

# NPort® 5400 Series

## 4-port RS-232/422/485 serial device servers



- > 10/100M auto-sensing Ethernet
- > 4 serial ports supporting RS-232/422/485
- > Built-in 15 KV ESD surge protection for all serial signals
- > Socket modes: TCP server/TCP client/UDP/Real COM
- > Configure via Telnet/Web/Windows utility
- > SNMP MIB-II for network management
- > 2 KV isolation protection for NPort 5430I/5450I/5450I-T
- > -40 to 75°C operating temperature range (T model)



### : Network Readiness for up to Four Serial Devices

NPort® 5400 device servers can conveniently and transparently connect up to four serial devices to an Ethernet network, allowing you to network your existing serial devices with only basic configuration. Data transmission between the serial and Ethernet interfaces is

bi-directional. By using NPort® device servers, you not only protect your current hardware investment, but also allow for future network expansion. You can both centralize the management of your serial devices, and distribute management hosts over the network.

### : Independent Operation Mode for Each Serial Port

NPort® 5400 device servers can be used to connect different devices for remote data polling or event handling over a TCP/IP network. Each serial port on the NPort® 5400 operates independently to provide

maximum versatility. For example, port 1 can operate in Driver mode, port 2 in TCP Server mode, and ports 3 and 4 in TCP Client mode.

### : User-friendly LCD Panel for Easy Installation

An LCD panel is built into the NPort® 5400's top panel, with four buttons for inputting data, configuration, and selecting the operation mode. The LCD panel displays the server name, serial number, and IP address, and can be used to enter or modify parameters such as IP address, netmask, and gateway. (The LCD panel is not available on wide temperature models.)



### : Dual DC Power Inputs

NPort® 5400 device servers support dual power sources by providing both a DC terminal block input and a DC power jack input. Providing two types of power input gives users greater flexibility for use with different applications.

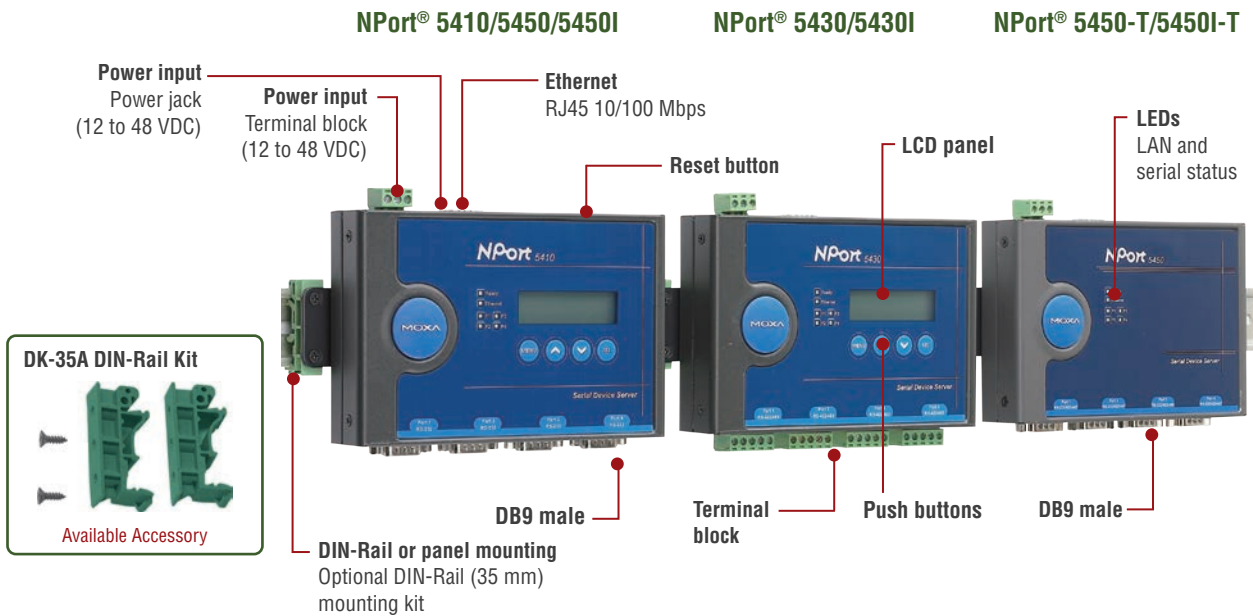


### : Adjustable Termination and Pull High/Low Resistors

The NPort 5400 series provides adjustable termination and pull high/low resistors for RS-485 applications. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals, and the pull high/low resistors may need adjusting to maintain the integrity of the electrical signal. Since no set of resistor values is universally compatible with all environments, the NPort® 5400 has four sets of DIP switches on the bottom panel to set the termination and pull high/low resistor values.



