

# 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



### 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 (Winsock, 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

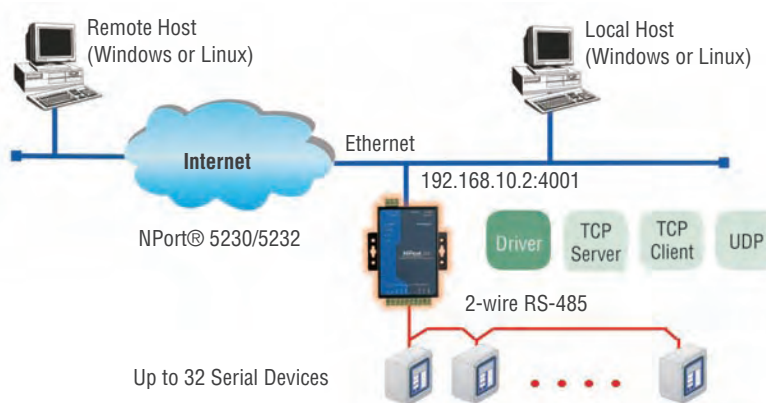
excellent “no fuss” way to preserve your software investment and enjoy the benefits of networking your serial devices.

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

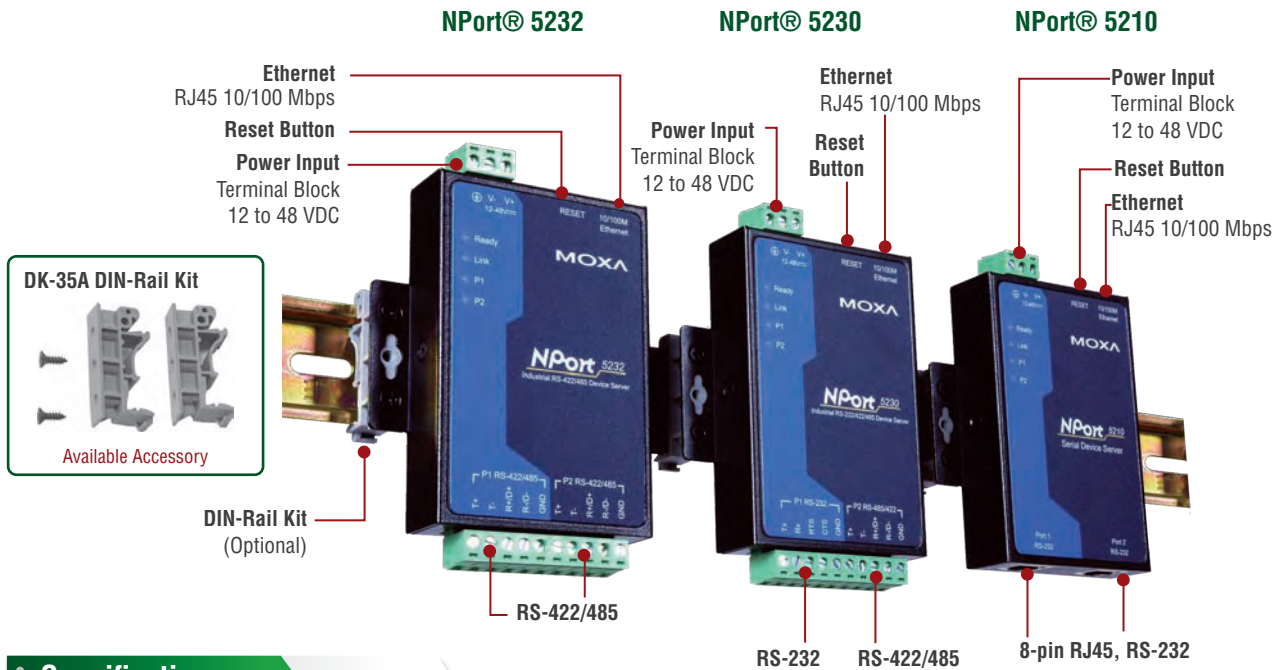
By specifying the NPort® 5200's IP address and port number, a network sockets API can obtain access to the attached serial device over the network, from any host computer that supports TCP/IP. For

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/V2c, HTTP, SMTP, SNTP
- Configuration Options:** Web Console, Serial Console (NPort® 5210/5230 only), Telnet Console, Windows Utility
- Windows Real COM Drivers:** Windows 95, 98, ME, NT, 2000, XP x86/x64, 2003 x86/x64, Vista x86/x64, 2008 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)
- 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:**

