

NPort® 5100 Series

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



- > Real COM/TTY drivers for Windows and Linux
- > Standard TCP/IP interface and versatile operation modes
- > Easy-to-use Windows utility for configuring multiple device servers
- > Built-in 15 KV ESD protection for all serial signals
- > SNMP MIB-II for network management
- > Configure by Telnet or web browser
- > Adjustable termination resistor for RS-485 ports

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Overview

NPort® 5100 device servers are designed to make serial devices network-ready in an instant. The small size of the servers makes them ideal for connecting devices such as card readers and payment

terminals to an IP-based Ethernet LAN. Use the NPort® 5100 device servers to give your PC software direct access to serial devices from anywhere on the network.

Most Cost-effective Serial-to-Ethernet Solution

Using serial device servers to connect legacy serial devices to Ethernet is now commonplace, and users expect device servers to be cost-effective and to provide a broad selection of useful functions. With its

full support of Microsoft and Linux operating systems and solid 5-year warranty, the NPort® 5100 series provides the best choice for serial-to-Ethernet converters.

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 with all environments, the NPort® 5100 device servers come with jumpers for adjusting termination and pull high/low resistor values for each serial port.

Standard TCP/IP Interface and Broad Choice of Operation Modes

The NPort® 5100 device servers can be configured for TCP Server, TCP Client, UDP Server/Client, Pair Connection, or Ethernet Modem

mode, ensuring compatibility with software based on a standard network API (e.g., Winsock or BSD Sockets).

Real COM/TTY Drivers for Existing Software

The Real COM/TTY drivers provided with the NPort® 5100 device servers allow you to continue using software designed for communicating through COM/TTY ports. Installation and configuration is painless, and allows your serial devices and PC to communicate

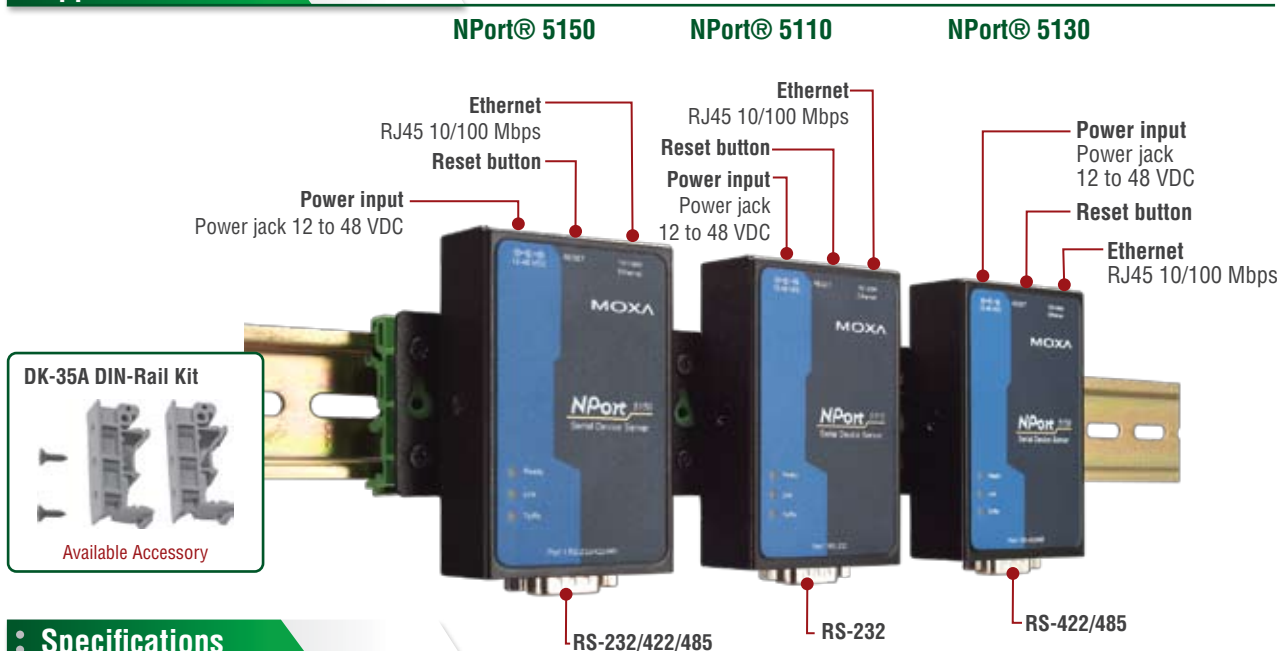
seamlessly over a TCP/IP network. Using Moxa's Real COM/TTY drivers is an excellent way to preserve your software investment, while still allowing you to enjoy the benefits of networking your serial devices.

Easy to Troubleshoot

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 the 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.

: Appearance



: Specifications

Ethernet Interface

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

Serial Interface

- Number of Ports:** 1
- Serial Standards:**
 NPort® 5110: RS-232
 NPort® 5130: RS-422/485
 NPort® 5150: RS-232/422/485

- Connector:** DB9 male
- Serial Line Protection:** 15 KV ESD protection for all signals
- RS-485 Data Direction Control:** ADDC® (automatic data direction control)

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:**
 NPort® 5110: 110 bps to 230.4 Kbps
 NPort® 5130/5150: 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, HTTP, SMTP
- Configuration Options:** Web Console, Serial Console, Telnet Console, Windows Utility

- Driver Support:** Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Physical Characteristics

- Housing:** Aluminum (1 mm)
- Weight:** 580 g
- Dimensions:**
 Without ears: 52 x 80 x 22 mm (2.05 x 3.15 x 0.87 in)
 With ears: 75.2 x 80 x 22 mm (2.96 x 3.15 x 0.87 in)

Environmental Limits

- Operating Temperature:**
 NPort® 5110/5130/5150: 0 to 55°C (32 to 131°F)
 NPort® 5110-T: -40 to 75°C (-40 to 167°F)
- Operating Humidity:** 5 to 95% RH
- Storage Temperature:** -20 to 85°C (-4 to 185°F)

Power Requirements

- Input Voltage:** 12 to 48 VDC
- Power Consumption:**
 NPort® 5110: 128.7 mA @ 12 V, 72 mA @ 24 V
 NPort® 5130/5150: 200 mA @ 12 V, 106 mA @ 24 V
- Power Line Protection:** 1 KV burst (EN61000-4-4: EFT/B), 0.5 KV surge (EN61000-4-5)

Regulatory Approvals

- EMC:** CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A
- Safety:** UL (UL60950-1), CUL, TÜV (EN60950-1)

Reliability

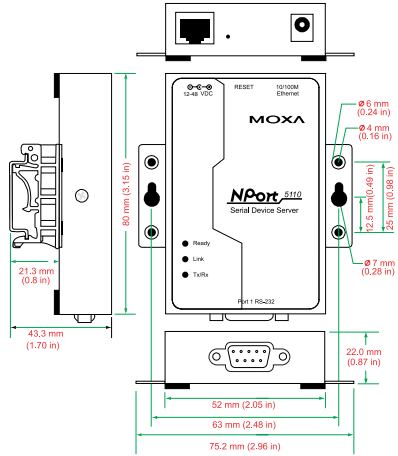
- Automatic Reboot Trigger:** Built-in WDT (watchdog timer)
- MTBF (mean time between failures):**
 NPort® 5110: 279122 hrs
 NPort® 5130: 246505 hrs
 NPort® 5150: 246034 hrs

Warranty

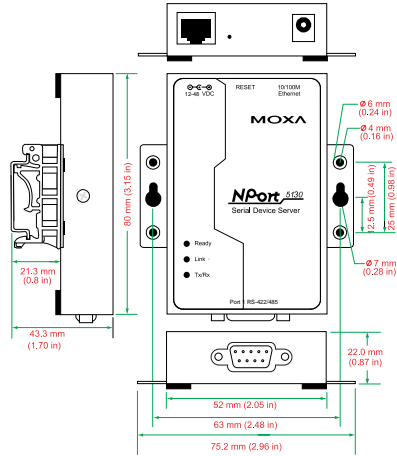
- Warranty Period:** 5 years
- Details:** See www.moxa.com/warranty

Dimensions

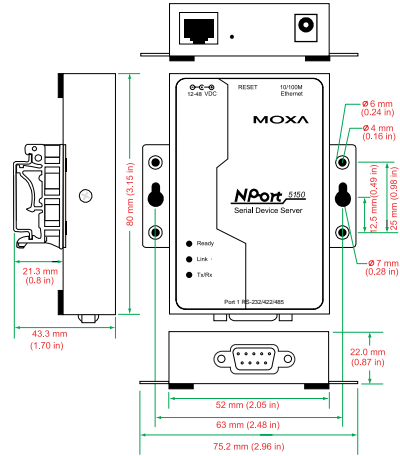
NPort® 5110



NPort® 5130

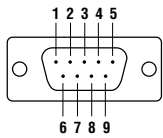


NPort® 5150



Pin Assignment

DB9 male connector



NPort® 5110 (RS-232)

