



Manuals.plus /

› Moxa /

› MOXA NPort 5430I 4-Port Serial Device Server User Manual

Moxa NPort 5430I

MOXA NPort 5430I 4-Port Serial Device Server User Manual

Model: NPort 5430I

1. INTRODUCTION

The MOXA NPort 5430I is a robust 4-port serial device server designed to connect RS-422/485 serial devices to an Ethernet network. It enables centralized management and access to serial devices from any network location, facilitating data communication and control in industrial automation, remote monitoring, and data acquisition applications. This model features 2 KV isolation for enhanced protection against electrical interference, ensuring reliable operation in demanding environments. Please note that a power adapter is not included with this unit.



Figure 1: Front view of the Moxa NPort 5430I device server. This image displays the MOXA logo, the model name NPort 5430I, status indicator LEDs (Ready, Ethernet, P1-P4), an LCD display for configuration, control buttons (MENU, up arrow, down arrow, SEL), and four green serial port connectors labeled P1 through P4 at the bottom of the unit.

2. SETUP AND INSTALLATION

2.1 Physical Installation

- Mounting:** Securely mount the NPort 5430I in a suitable location, such as a DIN-rail or wall, using the appropriate mounting kit (sold separately if not included). Ensure adequate ventilation around the device.
- Connect Serial Devices:** Connect your RS-422/485 serial devices to the NPort's P1, P2, P3, and P4 serial ports using appropriate cabling. Refer to your serial device's documentation for correct wiring.
- Connect to Ethernet Network:** Connect an Ethernet cable from your network switch or router to the Ethernet port on the NPort 5430I.
- Connect Power:** Connect a compatible DC power supply (not included) to the power input terminal block. Ensure the power supply meets the voltage and current requirements specified in the device's full technical specifications.

2.2 Initial Configuration

After physical installation, the NPort 5430I requires network configuration. This can typically be done via a web browser or Moxa's NPort Administrator utility.

- Web Console:** Open a web browser and enter the device's default IP address (refer to the device's label or quick installation guide for the default IP, commonly 192.168.1.254). Log in using the default credentials (e.g., username: admin, password: moxa).
- NPort Administrator Utility:** Install the NPort Administrator utility on a connected PC. The utility can discover

NPort devices on the network and allow for initial IP address assignment and configuration.

- **Configure Network Settings:** Set the device's IP address, subnet mask, and gateway to match your network's configuration.
- **Configure Serial Port Settings:** For each serial port (P1-P4), configure parameters such as baud rate, data bits, parity, stop bits, and flow control to match the connected serial device.

3. OPERATION

3.1 Status Indicators

The NPort 5430I features several LED indicators on its front panel to provide real-time status information:

- **Ready LED:** Indicates the device's operational status. A steady green light typically means the device is powered on and functioning correctly.
- **Ethernet LED:** Indicates Ethernet link status and activity. A steady light indicates a valid link, while blinking indicates data transmission.
- **P1-P4 LEDs:** Each serial port (P1 through P4) has an associated LED. These LEDs typically indicate serial data transmission (Tx) and reception (Rx) activity for their respective ports.

3.2 Operating Modes

The NPort 5430I supports various operating modes to suit different application requirements:

- **Real COM Mode:** Allows serial devices to be accessed as standard COM ports on a network-connected PC, ideal for legacy serial applications.
- **TCP Server/Client Mode:** Enables direct TCP/IP communication between the NPort and other network devices.
- **UDP Mode:** Supports UDP communication for applications requiring connectionless data transfer.
- **Pair Connection Mode:** Establishes a direct serial-to-serial connection over the Ethernet network between two NPort devices.

Detailed configuration for each mode is available through the web console or NPort Administrator utility.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your NPort 5430I device server.

- **Cleaning:** Periodically clean the exterior of the device with a soft, dry cloth. Do not use liquid or aerosol cleaners. Ensure ventilation openings are free from dust and debris.
- **Firmware Updates:** Check the official Moxa website regularly for firmware updates. Keeping the firmware up-to-date can improve performance, add new features, and address security vulnerabilities. Follow the provided instructions carefully when performing firmware updates.
- **Environmental Conditions:** Ensure the device operates within its specified temperature and humidity ranges. Avoid exposing the device to excessive heat, cold, or moisture.
- **Cable Integrity:** Periodically inspect all connected cables (serial, Ethernet, power) for any signs of damage or wear. Replace damaged cables immediately.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with the NPort 5430I.

Problem	Possible Cause	Solution
Device does not power on.	No power supply connected, incorrect power supply, or faulty power cable.	Verify power supply connection and ensure it meets specifications. Check power cable for damage.
Ethernet LED is off.	No Ethernet cable connected, faulty cable, or network issue.	Ensure Ethernet cable is securely connected. Try a different cable or network port. Check network switch/router status.
Cannot access device via web browser.	Incorrect IP address, network configuration mismatch, or firewall blocking access.	Verify the device's IP address. Ensure your PC is on the same subnet. Temporarily disable PC firewall for testing. Use NPort Administrator utility to discover.
Serial communication failure.	Incorrect serial port settings (baud rate, parity, etc.), incorrect wiring, or faulty serial device.	Check and match serial port settings on the NPort and the connected device. Verify RS-422/485 wiring. Test with a known working serial device.
Device unresponsive.	Software error or system hang.	Perform a power cycle (disconnect and reconnect power). If issue persists, consider a factory reset (refer to full manual for procedure).

6. SPECIFICATIONS

Attribute	Value
Model	NPort 5430I
Manufacturer	MOXA
Serial Ports	4 (RS-422/485)
Ethernet Interface	10/100BaseT(X) auto-sensing
Isolation	2 KV (serial ports)
Power Input	Terminal block (power adapter not included)
Item Weight	9.99 pounds
ASIN	B07K1L6VTQ
Date First Available	October 30, 2018

7. WARRANTY AND SUPPORT

For detailed warranty information regarding your MOXA NPort 5430I, please refer to the warranty card included with your purchase or visit the official Moxa website. Warranty terms and conditions may vary by region and product. For technical support, product documentation, drivers, and firmware updates, please visit the official Moxa support website:

<https://www.moxa.com/support>

When contacting support, please have your product model (NPort 5430I) and serial number ready.

