NPort 6450 Series
Quick Installation Guide

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Overview

The NPort 6450 secure serial device servers provide reliable serial-to-Ethernet connectivity for a wide range of serial devices. The NPort 6450 supports TCP Server, TCP Client, UDP, and Pair-Connection operation modes to ensure the compatibility of network software. In addition, the NPort 6450 also supports Secure TCP Server, Secure TCP Client, Secure Pair-Connection, and Secure Real COM modes for security critical applications such as banking, telecom, access control, and remote site management.

Package Checklist

Before installing the NPort 6450, please verify that the package contains the following items:

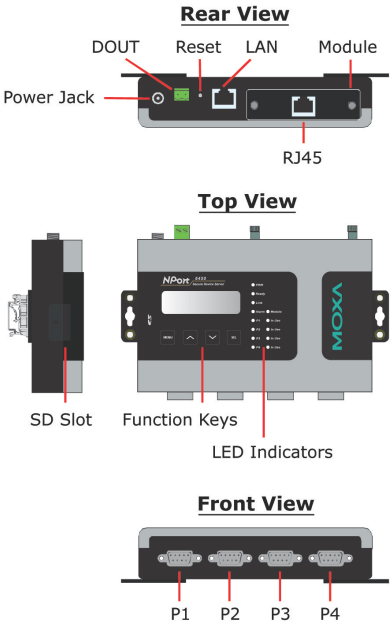
- 1 NPort 6450
- Power adaptor (does not apply to T models)
- 2 wallmount ears
- Documentation and software CD
- Quick installation guide
- Warranty card

Optional Accessories

- DK-35A: 35 mm DIN-rail mounting kit
- DIN-rail power supply
- CBL-RJ45M9-150: 8-pin RJ45 to male DB9 cable
- CBL-RJ45M25-150: 8-pin RJ45 to male DB25 cable
- NM-TX01: Network module with one 10/100BaseTX Ethernet port (RJ45 connector; supports cascade redundancy and RSTP/STP)
- NM-FX01-S-SC/NM-FX01-S-SC-T: Network module with one 100BaseFX single mode fiber port (SC connector; supports cascade redundancy and RSTP/STP)
- NM-FX02-S-SC/NM-FX02-S-SC-T: Network module with two 100BaseFX single mode fiber ports (SC connectors; supports cascade redundancy and RSTP/STP)
- NM-FX01-M-SC/NM-FX01-M-SC-T: Network module with one 100BaseFX multi-mode fiber port (SC connector; supports cascade redundancy and RSTP/STP)
- NM-FX02-M-SC/NM-FX02-M-SC-T: Network module with two 100BaseFX multi-mode fiber ports (SC connectors; supports cascade redundancy and RSTP/STP)

NOTE Please notify your sales representative if any of the above items are missing or damaged.

Hardware Introduction



NOTE The LCD panel is only available with standard temperature models.

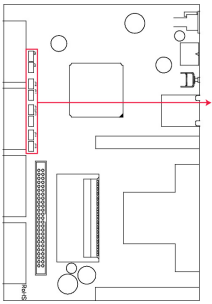
Reset Button—Press the Reset button continuously for 5 sec to load factory defaults. Use a pointed object, such as a straightened paper clip or toothpick, to press the reset button. This will cause the Ready LED to blink on and off. The factory defaults will be loaded once the Ready LED stops blinking (after about 5 seconds). At this point, you should release the reset button.

LED Indicators

Name	Color	Function	
PWR	Red	Power is being supplied to the power input.	
Ready	Red	Steady on:	NPort is booting up.
		Blinking:	IP conflict, DHCP or BOOTP server problem, or relay output problem.
	Green	Steady on:	Power is on and the NPort 6450 is functioning normally.
		Blinking:	NPort is responding to Locate function.
	Off	Power is off, or power error condition exists.	
Link	Orange	10 Mbps Ethernet connection.	
	Green	100 Mbps Ethernet connection.	
	Off	Ethernet cable is disconnected, or has a short.	
P1-P4	Orange	Serial port is receiving data.	
	Green	Serial port is transmitting data.	
	Off	Serial port is idle.	

Name	Color	Function	
FX	Orange	Steady on:	Ethernet port is idle.
		Blinking:	Fiber port is transmitting or receiving data.
Alarm	Red	The relay output (DOUT) is open (exception).	
	Off	The relay output (DOUT) is shorted (normal condition).	
Module	Green	A network module has been detected.	
	Off	No network module is present.	

