

NPort® 5600 Series

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



- > 8 or 16 serial ports supporting RS-232/422/485
- > Standard 19-inch rackmount size
- > 10/100M auto-sensing Ethernet
- > Easy IP address configuration with LCD panel (excluding wide temperature models)
- > Configure via Telnet/Web/Windows utility
- > Socket modes: TCP server/TCP client/UDP/Real COM
- > SNMP MIB-II for network management
- > Universal high-voltage range: 100 to 240 VAC or 88 to 300 VDC
- > Popular low-voltage ranges: ±48 VDC (20 to 72 VDC, -20 to -72 VDC)



Overview

With the NPort® 5600 rackmount series, you not only protect your current hardware investment, but also allow for future network expansion by centralizing the management of your serial devices and distributing management hosts over the network.

Network Readiness for up to 16 Serial Devices

Only basic configuration is needed with the NPort® 5600 to connect up to 16 serial devices to an Ethernet network.

19-inch Rackmount Device Server

NPort® 5600 device servers come with Tx/Rx LEDs for the serial ports on the front panel, and 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 operational, maintenance, and administrative tasks.

Real COM/TTY Ports

Real COM/TTY drivers are provided to 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

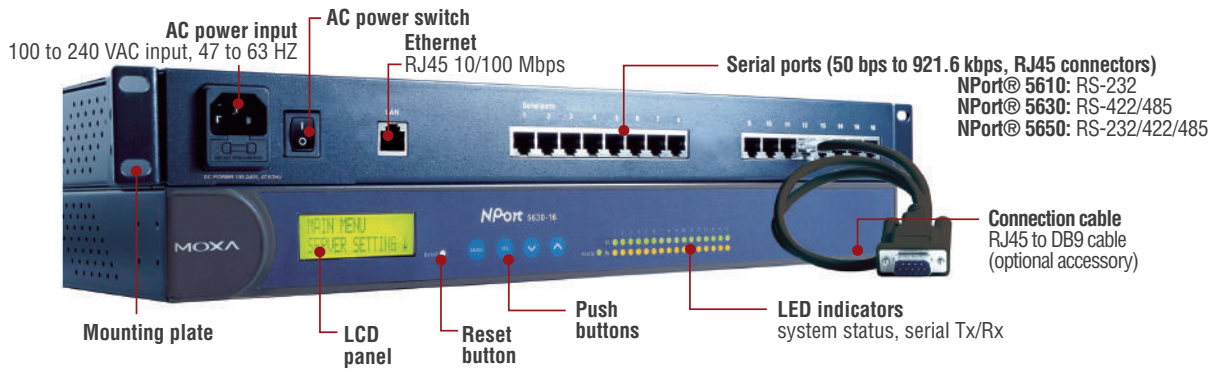
The System LED, serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks and help engineers analyze problems in the field. The LEDs not only indicate current system and network status, but also help field engineers monitor the status of attached serial devices.

Adjustable Termination and Pull High/Low Resistors

When using termination resistors to prevent serial signal reflection, it is 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® 5650-8/16 has DIP switches on the bottom panel for setting the termination and pull high/low resistor values.



Appearance



Note: LCD panel and configuration buttons not available with wide-temp. models

Specifications

Ethernet Interface

Number of Ports: 1
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: 8-pin RJ45

Magnetic Isolation Protection: 1.5 kV built-in

Optical Fiber Interface (for -M-SC and -S-SC)

	100BaseFX	
	Multi-mode	Single-mode
Wavelength	1300 nm	1310 nm
Max. TX	-14 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c
Saturation	-6 dBm	-3 dBm

a. 50/125 μ m, 800 MHz*km fiber optic cable
 b. 62.5/125 μ m, 500 MHz*km fiber optic cable
 c. 9/125 μ m, 3.5 PS/(nm*km) fiber optic cable

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

Connector: RJ45 (8 pins)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Pull High/Low Resistor for RS-485: 1 k Ω , 150 k Ω (NPort 5650-8/16)

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, IPv4, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, SNTTP, ARP, PPP, SLIP, RTelnet, RFC2217

Configuration Options: Web Console, Telnet Console, Windows Utility

Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded

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

Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x

Mini Screen with Push Buttons (for standard temp. models)

LCD Panel: Liquid Crystal Display on the case

Push Buttons: Four push buttons for convenient on-site configuration

Physical Characteristics

Housing: Metal

Weight:

NPort 5610-8: 3340 g

NPort 5610-8-48V: 3160 g

NPort 5630-8, 5650-8-S-SC, 5650-8-M-SC: 3380 g

NPort 5650-8: 3360 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, 5650-16-M-SC: 3440 g

NPort 5650-8-HV-T: 3720 g

NPort 5650-16-HV-T: 3820 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:

Standard Models: 0 to 55°C (32 to 131°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

High Voltage Wide Temp. Models: -40 to 85°C (-40 to 185°F)

Storage Temperature:

Standard Models: -40 to 75°C (-40 to 167°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

High Voltage Wide Temp. Models: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Altitude: Up to 2000 m

