NPort® 5600 Desktop Series

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

Overview

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

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.
Serial-to-Ethernet Device Servers

**Appearance**

- **LED Indicators**
- **Ethernet Switch**
  - RJ45 10/100 Mbps
- **Power Input**
  - Both power Jack and Terminal block 12-48VDC
- **RS-232 Console Port**
- **Push Buttons**
- **Mini Screen with Push Buttons**
  - LCD Panel
  - Liquid Crystal Display on the case
  - Push Buttons: Four push buttons for convenient on-site configuration

**Specifications**

**Ethernet Interface**
- **Number of Ports:** 2 (1 IP)
- **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-J: DB9 male
  - NPort 5610-8-DT-J/5650-8-DT-J: RJ45 (8 pins)
- **Serial Line Protection:** 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, SNMPv1, HTTP, SMTP, SNMP, Rlogin, ARP, RFC2217
- **Configuration Options:** Web Console, Telnet Console, Serial Console, Windows Utility
- **Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/x64/64, 2012 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 5.1, HP-UX 11i
- **Linux Real TTY Drivers:** Linux kernel 2.4.x, 2.6.x, 3.x

**Environmental Limits**
- **Operating Temperature:** 0 to 55°C (32 to 131°F)
- **Storage Temperature:** -20 to 70°C (-4 to 158°F)
- **Ambient Relative Humidity:** 5 to 95% (non-condensing)

**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

**Standards and Certifications**
- **Safety:** UL 60950-1, EN 60950-1
- **EMC:** CE, FCC
- **EMI:** EN 55022 Class A, FCC Part 15 Subpart B Class A
- **EMS:** EN 55024

**Reliability**
- **Alert Tools:** Built-in buzzer and RTC (real-time clock)
- **Automatic Reboot Trigger:** Built-in WDT (watchdog timer)
- **MTBF (mean time between failures):** 163,356 hrs

**Warranty**
- **Warranty Period:** 5 years

**Details:** See www.moxa.com/warranty
Pin Assignment

**DB9 male connector**

<table>
<thead>
<tr>
<th>PIN</th>
<th>RS-232</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DCD</td>
</tr>
<tr>
<td>2</td>
<td>RxD</td>
</tr>
<tr>
<td>3</td>
<td>TxD</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
</tr>
</tbody>
</table>

**8-pin RJ45 connector**

<table>
<thead>
<tr>
<th>PIN</th>
<th>RS-232</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DSR</td>
</tr>
<tr>
<td>2</td>
<td>RTS</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
</tr>
<tr>
<td>4</td>
<td>TxD</td>
</tr>
<tr>
<td>5</td>
<td>RxD</td>
</tr>
<tr>
<td>6</td>
<td>DCD</td>
</tr>
<tr>
<td>7</td>
<td>CTS</td>
</tr>
<tr>
<td>8</td>
<td>DTR</td>
</tr>
</tbody>
</table>

**NPort 5610-8-DT (RS-232)**

<table>
<thead>
<tr>
<th>PIN</th>
<th>RS-232</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DCD</td>
</tr>
<tr>
<td>2</td>
<td>RxD</td>
</tr>
<tr>
<td>3</td>
<td>TxD</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PIN</th>
<th>RS-232</th>
<th>RS-422/485-4w</th>
<th>RS-485-2w</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DCD</td>
<td>TxD(A)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RxD</td>
<td>TxD(B)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>TxD</td>
<td>RxD(B)</td>
<td>Data+(B)</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
<td>RxD(A)</td>
<td>Data-(A)</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>GND</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Available Models

- **NPort 5610-8-DT**: 8-port RS-232 desktop device server with DB9 male connectors
- **NPort 5610-8-DT-J**: 8-port RS-232 desktop device server with RJ45 connectors
- **NPort 5650-8-DT**: 8-port RS-232/422/485 desktop device server with DB9 male connectors
- **NPort 5650-8-DT-J**: 8-port RS-232/422/485 desktop device server with RJ45 connectors
- **NPort 5650I-8-DT**: 8-port RS-232/422/485 desktop device server with DB9 male connectors, and 2 kV optical isolation

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 DB9-F-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 2 A, 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.

Package Checklist

- 1 NPort 5600-8-DT 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.