UPort™ 1400-G2 Series Quick Installation Guide

Version 1.2, August 2025

Technical Support Contact Information
www.moxa.com/support

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P/N: 1802014000112

Overview

Moxa's USB-to-serial products provide a wide range of easy-to-use solutions for adding Windows COM ports, macOS, and Linux tty ports through the USB port of a computer. The UPort 1400-G2 Series comprises the following models:

4-port Models

UPort 1410-G2	RS-232 USB-to-serial converter	0 to 60°C (32 to 140°F)
UPort 1450-G2	RS-232/422/485 USB-to-serial converter	0 to 60°C (32 to 140°F)
UPort 1450-G2-T	RS-232/422/485 USB-to-serial converter	-40 to 75°C (-40 to 167°F)
UPort 1450I-G2	RS-232/422/485 USB-to-serial converter with isolation protection	0 to 60°C (32 to 140°F)
UPort 1450I-G2-T	RS-232/422/485 USB-to-serial converter with isolation protection	-40 to 75°C (-40 to 167°F)

WARNING

1. This unit is not intended for consumer use. It will only be shipped to manufacturers or factories.
2. 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.
3. This unit should be installed or set up by a qualified service person.

Package Checklist

After opening the box, verify that the package contains the following items:

- 1 UPort 1400-G2 USB-to-serial converter
- 1 USB cable with latch:
  - **CBL-USB3-BA-G-120** for all models except for the UPort 1650-8-G2-Hub, 1.2 m, with hook and screw
- Quick installation guide (printed)
- Warranty card (printed)

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

Accessories

Power Adapters

- PWR-12050-USJP-S1
- PWR-12150-*-SA-T (for all -T models; *: EU/USJP/CN/UK/AU)

WARNING

This product is intended to be supplied by an approved external power source (UL listed/IEC 60950-1/IEC 62368-1) which output complies with ES1/SELV, PS2/LPS, output rating 12 to 48 VDC, 0.34 A minimum (by DC jack) or 5 VDC, 0.61 A minimum (by USB port), ambient temperature 75°C minimum. If further information or help is needed, please contact your Moxa representative. If a Class I power source is used, the power cord should be connected to a socket outlet with an earthing connection.

Cables

- CBL-USB3-BA-G-120: USB 3.2 Gen 1 cable with latch 1.2 M
- CBL-USB3-BA-G-028: USB 3.2 Gen 1 cable with latch 0.28 M
- CBL-USB3-BA-B-120: Standard USB 3.2 Gen 1 cable 1.2 M

DIN-rail Kits:

- DK-UP1400-G2 (for UPort 1400-G2 models)

Wall-mounting Kits:

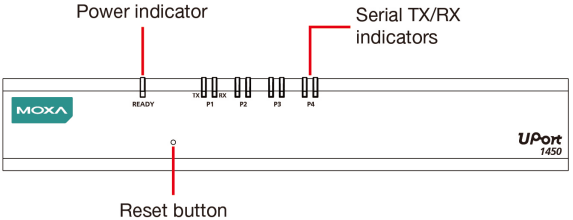
- WK-UP400A-BOT-BK: Wall mounting for 4/8-port models

Adapters:

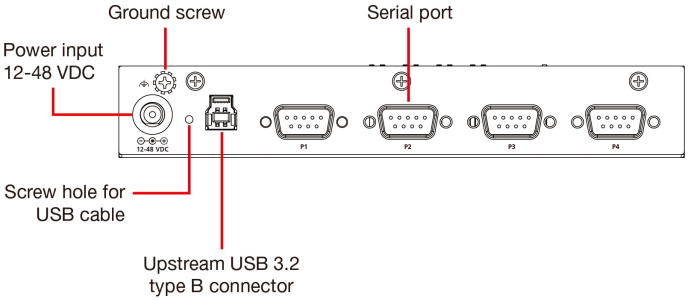
- LB-DB9F-G-01: Serial Loopback adapter
- ADP-RJ458P-DB9F: DB9F-to-RJ45 adapter
- Mini DB9F-to-TB: DB9F-to-TB adapter

Hardware Introduction

Front View



Back View

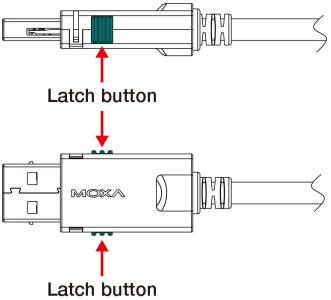


Grounding the UPort

Grounding and wire routing help limit the effects of noise caused by electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface before connecting devices.

