

UPort 1200/1400/1600 Quick Installation Guide

USB-to-Serial Converter

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Overview

Moxa's USB-to-serial product provides a wide range of easy-to-use solutions for adding Windows COM ports and Linux tty ports through a PC's USB port.

The UPort 1200/1400/1600 series are the following models:

- UPort 1250: 2-port RS-232/422/485 USB-to-serial converter
- UPort 1250I: 2-port RS-232/422/485 USB-to-serial converter w/ isolation protection
- UPort 1410: 4-port RS-232 USB-to-serial converter
- UPort 1450: 4-port RS-232/422/485 USB-to-serial converter
- UPort 1450I: 4-port RS-232/422/485 USB-to-serial converter w/ isolation protection
- UPort 1610-8: 8-port RS-232 USB-to-serial converter
- UPort 1650-8: 8-port RS-232/422/485 USB-to-serial converter
- UPort 1610-16: 16-port RS-232 USB-to-serial converter
- UPort 1650-16: 16-port RS-232/422/485 USB-to-serial converter

Before connecting UPort USB-to-serial converters to your computer's USB port, we recommend installing the UPort driver first. To do this, follow the installation procedure described in the "Installing the UPort 1200/1400/1600 Driver" section below. The installation procedure was done on a PC running a Windows platform. UPort converters can be connected to any upstream type A USB port that is on the PC host or on an upstream hub. UPort converters are hot pluggable, and therefore there is no need to power down your computer prior to installation.

After installing the driver, connect the UPort to an upstream host or hub. The **Found New Hardware** wizard will locate the appropriate drivers automatically. Once the drivers are found, various windows will pop up as the UPort's serial port is being installed. When the **Found New Hardware Wizard** finishes installing the UPort, use the operating system's **Device Manager** to check and/or modify the port settings. The new COM port will be listed under **Ports (COM & LPT)**.

Ordering Information

Package Checklist

Before installing the UPort, verify that the package contains the following items:

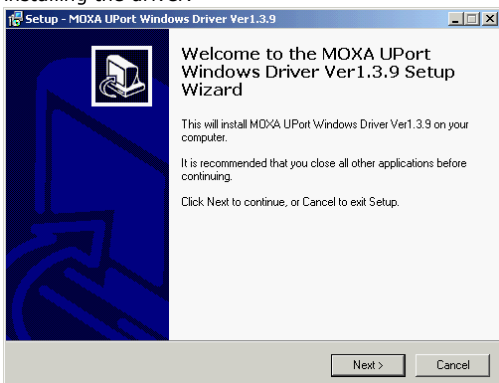
- 1 UPort 1200/1400/1600 USB-to-serial converter
- USB cable: CBL-USBA/B-100
- 100 to 240 VAC power adapter (excluding T models, UPort 1250/1410)
- 1 power cord suitable for your region (excluding T models, UPort 1250/1410)
- 1 serial adapter: mini DB9F-to-TB (excluding UPort 1410/1610 series)
- **WK-44-01**: 19" rackmount L brackets (2 L-shaped plates with 8 screws; for UPort 1600-16 series)
- Quick installation guide (printed)
- Warranty card

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

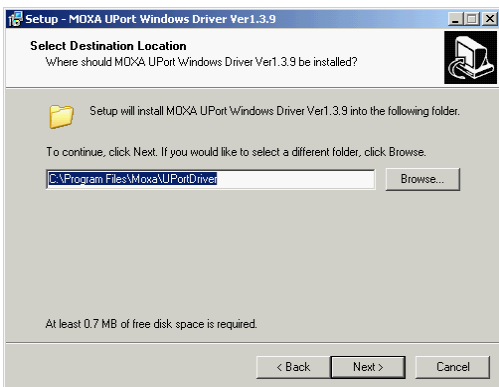
NOTE The operating temperature of the power adapter in the box is from 0 to 40°C. If your application is not in this range, please use a power adapter supplied by UL Listed External Power Supply (The power output meets SELV and LPS and rated 12 - 48 VDC, minimum current 0.73 A). Moxa has power adapters with wide temperature range (-40 to 75°C, -40 to 167°F), the PWR-12150-(plug type)-SA-T series, for your reference.

