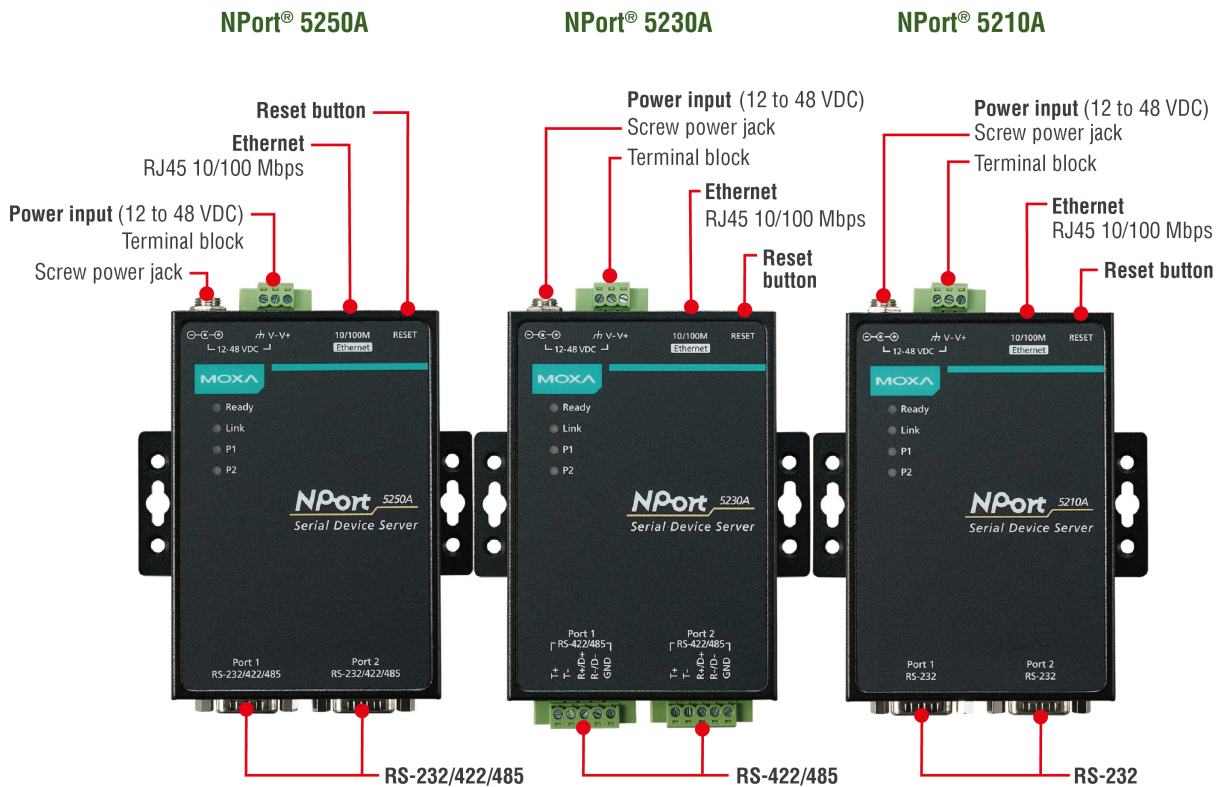
### 3-Step Web-based Configuration

The NPort® 5200A's 3-step web-based configuration tool is straightforward and user-friendly. The NPort® 5200A's web console guides users through three simple configuration steps that are necessary to activate the serial-to-Ethernet application. With this fast 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

|                                       |                   |
|---------------------------------------|-------------------|
| 10/100BaseT(X) Ports (RJ45 connector) | 1                 |
| Magnetic Isolation Protection         | 1.5 kV (built-in) |

### Ethernet Software Features

|                          |   |
|--------------------------|---|
| Configuration Options    | Windows Utility<br>Serial Console ((NPort 5210A NPort 5210A-T, NPort 5250A, and NPort 5250A-T)<br>Web Console (HTTP/HTTPS)<br>Device Search Utility (DSU)<br>MCC Tool<br>Telnet Console           |
| Management               | ARP<br>BOOTP<br>DHCP Client<br>DNS<br>HTTP<br>HTTPS<br>ICMP<br>IPv4<br>LLDP<br>SMTP<br>SNMPv1/v2c<br>Telnet<br>TCP/IP<br>UDP  |
| Filter                   | IGMP v1/v2  |
| Windows Real COM Drivers | Windows 11, 10, 8.1, 8, 7, Vista, XP, ME, 98, and 95<br>Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008, 2003, 2000, and NT<br>Windows Embedded CE 6.0 and 5.0, 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   |

|                             |   |
|-----------------------------|---|
|                             | SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X  |
| Arm®-based Platform Support | Windows 11<br>Linux Kernel 6.x, 5.x, and 4.x<br>macOS 14, 13, 12, and 11  |
| Virtual Machine             | VMWare ESXi (Windows 11/10)<br>VMware Fusion (Windows on macOS 14, 13, 12, 11, and 10.1x)<br>Parallels Desktop (Windows on macOS 14, 13, 12, 11, and 10.1x) |
| Android API                 | Android 3.1.x and later   |
| MIB                         | RFC1213, RFC1317  |

