

NPort 5400 Series

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



Features and Benefits

- User-friendly LCD panel for easy installation
- Adjustable termination and pull high/low resistors
- Socket modes: TCP server, TCP client, UDP
- Configure by Telnet, web browser, or Windows utility
- SNMP MIB-II for network management
- 2 kV isolation protection for NPort 5430I/5450I/5450I-T
- -40 to 75°C operating temperature range (-T model)

Certifications



Introduction

NPort® 5400 device servers provide many useful features for serial-to-Ethernet applications, including an independent operation mode for each serial port, user-friendly LCD panel for easy installation, dual DC power inputs, and adjustable termination and pull high/low resistors.

Network Readiness for up to 4 Serial Devices

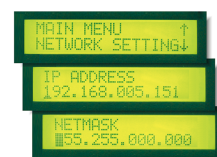
NPort® 5400 device servers can conveniently and transparently connect up to four serial devices to an Ethernet network, allowing you to network your existing serial devices with only basic configuration. Data transmission between the serial and Ethernet interfaces is bidirectional. By using NPort® device servers, you not only protect your current hardware investment, but also allow for future network expansion. You can both centralize the management of your serial devices and distribute management hosts over the network.

Independent Operation Mode for Each Serial Port

NPort® 5400 device servers can be used to connect different devices for remote data polling or event handling over a TCP/IP network. Each serial port on the NPort® 5400 operates independently to provide maximum versatility. For example, port 1 can operate in Driver mode, port 2 in TCP Server mode, and ports 3 and 4 in TCP Client mode.

User-friendly LCD Panel for Easy Installation

An LCD panel is built into the NPort® 5400's top panel, with four buttons for data input, configuration, and operation mode selection. The LCD panel displays the server name, serial number, and IP address, and it can be used to enter or modify parameters such as IP address, netmask, and gateway. (The LCD panel is not available on wide-temperature models.)



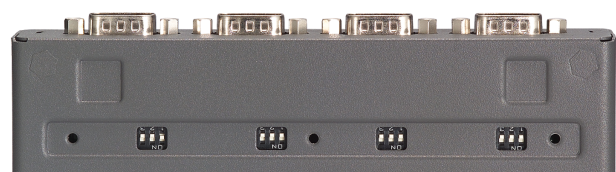
Dual DC Power Inputs

NPort® 5400 device servers support dual power sources by providing both a DC terminal block input and a DC power jack input. Providing two types of power inputs gives users greater flexibility for use with different applications.



Adjustable Termination and Pull High/Low Resistors

The NPort 5400 Series provides adjustable termination and pull high/low resistors for RS-485 applications. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals, and the pull high/low resistors may need adjusting to maintain the integrity of the electrical signal. Since no set of resistor values is universally compatible with all environments, the NPort® 5400 has four sets of DIP switches on the bottom panel to set the termination and pull high/low resistor values.



Specifications

Ethernet Interface

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|---------------------------------------|-------------------|
| 10/100BaseT(X) Ports (RJ45 connector) | 1 |
| Magnetic Isolation Protection | 1.5 kV (built-in) |

Ethernet Software Features

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|--------------------------|---|
| Configuration Options | Telnet Console, Windows Utility, Web Console (HTTP/HTTPS) |
| Management | ARP, BOOTP, DHCP Client, DNS, HTTP, HTTPS, ICMP, IPv4, LLDP, Rtelnet, SMTP, SNMPv1/v2c, TCP/IP, Telnet, UDP |
| Filter | IGMP v1/v2 |
| 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 (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 |
| Time Management | SNTP |

Serial Interface

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|-----------------------------------|--|
| Connector | NPort 5410/5450/5450-T/5450I/5450I-T: DB9 male NPort 5430/5430I: Terminal block |
| No. of Ports | 4 |
| Serial Standards | NPort 5410: RS-232 NPort 5430 Series: RS-422, RS-485 NPort 5450 Series: RS-232, RS-422, RS-485 |
| Operation Modes | Disabled, Ethernet Modem, Pair Connection, Real COM, Reverse Telnet, TCP Client, TCP Server, UDP |
| 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, 460.8k, 921.6k |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | RTS/CTS (RS-232 only), DTR/DSR (RS-232 only), XON/XOFF |
| Isolation | 2 kV isolation for NPort 5430I/5450I/5450I-T |
| Pull High/Low Resistor for RS-485 | 1 kilo-ohm, 150 kilo-ohms |
| RS-485 Data Direction Control | ADDC® (automatic data direction control) |
| Terminator for RS-485 | 120 ohms |