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

NPort® 5130 (RS-422/485)

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 (RS-232/422/485)

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	-	-	-

Ordering Information

Available Models

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

NPort® 5110-T: 1-port RS-232 device server, wide temperature (-40 to 75°C)

Optional Accessories (can be purchased separately)

DK-35A: Mounting Kit for 35-mm DIN-Rail

Package Checklist

- NPort® 5100 series device server
- Power Adaptor (see Appendix A)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

NPort® 5200 Series

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



- > Small size for easy installation
- > Versatile socket operation modes, including TCP Server, TCP Client, and UDP
- > Easy-to-use Windows utility for configuring multiple device servers
- > Supports 10/100M Ethernet
- > Patented ADDC® (Automatic Data Direction Control) for 2-wire and 4-wire RS-485
- > Built-in 15 KV ESD protection for all serial signals
- > SNMP MIB-II for network management

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Standard TCP/IP Protocols and Choice of Operation Modes

NPort® 5200 device servers can operate in TCP Server, TCP Client, or UDP operation 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

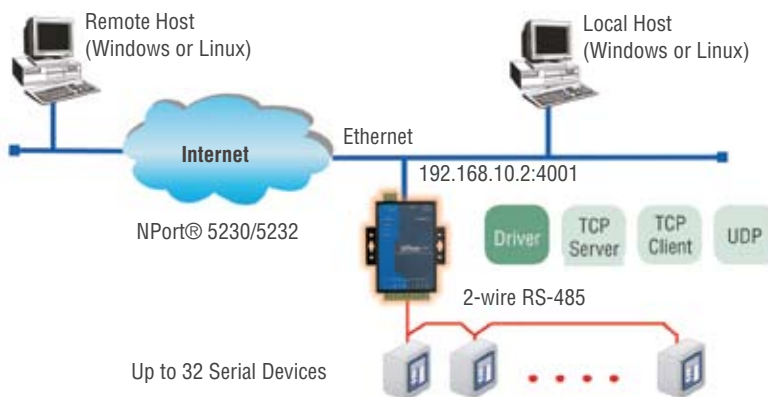
excellent “no fuss” way to preserve your software investment and enjoy the benefits of networking your serial devices.

Control Remote Serial Devices with TCP/IP or Traditional COM/TTY Port

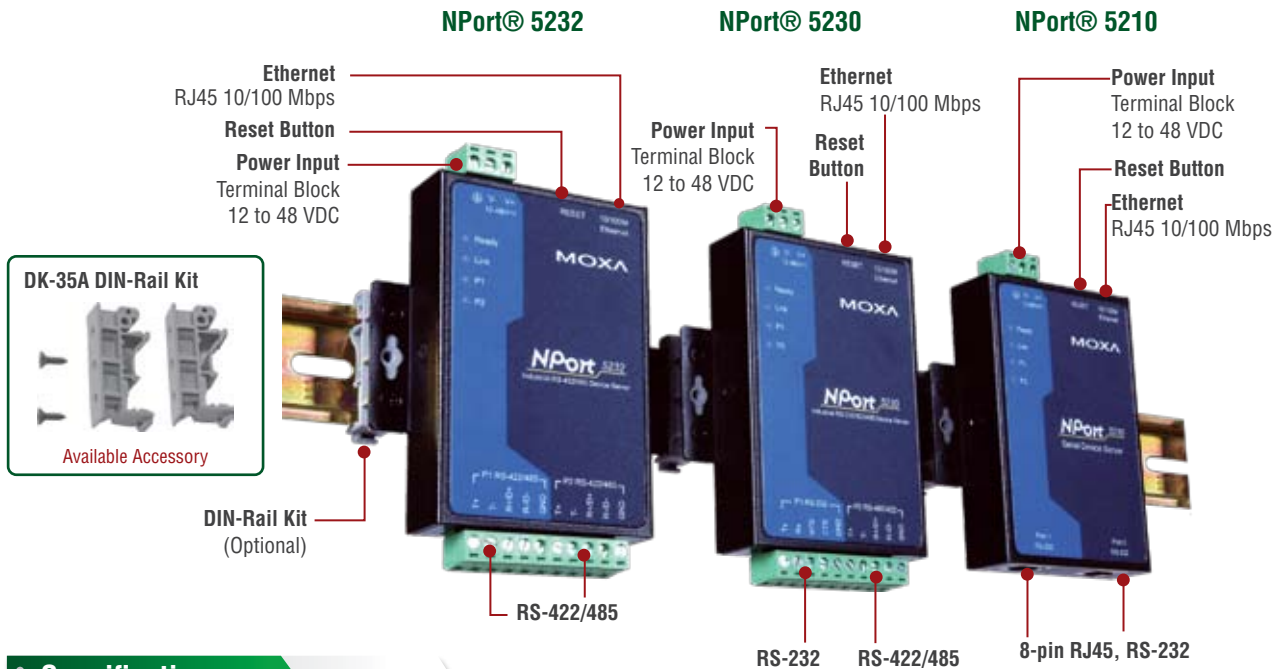
By specifying the NPort® 5200's IP address and port number, a network sockets API can obtain access to the attached serial device over the network, from any host computer that supports TCP/IP. For

legacy Windows or Linux software that is COM or TTY-based, Moxa's COM/TTY drivers provide a seamless way of operating over the network.

COM Driver or Network Socket Operation



Appearance



Specifications

Ethernet Interface

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

Serial Interface

- Number of Ports:** 2
- Serial Standards:**
 - NPort® 5210: RS-232
 - NPort® 5230: 1 RS-232 port, 1 RS-422/485 port
 - NPort® 5232: RS-422/485
- Connectors:**
 - NPort® 5210: RJ45 (8 pins)
 - NPort® 5230/5232: Terminal Block (5 pins per port)
- Serial Line Protection:**
 - 15 KV ESD protection
 - 2 KV isolation protection (NPort® 5232I/5232I-T)
- RS-485 Data Direction Control:** ADDC® (automatic data direction control)

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 (RS-232 only), DTR/DSR (NPort® 5210 only), XON/XOFF

Baudrate: 110 bps to 230.4 Kbps

Serial Signals

- RS-232:**
 - NPort® 5210: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
 - NPort® 5230/5232: TxD, RxD, RTS, CTS, 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, HTTP, SMTP, SNTF

Configuration Options: Web Console, Serial Console (NPort® 5210/5230 only), Telnet Console, Windows Utility (NPort® 5210/5230 only)

Driver Support: Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Physical Characteristics

Housing: Aluminum (1 mm), providing IP30 protection

Weight:

- NPort® 5210: 320 g
- NPort® 5230/5232: 340 g
- NPort® 5232I: 380 g

Dimensions:

- NPort® 5210/5230/5232:
 - Without ears: 67 x 100.4 x 22 mm (2.64 x 3.95 x 0.87 in)
 - With ears: 90 x 100.4 x 22 mm (3.54 x 3.95 x 0.87 in)
- NPort® 5232I:
 - Without ears: 67 x 100.4 x 35 mm (2.64 x 3.95 x 1.37 in)
 - With ears: 90 x 100.4 x 35 mm (3.54 x 3.95 x 1.37 in)

Environmental Limits

Operating Temperature:

- NPort® 5210/5230/5232/5232I: 0 to 55°C (32 to 131°F)
- NPort® 5210-T/5230-T/5232-T/5232I-T: -40 to 75°C (-40 to 167°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 85°C (-4 to 185°F)

Power Requirements

Input Voltage: 12 to 48 VDC

Power Consumption:

- NPort® 5210: 305 mA @ 12 V max.
- NPort® 5230: 347.1 mA @ 12 V max.
- NPort® 5232: 259.6 mA @ 12 V max.
- NPort® 5232I: 509.4 mA @ 12 V max.

