NPort® 5600 Desktop Series

8-port RS-232/422/485 serial device servers

- 8 serial ports supporting RS-232/422/485
- Compact desktop design
- 10/100M auto-detecting Ethernet
- Built-in 15 KV ESD protection for all serial signals
- Easy IP address configuration with LCD panel
- Choice of configuration methods: Web console, Telnet console, and Windows utility
- Versatile socket operation modes, including TCP Server, TCP Client, UDP, and Real COM
- SNMP MIB-II for network management
- Built-in speaker: Use your own voice as the alert when exceptions occur

Overview

NPort® 5600-8-DT device servers can conveniently and transparently connect 8 serial devices to an Ethernet network, allowing you to network your existing serial devices with only basic configuration. You can both centralize management of your serial devices and distribute management hosts over the network. Since the NPort® 5600-8-DT device servers have a smaller form factor compared to our 19-inch models, they are a great choice for applications that need additional serial ports, but for which mounting rails are not available.

Convenient Design for RS-485 Applications

The NPort® 5650-8-DT device servers support selectable 1 KΩ and 150 KΩ pull high/low resistors and a 120 Ω terminator. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals. When using termination resistors, it is also important to set the pull high/low resistors correctly so that the electrical signal is not corrupted. Since no set of resistor values is universally compatible with all environments, NPort® 5600-8-DT device servers use DIP switches to allow users to adjust termination and pull high/low resistor values manually for each serial port.

Convenient Power Inputs

The NPort® 5650-8-DT device servers support both power terminal blocks and power jacks for ease of use and greater flexibility. Users can connect the terminal block directly to a DC power source, or use the power jack to connect to an AC circuit through an adaptor.

LED Indicators to Ease Your Maintenance Tasks

The System LED, Serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks and help engineers analyze problems in the field. The NPort® 5600's LEDs not only indicate current system and network status, but also help field engineers monitor the status of attached serial devices.

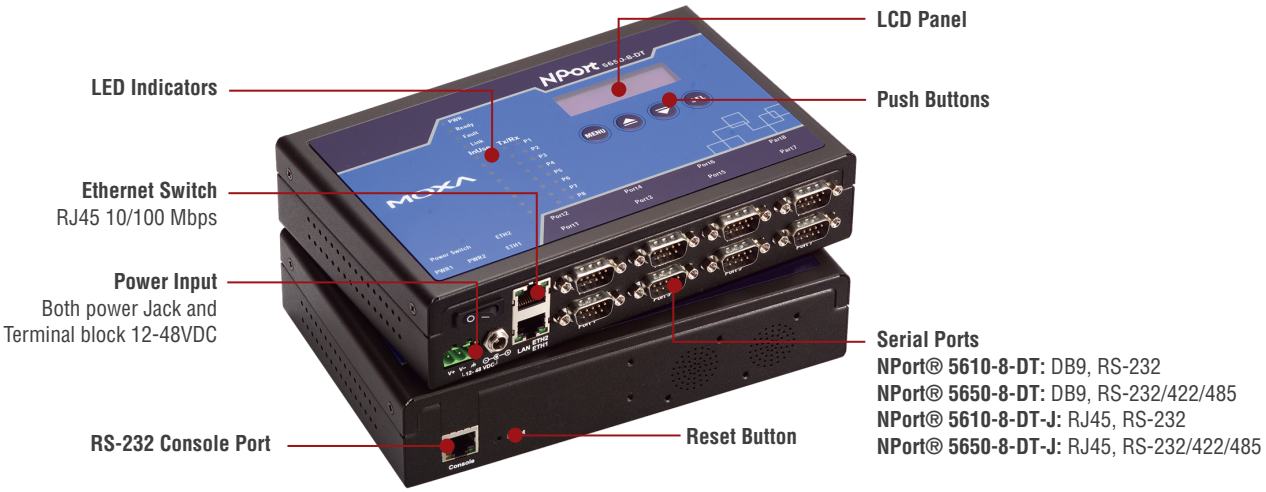
Two Ethernet Ports for Convenient Cascade Wiring

The NPort® 5600-8-DT device servers come with two Ethernet ports that can be used as Ethernet switch ports. Connect one port to the network or server, and the other port to another Ethernet device. The dual Ethernet ports eliminate the need to connect each device to a separate Ethernet switch, reducing wiring costs.

Automatic Warning Function by Speaker and/or E-mail

The built-in speakers can be used to alert administrators of problems with the Ethernet links or power input. The web console indicates which Ethernet link or power input has failed. An e-mail warning can also be issued when an exception is detected. These functions are valuable tools that enable maintenance engineers to react promptly to emergency situations.

