

NPort® 5200 Series

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



- > Small size for easy installation
- > Versatile socket operation modes, including TCP Server, TCP Client, and UDP
- > Easy-to-use Windows utility for configuring multiple device servers
- > Supports 10/100M Ethernet
- > Patented ADDC® (Automatic Data Direction Control) for 2-wire and 4-wire RS-485
- > Built-in 15 KV ESD protection for all serial signals
- > SNMP MIB-II for network management

See also NPort 5200A, p.8-26



Standard TCP/IP Protocols and Choice of Operation Modes

NPort® 5200 device servers can operate in TCP Server, TCP Client, or UDP operation mode, ensuring compatibility with software based on a

standard network API (Winsoc, BSD Sockets).

Real COM/TTY Drivers for Existing Software

With the Real COM/TTY drivers that are provided with each NPort®, software designed for communication with COM/TTY ports can be instantly and seamlessly integrated into a TCP/IP network. This is an

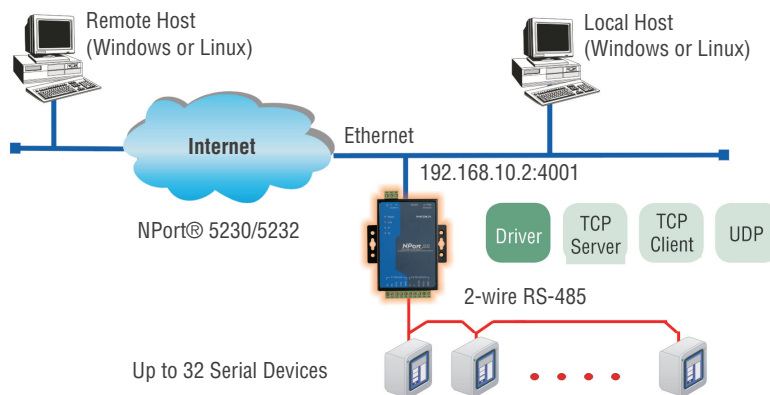
excellent “no fuss” way to preserve your software investment and enjoy the benefits of networking your serial devices.

Control Remote Serial Devices with TCP/IP or Traditional COM/TTY Port

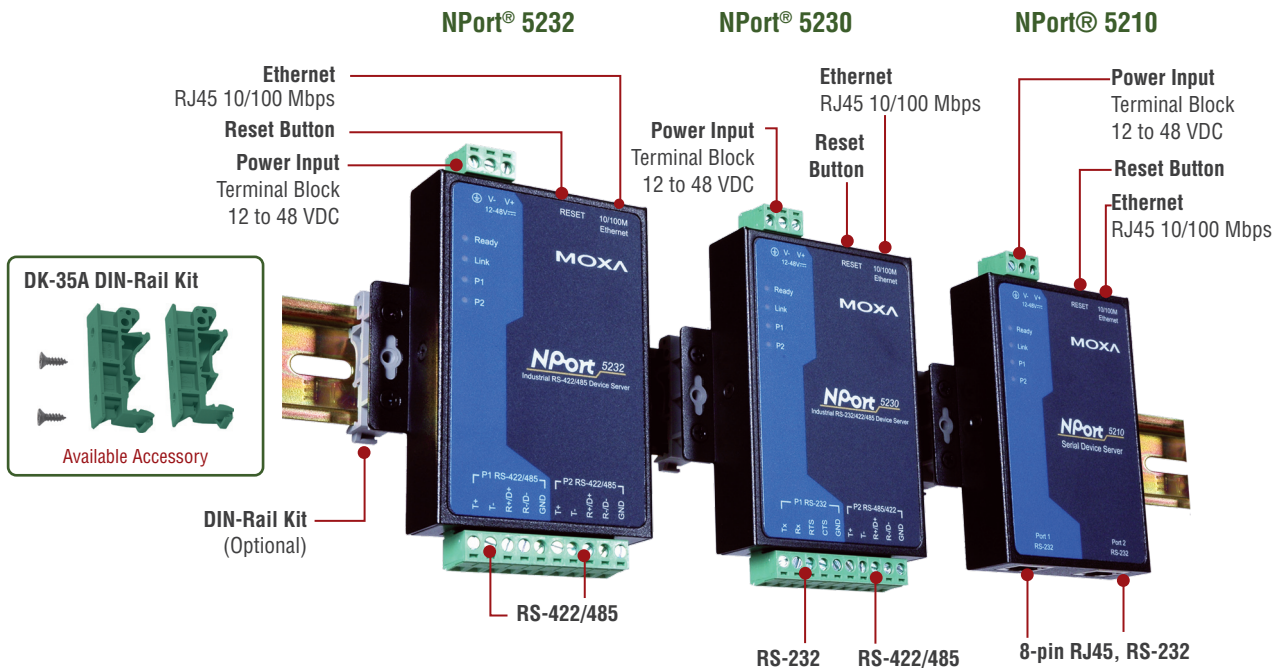
By specifying the NPort® 5200's IP address and port number, a network sockets API can obtain access to the attached serial device over the network, from any host computer that supports TCP/IP. For

legacy Windows or Linux software that is COM or TTY-based, Moxa's COM/TTY drivers provide a seamless way of operating over the network.

