

NPort® 6450

4-port RS-232/422/485 secure terminal server



The certification logos shown here apply to some or all of the products in this section. For details, see "Regulatory Approvals" under "Specifications" below.

- > LCD panel for easy IP address configuration
- > Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal and Reverse Terminal
- > 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



Overview

The NPort® 6450 is a 4-port device server that uses the SSL and SSH protocols to transmit encrypted serial data over Ethernet. Up to 4 serial devices of any type can be connected to the NPort® 6450, with

all four devices using the same IP address. The Ethernet port can be configured for a normal or secure TCP/IP connection.

No Data Loss if Ethernet Connection Fails

The NPort® 6450 is a reliable device server that provides users with secure serial-to-Ethernet data transmission and a customer-oriented hardware design. If the Ethernet connection fails, the NPort® 6450 will queue all serial data in its internal 64 KB port buffer. When the Ethernet

connection is re-established, the NPort® 6450 will immediately release all data in the buffer in the order that it was received. Users can increase the port buffer size by installing an SD card.

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 μm, 500 MHz*km)

Single mode: 0 to 40 km, 1310 nm (9/125 μm, 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: 4

Serial Standards: RS-232/422/485

Connector: DB9 male

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

Serial Line Protection: 15 KV ESD protection for all signals

Console Port: Serial port 1 doubles as RS-232 console port

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 KΩ, 150 KΩ

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: 1020 g

Dimensions:

Without ears: 158 x 103 x 35 mm (6.22 x 4.06 x 1.38 in)

With ears: 181 x 103 x 35 mm (7.13 x 4.06 x 1.38 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: 12 to 48 VDC

Power Consumption: 730 mA @ 12 V, 330 mA @ 24 V

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): Level 3

EN61000-4-4 (EFT): Level 2

EN61000-4-5 (Surge): Level 2

Reliability

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

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

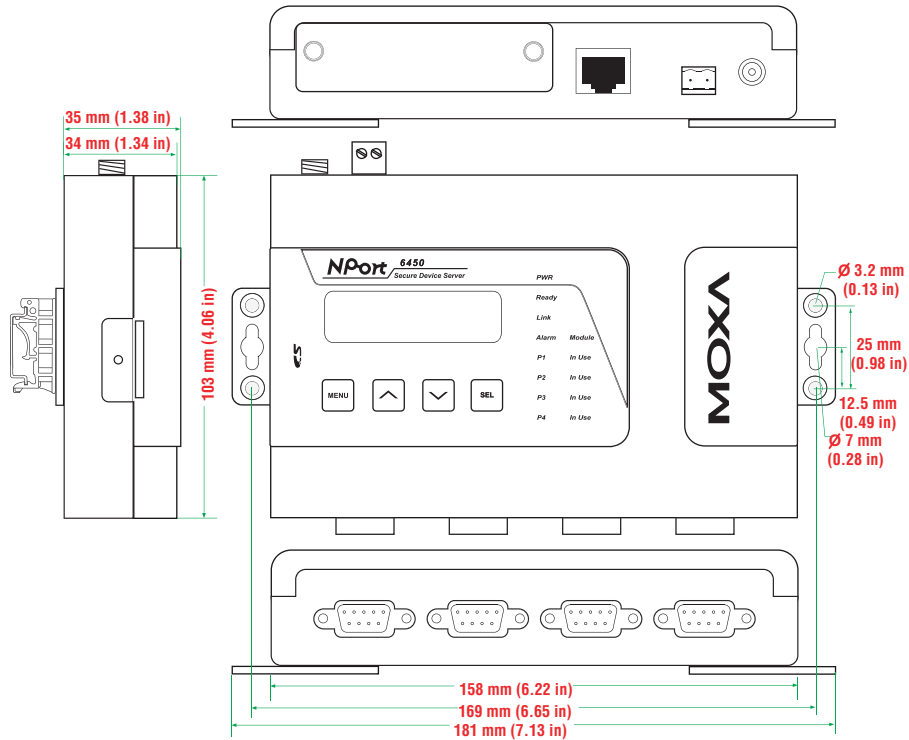
MTBF (meantime between failures): 120354 hrs

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

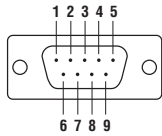
Dimensions



Pin Assignment

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

DB9 male connector



Ordering Information

Available Models

NPort 6450: 4-port secure device server, RS-232/422/485 to Ethernet

Optional Accessories (can be purchased separately)

DK-35A: Mounting Kit for 35-mm DIN-Rail

Package Checklist

- NPort® 6450 secure device server
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

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 	---	---	✓	✓	✓	✓
NM-TX02 	---	---	✓	✓	✓	✓
NM-FX01-S-SC 	---	---	✓	✓	✓	✓
NM-FX01-M-SC 	---	---	✓	✓	✓	✓
NM-FX02-S-SC 	---	---	✓	✓	✓	✓
NM-FX02-M-SC 	---	---	✓	✓	✓	✓
NM-GPRS/GSM 	---	---	✓	✓	✓	✓
NM-Modem 	---	---	✓	✓	✓	✓

Note: Expansion modules can be purchased separately.