

Heavy-Duty USB to Serial Converter With Port-to-Port Isolation

Model BB-USR604



PRODUCT FEATURES

- USB to serial conversion adds 4 serial ports to your PC
- 2 kV optical isolation; 8 kV contact, 15 kV air ESD protection
- 921.6 kbps serial data rate
- 480 Mbps, full-speed, USB 1.1/2.0 (high retention USB port)
- -40 to +80 °C wide operating temperature
- DIN rail or panel mount rugged metal case
- UL Class 1/Division 2
- Redundant power inputs (terminal block, locking barrel plug);
- Power source required (not included, sold separately)
- Includes: USB cable, DIN rail/panel mount hardware

This industrial grade, isolated, USB to serial converter allows you to add four RS-232/422/485 ports to your PC. Built to rugged specifications, the BB-USR604 offers 2 kV port-to-port isolation. This means that your upstream PC is isolated from the downstream serial devices and the downstream serial devices are isolated from each other and the upstream PC.

Additional features, such as a heavy-duty metal enclosure with panel and DIN rail mounting options, high ESD protection and wide operating temperatures, make the BB-USR604 ideal for use in harsh environments. Designed for industrial use, they are also suitable for instrumentation, utilities, and laboratory applications.

Full speed (12 Mbps) USB 2.0 support allows connectivity with modern computer technology. The serial ports are configurable for RS-232, RS-422 and RS-485 (2-wire & 4-wire). Modbus support enables them to be used with a wide variety of industrial devices. The USB converter comes with DIN rail and panel mounting hardware, giving maximum flexibility for your installation. USB cable included.

The converter features redundant power inputs (terminal block, locking barrel plug). An external power source is required (power supply not included, sold separately).

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION	SERIAL PORTS
BB-USR604	USB to Isolated Converter	4 (DB9M)

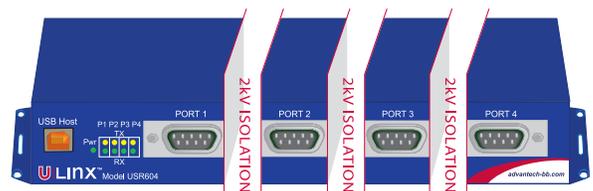
ACCESSORIES - sold separately

BB-PS12VLB-INT-MED - 12 VDC power supply, locking barrel plug, international blades
BB-MDR-20-24 - 24 VDC, 24 W power supply, DIN rail

WHAT IS PORT TO PORT ISOLATION?

Most isolated USB to Serial Converters isolate the upstream device from the downstream device. This is fine when you are working with a single port unit. However, with multi-port devices, you need the additional protection offered by port-to-port isolation.

Simply put, port-to-port isolation isolates the upstream device from the downstream devices as well as the downstream devices from each other. This is the only way you can be sure that ground loop or surge can not be transferred through Port 1 to a device connected to Port 2.



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SPECIFICATIONS

SERIAL TECHNOLOGY	
RS-232	TD, RD, RTS, CTS, DTR, DSR, DCD, GND
RS-422/485 4-Wire	TDA(-), RDA(-), TDB(+), RDB(+), GND
RS-485 2-Wire	DATA A(-), DATA B(+), GND
Connector	DB9 Male
Data Rate	921.6 Kbps
Isolation	2 kV port-to-port
Surge Protection	+/- 0.5 kVDC Ports, +/- 1 kV Signal Ports
Industrial Bus	Modbus ASCII/RTU
Bias	1 K Ω on Receive Lines in RS-422/485 Mode
USB TECHNOLOGY	
USB Compatibility	1.1 and 2.0
Speed	1.5, 12, and 480 Mbps
Connector	Type B High Retention (15 N / 3.4 lb. force withdrawal)
Operating System	Windows 8.1 (32/64 bit), 10 (32/64 bit), 2008-r2 (32/64 bit), 2012 Server-r2 (32/64 bit)
POWER	
Source	External (Dual Input) <i>(power supply not included, sold separately)</i>
Power Connector	Terminal Block Locking Barrel Plug
Input Voltage	10 to 48 VDC
Power Consumption	4.5 Watts, maximum
INDICATORS	
Power	Green LED
TD / RD (Each Port)	Green / Amber LED

SPECIFICATIONS - continued

MECHANICAL	
Dimensions BB-USR604	20.3 x 3.5 x 12.0 cm (8.0 x 1.4 x 4.7 in)
Enclosure	IP30, metal
Weight	0.68 kg
MEANTIME BETWEEN FAILURES (MTBF)	
MTBF	51098 hours
MTBF Calc. Method	MIL 217F Parts Count Reliability
ENVIRONMENTAL	
Operating Temperature	-40 to +80 °C
Storage Temperature	-40 to +85 °C
Operating Humidity	0 to 95%, non-condensing
APPROVALS / CERTIFICATIONS	
FCC Class B, CISPR Class B (EN55022) UL C1/D2	
CE - Directives	2014/30/EU - Electromagnetic Compatibility Directive 2011/65/EU amended by (EU) 2015/863 Reduction of Hazardous Substances Directive (RoHS) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)
CE - Standards	EMC: EN 55032 Class A - Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements EN 55024 - Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement EN 61000-6-4 +A1 - Generic Emission Standard for (heavy) Industrial Environments (Class A) EN 61000-6-2 - Generic Immunity Standards for (heavy) Industrial Environments

MECHANICAL DIAGRAM

