

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 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, 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 |
| 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 |
| Windows Real COM Drivers | Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10/11 (x86/x64), Windows 2008 R2/2012/2012 R2/2016/2019 (x64), Windows Server 2022, Windows Embedded CE 5.0/6.0, Windows XP Embedded |

Serial Interface

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|------------------|---|
| 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

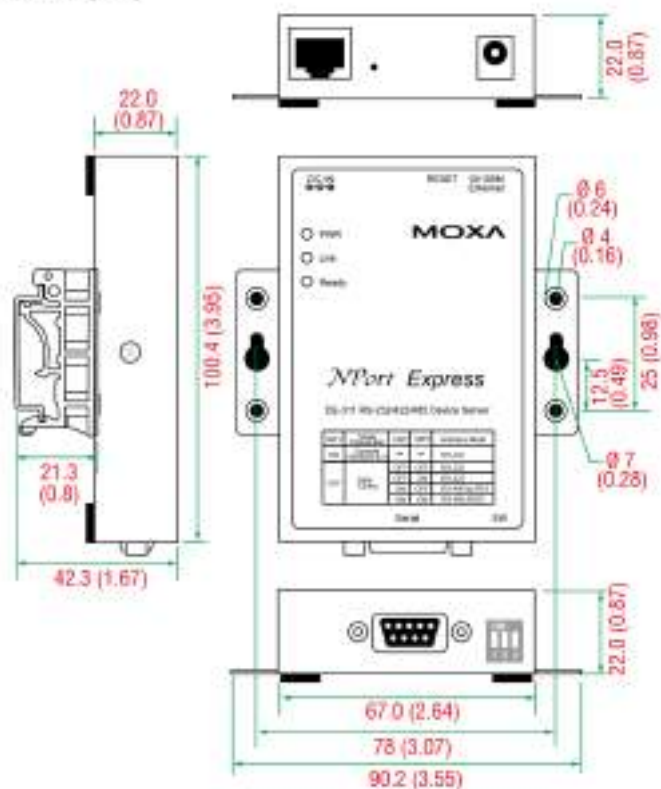
| | |
|-----|---|
| EMC | EN 55032/35 |
| EMI | CISPR 32, FCC Part 15B Class B |
| EMS | IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV 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

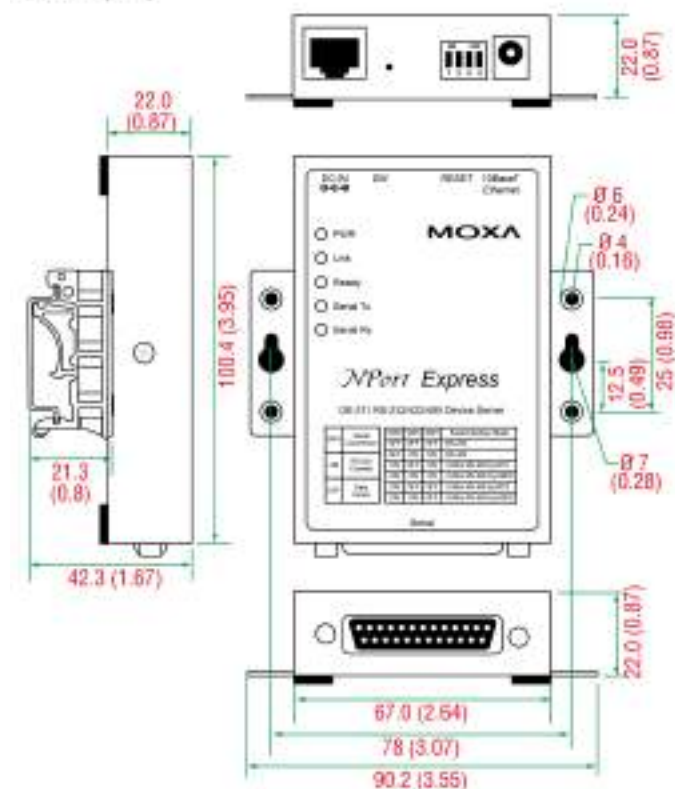
NPort DE-311

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

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|-------------------|---|
| PWR-12050-EU-S2 | Unlocking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature |
| PWR-12050-UK-S2 | Unlocking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature |
| PWR-12050-CN-S2 | Unlocking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature |
| PWR-12050-AU-S2 | Unlocking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature |
| PWR-12050-USJP-S2 | Unlocking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature |

Terminal Blocks

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|--------|--|
| 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

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|--------------|--|
| 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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