

# NPort 5600-8-DT

## Quick Installation Guide

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## Overview

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

- 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

## Package Checklist

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

- NPort 5600-8-DT 8-port serial device server
- Power cord and adapter
- DIN rail kit
- NPort documentation and software CD
- NPort 5600-8-DT Quick Installation Guide

### **Optional Accessories:**

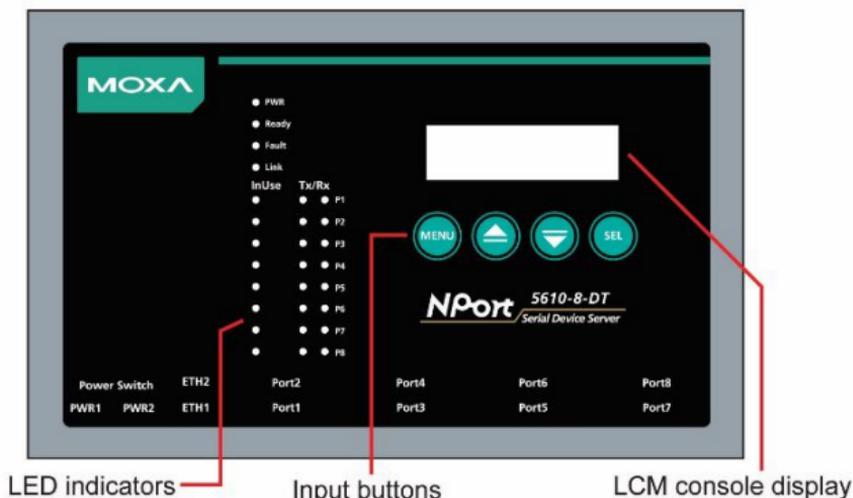
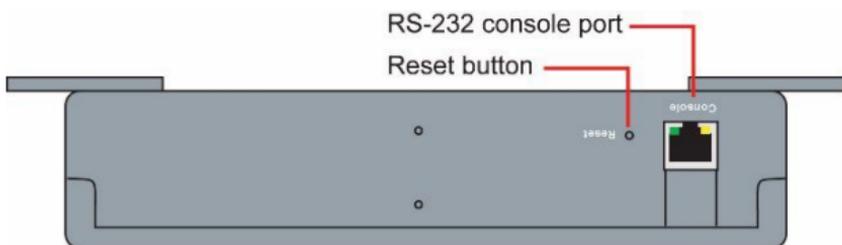
- DK-35A: DIN rail mounting kit (35 mm)
- CBL-RJ45M9-150: 8-pin RJ45 to male DB9 cable, 150 cm
- CBL-RJ45F9-150: 8-pin RJ45 to female DB9 cable, 150 cm
- CBL-RJ45M25-150: 8-pin RJ45 to male DB25 cable, 150 cm
- CBL-RJ45F25-150: 8-pin RJ45 to female DB25 cable, 150 cm
- NP21101: DB25-M to DB9-F RS-232 cable, 30 cm

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

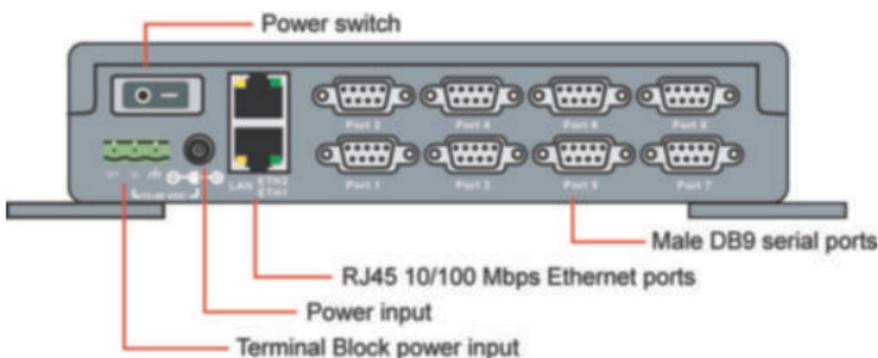
**NOTE** The operating temperature of the power adapter in the box is from 0 to 40°C. If your application is out of this range, please use a power adapter supplied by UL Listed External Power Supply (The power output meets SELV and LPS and rated 12 - 48 VDC, minimum current 0.73 A). Moxa has power adapters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

# Hardware Introduction

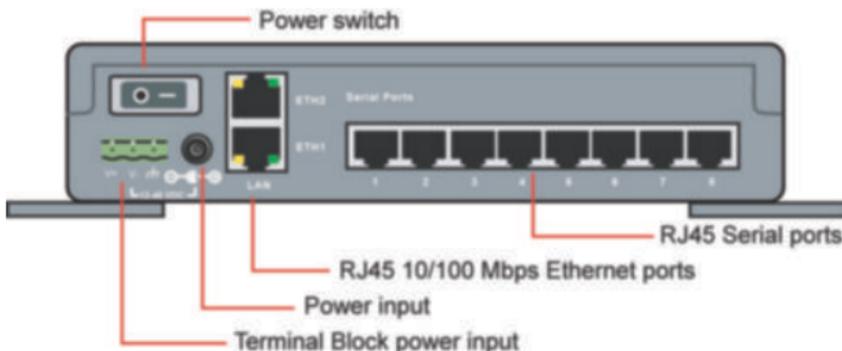
## Top and Rear View



## 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 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 <input type="checkbox"/> locate <input type="checkbox"/> 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.

