

# NPort 5600 系列

## 8 埠和 16 埠 RS-232/422/485 機架式串列設備伺服器



### 特色與優點

- 標準 19 吋機架式
- 使用 LCD 面板輕鬆設定 IP 位址 (寬溫型號除外)
- 透過 Telnet、網頁瀏覽器或 Windows 工具程式進行設定
- 通訊端模式：TCP server、TCP client、UDP
- 用於網路管理的 SNMP MIB-II
- 通用高電壓範圍：100 至 240 VAC 或 88 至 300 VDC
- 常用的低壓範圍：±48 VDC (20 至 72 VDC、-20 至 -72 VDC)

### 認證



### 簡介

使用 NPort® 5600 機架式系列，您不僅可以保護您目前的硬體資產，也可以透過集中管理串列設備以及在網路上分配管理主機來實現未來的網路擴充。

#### 最多可讓 16 個串列裝置連上網路

NPort® 5600 只需透過基本配置即可將多達 16 個串列設備連接到乙太網路。

#### 19 吋機架式設備伺服器

NPort® 5600 設備伺服器的前面板有串列埠的 Tx/Rx LED，後面板有 8 個或 16 個 RJ45 串列埠連接器。因此 NPort® 5600 設備伺服器適合標準的 19 吋機架式安裝，從而讓您簡化操作、維護和管理任務。

#### Real COM/TTY 連接埠

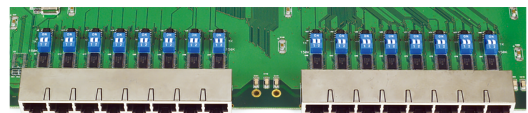
提供 Real COM/TTY 驅動程式，使 NPort® 5600 上的串列埠可透過 Windows 識別為 Real COM 連接埠，或由 Linux 識別為 Real TTY 連接埠。除了支援基本的數據傳輸和接收，NPort® 驅動程式也支援 RTS、CTS、DTR、DSR 和 DCD 控制訊號。

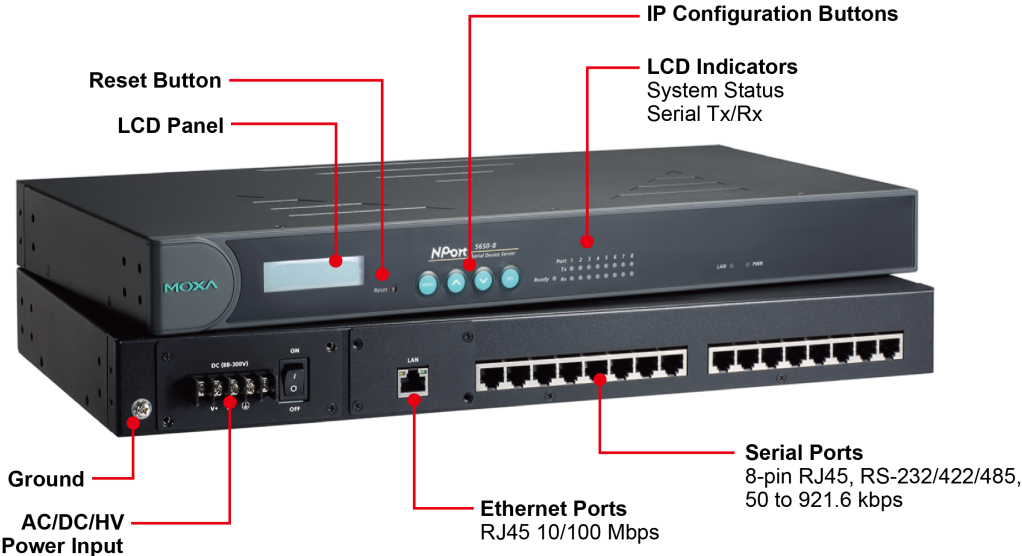
#### LED 指示燈可簡化維護任務

系統 LED、串列 Tx/Rx LED 和乙太網路 LED (位於 RJ45 連接器上) 是相當適合設備進行基本維護的工具，並協助工程師直接在現場分析問題。LED 不僅可顯示目前系統和網路狀態，而且也協助現場工程師監控已連接的串列裝置狀態。

#### 可調整的終端器和上拉/下拉電阻

使用終端電阻來防止串列訊號反射時，必須正確設定上拉/下拉電阻，以防止電器訊號被破壞。因為沒有電阻值可以相容於所有的環境，因此 NPort® 5650-8/16 的底部面板有 DIP 開關，可用於設定終端器和上拉/下拉電阻值。