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

### Regulatory Approvals

**EMC:** CE (EN55022 and EN55024 Class A), FCC Part 15 Subpart B Class A

**Safety:** UL (UL60950-1), TÜV (EN60950-1)

**Marine:** DNV

### Reliability

**Alert Tools:** Built-in buzzer and RTC (real-time clock)

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

**MTBF (meantime between failures):**

NPort® 5210: 134850 hrs

NPort® 5230: 106955 hrs

NPort® 5232: 102344 hrs

NPort® 5232I: 87083 hrs

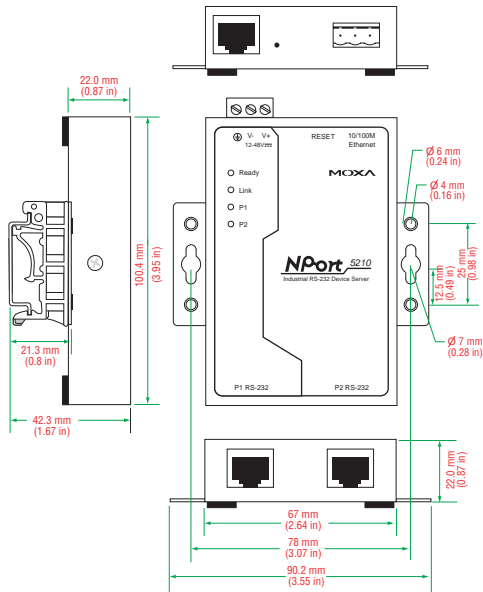
### Warranty

**Warranty Period:** 5 years

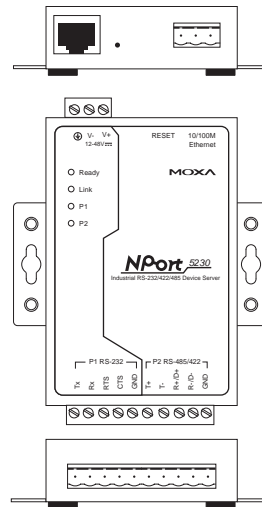
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions

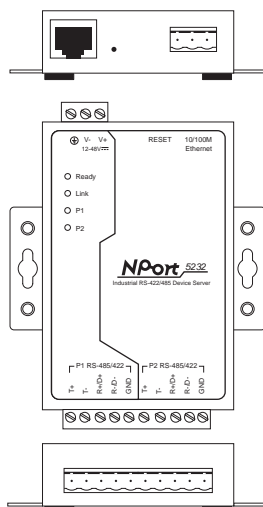
#### NPort® 5210



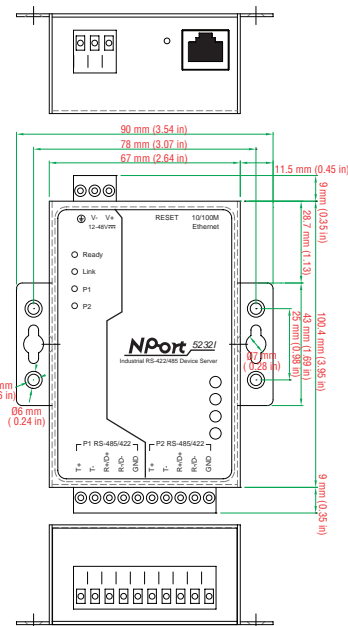
#### NPort® 5230



#### NPort® 5232

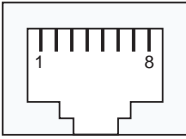


#### NPort® 5232I



## Pin Assignment

8-pin RJ45 connector

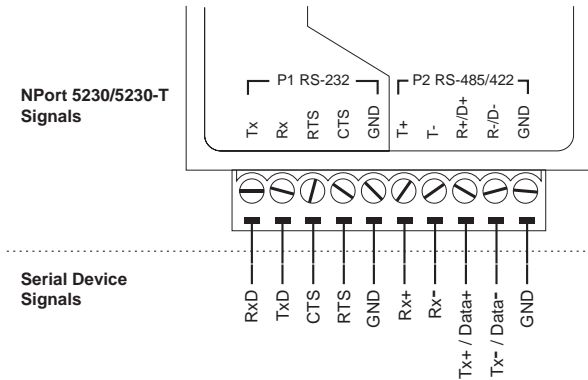


### NPort® 5210/5210-T (RS-232)

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)

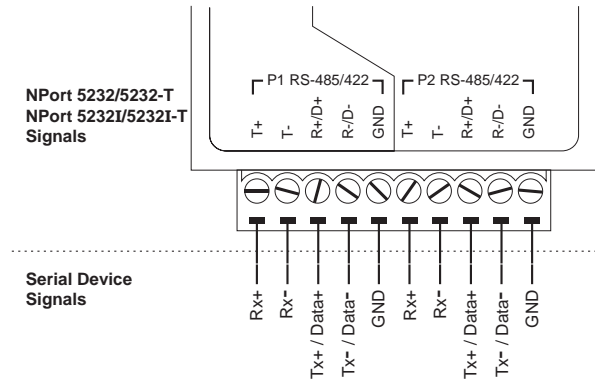
### NPort® 5230/5230-T

(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

### Package Checklist

- NPort® 5200 series device server
- Power jack to 3-pin terminal block adaptor
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

### 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