

# 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

The certification logos shown here apply to some or all of the products in this section. For details, see "Regulatory Approvals" under "Specifications" below.



### 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 (meantime between failures):**

NPort DE-211: 347822 hrs

NPort DE-311: 225529 hrs

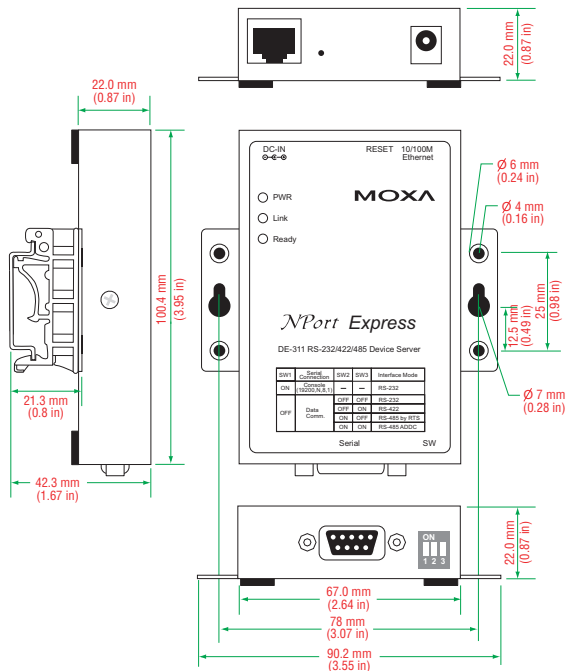
### Warranty

**Warranty Period:** 5 years

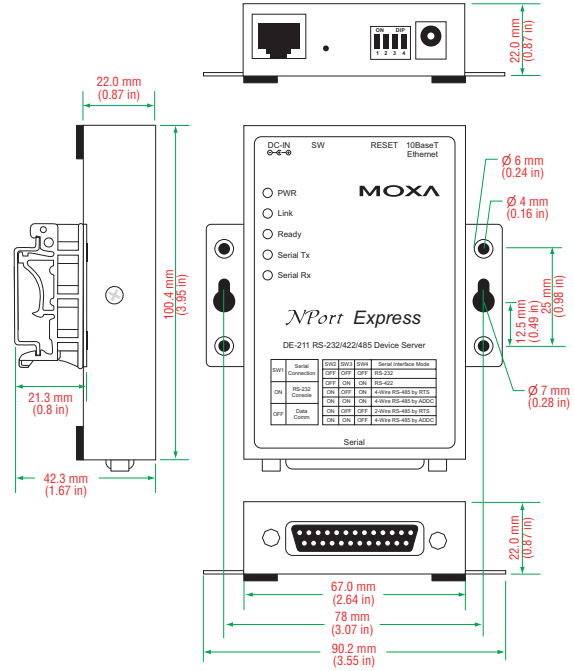
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions

#### NPort® DE-311

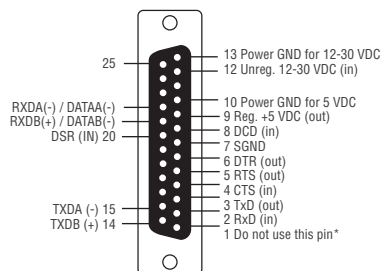


#### NPort® DE-211

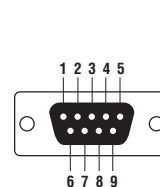


### Pin Assignment

**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