Note: LCD panel and configuration buttons not available with wide-temp. models

規格

| Ethernet Interface                    |                                                                                                                                                                                                                                                                                                     |                         |              |       |              |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------|-------|--------------|
| 10/100BaseT(X) Ports (RJ45 connector) | 1                                                                                                                                                                                                                                                                                                   |                         |              |       |              |
| Magnetic Isolation Protection         | 1.5 kV (built-in)                                                                                                                                                                                                                                                                                   |                         |              |       |              |
| Optical Fiber                         |                                                                                                                                                                                                                                                                                                     |                         | 100BaseFX    |       |              |
|                                       |                                                                                                                                                                                                                                                                                                     |                         | Multi-Mode   |       | Single-Mode  |
|                                       | Fiber Cable Type                                                                                                                                                                                                                                                                                    | OM1                     | 50/125 μm    | G.652 |              |
|                                       |                                                                                                                                                                                                                                                                                                     |                         | 800 MHz x km |       |              |
|                                       | Typical Distance                                                                                                                                                                                                                                                                                    |                         | 4 km         | 5 km  | 40 km        |
|                                       | Wavelength                                                                                                                                                                                                                                                                                          | Typical (nm)            | 1300         |       | 1310         |
|                                       |                                                                                                                                                                                                                                                                                                     | TX Range (nm)           | 1260 to 1360 |       | 1280 to 1340 |
|                                       |                                                                                                                                                                                                                                                                                                     | RX Range (nm)           | 1100 to 1600 |       | 1100 to 1600 |
|                                       | Optical Power                                                                                                                                                                                                                                                                                       | TX Range (dBm)          | -10 to -20   |       | 0 to -5      |
|                                       |                                                                                                                                                                                                                                                                                                     | RX Range (dBm)          | -3 to -32    |       | -3 to -34    |
|                                       |                                                                                                                                                                                                                                                                                                     | Link Budget (dB)        | 12           |       | 29           |
|                                       |                                                                                                                                                                                                                                                                                                     | Dispersion Penalty (dB) | 3            |       | 1            |
|                                       | Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.<br>Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB). |                         |              |       |              |

| Ethernet Software Features |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Configuration Options      | Telnet Console<br>Web Console (HTTP/HTTPS)<br>Windows Utility                                                                   |
| Management                 | ARP, BOOTP, DHCP Client, DNS, HTTP, HTTPS, ICMP, IPv4, LLDP, RFC2217, Rtelnet, PPP, SLIP, SMTP, SNMPv1/v2c, TCP/IP, Telnet, UDP |
| Filter                     | IGMP v1/v2c                                                                                                                     |

|                             |                                                                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows Real COM Drivers    | Windows 11, 10, 8.1, 8, 7, Vista, XP, ME, 98, and 95<br>Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008, 2003, 2000, and NT<br>Windows Embedded CE 6.0 and 5.0, Windows XP Embedded |
| Linux Real TTY Drivers      | Kernel versions 6.x, 5.x, 4.x, 3.x, 2.6.x, and 2.4.x                                                                                                                                              |
| Fixed TTY Drivers           | macOS versions: 14, 13, 12, 11, and 10.1x                                                                                                                                                         |
| Arm®-based Platform Support | Windows 11<br>Linux Kernel 6.x, 5.x, and 4.x<br>macOS 14, 13, 12, and 11                                                                                                                          |
| Virtual Machine             | VMWare ESXi (Windows 11/10)<br>VMware Fusion (Windows on macOS 14, 13, 12, 11, and 10.1x)<br>Parallels Desktop (Windows on macOS 14, 13, 12, 11, and 10.1x)                                       |
| Android API                 | Android 3.1.x and later                                                                                                                                                                           |
| Time Management             | SNTP                                                                                                                                                                                              |

### Security Functions

|                    |                                                  |
|--------------------|--------------------------------------------------|
| Authentication     | Local database                                   |
| Encryption         | HTTPS<br>AES-128<br>RSA-1024<br>SHA-1<br>SHA-256 |
| Security Protocols | HTTPS (TLS 1.2)<br>SNMPv3                        |

