MOXA®

NPort 5600-8-DT
Quick Installation Guide

Third Edition, December 2010

1. Overview

The following models comprise the NPort 5600-8-DT Series:

- **NPort 5610-8-DT:** 8 ports, RS-232, DB9
- **NPort 5610-8-DT-J:** 8 ports, RS-232, RJ45
- **NPort 5650-8-DT:** 8 ports, RS-232/422/485, DB9
- **NPort 5650-8-DT-J:** 8 ports, RS-232/422/485, RJ45
- **NPort 5650I-8-DT:** 8 ports, RS-232/422/485, DB9, optical isolation.

2. Package Checklist

The NPort 5600-8-DT package should contain the following items:

- NPort 5600-8-DT 8-port serial device server
- NPort Document & Software CD
- NPort 5600-8-DT Quick Installation Guide
- Power cord and adaptor
- DIN-rail kit

Optional Accessories:

- **DK-35A:** DIN-rail mounting kit (35 mm)
- **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
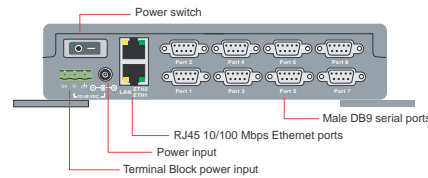- **NP21101:** DB25-M to DB9-F RS-232 cable, 30 cm

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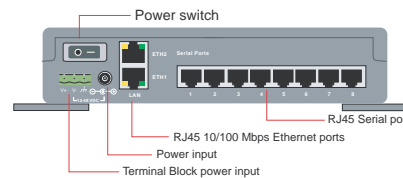
3. Hardware Introduction

Top and Rear View
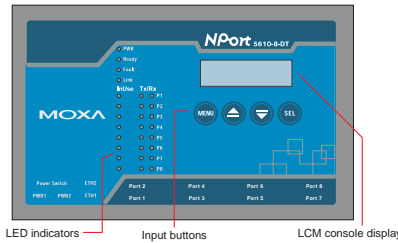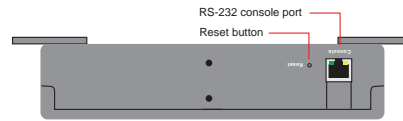
Front View (NPort 5610-8-DT, 5650-8-DT, 5650I-8-DT)

Front View (NPort 5610-8-DT-J, 5650-8-DT-J)

Reset Button

The reset button is used to load the factory defaults. Use a pointed object to hold the reset button down for five seconds. You may release the reset button when the Ready LED stops blinking.

LED Indicators

The LED indicators on the top panel are used to display the status as follows:

Name	Color	Function
PWR	red	Power is on.
	off	Power is off.
Ready	green	Steady: NPort is operational Blinking: NPort is responding to NPort Administrator "Locate" function
	off	Power is off or fault condition exists.

|		
Fault	red	IP conflict or DHCP or BOOTP server did not respond properly.
	off	No fault condition detected.
Link	green	Steady: Network is connected, no data is being transmitted. Blinking: Network is connected, data is being transmitted.
	off	Ethernet cable is disconnected or has a short.
InUse (P1 to P8)	green	Serial port has been opened by server side software.
	off	Serial port is not currently opened by server side software.
Tx/Rx (P1 to P8)	green (Tx)	Serial device is transmitting data.
	orange (Rx)	Serial device is receiving data.
	off	No data is flowing to or from the serial port.

4. Hardware Installation

STEP 1: After removing the NPort 5600-8-DT from the box, place it on a desktop or other horizontal surface. Connect the 12-48 VDC power adaptor to the NPort 5600-8-DT's power input when using an AC power source, or connect the NPort 5600-8-DT's terminal block directly to a DC power source.

STEP 2: Use an Ethernet cable to connect the NPort 5600-8-DT to a network hub or switch. You can also connect directly to your computer's Ethernet port, which is convenient for initial configuration or testing.

STEP 3: Connect the NPort 5600-8-DT's serial port to a serial device.

Wall or Cabinet Mounting

The NPort 5600-8-DT comes with two metal attachment plates to allow installation on a wall or the inside of a cabinet. First, attach the brackets to the back of the NPort with screws. Next, mount the unit on a wall or cabinet with screws. Screws should be less than 6.0 mm in head diameter, and less than 3.5 mm in shaft diameter.
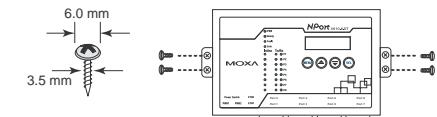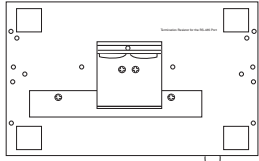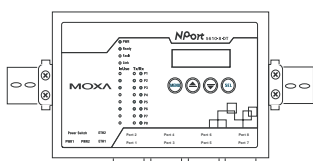

DIN-Rail Mounting

DIN-rail attachments can be purchased separately to attach the product to a DIN-rail. The DIN-rail attachments should be oriented with the metal springs on top.

