

# NPort® 6450

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



- > LCD panel for easy IP address configuration
- > Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal and Reverse Terminal
- > Any Baudrate supported with high precision
- > Port buffers for storing serial data when the Ethernet is off-line
- > SD slot for expanding port buffer memory
- > Slot for network expansion module

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.



### 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 (built-in)

**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 (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: 0 to 40 km, -5 dBm

#### Max. TX Output:

Multi-mode: -14 dBm  
 Single-mode: 0 to 40 km, 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

**ESD Protection:** 15 KV for all signals

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

**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

#### 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

**Software**

**Network Protocols:** ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, HTTP, SMTP, ARP, PPPoE, DDNS, RIP

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

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

**Driver Support:** Windows Real COM drivers (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY drivers (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)

**Physical Characteristics**

**Case:** SECC sheet metal (0.8 mm), 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)

**Surge Protection:** 15 KV ESD protection embedded

**Power Requirements**

**Input Voltage:** 12 to 48 VDC

**Power Consumption:** 730 mA @ 12 V (max.)

**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)

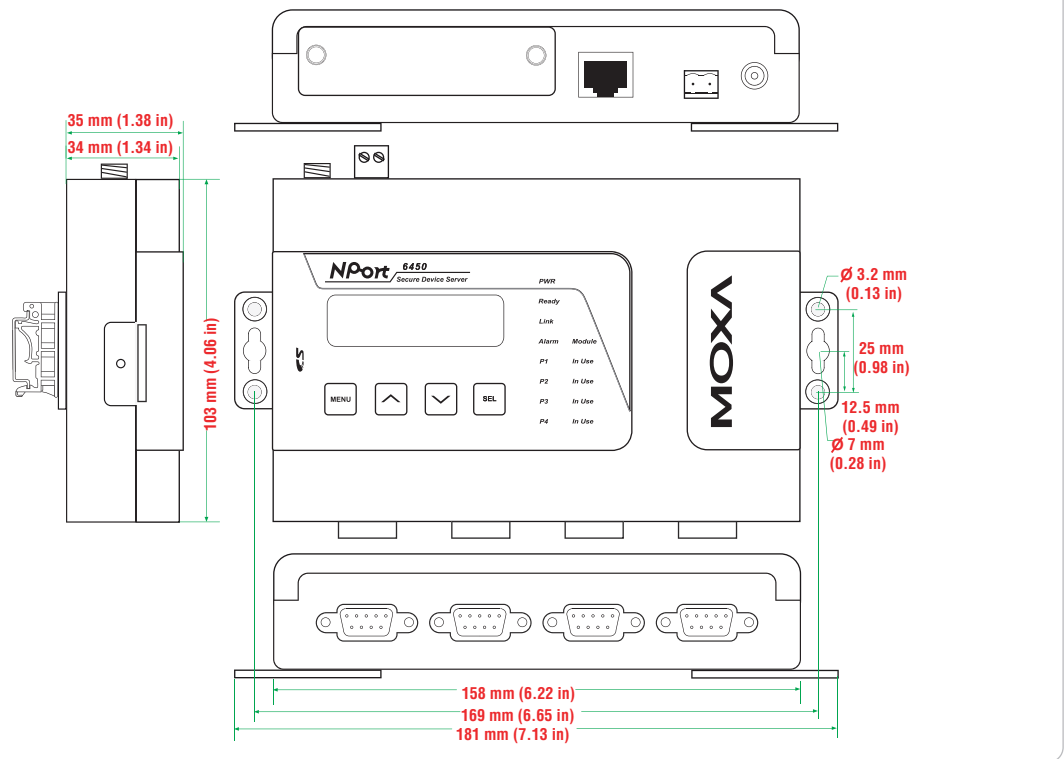
**Automatic Reboot Trigger:** Built-in WDT (watchdog timer)

**Warranty**

**Warranty Period:** 5 years

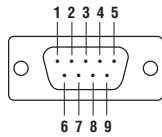
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**



### Pin Assignment

DB9 male connector



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	—	—

### 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:

Module model name	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.