

# NPort® 5400 Series

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



- > 10/100M auto-sensing Ethernet
- > 4 serial ports, with support for RS-232, RS-422, and RS-485
- > Built-in 15 KV ESD surge protection for all serial signals
- > Versatile socket operation modes, including TCP Server, TCP Client, and UDP
- > Choice of configuration methods: Web console, Telnet console, and Windows utility
- > SNMP MIB-II for network management
- > 2 KV isolation protection for NPort® 5430I/5450I/5450I-T
- > -40 to 75°C operating temperature (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.)



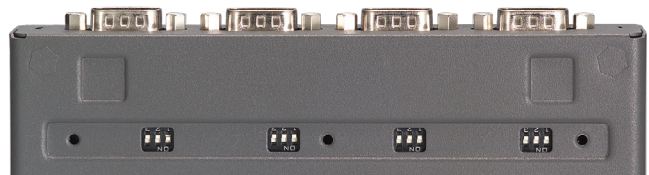
### Dual DC Power Inputs

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.

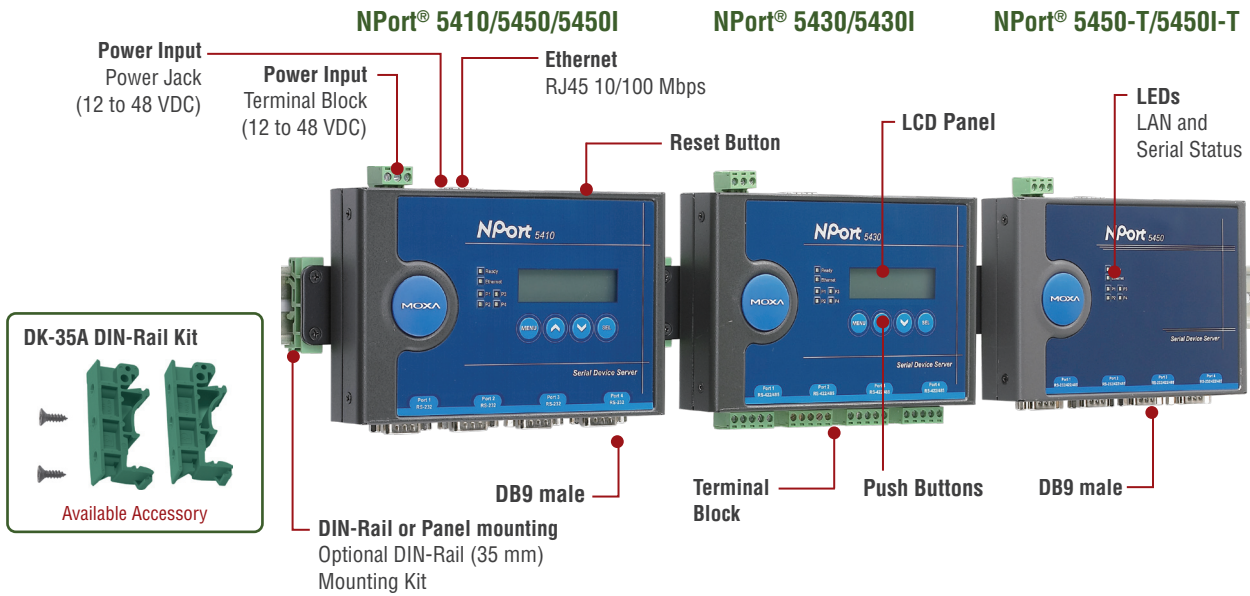


### Adjustable Termination and Pull High/Low Resistors

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:** Tx+, Rx+, 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 x86/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

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

**LCD Panel:** Liquid Crystal Display on the case  
**Push Buttons:** Four push buttons for convenient on-site configuration

### Physical Characteristics

**Housing:** Metal, IP30 protection  
**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: 176 x 103 x 33 mm (6.93 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)  
**Operating Humidity:** 5 to 95% RH  
**Storage Temperature:** -40 to 75°C (-40 to 167°F)

### 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

### Regulatory Approvals

**EMC:** CE (EN55022 and EN55024 Class A), FCC Part 15 Subpart B Class A  
**Safety:** UL (UL60950-1), TÜV (EN60950-1)  
**Marine:** DNV (standard temp. models only)  
**Medical:** EN60601-1-2 Class B, EN55011

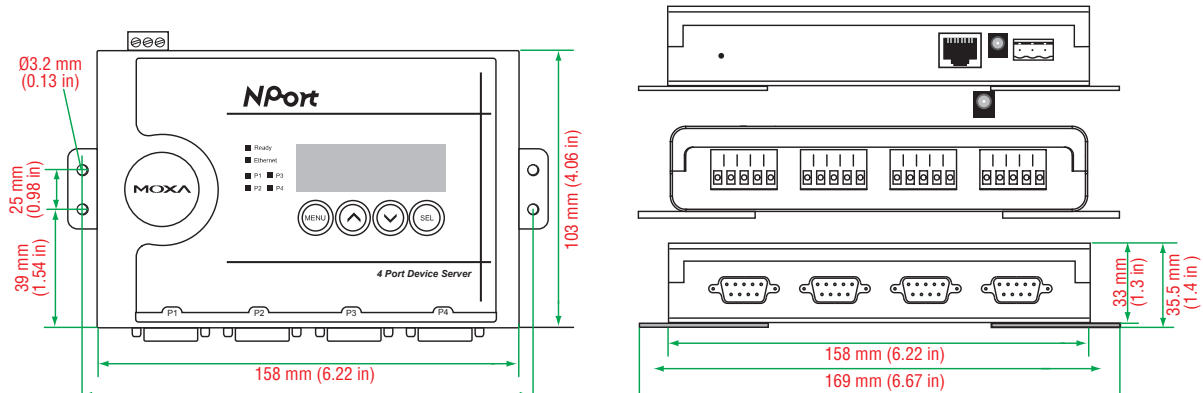
### Reliability

**Alert Tools:** Built-in buzzer and RTC (real-time clock)  
**Automatic Reboot Trigger:** Built-in WDT (watchdog timer)  
**MTBF (meantime between failures):**  
 NPort® 5410: 205153 hrs  
 NPort® 5430: 201699 hrs  
 NPort® 5430I: 114540 hrs  
 NPort® 5450/5450I: 206903 hrs  
 NPort® 5450-T/5450I-T: 206903 hrs

### Warranty

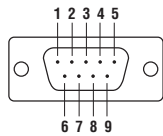
**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions



### Pin Assignment

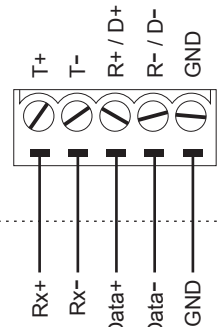
**NPort® 5410**  
 (RS-232, DB9 male connector)



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

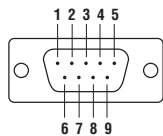
**NPort® 5430/5430I**  
 (RS-422/485, terminal block connector)

**NPort 5430/5430I**  
 Terminal Block



**Serial Device**  
 Signals

**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	-	-

## 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

### Package Checklist

- NPort® 5400 series device server
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card