UPort 1110 and 1130 User's Manual

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www.moxa.com/product

MOXA Technologies Co., Ltd.
Tel: +886-2-8919-1230
Fax: +886-2-8919-1231
Web: www.moxa.com

MOXA Technical Support
Worldwide: support@moxa.com

UPort 1110 and 1130 User's Manual

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1

Introduction

The UPort 1110 and the UPort 1130 are USB-to-serial adaptors, an easy way to add a COM port to your system. The UPort 1110 provides one RS-232 port and the UPort 1130 provides one RS-422/RS-485 port. As a plug and play USB device, the adaptors are perfect for mobile, instrumentation, and point-of sale applications.

The following topics are covered in this chapter:

- **Overview**
- **Package Checklist**
- **Product Features**
- **Product Specifications**
- **LED Indicators**

Overview

The UPort 1110 and UPort 1130 are part of Moxa's UPort line of USB-to-serial adaptors. The UPort line provides a range of easy-to-use solutions for adding COM ports through a PC's USB port. Simply install the drivers, connect the UPort to your computer, plug in your serial devices, and you're ready to go. Programming is not required, and you do not need to worry about IRQs, configuring a board, power requirements, or connection schemes.

The UPort 1110 and UPort 1130 provide single COM port expansion. The UPort 1110 adds one RS-232 port to your computer, which is the same type of COM port that is built into most PC motherboards. The UPort 1130 adds one port that is configurable for RS-422, 2-wire RS-485, and 4-wire RS-485 modes. Both models can operate at speeds of up to 12 Mbps, which is much faster than the current maximum serial transfer rate.

The adaptor is bus-powered, so no external power supply is required.

Package Checklist

The following items are included in your UPort package:

- UPort 1110 or UPort 1130 USB-to-Serial Adaptor
- UPort Documentation and Software CD
- UPort 1110/1130 Quick Installation Guide
- 5-year Warranty Statement

The UPort 1130 also comes with the following item:

- Mini DB9F-to-Terminal-Block Converter

NOTE: Notify your sales representative if any of the above items is missing or damaged.

Product Features

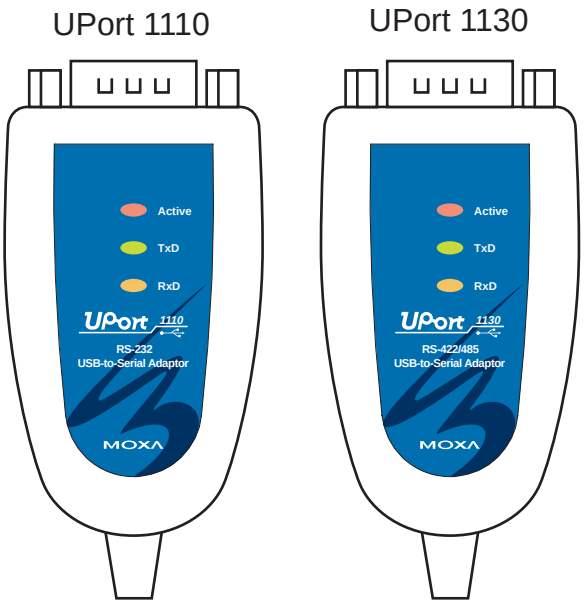
The UPort adaptor has the following features:

- Full-Speed USB operation at up to 12 Mbps
- Additional I/O or IRQ not required
- Serial transmission speed up to 921.6 Kbps
- 64-byte FIFO and built-in hardware and software flow control
- Built-in 15 KV ESD protection
- Support for RS-422, 2-wire RS-485, and 4-wire RS-485 (UPort 1130 only)
- Terminal block adaptor (UPort 1130 only)

Product Specifications

USB	
Version	USB 1.1 (also compatible with USB 1.0 and 2.0)
Connector	USB type B
Speed	12 Mbps
Serial Interface	
No. of Ports	1
RS-232 (UPort 1110)	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422 (UPort 1130)	TxD+(B), TxD-(A), RxD+(B), RxD-(A),GND
RS-485 (UPort 1130)	4-wire: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND 2-wire: Data+(B), Data-(A), GND
Connector	Male DB9
FIFO	64 bytes
Serial line protection	15 KV ESD for all signals
Serial Communication Parameters	
Parity	None, Even, Odd, Space, Mark
Data bits	5, 6, 7, 8
Stop bits	1, 1.5, 2
Flow control	RTS/CTS, XON/XOFF
Speed	50 bps to 921.6 Kbps
Power Requirements	
Power Consumption	30 mA@5 VDC
Mechanical	
Dimensions	37.5 x 20.5 x 60 mm (L x W x H)
Material	ABS + PC
Gross Weight	60 g (0.13 lb)
Environmental	
Operating Temperature	0°C to 55°C (32°F to 131°F)
Storage Temperature	-20°C to 85°C (-4°F to 185°F)
Operating Humidity	5% RH to 95% RH
Regulatory Approvals	
	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-8, FCC Part 15 Class B
Warranty	
	5 years

LED Indicators



Name	Description
Active	This LED indicates normal operation. If the driver is installed correctly and the adaptor is plugged into a functioning USB port, the Active LED will light up and remain on. If the LED does not light up, there may be a problem with the adaptor, the driver installation, or PC configuration.
TxD	This LED blinks when the adaptor transmits data through its COM port.
RxD	This LED blinks when the adaptor receives data through its COM port.

2

Installation and Configuration

Installation of the adaptor is a simple process. First install the driver, then plug the adaptor into a USB port. When the adaptor is plugged in, Windows will load the correct drivers for the adaptor and the new COM port. In this chapter, basic installation and configuration procedures are explained. Although the installation screens will be for Windows 2000, the procedures are essentially the same for Windows 98 and later versions.

