NPort® 5600-8-DT Lite Series

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

- 8 serial ports supporting RS-232/422/485
- Compact desktop design
- 10/100M auto-sensing Ethernet
- Configure via Telnet/Web/Windows utility
- Socket modes: TCP server/TCP client/UDP/Real COM
- SNMP MIB-II for network management

Overview

NPort® 5600-8-DTL device servers can conveniently and transparently connect 8 serial devices to an Ethernet network, allowing you to network your existing serial devices with basic configurations. You can both centralize management of your serial devices and distribute management hosts over the network. The NPort® 5600-8-DTL device servers have a smaller form factor than our 19-inch models, making them a great choice for applications that need additional serial ports when mounting rails are not available.

Convenient Design for RS-485 Applications

The NPort® 5600-8-DTL device servers support selectable 1 k\(\Omega\) and 150 k\(\Omega\) pull high/low resistors and a 120 \(\Omega\) 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-DTL device servers use DIP switches to allow users to adjust termination and pull high/low resistor values manually for each serial port.

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 they also help field engineers monitor the status of attached serial devices.

Appearance

- 8 serial ports supporting RS-232/422/485
- Compact desktop design
- 10/100M auto-sensing Ethernet
- Configure via Telnet/Web/Windows utility
- Socket modes: TCP server/TCP client/UDP/Real COM
- SNMP MIB-II for network management

Specifications

<table>
<thead>
<tr>
<th>Ethernet Interface</th>
<th>Number of Ports: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed:</td>
<td>10/100 Mbps, auto MDI/MDIX</td>
</tr>
<tr>
<td>Connector:</td>
<td>8-pin RJ45</td>
</tr>
<tr>
<td>Magnetic Isolation Protection:</td>
<td>1.5 kV built-in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Serial Interface</th>
<th>Number of Ports: 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Standards:</td>
<td>NPort 5610-8-DTL: RS-232</td>
</tr>
<tr>
<td></td>
<td>NPort 5650-8-DTL/5650I-8-DTL: RS-232/422/485</td>
</tr>
<tr>
<td>Connector:</td>
<td>DB9 male</td>
</tr>
<tr>
<td>Serial Line Protection:</td>
<td>15 kV ESD protection for all signals</td>
</tr>
<tr>
<td></td>
<td>2 kV isolation protection (NPort 5650I-8-DTL only)</td>
</tr>
</tbody>
</table>

- RS-485 Data Direction Control: ADDC® (Automatic Data Direction Control)
- Pull High/Low Resistor for RS-485: 1 k\(\Omega\), 150 k\(\Omega\)
- Terminator for RS-485: 120 \(\Omega\)

<table>
<thead>
<tr>
<th>Serial Communication Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Bits: 5, 6, 7, 8</td>
</tr>
<tr>
<td>Stop Bits: 1, 1.5, 2</td>
</tr>
<tr>
<td>Parity: None, Even, Odd, Space, Mark</td>
</tr>
<tr>
<td>Flow Control: DSR/DR and RTS/CTS (RS-232 only), XON/XOFF</td>
</tr>
<tr>
<td>Baudrate: 50 bps to 921.6 kbps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Serial Signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND</td>
</tr>
<tr>
<td>RS-422: Tx+, Tx-, Rx+, Rx-, GND</td>
</tr>
<tr>
<td>RS-485-4w: TxA+, BxA+, TxB-, BxB-, GND</td>
</tr>
<tr>
<td>RS-485-2w: Data+, Data-, GND</td>
</tr>
</tbody>
</table>
Software
Network Protocols: ICMP, IPv4, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, SNTP, Rtp, ARP, RFC2217
Configuration Options: Web Console, Telnet Console, Serial Console, Windows Utility
Fixed TTY Drivers: SCO Unix, SCO OpenServer, UnixWare 7, ONX 4.25, ONX 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

Physical Characteristics
Housing: Metal
Weight:
NPort 5610-8-DTL: 1.760 g (3.88 lb)
NPort 5650-8-DTL: 1.770 g (3.90 lb)
NPort 5650I-8-DTL: 1.850 g (4.08 lb)

Environmental Limits
Operating Temperature:
Standard Models: 0 to 60°C (32 to 140°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 5610-8-DTL: 340 mA @ 12 VDC
NPort 5650-8-DTL: 470 mA @ 12 VDC
NPort 5650I-8-DTL: 740 mA @ 12 VDC

Standards and Certifications
Safety: UL 60950-1
EMC: EN 55022/24
EMI: CISPR 22, 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: 2 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 PFM
IEC 61000-4-11 DIPs

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 5610-8-DTL: 953,388 hrs
NPort 5650-8-DTL: 740,457 hrs
NPort 5650I-8-DTL: 258,150 hrs

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

Dimensions

Pin Assignment

Available Models
NPort 5610-8-DTL: 8-port RS-232 desktop device server with DB9 male connectors, 0 to 60°C operating temperature
NPort 5650-8-DTL: 8-port RS-232/422/485 desktop device server with DB9 male connectors, 0 to 60°C operating temperature
NPort 5650I-8-DTL: 8-port RS-232/422/485 desktop device server with DB9 male connectors and 2 kV isolation, 0 to 60°C operating temperature
NPort 5610-8-DTL-T: 8-port RS-232 desktop device server with DB9 male connectors, -40 to 75°C operating temperature
NPort 5650-8-DTL-T: 8-port RS-232/422/485 desktop device server with DB9 male connectors, -40 to 75°C operating temperature
NPort 5650I-8-DTL-T: 8-port RS-232/422/485 desktop device server with DB9 male connectors and 2 kV isolation, -40 to 75°C operating temperature

