



# MOXA NPort 6450 Series Ethernet Secure Device Server Installation Guide

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NPort 6450 Series  
Quick Installation Guide

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Technical Support Contact Information [www.moxa.com/support](http://www.moxa.com/support)

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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:

- NPort 6450 · Power adapter (does not apply to T models)
- Two wall-mount ears
- Documentation
- Quick installation guide
- Warranty card
- Optional Accessories
  - DK-35A: 35 mm DIN-rail mounting kit
  - DIN-rail power supply (DR-75-48)
  - 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.



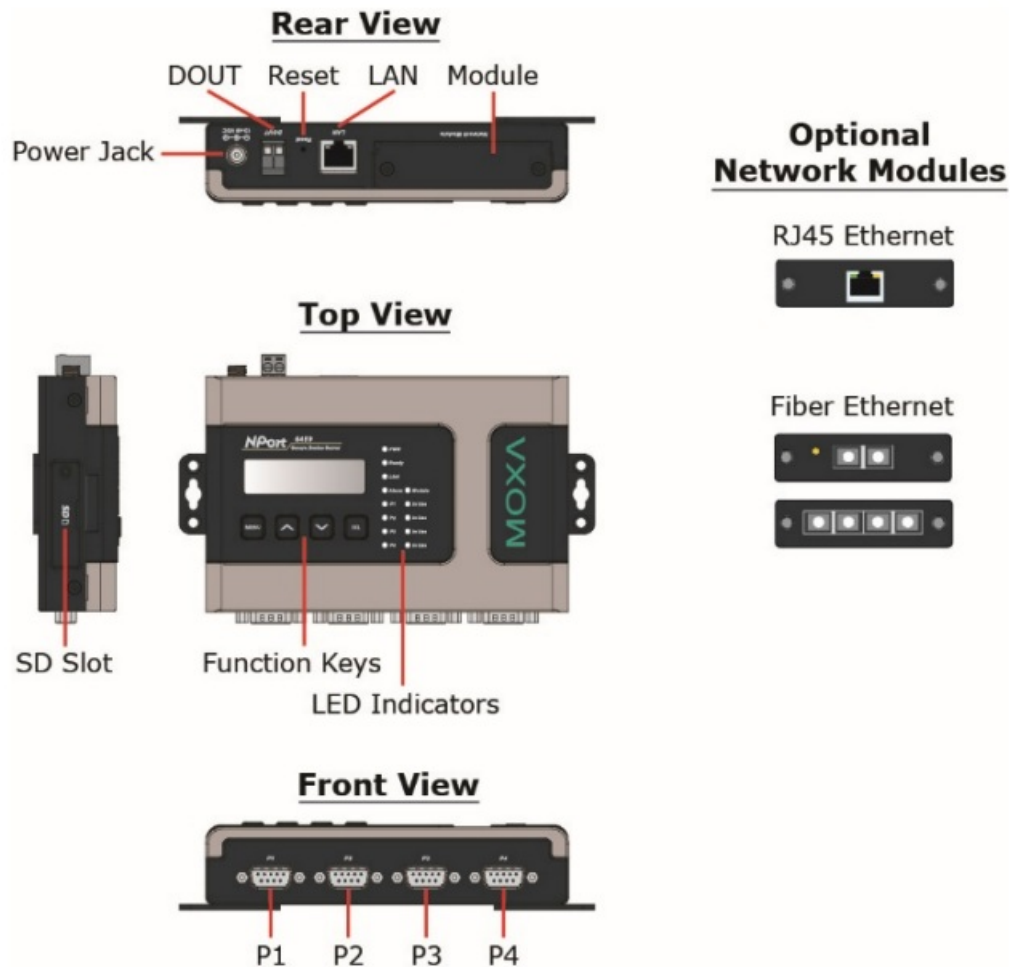
## WARNING

The risk of an explosion exists if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

**NOTE** This is a Class 1 laser/LED product. Do not share directly into the laser beam.

**NOTE** The installation instructions indicate use in a RESTRICTED ACCESS LOCATION only.

## 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.

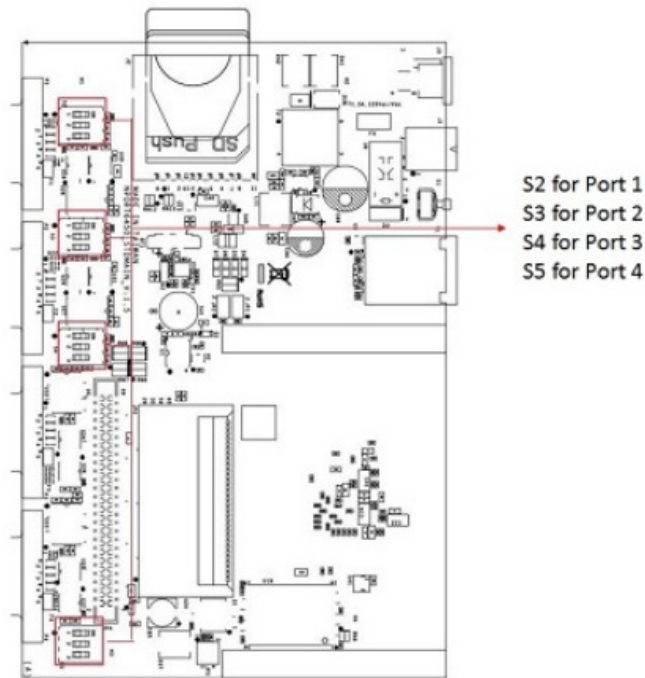
## LED Indicators

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	The serial port is receiving data.	
	Green	The serial port is transmitting data.	
	Off	The serial port is idle.	
FX	Orange	Steady on:	The Ethernet port is idle.
		Blinking:	The 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 up/down resistor for RS-422/485 (150 K $\Omega$ or 1 K $\Omega$ )



