NPort 5610/5630/5650 Series Quick Installation Guide

Second Edition, July 2006

1. Overview

Welcome to the MOXA NPort 5600 Series. NPort 5610-16/8 has 16 or 8 RS-232 ports, NPort 5630-16/8 has 16 or 8 RS-422/485 ports, and NPort 5650-16/8 have 16 or 8 RS-232/422/485 ports.

2. Package Checklist

The NPort 5600 package should contain the following items:

- 1 16-port or 8-port serial device server
- NPort Documentation & Software CD
- NPort 5600 Quick Installation Guide
- Power cord (included with AC version of the product)

Optional Accessories

- CBL-RJ45M9-150: 8-pin RJ45 to Male DB9 cable, 150 cm
- CBL-RJ45F9-150: 8-pin RJ45 to Female DB9 cable, 150 cm
- CBL-RJ45M25-150: 8-pin RJ45 to Male DB25 cable, 150 cm
- CBL-RJ45F25-150: 8-pin RJ45 to Female DB25 cable, 150 cm

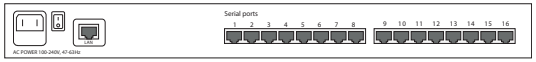
Notify your sales rep if any of the above items are missing or damaged.

3. Hardware Introduction

The NPort 5600 Series has 12 models: NPort 5610-16, NPort 5610-8, NPort 5610-16-48V, NPort 5610-8-48V, NPort 5630-16, NPort 5630-8, NPort 5650-8, NPort 5650-16, NPort 5650-8-M-SC, NPort 5650-16-M-SC, NPort 5650-8-S-SC, and NPort 5650-16-S-SC. The front and rear panels are shown below:

Front panel of NPort 5600 Series

Rear panel of NPort 5610/5630/5650 (AC Power)



Rear panel of NPort 5650 (Fiber Model)

Rear panel of NPort 5610-16-48V (DC Power)

P/N: 1802056000200

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.

LED Indicators on the Front Panel

The front panels of NPort 5600 have several LED indicators, as described in the following table.

LED Name	LED Color	LED Function
Ready	Off	Power is off, or power error condition exists.
	Red	Steady on: Power is on and NPort is booting up.
		Blinking: Indicates an IP conflict, or that DHCP or BOOTP server did not respond properly.
	Green	Steady on: Power is on and NPort is functioning normally.
		Blinking: The NPort has been located by NPort Administrator's Location function.
1-16	Orange	Serial port is receiving data.
	Green	Serial port is transmitting data.
	Off	No data is being transmitted or received through the serial port.

LCM Display Panel—If the NPort is working properly, the LCM panel will be colored green. The red Ready LED will also light up, indicating that the NPort is receiving power. After the red Ready LED turns green, you will see a display similar to:

```
N P 5 6 1 0 - 1 6 _ 3 8
1 9 2 . 1 6 8 . 1 2 7 . 2 5 4
```

- NP5610-16 is the NPort's name
- 38 is the NPort's serial number
- 192.168.127.254 is the NPort's IP address

LCM Panel Operation—There are four buttons on NPort 5600's front panel. These buttons are used to operate the server's LCM panel. Going from left to right, the buttons are:

Button	Action
MENU	Activates the main menu, or returns to an upper 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 CD-ROM in the ***NPort 5600 Series User's Manual.***

Link Indicator on the Rear Panel of NPort 5650 Fiber Model

The rear panels of NPort 5600 have a link indicator, as described in the following table.

LED Name	LED Color	LED Function
Link	Off	Fiber is disconnected
	Green	Fiber is connected and no data is being transmitted
	Blinking	Fiber is connected and data is being transmitted

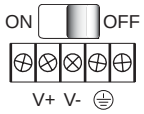
4. Hardware Installation Procedure

STEP 1: After removing NPort 5600 from the box, the first thing you should do is attach the power adaptor.

STEP 2: Connecting the Power

AC: Connect the NPort 5610/5630/5650 100 to 240 VAC power cord to the AC connector. If the power connection is correct, the "Ready" LED will glow solid red until the system is ready, at which time the "Ready" LED will change to green.

