CN2510 Series

8 and 16-port RS-232 terminal servers

Features and Benefits

- LCD control panel for easy on-site management
- Supports up to 16 dial-in users when operating as a standalone remote access server
- Supports PPP/SLIP with RADIUS authentication and RIP I/II routing protocols
- Real COM/TTY drivers for Windows and Linux
- 48 VDC for telecom applications (for CN2510-8/16-48V)

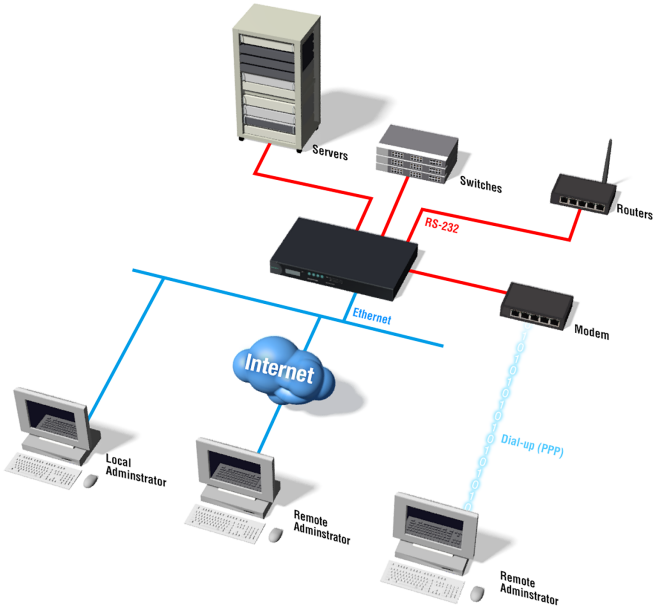
Certifications

Introduction

For most companies, the performance of IT equipment is critical to daily operation. To keep a server, router, PBX, or leased-line modem working properly, it is important to minimize downtime and troubleshoot faulty devices quickly. KVM is commonly used for in-band management of devices that are equipped with a screen and keyboard. However, RS-232 console access is often used as a last resort for all devices.

Remote Console Management

The CN2510 provides an easy console management solution in a convenient 1U rackmount package. With its RS-232 ports, connections are easily established to the console ports of network equipment, such as UNIX servers or routers, for centralized management of the attached devices. Each device's RS-232 console port becomes a network-accessible node, giving users Telnet access from anywhere on the network for configuration and management of the device. Full modem control signals are supported, ensuring compatibility with a wide range of serial peripherals.



User Authentication

It is very important that access is strictly controlled in a console management solution, and user privileges should be validated before a console port connection is allowed. The CN2510's authentication procedure involves verifying the username and password against an internal database or a RADIUS server.

Dial-back

When a dial-up connection is used for out-of-band management, the CN2510 provides a convenient dial-back function. Instead of accepting a connection request directly, the CN2510 calls back the management host to establish the connection. The dial-back function helps ensure that only registered users or hosts can remotely connect to the network through the CN2510, and helps to minimize long-distance phone costs.

Appearance

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1

Ethernet Software Features

Management	Device Search Utility (DSU), DHCP Client, TCP/IP, UDP
MIB	MIB-II
Security	RADIUS
Unicast Routing	RIPV1/V2, Static Route
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
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

Serial Interface

Connector	8-pin RJ45
No. of Ports	CN2510-8 Series: 8 CN2510-16 Series: 16
Serial Standards	RS-232
Operation Modes	Terminal mode
Baudrate	50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, XON/XOFF

Power Parameters

Input Current	CN2510-8/16: 125 mA @ 110 VAC CN2510-8/16-48V: 180 mA @ 48 VDC
Input Voltage	AC models: 100 to 240 VAC (47 to 63 Hz) DC models: ±48 VDC (38 to 72 VDC, -38 to -72 VDC)

Physical Characteristics

Housing	Metal
Installation	19-inch rack mounting
Dimensions	440 x 198 x 45 mm (17.3 x 7.8 x 1.77 in)
Weight	CN2510-8: 2,680 g (5.91 lb) CN2510-8-48V: 2,420 g (5.34 lb) CN2510-16: 2,700 g (5.95 lb) CN2510-16-48V: 2,480 g (5.27 lb)

Environmental Limits

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

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	AC models: IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2.5 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 PFMF IEC 61000-4-11 DIPs DC models: IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2.5 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 PFMF IEC 61000-4-8 PFMF
Safety	EN 60950-1, UL 60950-1

MTBF

Time	CN2510-8: 857,279 hrs CN2510-8-48V: 850,673 hrs CN2510-16: 654,195 hrs CN2510-16-48V: 650,342 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

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

Package Contents

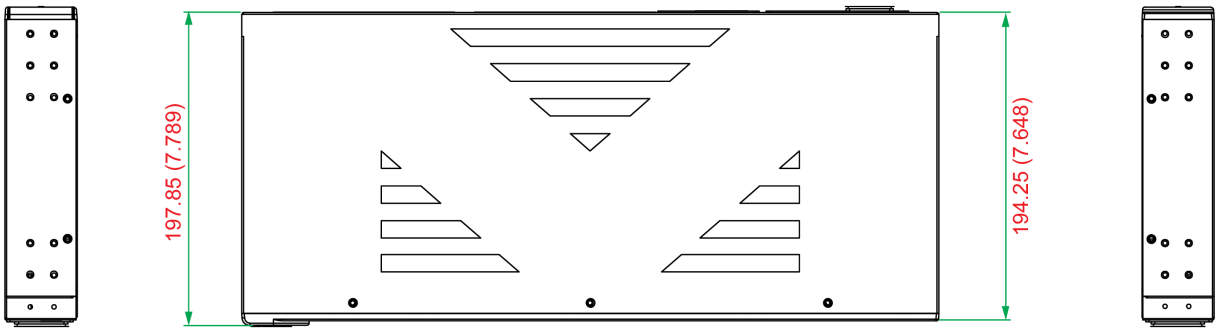
Device	1 x CN2510 Series terminal server
Cable	1 x RJ45-to-DB9 console cable 1 x power cord, suitable for your region (AC models)

Installation Kit	1 x rack-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

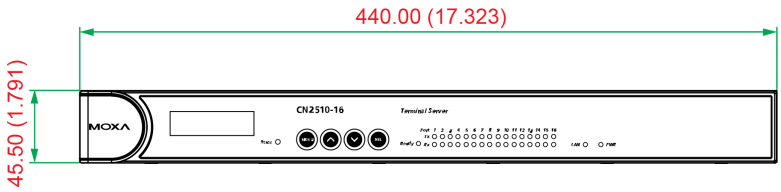
Dimensions

Unit: mm (inch)

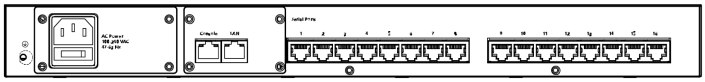
Top and Side Views



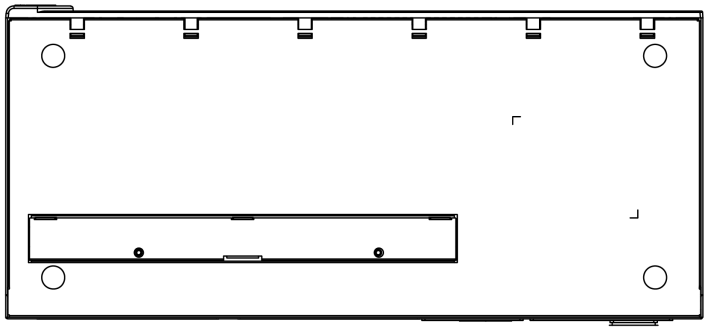
Front View



Rear View



Bottom View



Ordering Information

Model Name	Serial Standards	No. of Serial Ports	Serial Connector	Power Input
CN2510-8	RS-232	8	8-pin RJ45	100-240 VAC
CN2510-8-48V	RS-232	8	8-pin RJ45	±48 VDC
CN2510-16	RS-232	16	8-pin RJ45	100-240 VAC
CN2510-16-48V	RS-232	16	8-pin RJ45	±48 VDC

