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Moxa NPort 5232-T

MOXA NPort 5232-T 2-Port Device Server User Manual

Model: NPort 5232-T

1. INTRODUCTION

The MOXA NPort 5232-T is a 2-port serial device server designed for industrial automation applications. It enables serial devices (RS-422/485) to be connected to an Ethernet network, allowing for remote access and control over TCP/IP. This model supports 10/100 Fiber Ethernet connectivity and operates reliably in wide temperature ranges from -40°C to 75°C, making it suitable for harsh industrial environments. It supports data rates up to 230.4 Kbps.



Figure 1: MOXA NPort 5232-T 2-Port Device Server. This image displays the device from a slight angle, highlighting its compact form factor and various connection ports, including the fiber Ethernet port and serial ports.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the device. Failure to follow these instructions may result in injury or damage to the equipment.

- Ensure the power supply voltage is within the specified range.
- Do not expose the device to moisture or extreme temperatures outside its operating range.
- Disconnect power before performing any maintenance or installation procedures.
- Only qualified personnel should install and service this equipment.
- Use appropriate grounding techniques to prevent electrical hazards.

3. PACKAGE CONTENTS

Before installation, verify that the package contains the following items:

- MOXA NPort 5232-T Device Server
- Quick Installation Guide
- Warranty Card
- Terminal block for power input
- Wall mounting kit (optional, may vary by region)

If any of these items are missing or damaged, please contact your sales representative immediately.

4. HARDWARE DESCRIPTION

4.1 Front Panel Layout

The front panel of the NPort 5232-T typically includes LED indicators for power, Ethernet link/activity, and serial port activity. Specific models may also feature a reset button.

- **PWR LED:** Indicates power status (On: Power is supplied; Off: No power).
- **LAN LED:** Indicates Ethernet link/activity (On: Link established; Blinking: Data activity).
- **Serial Port LEDs (Tx/Rx):** Indicate data transmission (Tx) and reception (Rx) on each serial port.

4.2 Rear/Side Panel Connectors

The rear or side panel houses the primary connection interfaces:

- **Power Input:** Terminal block for DC power input.
- **Ethernet Port:** 10/100BaseFX fiber optic port (SC connector type).
- **Serial Ports:** Two RS-422/485 serial ports (DB9 male connectors).

5. SETUP

5.1 Mounting the Device

The NPort 5232-T can be mounted on a DIN-rail or wall-mounted using the provided kit. Ensure adequate ventilation around the device.

1. For DIN-rail mounting, attach the DIN-rail clip to the device and snap it onto the DIN-rail.
2. For wall mounting, secure the wall mounting brackets to the device, then use screws to fix the device to a sturdy surface.

5.2 Power Connection

Connect the power source to the terminal block. The NPort 5232-T supports a wide range of DC power inputs. Refer to the specifications for exact voltage requirements.

- Ensure the power supply is off before connecting.
- Connect the positive (+) wire to the V+ terminal and the negative (-) wire to the V- terminal.
- Connect the ground wire to the FG (Frame Ground) terminal for proper grounding.

5.3 Network Connection (Fiber Ethernet)

Connect the NPort 5232-T to your network using a fiber optic cable.

- Insert the SC fiber optic connector into the Ethernet port on the device.
- Connect the other end of the fiber optic cable to your network switch or router.
- Verify the LAN LED illuminates to indicate a successful link.

5.4 Serial Device Connection

Connect your RS-422/485 serial devices to the DB9 serial ports.

- Use appropriate RS-422/485 cabling.
- Ensure correct pin assignments for your serial devices. Refer to the NPort 5232-T's pinout diagram in the full technical manual for details.

6. OPERATING

6.1 Initial Configuration

The NPort 5232-T can be configured via a web browser or Moxa's NPort Windows utility.

1. **Default IP Address:** The device typically has a default IP address (e.g., 192.168.127.254). Refer to the Quick Installation Guide for the exact default.
2. **Accessing Web Console:** Open a web browser and enter the device's IP address. Log in using the default username and password (e.g., admin/moxa).
3. **Network Settings:** Configure the IP address, subnet mask, and gateway to match your network environment.
4. **Serial Port Settings:** Configure each serial port's parameters (baud rate, data bits, parity, stop bits, flow control) to match the connected serial devices.
5. **Operating Modes:** Select the desired operating mode (e.g., Real COM mode, TCP Server, TCP Client, UDP) based on your application requirements.

6.2 Data Communication

Once configured, the NPort 5232-T will transparently convert serial data to Ethernet packets and vice-versa, allowing your host PC or application to communicate with serial devices over the network.

7. MAINTENANCE

7.1 Cleaning

Keep the device clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid or aerosol cleaners.

7.2 Firmware Updates

Periodically check the Moxa website for firmware updates. Firmware updates can provide new features, performance

improvements, and security enhancements.

1. Download the latest firmware from the official Moxa support page for your specific model.
2. Access the device's web console.
3. Navigate to the firmware upgrade section and follow the on-screen instructions to upload and install the new firmware.
4. Do not power off the device during the firmware upgrade process.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Device not powering on.	No power supply, incorrect voltage, faulty power adapter/cable.	Check power connections, verify power supply voltage, try a different power source.
No Ethernet link (LAN LED off).	Faulty fiber cable, incorrect fiber connection, network switch issue.	Check fiber cable integrity, ensure correct SC connector insertion, verify network switch port status.
Cannot access web console.	Incorrect IP address, network configuration mismatch, firewall blocking.	Verify device IP address, ensure PC is on the same subnet, temporarily disable PC firewall, try pinging the device.
Serial communication failure.	Incorrect serial port settings, wrong cabling, device driver issues on host PC.	Check baud rate, data bits, parity, stop bits, flow control. Verify RS-422/485 wiring. Ensure correct COM port mapping if using Real COM mode.

If the problem persists, perform a factory reset (refer to the full manual for instructions) or contact Moxa technical support.

9. SPECIFICATIONS

Feature	Detail
Model	NPort 5232-T
Ethernet Ports	1 x 10/100BaseFX (SC connector)
Serial Ports	2 x RS-422/485 (DB9 male)
Serial Communication Speed	Up to 230.4 Kbps
Operating Temperature	-40°C to 75°C (-40°F to 167°F)
Power Input	12 to 48 VDC (via terminal block)
Dimensions	7.09 x 4.72 x 1.97 inches (180 x 120 x 50 mm)
Weight	2.2 pounds (1 kg)
Manufacturer	MOXA
Date First Available	March 31, 2018

10. WARRANTY AND SUPPORT

MOXA products are typically covered by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official MOXA website.

For technical support, product documentation, and driver downloads, please visit the MOXA support portal. You can find contact information for regional support centers on their website.

- **Official MOXA Website:** www.moxa.com
- **Support Portal:** Refer to the MOXA website for the dedicated support section.