USB Cable Usage Guide

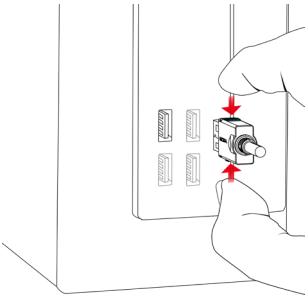
The new Moxa latch USB cable comes with a latch on each side of the Type-A connector and a screw on the Type-B connector.



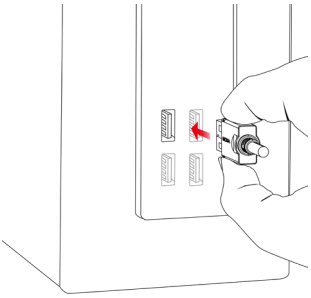
Plugging in the USB Cable Using Type A Connector

To plug in the USB cable to the host computer and secure it, do the following:

Step 1: Press both latches on the connector.

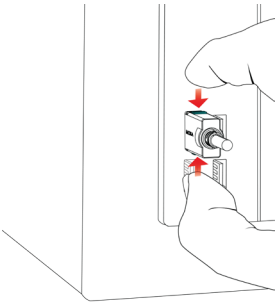


Step 2: Plug the connector into the USB slot.

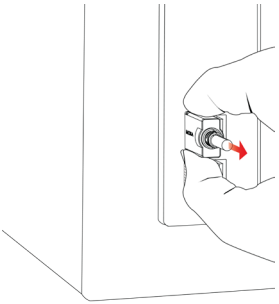


Removing the USB Cable

Step 1: Press both latches on the USB cable connector hard so that they are pushed to the maximum.



Step 2: Unplug and pull out the cable 90 degrees horizontal to the USB socket.



ATTENTION

Be cautious when plugging in or out the latch connector.

1. When the cable is plugged into a host computer or pulled out every time, always press both latches. Then, plug the connector into the receptacle on your computer or vice versa.
2. If the type A connector doesn't come off smoothly, **DO NOT** pull the cable out by force as it will deform the hook on the connector, and you may not be able to use the cable again. Try again by pushing the latch hard and shake the connector left to right gently.

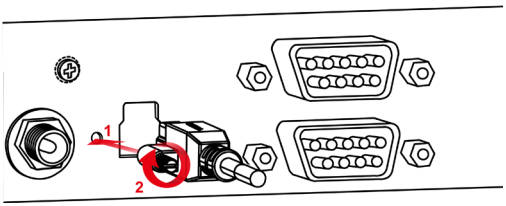
NOTE The latch cable is designed to lock to most of the computer USB sockets; however, there may be some sockets that are designed with a slight marginal difference, which may cause the latch not to lock to your computer USB sockets perfectly.

Plugging in a USB Cable to the Host Computer Using Type B Connector

The screw on the side of type B connector is for fixing the cable firmly to the UPort. Please remember to swivel the bolt after plugging in and before pulling out the connector.

Step 1: Plug in type B connector.

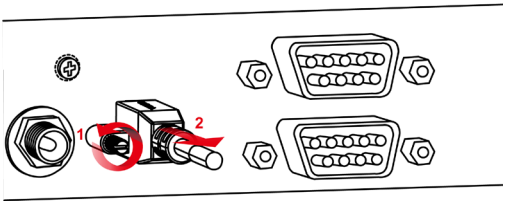
Step 2: Swivel the bolt about five rounds.



Pulling out a USB cable from the host computer

Step 1: Swivel the bolt about five rounds until it is loose.

Step 2: Pulling out type B connector.



LED Indicators

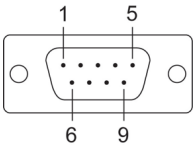
The LED indicators on the front panel are used to display the status as follows:

Function	Color	Definition
Ready	Red	Power is on and the system is not yet ready
	Green	System is up and ready
	Green blinks	Locate in action
	Off	Unit is not powered or out of operation
TX	Green blinks	Transmitting data
	Off	No data is being transmitted, or the serial device is not connected or out of operation
RX	Orange blinks	Receiving data
	Off	No data is being received, or the serial device is not connected or out of operation

Serial Port Pin Assignments

The serial ports on the UPort 1400/1600-G2 have DB9 male connectors. Refer to the following table below for the RS-232 and RS-422/485 pin assignments.