Accessories (sold separately)

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-RJ45M25-150	8-pin RJ45 to DB25 male serial cable, 1.5m
CBL-RJ45M9-150	8-pin RJ45 to DB9 male serial cable, 1.5m
CBL-RJ45SF25-150	8-pin RJ45 to DB25 female serial cable with shielding, 1.5m
CBL-RJ45SF9-150	8-pin RJ45 to DB25 male serial cable with shielding, 1.5m
CBL-RJ45SM25-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m
CBL-RJ45SM9-150	8-pin RJ45 to DB9 male serial cable with shielding, 1.5m

Power Cords

PWC-C13AU-3B-183	Power cord with Australian (AU) plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong China (CN) plug, 1.83 m
PWC-C13EU-3B-183	Power cord with Continental Europe (EU) plug, 1.83 m
PWC-C13JP-3B-183	Power cord with Japan (JP) plug, 7A/125V, 1.83 m
PWC-C13UK-3B-183	Power cord with United Kingdom (UK) plug, 1.83 m
PWC-C13US-3B-183	Power cord with United States (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

CN2600 Series

8 and 16-port RS-232/422/485 terminal servers with dual-LAN redundancy

Features and Benefits

- LCD panel for easy IP address configuration (excluding wide-temperature range models)
- Dual-LAN cards with two independent MAC addresses and IP addresses
- Redundant COM function available when both LANs are active
- Dual-host redundancy can be used to add a backup PC to your system
- Dual-AC-power inputs (for AC models only)
- Real COM/TTY drivers for Windows and Linux
- Universal high-voltage range: 100 to 240 VAC or 88 to 300 VDC

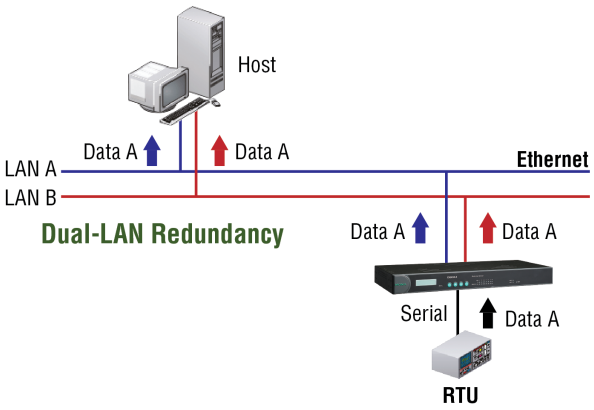
Certifications

Introduction

Redundancy is an important issue for industrial networks, and various types of solutions have been developed to provide alternative network paths when equipment or software failures occur. “Watchdog” hardware is installed to utilize redundant hardware, and a “Token”- switching software mechanism is applied. The CN2600 terminal server uses its built-in Dual-LAN ports to implement a “Redundant COM” mode that keeps your applications running uninterrupted.

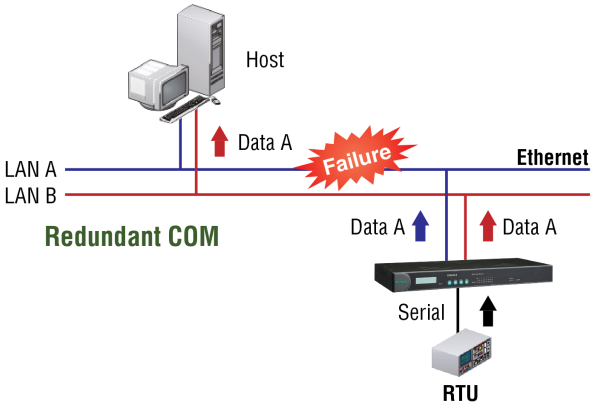
Dual-LAN Redundancy

The CN2600 has two separate LAN ports that can be connected to separate LAN networks. Dual-LAN redundancy involves setting up two separate physical networks to connect the PC host with the CN2600 (the PC host also requires two LAN cards). If one connection fails, the PC host can still communicate with your serial devices over the alternative LAN connection.



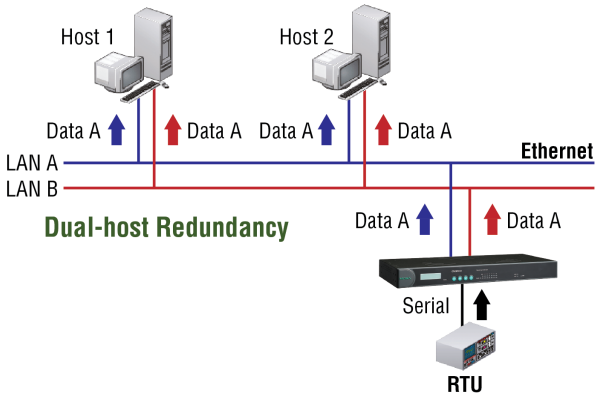
Redundant COM

Moxa offers “Redundant COM,” an easy-to-use application to provide an alternative solution for network redundancy. When the CN2600 receives a data packet from a connected device, two identical data packets are sent over two independent LAN connections to prevent lost data packets if one LAN connection becomes unavailable. The CN2600 software is programmed to automatically discard duplicate data packets.



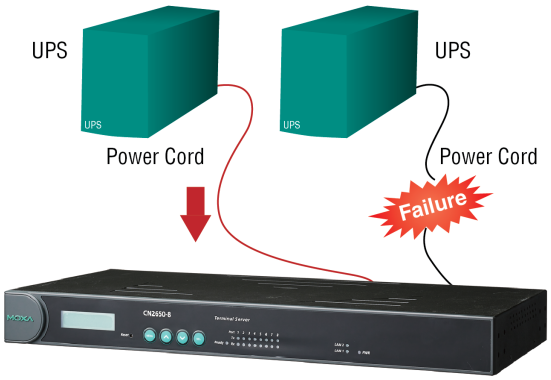
Dual-host Redundancy

The CN2600's dual-LAN cards can also be used to set up "dual-host" redundancy. In this case, both networks (LAN A and LAN B in the figure) are connected to two different hosts. If either of the two hosts shuts down unexpectedly, the other host will still be able to communicate with serial devices connected to the CN2600.