The following topics are covered in this chapter:

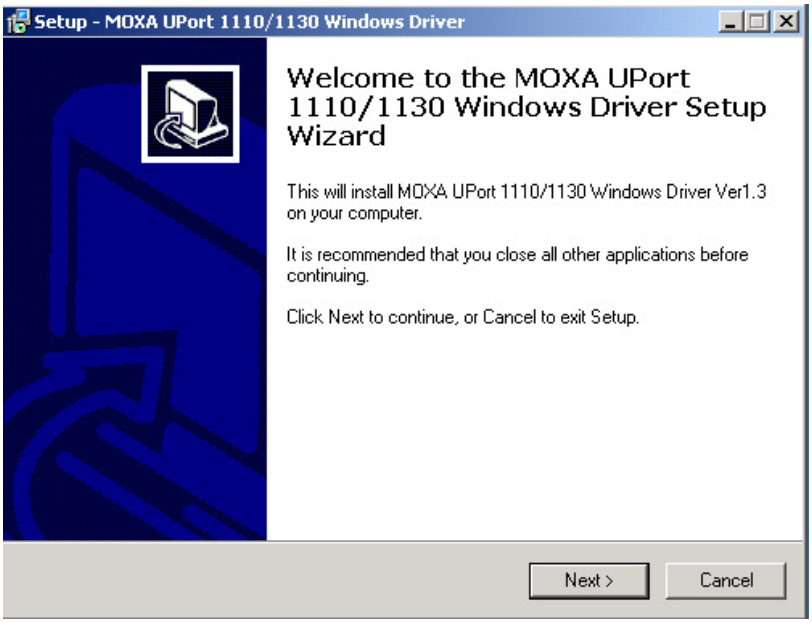
- **Initial Driver Installation**
- **Hardware Installation**
  - Windows 98 and Windows 2000
  - Windows XP and Windows 2003
- **Configuring the COM Port**
- **Configuring the Adaptor**
- **Removing the Adaptor**
- **Uninstalling the Driver**

Initial Driver Installation

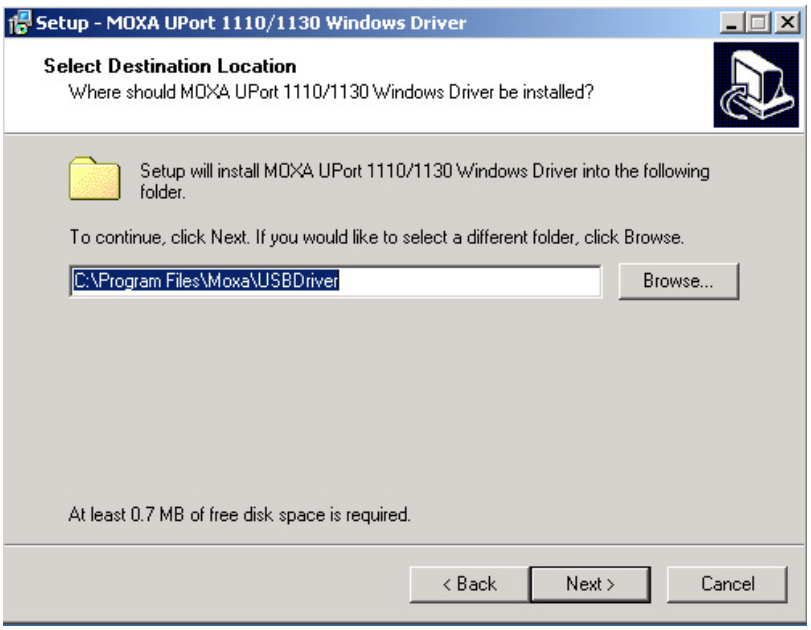
The Documentation and Software CD will contain the drivers for the adaptor. You may also download the drivers at www.moxa.com. The installation procedure is the same for all Windows operating systems.

Use Windows Explorer to locate the driver installation file, which will be **Setup** or **Install**. On the Documentation and Software CD, this file will be located in the **UPort 1100**/**Software** folder, filed by operating system. Double-click the **Setup** or **Install** file.

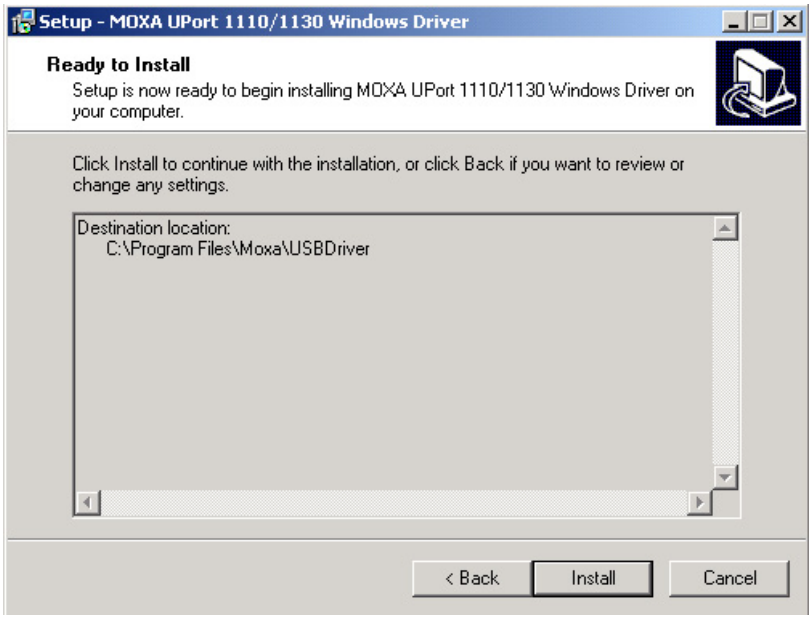
1. The Setup Wizard will open. Click **Next** to begin installing the driver.