### Serial Interface

|                                   |                                                                                                                                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connector                         | 8-pin RJ45                                                                                                                                                       |
| No. of Ports                      | 8 ports (NPort 5600-8 models) or 16 ports (NPort 5600-16 models)                                                                                                 |
| Serial Standards                  | NPort 5610 models: RS-232<br>NPort 5630 models: RS-422, RS-485<br>NPort 5650 models: RS-232, RS-422, RS-485                                                      |
| Baudrate                          | Supports standard baudrates (unit=bps): 50, 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230.4k, 460.8k, 921.6k |
| Data Bits                         | 5, 6, 7, 8                                                                                                                                                       |
| Stop Bits                         | 1, 1.5, 2                                                                                                                                                        |
| Parity                            | None, Even, Odd, Space, Mark                                                                                                                                     |
| Flow Control                      | None<br>RTS/CTS (RS-232 only)<br>DTR/DSR (RS-232 only)<br>XON/XOFF                                                                                               |
| Pull High/Low Resistor for RS-485 | 1 kilo-ohm, 150 kilo-ohms                                                                                                                                        |
| Terminator for RS-485             | 120 ohms                                                                                                                                                         |
| RS-485 Data Direction Control     | Automatic Data Direction Control (ADDC)                                                                                                                          |
| Operation Modes                   | Real COM, TCP Client, TCP Server, UDP, Ethernet Modem, Pair Connection, Reverse Telnet, RFC2217, Disabled                                                        |

## 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                      |

## Power Parameters

|               |                                                                                                                                                                                                                                                                                                              |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Current | NPort 5610-8-48V/16-48V: 135 mA @ 48 VDC<br>NPort 5650-8-HV-T/16-HV-T: 152 mA @ 88 VDC<br>NPort 5610-8/16: 141 mA @ 100 VAC<br>NPort 5630-8/16: 152 mA @ 100 VAC<br>NPort 5650-8/8-T/16/16-T: 158 mA @ 100 VAC<br>NPort 5650-8-M-SC/16-M-SC: 174 mA @ 100 VAC<br>NPort 5650-8-S-SC/16-S-SC: 164 mA @ 100 VAC |
| Input Voltage | HV models: 88 to 300 VDC<br>AC models: 100 to 240 VAC, 47 to 63 Hz<br>DC models: $\pm 48$ VDC, 20 to 72 VDC, -20 to -72 VDC                                                                                                                                                                                  |

## Reliability

|                          |              |
|--------------------------|--------------|
| Automatic Reboot Trigger | Built-in WDT |
|--------------------------|--------------|

## Physical Characteristics

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Housing                   | Metal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Dimensions (with ears)    | 480 x 45.5 x 198 mm (18.90 x 1.79 x 7.80 in)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Dimensions (without ears) | 440 x 45.5 x 198 mm (17.32 x 1.79 x 7.80 in)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Weight                    | NPort 5650-16-HV-T: 3,820 g (8.42 lb)<br>NPort 5650-8-HV-T: 3,720 g (8.20 lb)<br>NPort 5610-16-48V: 3,260 g (7.19 lb)<br>NPort 5610-8-48V: 3,160 g (6.97 lb)<br>NPort 5630-16: 2,560 g (5.64 lb)<br>NPort 5630-8/5650-16/5650-16-T: 2,510 g (5.53 lb)<br>NPort 5650-16-S-SC: 2,500 g (5.51 lb)<br>NPort 5610-16: 2,490 g (5.49 lb)<br>NPort 5650-8-S-SC/5650-16-M-SC: 2,440 g (5.38 lb)<br>NPort 5610-8: 2,290 g (5.05 lb)<br>NPort 5650-8-M-SC: 2,380 g (5.25 lb)<br>NPort 5650-8/5650-8-T: 2,310 g (5.09 lb) |
| Installation              | 19-inch rack mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Interactive Interface     | LCD panel display (standard temp. models only)<br>Push buttons for configuration (standard temp. models only)                                                                                                                                                                                                                                                                                                                                                                                                  |

## Environmental Limits

|                                        |                                                                                                                                                           |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature                  | Standard models: 0 to 60°C (32 to 140°F)<br>Wide temp. models: -40 to 75°C (-40 to 167°F)<br>High-voltage wide temp. models: -40 to 85°C (-40 to 185°F)   |
| Storage Temperature (package included) | Standard models: -20 to 70°C (-4 to 158°F)<br>Wide temp. models: -40 to 75°C (-40 to 167°F)<br>High-voltage wide temp. models: -40 to 85°C (-40 to 185°F) |
| Ambient Relative Humidity              | 5 to 95% (non-condensing)                                                                                                                                 |