### Security Functions

|                    |  |
|--------------------|--|
| Authentication     | Local database                                   |
| Encryption         | AES-128<br>RSA-1024<br>SHA-256<br>HTTPS<br>SHA-1 |
| Security Protocols | HTTPS (TLS 1.2)                                  |

### Serial Interface

|                                   |  |
|-----------------------------------|--|
| Connector                         | NPort 5210A/5250A models: DB9 male<br>NPort 5230A models: 5-pin terminal block   |
| No. of Ports                      | 2  |
| Serial Standards                  | NPort 5210A models: RS-232<br>NPort 5230A models: RS-422, RS-485<br>NPort 5250A models: RS-232, RS-422, RS-485   |
| Operation Modes                   | Disabled<br>Ethernet Modem<br>Pair Connection<br>Real COM<br>Reverse Telnet<br>RFC2217<br>TCP Client<br>TCP Server<br>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                      | RTS/CTS (RS-232 only)<br>DTR/DSR (RS-232 only)<br>XON/XOFF   |
| Pull High/Low Resistor for RS-485 | 1 kilo-ohm, 150 kilo-ohms  |
| RS-485 Data Direction Control     | NPort 5250A/5250A-T/5230A/5230A-T: ADDC (automatic data direction control)   |
| Terminator for RS-485             | 120 ohms   |

## 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       | 119 mA @ 12 VDC   |
| Input Voltage       | 12 to 48 VDC  |
| No. of Power Inputs | 2   |
| Power Connector     | 1 removable 3-contact terminal block(s)<br>Power input jack |

## Reliability

|                          |              |
|--------------------------|--------------|
| Automatic Reboot Trigger | Built-in WDT |
|--------------------------|--------------|

## Physical Characteristics

|                           |   |
|---------------------------|---|
| Housing                   | Metal   |
| Dimensions (with ears)    | 100 x 111 x 26 mm (3.94 x 4.37 x 1.02 in)                         |
| Dimensions (without ears) | 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)                          |
| Weight                    | 340 g (0.75 lb)   |
| Installation              | Desktop<br>DIN-rail mounting (with optional kit)<br>Wall mounting |

## Environmental Limits

|  |   |
|--|---|
| Operating Temperature                  | Standard models: 0 to 60°C (32 to 140°F)<br>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  |
| EMS    | IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m<br>IEC 61000-4-8 PFMF<br>IEC 61000-4-11 |
| EMI    | CISPR 32, FCC Part 15B Class A   |
| Safety | EN 62368-1<br>IEC 62368-1<br>UL 60950-1  |

## Declaration

|               |                   |
|---------------|-------------------|
| Green Product | RoHS, CRoHS, WEEE |
|---------------|-------------------|

## MTBF

|           |                                     |
|-----------|-------------------------------------|
| Time      | 847,750 hrs                         |
| Standards | Telcordia (Bellcore) Standard TR/SR |

## Warranty

|                 |  |
|-----------------|--|
| Warranty Period | 5 years  |
| Details         | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a> |

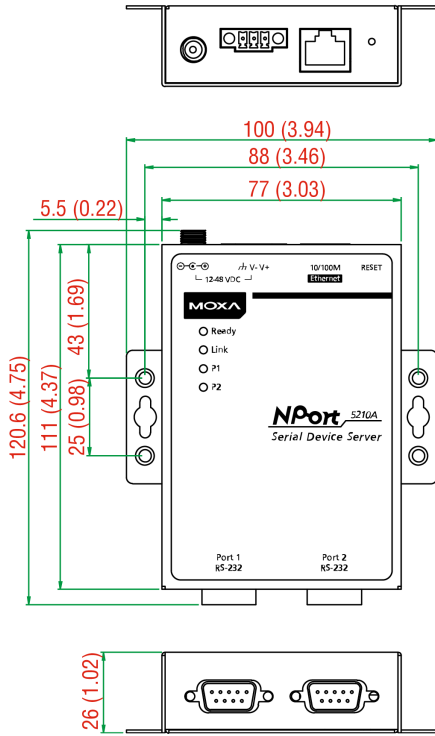
## Package Contents

|               |  |
|---------------|--|
| Device        | 1 x NPort 5200A Series device server                                     |
| Power Supply  | 1 x power adapter, suitable for your region (standard temp. models only) |
| Documentation | 1 x quick installation guide<br>1 x warranty card                        |