Optional Accessories (can be purchased separately)
DK35A: DIN-rail mounting clips, 35 mm, 2 DIN-rail plates with 4 screws
CBL-PJ21NOPEN-BK-30: Locking barrel plug to bare-wires cable
Mini D9F-to-TB: DB9 female to terminal block adapter for RS-422/485 applications
WK-35-04: Wall-mounting kit, 2 plates with 6 screws
PWR-12200-DT-S1: Desktop power supply (requires power cord), 12 VDC 2A, 100-240 VAC, 0 to 40°C operating temperature

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

Ordering Information
Available Models
NPort 5610-8-DTL: 8-port RS-232 desktop device server with DB9 male connectors, 0 to 60°C operating temperature
NPort 5650-8-DTL: 8-port RS-232/422/485 desktop device server with DB9 male connectors, 0 to 60°C operating temperature
NPort 5650I-8-DTL: 8-port RS-232/422/485 desktop device server with DB9 male connectors and 2 kV isolation, 0 to 60°C operating temperature

Optional Accessories (can be purchased separately)
DK35A: DIN-rail mounting clips, 35 mm, 2 DIN-rail plates with 4 screws
CBL-PJ21NOPEN-BK-30: Locking barrel plug to bare-wires cable
Mini D9F-to-TB: DB9 female to terminal block adapter for RS-422/485 applications
WK-35-04: Wall-mounting kit, 2 plates with 6 screws
PWR-12200-DT-S1: Desktop power supply (requires power cord), 12 VDC 2A, 100-240 VAC, 0 to 40°C operating temperature

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

Package Checklist
• 1 NPort 5600-8-DTL device server
• 100 to 240 VAC power adapter (excluding T model): PWR-12200-DT-S1
• 1 Ethernet cable: CBL-RJ458P-100
• 1 wall-mounting kit: WK-35-04
• 1 power cord (suitable for your region)
• Documentation and software CD
• Quick installation guide (printed)
• Warranty card

Note: The package includes one power cord suitable for your region.
AC Power Adapters (standard temp.)

Desktop type power adapters

<table>
<thead>
<tr>
<th>Model Name</th>
<th>PWR-12200-DT-S1</th>
<th>PWR-12125-DT-S2</th>
<th>PWR-12150-CN-S2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input Rating</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/P</td>
<td>100-240 VAC</td>
<td>100-240 VAC</td>
<td>100-240 VAC</td>
</tr>
<tr>
<td><strong>Input Plug</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plug Type</td>
<td>Desktop</td>
<td>Desktop</td>
<td>CN</td>
</tr>
<tr>
<td><strong>Output Rating</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O/P</td>
<td>2 A @ 12 VDC</td>
<td>1.25 A @ 12 VDC</td>
<td>1.5 A @ 12 VDC</td>
</tr>
<tr>
<td><strong>Output Plug</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector Type</td>
<td>S-Type 5.5/2.1/7.5</td>
<td>S-Type 5.5/2.1/7.5</td>
<td>S-Type 5.5/2.1/7.5</td>
</tr>
<tr>
<td>Outer Diameter</td>
<td>5.5 ± 0.1 mm</td>
<td>5.5 ± 0.1 mm</td>
<td>5.5 ± 0.1 mm</td>
</tr>
<tr>
<td>Inner Diameter</td>
<td>2.1 ± 0.1 mm</td>
<td>2.1 ± 0.1 mm</td>
<td>2.1 ± 0.1 mm</td>
</tr>
</tbody>
</table>
**Physical Characteristics**
- **Dimensions (L x W x H)**: 110.8 x 51.8 x 32 mm, 75 x 47.5 x 27.3 mm, 70 x 45 x 54 mm
- **Packaged Dimensions (L x W x H)**: 100 x 70 x 51.5 mm, 83 x 50 x 70 mm, 70 x 45 x 54 mm
- **Weight**: 200 g, 200 g, 200 g
- **Cord Length**: 1800 ± 200 mm, 1530 ± 100 mm, 1800 ± 200 mm
- **Environmental Limits**
  - **Operating Temperature**: 0 to 40°C (32 to 104°F)
  - **Storage Temperature**: -20 to 70°C (-4 to 158°F)
- **Regulatory Approvals**
  - **Safety**: UL/CE/FCC/GS/CCC/PSE/BSMI/TUV, UL/GS/CE/FCC/PSE, CCC
- **Related Products**
  - NPort 5610-8-DT, NPort 5610-8-DT-J, NPort 5650-8-DT, NPort 5650-8-DT-J, NPort 5650I-8-DT, NPort 5610-8-DTL, NPort 5650-8-DTL, NPort 5650I-DTL

Locking barrel plug to bare wires

CBL-PJ21NOPEN-BK-30

Cable Length: 300 ± 20 mm