Power Line Protection: 1 KV burst (EN61000-4-4: EFT/B), 0.5 KV surge (EN61000-4-5)

Regulatory Approvals

EMC: CE (EN55022 and EN55024 Class A), FCC Part 15 Subpart B Class A

Safety: UL (UL60950-1), TÜV (EN60950-1)

Medical: EN60601-1-2 Class B, EN55011

Marine: DNV

Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock)

Automatic Reboot Trigger: Built-in WDT (watchdog timer)

MTBF (meantime between failures):

- NPort® 5210: 134850 hrs
- NPort® 5230: 106955 hrs
- NPort® 5232: 102344 hrs
- NPort® 5232I: 87083 hrs

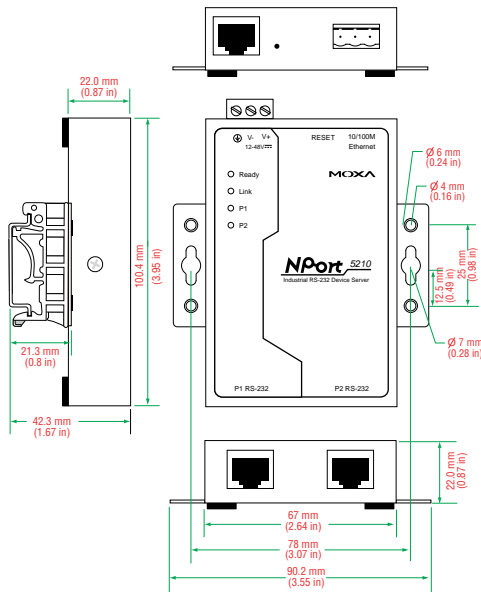
Warranty

Warranty Period: 5 years

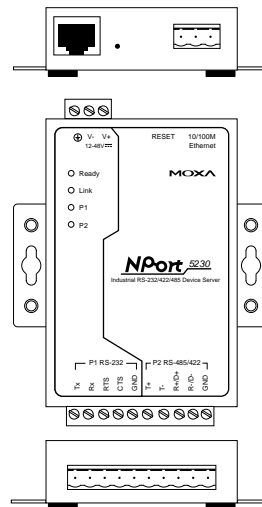
Details: See www.moxa.com/warranty

Dimensions

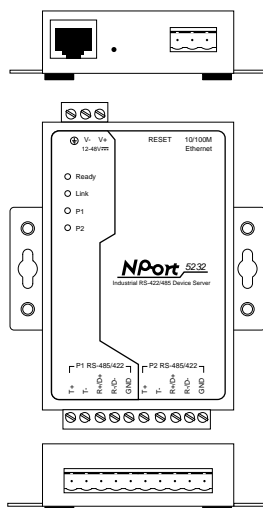
NPort® 5210



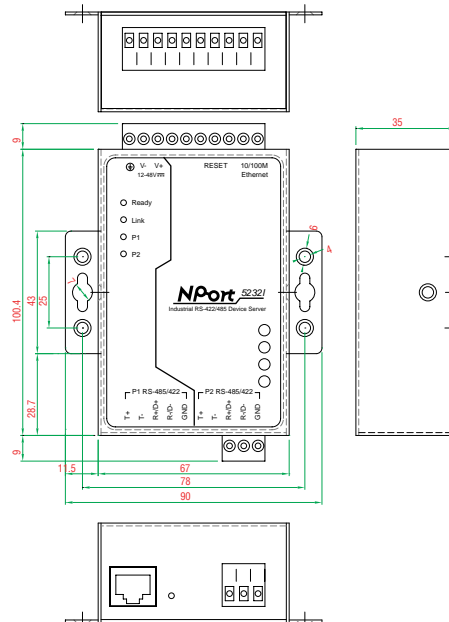
NPort® 5230



NPort® 5232

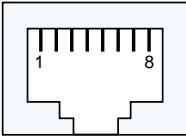


NPort® 5232I



Pin Assignment

8-pin RJ45 connector



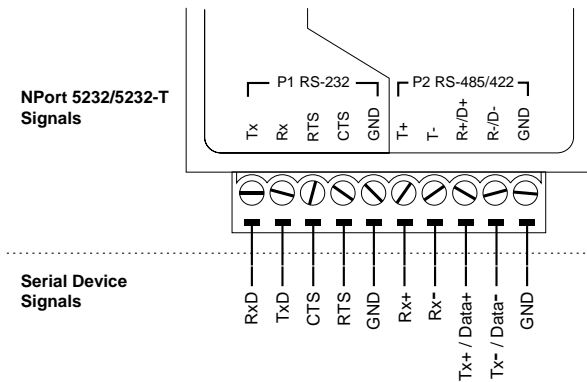
NPort® 5210/5210-T (RS-232)

PIN	RS-232
1	DSR (in)
2	RTS (out)
3	GND
4	TxD (out)

PIN	RS-232
5	RxD (in)
6	DCD (in)
7	CTS (in)
8	DTR (out)

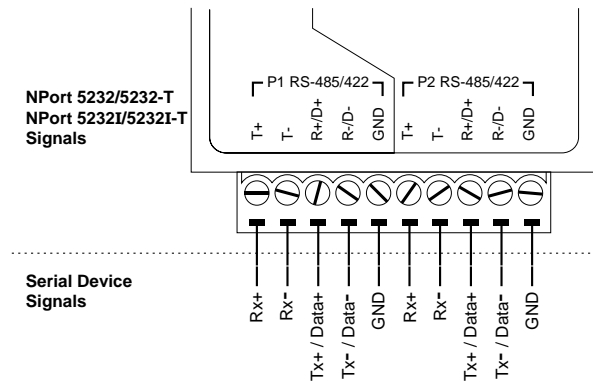
NPort® 5230/5230-T

(RS-232/422/485, terminal block connector)



NPort® 5232/5232I/5232-T/5232I-T

(RS-422/485, terminal block connector)



Ordering Information

Available Models

NPort® 5210: 2-port RS-232 device server

NPort® 5230: 2-port device server with 1 RS-232 port and 1 RS-422/485 port

NPort® 5232: 2-port RS-422/485 device server

NPort® 5232I: 2-port RS-422/485 device server with 2 KV optical isolation

NPort® 5210-T: 2-port RS-232 device server, wide temperature (-40 to 75°C)

NPort® 5230-T: 2-port device server with 1 RS-232 port and 1 RS-422/485 port, wide temperature (-40 to 75°C)

NPort® 5232-T: 2-port RS-422/485 device server, wide temperature (-40 to 75°C)

NPort® 5232I-T: 2-port RS-422/485 device server with 2 KV optical isolation, wide temperature (-40 to 75°C)

Package Checklist

- NPort® 5200 series device server
- Power Jack to 3-pin Terminal Block Adaptor
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

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

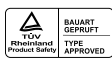
NPort® 5400 Series

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



- > Easy IP address configuration with LCD panel
- > 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

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



: 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, 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, event handling, or data multicasting 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.



: Redundant DC Power Inputs

NPort® 5400 device servers support redundant power sources and provide both a DC terminal block input and a DC power jack input. The two power inputs not only provide power redundancy, but also allow greater flexibility for use with different applications.

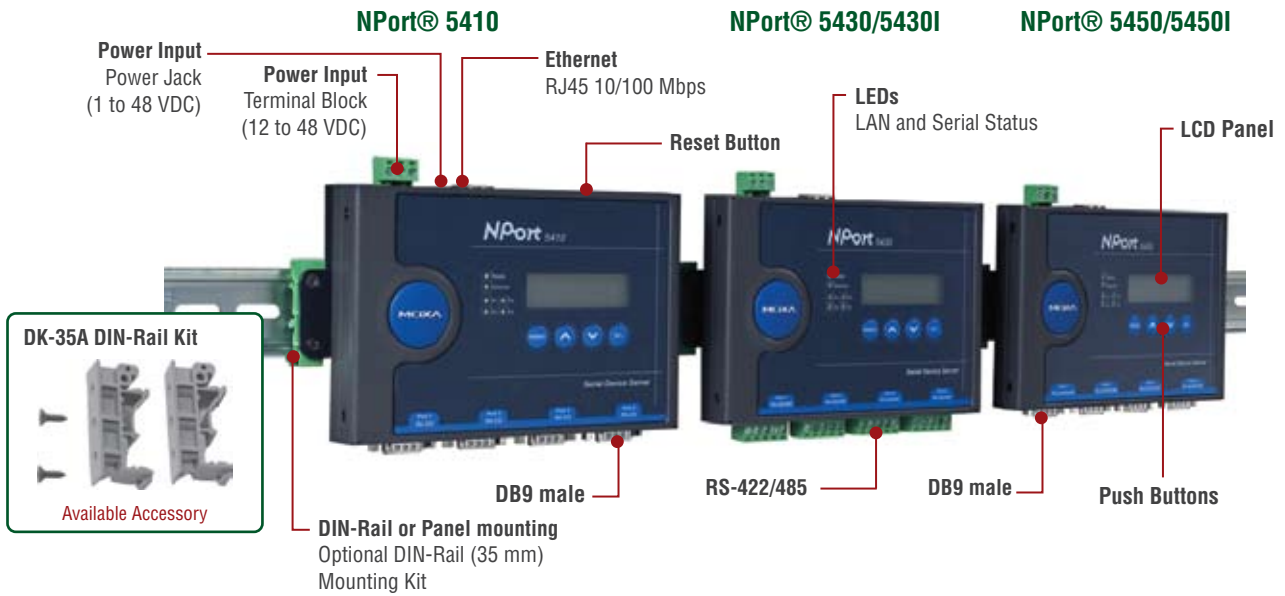


: Adjustable Termination and pull High/Low Resistors

Termination resistors may be needed in some critical environments to prevent the reflection of serial signals. When using termination resistors, it is important to set the pull high/low resistors correctly to prevent the electrical signal from being corrupted. 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
- 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: RS-422/485
 - NPort 5450: RS-232/422/485