Serial Port (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	–	–
9	–	–	–

NOTE For the UPort with DB9 male serial ports, you may refer to the *Serial Port Pin Assignments* section to loop back pin 2 and pin 3 for the RS-232 interface to carry out a self-test on the device. You may refer to *Communication Testing* in the *Software Installation* sections in this document for how to use the loopback connector in the box to perform the communication test.

Adjustable Pull High/low Resistors for the RS-485 Port

The UPort uses DIP switches to set the pull high/low resistor values for each serial port.

To set the pull high/low resistors to 150 KΩ, make sure both SW 1 and SW 2 switches are in the **OFF** position. This is the **default setting**.

To set the pull high/low resistors to 1 KΩ, make sure both SW 1 and SW 2 switches are in the **ON** position.

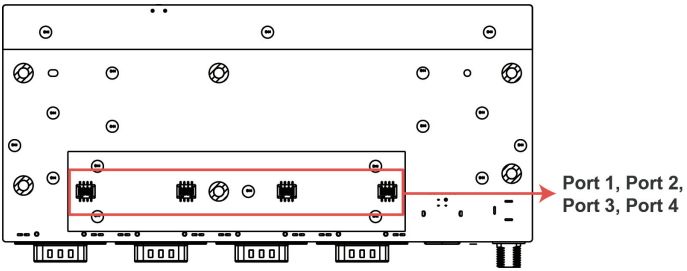
To set the termination on, SW 3 should be set to the **ON** position.

Switch	1	2	3	4
	Pull High	Pull Low	Termination	–
ON	1 KΩ	1 KΩ	120 Ω	–
OFF	150 KΩ	150 KΩ	–	–

ATTENTION

Do not use the 1-kΩ setting on the UPorts when using an RS-232 interface. Doing so will degrade the RS-232 signals and shorten the maximum allowed communication distance.

UPort 1400-G2 DIP Switches Location



Software Installation

To install the UPort driver, please follow the installation procedure described in the *Mounting the UPort 1400/1600-G2* section. UPort converters can be connected to any upstream type A USB port that is on the PC host or an upstream hub. UPort converters are hot-pluggable, and therefore there is no need to power down your computer prior to installation.

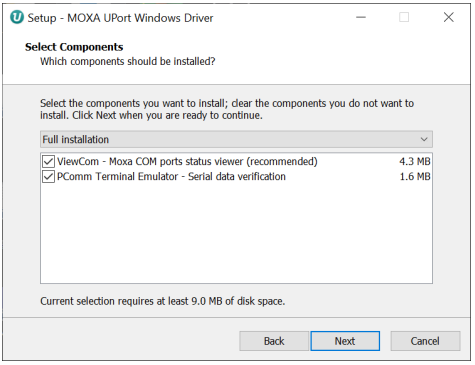
When the UPort is successfully installed, use the operating system's device manager to check and/or change the port settings. In Windows, the new COM port will be listed under Ports (COM & LPT).

Installing the Windows Driver

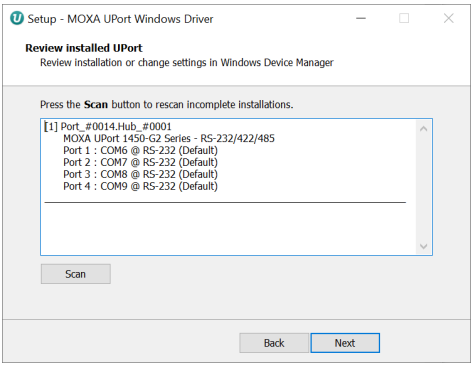
Download and run the Setup program from the UPort's product page and follow the installation steps.

A few things to note:

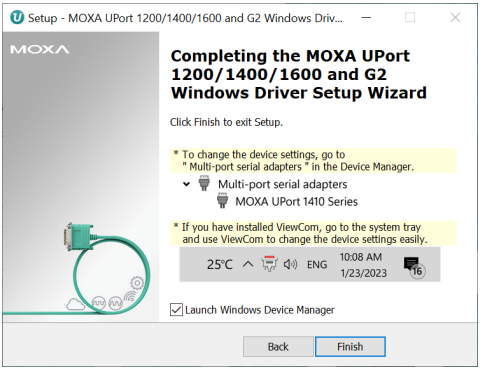
1. We recommend also installing companion utilities for future use. For an introduction of the utility, refer to the *User Manual*.