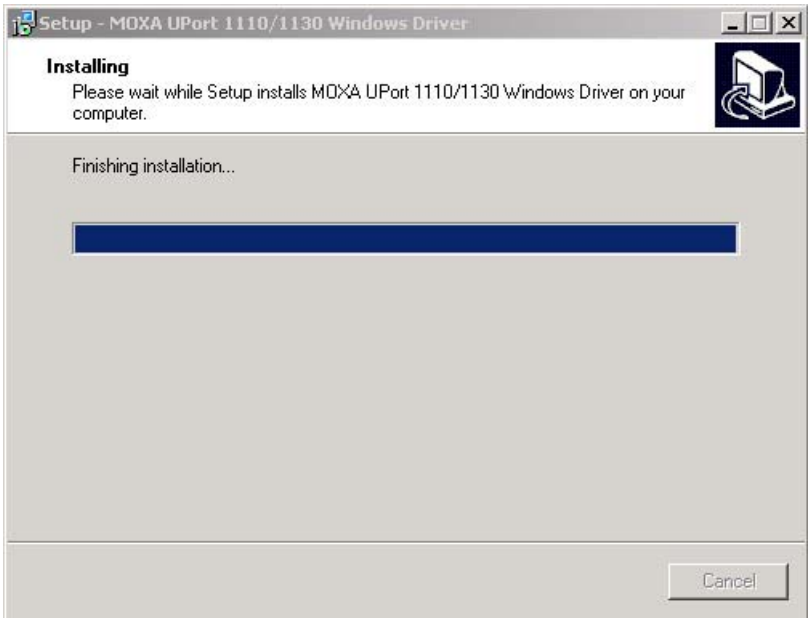
2. Click **Next** to install the driver in the indicated folder, or use the drop-down folder list to locate a different folder.



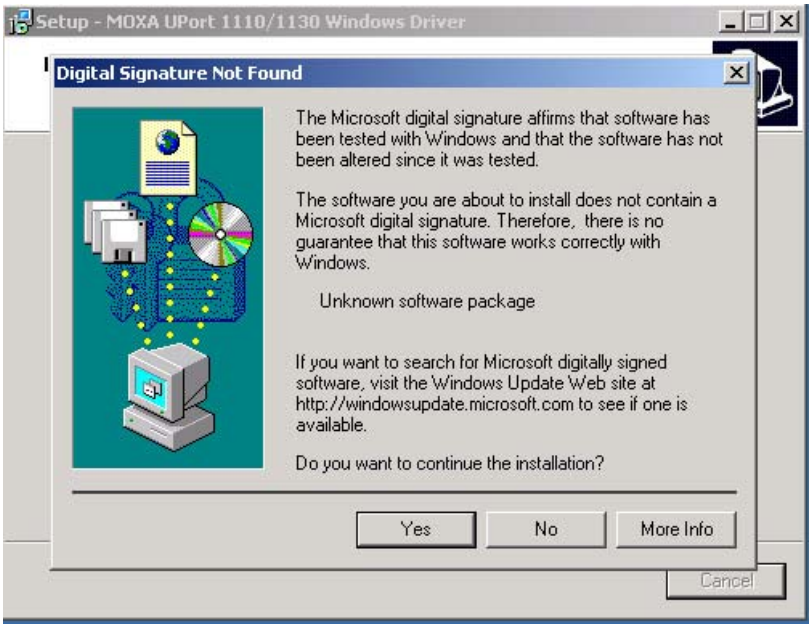
3. Click **Install** to proceed with the installation.



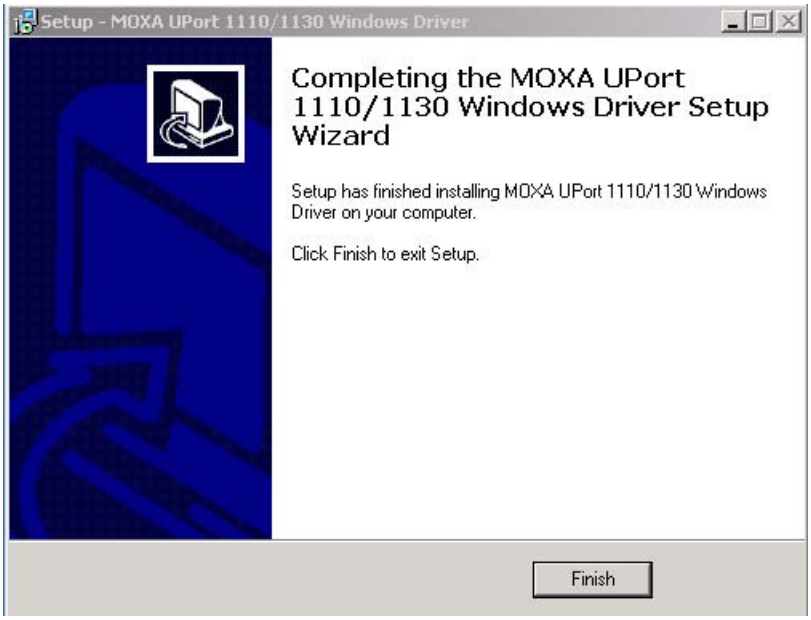
4. Wait while the driver is installed on your hard drive.



5. A window will pop up cautioning you that this software has not passed Windows logo testing. This is a standard warning, and Moxa has thoroughly tested the driver for safe Windows operation. Please click **Yes** to proceed.



6. Click **Finish** to complete the installation of the driver.



Hardware Installation

After installing the driver, plug the adaptor into any upstream USB port, such as a USB port on your computer. Windows will automatically detect the adaptor and begin installing the driver. When the Windows finishes installing the driver for the adaptor, it will then detect a new COM port, and will then install another driver for the new COM port..

