



# NPort IA5150/5250 Series Quick Installation Guide

Fifth Edition, July 2013

## Overview

NPort IA device servers deliver easy and reliable serial-to-Ethernet connectivity for the industrial automation market. The servers support several operation modes—TCP Server, TCP Client, UDP, Real COM, Pair Connection, and Ethernet Modem—ensuring the compatibility of network software, and are an ideal choice for connecting RS-232/422/485 serial devices, such as PLCs, sensors, meters, motors, drives, barcode readers, and operator displays. NPort IA device servers come with a compact and rugged DIN rail mountable casing.

## Package Checklist

Before installing NPort IA device servers, verify that the package contains the following items:

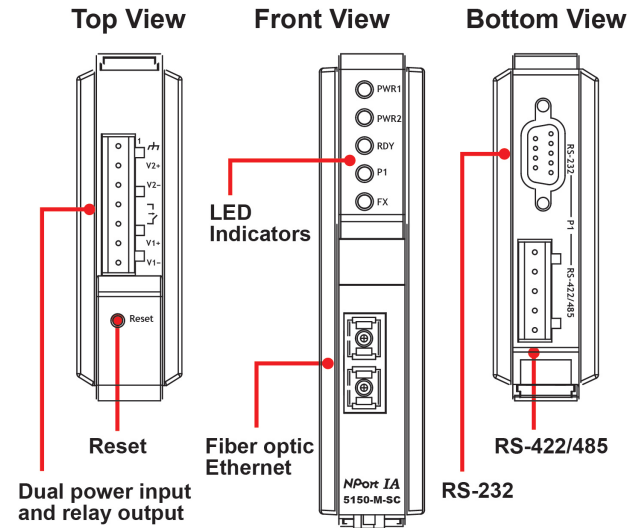
- 1 NPort IA series device server
- Documentation and software CD
- NPort IA series quick installation guide

### Optional Accessories

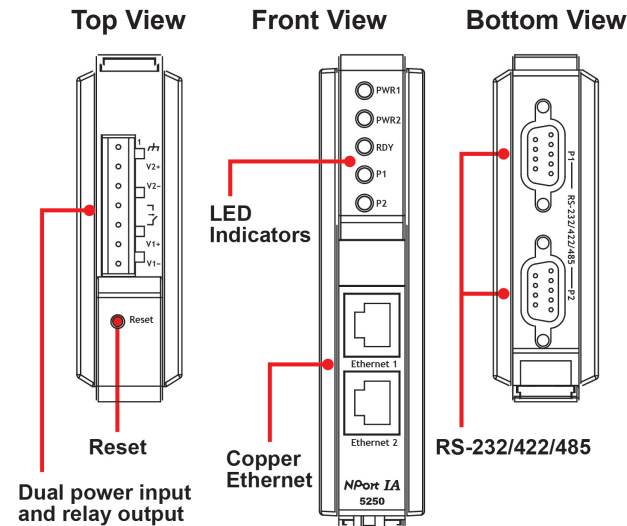
- **DR-4524:** 5W/2A DIN rail 24 VDC power supply with universal 85 to 264 VAC input
- **DR-75-24:** 75W/3.2A DIN rail 24 VDC power supply with universal 85 to 264 VAC input
- **DR-120-24:** 120W/5A DIN rail 24 VDC power supply with 88 to 132 VAC/176 to 264 VAC input by switch

*Note: Notify your sales representative if any of the above items are missing or damaged.*

### NPort IA5150 Series Appearance



### NPort IA5250 Appearance



**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.

### NPort IA LED Indicators (front panel)

Name	Color	Function
PWR1, PWR2	red	Power is being supplied to power input PWR1, PWR2.
Ready	red	Steady on: Power is on and the NPort IA is booting up. Blinking: Indicates an IP conflict, the DHCP or BOOTP server did not respond properly, or a relay output occurred.
	green	Steady on: Power is on and the NPort IA is functioning normally. Blinking: The device server has been located by Administrator's Location function.
	off	Power is off, or a power error condition exists.
Ethernet	Orange	10 Mbps Ethernet connection.
	Green	100 Mbps Ethernet connection.
	off	Ethernet cable is disconnected, or has a short.
P1, P2	orange	Serial port is receiving data.
	green	Serial port is transmitting data.
	off	No data is being transmitted or received through the serial port.
FX	orange	Steady on: Ethernet fiber connection, but port is idle. Blinking: Fiber port is transmitting or receiving data.

## Hardware Installation Procedure

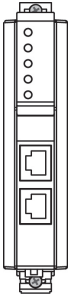
**STEP 1:** After removing the NPort IA from the box, the first thing you should do is connect the power adaptor. Connect the 12-48 VDC power line with the NPort IA's terminal block, or connect the DIN rail power supply with the NPort IA's terminal block.