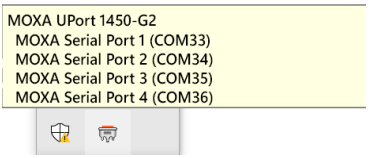
2. After the driver is successfully installed, connect the UPort to your computer. Then, click **Scan** to review the installation results and confirm that the UPort is connected to your computer.



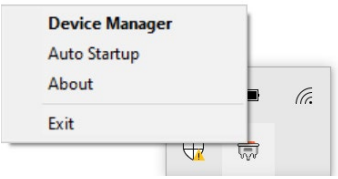
3. Check **Launch Windows Driver Manager** to configure the UPort after the setup is completed.



4. If you have installed **ViewCOM**, you can mouse over the **ViewCOM** icon in the system tray to see COM port information.



The right-click context menu has the shortcut to **Windows Device Manager** and **Auto Startup** utilities if needed.



For configuration details, check *COM Port Configuration* section in the *User Manual*.

Installing the Linux Driver

Run the following commands from the Linux prompt:

```
# CD /moxa
# tar xvfz moxa-uport-1200-1400-1600-series-linux-kernel-[kernel version]-driver-v[driver version].tgz
```

Find the **Makefile** file in **/moxa/mxuport** and run the commands:

```
# make install
# modprobe mxuport
```

For further information, refer to the *User Manual* or the **readme.txt** that comes with the driver package.

Installing the Linux Driver for Arm-based Platforms

Please refer to the **Tech Note: UPort Driver Arm-based Platform Porting Guide** on the product page or the **readme.txt** that comes with the driver package.

Installing the macOS Driver

For macOS 10.12 and later, follow the steps below to install the driver:

1. Enter the recovery mode.
2. Disable System Integrity Protection (SIP) by running the **csrutil disable** command from the terminal.
3. Return to the normal mode.
4. Launch the UPort driver installer and complete the installation procedure.
5. Reenter the recovery mode.
6. Enable System Integrity Protection (SIP) by running the **csrutil enable** command from the terminal.
7. Return to the normal mode.

For detailed instructions, please refer to the *User Manual* on the product page or the **readme.txt** that comes with the driver package.

Communication Testing

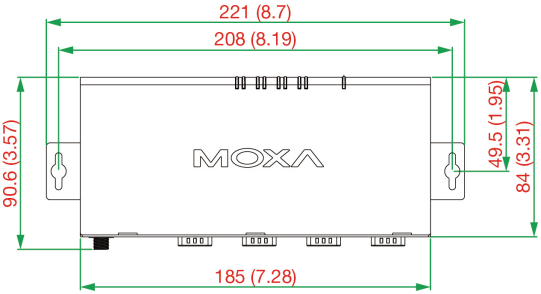
There are Moxa companion utilities for serial communication testing. For this purpose, you may use **PComm Terminal**. For other useful utilities, please refer to the UPort's *User Manual* for an introduction.

Mounting the UPort 1400-G2

UPort 1400-G2

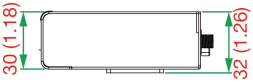
Dimensions

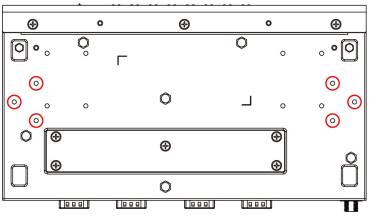
Unit = mm (inches)



Wall Mounting

The mounting kit is 2 mm in height, and the two centers of the mounting kit on each plate are 208 mm (8.19 in).

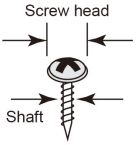


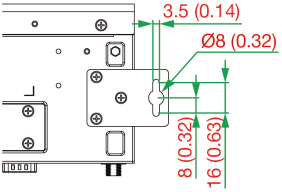


First, attach the brackets to the bottom of the UPort 1400-G2 with screws, where the circles show. The recommended screw tightening torque: 4.5 kgf-cm +/- 0.5, screw type: type F, PH2. Next, mount the unit to a wall with the screws.