Dip switch Pin 1 and Pin 2 are used to set the pull up/down resistors. The default is 150 K $\Omega$ . Turn on dip switch Pin 1 and Pin 2 to set this value to 1 K $\Omega$ . Do not use the K $\Omega$  setting with RS-232 mode, since doing so will degrade the RS-232 signals and shorten the communication distance. Dip switch Pin 3 is used to set the terminator. Turn on dip switch Pin 3 to set this value to 120 ohms.

## Hardware Installation Procedure

**STEP 1:** Connect the 12-48 VDC power adapter to the NPort 6450 and then plug the power adapter 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).

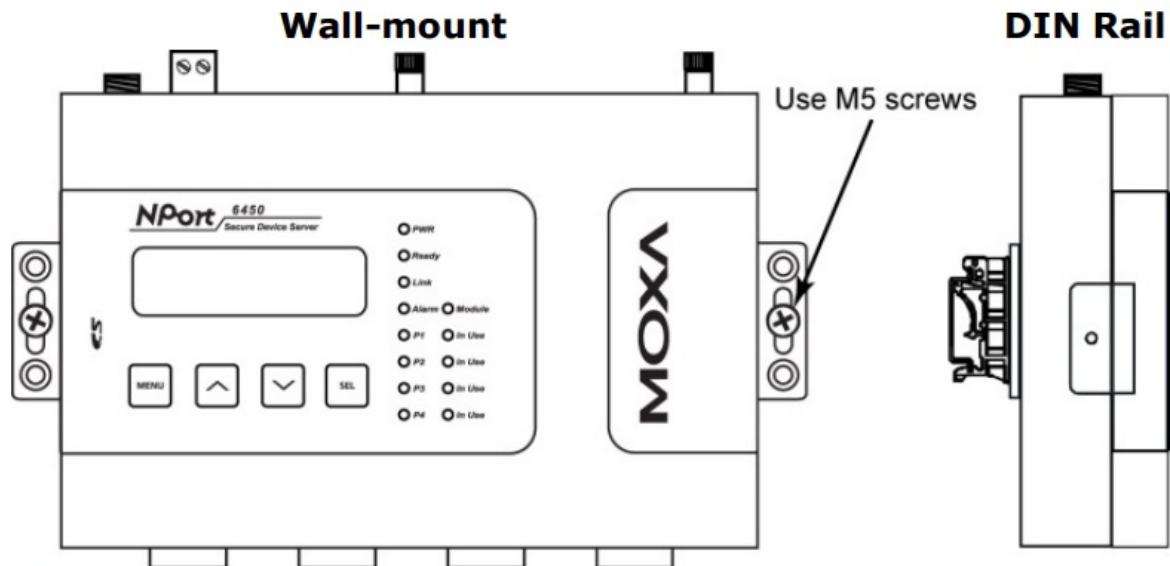
### NOTE

The operating temperature of the power adapter in the box is 0 to 40°C. If your application is out of this range, please use a power adapter supplied by UL Listed External Power Supply (The power output meets SELV and LPS and is rated 12 – 48 VDC, minimum 0.73A). Moxa has power adapters with a wide temperature range (-40 to 75°C, -40 to 167°F), the PWR-12150-(plug type)-SA-T series, for your reference.

## 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

For the NPort's configuration, the default IP address of the NPort is 192.168.127.254. You may log in with the account name admin and password moxa to change any settings to meet your network topology (e.g., IP address) or serial device (e.g., serial parameters).

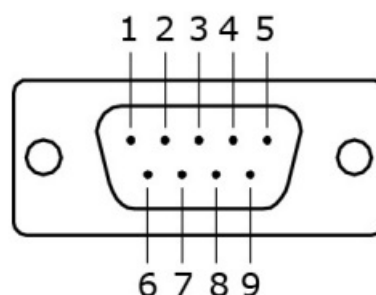
For software installation, download the relative utilities from Moxa's website:

[https://www.moxa.com/support/support\\_home.aspx?isSearchShow=1](https://www.moxa.com/support/support_home.aspx?isSearchShow=1)

- Download the NPort Windows Driver Manager and install it as the driver to run with the Real COM mode of the NPort Series.
- Execute NPort Windows Driver Manager; then map the virtual COM ports on your Windows platform.
- You may refer to the DB9 Male pin assignment section to loop back pin 2 and pin 3 for the RS-232 interface to carry out a self-test on the device.
- Use HyperTerminal or a similar program (you may download Moxa's program, called PComm Lite) to test whether the device is good or not.

## 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	RDX	TxD+(B)	–
3	TXD	RxD+(B)	Data+(B)
4	DR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–

### Japan Regulatory Compliance (VCCI)

The NPort 6000 series complies with the requirements of VCCI Class A Information Technology Equipment (ITE).



#### **WARNING**

If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

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**Documents / Resources**

