Moxa NPort 6650-8

MOXA NPort 6650-8 Secure Device Server Instruction Manual

1. INTRODUCTION

The MOXA NPort 6650-8 is an 8-port RS-232/422/485 secure device server designed to connect serial devices to an Ethernet network. This device facilitates secure and reliable data transmission, enabling remote management and access to serial equipment over a standard TCP/IP network. It supports various operating modes to accommodate diverse application requirements, ensuring seamless integration into existing network infrastructures.

This image displays the front view of the MOXA NPort 6650-8 Secure Device Server, a rack-mountable unit with a dark gray casing and a light gray front panel featuring an illuminated display and the 'MOXA' logo.

2. SETUP

2.1 Unpacking and Inspection

Upon receiving your NPort 6650-8, carefully unpack the unit and inspect its contents. Ensure all components are present and undamaged. If any items are missing or damaged, contact your vendor immediately.

2.2 Package Contents

- MOXA NPort 6650-8 Secure Device Server
- Power cord (100V~240VAC compatible)
- Rack-mounting kit
- Documentation (Quick Installation Guide, Warranty Card)

2.3 Hardware Installation

1. **Mounting:** Install the NPort 6650-8 into a standard 19-inch equipment rack using the provided rack-mounting

kit. Ensure adequate ventilation around the unit.

2. **Power Connection:** Connect the provided power cord to the NPort 6650-8's power input and then to a grounded AC power outlet (100V~240VAC).

3. **Ethernet Connection:** Connect an Ethernet cable from your network switch or router to the NPort 6650-8's Ethernet port.

4. **Serial Device Connection:** Connect your RS-232, RS-422, or RS-485 serial devices to the appropriate serial ports on the NPort 6650-8. Refer to your serial device's documentation for correct wiring.

2.4 Initial Configuration

The NPort 6650-8 can be configured via a web browser or a console port. For initial setup, it is recommended to use the web-based management interface. The device typically obtains an IP address via DHCP by default. If DHCP is not available, a default static IP address may be used (refer to the Quick Installation Guide for default IP information).

- Open a web browser and enter the NPort's IP address.
- Log in using the default username and password (refer to documentation).
- Configure network settings (static IP, subnet mask, gateway, DNS) if DHCP is not desired.

3. OPERATING INSTRUCTIONS

3.1 Basic Operation

- **Power On:** After connecting power, the device will boot up. Observe the LED indicators for status.
- **LED Indicators:** The front panel LEDs provide status information for power, network activity, and individual serial port activity. Consult the user manual for a detailed explanation of each LED's behavior.

3.2 Network Configuration

Access the web-based management interface to configure network parameters:

- **IP Address:** Set a static IP address or enable DHCP.
- **Subnet Mask and Gateway:** Configure according to your network topology.
- **DNS Settings:** Specify DNS servers if required for hostname resolution.

3.3 Serial Port Configuration

Each of the 8 serial ports can be individually configured:

- **Serial Parameters:** Set baud rate, data bits, parity, stop bits, and flow control to match your connected serial devices.
- **Operating Modes:** Select the appropriate mode for each port, such as Real COM mode (for virtual COM port applications), TCP Server, TCP Client, or UDP mode.

3.4 Security Features

The NPort 6650-8 includes robust security features:

- **Encrypted Communication:** Support for SSH (Secure Shell) for secure remote access and SSL (Secure Sockets Layer) for encrypted data transmission.
- **VPN Support:** Integrated VPN capabilities for secure connections over public networks.
- **User Authentication:** Implement strong password policies and user access controls.

3.5 Management

The device can be managed through:

- **Web Console:** A user-friendly web interface for comprehensive configuration and monitoring.
- **SNMP:** Support for Simple Network Management Protocol for integration with network management systems.

4. MAINTENANCE

4.1 Firmware Updates

Regularly check the MOXA website for the latest firmware updates. Firmware updates can provide new features, performance enhancements, and security patches. Follow the instructions provided with the firmware package for a safe update process.

4.2 Cleaning

To maintain optimal performance, keep the device clean. Use a soft, dry cloth to wipe the exterior. Avoid using liquid cleaners or solvents, which can damage the casing or internal components.

4.3 Environmental Considerations

Ensure the device operates within its specified temperature and humidity ranges. Avoid exposing the unit to direct sunlight, excessive dust, or moisture. Proper ventilation is crucial to prevent overheating.