ATTENTION

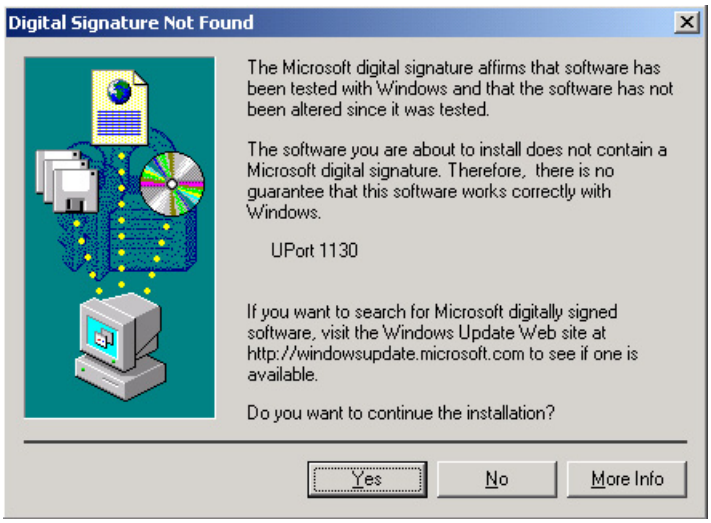
For best results, we recommend that you install the driver before plugging the adaptor into the USB port. Please refer to the previous section on Initial Driver Installation for instructions.

Windows 98 and Windows 2000

The following instructions are for Windows 98 and Windows 2000 systems:

1. After plugging the adaptor into a USB port, the **Found New Hardware** window should open automatically. The USB icon indicates that the USB port is being installed. No action is required.

2. Windows 98 users may skip to the next step. On Windows 2000 systems, a window will pop up cautioning you that this software has not passed Windows logo testing. This is a standard warning, and Moxa has thoroughly tested the driver for safe Windows operation. Please click **Yes** to proceed.



3. Windows will automatically detect and install the new serial port. No further action is required

Windows XP and Windows 2003

The following instructions are for Windows XP and Windows 2003 systems.

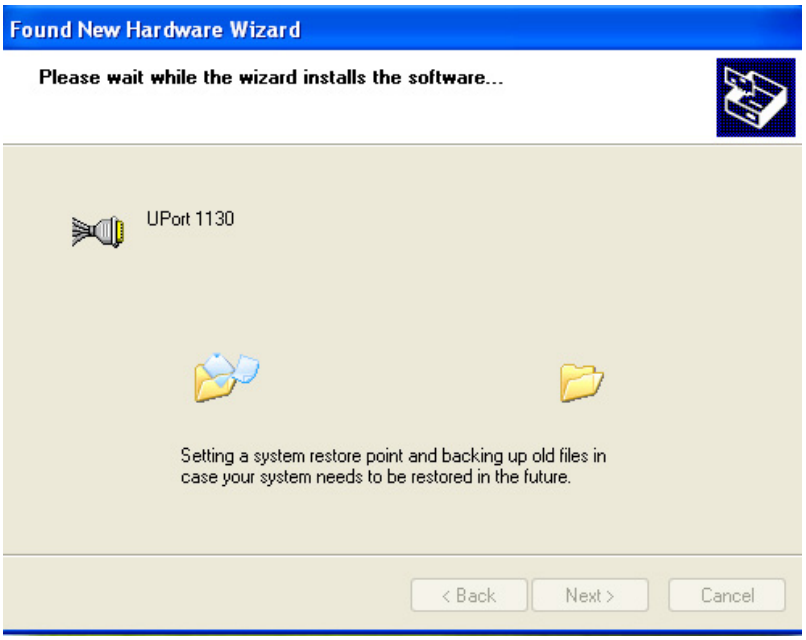
1. After plugging the adaptor into a USB port, Windows will automatically detect the new device. The **Found New Hardware** balloon will appear in the bottom right corner of the Windows desktop. No action is required yet.

2. After a moment, the Found New Hardware Wizard will open. If you see the following screen, select **No, not this time**, then click **Next**.

3. On the next window that appears, select **Install the software automatically (Recommended)**, then click **Next**.

4. The installation wizard will search for the correct drivers. After a moment, a window will pop up cautioning you that this software has not passed Windows logo testing. This is a standard warning, and Moxa has thoroughly tested the driver for safe Windows operation. Please click **Continue Anyway** to proceed.

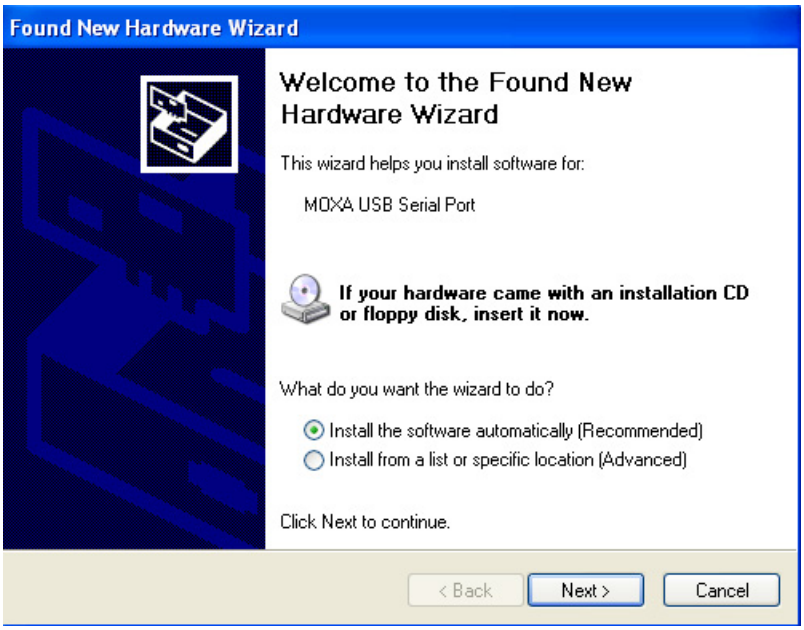
5. Windows will spend a few moments installing the UPort driver..



6. The next window indicates that Windows has completed the installation. Click **Finish** to continue with installation procedure.