# Dimensions

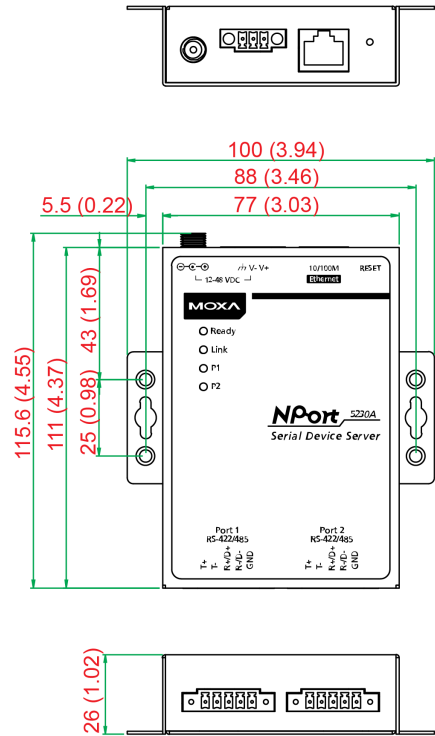
## NPort 5210A

Unit: mm (inch)



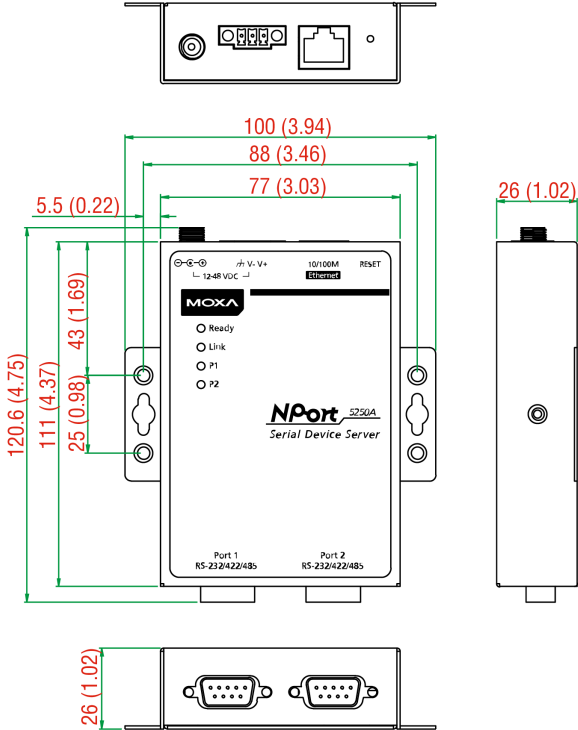
## NPort 5230A

Unit: mm (inch)



## NPort 5250A

Unit: mm (inch)



## Ordering Information

| Model Name    | Operating Temp. | Baudrate             | Serial Standards | No. of Serial Ports | Input Current   | Input Voltage |
|---------------|-----------------|----------------------|------------------|---------------------|-----------------|---------------|
| NPort 5210A   | 0 to 55°C       | 50 bps to 921.6 kbps | RS-232           | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |
| NPort 5210A-T | -40 to 75°C     | 50 bps to 921.6 kbps | RS-232           | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |
| NPort 5230A   | 0 to 55°C       | 50 bps to 921.6 kbps | RS-422/485       | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |
| NPort 5230A-T | -40 to 75°C     | 50 bps to 921.6 kbps | RS-422/485       | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |
| NPort 5250A   | 0 to 55°C       | 50 bps to 921.6 kbps | RS-232/422/485   | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |
| NPort 5250A-T | -40 to 75°C     | 50 bps to 921.6 kbps | RS-232/422/485   | 2                   | 119 mA @ 12 VDC | 12-48 VDC     |

## 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 |

### Connectors

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

### DIN-Rail Mounting Kits

|       |                              |
|-------|------------------------------|
| DK35A | DIN-rail mounting kit, 35 mm |
|-------|------------------------------|

### Power Adapters

|                     |   |
|---------------------|---|
| PWR-12150-USJP-SA-T | Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature<br><br>Applicable Models:<br>NPort 5210A-T<br>NPort 5230A-T<br>NPort 5250A-T |
| PWR-12150-EU-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature<br><br>Applicable Models:<br>NPort 5210A-T<br>NPort 5230A-T<br>NPort 5250A-T   |
| PWR-12150-CN-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature<br><br>Applicable Models:<br>NPort 5210A-T<br>NPort 5230A-T<br>NPort 5250A-T   |
| PWR-12150-UK-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature<br><br>Applicable Models:<br>NPort 5210A-T<br>NPort 5230A-T<br>NPort 5250A-T   |
| PWR-12150-AU-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature<br><br>Applicable Models:<br>NPort 5210A-T<br>NPort 5230A-T<br>NPort 5250A-T   |
| PWR-12050-USJP-S1   | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature   |
| PWR-12050-EU-S1     | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature  |
| PWR-12050-CN-S1     | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature  |

|                 |  |
|-----------------|--|
| PWR-12050-UK-S1 | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature |
| PWR-12050-AU-S1 | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature |
| PWR-12050-KR-S1 | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, KR plug, 0 to 40°C operating temperature |

#### Power Cords

|                    |  |
|--------------------|--|
| CBL-PJ21NOPE-BK-30 | Locking barrel plug to bare-wire cable |
|--------------------|--|

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