UPort 1600-8-G2 Series

8-port RS-232/422/485 USB-to-serial converters

Features and Benefits

- USB 3.2 SuperSpeed capability
- 512-byte on-chip FIFO cache and flow control for enhanced performance
- Drivers provided for a broad selection of operating systems, including Windows and Linux
- 50 bps to 921.6 kbps baudrate (nonstandard baudrates supported)
- Double-sided LEDs located at the corners show power, TX, and RX statuses in either directions
- Cascades with 3 UPort-G2 devices to up port capacity to 32 ports; no additional power adaptors required (UPort 1650-8-G2-Hub)
- Latching USB cable design for firmer connection
- Wide operating temperature models available for -40 to 75°C (-40 to 167°F) environments
- Serial port with 2 kV isolation protection (for "-I" models)

Certifications

Introduction

The UPort® 1600-8-G2 Series USB-to-serial converters are ideal for laptop or workstation computers that need serial port expansion. They are essential for computers which need to connect different serial devices in the field or need separate interface converters for devices without a standard COM port or DB9 connector. The computers also come with a USB cable that has a latch and screw lock for a more secure connection between the UPort and your computer. With the cascading capability of the UPort® 1650-8-G2-Hub, you can link up to 32 serial ports without a power adaptor to the UPort. The UPort® 1600-8-G2 Series converts from USB to RS-232/422/485. All products are compatible with legacy serial devices and can be used with instrumentation and point-of-sale applications.

Specification

USB Interface	
USB Standards	USB 3.2 Gen 1 USB 1.1/2.0 compliant
Speed	5 Gbps, 480 Mbps, 12 Mbps
No. of USB Ports	3 additional DFP for UPort 1650-8-G2-Hub
USB Connector	USB type B (UFP) for all models, and type A (DFP) for UPort 1650-8-G2-Hub

Serial Interface	
Connector	DB9 male
No. of Ports	8
Serial Standards	RS-232: UPort 1610-8-G2 RS-232/422/485: All other models
FIFO	512 bytes
Bitrate	50 bps to 921.6 kbps (supports non-standard baudrates)

Parity	None, Even, Odd, Space, Mark
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Flow Control	RTS/CTS, XON/XOFF
RS-485 Data Direction Control	Automatic Data Direction Control (ADDC)
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
Terminator for RS-485	120 ohms
Surge	0.5 kV
Isolation	UPort 1650I-8-G2: 2 kV UPort 1650I-8-G2-T: 2 kV

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND

Serial Software Features

Windows Drivers	Windows 11, 10, 8.1, 8, 7, Vista and XP Windows Server 2025, 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008 and 2000
Linux Drivers	Kernel 6.x, 5.x and 4.x
Mac Drivers	macOS version (Intel 64): 13, 12, 11 and 10.1x
Virtual Machine	VMware Fusion (Windows on macOS 13, 12, 11, 10.1x, Intel 64) VMWare ESXi (Linux kernel 4) Parallels Desktop (Windows on macOS 13, 12, 11, 10.1x, Intel 64)
Arm®-based Platform Support	Linux kernel 6.x, 5.x and 4.x
Android API	Android 3.1.x and later

Power Parameters

Input Voltage	UPort 1610-8-G2/1650-8-G2 models: 5 VDC by USB bus power or 12 to 48 VDC by external power adaptor UPort 1650I-8-G2 models/1650-8-G2-Hub: 12 to 48 VDC by external power adaptor
Input Current	UPort 1610-8-G2: 308 mA @ USB 2.0, 495 mA @ USB 3.2, 260 mA @ 12 VDC UPort 1650-8-G2 models: 466 mA @ USB 2.0, 652 mA @ USB 3.2, 350 mA @ 12 VDC UPort 1650I-8-G2 models: 530 mA @ 12 VDC UPort 1650-8-G2-Hub: 2,250 mA @ 12 VDC
Output Power Rating	UPort 1650-8-G2-Hub: 900 mA @ 5 VDC (USB 3.2) 500 mA @ 5 VDC (USB 2.0)

Physical Characteristics

Housing	Metal
Dimensions	216 x 41.5 x 121.6 mm (8.50 x 1.63 x 4.79 in)

Weight	UPort 1610-8-G2: 650 g (1.43 lb) UPort 1650-8-G2 models: 670 g (1.48 lb) UPort 1650I-8-G2 models: 678 g (1.49 lb) UPort 1650-8-G2-Hub: 689 g (1.52 lb)
IP Rating	IP20