5. TROUBLESHOOTING

5.1 Common Issues

- **No Power:** Verify the power cord is securely connected to both the device and a working power outlet. Check the power LED status.
- **Network Connectivity Issues:** Ensure the Ethernet cable is properly connected. Check network LED indicators. Verify IP address, subnet mask, and gateway settings. Ping the device from a connected computer.
- **Serial Communication Problems:** Confirm serial port settings (baud rate, data bits, parity, stop bits, flow control) match the connected serial device. Check serial port LED activity. Verify correct serial cable wiring.
- **Cannot Access Web Interface:** Ensure your computer is on the same network segment as the NPort. Verify the NPort's IP address. Clear browser cache or try a different browser.

5.2 LED Status Interpretation

Refer to the detailed LED status guide in the complete user manual for specific interpretations of LED colors and blinking patterns, which can help diagnose issues.

5.3 Resetting to Factory Defaults

If configuration issues persist, you may need to reset the device to its factory default settings. This procedure typically involves pressing a reset button for a specified duration. Refer to the full user manual for the exact steps, as this will erase all custom configurations.
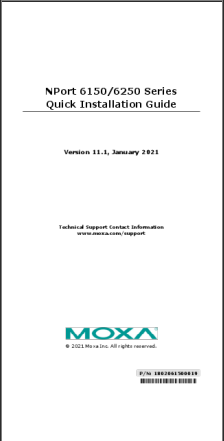
6. SPECIFICATIONS

Feature	Specification
Model	NPort 6650-8
Serial Ports	8-Port RS-232/422/485
Power Input	100V~240VAC
Item Weight	18.99 pounds
Manufacturer	MOXA
ASIN	B07CB1XDYT
First Available Date	April 2, 2018

7. WARRANTY AND SUPPORT

The MOXA NPort 6650-8 comes with a standard manufacturer's warranty. For detailed warranty terms and conditions, please refer to the warranty card included with your product or visit the official MOXA website. For technical assistance, product support, or service inquiries, please contact MOXA customer support directly through their official channels.

Related Documents - NPort 6650-8

NPort IA5000A Series Quick Installation Guide Version 5.3, July 2023 Technical Support Contact Information www.moxa.com/support MOXA © 2023 Moxa Inc. All rights reserved. P/n: 1802651560311	[Moxa NPort IA5000A Series Quick Installation Guide - Industrial Serial-to-Ethernet Device Servers](#) Comprehensive quick installation guide for the Moxa NPort IA5000A Series, covering overview, package contents, hardware introduction, installation procedures, LED indicators, pin assignments, ATEX/IECEx information, and software setup for industrial serial-to-Ethernet connectivity.
NPort 6150/6250 Series Quick Installation Guide Version 11.1, January 2021 Technical Support Contact Information www.moxa.com/support MOXA © 2021 Moxa Inc. All rights reserved. P/n: 1802061360019	[MOXA NPort 6150/6250 Series Quick Installation Guide | Setup and Configuration](#) MOXA NPort 6150/6250 Series: A Quick Installation Guide providing essential information on setup, hardware features, LED indicators, DIP switch settings, installation procedures, placement options, software configuration, and serial port pin assignments for these secure serial device servers.

NPort 5100A Series
Quick Installation Guide

Version 3.5, January 2021

Technical Support Contact Information
www.moxa.com/support

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P/N: 1802051000025

[Moxa NPort 5100A Series Quick Installation Guide](#)

This guide provides quick installation instructions for the Moxa NPort 5100A series of device servers, including hardware overview, installation steps, and specifications.

NPort 5400 Series
Quick Installation Guide

Version 7.3, April 2021

Technical Support Contact Information
www.moxa.com/support

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[Moxa NPort 5400 Series Quick Installation Guide](#)

Quick installation guide for Moxa's NPort 5400 Series 4-port serial device servers, covering models like NPort 5410, 5430, 5430I, 5450, 5450I, and their -T variants. Details hardware overview, package contents, installation procedures, pin assignments, and environmental specifications.

NPort 6450 Series
Quick Installation Guide

Version 11.2, January 2021

Technical Support Contact Information
www.moxa.com/support

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[Moxa NPort 6450 Series Quick Installation Guide](#)

This document provides a quick installation guide for the Moxa NPort 6450 series secure serial device servers. It covers product overview, package contents, hardware features, installation procedures, software setup, and pin assignments for serial communication.

NPort 5200 Series
Quick Installation Guide

Version 8.5, March 2025

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[Moxa NPort 5200 Series Quick Installation Guide](#)

This guide provides essential information for the quick installation of Moxa's NPort 5200 Series device servers, including hardware introduction, package checklist, and software installation details.