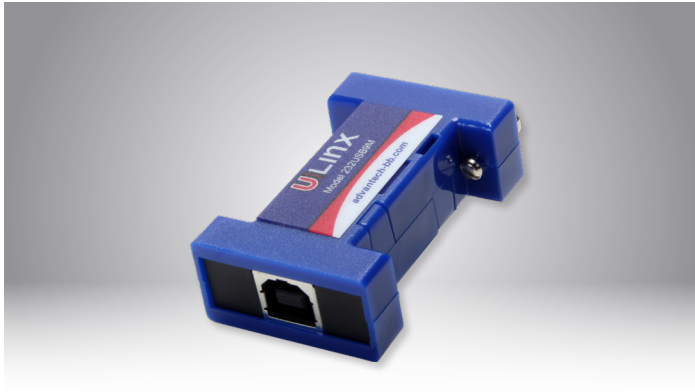# BB-232USB9M
BB-232USB9M-LS

USB to RS-232 Miniature Converters

Features

- Connect RS-232 devices to your USB port
- RS-232 data rates up to 921.6 Kbps
- Small form factor with in-line installation
- USB port powered
- USB 2.0 (12 Mbps) compatible
- Perfect for field service applications
- (1) USB cable included
- Locked serial number option (Model# BB-232USB9M-LS)

Introduction

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, you need a simple and reliable conversion solution. Model BB-232USB9Mx offers this solution in a compact, space saving, USB port-powered package.

Simply install the drivers supplied on CD ROM and plug the converter into an available USB port on your computer or USB hub. The device will show up as an additional COM port in the Windows Device Manager which is fully compatible with your Windows applications. Locked serial number version is also available. A USB cable is included.

Ordering Information

Model No.	Description
BB-232USB9M	USB to RS-232 Miniature Converter
BB-232USB9M-LS	USB to RS-232 Miniature Converter (Locked Serial Number)

Accessories – Sold Separately

BB-USBAMBM-3F – USB Cable, 0.91 m (3 ft) (one cable included with converter)

BB-9PAMF6 – Serial Cable, 1.8 m (6 ft), DB9 male to DB9 female

Locked Serial Numbers Explained

Advantech configures these single-port USB to serial converters in two ways. In standard format, each product has a unique serial number. "Locked serial number" format uses the same serial number that is associated with the model number.

If your converter will always be used with the same computer, the standard serialized model is all you need. If the converter is shared among several computers, like field service laptops, the locked serial number model lets you plug-and-play without having to worry about matching the two.

Description	Serialized	Locked Serial Number
Every unit is assigned a unique COM port	✔	-
Same type model numbers shares the same COM port	-	✔
Ideal applications	Fixed Locations	Field Service

Note: Serialized and Lock Serial Number versions sell for the same price.

Specifications

Serial Technology	
RS-232	TD, RD, DCD, DTR, GND, SDR, RTS, CTS, RI
Connector	DB9 male (DTE)
Data Rate	Up to 921.6 Kbps
USB Technology	
Connector	USB Type B female
Standard	2.0 (backward compatible)
Data Rate	12 Mbps
FIFO Buffers	
FIFO TX	128 bytes Data from USB Data OUT endpoint is stored in FIFO TX buffer and removed from the buffer to UART Transmit Register under control of UART FIFO controller.
FIFO RX	256 bytes Data from UART Receive Register is stored in FIFO RX buffer prior to being removed by the SIE on a USB data request from the device Data IN end-point.
Power	
Source	USB Port
Input Voltage	5 Vdc
Consumption	~ 0.5 W (low power device, draws less than 100 mA)
Software	
Driver CD	Windows 98, ME, 2000, XP, Vista, 7 (32/64 bit), 8 (32/64 bit), 10 (32/64 bit)

Mechanical	
Dimensions	5.8 x 3.2 x 1.6 cm (2.3 x 1.3 x 0.6 in)
Enclosure	In-line mount, plastic
Weight	104.3 gm (0.23 lb) with included USB cable
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	1946086 hours
Calculation Method	MIL 217F Parts Count Reliability Prediction
Regulatory – Approvals / Standards / Directives	
FCC, CE	
CE – Directive	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 Directive (WEEE)
CE - Standards	EN 55032 Class B - Electromagnetic Compatibility of Multimedia Equipment - Emissions Requirements EN 55024:2010 Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement
EN 61000-6-1	Generic Immunity Standard for Residential, Commercial and Light-industrial Environments

Pinouts: RS-232 DB9 Male DTE Connector
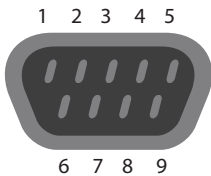
Pin	Direction	Signal Name
1	Input	DCD (Receive Line Signal Detector)
2	Input	RD (Receive Data)
3	Output	TD (Transmit Data)
4	Output	DTR (DTE Ready)
5	N/A	SG (Signal Ground)
6	Input	DSR (DCE Ready)
7	Output	RTS (Request to Send)
8	Input	CTS (Clear to Send)
9	Input	RI (Ring Indicator)

Mechanical Drawing

3.2 cm
1.3 in

1.6 cm
0.6 in

5.8 cm
2.3 in

ADVANTECH