NPort 5400 Series

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

Features and Benefits

- User-friendly LCD panel for easy installation
- Adjustable termination and pull high/low resistors
- Socket modes: TCP server, TCP client, UDP
- Configure by Telnet, web browser, or 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)

Certifications

Introduction

NPort® 5400 device servers provide many useful features for serial-to-Ethernet applications, including an independent operation mode for each serial port, user-friendly LCD panel for easy installation, dual DC power inputs, and adjustable termination and pull high/low resistors.

Network Readiness for up to 4 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 bidirectional. 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 data input, configuration, and operation mode selection. The LCD panel displays the server name, serial number, and IP address, and it 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 inputs 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.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Configuration Options	Telnet Console Windows Utility Web Console (HTTP/HTTPS)
Management	ARP BOOTP DHCP Client DNS HTTP HTTPS ICMP IPv4 LLDP Rtelnet SMTP SNMPv1/v2c TCP/IP Telnet UDP
Filter	IGMP v1/v2
Windows Real COM Drivers	Windows 11/10/8.1/8/7/Vista/XP/ME/98/95 Windows Server 2022/2019/2016/2012 R2/2012/2008 R2/2008/2003/2000/NT Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel Versions: 6.x, 5.x, 4.x, 3.x, 2.6.x, and 2.4.x
Fixed TTY Drivers	macOS Versions: 10.12 to 10.15, 11.x SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Arm®-based Platform Support	Linux Kernel 5.x/4.x
Virtual Machine	VMWare ESXi (Windows 11 / 10) VMware Fusion (Windows on macOS 10.12 to 11.x) Parallels Desktop (Windows on macOS 10.12 to 11.x)
Android API	Android 3.1.x and later
Time Management	SNTP

Security Functions

Authentication	Local database
Encryption	HTTPS AES-128 RSA-1024 SHA-1 SHA-256
Security Protocols	HTTPS (TLS 1.2) SNMPv3

Serial Interface

Connector	NPort 5410/5450/5450-T/5450I/5450I-T: DB9 male NPort 5430/5430I: Terminal block
No. of Ports	4

Serial Standards	NPort 5410: RS-232 NPort 5430 Models: RS-422, RS-485 NPort 5450 Models: RS-232, RS-422, RS-485
Operation Modes	Real COM TCP Server TCP Client UDP Ethernet Modem Pair Connection Reverse Telnet Disabled
Baudrate	Supports standard baudrates (unit=bps): 50, 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230.4k, 460.8k, 921.6k
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS (RS-232 only) DTR/DSR (RS-232 only) XON/XOFF
Isolation	2 kV isolation for NPort 5430I/5450I/5450I-T
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
RS-485 Data Direction Control	NPort 5450/5430I/5450/5450I/5450-T: ADDC (automatic data direction control)

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

Power Parameters

Input Current	NPort 5410/5450/5450-T: 365 mA @ 12 VDC NPort 5430: 320 mA @ 12 VDC NPort 5430I: 430 mA @ 12 VDC NPort 5450I/5450I-T: 550 mA @ 12 VDC
No. of Power Inputs	2
Power Connector	1 removable 3-contact terminal block(s) Power input jack
Input Voltage	12 to 48 VDC, 24 VDC for DNV

Reliability

Automatic Reboot Trigger	Built-in WDT
Alert Tools	Built-in buzzer and RTC (real-time clock)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	181 x 103 x 33 mm (7.14 x 4.06 x 1.30 in)

Dimensions (without ears)	158 x 103 x 33 mm (6.22 x 4.06 x 1.30 in)
Weight	740 g (1.63 lb)
Interactive Interface	LCD panel display (standard temp. models only) Push buttons for configuration (standard temp. models only)
Installation	Desktop DIN-rail mounting (with optional kit) Wall mounting

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 (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11
Safety	UL 62368-1
Maritime	DNV
Medical	EN 60601-1-2 Class B, EN 55011 (NPort 5410/5450/5450I models only)

