

NPort® DE-211/311

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



See also NPort 5100A, p. 8-18

- > 3-in-1 serial port: RS-232, RS-422, or RS-485
- > Versatile operation modes, including TCP Server, TCP Client, UDP, Ethernet Modem, and Pair Connection
- > Real COM/TTY drivers for Windows and Linux
- > 10M and 100M Ethernet speeds detected automatically
- > 2-wire RS-485 with patented Automatic Data Direction Control (ADDC®)
- > Built-in 15 KV ESD protection for all serial signals



Overview

The NPort® DE-211 and DE-311 are 1-port serial device servers that support RS-232, RS-422, 4-wire RS-485, and 2-wire RS-485. The DE-211 supports 10 Mbps Ethernet connections and has a DB25 female connector for the serial port. The DE-311 supports 10/100

Mbps Ethernet connections and has a DB9 female connector for the serial port.

Both device servers are ideal for applications that involve information display boards, PLCs, flow meters, gas meters, CNC machines, and biometric identification card readers.

Specifications

Ethernet Interface

Number of Ports: 1

Speed:

NPort DE-211: 10 Mbps, auto MDI/MDIX

NPort DE-311: 10/100 Mbps, auto MDI/MDIX

Connector: 8-pin RJ45

Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Number of Ports: 1

Serial Standards: RS-232/422/485 (selectable by DIP Switch)

Connector:

NPort DE-211: DB25 female

NPort DE-311: DB9 female

Serial Line Protection: 15 KV ESD protection for all signals

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, XON/XOFF

Baudrate: 150 bps to 230.4 Kbps

Serial Signals

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND

RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND (DE-211 only)

RS-485-2w: Data+, Data-, GND

Software

Network Protocols: DHCP, BOOTP, Telnet, TCP, UDP, IP, ICMP, ARP

Configuration Options: Serial Console, Telnet Console, Windows Utility

Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/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: 480 g

Dimensions:

Without ears: 67 x 100.4 x 22 mm (2.64 x 3.95 x 0.87 in)

With ears: 90.2 x 100.4 x 22 mm (3.55 x 3.95 x 0.87 in)

Environmental Limits

Operating Temperature: 0 to 55°C (32 to 131°F)

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

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

Power Requirements

Input Voltage:

DE-211: 12 to 30 VDC

DE-311: 9 to 30 VDC

Power Consumption:

NPort DE-211: 180 mA @ 12 V, 100 mA @ 24 V

NPort DE-311: 300 mA @ 9 V, 150 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

Medical: EN 60601-1-2 Class B, EN 55011 (DE-311 only)

Reliability

MTBF (mean time between failures):

NPort DE-211: 347,822 hrs

NPort DE-311: 225,529 hrs

Warranty

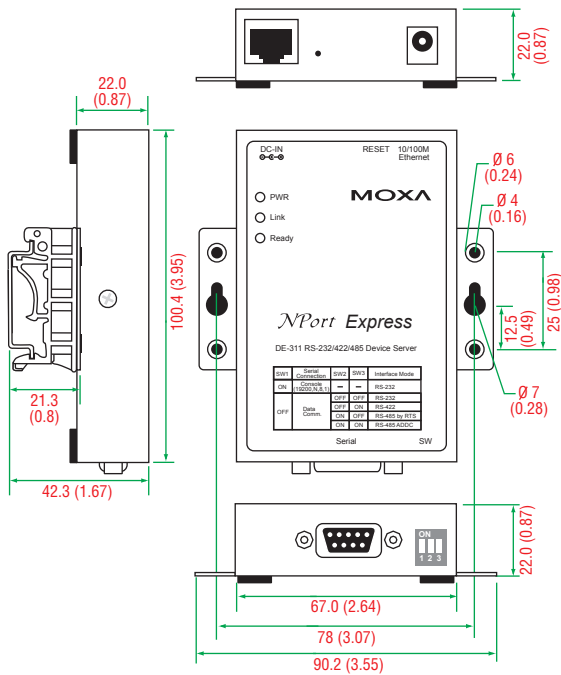
Warranty Period: 5 years

Details: See www.moxa.com/warranty

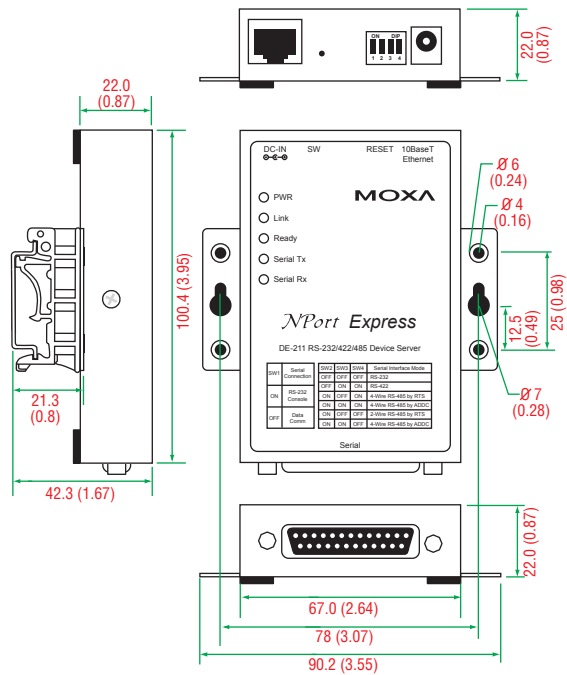
Dimensions

Unit: mm (inch)

NPort® DE-311

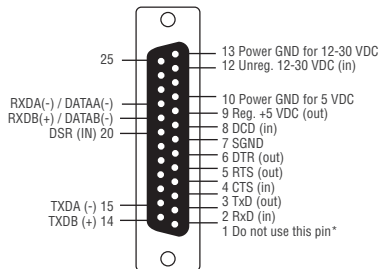


NPort® DE-211

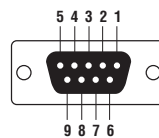


Pin Assignment

NPort® DE-211 (RS-232/422/485, DB25 female connector)



NPort® DE-311 (RS-232/422/485, DB9 female connector)



| PIN | RS-232 | RS-422 | RS-485-2w |
|-----|--------|---------|-----------|
| 1 | DCD | RxD-(A) | - |
| 2 | TxD | RxD+(B) | - |
| 3 | RxD | TxD+(B) | Data+(B) |
| 4 | DSR | TxD-(A) | Data-(A) |
| 5 | GND | GND | GND |
| 6 | DTR | CTS-(A) | - |
| 7 | CTS | CTS+(B) | - |
| 8 | RTS | RTS+(B) | - |
| 9 | - | RTS-(A) | - |

Ordering Information

Available Models

NPort DE-211: 1-port RS-232/422/485 device server with 10 Mbps Ethernet connection
NPort DE-311: 1-port RS-232/422/485 device server with 10/100 Mbps Ethernet connection

Optional Accessories (can be purchased separately)

NP21101: DB25 male to DB9 female cable for RS-232 transmission, 30 cm (for DE-211)
NP21102: DB25 male to DB9 male cable for RS-232 transmission, 30 cm (for DE-211)
NP21103: DB25 male terminal block kit for RS-422/485 transmission (for DE-211)
TB-M25: DB25 male DIN-Rail wiring terminal (for DE-211)
TB-M9 (for DE-311): DB9 male DIN-Rail wiring terminal (for DE-311)
DK-35A: Mounting Kit for 35-mm DIN-Rail

Package Checklist

- NPort DE-211 or DE-311 device server
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card