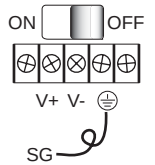
DC: Connect NPort 5610-16/8-48V's power cord to the DC connector, and then perform the following:



1. Loosen the screws on the V_+ and V_- terminals of NPort 5610-16/8-48V's terminal block.
2. Connect the power cord's 48 VDC or -48 VDC wire to the terminal block's V_+ terminal, and the power cord's DC Power Ground wire to the terminal block's V_- terminal, and then tighten the terminal block screws. (Note: NPort 5610-16/8-48V can still operate even if the 48V/-48V and DC Power Ground are reversed.)

If the power is connected properly, the "Ready" LED will glow a solid red until the system is ready, at which time the "Ready" LED will change to green.

Grounding NPort 5610-16/8-48V:



Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices. The Shielded Ground (sometimes called Protected Ground) contact is the second contact from the right of the 5-pin power terminal block connector located on the rear panel of NPort 5610-16/8-48V. Connect the SG wire to the Earth ground.

STEP 3: Connect NPort 5600 to a network. Use a standard straight-through Ethernet cable to connect to a Hub or Switch. When setting up or testing NPort 5600, you might find it convenient to connect directly to your computer's Ethernet port. In this case, use a cross-over Ethernet cable.

STEP 4: Connect NPort 5600's serial port to a serial device.

Placement Options: You can place NPort 5600 on a desktop or other horizontal surface.

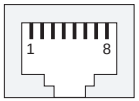
5. Software Installation Information

To install **NPort Administration Suite**, insert the **NPort Document & Software CD** into your computer's CD-ROM drive. Once the **NPort Installation CD** window opens, click the **INSTALL UTILITY** button, and then follow the instructions on the screen.

To view detailed information about **NPort Administration Suite**, click the **DOCUMENTS** button, and then select "NPort 5600 Series User's Manual" to open the pdf version of this user's guide.

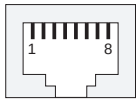
6. Pin Assignments and Cable Wiring

Serial Port Pinouts for NPort 5610



Pin	RS-232
1	DSR (in)
2	RTS (out)
3	GND
4	TxD (out)
5	RxD (in)
6	DCD (in)
7	CTS (in)
8	DTR (out)

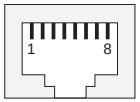
Serial Port Pinouts for NPort 5630



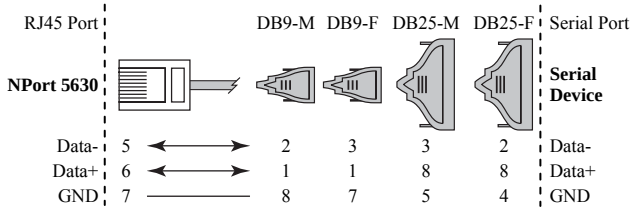
Pin	RS-422 4-wire RS-485	2-wire RS-485
1	---	---
2	---	---
3	TxD+	---
4	TxD-	---
5	RxD-	Data-
6	RxD+	Data+
7	GND	GND
8	---	---

Serial Port Pinouts for NPort 5650

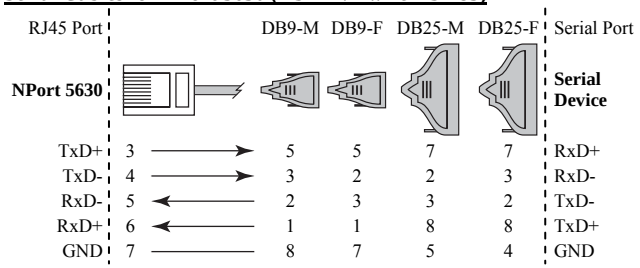
Pin	RS-232	RS-422 4-wire RS-485	2-wire RS-485
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TxD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---



