

NPort Express Series

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



Features and Benefits

- 3-in-1 serial port: RS-232, RS-422, or RS-485
- Variety of operation modes, including TCP Server, TCP Client, UDP, Ethernet Modem, and Pair Connection
- Real COM/TTY drivers for Windows and Linux
- 2-wire RS-485 with patented Automatic Data Direction Control (ADDC®)

Certifications



Introduction

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

No. of Ports	1
Magnetic Isolation Protection	1.5 kV (built-in)
10/100BaseT(X) Ports (RJ45 connector)	DE-311: Auto MDI/MDI-X connection
10BaseT(X) Ports, RJ45 Connector	DE-211: Auto MDI/MDI-X connection

Ethernet Software Features

Configuration Options	Windows Utility, Telnet Console, Serial Console
Management	ARP, BOOTP, DHCP Client, IPv4, TCP/IP, Telnet, UDP, ICMP
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later

Serial Interface

Connector	DE-211: DB25 female DE-311: DB9 female
Serial Standards	RS-232, RS-422, RS-485

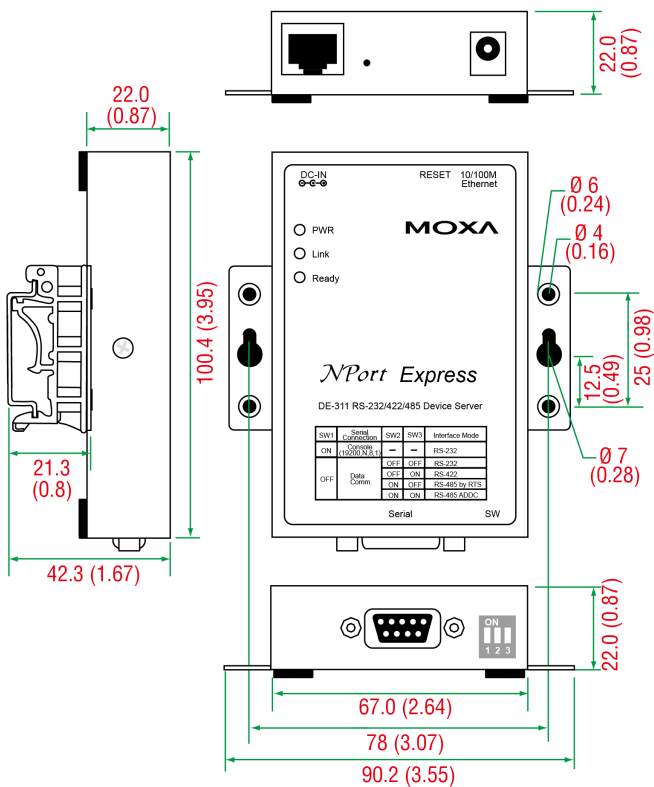
No. of Ports	1
Baudrate	Supports standard baudrates (unit=bps): 50, 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230.4k
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, XON/XOFF
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND
RS-485-2w	Data+, Data-, GND
Power Parameters	
Input Current	DE-211: 180 mA @ 12 VDC, 100 mA @ 24 VDC DE-311: 300 mA @ 9 VDC, 150 mA @ 24 VDC
Input Voltage	DE-211: 12 to 30 VDC DE-311: 9 to 30 VDC
Reliability	
Alert Tools	Built-in buzzer and RTC (real-time clock)
Physical Characteristics	
Housing	Metal
Dimensions (with ears)	90.2 x 100.4 x 22 mm (3.55 x 3.95 x 0.87 in)
Dimensions (without ears)	67 x 100.4 x 22 mm (2.64 x 3.95 x 0.87 in)
Weight	480 g (1.06 lb)
Environmental Limits	
Operating Temperature	0 to 55°C (32 to 131°F)
Storage Temperature (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class B
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-11

Safety	UL 60950-1
Medical	DE-311: EN 55011: 2007+A2: 2007 Class A (Group 1) compliant DE-311: EN 60601-1-2: 2007 compliant
Declaration	
Green Product	RoHS, CRoHS, WEEE
MTBF	
Time	DE-211: 347,822 hrs DE-311: 225,529 hrs
Standards	MIL-HDBK-217F
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x NPort Express Series device server
Power Supply	1 x power adapter, universal
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

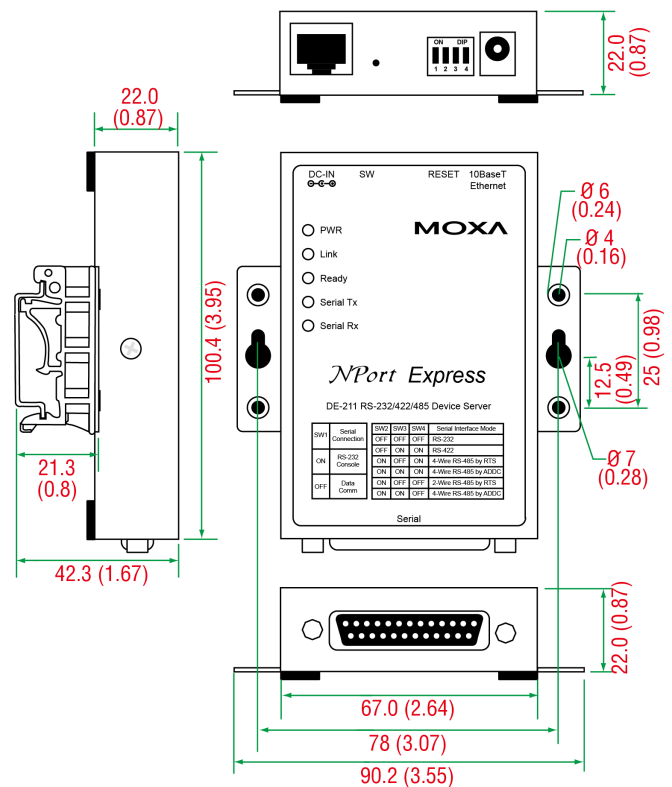
NPort DE-311

Unit: mm (inch)



NPort DE-211

Unit: mm (inch)



Ordering Information

Model Name	Ethernet Port Speed	Serial Connector	Power Input	Medical Certifications
DE-211	10 Mbps	DB25 female	12 to 30 VDC	–
DE-311	10/100 Mbps	DB9 female	9 to 30 VDC	EN 60601-1-2 Class B, EN 55011

Accessories (sold separately)

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm
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Power Adapters

PWR-12050-WPAU-S2	Non-locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, Australia (AU) plug, 0 to 40°C operating temperature
PWR-12050-WPCN-S2	Non-locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, China (CN) plug, 0 to 40°C operating temperature
PWR-12050-WPEU-S2	Non-locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, Continental Europe (EU) plug, 0 to 40°C operating temperature
PWR-12050-WPUK-S2	Non-locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, United Kingdom (UK) plug, 0 to 40°C operating temperature
PWR-12050-WPUSJP-S2	Non-locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, United States/Japan (US/JP) plug, 0 to 40°C operating temperature

Terminal Blocks

TB-M25	DB25 male DIN-rail wiring terminal Applicable Models: DE-211
TB-M9	DB9 male DIN-rail wiring terminal Applicable Models: DE-311

Cables

NP21103	DB25 male to terminal block for RS-422/485 transmission Applicable Models: DE-211
NP21102	DB25 male to DB9 male cable for RS-232 transmission, 30 cm Applicable Models: DE-211
CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m Applicable Models: DE-311
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm Applicable Models: DE-311
NP21101	DB25 male to DB9 female cable for RS-232 transmission, 30 cm Applicable Models: DE-211

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