

# NPort® 6250 Series

## 2-port RS-232/422/485 secure terminal servers



- > Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal
- > Nonstandard baudrates supported with high precision
- > Choice of network medium: 10/100BaseT(X) or 100BaseFX
- > Enhanced remote configuration with HTTPS and SSH
- > Port buffers for storing serial data when the Ethernet is offline
- > Supports IPv6
- > Generic serial commands supported in Command-by-Command mode
- > ISA99 / IEC 62443-4-2 compliant



### Overview

The 2-port NPort® 6250 device servers use the SSL and SSH protocols to transmit encrypted serial data over Ethernet. Models are available for connecting to a 10/100BaseT(X) copper Ethernet or

100BaseT(X) fiber network. Both single-mode and multi-mode fiber are supported.

### Zero Data Loss if Ethernet Connection Fails

The NPort® 6250 device servers help guarantee reliability by providing users with secure serial-to-Ethernet data transmission and a customer-oriented hardware design. If the Ethernet connection fails, the NPort® 6250 will queue all serial data in its internal 64 KB port buffer. When

the Ethernet connection is re-established, the NPort® 6250 will immediately release all of the 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 (NPort 6250-S-SC/6250-M-SC)

**Table:**

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#### Serial Interface

**Number of Ports:** 2  
**Serial Standards:** RS-232/422/485  
**Connector:** DB9 male  
**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 (supports nonstandard 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 slot (supports up to 2 GB)

#### Software

**Network Protocols:** ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE, HTTPS  
**Security Protocols:** SSLv3, TLSv1.0/1.1/1.2  
**Configuration Options:** Web Console, Serial Console, Telnet Console, Windows Utility  
**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (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  
**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

## Applications

**Terminal Sessions:** 8 sessions per port

## Physical Characteristics

**Housing:** Metal

**Weight:** 730 g (1.61 lb)

**Dimensions:**

Without ears: 77 x 111 x 29 mm (3.30 x 4.37 x 1.1 in)

With ears: 89 x 111 x 29 mm (3.50 x 4.37 x 1.1 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:** 12 to 48 VDC

**Input Current:**

NPort 6250: 333 mA @ 12 VDC

NPort 6250-M-SC: 428 mA @ 12 VDC

NPort 6250-S-SC: 376 mA @ 12 VDC

**Power Line Protection:** 1 kV burst (EN 61000-4-4: EFT/B), 1 kV surge (EN 61000-4-5)

## Standards and Certifications

**Safety:** UL 60950-1

**EMC:** EN 55032/24

**EMI:** CISPR 32, FCC Part 15B Class A

**EMS:**

IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV

IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m

IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV

IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV

IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m

IEC 61000-4-8 PFMF

IEC 61000-4-11 DIPs

**Freefall:** IEC-68-2-6, IEC-68-2-34, IEC-68-2-32

**Vibration:** IEC-68-2-6, IEC-68-2-34

**Green Product:** RoHS, CRoHS, WEEE

**Transportation:** NEMA TS2 (excluding fiber models)

## Reliability

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

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

**MTBF** (mean time between failures)

**Time:**

NPort 6250: 1,947,486 hrs

NPort 6250 Multi-mode fiber: 1,092,794 hrs

NPort 6250 Single-mode fiber: 1,477,682 hrs

**Standard:** Telcordia (Bellcore) Standard TR/SR

## Warranty

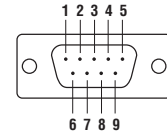
**Warranty Period:** 5 years

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

## Pin Assignment

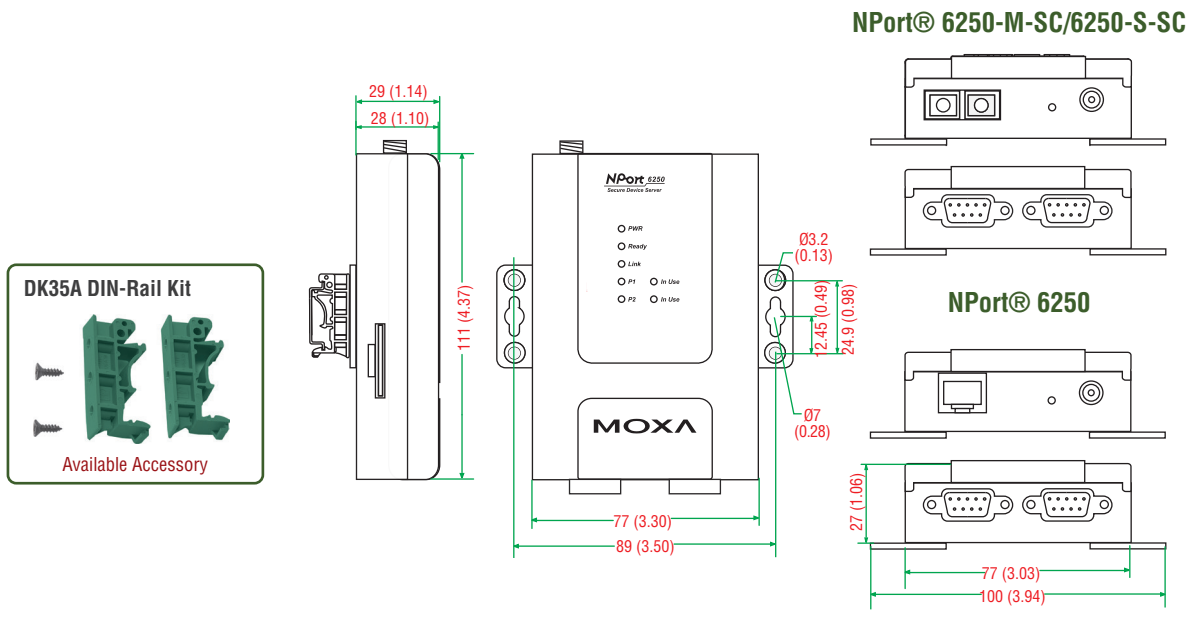
PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DCD	TxD-(A)	-
2	RxD	TxD+(B)	-
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-