## Standards and Certifications

|     |                                |
|-----|--------------------------------|
| EMC | EN 55032/35                    |
| EMI | CISPR 32, FCC Part 15B Class A |

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMS     | NPort 5650-8/16 models:<br>IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m<br>IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV<br>IEC 61000-4-5 Surge: Power: 2.5 kV; Signal: 1 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8<br>IEC 61000-4-11<br><br>NPort 5650-8/16-HV models:<br>IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV<br>IEC 61000-4-5 Surge: Power: 2 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 |
| Safety  | UL 62368-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Medical | EN 55011: 2007+A2: 2007 Class A (Group 1) compliant<br>EN 60601-1-2: 2007 compliant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## MTBF

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time      | NPort 5610-8: 903,009 hrs<br>NPort 5610-8-48V: 892,692 hrs<br>NPort 5630-8: 844,009 hrs<br>NPort 5650-8-T: 776,469 hrs<br>NPort 5650-8: 754,927 hrs<br>NPort 5650-8-M-SC/8-S-SC: 738,291 hrs<br>NPort 5650-8-HV-T: 716,168 hrs<br>NPort 5610-16-48V: 693,529 hrs<br>NPort 5610-16: 680,154 hrs<br>NPort 5630-16: 618,263 hrs<br>NPort 5650-16: 525,107 hrs<br>NPort 5650-16-T: 533,046 hrs<br>NPort 5650-16-M-SC/16-S-SC: 517,019 hrs<br>NPort 5650-16-HV-T: 506,093 hrs |
| Standards | HV models: Telcordia (Bellcore) Standard TR/SR<br>All other models: MIL-HDBK-217F                                                                                                                                                                                                                                                                                                                                                                                        |

## Warranty

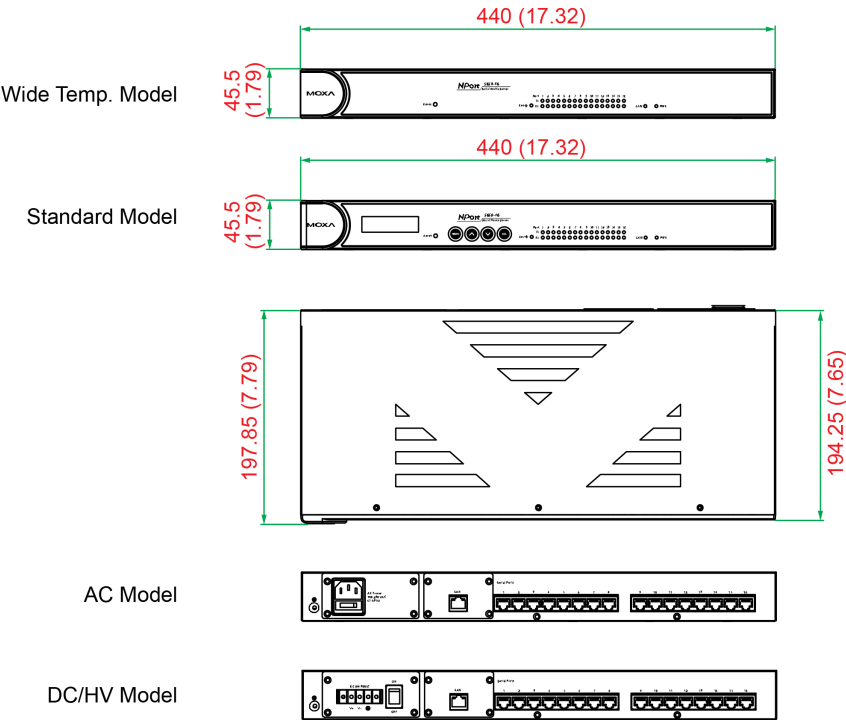
|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Warranty Period | 5 years                                                                    |
| Details         | See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a> |

## Package Contents

|                  |                                                      |
|------------------|------------------------------------------------------|
| Device           | 1 x NPort 5600 Series device server                  |
| Installation Kit | 1 x rack-mounting kit                                |
| Cable            | 1 x power cord, suitable for your region (AC models) |
| Documentation    | 1 x quick installation guide<br>1 x warranty card    |

