# Isolated USB 2 or 4 Port to RS-232 Converters

Models BB-USO9ML2-2P, BB-USO9ML2-4P



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#### **FEATURES**

- Connect multiple RS-232 devices to your USB port
- 2000 V RMS optical isolation; 15 KV ESD surge protection
- RS-232 data rates up to 460.8 kbps
- Supports USB 2.0 (backward compatible), 12 Mbps
- Desk or panel mount (flanges attached)
- USB port-powered or external power supply (not included, sold separately)
- · High retention USB port ensures reliable connections
- Includes one USB cable, 2 m (6 ft)

Universal Serial Bus (USB) has become the connectivity workhorse of today's PCs, replacing the familiar serial ports. However, many commercial and industrial devices still use the RS-232 interface. To connect these devices to modern PCs and provide protection from electrical transients, you need a simple and reliable conversion solution.

Connect legacy RS-232 devices to a USB port and with 2000 V RMS port-to-port optical isolation from voltage spikes and ground loops.

Models BB-USO9ML2-2P and BB-USO9ML2-4P offer this solution. Simply plug the converter into an available USB port on your computer or USB hub and install the drivers. Automatic configuration - the device will show up as additional COM ports in the Windows Device Manager which are fully compatible with your Windows applications. A USB cable is included.

Powered can be supplied by USB port powering or an external power source (not included, sold separately).

RS-232 PIN-OUT (DTE / DB9 MALE)			
PIN	Direction	Signal Name	
1	Input	DCD (Receive Line Signal Detector)	
2	Input	RD (Receive Data)	
3	Output	TD (Transmit Data)	
4	Output	DTR (DTE Ready)	
5	n/a	SG (Signal Ground)	
6	Input	DSR (DCE Ready)	
7	Output	RTS (Request to Send)	
8	Input	CTS (Clear to Send)	
9	Input	RI (Ring Indicator)	

### **ORDERING INFORMATION**

MODEL NUMBER	DESCRIPTION
BB-USO9ML2-2P	Isolated USB to 2-Port RS-232 Converter
BB-USO9ML2-4P	Isolated USB to 4-Port RS-232 Converter

## **ACCESSORIES - sold separately**

1 2
BB-MDR-20-24 - Power Supply, 24 VDC, 1 A, DIN Rail Mount
BB-USBAMBM-3F - 1 m (3 ft) USB Cable
BB-USBAMBM-6F - 2 m (6 ft) USB Cable (one included)
BB-9PAMF6 - 2 m (6 ft) DB9 Male to DB9 Female Cable
BB-9PAMF10 - 3 m (10 ft) DB9 Male to DB9 Female Cable
BB-232NM9 - 3 m (6 ft) DB9 Female to DB9 Female Null Modem Cable
BB-232NM9MF10 - 3 m (10 ft) DB9 Male to DB9 Female Null Modem Cable
BB-TBKT1 - Replacement Terminal Block - 2-position, 5.08mm, 8A, 30

All product specifications are subject to change without notice.

BB-USO9ML2-2P & BB-USO9ML2-4P\_0920ds



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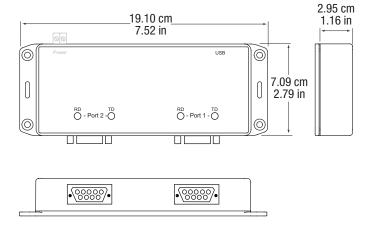
#### **SPECIFICATIONS**

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SERIAL TECHNOLOGY					
RS-232 Configuration	DTE				
RS-232 Connector	DB9 Male (DTE)				
Data Rate	460.8 kbps (maximum)				
Isolation	2000 V Optical (port-to-port)				
Surge Protection	15 KV ESD				
USB TECHNOLOGY					
Connector	USB Type B female, high retention withdrawal > 15 N				
Standard	1.1 and 2.0 Compatible				
Data Rate	12 Mbps				
POWER					
Source	USB Port or External Source (Power supply not included, sold separately)				
Input Voltage	5 VDC from USB Port or 10 - 30 VDC External Power Supply				
Consumption	Higher Power Device (>100 mA) BB-USO9ML2-2P: 3 Watts, External Power Supply BB-USO9ML2-4P: 5 Watts, External Power Supply				
SOFTWARE					
Driver O/S Support	Windows 10 (32/64 bit), Server 2016, Server 2019				

### **SPECIFICATIONS - continued**

MECHANICAL			
Dimensions – with flanges	19.10L x 7.09W x 2.95H cm (7.52L x 2.79W x 1.16H in)		
Weight	BB-USO9ML2-2P: 331.1 g (0.73 lbs) BB-USO9ML2-4P: 349.3 g (0.77 lbs)		
ENVIRONMENTAL			
Operating Temperature	0 to +70 °C (+32 to +158 °F)		
Storage Temperature	-40 to +85 °C (-40 to +185 °F)		
Operating Humidity	0 to 95%, non-condensing		
MEANTIME BETWEEN FAILURES (MTBF)			
MTBF	BB-USO9ML2-2P: 118245 hours BB-USO9ML2-4P: 61861 hours		
MTBF Method	Parts Count Reliability Prediction		
APPROVALS, DIRECTIVES, STANDARDS			
FCC, UL508			
CE Standards	EMC: EN 55032 Class B - Electromagnetic compatibility of multimedia equipment –Emission requirements EN 55024 - Information Technology Equipment – Immunity Characteristics – Limits and methods of measurement		
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 Eectrical and Electronic Equipment (WEEE		

## **MECHANICAL DIAGRAM - BB-USO9ML2-2P**



# MECHANICAL DIAGRAM - BB-USO9ML2-4P

