USB to RS-232
Mini-Converters
Models 232USB9M, 232USB9M-LS

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 232USB9Mx offers this solution in a 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.

PRODUCT FEATURES

- Connect RS-232 Devices to Your USB Port
- Perfect for Field Service Applications
- Compact, Space Saving Size
- USB Port Powered
- USB 2.0 (12 Mbps) Compatible
- RS-232 Data Rates Up to 921.6 Kbps
- Windows 98, ME, 2000, XP, Vista, 7 (32/64 bit), 8 (32/64 bit), 10 (32/64 bit)
- Locked serial number option (Model# 232USB9M-LS)

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>232USB9M</td>
<td>USB to RS-232 Mini-Converter</td>
</tr>
<tr>
<td>232USB9M-LS</td>
<td>USB to RS-232 Mini-Converter (Locked Serial Number)</td>
</tr>
</tbody>
</table>

ACCESSORIES

USBAMBM-3F - USB Cable, 0.91 m (3 ft), one included

Locked Serial Numbers Explained

We configure our single-port USB to serial converters in two ways. In standard format, each product has a unique serial number. “Locked serial” format uses the same serial number that is associated with a model type.

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.

<table>
<thead>
<tr>
<th>Description</th>
<th>Serialized</th>
<th>Locked Serial Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every unit is assigned a unique COM port</td>
<td>✔</td>
<td>-</td>
</tr>
<tr>
<td>Same type model numbers shares the same COM port</td>
<td>-</td>
<td>✔</td>
</tr>
<tr>
<td>Ideal applications</td>
<td>Fixed</td>
<td>Field</td>
</tr>
<tr>
<td>Location</td>
<td>Locations</td>
<td>Service</td>
</tr>
</tbody>
</table>

When ordering Locked Serial Number versions, add a “-LS” to the item number. Serialized and Lock Serial Number versions sell for the same price.
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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

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 g (0.23 lb) with USB Cable

ENVIRONMENTAL
Operating Temp  0 to 70 °C (32 to 158 °F)
Storage Temp  -40 to 85 °C (-40 to 185 °F)
Op Humidity  0 to 95% (Non-condensing)
MTBF  1946086 hours
MTBF Method  MIL 217F Parts Count Reliability Prediction

REGULATORY
Approvals  FCC, CE

CERTIFICATIONS
2014/30/EU  Electromagnetic Compatibility Directive
2011/65/EU  Reduction of Hazardous Substances Directive (RoHS)
2012/19/EU  Waste Electrical and Electronic Equipment Directive (WEEE)
EN 55032 Class B  Electromagnetic Compatibility of Multimedia Equipment -
Emissions Requirements
EN 61000-6-1  Generic Immunity Standard for Residential, Commercial and Light-
industrial Environments
EN 61000-4-2  ESD Immunity
EN 61000-4-3  Radiated Immunity
EN 61000-4-4  EFT/Burst Immunity
EN 61000-4-6  RF Conducted Immunity

PINOUTS: RS-232 DB9 MALE DTE CONNECTOR

<table>
<thead>
<tr>
<th>PIN</th>
<th>DIRECTION</th>
<th>SIGNAL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Input</td>
<td>DCD (Receive Line Signal Detector)</td>
</tr>
<tr>
<td>2</td>
<td>Input</td>
<td>RD (Receive Data)</td>
</tr>
<tr>
<td>3</td>
<td>Output</td>
<td>TD (Transmit Data)</td>
</tr>
<tr>
<td>4</td>
<td>Output</td>
<td>DTR (DTE Ready)</td>
</tr>
<tr>
<td>5</td>
<td>N/A</td>
<td>SG (Signal Ground)</td>
</tr>
<tr>
<td>6</td>
<td>Input</td>
<td>DSR (DCE Ready)</td>
</tr>
<tr>
<td>7</td>
<td>Output</td>
<td>RTS (Request to Send)</td>
</tr>
<tr>
<td>8</td>
<td>Input</td>
<td>CTS (Clear to Send)</td>
</tr>
<tr>
<td>9</td>
<td>Input</td>
<td>RI (Ring Indicator)</td>
</tr>
</tbody>
</table>

MECHANICAL DIAGRAM