Connectors:

- NPort 5410/5450: DB9 male
- NPort 5430: Terminal block

Serial Line Protection:

- 15 KV ESD protection for all signals
- 2 KV isolation protection (NPort 5430I/5450I)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Serial Communication Parameters

- Data Bits:** 5, 6, 7, 8
- Stop Bits:** 1, 1.5, 2
- Parity:** None, Even, Odd, Space, Mark
- Flow Control:** DSR/DTR (RS-232 only), RTS/CTS, 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, HTTP, SMTP, SNTIP, Rtelnet, ARP
- Configuration Options:** Web Console, Telnet Console, Windows Utility

Driver Support: Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Mini Screen with Push Buttons

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

Physical Characteristics

- Housing:** SECC sheet metal (1 mm), providing 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:** 0 to 55°C (32 to 131°F)
- Operating Humidity:** 5 to 95% RH
- Storage Temperature:** -20 to 70°C (-4 to 158°F)

Power Requirements

- Input Voltage:** 12 to 48 VDC
- Power Consumption:**
 - NPort 5410/5430: 350 mA @ 12 V max.
 - NPort 5430I: 585 mA @ 12 V max.
 - NPort 5450: 350 mA @ 12 V max.
 - NPort 5450I: 554 mA @ 12 V max.

Power Line Protection: 4 KV burst (EN61000-4-4: EFT/B), 2 KV surge (EN61000-4-5)

Regulatory Approvals

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

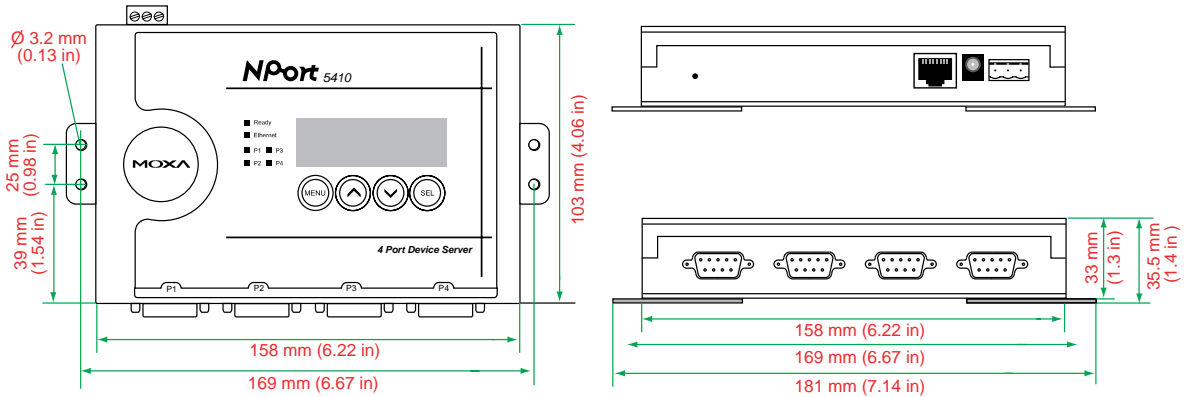
Reliability

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

Warranty

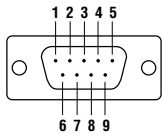
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions



Pin Assignment

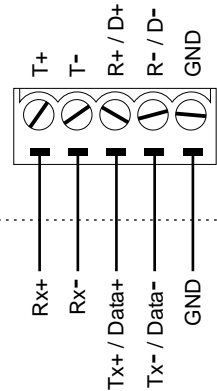
NPort® 5410
 (RS-232, DB9 male connector)



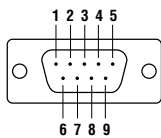
PIN	RS-232
1	DCD
2	RxD
3	RxD
4	DTR
5	GND
6	DSR
7	TRs
8	CTS
9	-

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

NPort 5430/5430I Terminal Block



NPort® 5450/5450I (RS-232/422/485, DB9 male connector)
(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	---	---
9	---	---	---

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 optical isolation
NPort® 5450: 4-port RS-232/422/485 device server
NPort® 5450I: 4-port RS-232/422/485 device server with 2 KV optical isolation

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
- Power Jack to 3-pin Terminal Block Adaptor
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

NPort® 5600 Rackmount Series

8 and 16-port RS-232/422/485 serial device servers



- > 8 or 16 serial ports supporting RS-232/422/485
- > Standard 19-inch rackmount size
- > 10/100M auto-sensing Ethernet
- > Built-in 15 KV ESD protection for all serial signals
- > Easy IP address configuration with LCD panel
- > Choice of configuration methods: Web console, Telnet console, and Windows utility
- > Versatile socket operation modes, including TCP Server, TCP Client, UDP, and Real COM
- > SNMP MIB-II for network management

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



: Network Readiness for up to Sixteen Serial Devices

NPort® 5600 rackmount device servers can conveniently and transparently connect up to sixteen serial devices to an Ethernet, 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.

: 19-inch Rackmount Device Server

NPort® 5600 device servers come with Tx/Rx LEDs for the serial ports on the front panel, and the 8 or 16 RJ45 serial port connectors on the rear panel. This makes the NPort® 5600 device servers suitable for

standard 19-inch rack mounting, allowing you to simplify operation, maintenance, and administrative tasks.

: Real COM/TTY Ports

Real COM/TTY drivers are provided that make the serial ports on the NPort® 5600 recognizable as Real COM ports by Windows, or Real TTY ports by Linux. In addition to supporting basic data transmission

and reception, the NPort® drivers also support the RTS, CTS, DTR, DSR, and DCD control signals.

: LED Indicators to Ease Your Maintenance Tasks

The System LED, Serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks and help engineers analyze problems in the field. The NPort® 5600's LEDs

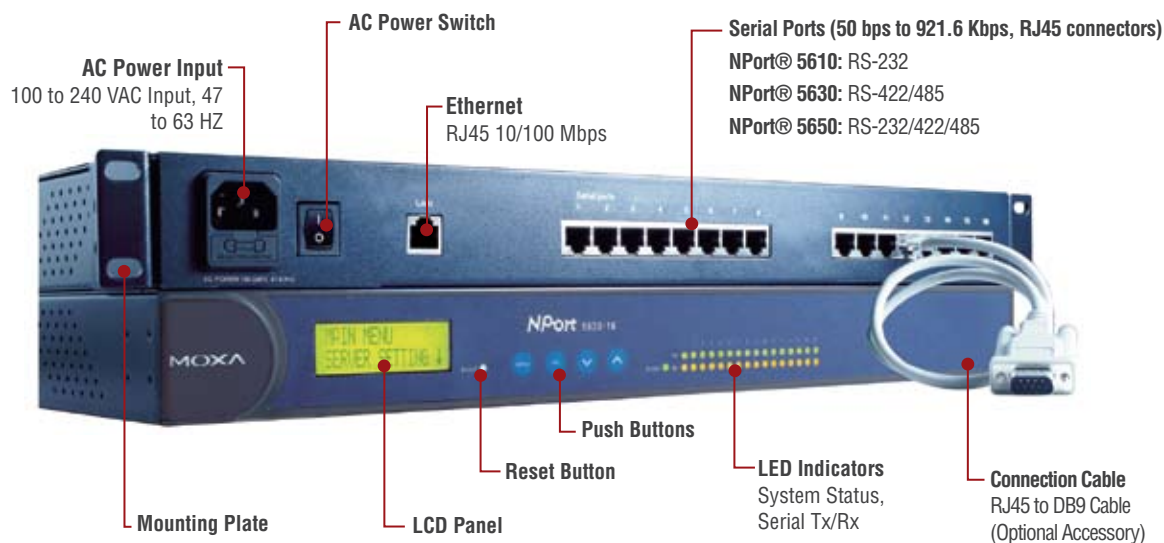
not only indicate current system and network status, but also help field engineers monitor the status of attached serial devices.

: 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, the NPort® 5600 has DIP switches on the bottom panel for setting the termination and pull high/low resistor values.