Environmental Limits

Operating Temperature	Standard models: 0 to 60°C (32 to 140°F) -T models: -40 to 75°C (-40 to 167°F)
Storage Temperature	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV IEC 61000-4-5 Surge: Power: 1 kV, Signal: 0.5 kV IEC 61000-4-6 CS: 3 kHz to 150 MHz; Signal: 80 V IEC 61000-4-8 PFMF
Safety	IEC 62368-1 EN 62368-1 UL 62368-1 (CB) KC
Vibration	IEC 60068-2-6 IEC 60068-2-64
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	UPort 1610-8-G2: 1,350,410 hrs UPort 1650-8-G2 models: 951,145 hrs UPort 1650I-8-G2 models: 782,795 hrs UPort 1650-8-G2-Hub: 823,983 hrs
Standards	Telcordia Standard SR332, Telcordia Issue 2

Package Contents

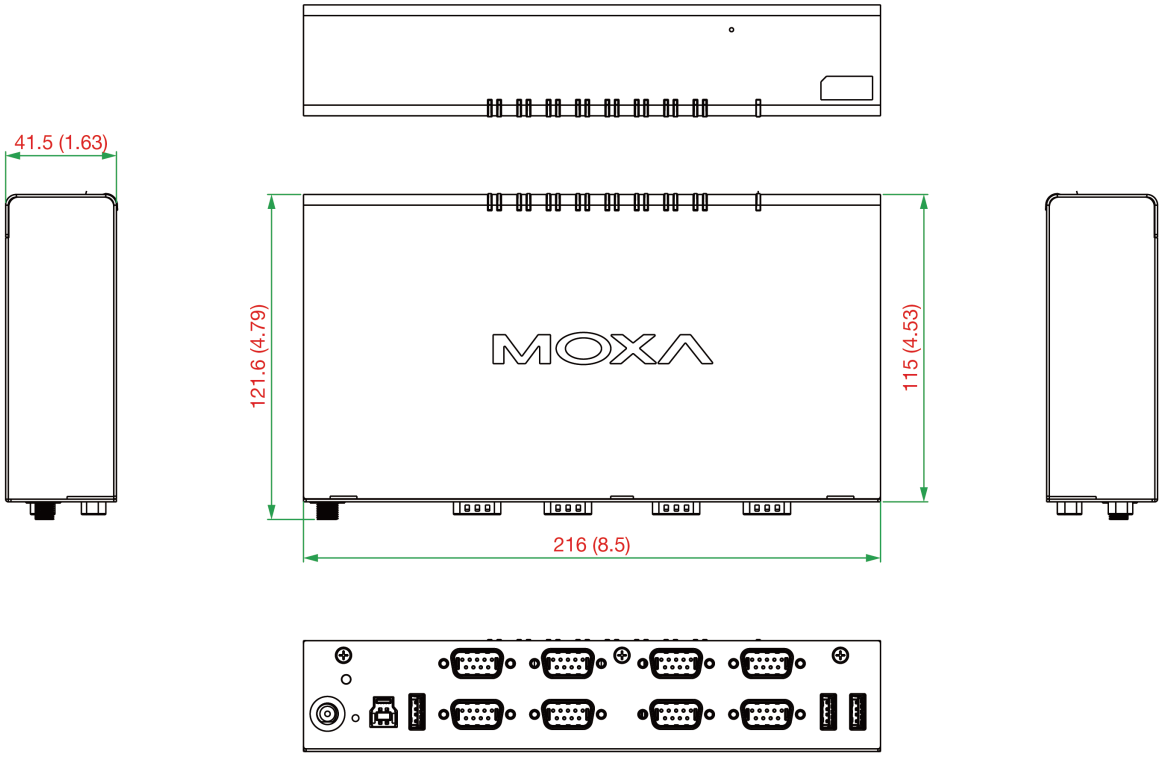
Device	1 x UPort 1600-8-G2
Cable	1 x USB 3.2 Gen 1 cable with latch and screw
Installation Kit	4 x rubber stand
Documentation	1 x quick installation guide 1 x warranty card