## Appearance



## Specifications

### Ethernet Interface

**Number of Ports:** 1  
**Speed:** 10/100 Mbps, auto MDI/MDIX  
**Connector:** 8-pin RJ45  
**Magnetic Isolation Protection:** 1.5 KV built-in

### Serial Interface

**Number of Ports:** 4  
**Serial Standards:**  
 NPort 5410: RS-232  
 NPort 5430/5430I: RS-422/485 (software selectable)  
 NPort 5450/5450I/5450-T/5450I-T: RS-232/422/485 (software selectable)  
**Connector:**  
 NPort 5410/5450/5450I/5450-T/5450I-T: DB9 male  
 NPort 5430/5430I: Terminal block  
**Serial Line Protection:**  
 15 KV ESD protection for all signals  
 2 KV isolation protection (NPort 5430I/5450I/5450I-T)  
**RS-485 Data Direction Control:** ADDC® (automatic data direction control)  
**Pull High/Low Resistor for RS-485:** 1 K $\Omega$ , 150 K $\Omega$   
**Terminator for RS-485:** 120  $\Omega$

### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8  
**Stop Bits:** 1, 1.5, 2  
**Parity:** None, Even, Odd, Space, Mark  
**Flow Control:** RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF  
**Baudrate:** 50 bps to 921.6 Kbps

### Serial Signals

**RS-232:** TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND  
**RS-422:** Tx+, Tx-, Rx+, Rx-, GND  
**RS-485-4w:** Tx+, Tx-, Rx+, Rx-, GND  
**RS-485-2w:** Data+, Data-, GND

### Software

**Network Protocols:** ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, SNT, Rtelnet, ARP  
**Configuration Options:** Web Console, Telnet Console, Windows Utility

**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 x64, Embedded CE 5.0/6.0, XP Embedded

**Fixed TTY Drivers:** SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i

**Linux Real TTY Drivers:** Linux kernel 2.4.x, 2.6.x, 3.x

**Mini Screen with Push Buttons** (for standard temp. models)

**LCD Panel:** Liquid Crystal Display on the case

**Push Buttons:** Four push buttons for convenient on-site configuration

### Physical Characteristics

**Housing:** Metal  
**Weight:** 740 g  
**Dimensions:**  
 Without mounting kit: 158 x 103 x 33 mm (6.22 x 4.06 x 1.30 in)  
 With mounting kit: 181 x 103 x 33 mm (7.14 x 4.06 x 1.30 in)

### Environmental Limits

**Operating Temperature:**  
 Standard Models: 0 to 55°C (32 to 131°F)  
 Wide Temp. Models: -40 to 75°C (-40 to 167°F)  
**Storage Temperature:** -40 to 75°C (-40 to 167°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

### Power Requirements

**Input Voltage:** 12 to 48 VDC  
**Power Consumption:**  
 NPort 5410: 350 mA @ 12 V, 190 mA @ 24 V  
 NPort 5430: 320 mA @ 12 V, 175 mA @ 24 V  
 NPort 5430I: 530 mA @ 12 V, 280 mA @ 24 V  
 NPort 5450/5450-T: 350 mA @ 12 V, 190 mA @ 24 V  
 NPort 5450I/5450I-T: 554 mA @ 12 V, 294 mA @ 24 V

### Standards and Certifications

**Safety:** UL 60950-1, EN 60950-1  
**EMC:** CE, FCC  
**EMI:** EN 55022 Class A, FCC Part 15 Subpart B Class A  
**EMS:** EN 55024  
**Marine:** DNV (standard temp. models only)

**Medical:** EN 60601-1-2 Class B, EN 55011 (NPort 5410/5450/5450I only)

**Reliability**

**Alert Tools:** Built-in buzzer and RTC (real-time clock)  
**Automatic Reboot Trigger:** Built-in WDT (watchdog timer)  
**MTBF (mean time between failures):**  
 NPort 5410: 205,153 hrs