: Appearance



: Specifications

Ethernet Interface

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

Optical Fiber Interface

- Distance:**
 - Multi mode: 0 to 2 km, 1310 nm (62.5/125 μm , 500 MHz*km)
 - Single mode: 0 to 40 km, 1310 nm (9/125 μm , 3.5 PS/(nm*km))
- Min. TX Output:** -20 dBm (Multi mode), -5 dBm (Single mode)
- Max. TX Output:** -14 dBm (Multi mode), 0 dBm (Single mode)
- Sensitivity:** -34 to -30 dBm (Multi mode), -36 to -32 dBm (Single mode)

Serial Interface

- Number of Ports:** 8 or 16
- Serial Standards:**
 - NPort@ 5610: RS-232
 - NPort@ 5630: RS-422/485
 - NPort@ 5650: RS-232/422/485
- Connectors:** RJ45 (8 pins)
- Serial Line Protection:** 15 KV ESD protection for all signals
- RS-485 Data Direction Control:** ADDC® (automatic data direction control)

Serial Communication Parameters

- Data Bits:** 5, 6, 7, 8
- Stop Bits:** 1, 1.5, 2
- Parity:** None, Even, Odd, Space, Mark
- Flow Control:** DSR/DTR and RTS/CTS (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, HTTP, SMTP, SNTIP, ARP, PPP, SLIP, RTelnet, RFC2217
- Configuration Options:** Web Console, Telnet Console, Windows Utility
- Driver Support:** Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)
- Mini Screen with Push Buttons**
 - LCD Panel:** Liquid Crystal Display on the case
 - Push Buttons:** Four push buttons for convenient on-site configuration

Physical Characteristics

Housing: SECC sheet metal (1 mm), providing IP30 protection

Weight:

NPort® 5610-8: 3340 g
 NPort® 5610-8-48V: 3160 g
 NPort® 5630-8: 3380 g
 NPort® 5650-8: 3360 g
 NPort® 5650-8-S-SC: 3380 g
 NPort® 5650-8-M-SC: 3380 g
 NPort® 5610-16: 3420 g
 NPort® 5610-16-48V: 3260 g
 NPort® 5630-16: 3400 g
 NPort® 5650-16: 3460 g
 NPort® 5650-16-S-SC: 3440 g
 NPort® 5650-16-M-SC: 3440 g

Dimensions:

Without ears: 440 x 45 x 198 mm (17.32 x 1.77 x 7.80 in)
 With ears: 480 x 45 x 198 mm (18.90 x 1.77 x 7.80 in)

Environmental Limits

Operating Temperature: 0 to 55°C (32 to 131°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 75°C (-4 to 167°F)

Power Requirements

Input Voltage:

NPort® 5610/5630/5650: 100 to 240 VAC, 47 to 63 hz
 NPort® 5610-48V: ±48 VDC (20 to 72 VDC, -20 to -72 VDC)

Power Consumption:

NPort® 5610-8/16: 141 mA @ 100 VAC, 93 mA @ 240 VAC
 NPort® 5630-8/16: 152 mA @ 100 VAC, 98 mA @ 240 VAC
 NPort® 5610-8/16-48V: 135 mA @ 48 VDC
 NPort® 5650-8/16: 158 mA @ 100 VAC, 102 mA @ 240 VAC
 NPort® 5650-8/16-S-SC: 164 mA @ 100 VAC, 110 mA @ 240 VAC
 NPort® 5650-8/16-M-SC: 174 mA @ 100 VAC, 113 mA @ 240 VAC

Power Line Protection: 4 KV burst (EN61000-4-4: EFT/B), 2 KV surge (EN61000-4-5)

Regulatory Approvals

EMC: CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A

NPort® 5610 only: IEC61000-4-12

Safety: UL (UL60950-1), TÜV (EN60950-1)

Medical: EN60601-1-2 Class B, EN55011

Reliability

Automatic Reboot Trigger: Built-in WDT (watchdog timer)

MTBF (meantime between failures):

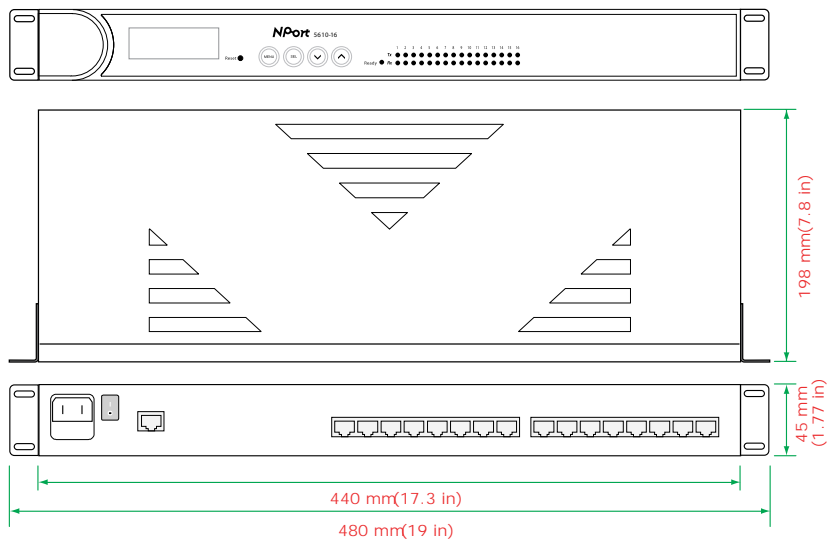
NPort® 5610-8: 97294 hrs
 NPort® 5610-16: 94928 hrs
 NPort® 5610-8-48V: 96758 hrs
 NPort® 5610-16-48V: 94417 hrs
 NPort® 5630-8: 118405 hrs
 NPort® 5630-16: 91483 hrs
 NPort® 5650-8: 117584 hrs
 NPort® 5650-16: 104767 hrs
 NPort® 5650-S-SC-8: 116914 hrs
 NPort® 5650-S-SC-16: 87528 hrs
 NPort® 5650-M-SC-8: 116914 hrs
 NPort® 5650-M-SC-16: 87528 hrs

Warranty

Warranty Period: 5 years

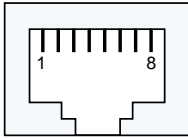
Details: See www.moxa.com/warranty

Dimensions



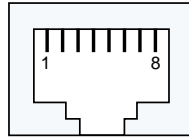
Pin Assignment

NPort® 5610
(RS-232, 8-port RJ45 connector)



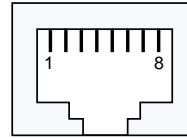
PIN	RS-232
1	DSR
2	RTS
3	GND
4	TXD
5	RxD
6	DCD
7	CTS
8	DTR

NPort® 5630
(RS-422/485, 8-port RJ45 connector)



PIN	RS-422/485-4w	RS-485-2w
1	---	---
2	---	---
3	TxD+	---
4	TxD-	---
5	RxD-	Data+
6	RxD+	Data-
7	GND	GND
8	---	---

NPort® 5650
(RS-232/422/485, 8-port RJ45 connector)



PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TXD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---

Ordering Information

Available Models

NPort® 5610-8: 8-port RS-232 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5610-8-48V: 8-port RS-232 rackmount device server with RJ45 connectors and 48 VDC power input

NPort® 5630-8: 8-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5650-8: 8-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5650-8-M-SC: 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) multi-mode fiber (SC connector)

NPort® 5650-8-S-SC: 8-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) single-mode fiber (SC connector)

NPort® 5610-16: 16-port RS-232 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5610-16-48V: 16-port RS-232 rackmount device server with RJ45 connectors and 48 VDC power input

NPort® 5630-16: 16-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5650-16: 16-port RS-422/485 rackmount device server with RJ45 connectors and 100-240 VAC power input

NPort® 5650-16-M-SC: 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) multi-mode fiber (SC connector)

NPort® 5650-16-S-SC: 16-port RS-232/422/485 rackmount device server with RJ45 connectors and 10/100BaseF(X) single-mode fiber (SC connector)

Optional Accessories (can be purchased separately)

CBL-RJ45F25-150: 8-pin RJ45 to DB25 female cable, 150 cm

CBL-RJ45M25-150: 8-pin RJ45 to DB25 male cable, 150 cm

CBL-RJ45F9-150: 8-pin RJ45 to DB9 female cable, 150 cm

CBL-RJ45M9-150: 8-pin RJ45 to DB9 male cable, 150 cm

Package Checklist

- NPort® 5600 series device server
- Power Cord (see Appendix A)
- Serial cable for configuration
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

NPort® 5600 Desktop Series

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



- > 8 serial ports supporting RS-232/422/485
- > Compact desktop design
- > 10/100M auto-detecting Ethernet
- > Built-in 15 KV ESD protection for all serial signals
- > Easy IP address configuration with LCD panel
- > Choice of configuration methods: Web console, Telnet console, and Windows utility
- > Versatile socket operation modes, including TCP Server, TCP Client, UDP, and Real COM
- > SNMP MIB-II for network management
- > Built-in recorder: Use your own voice as the alert when exceptions occur

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Introduction

NPort® 5600-8-DT device servers can conveniently and transparently connect 8 serial devices to an Ethernet, allowing you to network your existing serial devices with only basic configuration. You can both centralize management of your serial devices and distribute management hosts over the network.

