NPort 6600 Series
Quick Installation Guide

Fifth Edition, March 2011

1. Overview

The NPort 6600 series of serial device servers includes 8-port, 16-port, and 32-port models for connecting larger numbers of serial devices to Ethernet. Some applications now also require better security when transmitting data through a network. The NPort 6600 series of device servers use DES, 3DES, and AES data encryption to provide secure network communication.

2. Package Checklist

Before Installing your NPort 6600 series secure device server, verify that the package contains the following items:

- 1 NPort 6600 device server
- CBL-RJ45M9-150: 8-pin RJ45 to DB9 male connection cable, 150 cm
- Power Cord (AC models only)
- 2 rack-mount ears
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

Optional Accessories

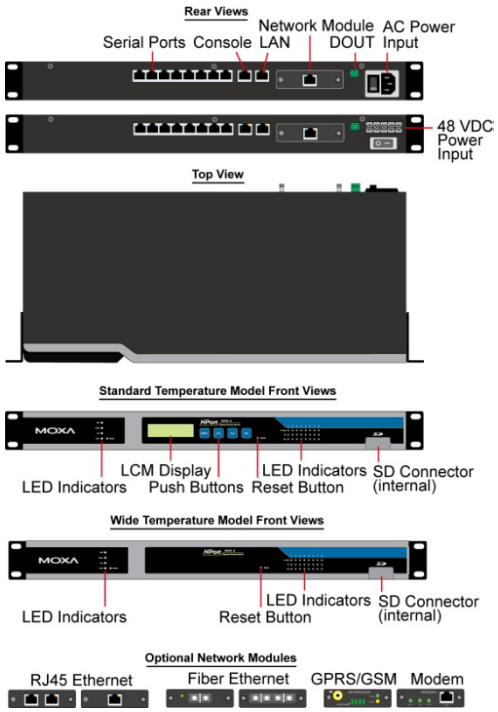
- DK-35A: 35 mm DIN-Rail Mounting Kit
- DIN-Rail Power Supply
- NM-TX01/NM-TX01-T: Network module with one 10/100BaseTX Ethernet port (RJ45 connector; supports cascade redundancy)
- NM-FX01-S-SC/NM-FX01-S-SC-T: Network module with one 100BaseFX single mode fiber port (SC connector; supports cascade redundancy)
- NM-FX02-S-SC/NM-FX02-S-SC-T: Network module with two 100BaseFX single mode fiber ports (SC connectors; supports cascade redundancy)
- NM-FX01-M-SC/NM-FX01-M-SC-T: Network module with one 100BaseFX multi mode fiber port (SC connector; supports cascade redundancy)
- NM-FX02-M-SC/NM-FX02-M-SC-T: Network module with two 100BaseFX multi mode fiber ports (SC connectors; supports cascade redundancy)
- NM-GPRS/GSM: GPRS/GSM modem module
- NM-Modem/NM-Modem-T: One PSTN modem port with RJ11 connector

P/N: 1802066500013

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

3. Hardware Introduction

Demonstrated 8 port model to be an example.

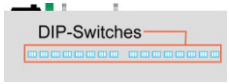


Reset button

Press the Reset button continuously for 5 sec to load factory defaults: Use a pointed object to press the reset button. Release the button after the Ready LED stops blinking.

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

The NPort 6650 has 3 DIP Switches associated with each serial port for configuring the pull high/low resistors for RS-485 applications. The switches are located in a recess on the bottom of the NPort 6650. To access the switches, first remove the panel covering the recess.



SW	1	2	3
	Pull High	Pull Low	Terminator
ON	1 KΩ	1 KΩ	120 KΩ
OFF	150 KΩ	150 KΩ	---

NOTE: For RS-232 applications, all DIP Switches for the port should be set to the OFF position.

Rack Mounting

Use four screws to attach the NPort 6610/6650 to a standard rack

LED Indicators

Name	Color	Function	
PWR	Red	Power is being supplied to the power input.	
Ready	Red	Steady on:	Power is on and the NPort 6600 series is booting up.
		Blinking:	IP conflict, DHCP or BOOTP server not responding, or relay output. Check relay output first. If still blinking, then there is an IP conflict, or the DHCP or BOOTP server did not respond properly.
	Green	Steady on:	Power is on and the NPort 6600 series is functioning normally.
		Blinking:	The device server has been located by the Administrator's Locator 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-P16 Tx	Green	Serial port is transmitting data.	
	Off	No data is being transmitted through the serial port	
P1-P16 Rx	Orange	Serial port is receiving data..	
	Off	No data is being received through the serial port.	
FX	Orange	Steady on:	Ethernet fiber connection, but port is idle.
		Blinking:	Fiber port is transmitting or receiving data.
P1-P16 in-use LEDs	Green	Serial port is opened by server side software.	
	Off	Serial port is not opened by server side software.	
Alarm	Red	The relay Dout is open (exception)	
	Off	The relay Dout is Shorted (normal)	
Module	Green	Network module is plugged in and detected	
	Off	No module present	
GSM	Green	GSM Connection	
GPRS	Orange	GPRS Connection	
GPRS/GSM Signal Strength	Green	More LEDs indicates better signal; 4 LEDs indicates maximum signal strength.	