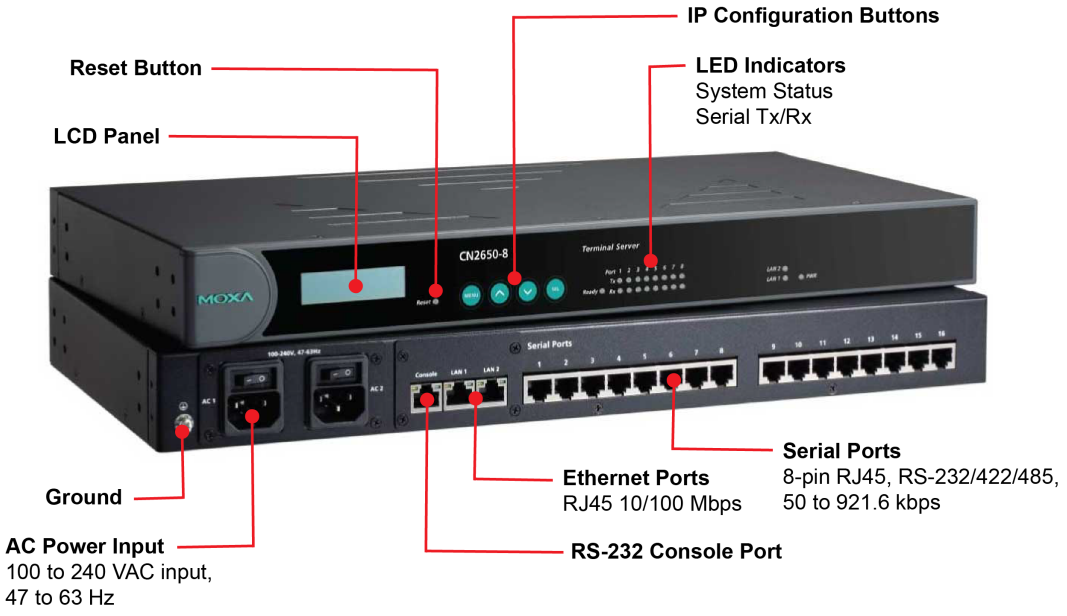


Dual-AC Model Supported

Dual-power redundancy uses two power inputs and redundant internal power supplies to ensure that all of the CN2600's functions will be available, even in the event of power circuit failures.



Appearance



Specifications

Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	2
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Configuration Options	Web Console (HTTP/HTTPS), Windows Utility, Telnet Console, Serial Console, Device Search Utility (DSU)
Management	ARP, BOOTP, DDNS, DHCP Client, DNS, HTTP, IPv4, SMTP, SNMPv1/v2c/v3, TCP/IP, Telnet, UDP, ICMP, SLIP
MIB	MIB-II
Security	HTTPS/SSL, RADIUS, SSH, PAP, CHAP
Unicast Routing	RIPV1/V2, Static Route
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
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
Android API	Android 3.1.x and later

Serial Interface

Connector	8-pin RJ45
No. of Ports	CN2610-8 models: 8 CN2610-16 models: 16
Serial Standards	CN2610 models: RS-232 CN2650 models: RS-232, RS-422, RS-485
Operation Modes	Real COM mode, TCP Server mode, TCP Client mode, UDP mode, RFC2217 mode, Terminal mode, Reverse Telnet mode, PPP mode, DRDAS mode, Redundant COM mode, Disabled
Baudrate	50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, DTR/DSR, XON/XOFF
Isolation	CN2650I Series: 2 kV
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (19200, n, 8, 1)

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

No. of Power Inputs	CN2600 Series: 1 CN2600 Series -2AC models: 2
Input Current	CN2650I Series -HV models: 200 mA @ 88 VDC CN2600 Series -2AC models: 130 mA @ 110 VAC
Input Voltage	AC models: 100 to 240 VAC, 47 to 63 Hz DC models: 110 VDC (88 to 300 VDC)

Reliability

Automatic Reboot Trigger	Built-in WDT
Alert Tools	Built-in buzzer and RTC (real-time clock)

Physical Characteristics

Housing	Metal
Installation	19-inch rack mounting
Dimensions (with ears)	480 x 198 x 45.5 mm (18.9 x 7.80 x 1.77 in)
Dimensions (without ears)	440 x 198 x 45.5 mm (17.32 x 7.80 x 1.77 in)
Weight	CN2610-8/CN2650-8: 2,410 g (5.31 lb) CN2610-16/CN2650-16: 2,460 g (5.42 lb) CN2610-8-2AC/CN2650-8-2AC/CN2650-8-2AC-T: 2,560 g (5.64 lb) CN2610-16-2AC/CN2650-16-2AC/CN2650-16-2AC-T: 2,640 g (5.82 lb) CN2650I-8: 3,666 g (8.08 lb) CN2650I-16: 3,776 g (8.32 lb) CN2650I-8-2AC: 3,932 g (8.67 lb) CN2650I-16-2AC: 4,022 g (8.87 lb) CN2650I-8-HV-T: 3,910 g (8.62 lb) CN2650I-16-HV-T: 3,930 g (8.66 lb)

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) CN2650-HV-T Models: -40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	Standard Models: 0 to 55°C (32 to 131°F) CN2650-8-2AC-T/CN2650-16-2AC-T: -40 to 75°C (40 to 167°F) CN2650I-8-HV-T/CN2650I-16-HV-T: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	AC models: IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2.5 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 IEC 61000-4-11 DIPs HVDC models: 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: 4 kV; Signal: 2 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 IEC 61000-4-8

Safety	UL 60950-1
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-32

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	CN2610-8: 831,925 hrs CN2610-16: 639,332 hrs CN2610-8-2AC/CN2650-8-2AC: 773,268 hrs CN2610-16-2AC: 604,346 hrs CN2650-8: 657,123 hrs CN2650-16: 457,175 hrs CN2650-16-2AC: 442,699 hrs CN2650I-8/CN2650I-8-2AC/CN2650-8-2AC-T: 190,562 hrs CN2650I-16/CN2650I-16-2AC/CN2650-16-2AC-T: 115,887 hrs CN2650I-8-HV-T: 191,326 hrs CN2650I-16-HV-T: 116,924 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

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

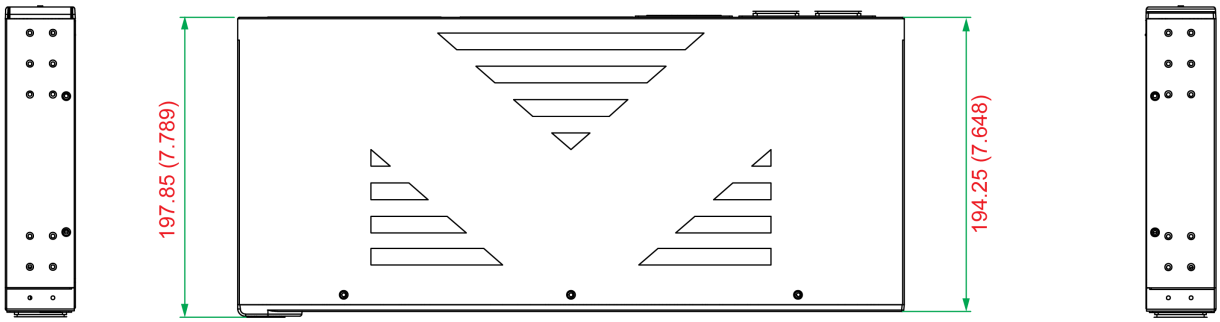
Package Contents

Device	1 x CN2600 Series terminal server
Installation Kit	1 x rack-mounting kit
Cable	1 x RJ45-to-DB9 console cable 1 x power cord, suitable for your region (AC models)
Documentation	1 x quick installation guide 1 x warranty card

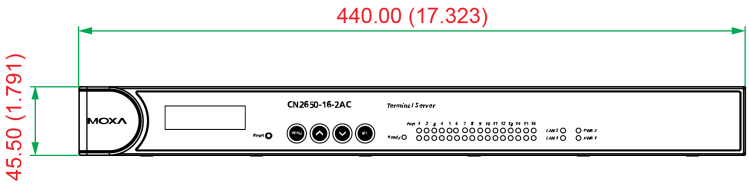
Dimensions

Unit: mm (inch)

