

NPort® 5600 Rackmount Series

8 and 16-port RS-232/422/485 serial device servers



- > 8 or 16 serial ports supporting RS-232/422/485
- > Standard 19-inch rackmount size
- > 10/100M auto-sensing Ethernet
- > Built-in 15 KV ESD protection for all serial signals
- > Easy IP address configuration with LCD panel
- > Choice of configuration methods: Web console, Telnet console, and Windows utility
- > Versatile socket operation modes, including TCP Server, TCP Client, UDP, and Real COM
- > SNMP MIB-II for network management

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Network Readiness for up to Sixteen Serial Devices

NPort® 5600 rackmount device servers can conveniently and transparently connect up to sixteen serial devices to an Ethernet, allowing you to network your existing serial devices with only basic configuration. Data transmission between the serial and Ethernet

interfaces is bi-directional. 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.

19-inch Rackmount Device Server

NPort® 5600 device servers come with Tx/Rx LEDs for the serial ports on the front panel, and the 8 or 16 RJ45 serial port connectors on the rear panel. This makes the NPort® 5600 device servers suitable for

standard 19-inch rack mounting, allowing you to simplify operation, maintenance, and administrative tasks.

Real COM/TTY Ports

Real COM/TTY drivers are provided that make the serial ports on the NPort® 5600 recognizable as Real COM ports by Windows, or Real TTY ports by Linux. In addition to supporting basic data transmission

and reception, the NPort® drivers also support the RTS, CTS, DTR, DSR, and DCD control signals.

LED Indicators to Ease Your Maintenance Tasks

The System LED, Serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks and help engineers analyze problems in the field. The NPort® 5600's LEDs

not only indicate current system and network status, but also help field engineers monitor the status of attached serial devices.

Adjustable Termination and Pull High/Low Resistors

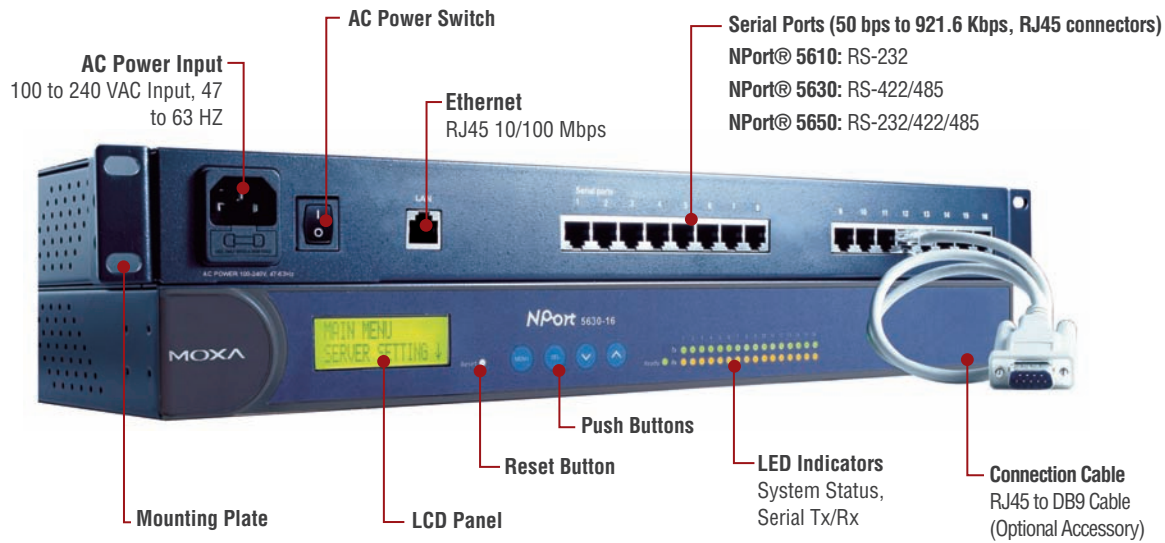
In some critical environments, termination resistors may be needed to prevent the reflection of serial signals. When using termination resistors, it is also important to set the pull high/low resistors correctly so that the electrical signal is not corrupted. Since no set of resistor values is universally compatible for all environments, the NPort® 5600 has DIP switches on the bottom panel for setting the termination and pull high/low resistor values.



