NPort 5100 Series

1-port Serial Device Servers

Features

- Small size
- Real COM/TTY drivers for Windows and Linux
- Standard TCP/IP interface and versatile operation modes
- Easy-to-use Windows utilty for mass installation
- Built-in 15 KV ESD protection for all serial signals
- SNMP MIB-II for network management
- Configuration by Telnet or web browser
- Adjustable termination resistor for the RS-485 port

Overview

NPort 5100 device servers are designed to make industrial serial devices instantly Internet-ready. Their small size makes them ideal for connecting devices such as card readers or payment terminals to an IP-based Ethernet LAN. With NPort device servers, your devices can be made accessible to your software from anywhere on the local LAN or the Internet.

Most Cost-Effective Serial-to-Ethernet Solution

Using serial-to-Ethernet to connect legacy serial devices to Ethernet is no longer a novel solution. Users now expect to be able to find device servers that are cost-effective, provide a broad selection of different functions, and are high quality. With its full support of Microsoft and Linux operating systems and solid 5-year warranty, NPort 5100 is one of the best device server solutions in the worldwide industrial market.

Adjustable Termination and Pull High/Low Resistors

In some critical environments, termination resistors may be needed to prevent the reflection of serial signals. When using termination resistors, it is also important to set the pull high/low resistors correctly so that the electrical signal is not corrupted. Since no set of resistor values is universally compatible for all environments, NPort 5100 device servers allow user adjustment of termination and pull high/low resistor values for each serial port, using jumpers.

Standard TCP/IP Interface and Versatile Operation Modes

The NPort 5110 can operate in TCP Server, TCP Client, UDP Server/Client, Pair Connection, or Ethernet Modem mode, ensuring compatibility with software based on a standard network API (Winsock, BSD Sockets).

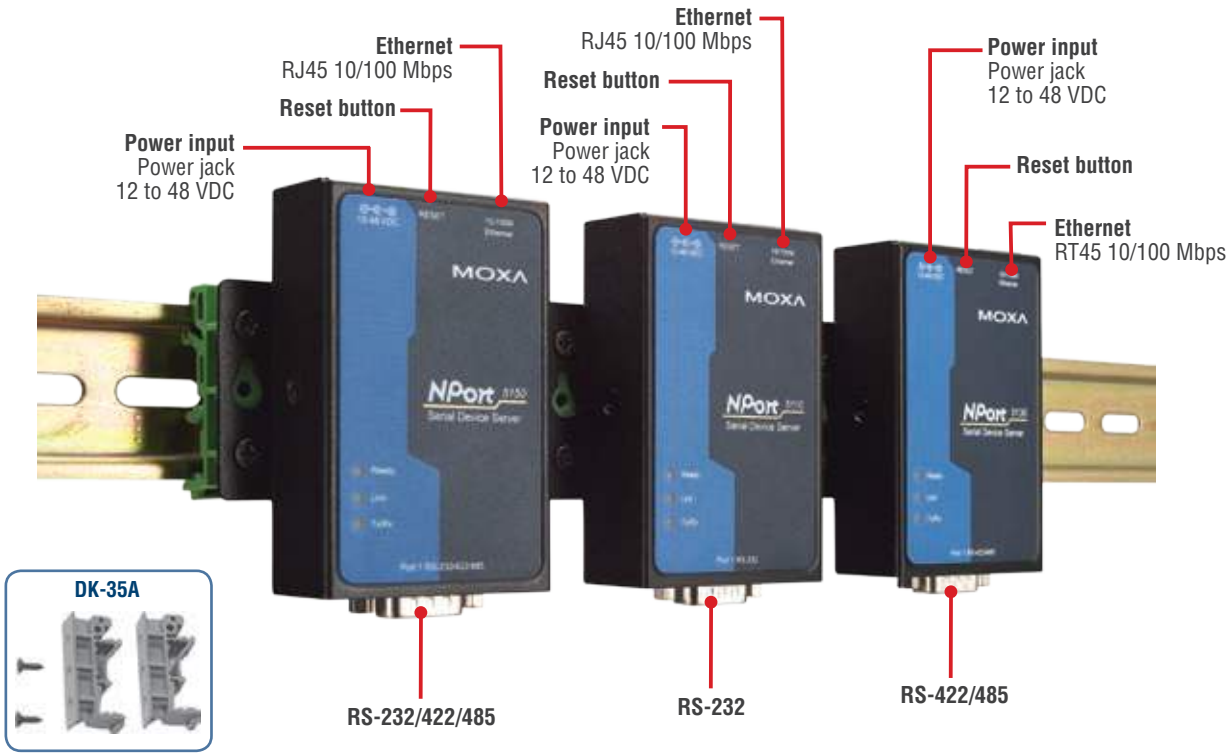
Real COM/TTY Drivers for Existing Software

With the Real COM/TTY drivers that are provided with each NPort, software designed for communication with COM/TTY ports can be instantly and seamlessly integrated into a TCP/IP network. This is an excellent way to preserve your software investment and enjoy the benefits of networking your serial devices, with no fuss.

Easy Troubleshooting

NPort 5100 device servers support SNMP V2, which can be used to monitor all units over Ethernet. Each unit can be configured to send trap messages automatically to the SNMP manager when user-defined errors are encountered. For users who do not use SNMP manager, an e-mail alert can be sent instead. Users can define the trigger for those alerts using MOXA's Windows utility or the web console. For example, alerts can be triggered by a warm start, a cold start, or a change in password.

