

Moxa MOXA-5230

MOXA NPort 5230 Series Device Server User Manual

Model: MOXA-5230

1. INTRODUCTION

This user manual provides comprehensive instructions for the installation, operation, and maintenance of the MOXA NPort 5230 Series serial device server. The NPort 5230 is designed to connect industrial serial devices, such as PLCs, meters, and sensors, to an IP-based Ethernet LAN, enabling software access to these devices from anywhere on a local LAN or the Internet.

Please read this manual thoroughly before operating the device to ensure proper usage and to prevent damage.

2. SETUP AND INSTALLATION

2.1 Package Contents

- MOXA NPort 5230 Device Server
- Power Adapter (if included)
- Quick Installation Guide
- Documentation CD (or link to online resources)

2.2 Physical Installation

The NPort 5230 features a compact design suitable for panel mounting. Its dimensions are approximately 9 x 7 x 3 inches, and it weighs about 12 ounces. Ensure adequate ventilation around the device.



Figure 1: Front view of the MOXA NPort 5230 Device Server, showing the MOXA logo, LED indicators, Ethernet port, and serial ports (P1 RS-232, P2 RS-485/422) with terminal blocks.



Figure 2: Angled view of the MOXA NPort 5230 Device Server, providing a better perspective of the side mounting brackets and the terminal block connections for power and serial ports.

2.3 Power Connection

Connect the power supply to the device. The NPort 5230 operates with a voltage range of 12-48V DC, typically 120 Volts AC via an external adapter (if applicable). Ensure the power source matches the device's requirements.

2.4 Network Connection

Connect a standard Ethernet cable (RJ45) from your network switch or router to the 10/100M Ethernet port on the NPort 5230.

2.5 Serial Port Connections

The device features two serial ports with screw or clamp type terminal block connectors:

- **P1 RS-232 Port:** For connecting RS-232 compatible devices.
- **P2 RS-422/485 Port:** For connecting RS-422 or RS-485 compatible devices. This port supports Automatic Data Direction Control (ADDC) for 2-wire and 4-wire RS-485 configurations.

Ensure correct wiring based on your serial device's pinout and the NPort 5230's terminal block labels (Tx, Rx, RTS, CTS, GND for RS-232; T+, T-, R+, R-, GND for RS-422/485).

2.6 Initial Configuration

Use the easy-to-use Windows utility provided by MOXA for configuring multiple device servers. This utility allows you to set IP addresses, serial port parameters, and operating modes.

3. OPERATION

3.1 LED Indicators

The NPort 5230 has several LED indicators to show its status:

- **Ready:** Indicates the device is powered on and ready for operation.
- **Link:** Indicates an active Ethernet link.
- **P1:** Indicates activity on serial port 1 (RS-232).
- **P2:** Indicates activity on serial port 2 (RS-422/485).

3.2 Socket Modes

The NPort 5230 supports various socket modes for flexible network communication:

- **TCP Server:** The NPort listens for incoming TCP connections from host computers.
- **TCP Client:** The NPort initiates a TCP connection to a specified host computer.
- **UDP:** The NPort sends and receives data using UDP, a connectionless protocol.

3.3 Automatic Data Direction Control (ADDC)

For RS-485 communication on port P2, the NPort 5230 features ADDC. This intelligent technology automatically detects the direction of data flow, eliminating the need for manual control signals and simplifying RS-485 network setup.

4. MAINTENANCE

4.1 General Care

Keep the device in a clean, dry environment. Avoid exposing it to extreme temperatures, humidity, or direct sunlight. The upper temperature rating for operation is 55 degrees Celsius.

4.2 Cleaning

To clean the device, gently wipe the exterior with a soft, dry cloth. Do not use liquid cleaners or aerosols, as they may damage the internal components.

5. TROUBLESHOOTING

5.1 Common Issues and Solutions

- **No Power/Device Not Responding:**
 - Check power connections and ensure the power adapter is functioning.
 - Verify the power source voltage is within the 12-48V DC range.
- **No Network Link:**
 - Ensure the Ethernet cable is securely connected to both the NPort and the network device.
 - Check the "Link" LED indicator. If off, there might be a cable or network issue.
 - Verify network settings (IP address, subnet mask) using the configuration utility.

- **Serial Communication Failure:**

- Check serial cable connections and pinouts.
- Verify serial port settings (baud rate, data bits, parity, stop bits) match the connected device.
- Observe P1/P2 LEDs for data activity.
- For RS-485, ensure ADDC is functioning correctly or check wiring for 2-wire vs. 4-wire setup.

- **Device Unresponsive (Software):**

- Try resetting the device using the "RESET" button (refer to device diagram for location). A paperclip or similar tool may be needed.
- Re-run the MOXA configuration utility to re-detect and reconfigure the device.

6. SPECIFICATIONS

Feature	Detail
Model Number	MOXA-5230
Ports	1 x RS-232, 1 x RS-422/485, 1 x 10/100M Ethernet
Connector Type	Screw Or Clamp (Serial), RJ45 (Ethernet)
Voltage Input	12-48V DC (typically 120 Volts AC via adapter)
Material	Plastic
Color	Black
Mounting Type	Panel Mount
Product Dimensions	9 x 7 x 3 inches
Item Weight	12 ounces
Operating Temperature	Up to 55 Degrees Celsius
Certifications	UL (Specification Met)
Features	ADDC for RS-485, SNMP MIB-II, TCP Server/Client, UDP modes

7. WARRANTY INFORMATION

Warranty terms and conditions for the MOXA NPort 5230 Series Device Server are typically provided with the product packaging or can be found on the official MOXA website. Please refer to these resources for detailed information regarding warranty coverage, duration, and claims procedures.

8. TECHNICAL SUPPORT

For technical assistance, troubleshooting beyond this manual, or inquiries about the MOXA NPort 5230, please contact MOXA's official technical support. Support contact information, including phone numbers, email, and online resources, can be found on the MOXA corporate website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question