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 (Not include wide temperature models)
> 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

: 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.

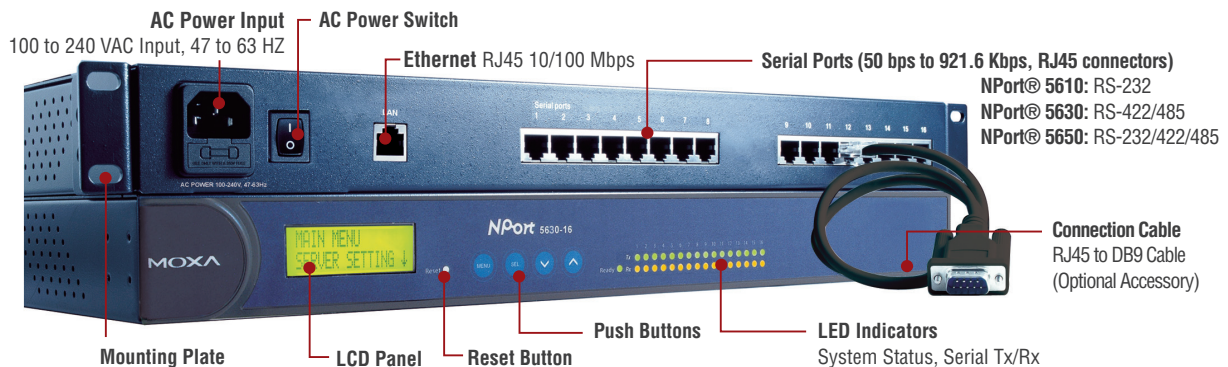### LED Indicators to Ease Your Maintenance Tasks
The System LED, serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks, and help engineers analyze problems in the field. The LEDs not only indicate current system and network status, but 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

AC Power Input 100 to 240 VAC Input, 47 to 63 HZ
AC Power Switch
Ethernet RJ45 10/100 Mbps
Serial Ports (50 bps to 921.6 Kbps, RJ45 connectors)
NPort® 5610: RS-232
NPort® 5630: RS-422/485
NPort® 5650: RS-232/422/485

Connection Cable RJ45 to DB9 Cable (Optional Accessory)

Mounting Plate
LCD Panel
Reset Button
Push Buttons
LED Indicators System Status, Serial Tx/Rx

Note: Wide temp. models do not include the LCD Panel and Push Buttons.

: 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 µm, 800 MHz*km fiber optic cable
b. 62.5/125 µm, 500 MHz*km fiber optic cable
c. 9/125 µm, 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)
Serial Line Protection:
15 KV ESD protection for all signals
RS-485 Data Direction Control: ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485: 1 KΩ, 150 KΩ (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, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, SNTP, ARP, PPP, 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 x86/x64, Embedded CE 5.0/6.0, XP Embedded
Fixed TTY Drivers: 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
Linux Real TTY Drivers: Linux kernel 2.4.x, 2.6.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, IP30 protection
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
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)
Storage Temperature: -40 to 75°C (-40 to 167°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

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

Standards and Certifications
Safety: UL 60950-1, EN 60950-1
EMC: CE, FCC
EMI: EN 55022 Class A, FCC Part 15 Subpart B Class A
EMS: EN 55024
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

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

Dimensions

Unit: mm (inch)
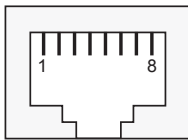
Wide Temp. Model

Standard Model

198 (7.8)

45 (1.77)

440 (17.3)

480 (19)
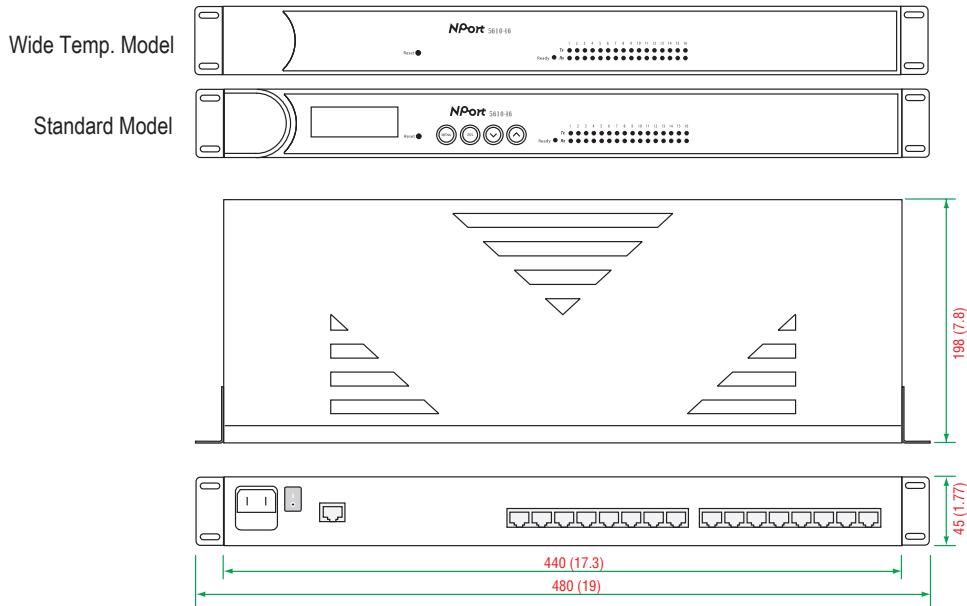
Pin Assignment

(8-pin RJ45 connector)

1   8

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 RJ45 connectors and 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 100BaseF(X) 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 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 RJ45 connectors and 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 100BaseF(X) 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

Package Checklist

- NPort 5600 series device server
- Power cord
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card