Moxa UPort 1250

MOXA UPort 1250-2 Port USB-to-Serial Hub Instruction Manual

Model: UPort 1250

1. INTRODUCTION

The MOXA UPort 1250 is a 2-port USB-to-Serial hub designed for industrial and commercial applications requiring reliable serial communication. It provides two RS-232/422/485 serial ports, enabling connection of various serial devices to a host computer via a single USB 2.0 interface. This device supports high-speed data transmission up to 921.6 Kbps and features 15KV ESD protection for enhanced durability in challenging environments.
This manual provides detailed instructions for the installation, operation, and maintenance of your UPort 1250 hub.

2. PRODUCT FEATURES

- Hi-Speed USB 2.0 for up to 480 Mbps USB transmission.
- Two independent RS-232/422/485 serial ports.
- Maximum baud rate of 921.6 Kbps for fast data transmission.
- 128-byte FIFO and on-chip hardware/software flow control.
- 15KV ESD protection for all serial signals.
- Locking power jack for secure power connection.
- 15N high retention type B USB connector.
- Supports fixed-base COM Utility for setting initial extended COM port numbers.
- Driver support for Windows, WinCE, and Linux operating systems.
- LED indicators for easy monitoring of USB and serial port activity.

3. PACKAGE CONTENTS

Verify that your package contains the following items:

- MOXA UPort 1250 USB-to-Serial Hub
- USB Type A to Type B cable
- Power adapter (if applicable, check specific model variant)

- Documentation CD or link to driver download
- Quick Installation Guide

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

4. Hardware Description

Figure 1: Front view of the MOXA UPort 1250, showing USB and Active LEDs, P1 and P2 indicators for RS-232, RS-422, 4W RS-485, 2W RS-485, and TxD/RxD, along with Port 1 and Port 2 DB9 connectors.

Figure 2: Angled view of the MOXA UPort 1250, illustrating the two DB9 serial ports (Port 1 and Port 2) and the overall compact design of the hub.

LED Indicators:

- **USB:** Indicates USB connection status. Lit when connected to a host.
- **Active:** Indicates data activity on the USB interface.
- **P1/P2 (RS-232/422/485, TxD/RxD):** These LEDs indicate the current serial mode and data transmission/reception activity for each port.

Connectors:

- **USB Port:** Type B connector for connection to the host computer.
- **Serial Ports (Port 1, Port 2):** DB9 male connectors for RS-232/422/485 serial devices.
- **Power Jack:** Locking power jack for external power adapter (if required by application or specific model).

5. SETUP AND DRIVER INSTALLATION

5.1 Driver Installation

Before connecting the UPort 1250 to your computer, install the necessary drivers. Drivers are available for Windows, WinCE, and Linux operating systems. Refer to the included documentation or the Moxa website for the latest driver downloads and installation instructions specific to your operating system.

1. Download the appropriate driver package from the Moxa official website.
2. Extract the driver files to a temporary directory.
3. Follow the on-screen instructions provided by the driver installer.

4. Restart your computer if prompted.

5.2 Hardware Connection

1. Connect the USB Type B port on the UPort 1250 to an available USB port on your host computer using the provided USB cable. The "USB" LED on the hub should illuminate.
2. If external power is required, connect the power adapter to the locking power jack on the UPort 1250 and then to a power outlet.
3. Connect your serial devices to the DB9 serial ports (Port 1 and Port 2) on the UPort 1250. Ensure correct pin assignments for RS-232, RS-422, or RS-485 as per your device's requirements.
4. After successful driver installation and hardware connection, the operating system should recognize the new COM ports.

5.3 COM Port Utility

The UPort 1250 supports a fixed-base COM Utility. This utility allows you to configure and manage the assigned COM port numbers, which can be useful in environments where specific COM port assignments are required for legacy applications or system consistency. Refer to the Moxa software documentation for detailed instructions on using this utility.

6. OPERATING INSTRUCTIONS

6.1 Serial Communication Modes

The UPort 1250 supports RS-232, RS-422, and RS-485 communication modes. The mode is typically auto-detected or configured via software settings depending on the connected device and driver capabilities. Ensure your serial device is configured to match the UPort's port settings.

- **RS-232:** Standard serial communication for point-to-point connections.
- **RS-422:** Differential signaling for longer distances and higher noise immunity, typically point-to-multipoint.
- **RS-485 (2-wire/4-wire):** Multi-drop communication for connecting multiple devices on a single bus. The UPort 1250 supports both 2-wire and 4-wire configurations.