Screw information:

Type	M3
Quantity	6
Length	5 mm
Head diameter	Less than 3.5 mm
Shaft diameter	Less than 3.0 mm

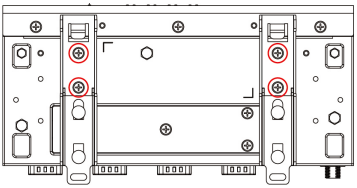




DIN-rail Mounting

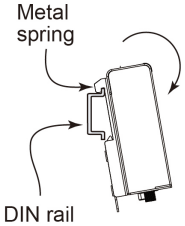
The UPort 1400-G2 models have a DIN-rail kit option to allow installation on a DIN rail. DIN-rail attachments can be purchased separately to attach the product to a DIN rail. The DIN-rail attachments should be oriented with the metal springs on top.

First, attach the DIN-rail attachments to the rear of the UPort 1400-G2 with screws, showed by the circles. The recommended screw type is M3, 5 mm in length, tightening torque: 4.5 kgf-cm +/- 0.5, screw type: type F, PH2, 4 screws.

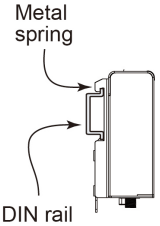


Next, mount the UPort 1400-G2 onto the mounting rail.

STEP 1: Insert the upper lip of the DIN-rail kit into the mounting rail.



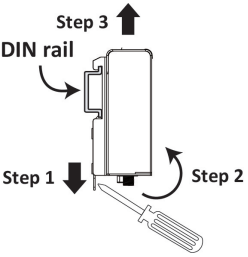
STEP 2: Press the UPort 1400-G2 towards the mounting rail until it snaps into place.



To remove the UPort 1400-G2 from the DIN rail, do the following:

STEP 1:
Pull down the latch on the DIN-rail kit with a screwdriver.

STEP 2 & 3:
Slightly pull the UPort 1400-G2 forward and lift it up to remove it from the mounting rail.



Product Specifications

USB Interface	
Standard	USB 3.2/2.0/1.1 compliant 5 Gbps (SuperSpeed USB), 480 Mbps (Hi-Speed USB) and 12 Mbps (Full-Speed USB)
Upstream	1 USB port, Type B connector
Downstream	4 serial ports, DB9 connectors
Physical Characteristics	
Housing	Metal (SECC) + Aluminum
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Operating Humidity	5 to 95% RH (For use in Pollution Degree 2 environments)
Storage Temperature	Standard Models: -40 to 75°C (-40 to 167°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Power Requirements	

Most of the UPort G2 models can be powered up by USB bus power. Please refer to the table below to find out how your model can be powered on:

	USB 2.0 bus power (0.5A)	**USB 3.2 bus power (0.9A)**	**Power adapter 12-48 VDC**
UPort 1410-G2	✓	✓	✓
UPort 1450-G2	✓	✓	✓
UPort 1450I-G2	✓	✓	✓

Power Consumption	
	Power adapter @ 12V
UPort 1410-G2	0.200 A
UPort 1450-G2	0.240 A
UPort 1450I-G2	0.340 A
Regulatory Approvals	
EN IEC 61000-4-4, EN IEC 61000-4-5, EN IEC 61000-4-6, EN IEC 61000-4-8, EN IEC 61000-4-11, EN IEC 61000-6-2, EN IEC 61000-6-4 FCC Part 15B Class A, U62368-1, LVD	
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty

The latest specifications for Moxa's products can be found at https://www.moxa.com.

Certifications

CE Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take appropriate measures.

Federal Communications Commission Statement

FCC - This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

KC Certification

사용자안내문 (User Guide)

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

(This equipment has KC approval for use in industrial environments and could possibly interfere with household equipment.)

기 종별 Type of Equipment	사용자안내문 User Guide
A 급 기기 (업무용 방송 통신기 자재) Class A Equipment (Broadcasting and Communication Equipment for Industrial and Commercial Use)	이 기기는 업무용 (A 급) 전자파 적합 기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다. This equipment is the EMC conformity equipment (Class A) for Industrial and Commercial Use. The seller or user should take note of this as this equipment can be used in places that exclude homes.
B 급 기기 (가정용 방송 통신 기자재) Class B Equipment (Broadcasting and Communication Equipment for Home Use)	이 지기는 가정용 (B 급) 전자파적합 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다. This equipment is the EMC conformity equipment (Class B) for Home Use and can be used mainly at homes, as well as in other areas.