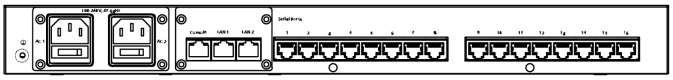
Top and Side Views



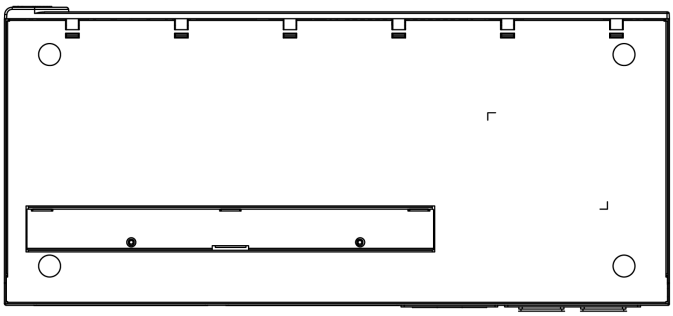
Front View



Rear View



Bottom View



Ordering Information

Model Name	Serial Standards	No. of Serial Ports	Serial Connector	Isolation	No. of Power Inputs	Power Input	Operating Temp.
CN2610-8	RS-232	8	8-pin RJ45	–	1	100-240 VAC	0 to 55°C
CN2610-16	RS-232	16	8-pin RJ45	–	1	100-240 VAC	0 to 55°C
CN2610-8-2AC	RS-232	8	8-pin RJ45	–	2	100-240 VAC	0 to 55°C
CN2610-16-2AC	RS-232	16	8-pin RJ45	–	2	100-240 VAC	0 to 55°C
CN2650-8	RS-232/422/485	8	8-pin RJ45	–	1	100-240 VAC	0 to 55°C
CN2650-16	RS-232/422/485	16	8-pin RJ45	–	1	100-240 VAC	0 to 55°C
CN2650-8-2AC	RS-232/422/485	8	8-pin RJ45	–	2	100-240 VAC	0 to 55°C
CN2650-8-2AC-T	RS-232/422/485	8	8-pin RJ45	–	2	100-240 VAC	-40 to 75°C
CN2650-16-2AC	RS-232/422/485	16	8-pin RJ45	–	2	100-240 VAC	0 to 55°C
CN2650-16-2AC-T	RS-232/422/485	16	8-pin RJ45	–	2	100-240 VAC	-40 to 75°C
CN2650I-8	RS-232/422/485	8	DB9 male	2 kV	1	100-240 VAC	0 to 55°C
CN2650I-16	RS-232/422/485	16	DB9 male	2 kV	1	100-240 VAC	0 to 55°C

Model Name	Serial Standards	No. of Serial Ports	Serial Connector	Isolation	No. of Power Inputs	Power Input	Operating Temp.
CN2650I-8-2AC	RS-232/422/485	8	DB9 male	2 kV	2	100-240 VAC	0 to 55°C
CN2650I-16-2AC	RS-232/422/485	16	DB9 male	2 kV	2	100-240 VAC	0 to 55°C
CN2650I-8-HV-T	RS-232/422/485	8	DB9 male	2 kV	1	88-300 VDC	-40 to 85°C
CN2650I-16-HV-T	RS-232/422/485	16	DB9 male	2 kV	1	88-300 VDC	-40 to 85°C

Accessories (sold separately)

Cables

CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm
CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
CBL-RJ45M25-150	8-pin RJ45 to DB25 male serial cable, 1.5m
CBL-RJ45SF25-150	8-pin RJ45 to DB25 female serial cable with shielding, 1.5m
CBL-RJ45F25-150	8-pin RJ45 to DB25 female serial cable, 1.5 m
CBL-RJ45M9-150	8-pin RJ45 to DB9 male serial cable, 1.5m
CBL-RJ45SM9-150	8-pin RJ45 to DB9 male serial cable with shielding, 1.5m
CBL-RJ45SF9-150	8-pin RJ45 to DB25 male serial cable with shielding, 1.5m
CBL-RJ45SM25-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m
CBL-RJ45F9-150	8-pin RJ45 to DB9 female serial cable, 1.5m

Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector

Power Cords

PWC-C13AU-3B-183	Power cord with Australian (AU) plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong China (CN) plug, 1.83 m
PWC-C13EU-3B-183	Power cord with Continental Europe (EU) plug, 1.83 m
PWC-C13JP-3B-183	Power cord with Japan (JP) plug, 7A/125V, 1.83 m
PWC-C13UK-3B-183	Power cord with United Kingdom (UK) plug, 1.83 m
PWC-C13US-3B-183	Power cord with United States (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

NPort 6100/6200 Series

1/2-port RS-232/422/485 secure terminal servers

Features and Benefits

- Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal
- Supports nonstandard baudrates with high precision
- NPort 6250: 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 offline
- Supports IPv6
- Generic serial commands supported in Command-by-Command mode
- Security features based on IEC 62443

Certifications

Introduction

The NPort® 6000 device servers use the SSL and SSH protocols to transmit encrypted serial data over Ethernet. The NPort® 6000's 3-in-1 serial port supports RS-232, RS-422, and RS-485, with the interface selected from an easy-to-access configuration menu. The NPort® 6000 2-port device servers 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.

Secure Data Transmission

For many applications, guaranteeing secure data transmission is an important concern when connecting serial devices to a network. To answer this concern, the NPort® 6000 supports the SSL and SSH protocols, which work by encrypting data before sending it over the network. With the NPort® 6000, users can rest assured that serial data is transmitted securely over both private and public networks.

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

Memory	
SD Slot	NPort 6200 Series: Up to 32 GB (SD 2.0 compatible)
Ethernet Interface	
10/100BaseT(X) Ports (RJ45 connector)	NPort 6150/6150-T: 1 NPort 6250/6250-T: 1 Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	NPort 6250-M-SC Series: 1
100BaseFX Ports (single-mode SC connector)	NPort 6250-S-SC Series: 1

Magnetic Isolation Protection	1.5 kV (built-in)
Optical Fiber	

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
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.
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	Web Console (HTTP/HTTPS), Serial Console, Telnet/SSH Console, Windows Utility
Management	ARP, BOOTP, DHCP Client, DNS, HTTP, IPv4/IPv6, SMTP, SNMPv1/v2c/v3, TCP/IP, Telnet, UDP, PPPOE, ICMP
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6.x, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later
MIB	MIB-II
Unicast Routing	RIPV1/V2, Static Route

Serial Interface

Connector	DB9 male
No. of Ports	NPort 6150 Series: 1 NPort 6250 Series: 2
Serial Standards	RS-232, RS-422, RS-485
Secure Operation Modes	Reverse SSH, Secure Pair Connection, Secure Real COM, Secure TCP Client, Secure TCP Server, SSH
Standard Operation Modes	Disabled, Ethernet Modem, Pair Connection, PPP, Printer, Real COM, Reverse Telnet, RFC2217, TCP Client, TCP Server, Terminal, UDP
Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Data Bits	5, 6, 7, 8

Stop Bits	1, 1.5, 2
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF
Parity	None, Even, Odd, Space, Mark
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
RS-485 Data Direction Control	ADDC® (automatic data direction control)

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 6150/6150-T: 285 mA @ 12 VDC NPort 6250/6250-T: 333 mA @ 12 VDC NPort 6250-M-SC/6250-M-SC-T: 428 mA @ 12 VDC NPort 6250-S-SC/6250-S-SC-T: 376 mA @ 12 VDC
Input Voltage	12 to 48 VDC

Reliability

Automatic Reboot Trigger	Built-in WDT
Alert Tools	Built-in buzzer and RTC (real-time clock)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	NPort 6150 Series: 90 x 100.4 x 29 mm (3.54 x 3.95 x 1.1 in) NPort 6250 Series: 89 x 111 x 29 mm (3.50 x 4.37 x 1.1 in)
Dimensions (without ears)	NPort 6150 Series: 67 x 100.4 x 29 mm (2.64 x 3.95 x 1.1 in) NPort 6250 Series: 77 x 111 x 29 mm (3.30 x 4.37 x 1.1 in)
Weight	NPort 6150 Series: 700 g (1.54 lb) NPort 6250 Series: 730 g (1.61 lb)
Installation	Desktop, DIN-rail mounting (with optional kit), Wall mounting