6.2 Data Transmission

Once drivers are installed and devices are connected, your application software can access the serial ports as standard COM ports. Configure your application with the correct COM port number, baud rate (up to 921.6 Kbps), data bits, stop bits, and parity settings to match your serial device.
The TxD/RxD LEDs for each port will flash to indicate data transmission (TxD) and reception (RxD) activity, providing visual confirmation of communication.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid or aerosol cleaners.
- **Environment:** Operate the UPort 1250 within its specified environmental conditions (temperature, humidity) to ensure optimal performance and longevity.
- **ESD Protection:** The device features 15KV ESD protection. However, always handle the device and connected cables with care to minimize static discharge, especially in dry environments.
- **Firmware/Driver Updates:** Periodically check the Moxa website for updated drivers or firmware that may improve performance or add new features.

8. TROUBLESHOOTING

- **Device Not Recognized:**

  - Ensure the USB cable is securely connected to both the UPort 1250 and the host computer.
  - Verify that the USB LED on the UPort 1250 is illuminated.
  - Check if the drivers are correctly installed in your operating system's Device Manager (Windows) or equivalent. Reinstall drivers if necessary.
  - Try connecting to a different USB port on your computer.

- **No Communication with Serial Device:**

  - Confirm that the serial device is properly connected to the UPort 1250's serial port.
  - Verify that your application software is configured with the correct COM port number, baud rate, data bits, stop bits, and parity settings.
  - Check the TxD/RxD LEDs on the UPort 1250 for activity. If no LEDs flash during communication attempts, there might be an issue with the serial device or its connection.
  - Ensure the correct serial mode (RS-232/422/485) is selected or auto-detected.

- **Intermittent Connection/Data Loss:**

  - Check for loose cable connections.
  - Ensure the power supply is stable and correctly connected (if external power is used).
  - Minimize electromagnetic interference by keeping the device away from strong electrical fields.

9. SPECIFICATIONS

Model	UPort 1250
USB Interface	USB 2.0 Hi-Speed (480 Mbps)
Serial Ports	2 (RS-232/422/485)
Connectors	USB Type B, DB9 Male (x2)
Baud Rate	50 bps to 921.6 Kbps
ESD Protection	15 KV (all serial signals)
FIFO	128-byte
Flow Control	Hardware (RTS/CTS), Software (XON/XOFF)
Operating Systems	Windows, WinCE, Linux
Dimensions (L x W x H)	3 x 4 x 1 inches
Weight	13 ounces
Manufacturer	Moxa Inc.

10. WARRANTY AND SUPPORT

Moxa products are designed for reliability and performance. For information regarding product warranty, technical support, and service, please refer to the official Moxa website or contact your local Moxa distributor. Ensure you have your product model number (UPort 1250) and serial number ready when seeking support.
Moxa Official Website: www.moxa.com

Related Documents - UPort 1250

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<tr>
<td>
UPort™ 1200-G2 Series
Quick Installation Guide

Version 1.0, March 2024

Technical Support Contact Information
www.moxa.com/support

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[Moxa UPort 1200-G2 Series Quick Installation Guide](#)

This guide provides essential information for installing and setting up the Moxa UPort 1200-G2 Series USB-to-serial converters. It covers hardware introduction, cable usage, LED indicators, serial port pin assignments, DIP switch settings, software installation for Windows, Linux, and macOS, communication testing, and mounting instructions.

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<td>
UPort 1200/1400/1600 Series
Quick Installation Guide
USB-to-Serial Converter

Version 9.2, May 2021

Technical Support Contact Information
www.moxa.com/support

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[Moxa UPort 1200/1400/1600 Series Quick Installation Guide - USB-to-Serial Converters](#)

This guide provides installation instructions and technical specifications for Moxa's UPort 1200, 1400, and 1600 series USB-to-serial converters, including models like UPort 1250, 1410, and 1610-8. Learn about setup, package contents, and serial port pin assignments.

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<td>
UPort 1200/1400/1600 Series
User's Manual

Version 9.1, June 2021

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[UPort 1200/1400/1600 Series User's Manual - Moxa](#)

This user's manual provides comprehensive information on the Moxa UPort 1200/1400/1600 Series USB-to-serial converters, including features, specifications, installation, and troubleshooting.

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UPort™ 1100 Series
Quick Installation Guide

Version 8.1, January 2021

Technical Support Contact Information
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[Moxa UPort 1100 Series Quick Installation Guide](#)

This guide provides instructions for installing and using the Moxa UPort 1100 Series USB-to-Serial Converters, including driver installation for Windows, macOS, and Linux.

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[Moxa UC-7400 Series: 2G NPort Real TTY Driver Manager Installation and Configuration Guide](#)
Comprehensive guide to installing and configuring the Moxa 2G NPort Real TTY Driver Manager on UC-7400 embedded computers for managing remote serial device servers. Covers hardware specifications, software setup, port mapping, and serial programming APIs.

[Moxa NPort DE-311 Series Quick Installation Guide](#)
A quick installation guide for the Moxa NPort DE-311 series, a compact serial device server that enables RS-232/422/485 serial devices to communicate over an Ethernet network. Includes hardware overview, package checklist, DIP switch settings, and wiring diagrams.