NPort 5110, 5130, 5150



Ordering Information

NPort 5110: 1-port RS-232 device server

NPort 5130: 1-port RS-422/485 device server

NPort 5150: 1-port RS-232/422/485 device server

Package Checklist

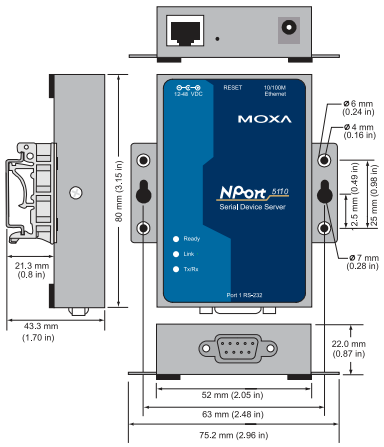
- 1 NPort 5100 Device Server
- Power Adaptor
- Quick Installation Guide
- NPort Document and Software CD-ROM

Optional Accessories

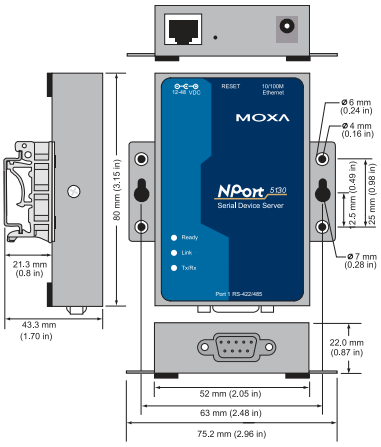
DK-35A: DIN-Rail Mounting Kit (35 mm)

Dimensions (unit = mm)

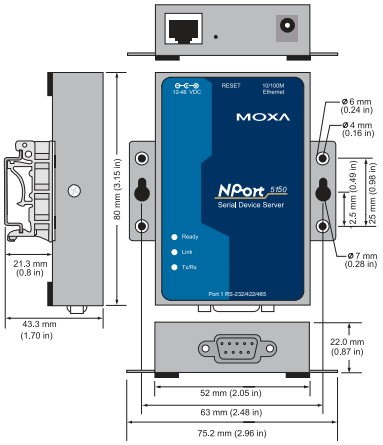
NPort 5110



NPort 5130

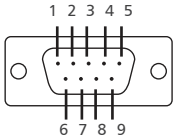


NPort 5150



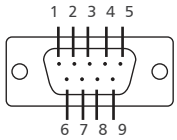
Pin Assignment

NPort 5110



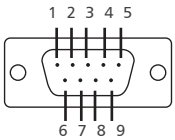
PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

NPort 5130



PIN	RS-422/485 (4W)	RS-485 (2W)
1	TxD-(A)	–
2	TxD+(B)	–
3	RxD+(B)	Data+(B)
4	RxD-(A)	Data-(A)
5	GND	GND
6	–	–
7	–	–
8	–	–
9	–	–

NPort 5150



PIN	RS-232	RS-422/485 (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		–	–

Specifications

LAN

Ethernet: 10/100 Mbps, RJ45

Protection: Built-in 1.5 KV magnetic isolation

NPort 5110 Serial Interface

Interface: RS-232

No. of Ports: 1

Port Type: DB9 (Male)

Transmission Speed: 100-230.4 Kbps

Signals: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

Serial Line Protection: 15 KV ESD for all signals

NPort 5130 Serial Interface

Interface: RS-422/485

No. of Ports: 1

Port Type: DB9 (Male)

Transmission Speed: 50-921.6 Kbps

Signals

RS-422: Tx+, Tx-, Rx+, Rx-, GND

RS-485 (2-wire): Data+, Data-, GND

RS-485 (2-wire): Tx+, Tx-, Rx+, Rx-, GND

Serial Line Protection: 15 KV ESD for all signals

RS-485 Data Direction: ADDC™ (Automatic Data Direction Control)

NPort 5150 Serial Interface

Interface: RS-232/422/485

No. of Ports: 1

Port Type: DB9 (Male)

Transmission Speed: 50-921.6 Kbps

Signals

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: 15 KV ESD for all signals

RS-485 Data Direction

ADDC™ (Automatic Data Direction Control)

Power Line Protection:

4 KV burst (EFT), EN61000-4-4, 2 KV surge, EN61000-4-5

Advanced Built-in Features: Watchdog timer

Serial Communication Parameters

Parity: None, Even, Odd, Space, Mark

Data Bits: 5, 6, 7, 8

Stop Bit(s): 1, 1.5, 2

Flow Control: RTS/CTS, DTR/DSR (for RS-232 only), XON/XOFF

Software Features

Protocols:

ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, HTTP, SMTP

Utilities:

NPort Administrator for Windows 95/98/ME/NT/2000/XP/2003/Vista

OS Driver Support:

Windows 95/98/ME/NT/2000/XP/2003/XP x64/2003 x64/ COM driver/ Linux Real TTY driver/SCO Unix/SCO OpenServer 5/UnixWare 7/Unix Ware 2.1.x/SVR4.2/QNX

Configuration:

Web console, serial console, Telnet console, or Windows utility

Power Requirements

Power Input: 12 to 48 VDC

Power Consumption:

NPort 5110: 128.7 mA@12V, 72 mA@24V

NPort 5130: 200 mA@12V, 106 mA@24V

NPort 5150: 200 mA@12V, 106 mA@24V

Mechanical

Casing: Aluminum case (1 mm)

Dimensions (W × H × D): 50 × 80 × 22 mm (1.97 × 3.15 × 0.87 in)

Gross Weight: 0.580 kg

Environment

Operating Temperature:

0 to 55°C (32 to 131°F), 5 to 95%RH

-40 to 75°C (-40 to 167°F) for wide temperature models

Storage Temperature: -20 to 85°C (-4 to 185°F), 5 to 95%RH

Regulatory Approvals

EMC FCC Class A, CE Class A, Safety UL, CUL, TÜV

Warranty: 5 years

MTBF

NPort 5110: 279/22 hrs

NPort 5130: 246505 hrs

NPort 5150: 246034 hrs