Standard Attachment

DK-35A Attachment

5. Pull High/Low Resistors for RS-485

Use the set of DIP switches on the bottom panel to set the pull high/low resistor values for each serial port. To access the switches, remove the screws holding the DIP switch cover in place and flip open the cover. There are three DIP switches for each port's pull high/low resistors:

SW	1	2	3
	Pull High	Pull Low	Terminator
ON	1KΩ	1KΩ	120Ω
Default→ OFF	150KΩ	150KΩ	–

6. Software Installation Information

To install **NPort Administration Suite**, insert the NPort **Document & Software CD** into your PC's CD-ROM drive. Locate and run the setup program and follow the on-screen instructions. The setup program will be named **Npadm_Setup_**[*Version*]**_Build_**[*DateTime*]**.exe** (e.g., "Npadm _Setup_Ver1.8_Build_07041316.exe"). Refer to the NPort 5600-8-DT User's Manual for more details.

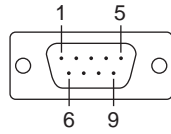## 7. Pin Assignments and Cable Wiring

RJ45 Ports (NPort 5610-8-DT-J, 5650-8-DT-J)
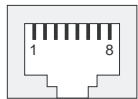
Pin	RS-232	RS-422/RS-485-4W	RS-485-2W
1	DSR	–	–
2	RTS	TxD+	–
3	GND	GND	GND
4	TxD	TxD-	–
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	–	–
8	DTR	–	–

Note: The NPort 5610-8-DT-J supports RS-232 only.

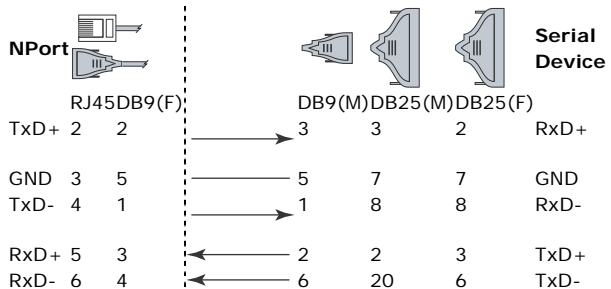**DB9 Male Ports** (NPort 5610-8-DT, 5650-8-DT, 5650I-8-DT)

Pin	RS-232	RS-422/RS-485-4W	RS-485-2W
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	–	–	–

Note: The NPort 5610-8-DT supports RS-232 only.

RS-232 Cables

	RJ45	DB9(F)		DB9(M)	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
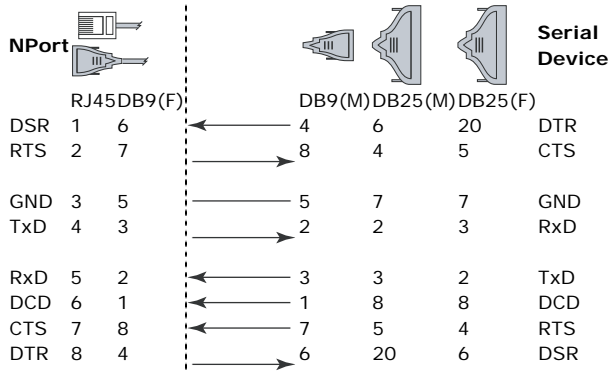
RS-422, 4-wire RS-485 Cables

	RJ45	DB9(F)		DB9(M)	DB25(M)	DB25(F)	
TxD+	2	2	→	3	3	2	RxD+
GND	3	5	—	5	7	7	GND
TxD-	4	1	→	1	8	8	RxD-
RxD+	5	3	←	2	2	3	TxD+
RxD-	6	4	←	6	20	6	TxD-

2-wire RS-485 Cables

	RJ45	DB9(F)		DB9(M)	DB25(M)	DB25(F)	
GND	3	5	—	5	7	7	GND
Data+	5	3	→	2	2	3	Data+
Data-	6	4	←	6	20	6	Data-
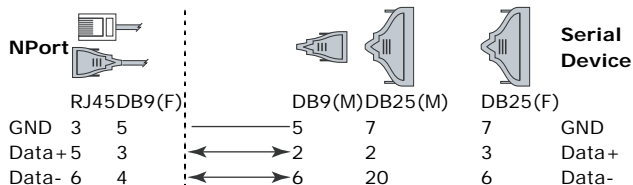
8. Specifications

LAN
Ethernet Ports: 2 × 10/100 Mbps (RJ45)
Protection: Built-in 1.5 KV magnetic isolation
Serial Interface
RS-232: NPort 5610-8-DT, 5610-8-DT-J
RS-232/422/485: NPort 5650-8-DT, 5650-8-DT-J, 5650I-8-DT
Serial Ports: 8 (DB9-M or RJ45 connectors)
Isolation: 2K VDC isolation (NPort 5650I-8-DT)
Serial Signals
RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422: Tx+, Tx-, Rx+, Rx-, GND
RS-485 (2-wire): Data+, Data-, GND
RS-485 (4-wire): 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, DSR/DTR (for RS-232 only), XON/XOFF
Transmission Speed: 50 bps to 921.6 Kbps
Power Requirements
Power Input: 12 to 48 VDC
Mechanical
Operating Temperature: 0 to 55°C (32 to 131°F), 5 to 95% RH
Storage Temperature: -20 to 70°C (-4 to 185°F), 5 to 95% RH
Material: SECC sheet metal (0.8 mm)
Dimensions: 197 × 44 × 125 mm
    with wall-mount: 229 × 46 × 125 mm
    with DIN-rail kit: 197 × 52.8 × 125 mm
Power Line Protection: 2 KV Surge, EN61000-4-5
Certifications
Regulatory Approvals: FCC Class A, CE Class A, UL, CUL, LVD
Warranty: 5 years

MOXA® **www.moxa.com/support**

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