

## Moxa NPort 5630-8

# MOXA NPort 5630-8 8-Port Device Server Instruction Manual

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## 1. INTRODUCTION

This manual provides comprehensive instructions for the installation, configuration, and operation of the MOXA NPort 5630-8 8-Port Device Server. The NPort 5630-8 is designed to connect 8 serial RS-422/485 devices to an Ethernet network, enabling remote access and management of serial devices from any network location. It supports 10/100 Mbps Ethernet connectivity and features 15KV ESD protection for robust industrial applications.

## 2. SAFETY INFORMATION

Please read and follow these safety guidelines to prevent damage to the device and ensure safe operation:

- **Power Supply:** Use only the specified power adapter (110V) or power source. Ensure the power supply is stable and within the device's voltage range.
- **Environment:** Operate the device in a well-ventilated area, away from direct sunlight, heat sources, and excessive moisture. Avoid environments with high electromagnetic interference.
- **ESD Protection:** The device features 15KV ESD protection. However, always handle the device with care and take appropriate anti-static precautions when installing or servicing.
- **Mounting:** Ensure the device is securely mounted according to the instructions to prevent accidental falls.

- **Servicing:** Do not attempt to open or repair the device yourself. Refer all servicing to qualified personnel.

### 3. PACKAGE CONTENTS

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

- MOXA NPort 5630-8 8-Port Device Server
- Power Adapter (110V)
- DIN-Rail Mounting Kit
- Quick Installation Guide
- Documentation CD (or link to online resources)

If any items are missing or damaged, please contact your vendor immediately.

### 4. HARDWARE DESCRIPTION

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#### 4.1 Front Panel Layout



**Figure 1:** Front panel of the NPort 5630-8. This view displays the power LED, ready LED, Ethernet link/activity LEDs, and eight RJ-45 8-pin serial ports for RS-422/485 connections.

The front panel features status LEDs and the serial communication ports:

- **Power LED:** Indicates power status.
- **Ready LED:** Indicates device operational status.
- **Ethernet Link/Activity LEDs:** Indicate Ethernet connection status and data transmission.
- **Serial Ports (1-8):** Eight RJ-45 8-pin connectors for RS-422/485 serial devices.

#### 4.2 Rear Panel Layout



**Figure 2:** Rear panel of the NPort 5630-8. This view shows the DC power input terminal block and the 10/100 Mbps Ethernet port.

The rear panel includes the power input and Ethernet port:

- **Power Input:** Terminal block for 110V DC power connection.
- **Ethernet Port:** RJ-45 connector for 10/100 Mbps Ethernet network connection.

### 5. SETUP

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#### 5.1 Mounting the Device Server

The NPort 5630-8 can be mounted on a DIN-rail or directly to a wall/panel.

##### **DIN-Rail Mounting:**

1. Attach the DIN-rail mounting kit to the rear of the NPort 5630-8 using the provided screws.
2. Hook the top of the DIN-rail clip onto the DIN-rail.
3. Push the bottom of the device towards the DIN-rail until it snaps into place.

##### **Wall/Panel Mounting:**

1. Attach the wall mounting plates (if included or purchased separately) to the sides of the NPort 5630-8.
2. Mark the positions for the screws on the wall or panel using the mounting plates as a template.
3. Drill pilot holes and secure the device to the wall/panel using appropriate screws.

## 5.2 Power Connection

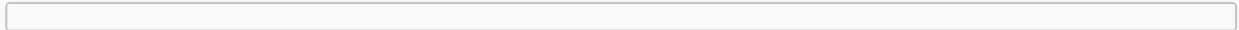
Connect the 110V power adapter to the power input terminal block on the rear panel. Ensure correct polarity if using a DC power source. The Power LED on the front panel should illuminate once connected.

## 5.3 Network Connection

Connect a standard Ethernet cable (RJ-45) from your network switch or router to the Ethernet port on the rear panel of the NPort 5630-8. The Ethernet Link/Activity LEDs should indicate a successful connection and data activity.

## 5.4 Serial Device Connection

Connect your RS-422/485 serial devices to the RJ-45 8-pin serial ports on the front panel. Refer to the device's pinout diagram for correct wiring. The NPort 5630-8 supports both RS-422 and RS-485 modes, which can be configured via software.



**Figure 3:** Connection diagram for the NPort 5630-8. This illustrates how to connect the power supply, Ethernet network, and multiple serial devices to the server.

# 6. OPERATING

## 6.1 Initial Configuration

The NPort 5630-8 can be configured using a web browser or the NPort Administrator utility.

### Web Console:

1. Ensure your computer is on the same network as the NPort device server.
2. Open a web browser and enter the default IP address (e.g., 192.168.1.254) or the IP address assigned by your DHCP server.
3. Log in using the default username and password (refer to the Quick Installation Guide for defaults).
4. Configure network settings, serial port parameters, and operating modes as required.