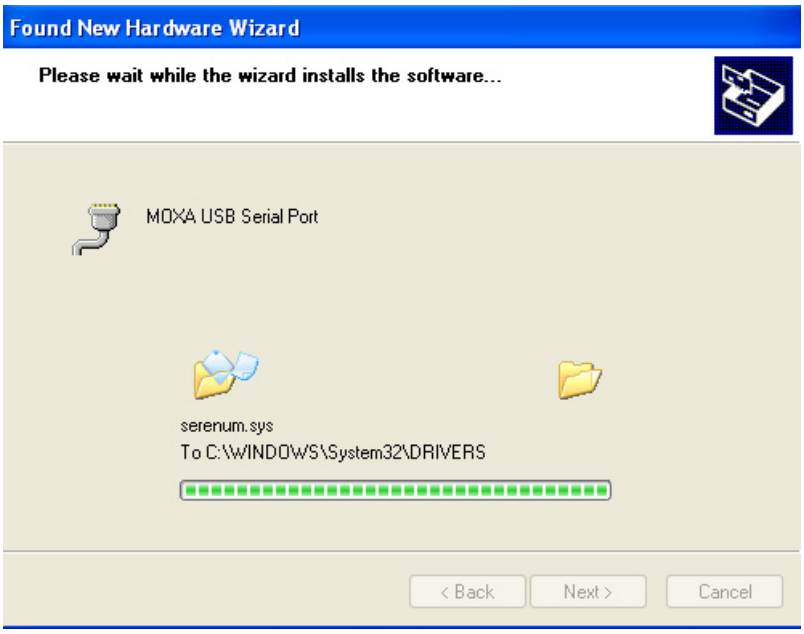
7. After Windows has completed installing the adaptor, it will automatically detect the new COM port. The **Found New Hardware** balloon will appear in the bottom right corner of the Windows desktop.

8. After a moment, the Found New Hardware Wizard will open. Select **Install the software automatically (Recommended)**, then click **Next.**



9. The installation wizard will search for the correct drivers. After a moment, a window will pop up cautioning you that this software has not passed Windows logo testing. This is a standard warning, and Moxa has thoroughly tested the driver for safe Windows operation. Please click **Continue Anyway** to proceed.

10. Windows will spend a few moments installing the driver.

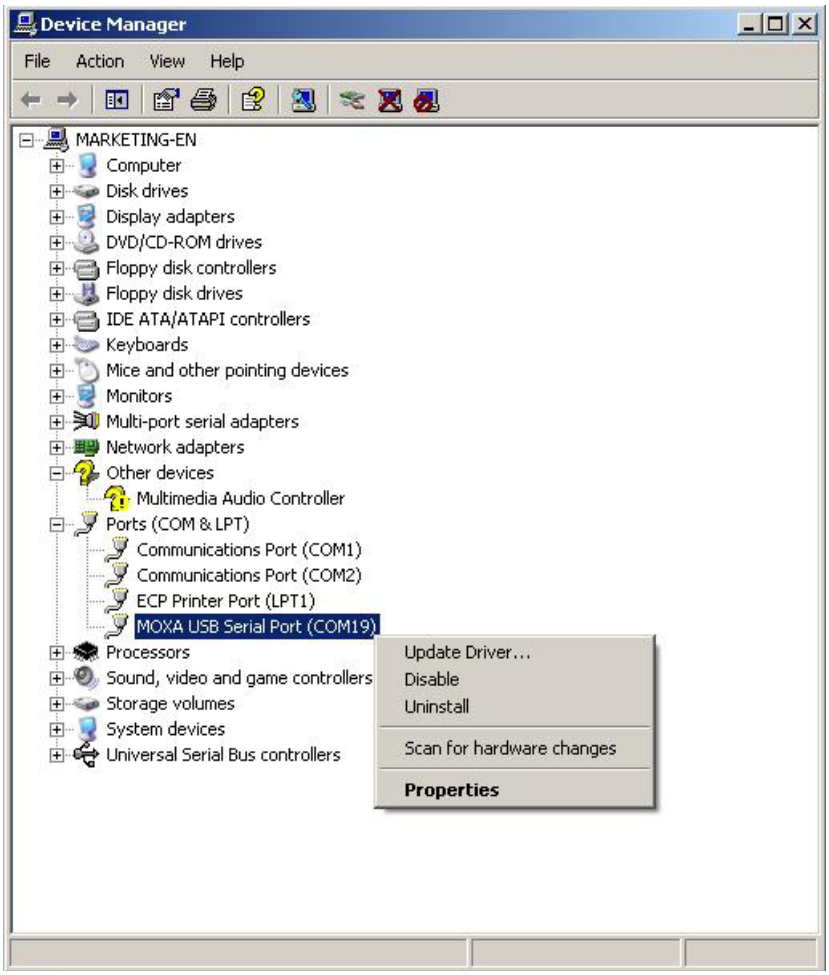


11. The next window indicates that Windows has completed the installation. Click **Finish** to proceed with installation procedure.