Adjustable pull high/low resistor for RS-422/485 (150 KΩ or 1 KΩ)



Jumpers are used to set the pull high/low resistors. The default is 150 KΩ. Short the jumpers to set this value to 1 KΩ. Do not use the KΩ setting with RS-232 mode, since doing so will degrade the RS-232 signals and shorten the communication distance.

Hardware Installation Procedure

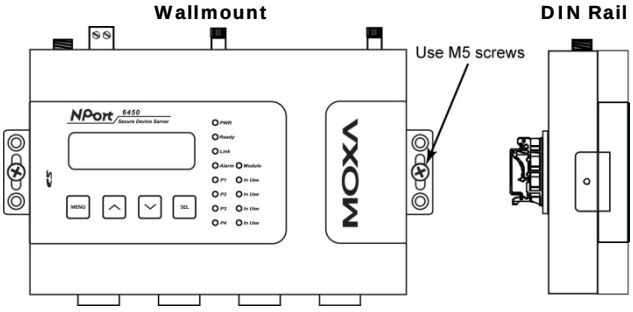
STEP 1: Connect the 12-48 VDC power adaptor to the NPort 6450 and then plug the power adaptor into a DC outlet.

STEP 2: For first-time configuration, use a cross-over Ethernet cable to connect the NPort 6450 directly to your computer's Ethernet cable. For connecting to a network, use a standard straight-through Ethernet cable to connect to a hub or switch.

STEP 3: Connect the NPort 6450's serial port(s) to serial device(s).

Placement Options

The NPort 6450 can be placed flat on a desktop or other horizontal surface. In addition, you may use the DIN-Rail or Wall Mount options, as illustrated below.



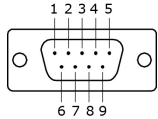
Software Installation Information

The Document & Software CD contains the User's Manual, NPort Search Utility, and the PComm Lite Suite. Insert the CD and follow the on-screen instructions. Please refer to the User's Manual for additional details on using the NPort Search Utility and PComm Lite.

Pin Assignments and Cable Wiring

RS-232/422/485 Pin Assignments (male DB9)

Pin	RS-232	RS-422/ 4W RS-485	2W RS-485
1	DCD	TxD-(A)	–
2	RXD	TxD+(B)	–
3	TXD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–



Specifications

LAN	
Ethernet	10/100 Mbps, RJ45
Protection	Built-in 1.5 KV magnetic isolation
Optical Fiber (for fiber port modules)	
Distance	Multi-mode: 0 to 2 km, 1310 nm (62.5/125 µm, 500 MHz*km) Single mode: 0 to 40 km, 1310 nm (9/125 µm, 3.5 PS/(nm*km)
Min. TX Output	Multi-mode: -20 dBm; Single mode: -5 dBm
Max. TX Output	Multi-mode: -10 dBm; Single mode: 0 dBm
Sensitivity	Multi-mode: -34 to -30 dBm, Single mode: -36 to -32 dBm
Serial	
Interfaces	RS-232/422/485 (male DB9)
No. of Ports	4
Serial Communication Parameters	
Parity	None, Even, Odd, Space, Mark
Data Bits	5, 6, 7, 8
Stop Bit(s)	1, 1.5, 2
Flow Control	RTS/CTS, XON/XOFF, DTR/DSR
Speed	50 bps to 921.6 kbps (supports nonstandard baudrates)
Additional Features	
Console Port	RS-232 (see the user's manual for detailed operating instructions)
Memory	One SD socket
Software Features	
Protocols	ICMP, IPv4/v6, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, DDNS, HTTP, SMTP, HTTPS, SSL, SSH, PPPoE
Utilities	Windows utility for Windows 98, ME, NT, 2000, XP, 2003, Vista, 8, 8.1, 10, XP x64, 2003 x64, Vista x64, 2012 x64

Security	SSLv3, TLSv1.0/1.1/1.2
OS Driver Support	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 Real TTY drivers: Linux 2.4, 2.6, and 3.x Fixed TTY drivers: SCO Unix, SCO OpenServer 5, OpenServer 6, UnixWare 7, UnixWare 2.1, SVR4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD 5, FreeBSD 6
Configuration	Web Console, Serial/Telnet Console, Windows utility
Power Requirements	
Power Input	12 to 48 VDC
Mechanical Specifications	
Material	SECC sheet metal (1 mm)
Environmental Limits	
Operating Temperature	NPort 6450: 0 to 50°C (32 to 122°F) NPort 6450-T: -40 to 75°C (-40 to 167°F)
Storage Temperature	NPort 6450: 0 to 55°C (32 to 131°F) NPort 6450-T: -20 to 75°C (-4 to 167°F)
Regulatory Approvals	
EMC	FCC Class A, CE Class A
Safety	UL, CUL, TUV