### NPort Administrator Utility:

This Windows-based utility allows for easy discovery and configuration of multiple NPort devices on the network. Install the utility from the provided CD or Moxa's website.

## 6.2 Operating Modes

The NPort 5630-8 supports various operating modes for serial-to-Ethernet communication:

- **Real COM Mode:** Maps serial ports to virtual COM ports on a host PC, allowing legacy serial applications to communicate over Ethernet.
- **TCP Server/Client Mode:** Establishes TCP connections for data transmission between serial devices and network hosts.
- **UDP Mode:** Uses UDP for connectionless data transmission, suitable for broadcast or multicast applications.
- **Pair Connection Mode:** Creates a direct serial-to-serial connection over Ethernet between two NPort devices.

## 6.3 LED Indicators

**Table 1: LED Indicator Status**

LED	Status	Description
Power	Green (Solid)	Device is powered on.
Ready	Green (Solid)	Device is initialized and ready for operation.
Ethernet Link	Green (Solid)	Ethernet link established.
Ethernet Activity	Green (Flashing)	Data is being transmitted or received over Ethernet.
Serial Tx/Rx	Green/Yellow (Flashing)	Data is being transmitted (Tx) or received (Rx) on the corresponding serial port.

## 7. MAINTENANCE

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### 7.1 Firmware Upgrade

Periodically check Moxa's official website for the latest firmware updates. Firmware upgrades can improve performance, add new features, or fix bugs. Follow the instructions provided with the firmware package for a safe upgrade process, typically performed via the web console or NPort Administrator utility.

### 7.2 Factory Reset

If you encounter configuration issues or forget the login credentials, you may need to perform a factory reset. This will revert all settings to their default values. Refer to the Quick Installation Guide or Moxa's website for specific instructions on how to perform a hardware or software factory reset for the NPort 5630-8.

### 7.3 Cleaning

Keep the device server clean and free from dust. Use a soft, dry cloth to wipe the exterior. Do not use liquid cleaners or solvents, as they may damage the device.

## 8. TROUBLESHOOTING

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**Table 2: Common Troubleshooting Steps**

Problem	Possible Cause	Solution
<b>Device not powering on.</b>	No power supply or faulty adapter.	Check power cable connection and power adapter. Ensure the power source is active.
<b>Cannot access device via network.</b>	Incorrect IP address, network cable issue, or firewall.	Verify IP address, subnet mask, and gateway settings. Check Ethernet cable and network switch. Temporarily disable firewall on your PC. Use NPort Administrator to discover the device.
<b>Serial devices not communicating.</b>	Incorrect serial port settings, wrong wiring, or device driver issues.	Check serial port configuration (baud rate, data bits, parity, stop bits, flow control). Verify RS-422/485 wiring. Ensure correct virtual COM port driver is installed on the host PC.
<b>Slow data transfer.</b>	Network congestion, incorrect duplex settings, or outdated firmware.	Check network traffic. Ensure Ethernet port duplex settings match the switch. Upgrade firmware to the latest version.

For further assistance, refer to the detailed user manual available on Moxa's official website or contact technical support.

## 9. SPECIFICATIONS

**Table 3: MOXA NPort 5630-8 Technical Specifications**

Feature	Specification
<b>Model</b>	NPort 5630-8
<b>Ethernet Ports</b>	1 x 10/100BaseT(X) auto-sensing RJ45
<b>Serial Ports</b>	8 x RS-422/485, RJ45 8-pin
<b>Serial Communication Parameters</b>	<b>Baudrate:</b> 50 bps to 921.6 Kbps <b>Data Bits:</b> 5, 6, 7, 8 <b>Stop Bits:</b> 1, 1.5, 2 <b>Parity:</b> None, Even, Odd, Space, Mark <b>Flow Control:</b> RTS/CTS, DTR/DSR, XON/XOFF
<b>ESD Protection</b>	15 KV for all serial signals
<b>Power Input</b>	110V AC (via external power adapter)
<b>Operating Temperature</b>	0 to 60°C (32 to 140°F)
	-40 to 85°C (-40 to 185°F)
<b>Humidity</b>	5 to 95% RH (non-condensing)
<b>Dimensions (W x D x H)</b>	(Refer to product datasheet for exact dimensions)
<b>Weight</b>	(Refer to product datasheet for exact weight)

## 10. WARRANTY AND SUPPORT

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Moxa products typically come with a standard warranty. For detailed warranty terms and conditions, please refer to the warranty statement included with your product or visit the official Moxa website. Keep your purchase receipt as proof of purchase.

For technical support, product documentation, drivers, and software downloads, please visit the Moxa support portal:

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

When contacting support, please have your product model (NPort 5630-8) and serial number ready.