

# NPort® 6600 Series

**8/16/32-port RS-232/422/485 rackmount terminal servers**



- > Up to 32 ports for high density environments
- > Non-standard baudrates supported with high precision
- > Port buffers for storing serial data when the Ethernet is off-line
- > Supports IPv6
- > Ethernet redundancy (STP/RSTP/Turbo Ring) with network module
- > Modular design for network expansion
- > Secure data transmission



## Overview

The NPort® 6600 series of secure device servers is the right choice for applications that use large numbers of serial devices packed into a small space. If you're worried about security, you can rest assured with the NPort® 6600, since it supports DES, 3DES, and AES, the

three most common standards for data encryption. Serial devices of any type can be connected to the NPort® 6600, and each serial port on the NPort® can be configured independently for RS-232, RS-422, or RS-485 transmission.

## LCD Panel Makes Configuration Easy

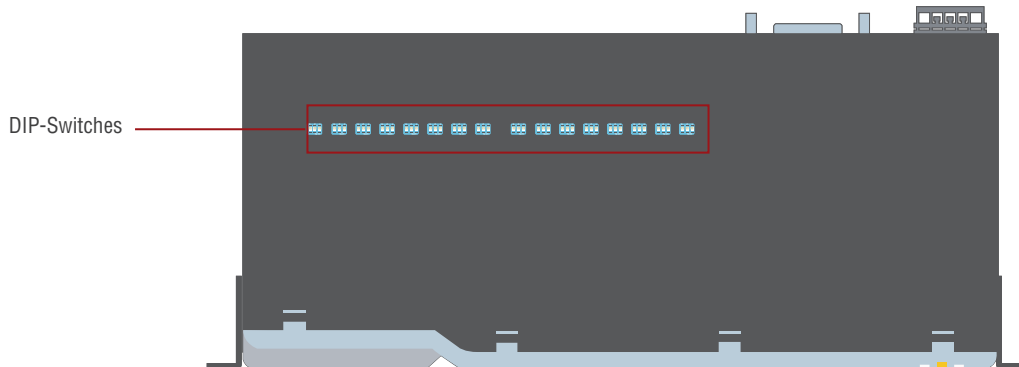
The NPort® 6600 has a built-in LCD panel for configuration. The panel displays the server name, serial number, and IP address, and any of the device server's configuration parameters, such as IP address, netmask, and gateway address, can be updated easily and quickly.



## Adjustable Resistor Values for RS-485 Communication

The NPort® 6600 provides adjustable termination, pull high, and pull low resistors for RS-485 communication. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals, and the pull high and pull low resistors may

need adjusting to maintain the integrity of the electrical signal. Since no set of resistor values works for every environment, the NPort® 6600 allows manual adjustment of the resistor values for each serial port using built-in DIP switches.



## Specifications

### Ethernet Interface

**Number of Ports:** 1

**Speed:** 10/100 Mbps, auto MDI/MDIX

**Connector:** 8-pin RJ45

**Magnetic Isolation:** 1.5 KV built-in

### Optical Fiber Interface (with network module)

**Fiber Port:** 100BaseFX, SC connector

#### Distance:

Multi-mode: 0 to 2 km, 1310 nm (62.5/125  $\mu$ m, 500 MHz\*km)

Single mode: 0 to 40 km, 1310 nm (9/125  $\mu$ m, 3.5 PS/(nm\*km))

#### Min. TX Output:

Multi-mode: -20 dBm

Single-mode: -5 dBm

#### Max. TX Output:

Multi-mode: -14 dBm

Single-mode: 0 dBm

#### Sensitivity:

Multi-mode: -34 to -30 dBm

Single-mode: -36 to -32 dBm

### Serial Interface

**Number of Ports:** 8, 16, or 32

#### Serial Standards:

NPort 6610: RS-232

NPort 6650: RS-232/422/485

**Connector:** 8-pin RJ45

**RS-485 Data Direction Control:** ADDC® (Automatic Data Direction Control)

**Serial Line Protection:** 15 KV ESD protection for all signals

**Console Port:** Dedicated RS-232 console port on rear panel (8-pin RJ45)

### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8

**Stop Bits:** 1, 1.5, 2

**Parity:** None, Even, Odd, Space, Mark

**Flow Control:** RTS/CTS, DTR/DSR, XON/XOFF

**Baudrate:** 50 bps to 921.6 Kbps (supports non-standard baudrates)

**Pull High/Low Resistor for RS-485:** 1 K $\Omega$ , 150 K $\Omega$

**Terminator for RS-485:** 120  $\Omega$

### 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

### Memory Expansion Slot

**Slot Type:** SD socket (supports up to 1 GB)

### Software

**Network Protocols:** ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE, DDNS

**Security Protocols:** DES, 3DES, AES, SSH, SSL, HTTPS, RADIUS, PAP, CHAP, TACACS+

**Configuration Options:** Web Console, Serial Console, Telnet Console, Windows Search Utility

**Windows Real COM Drivers:** Windows 95, 98, ME, NT, 2000, XP x86/x64, 2003 x86/x64, Vista x86/x64, 2008 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:** 2.4.x, 2.6.x

**Management:** SNMP MIB-II

**IP Routing:** Static, RIP-I, RIP-II

### Operation Modes

**Standard:** Real COM, TCP Server, TCP Client, UDP, Pair Connection, RFC2217, Terminal, Reverse Telnet, Ethernet Modem, Printer, PPP, Disabled