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Appearance



Specifications

Ethernet Interface

Number of Ports: 1
Speed: 10/100 Mbps
Connector: 8-pin RJ45
Magnetic Isolation Protection: 1.5 KV built-in

Optical Fiber Interface

Distance:
 Multi mode: 0 to 2 km, 1310 nm (62.5/125 μ m, 500 MHz*km)
 Single mode: 0 to 40 km, 1310 nm (9/125 μ m, 3.5 PS/(nm*km))
Min. TX Output: -20 dBm (Multi mode), -5 dBm (Single mode)
Max. TX Output: -14 dBm (Multi mode), 0 dBm (Single mode)
Sensitivity: -34 to -30 dBm (Multi mode), -36 to -32 dBm (Single mode)

Serial Interface

Number of Ports: 8 or 16
Serial Standards:
 NPort® 5610: RS-232
 NPort® 5630: RS-422/485
 NPort® 5650: RS-232/422/485
Connectors: RJ45 (8 pins)
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: DSR/DTR and RTS/CTS (RS-232 only), XON/XOFF
Baudrate: 50 bps to 921.6 Kbps

Serial Signals

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

Software

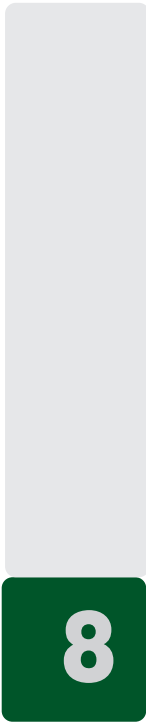
Network Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, HTTP, SMTP, SNTP, ARP, PPP, SLIP, RTelnet, RFC2217
Configuration Options: Web Console, Telnet Console, Windows Utility
Driver Support: Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Mini Screen with Push Buttons

LCD Panel: Liquid Crystal Display on the case
Push Buttons: Four push buttons for convenient on-site configuration

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Physical Characteristics

Housing: SECC sheet metal (1 mm), providing IP30 protection

Weight:

- NPort® 5610-8: 3340 g
- NPort® 5610-8-48V: 3160 g
- NPort® 5630-8: 3380 g
- NPort® 5650-8: 3360 g
- NPort® 5650-8-S-SC: 3380 g
- NPort® 5650-8-M-SC: 3380 g
- NPort® 5610-16: 3420 g
- NPort® 5610-16-48V: 3260 g
- NPort® 5630-16: 3400 g
- NPort® 5650-16: 3460 g
- NPort® 5650-16-S-SC: 3440 g
- NPort® 5650-16-M-SC: 3440 g

Dimensions:

Without ears: 440 x 45 x 198 mm (17.32 x 1.77 x 7.80 in)
 With ears: 480 x 45 x 198 mm (18.90 x 1.77 x 7.80 in)

Environmental Limits

- Operating Temperature:** 0 to 55°C (32 to 131°F)
- Operating Humidity:** 5 to 95% RH
- Storage Temperature:** -20 to 75°C (-4 to 167°F)

Power Requirements

Input Voltage:

NPort® 5610/5630/5650: 100 to 240 VAC, 47 to 63 hz
 NPort® 5610-48V: ±48 VDC (20 to 72 VDC, -20 to -72 VDC)

Power Consumption:

- NPort® 5610-8/16: 141 mA @ 100 VAC, 93 mA @ 240 VAC
- NPort® 5630-8/16: 152 mA @ 100 VAC, 98 mA @ 240 VAC
- NPort® 5610-8/16-48V: 135 mA @ 48 VDC
- NPort® 5650-8/16: 158 mA @ 100 VAC, 102 mA @ 240 VAC
- NPort® 5650-8/16-S-SC: 164 mA @ 100 VAC, 110 mA @ 240 VAC
- NPort® 5650-8/16-M-SC: 174 mA @ 100 VAC, 113 mA @ 240 VAC

Power Line Protection: 4 KV burst (EN61000-4-4: EFT/B), 2 KV surge (EN61000-4-5)

Regulatory Approvals

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

NPort® 5610 only: IEC61000-4-12

Safety: UL (UL60950-1), TÜV (EN60950-1)

Medical: EN60601-1-2 Class B, EN55011

Reliability

Automatic Reboot Trigger: Built-in WDT (watchdog timer)

MTBF (mean time between failures):