COM Driver or Network Socket Operation



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

Serial Interface

- Number of Ports:** 2
- Serial Standards:**
- NPort 5210: RS-232
- NPort 5230: 1 RS-232 port, 1 RS-422/485 port
- NPort 5232/5232I: RS-422/485

Connector:

- NPort 5210: RJ45 (8 pins)
- NPort 5230/5232/5232I: Terminal Block (5 contacts per port)

Serial Line Protection:

- 15 KV ESD protection for all signals
- 2 KV isolation protection (NPort 5232I/5232I-T)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

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 (RS-232 only), DTR/DSR (NPort 5210 only), XON/XOFF

Baudrate: 110 bps to 230.4 Kbps

Serial Signals

- RS-232:**
- NPort 5210: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
- NPort 5230: TxD, RxD, RTS, CTS, 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, SMTP

Configuration Options: Web Console, Serial Console (NPort 5210/5230 only), Telnet Console, Windows Utility

Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64, Embedded CE 5.0/6.0, XP Embedded

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

Linux Real TTY Drivers: Linux kernel 2.4.x, 2.6.x

Physical Characteristics

Housing: Metal, IP30 protection

Weight:

- NPort 5210: 340 g
- NPort 5230/5232: 360 g
- NPort 5232I: 380 g

Dimensions:

- NPort 5210/5230/5232:
- Without ears: 67 x 100.4 x 22 mm (2.64 x 3.95 x 0.87 in)
- With ears: 90 x 100.4 x 22 mm (3.54 x 3.95 x 0.87 in)
- NPort 5232I:
- Without ears: 67 x 100.4 x 35 mm (2.64 x 3.95 x 1.37 in)
- With ears: 90 x 100.4 x 35 mm (3.54 x 3.95 x 1.37 in)

Environmental Limits

Operating Temperature:

- Standard Models: 0 to 55°C (32 to 131°F)
- Wide Temp. Models: -40 to 75°C (-40 to 167°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Power Requirements

Input Voltage: 12 to 48 VDC

Power Consumption:

- NPort 5210: 325 mA @ 12 V, 190 mA @ 24 V
- NPort 5230: 325 mA @ 12 V, 190 mA @ 24 V
- NPort 5232: 280 mA @ 12 V, 150 mA @ 24 V
- NPort 5232I: 509.4 mA @ 12 V, 200 mA @ 24 V

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
Marine: DNV
Medical:
 EN 60601-1-2 Class B, EN 55011 (NPort 5210/5210-T only)

Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger: Built-in WDT (watchdog timer)
MTBF (mean time between failures):
 NPort 5210: 134,850 hrs
 NPort 5230: 106,955 hrs
 NPort 5232: 102,344 hrs
 NPort 5232I: 87,083 hrs

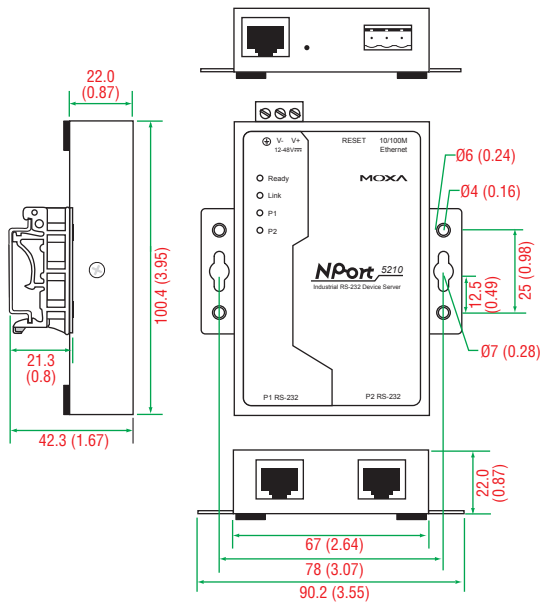
Warranty

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

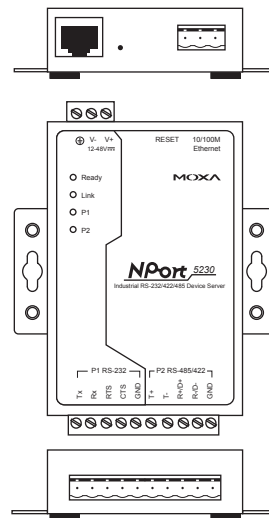
Dimensions

Unit: mm (inch)