尺寸

單位：公釐（英吋）



訂購資訊

| Model Name         | Ethernet Interface Connector | Serial Interface | No. of Serial Ports | Operating Temp. | Input Voltage |
|--------------------|------------------------------|------------------|---------------------|-----------------|---------------|
| NPort 5610-8       | 8-pin RJ45                   | RS-232           | 8                   | 0 to 60°C       | 100-240 VAC   |
| NPort 5610-8-48V   | 8-pin RJ45                   | RS-232           | 8                   | 0 to 60°C       | ±48 VDC       |
| NPort 5630-8       | 8-pin RJ45                   | RS-422/485       | 8                   | 0 to 60°C       | 100-240 VAC   |
| NPort 5610-16      | 8-pin RJ45                   | RS-232           | 16                  | 0 to 60°C       | 100-240 VAC   |
| NPort 5610-16-48V  | 8-pin RJ45                   | RS-232           | 16                  | 0 to 60°C       | ±48 VDC       |
| NPort 5630-16      | 8-pin RJ45                   | RS-422/485       | 16                  | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-8       | 8-pin RJ45                   | RS-232/422/485   | 8                   | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-8-M-SC  | Multi-mode fiber SC          | RS-232/422/485   | 8                   | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-8-S-SC  | Single-mode fiber SC         | RS-232/422/485   | 8                   | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-8-T     | 8-pin RJ45                   | RS-232/422/485   | 8                   | -40 to 75°C     | 100-240 VAC   |
| NPort 5650-8-HV-T  | 8-pin RJ45                   | RS-232/422/485   | 8                   | -40 to 85°C     | 88-300 VDC    |
| NPort 5650-16      | 8-pin RJ45                   | RS-232/422/485   | 16                  | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-16-M-SC | Multi-mode fiber SC          | RS-232/422/485   | 16                  | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-16-S-SC | Single-mode fiber SC         | RS-232/422/485   | 16                  | 0 to 60°C       | 100-240 VAC   |
| NPort 5650-16-T    | 8-pin RJ45                   | RS-232/422/485   | 16                  | -40 to 75°C     | 100-240 VAC   |
| NPort 5650-16-HV-T | 8-pin RJ45                   | RS-232/422/485   | 16                  | -40 to 85°C     | 88-300 VDC    |

## 配件 (選購)

### Cables

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| CBL-RJ45F25-150         | 8-pin RJ45 to DB25 female serial cable, 1.5 m                        |
| CBL-RJ45F9-150          | 8-pin RJ45 to DB9 female serial cable, 1.5m                          |
| CBL-RJ45M9-150          | 8-pin RJ45 to DB9 male serial cable, 1.5m                            |
| CBL-RJ45SF9-150         | 8-pin RJ45 to DB9 female serial cable with shielding, 1.5m           |
| CBL-RJ45SF25-150        | 8-pin RJ45 to DB25 female serial cable with shielding, 1.5m          |
| CBL-RJ45SM25-150        | 8-pin RJ45 to DB25 male serial cable with shielding, 1.5m            |
| CBL-RJ45SM9-150         | 8-pin RJ45 to DB9 male serial cable with shielding, 1.5m             |
| CBL-F9M9-150            | DB9 female to DB9 male serial cable, 1.5 m                           |
| CBL-F9M9-20             | DB9 female to DB9 male serial cable, 20 cm                           |
| CBL-RJ458P-100          | 8-pin RJ45 CAT5 Ethernet cable, 1 m                                  |
| CBL-RJ458P-Cisco-BK-180 | 8-pin RJ45 to 8-pin RJ45 serial cable, 1.8 m, for Cisco console port |

### Connectors

|                 |                              |
|-----------------|------------------------------|
| ADP-RJ458P-DB9F | DB9 female to RJ45 connector |
| ADP-RJ458P-DB9M | RJ45 to DB9 male connector   |

### Power Cords

|                  |                                               |
|------------------|-----------------------------------------------|
| PWC-C13AU-3B-183 | Power cord with AU plug, 1.83 m               |
| PWC-C13CN-3B-183 | Power cord with three-prong CN plug, 1.83 m   |
| PWC-C13EU-3B-183 | Power cord with EU/KR plug, 1.83 m            |
| PWC-C13JP-3B-183 | Power cord with JP plug plug, 7A/125V, 1.83 m |
| PWC-C13UK-3B-183 | Power cord with UK plug, 1.83 m               |
| PWC-C13US-3B-183 | Power cord with US plug, 1.83 m               |

### Rack-Mounting Kits

|          |                                                                  |
|----------|------------------------------------------------------------------|
| WK-45-01 | Rack-mounting kit, 2 L-shaped plates, 8 screws, 45 x 57 x 2.5 mm |
|----------|------------------------------------------------------------------|

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