Installing the UPort 1200/1400/1600 Driver

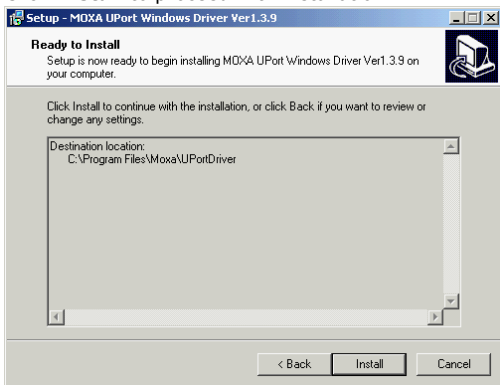
1. Run the Setup program which you may find on Moxa's support website <http://www.moxa.com/support/>. Click **Next** to start installing the driver.



2. Click **Next** to install the driver in the indicated folder.



- Click **Install** to proceed with installation.



- Then click **Finish** to complete the driver installation.



WARNING

- This unit is not intended for consumer use. It will only be shipped to manufacturers or factories.
- The DC source should come from a class external adapter or a 12 to 48 VDC safety extra-low voltage (SELV) limited power source (LPS), using a transfer device.
- This unit should be installed or set up by a qualified service person.

- Refer to the table below to see if external power is needed for your UPort. If applicable, connect the UPort to an external power source.

	UPort 1250	UPort 1250I	UPort 1400	UPort 1600-8	UPort 1600-16
Bus Power	✓	–	✓	–	–
External Power (adapter)	–	✓	✓	✓	–
External Power (cord)	–	–	–	–	✓

- Connect the UPort to the PC using the USB cable.
- After turning your PC's power on, Windows will automatically detect the UPort.

- Case 1: The UPort Driver is Certified**

If the UPort driver that you installed has been certified by Microsoft, the UPort and the UPort's serial ports will be installed automatically when you plug the UPort into your computer's USB port.

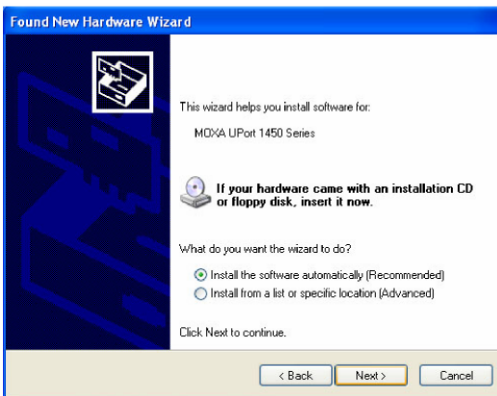
Case 2: The UPort Driver is NOT Certified

If the UPort driver that you installed has not been certified by Microsoft, then plugging the driver into your computer's USB port will activate the UPort installation program. The first part of the installation procedure installs the software for the UPort itself (the second part of the procedure installs the serial ports).

Click **Next** to start the installation process.



5. Select **Install the software automatically (Recommended)**



6. The window that opens next cautions you that although this software has not passed Windows logo testing, this driver has already been tested and demonstrated that it supports the Windows OS. Click **Continue Anyway** to proceed and then click **Finish** to complete the driver installation.



7. Repeat steps 4 to 6 until all COM ports are installed.

Installing the Linux Kernel 2.6.x and 3.x Driver

First obtain the Linux driver file

driv_linux_uport_v1.x_build_xxx.tgz from the Moxa's website at <http://www.moxa.com>. Save the driver file to a specific directory, such as **/moxa**, and then execute the commands listed below:

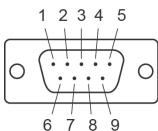
```
# cd /moxa
# tar xvfz driv_linux_uport_v1.x_build_xxx.tgz
# make
# make install
# modprobe mxuport
# ls /dev/ttyMXUSB*
```

Serial Port Pin Assignments

The serial ports on the UPort 1200/1400/1600 have DB9 male connectors. Refer to the following table below for the RS-232 and RS-422/485 pin assignments.

NOTE For UPort with DB Male Serial Ports, you may refer to DB9 Male Ports pin assignment section to loop back pin 2 and pin 3 for the RS-232 interface to carry out a self test on the device.

Male DB9



Pin	RS-232	RS-422/ RS-485 4W	RS-485 2W
1	DCD	TxD-(A)	-
2	RxD	TxD+(B)	-
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-

Power Input Specifications

UPort 1250	5 VDC (bus power), 360 mA
UPort 1250I	12 to 48 VDC, 200 mA (max. in 12 VDC)
UPort 1410/1450	12 to 48 VDC (external) or 5 VDC (bus power), 260 mA (max. in 12 VDC)
UPort 1450I	12 to 48 VDC, 360 mA (max. in 12 VDC)
UPort 1600-8	12 to 48 VDC, 340 mA (max. in 12 VDC)
UPort 1600-16	100 to 240 VAC, 150 mA (max. in 100 VAC)