# NPort® 5200 Series

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



- Compact design for easy installation
- Socket modes: TCP server/TCP client/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.9-28

## 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, 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, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 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, 3.x

### Physical Characteristics

**Housing:** Metal
**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:** (NPort 5210 only)
EN 60601-1-2 Class B, EN 55011

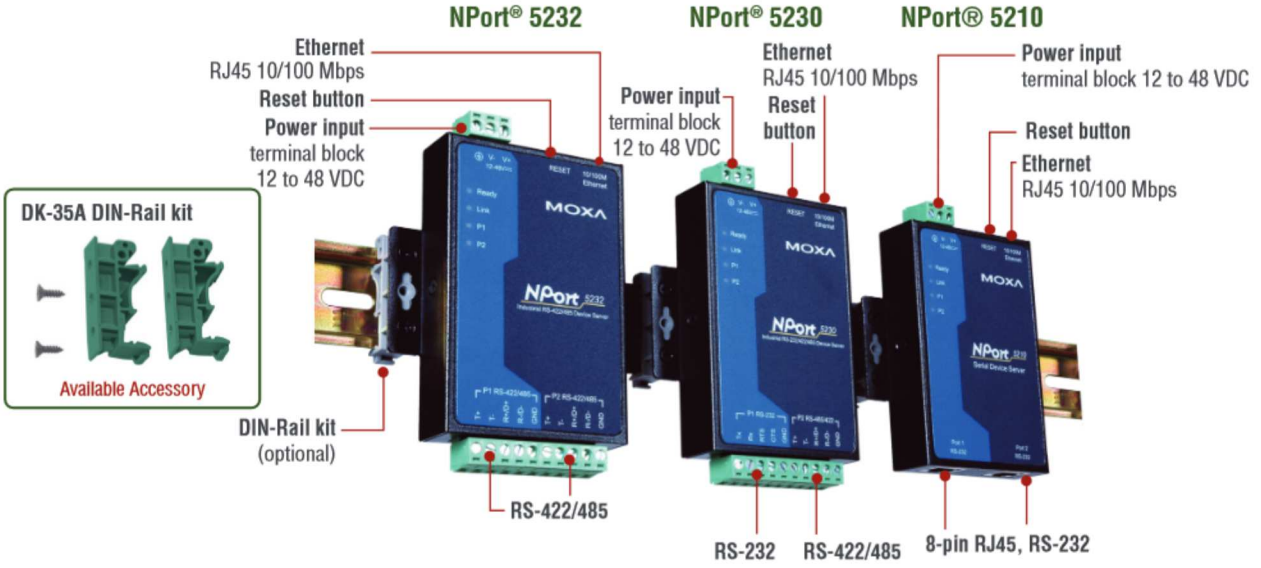
## Reliability

**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

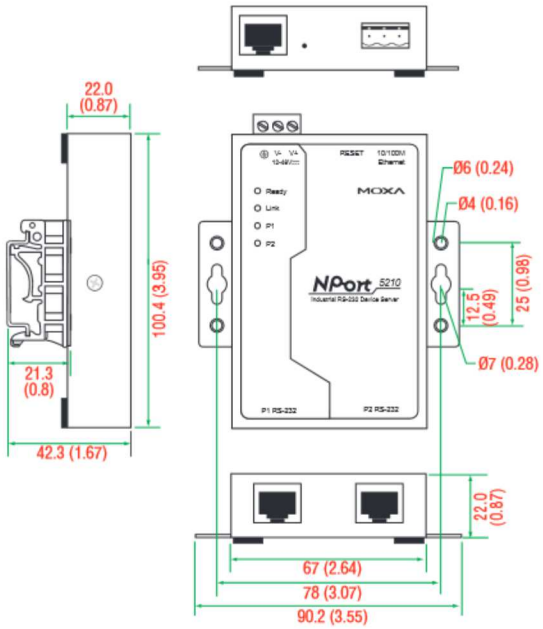
## Appearance



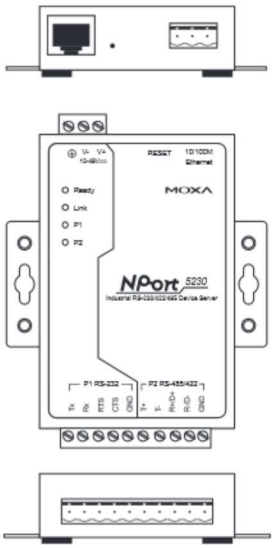

## Dimensions

Unit: mm (inch)

### NPort® 5210



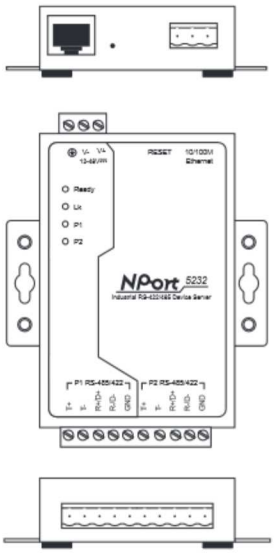

### NPort® 5230



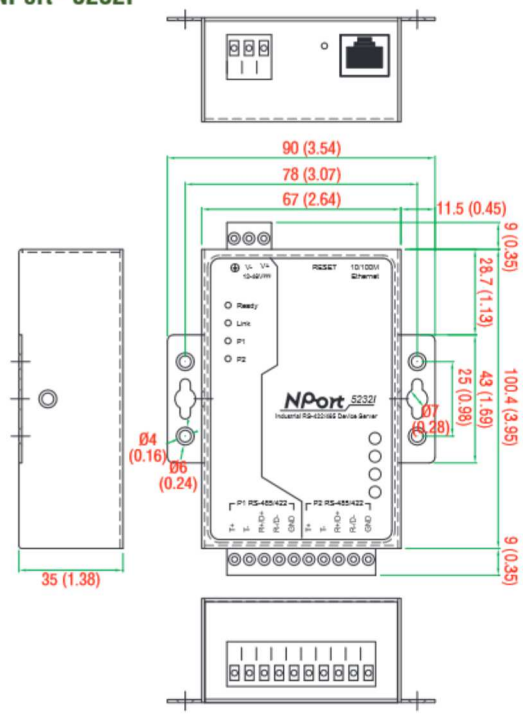
## Dimensions

Unit: mm (inch)

### NPort® 5232

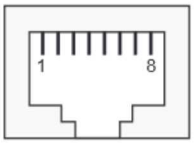


### NPort® 5232I




## 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) |

## 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 device server
- Power jack to a 3-pin terminal block adaptor
- 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
**DIN-Rail Power Supply:** See page A-8 for details
**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

# Wiring Kits

| | TB-M9 | TB-F9 | TB-M25 | TB-F25 | ADP-RJ458P-DB9M | ADP-RJ458P-DB9F |
|---|---|---|---|---|---|---|
| Accessories Image |  |  |  |  |   |   |
| Type | DB9 male DIN-Rail wiring terminal | DB9 female DIN-Rail wiring terminal | DM25 male DIN-Rail wiring terminal | DB25 female DIN-Rail wiring terminal | RJ45-to-DB9 adaptor (male) | RJ45-to-DB9 adaptor (female) |
| Connector | DB9 male | DB9 female | DB25 male | DB25 female | - | - |
| Rating | 300 V, 20 A (IEC250V 10A) | | | | - | - |
| Operating Temperature | -40 to 105°C (-40 to 221°F) | | | | - | - |
| Suitable Wiring | 24-12 AWG (IEC 0.5-2.5 mm2) | | | | - | - |


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