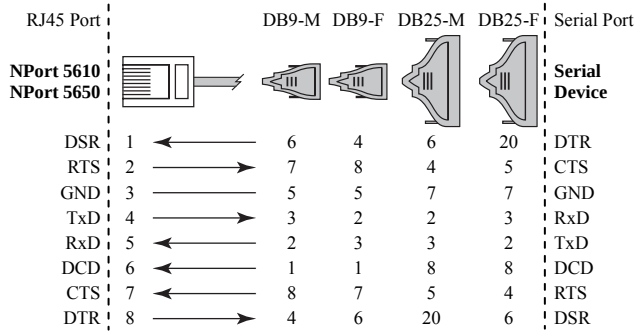
Serial Cables for NPort 5630 (2-wire RS-485)



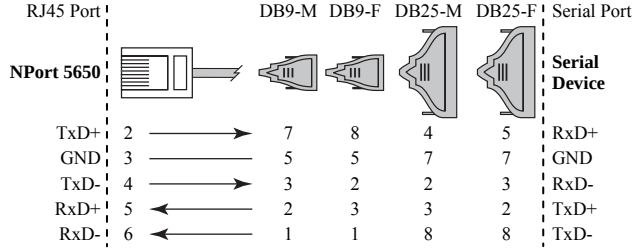
Serial Cables for NPort 5630 (RS-422/4-wire RS-485)



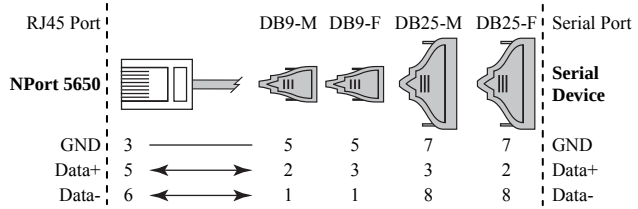
Serial Cables for NPort 5610/5650 (RS-232)



Serial Cables for NPort 5650 (RS-422/4-wire RS-485)



Serial Cables for NPort 5650 (2-wire RS-485)



7. Environmental Specifications

LAN		
Ethernet	10/100 Mbps, RJ45	
Protection	Built-in 1.5 KV magnetic isolation	
Optical Fiber	Multi mode	Single mode
Distance	0 to 2 km, 1310 nm (62.5/125 µm, 500 MHz*km)	0 to 40 km, 1310 nm (9/125 µm, 3.5 PS/ (nm*km))
Min. TX Output	-20 dBm	0 to 40 km, -5 dBm
Max. TX Output	-14 dBm	0 to 40 km, 0 dBm
Sensitivity	-34 to -30 dBm	-36 to -32 dBm
Serial Interface		
Interface	RS-232/422/485	
No. of Ports	16/8	
Port Type	8-pin RJ45	
Signals (RS-232)	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND	
Signals (RS-422)	Tx+, Tx-, Rx+, Rx-	
Signals (2-wire RS-485)	Data+, Data-, GND	
Signals (4-wire RS-485)	Tx+, Tx-, Rx+, Rx-	
Serial Line Protection	15 KV ESD for all signals	
RS-485 Data Direction	ADDC™ (Automatic Data Direction Control)	
Power requirements		
Power Input	100 to 240 VAC, 47 to 63 Hz, ±48 VDC (38 to 72 VDC, -38 to -72 VDC)	
Power Consumption		
NPort 5610-8/16	141 mA @ 100 VAC, 93 mA @ 240 VAC	
NPort 5610-8/16-48V	135 mA @ 48 VDC	
NPort 5630-8/16	152 mA @ 100 VAC, 98 mA @ 240 VAC	
NPort 5650-8/16	158 mA @ 100 VAC, 102 mA @ 240 VAC	
NPort 5650-S-SC-8/16	164 mA @ 100 VAC, 110 mA @ 240 VAC	
NPort 5650-M-SC-8/16	174 mA @ 100 VAC, 113 mA @ 240 VAC	
Operating temp.	0 to 55°C (32 to 131°F)	
Operating humidity	5 to 95% RH	
Dimensions (W×D×H)	190 × 44.5 × 478 mm (including ears) 190 × 44.5 × 440 mm (without ears)	
Serial line protection	15 KV ESD for all signals	
Magnetic isolation	1.5 KV for Ethernet	
Power line protection	4 KV Burst (EFT), EN61000-4-4 2 KV Surge, EN61000-4-5	
Regulatory approvals	FCC Class A, CE Class A, UL, CUL, TÜV	

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