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

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)
 NPort 5650-HV: 110 VDC (88 to 300 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
 NPort 5650-8/16-HV: 152 mA @ 88 VDC, 86 mA @ 300 VDC

Standards and Certifications

EMI: EN55022 Class A, FCC part 15 Subpart B Class A

EMS:

EN 61000-4-2 ESD: contact 4 kV; air 8 kV
 EN 61000-4-3 RS: 3 V/m (80 MHz to 1 GHz)
 EN 61000-4-4 EFT: Power 4 kV; Signal 2 kV
 EN 61000-4-5 Surge: AC 1 kV (AC models); DC 2 kV (DC/HV models);
 Signal 1 kV
 EN 61000-4-6 CS: 3 V
 EN 61000-4-8
 EN 61000-4-11: AC models only

Safety: UL 60950-1, EN 60950-1

EMC: 55022/24

Medical: EN 60601-1-2 Class B, EN 55011

Reliability

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

MTBF (mean time between failures):

NPort 5610-8: 97,294 hrs
 NPort 5610-16: 94,928 hrs
 NPort 5610-8-48V: 96,758
 NPort 5610-16-48V: 94,417 hrs
 NPort 5630-8: 118,405 hrs
 NPort 5630-16: 91,483 hrs
 NPort 5650-8: 117,584 hrs
 NPort 5650-16: 104,767 hrs
 NPort 5650-8-S-SC: 116,914 hrs
 NPort 5650-16-S-SC: 87,528 hrs
 NPort 5650-8-M-SC: 116,914 hrs
 NPort 5650-16-M-SC: 87,528 hrs
 NPort 5650-8-HV: 725,390 hrs
 NPort 5650-16-HV: 531,264 hrs

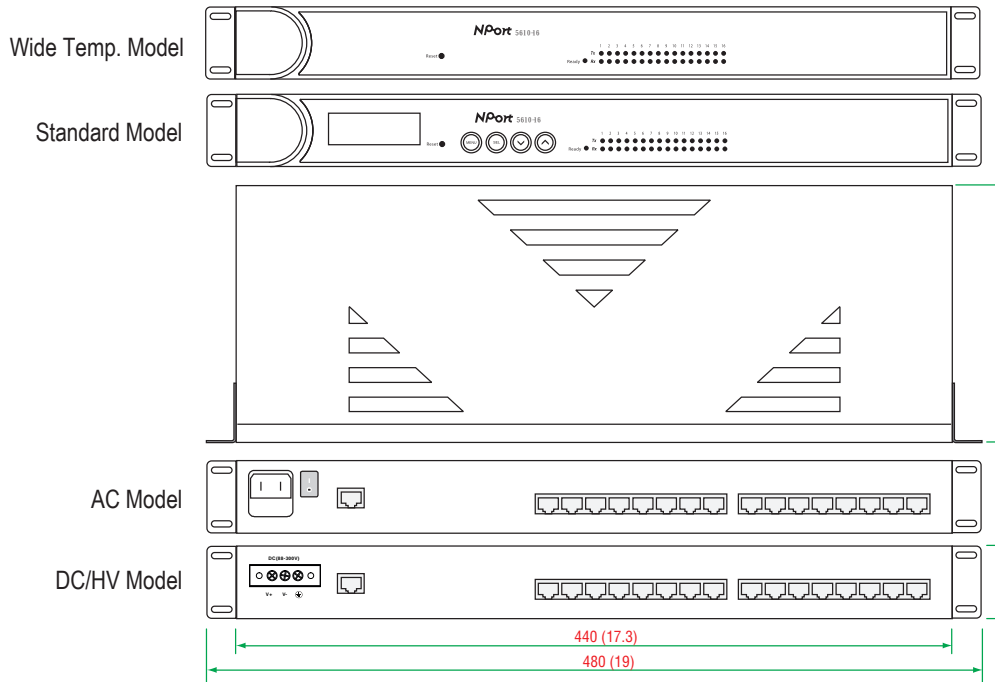
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

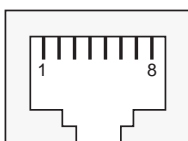
Dimensions

Unit: mm (inch)



Pin Assignment

(8-pin RJ45 connector)



NPort® 5610: RS-232

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

NPort® 5630: RS-422/485

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

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-232/422/485 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 multi-mode fiber (SC connector)

NPort 5650-8-S-SC: 8-port RS-232/422/485 rackmount device server with single-mode fiber (SC connector)

NPort 5650-8-T: 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input, -40 to 75°C operating temperatures

NPort 5650-8-HV-T: 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 88 to 300 VDC power input, -40 to 85°C operating temperature

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-232/422/485 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 multi-mode fiber (SC connector)

NPort 5650-16-S-SC: 16-port RS-232/422/485 rackmount device server with single-mode fiber (SC connector)

NPort 5650-16-T: 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input, -40 to 75°C operating temperatures

NPort 5650-16-HV-T: 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 88 to 300 VDC power input, -40 to 85°C operating temperature

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 device server
- Power cord (AC models only)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card