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 (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, 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(AC), 0.5 kV(DC); Signal: 0.5 kV

	IEC 61000-4-5 Surge: Power: 1 kV(AC), 0.5 kV(DC); Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
Safety	UL 60950-1
Traffic Control	NEMA TS2 (excluding fiber models)
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-34

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	NPort 6150/6150-T: 2,097,705 hrs NPort 6250/6250-T: 1,947,486 hrs NPort 6250-M-SC/6250-M-SC-T: 1,092,794 hrs NPort 6250-S-SC/6250-S-SC-T: 1,477,682 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

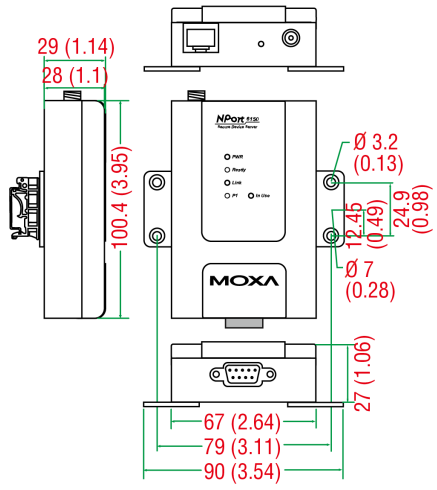
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

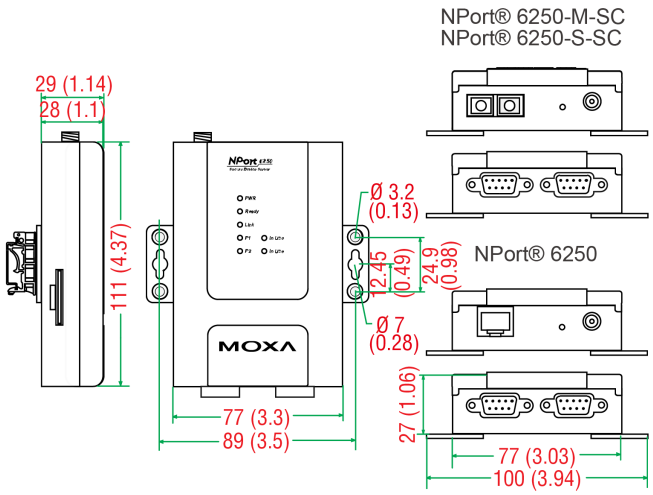
Device	1 x NPort 6100/6200 Series terminal server
Power Supply	1 x power adapter, suitable for your region (except for -T models)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Unit: mm (inch)



Ordering Information

Model Name	Ethernet Interface	No. of Serial Ports	SD Card Support	Operating Temp.	Traffic Control Certificates	Power Supply Included
NPort 6150	RJ45	1	–	0 to 55°C	NEMA TS2	✓
NPort 6150-T	RJ45	1	–	-40 to 75°C	NEMA TS2	–
NPort 6250	RJ45	2	Up to 32 GB (SD 2.0 compatible)	0 to 55°C	NEMA TS2	✓
NPort 6250-M-SC	Multi-mode SC fiber connector	2	Up to 32 GB (SD 2.0 compatible)	0 to 55°C	–	✓
NPort 6250-S-SC	Single-mode SC fiber connector	2	Up to 32 GB (SD 2.0 compatible)	0 to 55°C	–	✓
NPort 6250-T	RJ45	2	Up to 32 GB (SD 2.0 compatible)	-40 to 75°C	NEMA TS2	–
NPort 6250-M-SC-T	Multi-mode SC fiber connector	2	Up to 32 GB (SD 2.0 compatible)	-40 to 75°C	–	–
NPort 6250-S-SC-T	Single-mode SC fiber connector	2	Up to 32 GB (SD 2.0 compatible)	-40 to 75°C	–	–

Accessories (sold separately)

Connectors

ADP-RJ458P-DB9F	DB9 female to RJ45 connector
Mini DB9F-to-TB	DB9 female to terminal block connector

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm

Power Adapters

PWR-12125-DT-S2	Desktop power supply (requires power cord), 12 VDC, 1.25 A, 100-240 VAC, 0 to 40°C operating temperature
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Australia (AU) plug, -40 to 75°C operating temperature Applicable Models: NPort 6150-T NPort 6250-T NPort 6250-M-SC-T NPort 6250-S-SC-T
PWR-12150-CN-SA-T	Wide-temperature (-40 to 75°C) locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, China (CN) plug Applicable Models: NPort 6150-T NPort 6250-T NPort 6250-M-SC-T NPort 6250-S-SC-T
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Continental Europe (EU) plug, -40 to 75°C operating temperature Applicable Models: NPort 6150-T NPort 6250-T NPort 6250-M-SC-T NPort 6250-S-SC-T
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, United Kingdom (UK) plug, -40 to 75°C operating temperature Applicable Models: NPort 6150-T NPort 6250-T NPort 6250-M-SC-T

	NPort 6250-S-SC-T
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100-240 VAC, United States/Japan (US/JP) plug, -40 to 75°C operating temperature Applicable Models: NPort 6150-T NPort 6250-T NPort 6250-M-SC-T NPort 6250-S-SC-T

Power Cords

CBL-PJ21NOPEN-BK-30	Locking barrel plug to bare-wire cable
PWC-C7AU-2B-183	Power cord with Australian (AU) plug, 2.5A/250V, 1.83 m
PWC-C7EU-2B-183	Power cord with Continental Europe (EU) plug, 2.5A/250V, 1.83 m
PWC-C7UK-2B-183	Power cord with United Kingdom (UK) plug, 2.5A/250V, 1.83 m
PWC-C7US-2B-183	Power cord with United States (US) plug, 10A/125V, 1.83 m
PWC-C7JP-2B-183	Power cord with Japan (JP) plug, 7A/125V, 1.83 m

Wall-Mounting Kits

WK-35-02	Wall-mounting kit, 2 plates, 6 screws

NPort 6400/6600 Series

4/8/16/32-port RS-232/422/485 secure terminal servers

Features and Benefits

- LCD panel for easy IP address configuration (standard temp. models)
- Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal
- Nonstandard baudrates supported with high precision
- Port buffers for storing serial data when the Ethernet is offline
- Supports IPv6
- Ethernet redundancy (STP/RSTP/Turbo Ring) with network module
- Generic serial commands supported in Command-by-Command mode
- Security features based on IEC 62443

Certifications

Introduction

The NPort® 6000 is a terminal server that uses the SSL and SSH protocols to transmit encrypted serial data over Ethernet. Up to 32 serial devices of any type can be connected to the NPort® 6000, using the same IP address. The Ethernet port can be configured for a normal or secure TCP/IP connection. The NPort® 6000 secure device servers are the right choice for applications that use large numbers of serial devices packed into a small space. Security breaches are intolerable and the NPort® 6000 Series ensures data transmission integrity with support for DES, 3DES, and AES encryption algorithms. Serial devices of any type can be connected to the NPort® 6000, and each serial port on the NPort® 6000 can be configured independently for RS-232, RS-422, or RS-485 transmission.

No Data Loss If Ethernet Connection Fails

The NPort® 6000 is a reliable device server that provides users with secure serial-to-Ethernet data transmission and a customer-oriented hardware design. If the Ethernet connection fails, the NPort® 6000 will queue all serial data in its internal 64 KB port buffer. When the Ethernet connection is re-established, the NPort® 6000 will immediately release all data in the buffer in the order that it was received. Users can increase the port buffer size by installing an SD card.