Serial Signals

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|--------|--|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |

| | |
|--|---|
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |
| Power Parameters | |
| Input Current | NPort 5410/5450/5450-T: 350 mA @ 12 VDC NPort 5430: 320 mA @ 12 VDC NPort 5430I: 530 mA @ 12 VDC NPort 5450I/5450I-T: 554 mA @ 12 VDC |
| Input Voltage | 12 to 48 VDC |
| No. of Power Inputs | 2 |
| Power Connector | 1 removable 3-contact terminal block(s) Power input jack |
| Reliability | |
| Automatic Reboot Trigger | Built-in WDT |
| Alert Tools | Built-in buzzer and RTC (real-time clock) |
| Physical Characteristics | |
| Housing | Metal |
| Dimensions (with ears) | 181 x 103 x 33 mm (7.14 x 4.06 x 1.30 in) |
| Dimensions (without ears) | 158 x 103 x 33 mm (6.22 x 4.06 x 1.30 in) |
| Weight | 740 g (1.63 lb) |
| Interactive Interface | LCD panel display (standard temp. models only) Push buttons for configuration (standard temp. models only) |
| Installation | Desktop, DIN-rail mounting (with optional kit), Wall mounting |
| Environmental Limits | |
| Operating Temperature | Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -40 to 75°C (-40 to 167°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 A |
| 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; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs |
| Maritime | DNV-GL (standard temp. models only) |
| Medical | EN 60601-1-2 Class B, EN 55011 (NPort 5410/5450/5450I only) |
| Safety | UL 60950-1 |

MTBF

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|-----------|---|
| Time | NPort 5410: 310,331 hrs NPort 5430/5430I: 265,650 hrs NPort 5450/5450I: 206,903 hrs |
| Standards | Telcordia (Bellcore) Standard TR/SR |

Warranty

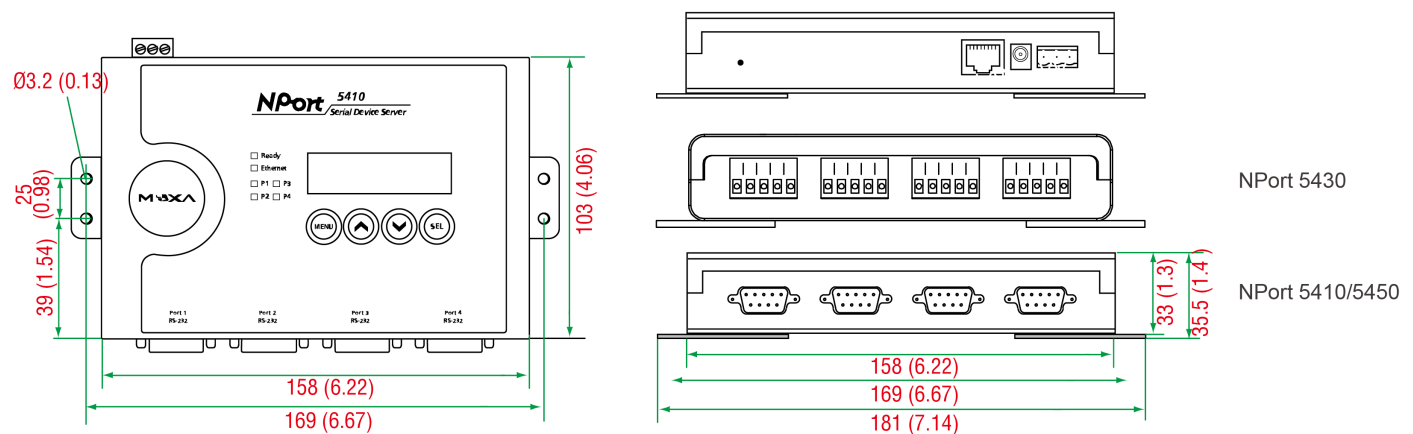
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| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |

Package Contents

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|------------------|---|
| Device | 1 x NPort 5400 Series device server |
| Power Supply | 1 x power wiring adapters: CBL-PJTB-10 |
| Installation Kit | 1 x wall-mounting kit |
| Documentation | 1 x quick installation guide 1 x warranty card |

Dimensions

Unit: mm (inch)



Ordering Information

| Model Name | Serial Interface | Serial Interface Connector | Serial Interface Isolation | Operating Temp. | Input Voltage |
|---------------|------------------|----------------------------|----------------------------|-----------------|---------------|
| NPort 5410 | RS-232 | DB9 male | – | 0 to 55°C | 12 to 48 VDC |
| NPort 5430 | RS-422/485 | Terminal block | – | 0 to 55°C | 12 to 48 VDC |
| NPort 5430I | RS-422/485 | Terminal block | 2 kV | 0 to 55°C | 12 to 48 VDC |
| NPort 5450 | RS-232/422/485 | DB9 male | – | 0 to 55°C | 12 to 48 VDC |
| NPort 5450-T | RS-232/422/485 | DB9 male | – | -40 to 75°C | 12 to 48 VDC |
| NPort 5450I | RS-232/422/485 | DB9 male | 2 kV | 0 to 55°C | 12 to 48 VDC |
| NPort 5450I-T | RS-232/422/485 | DB9 male | 2 kV | -40 to 75°C | 12 to 48 VDC |

Accessories (sold separately)

Cables

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| CBL-F9M9-150 | DB9 female to DB9 male serial cable, 1.5 m |
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| CBL-F9M9-20 | DB9 female to DB9 male serial cable, 20 cm |
| CBL-RJ458P-100 | 8-pin RJ45 CAT5 Ethernet cable, 1 m |
| CBL-RJ45SF9-150 | 8-pin RJ45 to DB25 male serial cable with shielding, 1.5m |

Connectors

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|-----------------|--|
| ADP-RJ458P-DB9F | DB9 female to RJ45 connector |
| Mini DB9F-to-TB | DB9 female to terminal block connector |

DIN-Rail Mounting Kits

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| DK35A | DIN-rail mounting kit, 35 mm |
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Power Adapters

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| PWR-12125-WPAU-S1 | Non-locking barrel plug, 12 VDC, 1.25 A, 100 to 240 VAC, Australia (AU) plug, 0 to 40°C operating temperature |
| PWR-12125-WPCN-S1 | Non-locking barrel plug, 12 VDC, 1.25 A, 100 to 240 VAC, China (CN) plug, 0 to 40°C operating temperature |
| PWR-12125-WPEU-S1 | Non-locking barrel plug, 12 VDC, 1.25 A, 100-240 VAC, Continental Europe (EU) plug, 0 to 40°C operating temperature |
| PWR-12125-WPUK-S1 | Non-locking barrel plug, 12 VDC, 1.25 A, 100-240 VAC, United Kingdom (UK) plug, 0 to 40°C operating temperature |
| PWR-12125-USJP-S1 | Non-locking barrel plug, 12 VDC, 1.25 A, 100-240 VAC, United States/Japan (US/JP) plug, 0 to 40°C operating temperature |
| PWR-12150-AU-SA-T | Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Australia (AU) plug, -40 to 75°C operating temperature Applicable Models: NPort 5450-T NPort 5450I-T |
| PWR-12150-CN-SA-T | Wide-temperature (-40 to 75°C) locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, China (CN) plug Applicable Models: NPort 5450-T NPort 5450I-T |
| PWR-12150-EU-SA-T | Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Continental Europe (EU) plug, -40 to 75°C operating temperature Applicable Models: NPort 5450-T NPort 5450I-T |
| PWR-12150-UK-SA-T | Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, United Kingdom (UK) plug, -40 to 75°C operating temperature Applicable Models: NPort 5450-T NPort 5450I-T |
| PWR-12150-USJP-SA-T | Locking barrel plug, 12 VDC 1.5 A, 100-240 VAC, United States/Japan (US/JP) plug, -40 to 75°C operating temperature Applicable Models: NPort 5450-T NPort 5450I-T |

Power Wiring

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| CBL-PJTB-10 | Non-locking barrel plug to bare-wire cable |
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