

# NPort P5150A Series

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



### Features and Benefits

- IEEE 802.3af-compliant PoE power device equipment
- Speedy 3-step web-based configuration
- Surge protection for serial, Ethernet, and power
- COM port grouping and UDP multicast applications
- Screw-type power connectors for secure installation
- Real COM and TTY drivers for Windows, Linux, and macOS
- Standard TCP/IP interface and versatile TCP and UDP operation modes

### Certifications



## Introduction

NPort® P5150A device servers are designed to make serial devices network-ready in an instant. It is a power device and is IEEE 802.3af compliant, so it can be powered by a PoE PSE device without an additional power supply. Use the NPort® P5150A device servers to give your PC software direct access to serial devices from anywhere on the network. The NPort® P5150A device servers are ultra-lean, ruggedized, and user-friendly, making simple and reliable serial-to-Ethernet solutions possible.

### Surge Protection for Serial, Ethernet, and Power

Surge, which is typically caused by high voltages that result from switching and lightning transients, is a common threat to all electrical devices. Moxa's leading-edge surge immunity solution, which is applied to the NPort® P5150A's serial, power, and Ethernet lines, is tested and proven compliant with IEC 61000-4-5. This state-of-the-art surge protection provides a robust serial-to-Ethernet solution that can protect electrical devices from voltage spikes and withstand electrically noisy environmental conditions.

### 3-Step Web-based Configuration

The NPort® P5150A's 3-step web-based configuration tool is straightforward and user-friendly. The NPort® P5150A's web console guides users through 3 simple configuration steps that are necessary to activate the serial-to-Ethernet application. With this speedy 3-step web-based configuration, a user only needs to spend an average of 30 seconds to complete the NPort® settings and enable the application, saving a great amount of time and effort.

### Easy to Troubleshoot

NPort® P5150A device servers support SNMP, 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 email 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 password change.

Appearance



Specifications

Ethernet Interface

|                                       |                    |
|---------------------------------------|--------------------|
| 10/100BaseT(X) Ports (RJ45 connector) | 1                  |
| Magnetic Isolation Protection         | 1.5 kV (built-in)  |
| Standards                             | PoE (IEEE 802.3af) |

Ethernet Software Features

|                             |                                                                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Configuration Options       | Web Console (HTTP/HTTPS)<br>Windows Utility<br>Device Search Utility (DSU)<br>Telnet Console<br>Serial Console<br>MCC Tool                                                                        |
| Management                  | ARP<br>BOOTP<br>DHCP Client<br>DNS<br>HTTP<br>HTTPS<br>ICMP<br>IPv4<br>LLDP<br>SMTP<br>SNMPv1/v2c<br>TCP/IP<br>Telnet<br>UDP                                                                      |
| Filter                      | IGMP v1/v2                                                                                                                                                                                        |
| Windows Real COM Drivers    | Windows 11, 10, 8.1, 8, 7, Vista, XP, ME, 98, and 95<br>Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008, 2003, 2000, and NT<br>Windows Embedded CE 5.0 and 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: 14, 13, 12, 11, and 10.1x<br>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 | Windows 11<br>Linux Kernel 6.x, 5.x, and 4.x                                                                                                                                                      |

|                 |                                                                                                                                                             |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | macOS 14, 13, 12, and 11                                                                                                                                    |
| Virtual Machine | VMWare ESXi (Windows 11/10)<br>VMware Fusion (Windows on macOS 14, 13, 12, 11, and 10.1x)<br>Parallels Desktop (Windows on macOS 14, 13, 12, 11, and 10.1x) |
| Android API     | Android 3.1.x and later                                                                                                                                     |
| MIB             | RFC1213, RFC1317                                                                                                                                            |

#### Serial Interface

|                                   |                                                                                                                                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connector                         | DB9 male                                                                                                                                                         |
| No. of Ports                      | 1                                                                                                                                                                |
| Serial Standards                  | RS-232<br>RS-422<br>RS-485                                                                                                                                       |
| Operation Modes                   | Disabled<br>Ethernet Modem<br>Pair Connection<br>Real COM<br>Reverse Telnet<br>RFC2217<br>TCP Client<br>TCP Server<br>UDP                                        |
| 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<br>DTR/DSR<br>XON/XOFF                                                                                                                                   |
| Pull High/Low Resistor for RS-485 | 1 kilo-ohm, 150 kilo-ohms                                                                                                                                        |
| RS-485 Data Direction Control     | Automatic Data Direction Control (ADDC)                                                                                                                          |

#### 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         | DC Jack I/P: 125 mA @ 12 VDC<br>PoE I/P: 180 mA @ 48 VDC             |
| Input Voltage         | 12 to 48 VDC (supplied by power adapter)<br>48 VDC (supplied by PoE) |
| No. of Power Inputs   | 1                                                                    |
| Source of Input Power | Power input jack<br>PoE                                              |