LCM Display Panel

The NPort 6600 display panel will show the model name, server name, and IP address when powered up

N	P	6	6	1	0	_	6	6	1	0	2			
1	9	2	.	1	6	8	.	1	2	7	.	2	5	4

Operating the LCM Panel

There are four push buttons on the NPort 6600's top panel for operating the server's LCM panel. The function of each button is described below:

Button	Action
MENU	Activates the main menu, or returns to a lower level.
^	Scrolls up through a list of items shown on the LCM panel's second line.
v	Scrolls down through a list of items shown on the LCM panel's second line.
SEL	Selects the option listed on the LCM panel's second line.

Detailed LCM panel operating instructions can be found on the Document and Software CD in the "NPort 6600 Series User's Manual."

Note: LCM display panel and push buttons only for standard temprature model

4. Hardware Installation Procedure

STEP 1: Connect the NPort 6600 device server to a suitable power source.

AC models: Connect the 100 to 240 VAC power cord to the NPort 6600's power input.

DC models: Connect the terminal block to a battery.

STEP 2: Connect the NPort 6600 series to a network. Use a standard straight-through Ethernet cable to connect to a hub or switch. Use a cross-over Ethernet cable when connecting to your computer's Ethernet port (e.g., when setting up or testing the NPort 6600 server).

STEP 3: Connect the NPort 6600's serial ports to your serial devices.

5. Software Installation Information

NPort Search Utility

To install the NPort Search Utility, insert the NPort Document and Software CD into your computer's CD-ROM drive. When the NPort Installation CD window opens, click on the Installation button, and then follow the instructions on the screen. To view detailed information about the NPort Search Utility, refer to the pdf version of the "NPort 6600 Series User's Manual," which is located in the document directory of the CD.

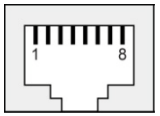
PComm Lite and Console Port (19200, 8, None, 1)

MOXA's PComm Lite software utility is also included in the Document and Software CD of the CD-ROM. PComm Lite is often used to connect to the NPort 6600 through its console port to configure the IP address for the first time. Use the following serial console parameters when connecting through the console port: 19200, 8, None, 1.

6. Pin Assignments and Cable Wiring

Pin Assignments (NPort 6610/6650)

Pin	RS-232	RS-422, 4-wire RS -485	2-wire RS-485
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TxD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---



Pin Mapping for RS-232 Cables (NPort 6610/6650)

NPort6610/6650			Serial Device				
	RJ45		DB9(M)	DB9(F)	DB25(M)	DB25(F)	
DSR	1	←	6	4	6	20	DTR
RTS	2	→	7	8	4	5	CTS
GND	3	—	5	5	7	7	GND
TxD	4	→	3	2	2	3	RxD
RxD	5	←	2	3	3	2	TxD
DCD	6	←	1	1	8	8	DCD
CTS	7	←	8	7	5	4	RTS
DTR	8	→	4	6	20	6	DSR

Pin Mapping for RS-422/4-wire RS-485 Cables (NPort 6650)

NPort 6650			Serial Device				
	RJ45		DB9(M)	DB9(F)	DB25(M)	DB25(F)	
TxD+	2	→	7	8	4	5	RxD+
GND	3	—	5	5	7	7	GND
TxD-	4	→	3	2	2	3	RxD-
RxD+	5	←	2	3	3	2	TxD+
RxD-	6	←	1	1	8	8	TxD-

Pin Mapping for 2-wire RS-485 Cables (NPort 6650)

NPort 6650			Serial Device				
	RJ45		DB9(M)	DB9(F)	DB25(M)	DB25(F)	
GND	3	—	5	5	7	7	GND
Data+	5	↔	2	3	3	2	Data+
Data-	6	↔	1	1	8	8	Data-

7. Specifications

LAN	
Ethernet Ports:	10/100 Mbps (RJ45)
Protection:	Built-in 1.5 KV magnetic isolation
Serial Interface	
NPort 6610: NPort 6650:	8, 16, or 32 RS-232 ports (8-pin RJ45) 8, 16, or 32 RS-232/422/485 ports (8-pin RJ45)
Signals:	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND RS-422: Tx+, Tx-, Rx+, Rx-, GND RS-485(2W): Data+, Data-, GND RS-485(4W): Tx+, Tx-, Rx+, Rx-, GND
Serial Line Protection:	15 KV ESD for all signals
RS-485 Data Direction:	ADDC™ (Automatic Data Direction Control)
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
Console port:	RS-232 console × 1
Memory Expansion Slot	
Slot Type:	SD socket (supports up to 2 GB)
Power Requirements	
Power input:	100 to 240 VAC, 47 to 63 Hz, ±48 VDC (20 to 72 VDC, -20 to -72 VDC)
Alarm Contact:	Relay output with current carrying capacity of 1A @ 24 VDC
Mechanical Specifications	
Material:	SECC sheet metal (1 mm)
Dimensions: (W×D×H)	480×44×195 mm (including ears) 440×44×195 mm (without ears)
Environment	
Operating Temp.:	0-55°C (32 to 131°F), 5 to 95% RH
Wide Temp.:	-40 to 75°C (-40 to 167°F)
Storage Temp.:	-40 to 75°C (-40 to 167°F)
Regulatory Approvals	
EMC:	FCC Class A, CE Class A
Safety:	UL, CUL, EN 60950-1

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