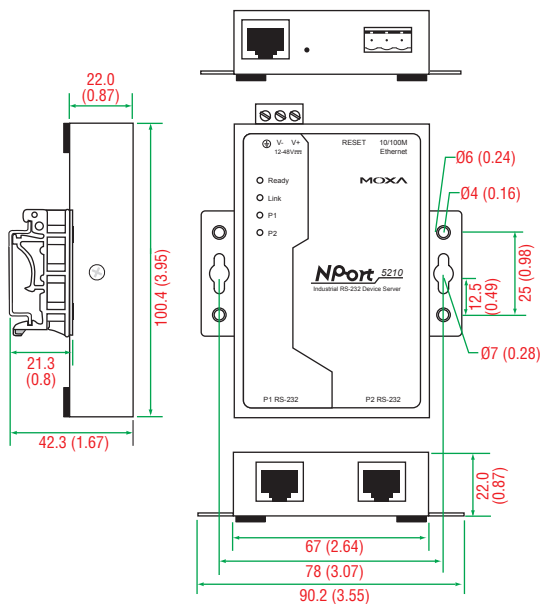
NPort® 5210



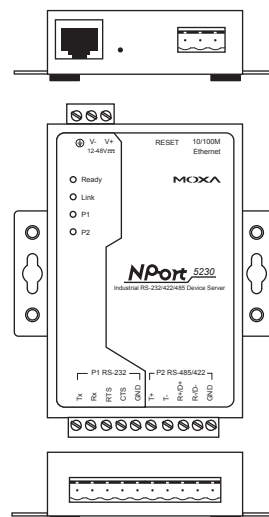
NPort® 5230



NPort® 5232

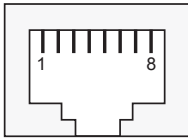


NPort® 5232I



Pin Assignment

8-pin RJ45 connector

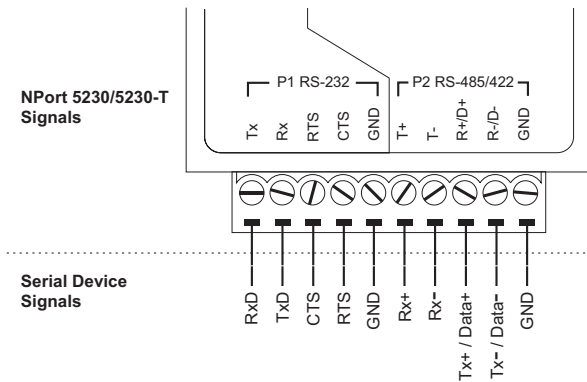


NPort® 5210/5210-T (RS-232)

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

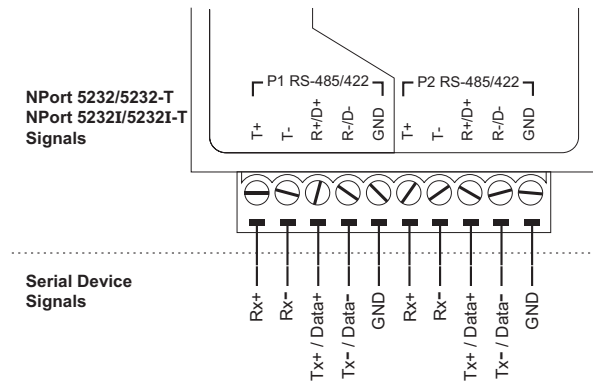
NPort® 5230/5230-T

(RS-232/422/485, terminal block connector)



NPort® 5232/5232I/5232-T/5232I-T

(RS-422/485, terminal block connector)



Ordering Information

Available Models

- NPort 5210:** 2-port RS-232 device server, 0 to 55°C operating temperature
- NPort 5230:** 2-port device server with 1 RS-232 port and 1 RS-422/485 port, 0 to 55°C operating temperature
- NPort 5232:** 2-port RS-422/485 device server, 0 to 55°C operating temperature
- NPort 5232I:** 2-port RS-422/485 device server with 2 KV optical isolation, 0 to 55°C operating temperature
- NPort 5210-T:** 2-port RS-232 device server, -40 to 75°C operating temperature
- NPort 5230-T:** 2-port device server with 1 RS-232 port and 1 RS-422/485 port, -40 to 75°C operating temperature
- NPort 5232-T:** 2-port RS-422/485 device server, -40 to 75°C operating temperature
- NPort 5232I-T:** 2-port RS-422/485 device server with 2 KV optical isolation, -40 to 75°C operating temperature

Optional Accessories (can be purchased separately)

- DK-35A:** Mounting Kit for 35-mm DIN-Rail
- DIN-Rail Power Supply:** See page A-8 for details
- Terminal Block:** See page A-7 for details

Package Checklist

- NPort 5200 device server
- Power jack to a 3-pin terminal block adaptor
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card