## Reliability

|                          |              |
|--------------------------|--------------|
| Automatic Reboot Trigger | Built-in WDT |
|--------------------------|--------------|

## Physical Characteristics

|                           |                                           |
|---------------------------|-------------------------------------------|
| Housing                   | Metal                                     |
| Dimensions (with ears)    | 100 x 111 x 26 mm (3.94 x 4.37 x 1.02 in) |
| Dimensions (without ears) | 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)  |
| Weight                    | 300 g (0.66 lb)                           |

## Environmental Limits

|                                        |                                                                                     |
|----------------------------------------|-------------------------------------------------------------------------------------|
| Operating Temperature                  | NPort P5150A: 0 to 60°C (32 to 140°F)<br>NPort P5150A-T: -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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF<br>IEC 61000-4-11 |
| Safety | EN 62368-1<br>UL 60950-1                                                                                                                                                                                                                                                                       |

## MTBF

|           |                                     |
|-----------|-------------------------------------|
| Time      | 2,231,530 hrs                       |
| Standards | Telcordia (Bellcore) Standard TR/SR |

## Warranty

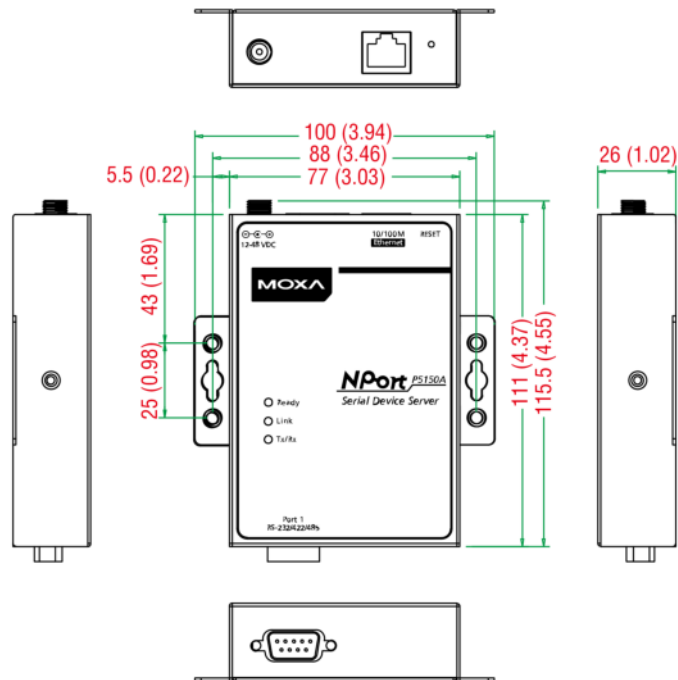
|                 |                                                                      |
|-----------------|----------------------------------------------------------------------|
| Warranty Period | 5 years                                                              |
| Details         | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a> |

## Package Contents

|               |                                                   |
|---------------|---------------------------------------------------|
| Device        | 1 x NPort P5150A Series device server             |
| Documentation | 1 x quick installation guide<br>1 x warranty card |

## Dimensions

Unit: mm (inch)



## Ordering Information

| Model Name     | Operating Temp. | Baudrate             | Serial Standards | No. of Serial Ports | Input Voltage                               |
|----------------|-----------------|----------------------|------------------|---------------------|---------------------------------------------|
| NPort P5150A   | 0 to 60°C       | 50 bps to 921.6 kbps | RS-232/422/485   | 1                   | 12-48 VDC by power adapter or 48 VDC by PoE |
| NPort P5150A-T | -40 to 75°C     | 50 bps to 921.6 kbps | RS-232/422/485   | 1                   | 12-48 VDC by power adapter or 48 VDC by PoE |

## Accessories (sold separately)

### Cables

|              |                                            |
|--------------|--------------------------------------------|
| CBL-F9M9-150 | DB9 female to DB9 male serial cable, 1.5 m |
| CBL-F9M9-20  | DB9 female to DB9 male serial cable, 20 cm |

### 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-12050-USJP-S1 | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature |
| PWR-12050-EU-S1   | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature    |
| PWR-12050-CN-S1   | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature    |
| PWR-12050-UK-S1   | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature    |
| PWR-12050-AU-S1   | Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature    |
| PWR-12150-AU-SA-T | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature  |
| PWR-12150-CN-SA-T | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature  |

|                     |                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------|
| PWR-12150-EU-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature   |
| PWR-12150-UK-SA-T   | Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature   |
| PWR-12150-USJP-SA-T | Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature |

#### Power Cords

|                     |                                        |
|---------------------|----------------------------------------|
| CBL-PJ21NOPEN-BK-30 | Locking barrel plug to bare-wire cable |
|---------------------|----------------------------------------|

© Moxa Inc. All rights reserved. Updated Mar 26, 2024.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.