Appearance



Specifications

Ethernet Interface

Number of Ports: 2

Speed: 10/100 Mbps, auto MDI/MDIX

Connector: 8-pin RJ45

Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Number of Ports: 8

Serial Standards:
NPort® 5610-8-DT: RS-232
NPort® 5650-8-DT: RS-232/422/485

Connector:
NPort® 5610-8-DT/5650-8-DT/5650I-8-DT: DB9 male
NPort® 5610-8-DT-J/5650-8-DT-J: RJ45 (8 pins)

Serial Line Protection:
15 KV ESD protection for all signals
2 KV isolation protection (NPort® 5650I-8-DT only)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Pull High/Low Resistor for RS-485: 1 KΩ, 150 KΩ

Terminator for RS-485: 120 Ω

Serial Communication Parameters

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: DSR/DTR and RTS/CTS (RS-232 only), 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

Software

Network Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1/V2c, HTTP, SMTP, SNTP, Rtelnet, ARP, RFC2217

Configuration Options: Web Console, Telnet Console, Serial Console, Windows 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: Linux kernel 2.4.x, 2.6.x

Mini Screen with Push Buttons

LCD Panel: Liquid Crystal Display on the case

Push Buttons: Four push buttons for convenient on-site configuration

Physical Characteristics

Housing: Metal, IP30 protection

Weight:
NPort® 5610-8-DT: 1760 g
NPort® 5610-8-DT-J: 1170 g
NPort® 5650-8-DT: 1770 g
NPort® 5650-8-DT-J: 1710 g
NPort® 5650I-8-DT: 1850 g

Dimensions:
Without ears: 197 x 44 x 135.5 mm (7.76 x 1.73 x 5.33 in)
With ears: 229 x 46 x 135.5 mm (9.01 x 1.81 x 5.33 in)
With DIN-Rail kit on bottom panel: 197 x 53 x 135.5 mm (7.76 x 2.09 x 5.33 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:
NPort® 5610-8-DT:
611 mA @ 12 V, 300 mA @ 24 V, 140 mA @ 48 V
NPort® 5610-8-DT-J:
611 mA @ 12 V, 300 mA @ 24 V, 140 mA @ 48 V
NPort® 5650-8-DT:
615 mA @ 12 V, 300 mA @ 24 V, 156 mA @ 48 V
NPort® 5650I-8-DT:
1066 mA @ 12 V, 510 mA @ 24 V, 200 mA @ 48 V
NPort® 5650-8-DT-J:
615 mA @ 12 V, 300 mA @ 24 V, 156 mA @ 48 V

Regulatory Approvals

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

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

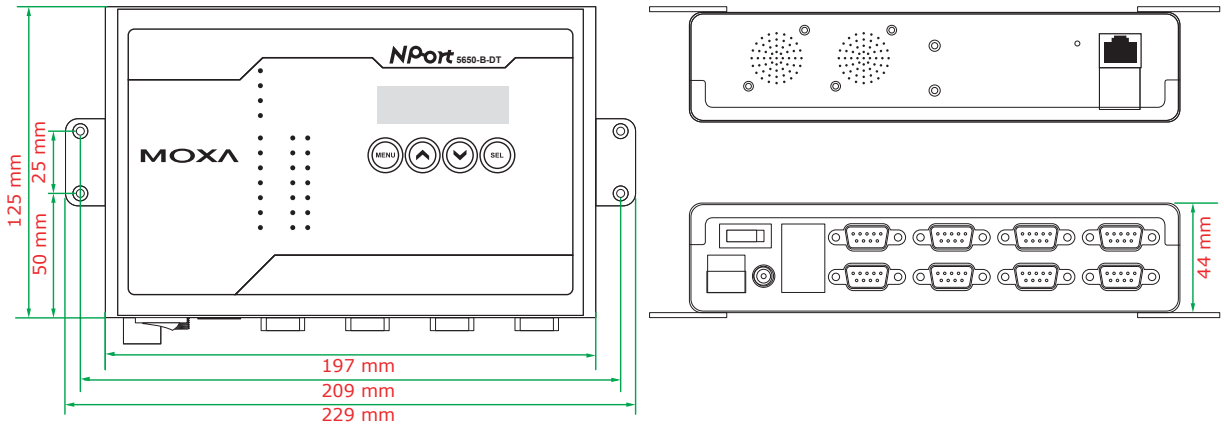
Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger: Built-in WDT (watchdog timer)
MTBF (meantime between failures): 163356 hrs

Warranty

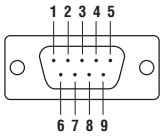
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions



Pin Assignment

DB9 male connector



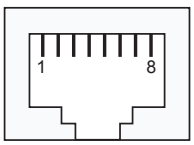
NPort® 5610-8-DT (RS-232)

PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

NPort® 5650-8-DT/5650I-8-DT (RS-232/422/485)

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	–	–

8-pin RJ45 connector



NPort® 5610-8-DT-J (RS-232)

PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

NPort® 5650-8-DT-J (RS-232/422/485)

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

Ordering Information

Available Models

NPort® 5610-8-DT: 8-port RS-232 desktop device server with DB9 male connectors and 48 VDC power input
NPort® 5610-8-DT-J: 8-port RS-232 desktop device server with RJ45 connectors and 48 VDC power input
NPort® 5650-8-DT: 8-port RS-232/422/485 desktop device server with DB9 male connectors and 48 VDC power input
NPort® 5650-8-DT-J: 8-port RS-232/422/485 desktop device server with RJ45 connectors and 48 VDC power input
NPort® 5650I-8-DT: 8-port RS-232/422/485 desktop device server with DB9 male connectors, 48 VDC power input, and 2 KV optical isolation

Optional Accessories (can be purchased separately)

CBL-RJ45F25-150: 8-pin RJ45 to DB25 female cable, 150 cm
CBL-RJ45M25-150: 8-pin RJ45 to DB25 male cable, 150 cm
CBL-RJ45F9-150: 8-pin RJ45 to DB9 female cable, 150 cm
CBL-RJ45M9-150: 8-pin RJ45 to DB9 male cable, 150 cm

Package Checklist

- NPort® 5600 series device server
- Power Adaptor (see Appendix A)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card