

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
- > Non-standard 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 off-line
- > Supports IPv6
- > Generic serial commands supported in Command-by-Command mode



: 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)

	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: 2
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 2 GB)

Software

Network Protocols: ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1/V2c/V3, HTTP, SMTP, ARP, PPPoE
Security Protocols: DES, 3DES, AES, SSH, SSL
Configuration Options: Web Console, Serial Console, Telnet Console, Windows Search Utility
Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1 (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

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)

Altitude: Up to 2000 m

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Power Requirements

Input Voltage: 12 to 48 VDC

Power Consumption:

NPort 6250: 333 mA @ 12 V, 173 mA @ 24 V

NPort 6250-M-SC: 428 mA @ 12 V, 219 mA @ 24 V

NPort 6250-S-SC: 376 mA @ 12 V, 193 mA @ 24 V

Power Line Protection: 1 kV burst (EN 61000-4-4: EFT/B), 0.5 kV surge (EN 61000-4-5)

Standards and Certifications

Safety: UL 60950-1, EN 60950-1

EMI: EN 55022 Class A, FCC Part 15 Subpart B Class A

EMS:

EN 55024,

EN 61000-4-2 (ESD) Level 2/3,

EN 61000-4-3 (RS) Level 2,

EN 61000-4-4 (EFT) Level 2,

EN 61000-4-5 (Surge) Level 2,

EN 61000-4-6 (CS) Level 2,

EN 61000-4-8 Level 1,

EN 61000-4-11

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

Reliability

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

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

MTBF (mean time between failures):

NPort 6250: 226,128 hrs

NPort 6250-M-SC: 225,762 hrs

NPort 6250-S-SC: 225,762 hrs

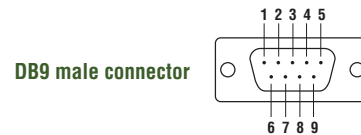
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

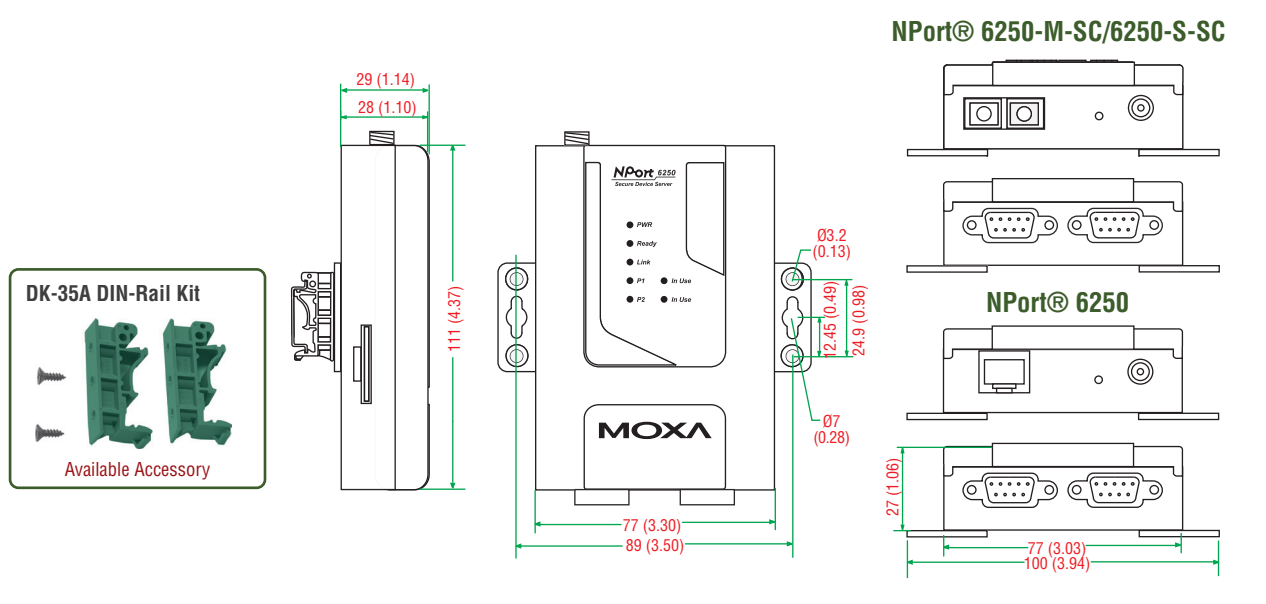
Pin Assignment

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	-	-



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)

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

PWR-12150-USJP-SA-T: 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, US/JP plug, -40 to 75°C operating temperature

PWR-12150-EU-SA-T: 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, EU plug, -40 to 75°C operating temperature

PWR-12150-UK-SA-T: 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, UK plug, -40 to 75°C operating temperature

PWR-12150-CN-SA-T: 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, CN plug, -40 to 75°C operating temperature

PWR-12150-AU-SA-T: 100 to 240 VAC input, 12 VDC / 1.5 A output, screw-type, AU plug, -40 to 75°C operating temperature

Mini DB9F-to-TB adapter: DB9 female to terminal block adapter for RS-422/485 applications

Package Checklist

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