LCD Panel Makes Configuration Easy

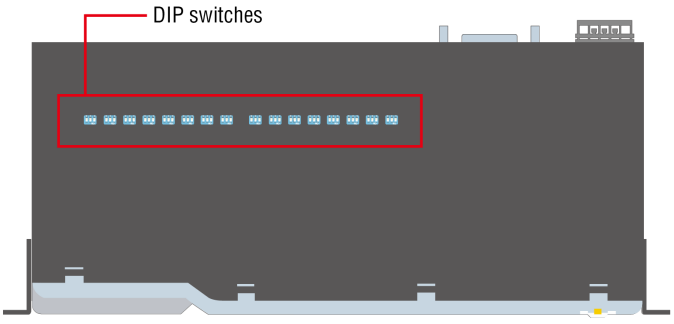
The NPort® 6600 has a built-in LCD panel for configuration. The panel displays the server name, serial number, and IP address, and any of the device server's configuration parameters, such as IP address, netmask, and gateway address, can be updated easily and quickly.

Note: The LCD panel is only available with standard-temperature models.

Note: The LCD panel is only available with standard temperature models.

Adjustable Resistor Values for RS-485 Communication

The NPort® 6600 provides adjustable termination, pull high, and pull low resistors for RS-485 communication. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals, and the pull high and pull low resistors may need adjusting to maintain the integrity of the electrical signal. Since no set of resistor values works for every environment, the NPort® 6600 allows manual adjustment of the resistor values for each serial port using built-in DIP switches.



Specifications

Memory

SD Slot	Up to 32 GB (SD 2.0 compatible)

Input/Output Interface

Alarm Contact Channels	Resistive load: 1 A @ 24 VDC

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1 Auto MDI/MDI-X connection
Magnetic Isolation Protection	1.5 kV (built-in)
Optical Fiber	

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652
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.
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	Web Console (HTTP/HTTPS), Serial Console, Telnet/SSH Console, Windows Utility
Management	ARP, BOOTP, DHCP Client, DNS, HTTP, IPv4/IPv6, SMTP, SNMPv1/v2c/v3, TCP/IP, Telnet, UDP, PPPOE, ICMP
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6.x, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later
MIB	MIB-II
Unicast Routing	RIPV1/V2, Static Route

Serial Interface

Connector	NPort 6600 Series: 8-pin RJ45 NPort 6450 Series: DB9 male
No. of Ports	NPort 6450 Series: 4 NPort 6600-8 Series: 8 NPort 6600-16 Series: 16 NPort 6600-32 Series: 32
Serial Standards	NPort 6610 Series: RS-232 NPort 6450/6650 Series: RS-232, RS-422, RS-485
Secure Operation Modes	Reverse SSH, Secure Pair Connection, Secure Real COM, Secure TCP Client, Secure TCP Server, SSH
Standard Operation Modes	Disabled, Ethernet Modem, Pair Connection, PPP, Printer, Real COM, Reverse Telnet, RFC2217, TCP Client, TCP Server, Terminal, UDP
Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Console Port	NPort 6600 Series: RS-232 (TxD, RxD, GND), 8-pin RJ45 (19200, n, 8, 1)
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
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Terminator for RS-485	NPort 6600 Series: 120 ohms

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 6450 Series: 730 mA @ 12 VDC NPort 6600 Series DC Models: 293 mA @ 48 VDC, 200 mA @ 88 VDC AC Models: 140 mA @ 100 VAC (8 ports), 192 mA @ 100 VAC (16 ports), 285 mA @ 100 VAC (32 ports)
Input Voltage	NPort 6450 Series: 12 to 48 VDC NPort 6600 Series AC Models: 100 to 240 VAC DC Models: ±48 VDC (20 to 72 VDC, -20 to -72 VDC), 110 VDC (88 to 300 VDC)

Reliability

Automatic Reboot Trigger	Built-in WDT
Alert Tools	Built-in buzzer and RTC (real-time clock)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	NPort 6450 Series: 181 x 103 x 35 mm (7.13 x 4.06 x 1.38 in) NPort 6600 Series: 480 x 195 x 44 mm (18.9 x 7.68 x 1.73 in)
Dimensions (without ears)	NPort 6450 Series: 158 x 103 x 35 mm (6.22 x 4.06 x 1.38 in) NPort 6600 Series: 440 x 195 x 44 mm (17.32 x 7.68 x 1.73 in)
Weight	NPort 6450 Series: 1,020 g (2.25 lb) NPort 6600-8 Series: 3,460 g (7.63 lb) NPort 6600-16 Series: 3,580 g (7.89 lb) NPort 6600-32 Series: 3,600 g (7.94 lb)
Interactive Interface	LCD panel display (non-T models only) Push buttons for configuration (non-T models only)
Installation	NPort 6450 Series: Desktop, DIN-rail mounting, Wall mounting NPort 6600 Series: Rack mounting (with optional kit)

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) High-Voltage Wide Temp. Models: -40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	Standard/Wide Temp. Models: -40 to 75°C (-40 to 167°F) 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 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	NPort 6450 Series: 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: 1 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 PFMF IEC 61000-4-11 DIPs NPort 6600 Series (except -48V/-HV models): 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 IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs NPort 6600-48V Series: 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: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF NPort 6650-HV Series: 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: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Safety	UL 60950-1

Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-34

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	NPort 6450 Series: 850,905 hrs NPort 6610-8 Series: 135,891 hrs NPort 6610-16 Series: 102,373 hrs NPort 6610-32 Series: 68,707 hrs NPort 6650-8 Series: 636,600 hrs NPort 6650-16 Series: 439,673 hrs NPort 6650-32 Series: 310,078 hrs NPort 6650-8-HV-T: 501,171 hrs NPort 6650-16-HV-T: 380,006 hrs NPort 6650-32-HV-T: 290,914 hrs
Standards	NPort 6450 Series: Telcordia (Bellcore) Standard TR/SR NPort 6600 Series: Telcordia (Bellcore) Standard

Warranty

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

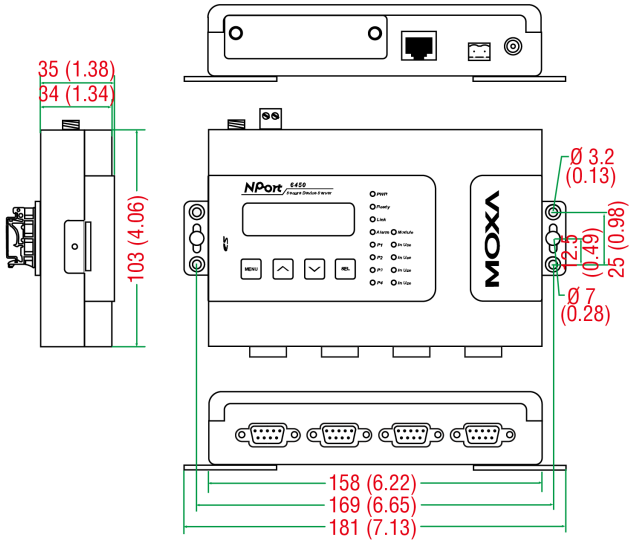
Package Contents

Device	1 x NPort 6400/6600 Series terminal server
Installation Kit	2 x rack-mounting ear (NPort 6600 Series)
Cable	1 x DB9 male to RJ45 8-pin (NPort 6600 Series)
Power Supply	1 x power cable, suitable for your region (AC models except -T models) 1 x power adapter, suitable for your region (NPort 6450)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

