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

Model BB-USR604



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### 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 allowa 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.



All product specifications are subject to change without notice. BB-USR604\_5020s



# **Heavy-Duty USB to Serial Converters With Port-to-Port Isolation**

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#### **SPECIFICATIONS**

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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 $\Omega$ 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) (power supply not included, sold separately)	
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**

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	MECHANICAL		
Dimensions BB-USR604		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 BET	WEEN FA	ILURES (MTBF)
	MTBF		51098 hours
	MTBF Calc. Met	hod	MIL 217F Parts Count Reliability
	ENVIRONMENT	AL	
	Operating Temperature		-40 to +80 °C
Storage Temperature Operating Humidity		ature	-40 to +85 °C
		dity	0 to 95%, non-condensing
APPROVALS / CERTIFICATIONS			TIONS
FCC Class B, CISPR Class B (EN55022) UL C1/D2		B (EN55022)	
	CE - Directives	Substances Directive (KOHS) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE) EMC: EN 55032 Class A - Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements EN 55024 - Information Technology Equipment – Immunity Characteristics — Limits and Mathods of Magazinement	
	CE - Standards		

### **MECHANICAL DIAGRAM**