Warranty

Warranty Period	5 years Note: Product only
Details	See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Serial Standards	No. of Serial Ports	Isolation	Power Input	Operating Temp.
UPort 1610-8-G2	RS-232	8	-	USB bus power/ Power adapter	0 to 60°C
UPort 1650-8-G2	RS-232/422/485	8	-	USB bus power/ Power adapter	0 to 60°C
UPort 1650-8-G2-T	RS-232/422/485	8	-	USB bus power/ Power adapter	-40 to 75°C
UPort 1650I-8-G2	RS-232/422/485	8	2 kV	Power adapter	0 to 60°C
UPort 1650I-8-G2-T	RS-232/422/485	8	2 kV	Power adapter	-40 to 75°C
UPort 1650-8-G2-Hub	RS-232/422/485	8	-	Power adapter	0 to 60°C

Accessory

Cables

CBL-USB3-BA-G-120	USB 3.2 Gen 1 cable, type A-to-type B with latch and screw, 1.2 m
CBL-USB3-BA-G-028	USB 3.2 Gen 1 cable, type A-to-type B with latch and screw, 0.28 m
CBL-USB3-BA-BK-120	USB 3.2 Gen 1 cable, type A-to-type B, 1.2 m
CBL-F9M9-20	DB9 female to DB9 male serial cable, 20 cm
CBL-F9M9-150	DB9 female to DB9 male serial cable, 1.5 m

Connectors

LB-DB9F-G-01	Serial loopback DB9 adaptor
Mini DB9F-to-TB	DB9 female to terminal block connector
ADP-RJ458P-DB9F	DB9 female to RJ45 connector

Wall-Mounting Kits

WK-UP400A-BOT-BK	Bottom-panel wall-mounting kit for the UPort 400A/1400-G2/1600-G2 Series with 2 plates (43 x 30 x 2 mm or 1.69 x 1.18 x 0.08 in), 6 M3 x 5 mm screws

DIN-Rail Mounting Kits

DK-UP1600-G2	DIN Rail mounitng kits for UPort 1600-G2

Rack-Mounting Kits

RK-UP1600-G2	Rack mounting kits for UPort 1400/1600-G2

Power Adapters

PWR-12050-EU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, EU plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2 UPort 1650-8-G2 UPort 1650I-8-G2
PWR-12050-USJP-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, US/JP plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2 UPort 1650-8-G2 UPort 1650I-8-G2
PWR-12050-CN-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, CN plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2 UPort 1650-8-G2 UPort 1650I-8-G2
PWR-12050-UK-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, UK plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2 UPort 1650-8-G2 UPort 1650I-8-G2
PWR-12050-AU-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, AU plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2 UPort 1650-8-G2 UPort 1650I-8-G2
PWR-12050-KR-S1	Locking barrel plug, 12 VDC, 0.5 A, 100 to 240 VAC, KR plug, 0 to 40°C operating temperature Applicable Models: UPort 1610-8-G2/KC UPort 1650-8-G2/KC UPort 1650I-8-G2/KC
PWR-12300-WP-S2	Locking barrel plug with 12 VDC, 3 A, 100 to 240 VAC, without plug, 0 to 40°C operating temperature Applicable Models: UPort 1650-8-G2-Hub UPort 1650-8-G2-Hub/KC
PWR-Plug-EU-02	EU plug for PWR-12150-WPEU and PWR-12300-WPEU Applicable Models: UPort 1650-8-G2-Hub
PWR-Plug-USJP-02	US/JP plug for PWR-12150-WPUSJP and PWR-12300-WPUSJP Applicable Models: UPort 1650-8-G2-Hub
PWR-Plug-CN-02	CN plug for PWR-12150-WPCN and PWR-12300-WPCN Applicable Models: UPort 1650-8-G2-Hub
PWR-Plug-UK-02	UK plug for PWR-12150-WPUK and PWR-12300-WPUK Applicable Models: UPort 1650-8-G2-Hub

PWR-Plug-AU-03	AU plug for PWR-12300-WPAU Applicable Models: UPort 1650-8-G2-Hub
PWR-Plug-KR-02	KR plug for the PWR-12150-WPKR and the PWR-12300-WPKR Applicable Models: UPort 1650-8-G2-Hub/KC
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature Applicable Models: UPort 1650-8-G2-T UPort 1650I-8-G2-T
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature Applicable Models: UPort 1650-8-G2-T UPort 1650I-8-G2-T
PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature Applicable Models: UPort 1650-8-G2-T UPort 1650I-8-G2-T
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature Applicable Models: UPort 1650-8-G2-T UPort 1650I-8-G2-T
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature Applicable Models: UPort 1650-8-G2-T UPort 1650I-8-G2-T

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