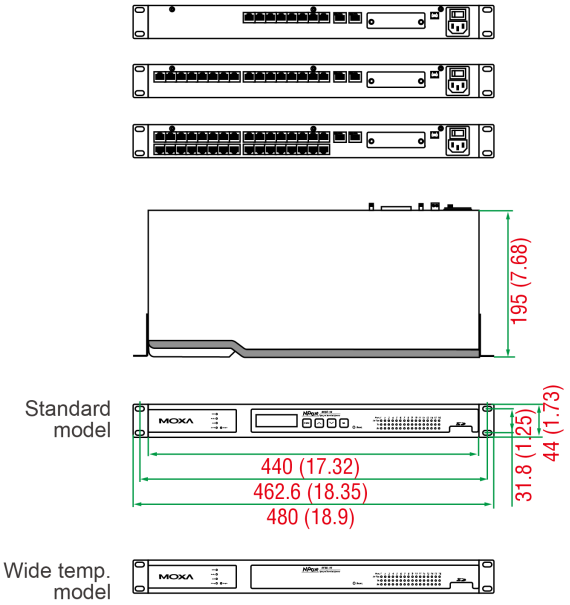
NPort 6450

Unit: mm (inch)



NPort 6600

Unit: mm (inch)



Ordering Information

Model Name	No. of Serial Ports	Serial Standards	Serial Interface	Operating Temp.	Input Voltage
NPort 6450	4	RS-232/422/485	DB9 male	0 to 55°C	12 to 48 VDC
NPort 6450-T	4	RS-232/422/485	DB9 male	-40 to 75°C	12 to 48 VDC
NPort 6610-8	8	RS-232	8-pin RJ45	0 to 55°C	100-240 VAC
NPort 6610-8-48V	8	RS-232	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6610-16	16	RS-232	8-pin RJ45	0 to 55°C	100-240 VAC
NPort 6610-16-48V	16	RS-232	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6610-32	32	RS-232	8-pin RJ45	0 to 55°C	100-240 VAC
NPort 6610-32-48V	32	RS-232	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6650-8	8	RS-232/422/485	8-pin RJ45	0 to 55°C	100-240 VAC
NPort 6650-8-T	8	RS-232/422/485	8-pin RJ45	-40 to 75°C	100-240 VAC
NPort 6650-8-HV-T	8	RS-232/422/485	8-pin RJ45	-40 to 85°C	110 VDC; 88 to 300 VDC
NPort 6650-8-48V	8	RS-232/422/485	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6650-16	16	RS-232/422/485	8-pin RJ45	0 to 55°C	100-240 VAC
NPort 6650-16-48V	16	RS-232/422/485	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6650-16-T	16	RS-232/422/485	8-pin RJ45	-40 to 75°C	100-240 VAC
NPort 6650-16-HV-T	16	RS-232/422/485	8-pin RJ45	-40 to 85°C	110 VDC; 88 to 300 VDC
NPort 6650-32	32	RS-232/422/485	8-pin RJ45	0 to 55°C	100-240 VAC

Model Name	No. of Serial Ports	Serial Standards	Serial Interface	Operating Temp.	Input Voltage
NPort 6650-32-48V	32	RS-232/422/485	8-pin RJ45	0 to 55°C	48 VDC; +20 to +72 VDC, -20 to -72 VDC
NPort 6650-32-HV-T	32	RS-232/422/485	8-pin RJ45	-40 to 85°C	110 VDC; 88 to 300 VDC

Accessories (sold separately)

Cables

CBL-RJ45F25-150	8-pin RJ45 to DB25 female serial cable, 1.5 m Applicable Models: NPort 6650-8-48V NPort 6650-8-HV-T NPort 6650-32-48V NPort 6650-32-HV-T NPort 6650-16-HV-T NPort 6650-16-48V
CBL-RJ45F9-150	8-pin RJ45 to DB9 female serial cable, 1.5m Applicable Models: NPort 6650-16 NPort 6650-8-48V NPort 6610-32-48V NPort 6650-16-48V NPort 6650-16-T NPort 6650-8 NPort 6650-8-HV-T NPort 6610-16 NPort 6650-32-HV-T NPort 6610-8 NPort 6650-32-48V NPort 6650-16-HV-T NPort 6610-32 NPort 6610-16-48V NPort 6610-8-48V NPort 6650-8-T NPort 6650-32
CBL-RJ45M25-150	8-pin RJ45 to DB25 male serial cable, 1.5m Applicable Models: NPort 6650-8 NPort 6650-8-HV-T NPort 6610-16 NPort 6650-8-T NPort 6610-32-48V NPort 6650-16-T NPort 6650-8-48V NPort 6650-16-HV-T NPort 6650-16-48V NPort 6650-16 NPort 6650-32-HV-T NPort 6650-32 NPort 6610-8 NPort 6610-8-48V NPort 6650-32-48V NPort 6610-16-48V NPort 6610-32
CBL-RJ45M9-150	8-pin RJ45 to DB9 male serial cable, 1.5m Applicable Models: NPort 6610-32-48V NPort 6610-8-48V NPort 6650-32 NPort 6650-8 NPort 6650-32-HV-T NPort 6610-16 NPort 6610-8 NPort 6650-8-48V

	NPort 6650-16 NPort 6650-16-HV-T NPort 6610-16-48V NPort 6610-32 NPort 6650-32-48V NPort 6650-8-T NPort 6650-16-T NPort 6650-8-HV-T NPort 6650-16-48V
CBL-RJ45SF25-150	8-pin RJ45 to DB25 female serial cable with shielding, 1.5m Applicable Models: NPort 6610-16 NPort 6610-32-48V NPort 6610-32 NPort 6650-32 NPort 6650-32-48V NPort 6610-8 NPort 6650-16-T NPort 6610-16-48V NPort 6650-32-HV-T NPort 6650-16 NPort 6650-8 NPort 6650-16-48V NPort 6650-16-HV-T NPort 6650-8-T NPort 6610-8-48V NPort 6650-8-48V NPort 6650-8-HV-T
CBL-RJ45SF9-150	8-pin RJ45 to DB25 male serial cable with shielding, 1.5m Applicable Models: NPort 6610-32 NPort 6650-8 NPort 6650-32 NPort 6650-8-HV-T NPort 6650-16-HV-T NPort 6610-8 NPort 6650-16 NPort 6610-16 NPort 6650-16-48V NPort 6650-8-T NPort 6650-8-48V NPort 6650-32-48V NPort 6650-16-T NPort 6610-32-48V NPort 6610-8-48V NPort 6610-16-48V NPort 6650-32-HV-T
CBL-RJ45SM25-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m Applicable Models: NPort 6650-8 NPort 6650-8-48V NPort 6610-32-48V NPort 6650-8-T NPort 6650-32-HV-T NPort 6650-32 NPort 6610-16 NPort 6650-16 NPort 6610-8-48V NPort 6650-16-T NPort 6610-8 NPort 6610-16-48V NPort 6650-16-48V NPort 6610-32 NPort 6650-8-HV-T NPort 6650-32-48V NPort 6650-16-HV-T
CBL-RJ45SM9-150	8-pin RJ45 to DB9 male serial cable with shielding, 1.5m Applicable Models: NPort 6610-16

	NPort 6650-32 NPort 6650-8-T NPort 6610-32-48V NPort 6610-16-48V NPort 6650-16-48V NPort 6610-8 NPort 6650-32-HV-T NPort 6610-8-48V NPort 6650-16-HV-T NPort 6650-32-48V NPort 6650-8-HV-T NPort 6650-16-T NPort 6610-32 NPort 6650-8-48V NPort 6650-16 NPort 6650-8

Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector Applicable Models: NPort 6450 NPort 6450-T

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm Applicable Models: NPort 6450 NPort 6450-T