## Hardware Installation

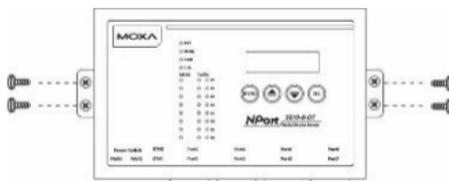
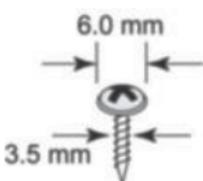
**STEP 1:** After removing the NPort 5600-8-DT from the box, place it on a desktop or other horizontal surface. Connect the 12-48 VDC power adaptor to the NPort 5600-8-DT's power input when using an AC power source, or connect the NPort 5600-8-DT's terminal block directly to a DC power source.

**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

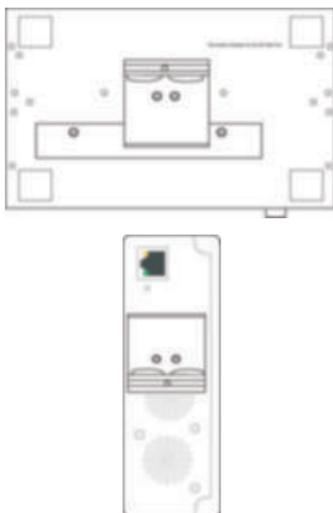
The NPort 5600-8-DT comes with two metal attachment plates to allow installation on a wall or the inside of a cabinet. First, attach the brackets to the back of the NPort with screws. Next, mount the unit on a wall or cabinet with screws. Screws should be less than 6.0 mm in head diameter, and less than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



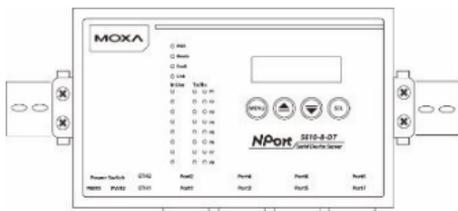
## DIN Rail Mounting

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



**NOTE** The operating temperature of the power adapter in the box is from 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 rated 12 - 48 VDC, minimum current 0.73 A). Moxa has power adapters with wide temperature range (-40 to 75°C, -40 to 167°F), the PWR-12150-(plug type)-SA-T series, for your reference.

## 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
	ON	Pull High	Pull Low
OFF	1KΩ	1KΩ	120Ω
Default →	150KΩ	150KΩ	<input type="checkbox"/>

## Software Installation Information

For the NPort's configuration, the default IP address of the NPort is: LAN: Static; IP = 192.168.127.254; netmask = 255.255.255.0

**NOTE** If you have forgotten the NPort's IP address, use the Device Search Utility (DSU) from your PC to locate the NPort. After searching the LAN for NPort units, the DSU will display the IP address of each unit.

You may log in with the password **moxa** to change any setting to meet your network topology (e.g., IP address) or serial device (e.g., serial parameters). For first-time use, click the Wizard in the left navigation

panel. The wizard will prompt you to configure the IP address, SSID, and security mode. For other settings, use the factory defaults or modify the settings for your application.

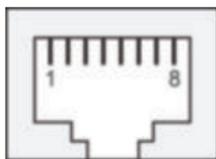
For software installation, download the relative utilities from Moxa's website:

[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 Real COM mode of the NPort Series.
- Execute NPort Windows Driver Manager; then map the virtual COM ports on your Windows platform.
- For Loopback Wiring:
  - The NPort with RJ45 Port :  
You may refer to the RJ45 Ports pin assignment section to loop back pin 4 and pin 5 for the RS-232 interface to carry out a self test on the device.
  - The NPort with DB9 Male Serial Ports:  
You may refer to the DB9 Male Ports 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

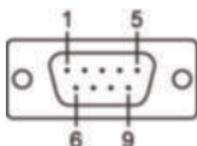
### **RJ45 Ports** (NPort 5610-8-DT-J, 5650-8-DT-J)



Pin	RS-232	RS-422 4-wire RS-485	2-wire RS-485
1	DSR	<input type="checkbox"/>	<input type="checkbox"/>
2	RTS	TxD+	<input type="checkbox"/>
3	GND	GND	GND
4	TxD	TxD-	<input type="checkbox"/>
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	<input type="checkbox"/>	<input type="checkbox"/>
8	DTR	<input type="checkbox"/>	<input type="checkbox"/>