Since the NPort® 5600-8-DT device servers have a smaller form factor compared to our 19" models, they are a great choice for applications that need additional serial ports, but for which mounting rails are not available.

Convenient Design for RS-485 Applications

The NPort® 5650-8-DT device servers support selectable 1K-ohm and 150K-ohm pull high/low resistors and a 120-ohm terminator. 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 with all environments, NPort® 5600-8-DT device servers use DIP switches to allow users to adjust termination and pull high/low resistor values manually for each serial port.

Convenient Power Inputs

The NPort® 5650-8-DT device servers support both a power terminal block and power jack for ease of use and greater flexibility. Users can

connect the terminal block directly to a DC power source, or use the power jack to connect to an AC circuit through an adaptor.

LED Indicators to Ease Your Maintenance Tasks

The System LED, Serial Tx/Rx LEDs, and Ethernet LEDs (located on the RJ45 connector) provide a great tool for basic maintenance tasks and help engineers analyze problems in the field. The NPort® 5600's LEDs

not only indicate current system and network status, but also help field engineers monitor the status of attached serial devices.

Two Ethernet Ports for Convenient Cascade-style Wiring

The NPort® 5600-8-DT device servers come with two Ethernet ports that can be used as Ethernet switch ports. Connect one port to the network or server, and the other port to another Ethernet device. The

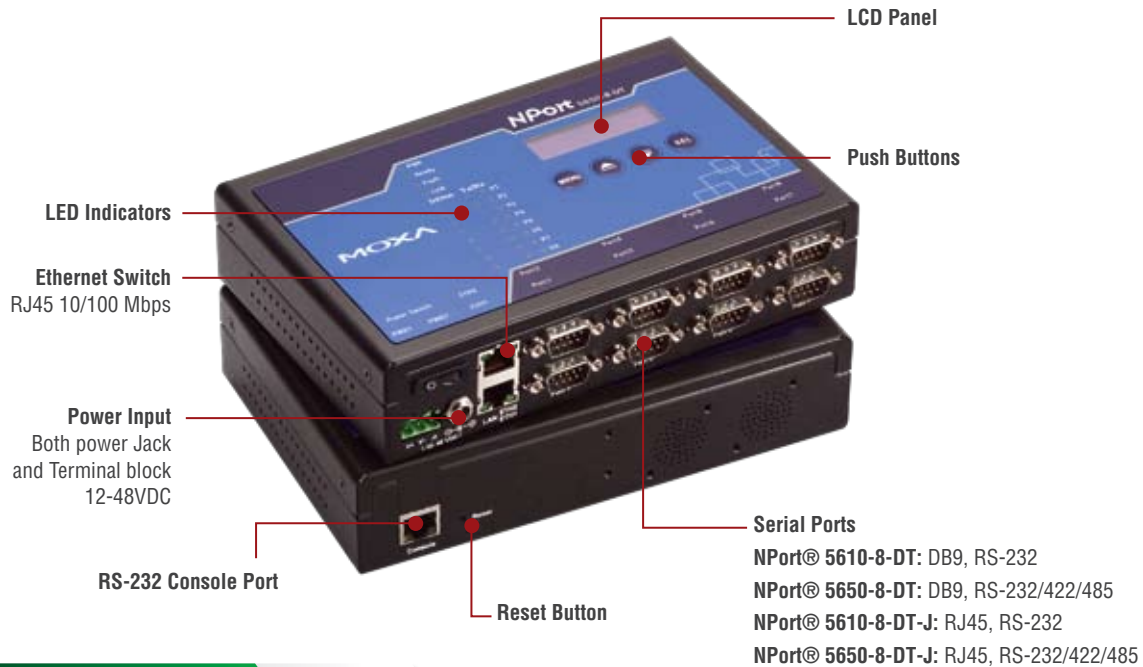
dual Ethernet ports eliminate the need to connect each device to a separate Ethernet switch, reducing wiring costs.

: Automatic Warning Function by Speaker and/or E-mail

The built-in speakers can be used to alert administrators of problems with the Ethernet links or power input. The web console indicates which Ethernet link or power input has failed. An e-mail warning can

also be issued when an exception is detected. These functions are valuable tools that enable maintenance engineers to react promptly to emergency situations.

: Appearance



: Specifications

Ethernet Interface

Number of Ports: 2
Speed: 10/100 Mbps
Connector: 8-pin RJ45
Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Number of Ports: 8
Serial Standards:
 NPort® 5610-8-DT: RS-232
 NPort® 5650-8-DT: RS-232/422/485

Connectors:

NPort® 5610-8-DT/5650-8-DT/5650I-8-DT: DB9 male
 NPort® 5610-8-DT-J/5650-8-DT-J: RJ45 (8 pins)

Serial Line Protection:

15 KV ESD protection for all signals
 2 KV isolation protection (NPort® 5650I-8-DT only)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

Serial Communication Parameters

Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: DSR/DTR and RTS/CTS (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, HTTP, SMTP, SNT, Rtelnet, ARP, RFC2217

Configuration Options: Web Console, Telnet Console, Windows Utility

Driver Support: Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Mini Screen with Push Buttons

LCD Panel: Liquid Crystal Display on the case

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

Physical Characteristics

Housing: SECC sheet metal (0.8 mm), providing IP30 protection

Weight:

NPort® 5610-8-DT: 1760 g

NPort® 5610-8-DT-J: 1170 g

NPort® 5650-8-DT: 1770 g

NPort® 5650-8-DT-J: 1710 g

NPort® 5650I-8-DT: 1850 g

Dimensions:

Without ears: 197 x 44 x 135.5 mm (7.76 x 1.73 x 5.33 in)

With ears: 229 x 46 x 135.5 mm (9.01 x 1.81 x 5.33 in)

With DIN-Rail kit on bottom panel: 197 x 53 x 135.5 mm (7.76 x 2.09 x 5.33 in)

Environmental Limits

Operating Temperature: 0 to 55°C (32 to 131°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 70°C (-4 to 158°F)

Power Requirements

Input Voltage: 12 to 48 VDC

Power Consumption:

NPort® 5610-8-DT: 621 mA @ 12 V, 140 mA @ 48 V

NPort® 5610-8-DT-J: 621 mA @ 12 V, 140 mA @ 48 V

NPort® 5650-8-DT: 580 mA @ 12 V, 156 mA @ 48 V

NPort® 5650I-8-DT: 1066 mA @ 12 V, 200 mA @ 48 V

NPort® 5650-8-DT-J: 580 mA @ 12 V, 156 mA @ 48 V

Regulatory Approvals

EMC: CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A

Safety: UL (UL60950-1), TÜV (EN60950-1)

Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock)

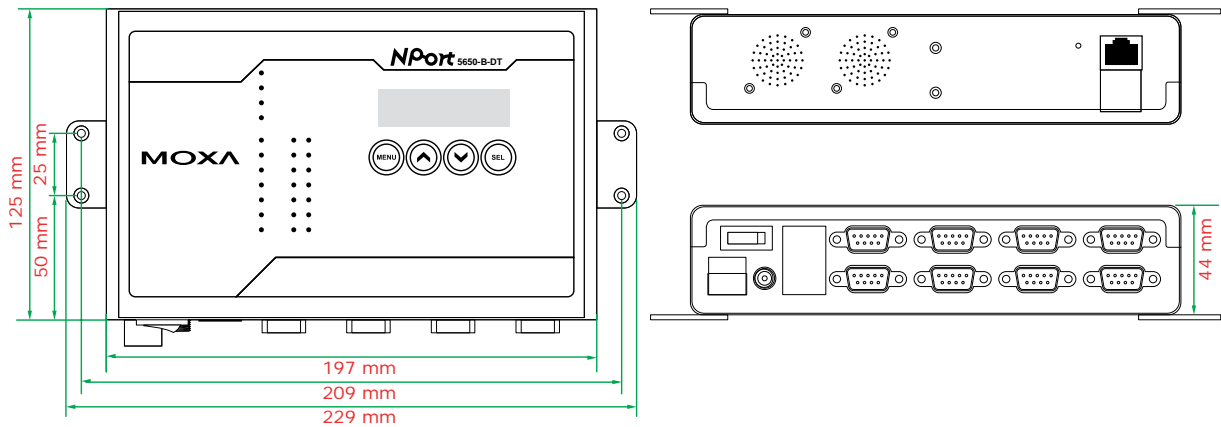
Automatic Reboot Trigger: Built-in WDT (watchdog timer)