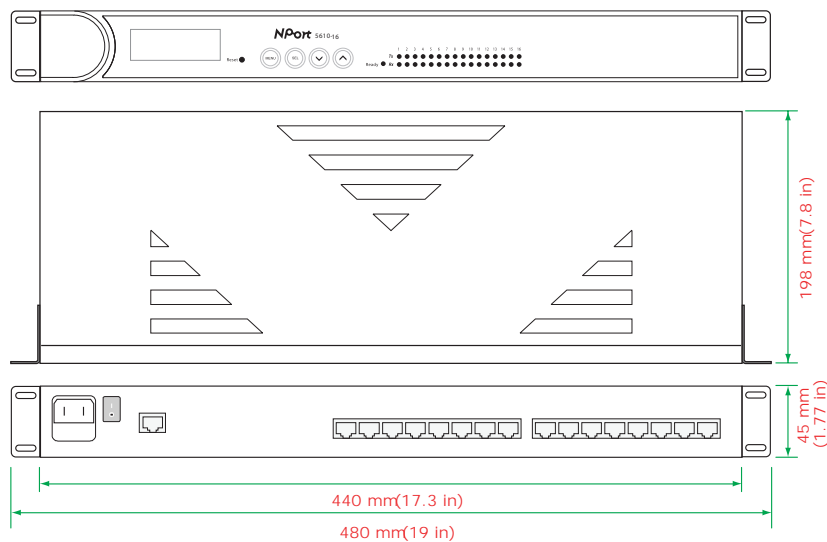
- NPort® 5610-8: 97294 hrs
- NPort® 5610-16: 94928 hrs
- NPort® 5610-8-48V: 96758 hrs
- NPort® 5610-16-48V: 94417 hrs
- NPort® 5630-8: 118405 hrs
- NPort® 5630-16: 91483 hrs
- NPort® 5650-8: 117584 hrs
- NPort® 5650-16: 104767 hrs
- NPort® 5650-S-SC-8: 116914 hrs
- NPort® 5650-S-SC-16: 87528 hrs
- NPort® 5650-M-SC-8: 116914 hrs
- NPort® 5650-M-SC-16: 87528 hrs

Warranty

Warranty Period: 5 years

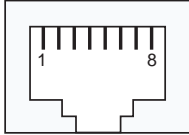
Details: See www.moxa.com/warranty

Dimensions



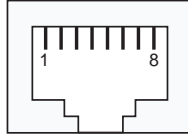
Pin Assignment

NPort® 5610
(RS-232, 8-port RJ45 connector)



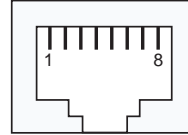
PIN	RS-232
1	DSR
2	RTS
3	GND
4	TXD
5	RxD
6	DCD
7	CTS
8	DTR

NPort® 5630
(RS-422/485, 8-port RJ45 connector)



PIN	RS-422/485-4w	RS-485-2w
1	---	---
2	---	---
3	TxD+	---
4	TxD-	---
5	RxD-	Data+
6	RxD+	Data-
7	GND	GND
8	---	---

NPort® 5650
(RS-232/422/485, 8-port RJ45 connector)



PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TXD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---

Ordering Information

Available Models

- NPort® 5610-8:** 8-port RS-232 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5610-8-48V:** 8-port RS-232 rackmount device server with RJ45 connectors and 48 VDC power input
- NPort® 5630-8:** 8-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5650-8:** 8-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5650-8-M-SC:** 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) multi-mode fiber (SC connector)
- NPort® 5650-8-S-SC:** 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) single-mode fiber (SC connector)
- NPort® 5610-16:** 16-port RS-232 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5610-16-48V:** 16-port RS-232 rackmount device server with RJ45 connectors and 48 VDC power input
- NPort® 5630-16:** 16-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5650-16:** 16-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input
- NPort® 5650-16-M-SC:** 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) multi-mode fiber (SC connector)
- NPort® 5650-16-S-SC:** 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) single-mode fiber (SC connector)

Optional Accessories (can be purchased separately)

- CBL-RJ45F25-150:** 8-pin RJ45 to DB25 female cable, 150 cm
- CBL-RJ45M25-150:** 8-pin RJ45 to DB25 male cable, 150 cm
- CBL-RJ45F9-150:** 8-pin RJ45 to DB9 female cable, 150 cm
- CBL-RJ45M9-150:** 8-pin RJ45 to DB9 male cable, 150 cm

Package Checklist

- NPort® 5600 series device server
- Power Cord (see Appendix A)
- Serial cable for configuration
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

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