**Secure:** Secure Real COM, Secure TCP Server, Secure TCP Client, Secure Pair Connection, SSH, Reverse SSH

**Terminal Sessions:** 8 sessions per port

### Physical Characteristics

**Case:** Metal, IP30 protection

#### Weight:

NPort 6600-8: 3460 g

NPort 6600-16: 3580 g

NPort 6600-32: 3600g

#### Dimensions:

Without ears: 440 x 195 x 44 mm (17.32 x 7.68 x 1.73 in)

With ears: 480 x 195 x 44 mm (18.9 x 7.68 x 1.73 in)

### Environmental Limits

**Operating Temperature:** 0 to 55°C (32 to 131°F)

**Operating Humidity:** 5 to 95% RH

**Storage Temperature:** -20 to 70°C (-4 to 158°F)

### Power Requirements

#### Input Voltage:

AC Models: 100 to 240 VAC

DC Models:  $\pm$ 48 VDC (20 to 72 VDC, -20 to -72 VDC)

#### Power Consumption:

AC Models: 285 mA @ 100 VAC, 190 mA @ 240 VAC

DC Models: 293 mA @ 48 VDC

**Power Line Protection:** 1 KV burst (EN61000-4-4: EFT/B), 0.5 KV surge (EN61000-4-5)

### Regulatory Approvals

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

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

**EN61000-4-2 (ESD):** 4 KV contact

**EN61000-4-4 (EFT):** 1 KV power

**EN61000-4-5 (Surge):** 2 KV power

### Reliability

**Alert Tools:** Built-in buzzer and RTC (real-time clock)

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

#### MTBF (meantime between failures):

NPort 6610-8: 135891 hrs

NPort 6610-16: 102373 hrs

NPort 6610-32: 68707 hrs

NPort 6650-8: 135370 hrs

NPort 6650-16: 101783 hrs

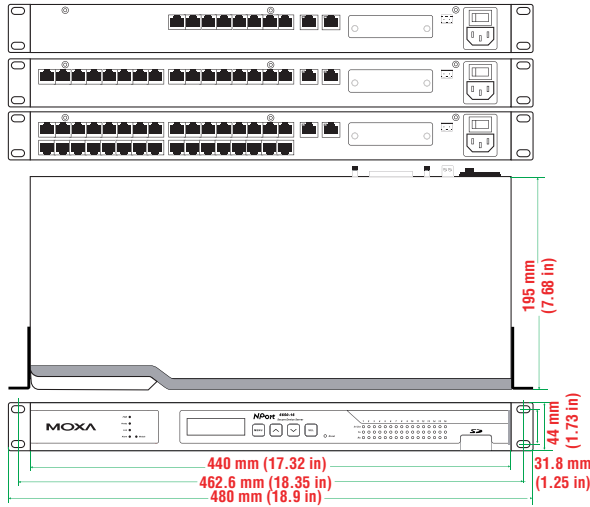
NPort 6650-32: 68177 hrs

### Warranty

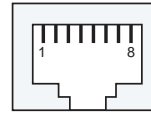
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions and Pin Assignment



8-pin RJ45 connector



PIN	RS-232	RS-422/ 485-4W	RS-485- 2w
1	DSR (in)	---	---
2	RTS (out)	TxD+	---
3	GND	GND	GND
4	TxD (out)	TxD-	---
5	RxD (in)	RxD+	Data+
6	DcD (in)	RxD-	Data-
7	CTS (in)	---	---
8	DTR (out)	---	---

### Ordering Information

#### Available Models

- NPort 6610-8:** 8-port RS-232 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6610-8-48V:** 8-port RS-232 to Ethernet secure terminal server, ±48 VDC power input
- NPort 6610-16:** 16-port RS-232 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6610-16-48V:** 16-port RS-232 to Ethernet secure terminal server, ±48 VDC power input
- NPort 6610-32:** 32-port RS-232 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6610-32-48V:** 32-port RS-232 to Ethernet secure terminal server, ±48 VDC power input
- NPort 6650-8:** 8-port RS-232/422/485 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6650-8-48V:** 8-port RS-232/422/485 to Ethernet secure terminal server, ±48 VDC power input
- NPort 6650-16:** 16-port RS-232/422/485 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6650-16-48V:** 16-port RS-232/422/485 to Ethernet secure terminal server, ±48 VDC power input
- NPort 6650-32:** 32-port RS-232/422/485 to Ethernet secure terminal server, 100 to 240 VAC power input
- NPort 6650-32-48V:** 32-port RS-232/422/485 to Ethernet secure terminal server, ±48 VDC power input

#### Package Checklist

- NPort® 6600 device server
- CBL-RJ45M9-150: 8-pin RJ45 to DB9 male connection cable, 150 cm
- Power Cord (AC models only)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

#### Optional Accessories (can be purchased separately)

**Serial Cables and Adaptors:** See Appendix A for details

Expansion Modules	Use with the following NPort® models						
	6150	6250	6450	6610-8 6650-8	6610-16 6650-16	6610-32 6650-32	
NM-TX01		1 10/100BaseTX port	---	---	√	√	√
NM-TX02		2 10/100BaseTX port	---	---	√	√	√
NM-FX01-S-SC		1 100BaseFX port, single mode, SC connector	---	---	√	√	√
NM-FX01-M-SC		1 100BaseFX port, multi mode, SC connector	---	---	√	√	√
NM-FX02-S-SC		2 100BaseFX ports, single mode, SC connector	---	---	√	√	√
NM-FX02-M-SC		2 100BaseFX ports, multi mode, SC connector	---	---	√	√	√
NM-GPRS/GSM		1 GPRS/GSM modem module	---	---	√	√	√
NM-Modem		1 PSTN modem port with RJ11 connector	---	---	√	√	√

Note: Expansion modules can be purchased separately.