Warranty

Warranty Period: 5 years

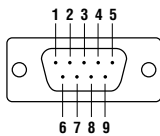
Details: See www.moxa.com/warranty

Dimensions



Pin Assignment

DB9 male connector



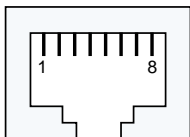
NPort® 5610-8-DT (RS-232)

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

NPort® 5650-8-DT/5650I-8-DT (RS-232/422/485)

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	-	-

8-pin RJ45 connector



NPort® 5610-8-DT-J (RS-232)

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

NPort® 5650-8-DT-J (RS-232/422/485)

PIN	RS-232	RS-422/485-4w	RS-485-2w
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TXD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---

: Ordering Information

Available Models

NPort® 5610-8-DT: 8-port RS-232 desktop device server with DB9 male connectors and 48 VDC power input

NPort® 5610-8-DT-J: 8-port RS-232 desktop device server with RJ45 connectors and 48 VDC power input

NPort® 5650-8-DT: 8-port RS-232/422/485 desktop device server with DB9 male connectors and 48 VDC power input

NPort® 5650I-8-DT: 8-port RS-232/422/485 desktop device server with DB9 male connectors, 48 VDC power input, and 2 KV optical isolation

NPort® 5650-8-DT-J: 8-port RS-232/422/485 desktop device server with RJ45 connectors and 48 VDC power input

Optional Accessories (can be purchased separately)

CBL-RJ45F25-150: 8-pin RJ45 to DB25 female cable, 150 cm

CBL-RJ45M25-150: 8-pin RJ45 to DB25 male cable, 150 cm

CBL-RJ45F9-150: 8-pin RJ45 to DB9 female cable, 150 cm

CBL-RJ45M9-150: 8-pin RJ45 to DB9 male cable, 150 cm

Package Checklist

- NPort® 5600 series device server
- Power Adaptor (see Appendix A)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

NPort® IA5000 Series

1 and 2-port serial device servers for industrial automation



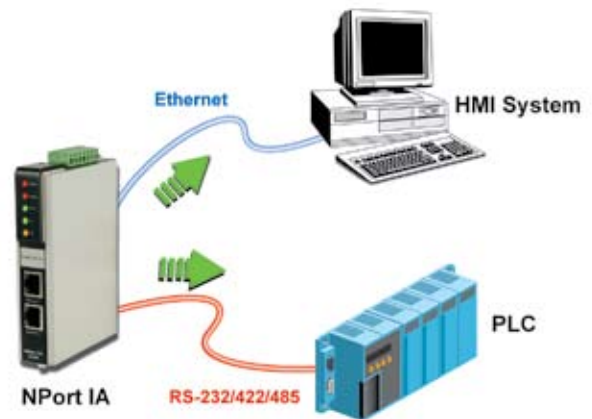
- > Versatile socket operation modes, including TCP Server, TCP Client, UDP
- > Patented ADDC® (automatic data direction control) for 2-wire and 4-wire RS-485
- > Cascading Ethernet ports for easy wiring (applies only to RJ45 connectors)
- > Redundant DC power inputs
- > Warning by relay output and e-mail
- > 10/100BaseTX (RJ45) or 100BaseFX (single mode or multi-mode with SC connector)
- > IP30-rated housing

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



Overview

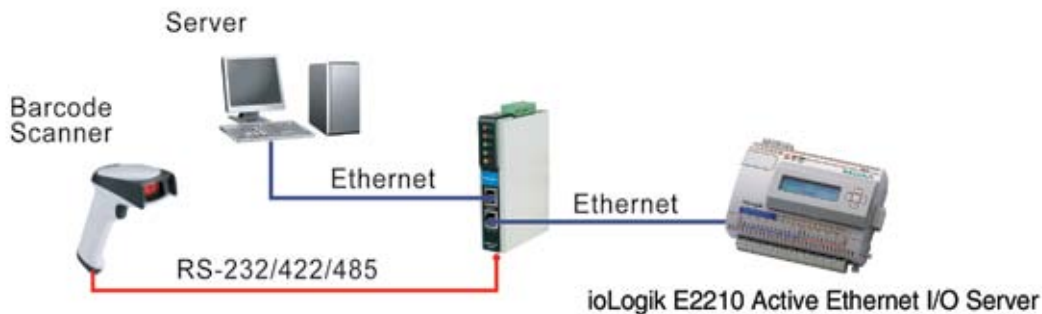
NPort® IA device servers provide easy and reliable serial-to-Ethernet connectivity for industrial automation applications. The device servers can connect any serial device to an Ethernet network, and to ensure compatibility with network software, they support a variety of port operation modes, including TCP Server, TCP Client, and UDP. The rock-solid reliability of the NPort® IA device servers makes them an ideal choice for establishing network access to RS-232/422/485 serial devices such as PLCs, sensors, meters, motors, drives, barcode readers, and operator displays. All models are housed in a compact, rugged housing that is DIN-rail mountable.



Cascading Ethernet Ports Make Wiring Easy (10/100BaseTX models only)

The NPort® IA5150 and IA5250 device servers each have two Ethernet ports that can be used as Ethernet switch ports. One port connects directly to the network or server, and the other port can be connected to another NPort® IA device server or another Ethernet device. The

dual Ethernet ports help reduce wiring costs by eliminating the need to connect each device to a separate Ethernet switch.



Redundant Power Inputs

The NPort® IA5000 device servers have two power inputs that can be connected simultaneously to live DC power sources. If one power

source fails, the other source takes over automatically. Redundant power inputs help assure non-stop operation of your device server.

Dual Power Inputs



Power Failure Alarm



Relay Output Warning and E-mail Alerts

The built-in relay output can be used to alert administrators of problems with the Ethernet links or power inputs, or when there is a change in the DCD or DSR serial signals. The web console indicates which Ethernet link or power input has failed, or which serial signal has changed. An e-mail warning can also be issued when an exception is detected. These functions are valuable tools that enable maintenance engineers to react promptly to emergency situations.



Optical Fiber for Ethernet Communication

The NPort® IA5000 series includes 100BaseFX fiber models that support transmission distances up to 2 km for multi-mode models, and up to 40 km for single-mode models. Optical fiber is well-suited for industrial applications because it is immune to electromagnetic

noise and interference. For environments that experience high ground loop voltages, fiber provides the best isolation protection, and because there is no danger of sparking, optical fiber is safer than copper wire to use in hazardous environments.

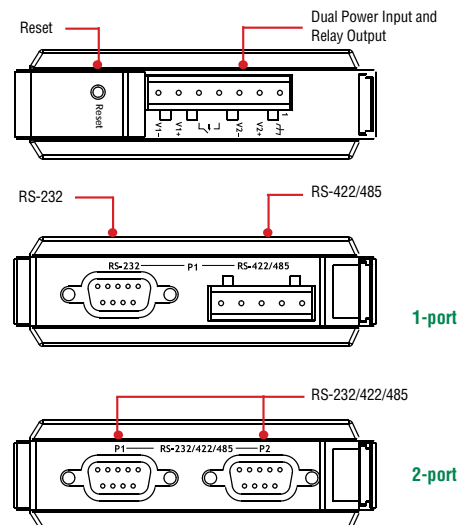
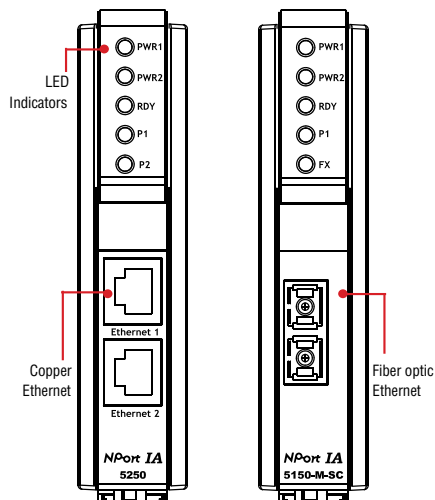
Industrial-grade Certification

To ensure safe and reliable operation in industrial environments, the NPort® IA5000 device servers have obtained various industrial certifications, including an IP30 rating for mechanical protection, UL508 safety certification for industrial control equipment, and

explosion-safe certifications for hazardous locations. Certifications include UL/cUL Class 1 Division 2 Groups A, B, C, D, and ATEX Class 1 Zone 2.