12. The **Found New Hardware balloon** will reappear, indicating that the installation was successful.

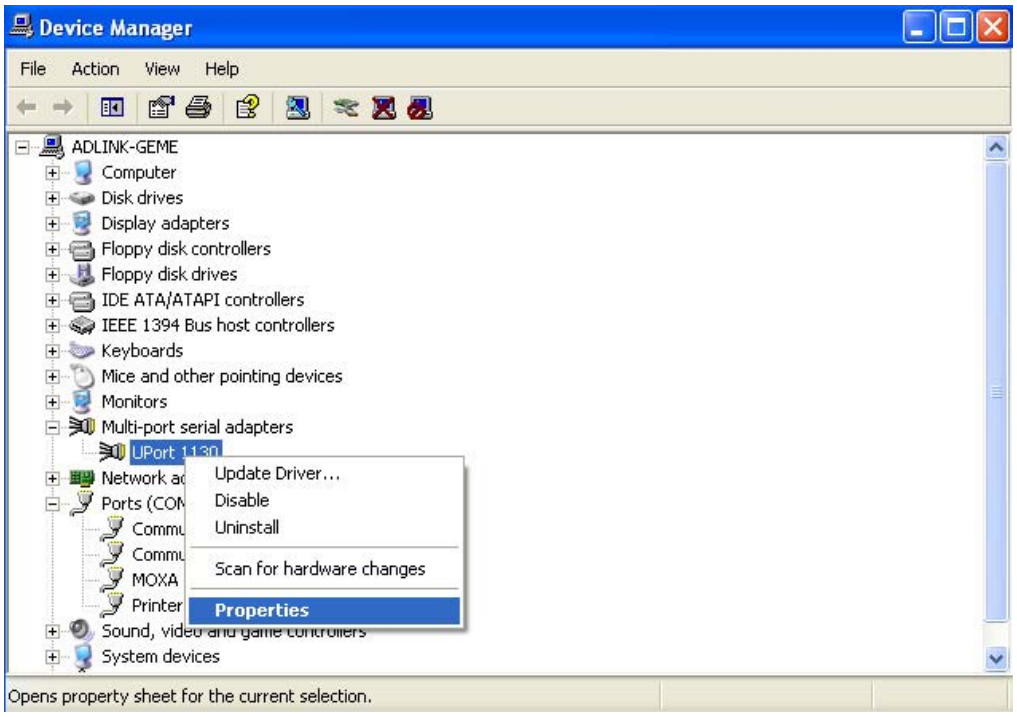
Configuring the COM Port

After the driver and hardware have been successfully installed, the new COM port will have a COM number and can be accessed and controlled just like your PC's built-in COM ports. If you need to change the baud rate, parity, or other COM port settings, you may use your serial communication application to make those changes. You may also go to Device Manager and right-click the **MOXA USB Serial Port**, which will be listed under **Ports** along with your PC's built-in COM ports. In the context menu that pops up, you may select **Properties** in order to modify the COM port settings.

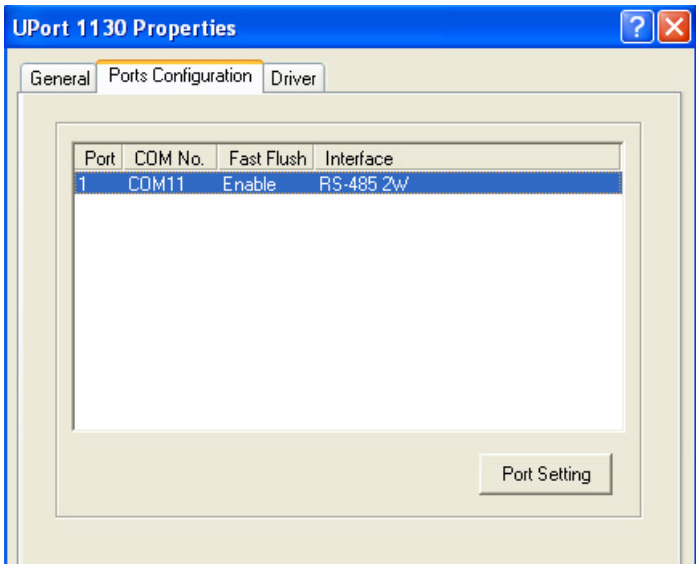


Configuring the Adaptor

If you need to change the COM number that the adaptor assigns to the COM port, or adjust other advanced settings, you may go to Device Manager and right-click the UPort adaptor, which will be listed under **Multi-port serial adaptors**. In the context menu that pops up, you may select **Properties** in order to modify the COM port settings.



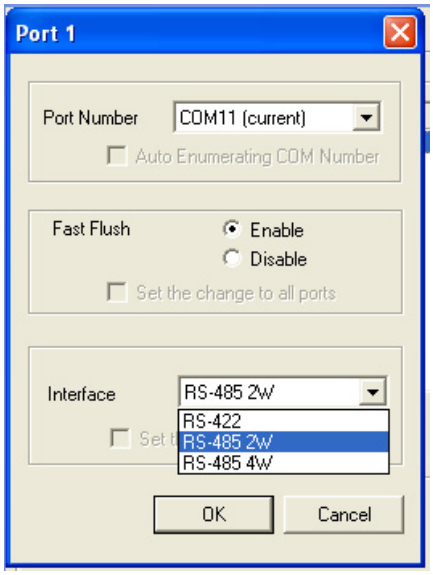
In the **Port Configuration** tab, you will see the new COM port listed. Click **Port Setting** to modify the COM number and other parameters.



ATTENTION

Before modifying these settings, make sure that you have closed any applications that may be accessing the COM port, such as HyperTerminal.

You may change the Port Number and enable or disable the Fast Flush function. For the UPort 1130, you may also select between RS-422, 2-wire RS-485, and 4-wire RS-485 modes. Please note that **Auto Enumerating COM Number** and **Set the change to all ports** are not available for this model of UPort.



