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› MOXA NPort 5650-16 - 16 Ports Rackmount Serial Device Server, 10/100 Ethernet, RS-232/422/485, RJ-45 8pin, 15KV ESD

Moxa NPort 5650-16

MOXA NPort 5650-16

16-PORT RACKMOUNT SERIAL DEVICE SERVER USER MANUAL

1. INTRODUCTION

The MOXA NPort 5650-16 is a high-performance 16-port rackmount serial device server designed to connect serial devices to an Ethernet network. It provides reliable and flexible serial-to-Ethernet connectivity, enabling centralized management and access to serial devices from anywhere on the network. This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your NPort 5650-16 device server.

2. KEY FEATURES

- **16 Serial Ports:** Supports RS-232/422/485 for versatile device connectivity.
- **10/100M Auto-Sensing Ethernet:** Ensures compatibility with various network speeds.
- **Standard 19-inch Rackmount Size:** Designed for easy integration into standard server racks.
- **Multiple Configuration Options:** Configure via Telnet, Web browser, or Windows utility for convenience.
- **LCD Panel for Easy IP Configuration:** Simplifies initial setup (excluding wide temperature models).
- **Versatile Socket Modes:** Supports TCP server, TCP client, UDP, and Real COM modes.
- **SNMP MIB-II Support:** Enables comprehensive network management.
- **Wide Voltage Range:** Universal high-voltage range (100 to 240 VAC or 88 to 300 VDC) and popular low-voltage ranges (± 48 VDC, 20 to 72 VDC, -20 to -72 VDC).

3. PACKAGE CONTENTS

Please verify that your package contains the following items:

- MOXA NPort 5650-16 Device Server
- Power Cord (region-specific)
- Rackmount Kit (brackets and screws)
- Quick Installation Guide
- Product CD (includes drivers, utilities, and full manual)

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

4. SETUP AND INSTALLATION

4.1 Physical Installation

The NPort 5650-16 is designed for 19-inch rack mounting. Attach the provided rackmount brackets to the sides of the device server using the included screws. Secure the device server into an available slot in your standard equipment rack.

4.2 Connecting Power

Connect the appropriate power cord to the AC power input on the rear panel of the NPort 5650-16. Ensure the power source matches the device's voltage requirements (100-240 VAC or 88-300 VDC, or specified DC ranges). Once connected, the power LED on the front panel should illuminate.

4.3 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 5650-16. The Ethernet Link/Activity LED on the front panel will indicate a successful connection and data activity.

4.4 Serial Device Connection

Connect your serial devices to the 16 RJ-45 serial ports on the front panel of the NPort 5650-16. The device supports RS-232, RS-422, and RS-485 standards. Ensure correct pin assignments for your specific serial devices. Refer to the full product manual on the provided CD for detailed pinout diagrams.



Figure 1: Front view of the MOXA NPort 5650-16. This image shows the front panel of the device, featuring the MOXA logo, an LCD display, navigation buttons (Reset, Menu, Up, Down, Enter), and 16 RJ-45 serial ports with corresponding Tx/Rx and Ready LEDs. The device has a sleek, dark gray rackmount design.

5. OPERATING INSTRUCTIONS

5.1 Initial Configuration

Upon initial power-up, the NPort 5650-16 can be configured using its front panel LCD and buttons, a web browser, Telnet, or the NPort Windows utility. The LCD panel allows for quick IP address assignment. For detailed network settings, serial port parameters, and security configurations, it is recommended to use the web-based management interface or the NPort Administrator utility.

5.2 Socket Modes

The NPort 5650-16 supports various operation modes to suit different application needs:

- **TCP Server Mode:** The NPort listens for incoming TCP connections from host computers.
- **TCP Client Mode:** The NPort initiates TCP connections to a specified host computer.
- **UDP Mode:** Data is transmitted using the UDP protocol, suitable for broadcast or multicast applications.

- **Real COM Mode:** Allows Windows or Linux hosts to access serial devices over the network as if they were directly connected to a local COM port. This requires installing MOXA's Real COM driver.

5.3 Network Management

The device supports SNMP MIB-II, allowing it to be integrated into existing network management systems for monitoring and control. Refer to the full manual for details on SNMP configuration and available MIBs.

6. MAINTENANCE

To ensure optimal performance and longevity of your NPort 5650-16, follow these maintenance guidelines:

- **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:** Regularly check the MOXA website for the latest firmware updates. Applying updates can improve performance, add new features, and resolve known issues. Follow the instructions provided with the firmware update package carefully.
- **Environmental Conditions:** Ensure the device operates within its specified temperature and humidity ranges to prevent damage.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your NPort 5650-16.

7.1 Power LED is Off

- **Check Power Connection:** Ensure the power cord is securely connected to both the device and the power outlet.
- **Verify Power Source:** Confirm that the power outlet is active and providing the correct voltage.
- **Inspect Power Cord:** Check for any damage to the power cord.

7.2 No Network Connectivity

- **Check Ethernet Cable:** Ensure the Ethernet cable is securely connected to the NPort and the network switch/router.
- **Verify Network Settings:** Confirm the NPort's IP address, subnet mask, and gateway settings are correct and compatible with your network. Use the LCD panel or web interface to check.
- **Ping Test:** From a computer on the same network, try to ping the NPort's IP address.
- **Network Switch Status:** Check the status of the port on your network switch to which the NPort is connected.

7.3 Serial Device Communication Failure

- **Verify Serial Cable:** Ensure the serial cable is correctly wired and securely connected to both the NPort and the serial device.
- **Check Serial Port Settings:** Confirm that the baud rate, data bits, parity, and stop bits configured on the NPort match those of your serial device.
- **Driver Installation (Real COM Mode):** If using Real COM mode, ensure the MOXA Real COM driver is correctly installed and configured on your host computer.
- **Loopback Test:** Perform a loopback test on the serial port to verify its functionality.

For more complex issues, refer to the comprehensive troubleshooting section in the full user manual available on the product CD or MOXA's official website.

8. TECHNICAL SPECIFICATIONS

Attribute	Value
Model	NPort 5650-16
Serial Ports	16 (RJ-45 8pin)
Serial Standards	RS-232/422/485
Ethernet Ports	1 (10/100M auto-sensing)
Input Voltage	100 to 240 VAC or 88 to 300 VDC; ± 48 VDC (20 to 72 VDC, -20 to -72 VDC)
ESD Protection	15 KV
Package Dimensions	20.29 x 10.4 x 4.89 inches
Item Weight	7.35 pounds
Manufacturer	Moxa Inc.
First Available Date	January 26, 2018

9. WARRANTY AND SUPPORT

The MOXA NPort 5650-16 comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty information included with your product or visit the official MOXA website. For technical support, driver downloads, firmware updates, and additional documentation, please visit the MOXA support portal or contact their customer service team. Always provide your product model and serial number when seeking support.

Note: No official product videos were available for embedding based on the provided data.

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