**NOTE** The NPort 5610-8-DT-J supports RS-232 only.

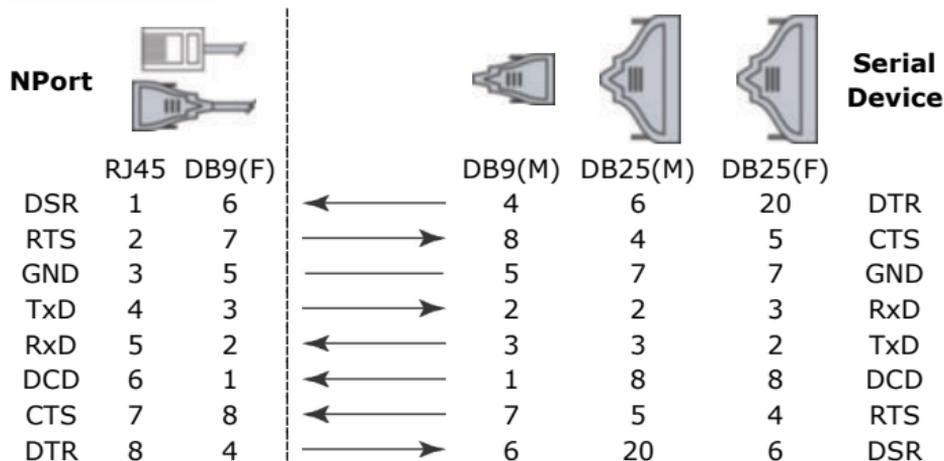
### **DB9 Male Ports** (NPort 5610-8-DT, 5650-8-DT, 5650I-8-DT)



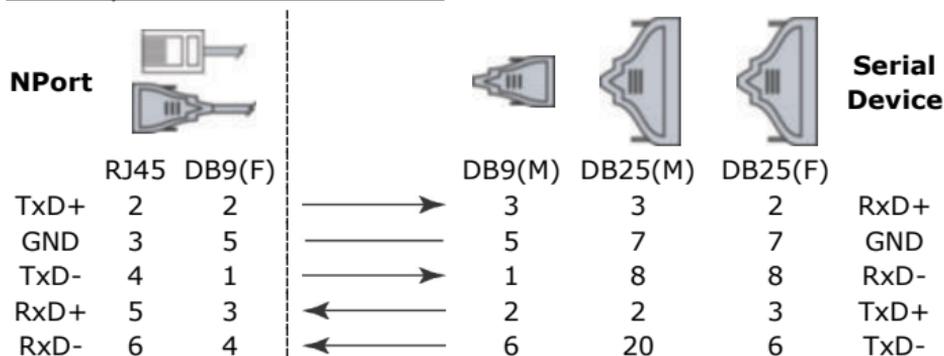
Pin	RS-232	RS-422 4-wire RS-485	2-wire RS-485
1	DCD	TxD-(A)	<input type="checkbox"/>
2	RxD	TxD+(B)	<input type="checkbox"/>
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	<input type="checkbox"/>	<input type="checkbox"/>
7	RTS	<input type="checkbox"/>	<input type="checkbox"/>
8	CTS	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**NOTE** The NPort 5610-8-DT supports RS-232 only.

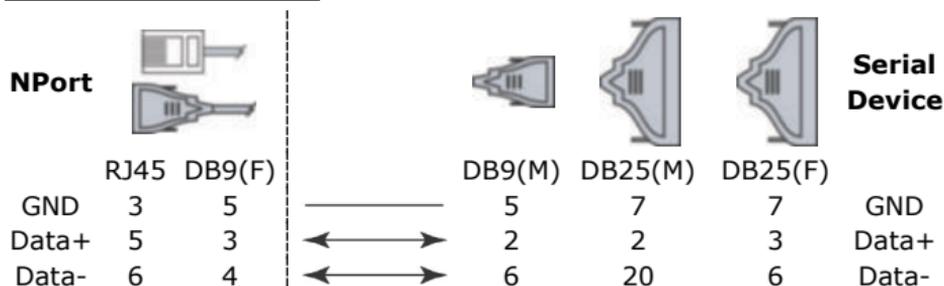
### RS-232 Cables



### RS-422, 4-wire RS-485 Cables



### 2-wire RS-485 Cables



## Specifications

<b>LAN</b>	
Ethernet Ports	2 □ 10/100 Mbps (RJ45)
Protection	Built-in 1.5 kV magnetic isolation
<b>Serial Interface</b>	
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)
<b>Serial Signals</b>	
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	15KV ESD for all signals
RS-485 Data Direction	ADDC□ (Automatic Data Direction Control)
<b>Serial Communication Parameters</b>	
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
<b>Power Requirements</b>	
Power Input	12 to 48 VDC
<b>Mechanical</b>	
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 (W □ D □ H)	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
<b>Certifications</b>	
Regulatory Approvals	FCC Class A, CE Class A, UL, CUL, LVD
Warranty	5 years