**STEP 2:** Connect the NPort IA to a network. Use a standard straight-through Ethernet cable to connect to a hub or switch. When setting up or testing the NPort IA, you might find it convenient to connect directly to your computer's Ethernet port. In this case, use a cross-over Ethernet cable.

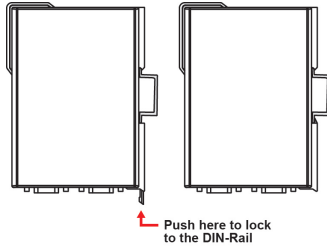
**STEP 3:** Connect the NPort IA's serial port to a serial device.

**STEP 4:** The NPort IA is designed to be attached to a DIN rail or mounted on a wall. The two sliders on the NPort IA's rear panel serve a dual purpose. For wall mounting, both sliders should be extended. For DIN rail mounting, start with one slider pushed in, and the other slider extended. After placing the NPort IA on the DIN rail, push the extended slider in to lock the device server to the rail. The two placement options are illustrated in the accompanying figures.

### Wallmount



### DIN Rail

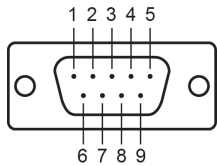


## Software Installation Information

To install **NPort Administration Suite**, insert the **Document & Software CD** into your computer's CD-ROM drive. Once the installation window opens, click on the **Install Administration Suite** button, and then follow the instructions on the screen. To view detailed information about NPort IA Administration Suite, click on the **Documents** button, and then select **NPort IA5150/5250 Series User's Manual** to open the pdf version of this user's manual.

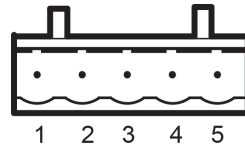
## Pin Assignments and Cable Wiring

### RS-232/422/485 (Male DB9) Pinouts



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	-	-	-

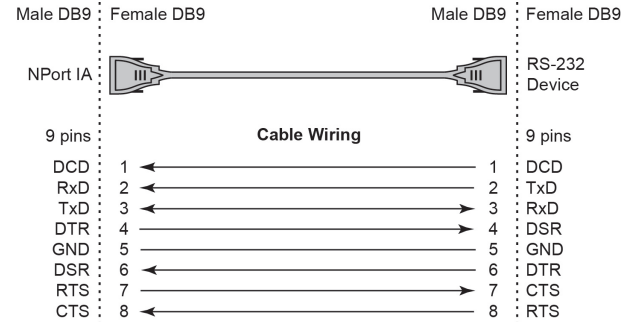
### 4W/2W RS-485/RS-422 (Terminal Block) Pinouts



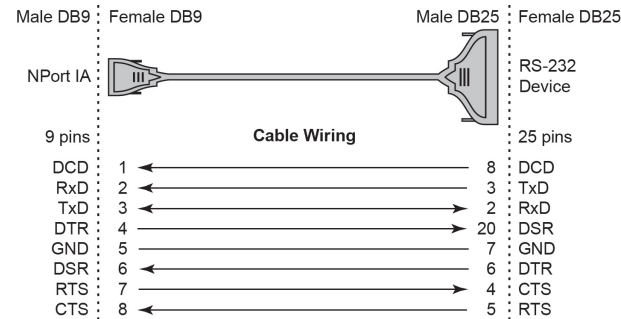
PIN	2W	4W
1	-	TxD+(B)
2	-	TxD-(A)
3	Data+(B)	RxD+(B)
4	Data-(A)	RxD-(A)
5	-	GND

Four cables are available as optional accessories that can be used to connect the NPort IA to RS-232 serial devices. For your convenience, we show precise cable wiring diagrams for each of the two cables.

### Female DB9 to Male DB9



### Female DB9 to Male DB25



## ATEX and IECEx Information

1. Certificate number: DEMKO 07 ATEX 0690059x
2. Ambient range (-40°C ≤ Tamb ≤ 75°C)
3. Certification string (Ex nA IIC T3)
4. Standards covered (EN60079-0:2006, EN60079-15:2005, IECEx UL 13.0023X, IEC 60079-0 Ed. 6, IEC 60079-15 Ed. 4)
5. Conditions of safe usage:

The Ethernet Communication Devices are to be mounted in an IP54 enclosure and used in an area of not more than pollution degree 2 as defined by IEC 60664-1.

A 4 mm<sup>2</sup> conductor must be used when connection to the external grounding screw is utilized.

Conductors suitable for use in an ambient temperature of 114°C must be used for the Power Supply Terminal.

Provisions shall be made, either in the apparatus or external to the apparatus, to prevent the rated voltage being exceeded by the transient disturbances of more than 40%.

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