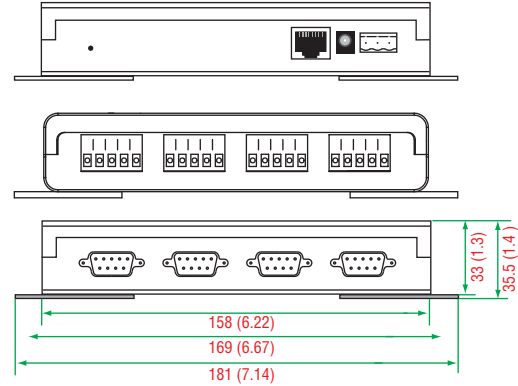
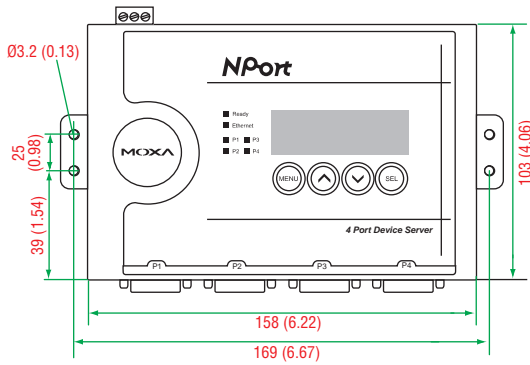
NPort 5430: 201,699 hrs  
 NPort 5430I: 114,540 hrs  
 NPort 5450/5450I: 206,903 hrs  
 NPort 5450-T/5450I-T: 206,903 hrs

**Warranty**

**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

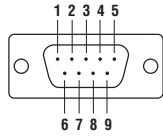
**Dimensions**

Unit: mm (inch)



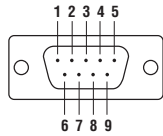
**Pin Assignment**

**NPort® 5410**  
 (RS-232, DB9 male connector)



PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	-

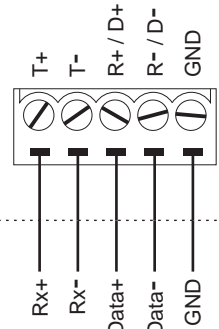
**NPort® 5450/5450I/5450-T/5450I-T**  
 (RS-232/422/485, DB9 male connector)



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	-	-

**NPort® 5430/5430I**  
 (RS-422/485, terminal block connector)

**NPort 5430/5430I Terminal Block**



**Serial Device Signals**

**Ordering Information**

**Available Models**

- NPort 5410:** 4-port RS-232 device server
- NPort 5430:** 4-port RS-422/485 device server
- NPort 5430I:** 4-port RS-422/485 device server with 2 KV isolation protection
- NPort 5450:** 4-port RS-232/422/485 device server
- NPort 5450I:** 4-port RS-232/422/485 device server with 2 KV isolation protection
- NPort 5450-T:** 4-port RS-232/422/485 device server, -40 to 75°C operating temperature (without LCM)
- NPort 5450I-T:** 4-port RS-232/422/485 device server with 2KV isolation protection, -40 to 75°C operating temperature (without LCM)







**Optional Accessories** (can be purchased separately)

- DK-35A:** Mounting Kit for 35-mm DIN-Rail
- DIN-Rail Power Supply:** See page A-8 for details
- Terminal Block:** See page A-7 for details
- Power Adaptor:** See page A-9 for details
- PWR-12150-USJP-SA-T:** 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, US/JP Plug
- PWR-12150-EU-SA-T:** 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, EU Plug
- PWR-12150-UK-SA-T:** 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, UK Plug
- PWR-12150-CN-SA-T:** 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, CN Plug
- PWR-12150-AU-SA-T:** 100 to 240 VAC input, 12 VDC/1.5A output, -40 to 75°C, screw type, AU Plug

**Package Checklist**

- NPort 5400 device server
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

# Wiring Kits

	TB-M9	TB-F9	TB-M25	TB-F25	ADP-RJ458P-DB9M	ADP-RJ458P-DB9F
Accessories Image					 <p>DB9M 1.....7 2.....8 3.....9 4.....10 5.....11 6.....12 RJ-45</p>	 <p>DB9F 1.....2 3.....3 4.....4 5.....5 6.....6 7.....7 8.....8 RJ-45</p>
Type	DB9 male DIN-Rail wiring terminal	DB9 female DIN-Rail wiring terminal	DM25 male DIN-Rail wiring terminal	DB25 female DIN-Rail wiring terminal	RJ45-to-DB9 adaptor (male)	RJ45-to-DB9 adaptor (female)
Connector	DB9 male	DB9 female	DB25 male	DB25 female	-	-
Rating	300 V, 20 A (IEC250V 10A)				-	-
Operating Temperature	-40 to 105°C (-40 to 221°F)				-	-
Suitable Wiring	24-12 AWG (IEC 0.5-2.5 mm <sup>2</sup> )				-	-