MTBF

Time	NPort 5410: 880,274 hrs NPort 5430: 826,688 hrs NPort 5430I: 718,600 hrs NPort 5450: 773,682 hrs NPort 5450I: 678,381 hrs NPort 5450-T: 1,213,993 hrs NPort 5450I-T: 996,176 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

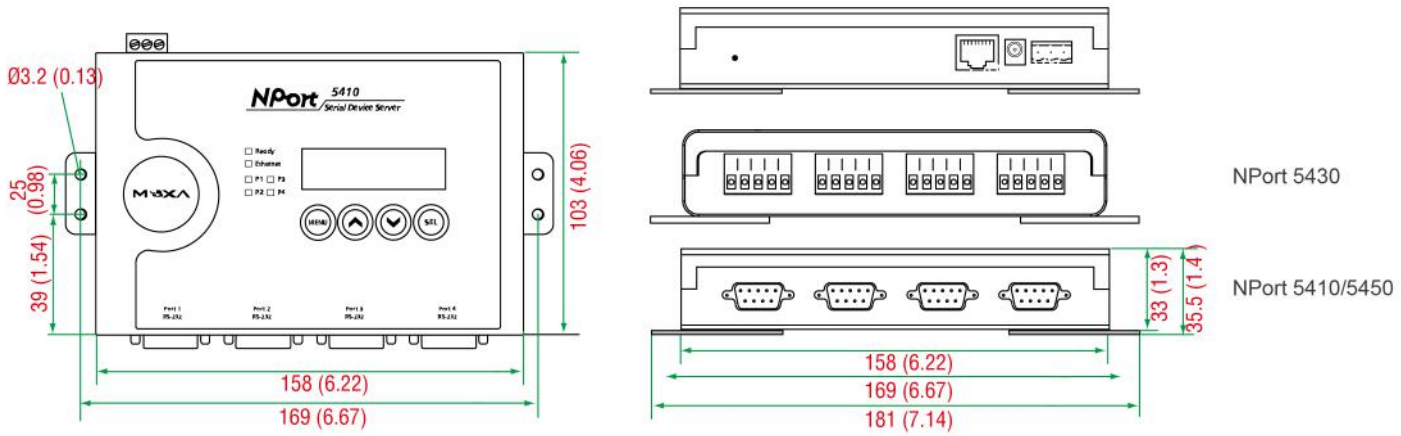
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x NPort 5400 Series device server
Power Supply	1 x nonlocking barrel plug to bare wires: CBL-PJTB-10
Installation Kit	1 x wall-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Serial Interface	Serial Interface Connector	Serial Interface Isolation	Operating Temp.	Input Voltage
NPort 5410	RS-232	DB9 male	–	0 to 55°C	12 to 48 VDC
NPort 5430	RS-422/485	Terminal block	–	0 to 55°C	12 to 48 VDC
NPort 5430I	RS-422/485	Terminal block	2 kV	0 to 55°C	12 to 48 VDC
NPort 5450	RS-232/422/485	DB9 male	–	0 to 55°C	12 to 48 VDC
NPort 5450-T	RS-232/422/485	DB9 male	–	-40 to 75°C	12 to 48 VDC
NPort 5450I	RS-232/422/485	DB9 male	2 kV	0 to 55°C	12 to 48 VDC
NPort 5450I-T	RS-232/422/485	DB9 male	2 kV	-40 to 75°C	12 to 48 VDC

Accessories (sold separately)

Cables

CBL-RJ45SF9-150	8-pin RJ45 to DB9 female serial cable with shielding, 1.5m
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm
CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m
CBL-RJ458P-100	8-pin RJ45 CAT5 Ethernet cable, 1 m

Connectors

ADP-RJ458P-DB9F	DB9 female to RJ45 connector
Mini DB9F-to-TB	DB9 female to terminal block connector

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm

Power Adapters

PWR-12150-WPUSJP-S2	Unlocking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature
PWR-12150-WPEU-S2	Unlocking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature
PWR-12150-WPUK-S2	Unlocking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature
PWR-12150-WPAU-S2	Unlocking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature
PWR-12150-WPCN-S2	Unlocking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature

Power Wiring

CBL-PJTB-10	Non-locking barrel plug to bare-wire cable

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