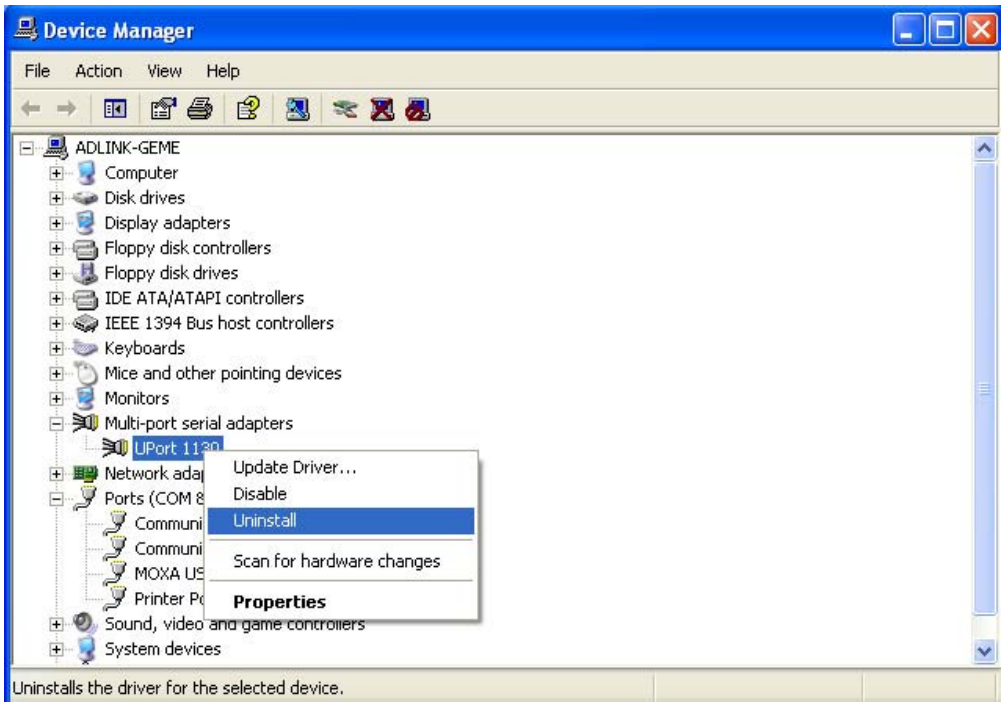
The Fast Flush function is specifically designed to handle Win32 PurgeComm() function calls and is enabled by default. When Fast Flush is enabled, the driver will automatically clear the local buffer when it receives a PurgeComm() command. When Fast Flush is disabled, the driver will repeatedly query the adaptor until it verifies that there is no more data in the buffer. Disabling this function can cause lower throughput for applications that use PurgeComm() heavily.

Removing the Adaptor

The adaptor is a plug and play device. No special procedures are required to remove the adaptor; you may simply pull the adaptor out of the USB port. You should verify that no data is being transmitted before removing the adaptor.

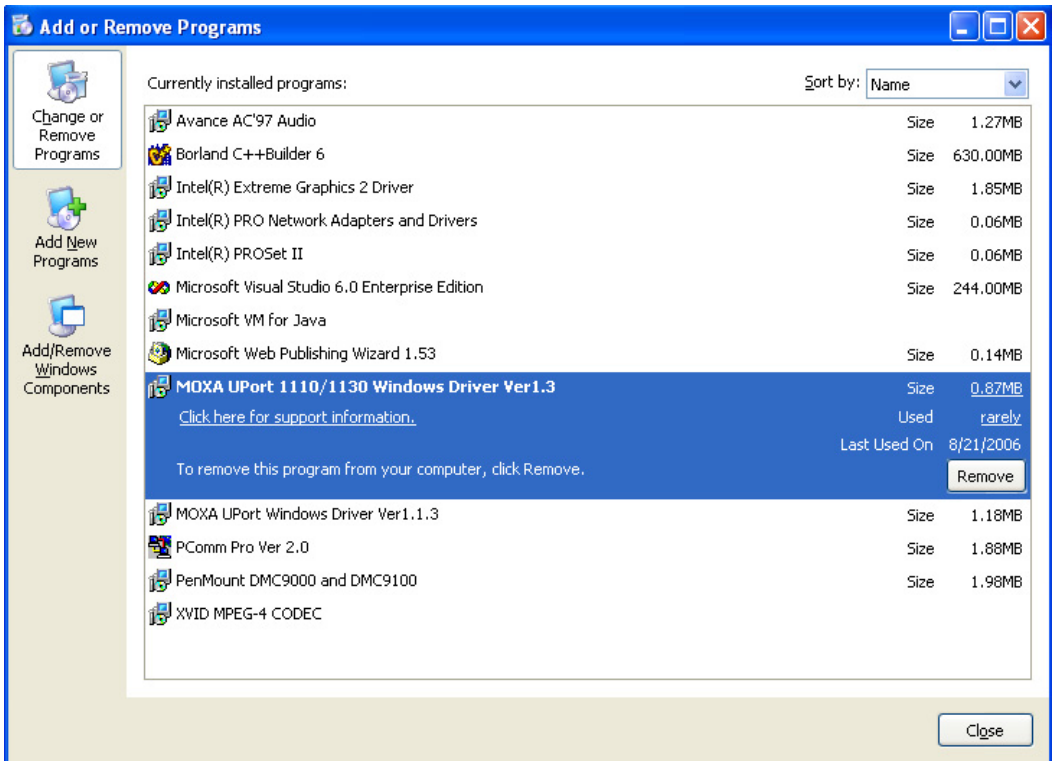
Removing the adaptor does not remove the drivers. The drivers remain in place so that the adaptor can be automatically detected and installed if it is pluged back into the USB port.