Appearance



Specifications

Ethernet Interface (NPort® IA5150/5150I/5250)

Number of Ports: 2

Speed: 10/100 Mbps, Auto MDI/MDIX

Connector: 8-pin RJ45

Magnetic Isolation Protection: 1.5 KV built-in

Optical Fiber Interface (NPort® IA5150-M-SC/5150I-M-SC/5150-S-SC/5150I-S-SC)

Fiber Port: 100 BaseFX, SC connector

Distance:

Multi mode: 0 to 2 km, 1310 nm (62.5/125 μm, 500 MHz*km)

Single mode: 0 to 40 km, 1310 nm (9/125 μm, 3.5 PS/(nm*km))

Min. TX Output: -20 dBm (Multi mode), -5 dBm (Single mode)

Max. TX Output: -14 dBm (Multi mode), 0 dBm (Single mode)

Sensitivity: -34 to -30 dBm (Multi mode), -36 to -32 dBm (Single mode)

Serial Interface

Number of Ports:

NPort® IA5150: 1

NPort® IA5250: 2

Serial Standards: RS-232/422/485

Connectors:

NPort® IA5150: 8-pin RJ45 for RS-232, Terminal Block for RS-422/485

NPort® IA5250: Terminal Block (5 terminals per port)

ESD Protection: 15 KV for all signals

Optical Isolation Protection: 2 KV (NPort® IA5150I, NPort® 5150I-M-SC, NPort® 5150I-S-SC)

RS-485 Data Direction Control: ADDC® (automatic data direction control)

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 (RS-232 only), XON/XOFF

Baudrate: 110 bps to 230.4 Kbps

Serial Signals

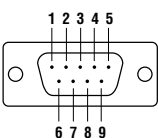
RS-232:

NPort® IA5150: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

NPort® IA5250: TxD, RxD, RTS, CTS, GND

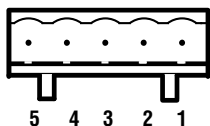
Pin Assignment

RS-232/422/485
DB9 male port



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	–	–

RS-422/485 Terminal
Block Wiring



PIN	RS-422/RS-485-4w	RS-485-2w
1	TxD+(B)	–
2	TxD-(A)	–
3	RxD+(B)	Data+(B)
4	RxD-(A)	Data-(A)
5	GND	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, Rtelnet, DNS, SNMP, HTTP, SMTP, SNTp

Configuration Options: Web Console, Serial Console, Telnet Console, Windows Utility

Driver Support: Windows Real COM driver (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, Fixed TTY driver (for 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)

Physical Characteristics

Housing: IP30 protection

Weight:

NPort® IA5150: 360 g

NPort® IA5250: 380 g

Dimensions: 29 x 89.2 x 118.5 mm (0.82 x 3.51 x 4.57 in)

Environmental Limits

Operating Temperature:

NPort® IA5150/5250: 0 to 55°C (32 to 131°F)

NPort® IA5150-T/5250-T: -40 to 75°C (-40 to 167°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 85°C (-4 to 185°F)

Power Requirements

Input Voltage: 12 to 48 VDC

Power Consumption:

NPort® IA5150: 360 mA @ 12V max.

NPort® IA5150I: 420 mA @ 12V max.

NPort® IA5250: 440 mA @ 12V max.

NPort® IA5150-S-SC: 470 mA @ 12V max.

NPort® IA5150I-S-SC: 490 mA @ 12V max.

NPort® IA5150-M-SC: 500 mA @ 12V max.

NPort® IA5150I-M-SC: 510 mA @ 12V max.

Regulatory Approvals

Safety: UL60950 (E212360), UL 508, CSA C22.2 No. 60950, EN60950

Hazardous Location: UL/cUL Class I, Division 2, Groups A, B, C and D (E238559) (pending)

ATEX: Class I, Zone 2, EEx nC IIC (03CA24537) (pending)

Marine: DNV

EMI: FCC Part 15, CISPR (EN55022) Class A

EMS:

EN61000-4-2 (ESD), Level 3

EN61000-4-3 (RS), Level 3

EN61000-4-4 (EFT), Level 4

EN61000-4-5 (Surge), Level 3

EN61000-4-6 (CS), Level 3

EN61000-4-8

EN61000-4-11

EN61000-4-12

Shock: IEC60068-2-27

Freefall: IEC60068-2-32

Vibration: IEC60068-2-6

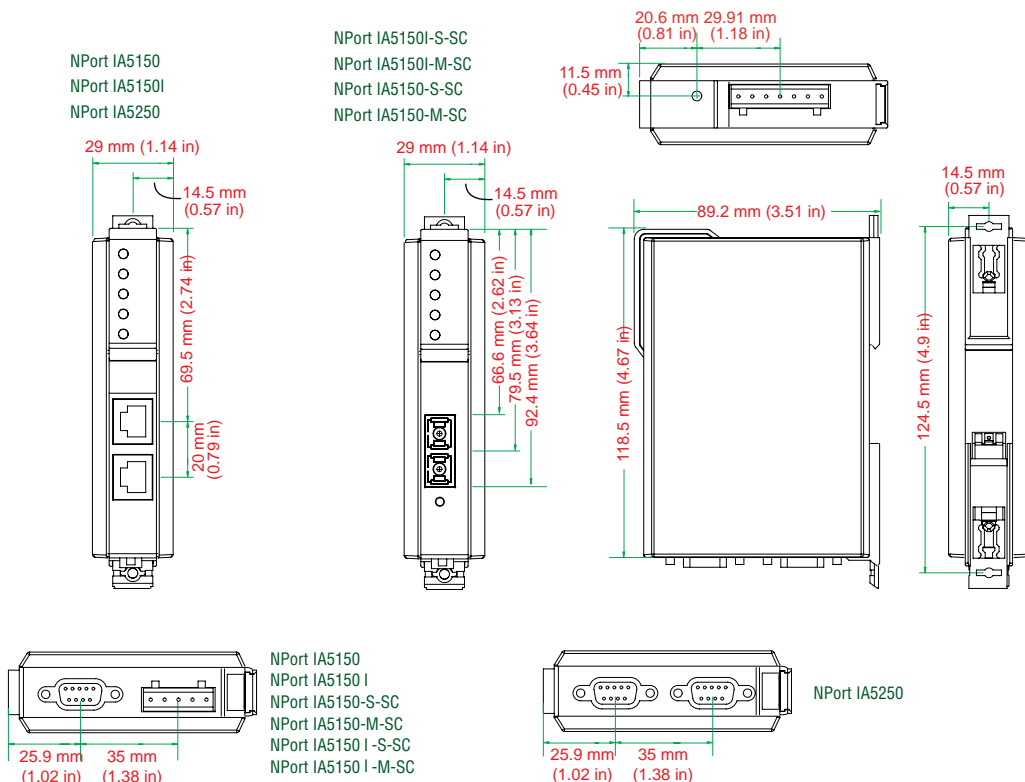
Dust-proof: IP30

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Ordering Information

Available Models

- NPort® IA5150:** 1-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP)
- NPort® IA5150-T:** 1-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP), wide temperature (-40 to 75°C)
- NPort® IA5150I:** 1-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP) and 2 KV optical isolation
- NPort® IA5150I-T:** 1-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP) and 2 KV optical isolation, wide temperature (-40 to 75°C)
- NPort® IA5150-M-SC:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) multi-mode fiber (SC connectors) ports
- NPort® IA5150-M-SC-T:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) multi-mode fiber (SC connectors) ports, wide temperature (-40 to 75°C)
- NPort® IA5150I-M-SC:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) multi-mode fiber (SC connectors) ports and 2 KV optical isolation
- NPort® IA5150I-M-SC-T:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) multi-mode fiber (SC connectors) ports and 2 KV optical isolation, wide temperature (-40 to 75°C)
- NPort® IA5150-S-SC:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) single-mode fiber (SC connectors) ports
- NPort® IA5150-S-SC-T:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) single-mode fiber (SC connectors) ports, wide temperature (-40 to 75°C)
- NPort® IA5150I-S-SC:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) single-mode fiber (SC connectors) ports and 2 KV optical isolation
- NPort® IA5150I-S-SC-T:** 1-port RS-232/422/485 device server with 2 10/100BaseF(X) single-mode fiber (SC connectors) ports and 2 KV optical isolation, wide temperature (-40 to 75°C)
- NPort® IA5250:** 2-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP)
- NPort® IA5250-T:** 2-port RS-232/422/485 device server with 2 10/100BaseT(X) ports (RJ45 connectors, single IP), wide temperature (-40 to 75°C)

Optional Accessories (can be purchased separately)

- Optical Fiber Patch Cord:** See page A-14
- Terminal Block for RS-422/485 ports:** See page A-7
- Power Jack to Terminal Block Cable:** See page A-7

Package Checklist

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

