

NPort® DE-211/311

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



- > 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: 50 bps to 230.4 Kbps

Serial Signals

RS-232: Tx+, Rx+, 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, 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: 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)

Operating Humidity: 5 to 95% RH

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

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

Regulatory Approvals

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

Safety: UL (UL60950), TÜV (EN60950)

Medical: EN60601-1-2 Class B, EN55011 (DE-311 only)

MTBF (mean time between failures):

NPort DE-211: 347822 hrs

NPort DE-311: 225529 hrs

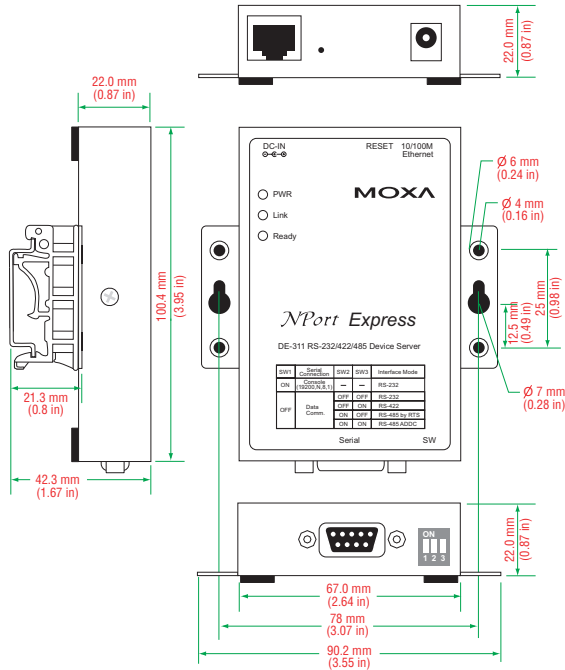
Warranty

Warranty Period: 5 years

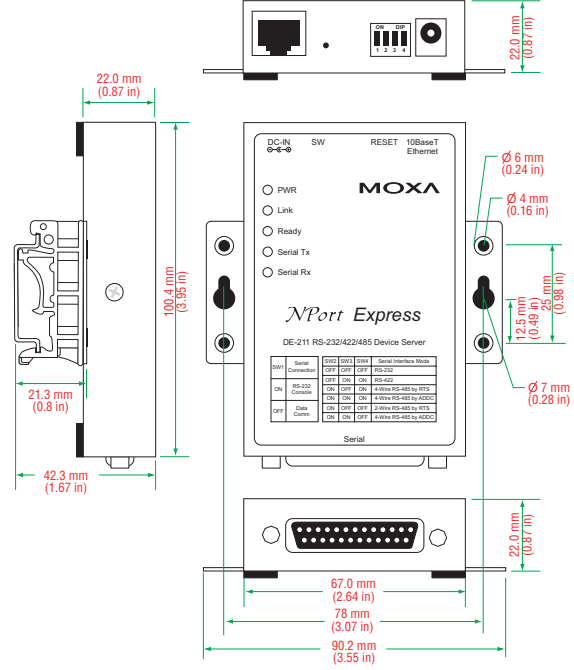
Details: See www.moxa.com/warranty

Dimensions

NPort® DE-311

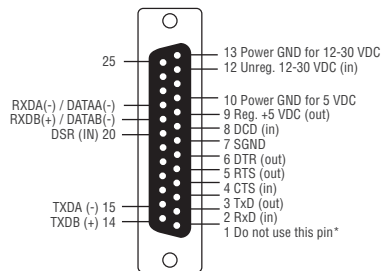


NPort® DE-211

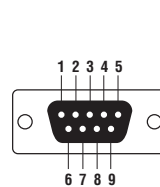


Pin Assignment

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



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



PIN	RS-232	RS-422/485-4w	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 serial device server
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card