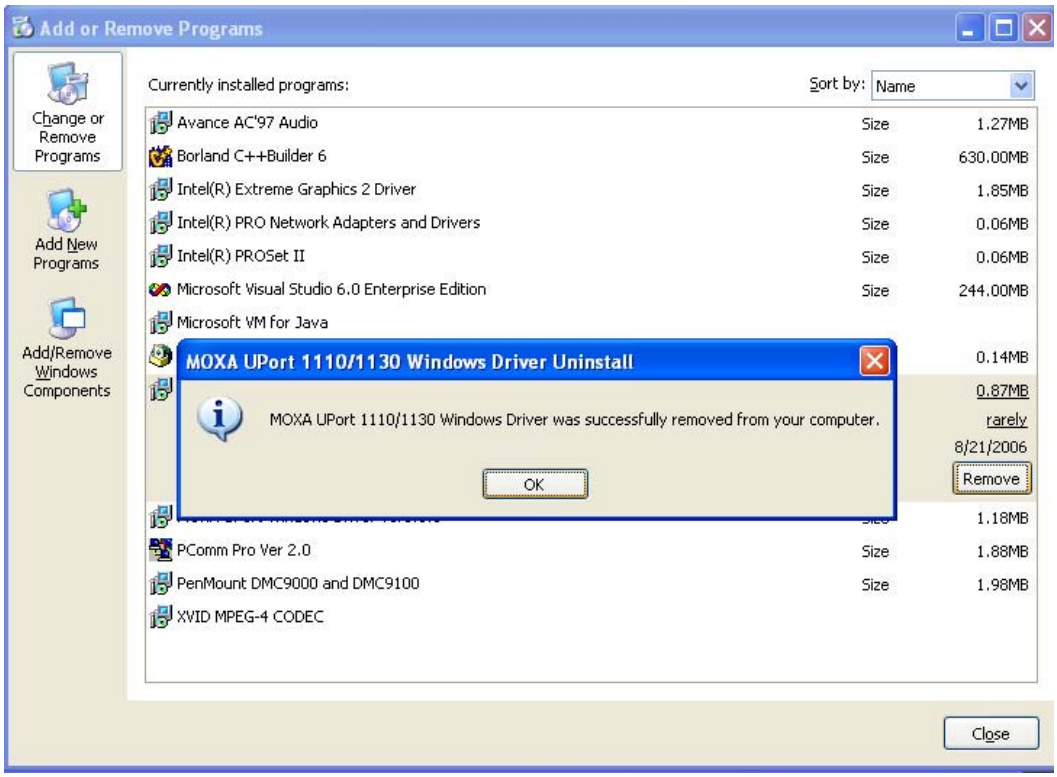
The adaptor can also be uninstalled through the Device Manager, the same as other Windows devices. Right-click the adaptor, which will be found under **Multi-port serial adaptors**, then select **Uninstall** from the context menu.



Uninstalling the Driver

The UPort driver may be removed through Add/Remove Programs in the Windows Control Panel. Click **Remove** next to **MOXA UPort 1110/1130 Windows Driver Ver1.3**.



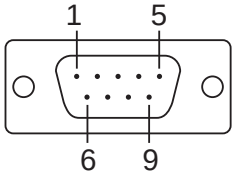

Add or Remove Programs
Change or Remove Programs
Add New Programs
Add/Remove Windows Components
Currently installed programs:
Sort by: Name
Avance AC'97 Audio Size 1.27MB
Borland C++Builder 6 Size 630.00MB
Intel(R) Extreme Graphics 2 Driver Size 1.85MB
Intel(R) PRO Network Adapters and Drivers Size 0.06MB
Intel(R) PROSet II Size 0.06MB
Microsoft Visual Studio 6.0 Enterprise Edition Size 244.00MB
Microsoft VM for Java
0.14MB
0.87MB
rarely
8/21/2006
Remove
MOXA UPort 1110/1130 Windows Driver Uninstall
MOXA UPort 1110/1130 Windows Driver was successfully removed from your computer.
OK
1.18MB
PComm Pro Ver 2.0 Size 1.88MB
PenMount DMC9000 and DMC9100 Size 1.98MB
XVID MPEG-4 CODEC
Close

A

Pin Assignments

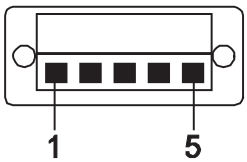
UPort DB9 Pin Assignments

The UPort 1110 and UPort 1130 use male DB9 connectors. Pin assignments are shown in the following diagram:

		UPort 1110	UPort 1130	
DB9 (male)	**Pin**	**RS-232**	**RS-422 4-wire RS-485**	**2-wire RS-485**
	1	DCD (in)	TxD-(A)	-
	2	RxD (in)	TxD+(B)	-
	3	TxD (out)	RxD+(B)	Data+(B)
	4	DTR (out)	RxD-(A)	Data-(A)
	5	GND	GND	GND
	6	DSR (in)	-	-
	7	RTS (out)	-	-
	8	CTS (in)	-	-

Terminal Block Pin Assignments

The UPort 1130 comes with a DB9 to terminal block converter, with pin assignments as shown below:

Terminal Block	**Pin**	**RS-422 4-wire RS-485**	**2-wire RS-485**
	1	TxD+(B)	-
	2	TxD-(A)	-
	3	RxD+(B)	Data+(B)
	4	RxD-(A)	Data-(A)
	5	GND	GND

Note that the converter maps pin 1 on the DB9 connector to pin 2 on the terminal block, and pin 2 on the DB9 connector to pin 1 on the terminal block.

B

Service Information

This appendix contains information on how to obtain information or service from MOXA for the UPort adaptor and other MOXA products. The following topics are covered:

- **MOXA Internet Services**
  - Technical Support E-mail Address
  - Website for Product Information
- **Problem Report Form**
- **Product Return Procedure**

MOXA Internet Services

Customer satisfaction is our top priority. To ensure that customers receive the full benefit of our products, MOXA Internet Services has been set up to provide technical support, driver updates, product information, and user's manual updates.
The following services are provided

Technical Support E-mail Address

support@moxa.com

Website for Product Information

http://www.moxa.com

Problem Report Form

MOXA UPort 1110 or UPort 1130

Customer name:	
Company:	
Tel:	**Fax:**
Email:	**Date:**

Select Product Model

❑ **UPort 1110**

❑ **UPort 1130**

Serial Number:_____

Problem Description

Please describe the symptoms of the problem as clearly as possible, including any error messages you see. A clearly written description of the problem will allow us to reproduce the symptoms and expedite the repair of your product.

Product Return Procedure

For product repair, exchange, or refund, the customer must:

- Provide evidence of original purchase.
- Obtain a Product Return Agreement (PRA) from the sales representative or dealer.
- Fill out the Problem Report Form (PRF). Include as much detail as possible for a shorter product repair time.
- Carefully pack the product in an anti-static package and send it, pre-paid, to the dealer. The PRA should be visible on the outside of the package and should include a description of the problem along with the return address and telephone number.