Expansion Modules

NM-TX01	1 10/100BaseTX port
NM-TX01-T	1 10/100BaseTX port, -40 to 75°C operating temperature
NM-TX02	2 10/100BaseTX ports
NM-TX02-T	2 10/100BaseTX ports, -40 to 75°C operating temperature
NM-FX01-M-SC	1 100BaseFX port, multi-mode, SC connector
NM-FX01-M-SC-T	1 100BaseFX port, multi-mode, SC connector, -40 to 75°C operating temperature
NM-FX01-S-SC	1 100BaseFX port, single-mode, SC connector
NM-FX01-S-SC-T	1 100BaseFX port, single-mode, SC connector, -40 to 75°C operating temperature
NM-FX02-M-SC	2 100BaseFX ports, multi-mode, SC connector
NM-FX02-M-SC-T	2 100BaseFX ports, multi-mode, SC connector, -40 to 75°C operating temperature
NM-FX02-S-SC	2 100BaseFX ports, single-mode, SC connector
NM-FX02-S-SC-T	2 100BaseFX ports, single-mode, SC connector, -40 to 75°C operating temperature

Power Adapters

PWR-12125-DT-S2	Desktop power supply (requires power cord), 12 VDC, 1.25 A, 100-240 VAC, 0 to 40°C operating temperature Applicable Models: NPort 6450 NPort 6450-T
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Australia (AU) plug, -40 to 75°C operating temperature Applicable Models: NPort 6450-T NPort 6650-16-HV-T NPort 6650-16-T NPort 6650-32-HV-T NPort 6650-8-HV-T NPort 6650-8-T

PWR-12150-CN-SA-T	Wide-temperature (-40 to 75°C) locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, China (CN) plug Applicable Models: NPort 6450-T NPort 6650-16-HV-T NPort 6650-16-T NPort 6650-32-HV-T NPort 6650-8-HV-T NPort 6650-8-T
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, Continental Europe (EU) plug, -40 to 75°C operating temperature Applicable Models: NPort 6450-T NPort 6650-16-HV-T NPort 6650-16-T NPort 6650-32-HV-T NPort 6650-8-HV-T NPort 6650-8-T
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100-240 VAC, United Kingdom (UK) plug, -40 to 75°C operating temperature Applicable Models: NPort 6450-T NPort 6650-16-HV-T NPort 6650-16-T NPort 6650-32-HV-T NPort 6650-8-HV-T NPort 6650-8-T
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100-240 VAC, United States/Japan (US/JP) plug, -40 to 75°C operating temperature Applicable Models: NPort 6450-T NPort 6650-16-HV-T NPort 6650-16-T NPort 6650-32-HV-T NPort 6650-8-HV-T NPort 6650-8-T

Power Cords

PWC-C13AU-3B-183	Power cord with Australian (AU) plug, 1.83 m Applicable Models: NPort 6610-16-48V NPort 6650-8-48V NPort 6650-16-HV-T NPort 6610-8-48V NPort 6610-32 NPort 6650-8 NPort 6650-32 NPort 6610-32-48V NPort 6610-8 NPort 6650-8-T NPort 6610-16 NPort 6650-16-48V NPort 6650-8-HV-T NPort 6650-32-48V NPort 6650-32-HV-T NPort 6650-16 NPort 6650-16-T
PWC-C13CN-3B-183	Power cord with three-prong China (CN) plug, 1.83 m Applicable Models: NPort 6650-32 NPort 6650-8-T NPort 6650-8-48V NPort 6650-16 NPort 6650-16-48V NPort 6650-16-T NPort 6610-32 NPort 6650-8-HV-T

	NPort 6610-16 NPort 6650-8 NPort 6610-32-48V NPort 6650-16-HV-T NPort 6610-16-48V NPort 6610-8-48V NPort 6650-32-48V NPort 6610-8 NPort 6650-32-HV-T
PWC-C13EU-3B-183	Power cord with Continental Europe (EU) plug, 1.83 m Applicable Models: NPort 6650-8-48V NPort 6650-8-HV-T NPort 6650-32 NPort 6650-16 NPort 6650-16-T NPort 6650-16-HV-T NPort 6610-32 NPort 6650-16-48V NPort 6610-16-48V NPort 6610-8 NPort 6610-8-48V NPort 6650-32-48V NPort 6650-32-HV-T NPort 6650-8 NPort 6610-16 NPort 6610-32-48V NPort 6650-8-T
PWC-C13JP-3B-183	Power cord with Japan (JP) plug, 7A/125V, 1.83 m Applicable Models: NPort 6650-16-T NPort 6650-8 NPort 6610-8 NPort 6650-8-HV-T NPort 6650-32 NPort 6610-8-48V NPort 6650-8-T NPort 6650-16 NPort 6610-16-48V NPort 6610-32-48V NPort 6650-16-HV-T NPort 6650-8-48V NPort 6610-16 NPort 6650-16-48V NPort 6610-32 NPort 6650-32-48V NPort 6650-32-HV-T
PWC-C13UK-3B-183	Power cord with United Kingdom (UK) plug, 1.83 m Applicable Models: NPort 6650-16-HV-T NPort 6650-16 NPort 6610-32 NPort 6610-16 NPort 6610-8-48V NPort 6650-16-T NPort 6610-8 NPort 6610-32-48V NPort 6650-8 NPort 6650-8-T NPort 6650-16-48V NPort 6650-32 NPort 6650-32-HV-T NPort 6650-8-48V NPort 6650-32-48V NPort 6650-8-HV-T NPort 6610-16-48V
PWC-C13US-3B-183	Power cord with United States (US) plug, 1.83 m Applicable Models: NPort 6650-32

	NPort 6650-8 NPort 6650-16 NPort 6610-8 NPort 6650-8-HV-T NPort 6610-32 NPort 6610-8-48V NPort 6610-16 NPort 6610-16-48V NPort 6650-16-48V NPort 6650-8-48V NPort 6650-8-T NPort 6610-32-48V NPort 6650-32-48V NPort 6650-32-HV-T NPort 6650-16-HV-T NPort 6650-16-T
PWC-C7AU-2B-183	Power cord with Australian (AU) plug, 2.5A/250V, 1.83 m Applicable Models: NPort 6450-T NPort 6450
PWC-C7EU-2B-183	Power cord with Continental Europe (EU) plug, 2.5A/250V, 1.83 m Applicable Models: NPort 6450 NPort 6450-T
PWC-C7JP-2B-183	Power cord with Japan (JP) plug, 7A/125V, 1.83 m Applicable Models: NPort 6450-T NPort 6450
PWC-C7UK-2B-183	Power cord with United Kingdom (UK) plug, 2.5A/250V, 1.83 m Applicable Models: NPort 6450-T NPort 6450
PWC-C7US-2B-183	Power cord with United States (US) plug, 10A/125V, 1.83 m Applicable Models: NPort 6450 NPort 6450-T

Power Wiring

CBL-PJ21NOPEN-BK-30	Locking barrel plug to bare-wire cable Applicable Models: NPort 6450

Rack-Mounting Kits

WK-44-01	Rack-mounting kit, 2 L-shaped plates, 8 screws, 44 x 57.5 x 1.6 mm Applicable Models: NPort 6610-8 NPort 6610-32 NPort 6610-32-48V NPort 6610-16-48V NPort 6610-16 NPort 6610-8-48V NPort 6650-16-T NPort 6650-16-48V NPort 6650-16 NPort 6650-32-HV-T NPort 6650-16-HV-T NPort 6650-8-T NPort 6650-32 NPort 6650-32-48V NPort 6650-8-HV-T NPort 6650-8 NPort 6650-8-48V

Wall-Mounting Kits

WK-35-01	Wall-mounting kit, 2 plates, 6 screws Applicable Models: NPort 6450-T NPort 6450