DB9 male connector



## Dimensions

Unit: mm (inch)



## Ordering Information

### Available Models

**NPort 6250:** 2-port secure device server, RS-232/422/485 to Ethernet

**NPort 6250-M-SC:** 2-port secure device server, RS-232/422/485 to multi-mode fiber (SC connector)

**NPort 6250-S-SC:** 2-port secure device server, RS-232/422/485 to single-mode fiber (SC connector)

**NPort 6250-T:** 2-port secure device server, RS-232/422/485 to Ethernet, -40 to 75°C operating temperature

**NPort 6250-M-SC-T:** 2-port secure device server, RS-232/422/485 to multi-mode fiber (SC connector), -40 to 75°C operating temperature

**NPort 6250-S-SC-T:** 2-port secure device server, RS-232/422/485 to single-mode fiber (SC connector), -40 to 75°C operating temperature

### Optional Accessories (can be purchased separately)

**DK35A:** DIN-rail mounting kit, 35 mm, 2 DIN-rail plates with 4 screws

**CBL-PJ21NOPEN-BK-30:** Locking barrel plug to bare-wires cable

**Mini DB9F-to-TB:** DB9(F) to terminal block connector


**Note:** One power adapter suitable for your region is included in the product package. Additional power adapters can be purchased separately. Please refer to the Power Accessory Selection Guide for details.


### Package Checklist

- 1 NPort 6250 secure device server
- 100 to 240 VAC power adapter (excluding T models)\*
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

\*For non-T models, the package includes one power adapter suitable for your region.

# Power Accessory Selection Guide

Barrel Plug Type		Locking Barrel Plug		Power Cord				
O/P		12 VDC, 1.5 A, 100 to 240 VAC		10A/250V Power Cord, 183 cm				
Plug Type		CN	US	JP	EU	AU	UK	CN
Model Name		PWR-12150-CN-S2	PWC-C13US-3B-183	PWC-C13JP-3B-183	PWC-C13EU-3B-183	PWC-C13AU-3B-183	PWC-C13UK-3B-183	PWC-C13CN-3B-183
Appearance								
1 port	NPort 6150	✓	–	–	–	–	–	–
	NPort 6250	✓	–	–	–	–	–	–
2 ports	NPort 6250-M-SC	✓	–	–	–	–	–	–
	NPort 6250-S-SC	✓	–	–	–	–	–	–
4 ports	NPort 6450	✓	–	–	–	–	–	–
8 ports	NPort 6610-8	–	✓	✓	✓	✓	✓	✓
	NPort 6650-8	–	✓	✓	✓	✓	✓	✓
	CN2610-8	–	✓	✓	✓	✓	✓	✓
	CN2610-8-2AC	–	✓	✓	✓	✓	✓	✓
	CN2650-8	–	✓	✓	✓	✓	✓	✓
	CN2650-8-2AC	–	✓	✓	✓	✓	✓	✓
	CN2650I-8	–	✓	✓	✓	✓	✓	✓
	CN2650I-8-2AC	–	✓	✓	✓	✓	✓	✓
16 ports	NPort 6610-16	–	✓	✓	✓	✓	✓	✓
	NPort 6650-16	–	✓	✓	✓	✓	✓	✓
	CN2610-16	–	✓	✓	✓	✓	✓	✓
	CN2610-16-2AC	–	✓	✓	✓	✓	✓	✓
	CN2650-16	–	✓	✓	✓	✓	✓	✓
	CN2650-16-2AC	–	✓	✓	✓	✓	✓	✓
	CN2650I-16	–	✓	✓	✓	✓	✓	✓
	CN2650I-16-2AC	–	✓	✓	✓	✓	✓	✓
32 ports	NPort 6610-32	–	✓	✓	✓	✓	✓	✓

Barrel Plug Type		Locking barrel plug						
O/P		12 VDC, 2 A, 100 to 240 VDC (desktop type)		2.5A/250V Power Cord, 183 cm				
Plug Type		Must be used with one power cord		US	JP	EU	AU	UK
Model Name		PWR-12125-DT-S2	PWC-C7US-2B-183	PWC-C7JP-2B-183	PWC-C7EU-2B-183	PWC-C7AU-2B-183	PWC-C7UK-2B-183	
Appearance								
1 port	NPort 6150	✓	✓	✓	✓	✓	✓	✓
	NPort 6250	✓	✓	✓	✓	✓	✓	✓
2 ports	NPort 6250-M-SC	✓	✓	✓	✓	✓	✓	✓
	NPort 6250-S-SC	✓	✓	✓	✓	✓	✓	✓
4 ports	NPort 6450	✓	✓	✓	✓	✓	✓	✓
8 ports	NPort 6610-8	–	–	–	–	–	–	–
	NPort 6650-8	–	–	–	–	–	–	–
16 ports	NPort 6610-16	–	–	–	–	–	–	–
	NPort 6650-16	–	–	–	–	–	–	–
32 ports	NPort 6610-32	–	–	–	–	–	–	–