



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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

## USO9ML2-2P & USO9ML2-4P

**B+B SMARTWORX**

Powered by

**ADVANTECH**

[www.advantech-bb.com](http://www.advantech-bb.com)



### PRODUCT FEATURES

- Connects Multiple RS-232 Devices to Your USB Port
- 2000 V RMS Port-to-Port Optical Isolation
- 15 KV ESD Surge Protection
- USB Port Powered or External Power
- Supports USB 2.0 (backward compatible)
- High Retention USB Port Ensures A Reliable Connection
- RS-232 Data Rates up to 460.8 kbps
- LED's Indicate Data Flow on RS-232 Ports
- Automatic Configuration on Windows 2000, XP, Vista, 7 (32/64 bit)

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

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.

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

### ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
<b>USO9ML2-2P</b>	Isolated USB to 2-Port RS-232 Converter
<b>USO9ML2-4P</b>	Isolated USB to 4-Port RS-232 Converter

### ACCESSORIES

<b>USBAMB-3F</b> - 3 ft. (1 m) USB Cable (one included)
<b>USBAMB-6F</b> - 2 m (6 ft.) USB Cable
<b>9PAMF6</b> - 2 m (6 ft.) DB9 Male to DB9 Female Cable
<b>9PAMF10</b> - 3 m (10 ft.) DB9 Male to DB9 Female Cable
<b>232NM9</b> - 3 m (6 ft.) DB9 Female to DB9 Female Null Modem Cable
<b>232NM9MF10</b> - 3 m (10 ft.) DB9 Male to DB9 Female Null Modem Cable
<b>MDR-20-24</b> - DIN Rail Mount, 24 VDC, 1 A Power Supply
<b>12DC1AST</b> - DC Power supply Unregulated 12VDC@1000mA

All product specifications are subject to change without notice.  
USO9ML2-2P & USO9ML2-4P\_1417ds

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

## USO9ML2-2P & USO9ML2-4P

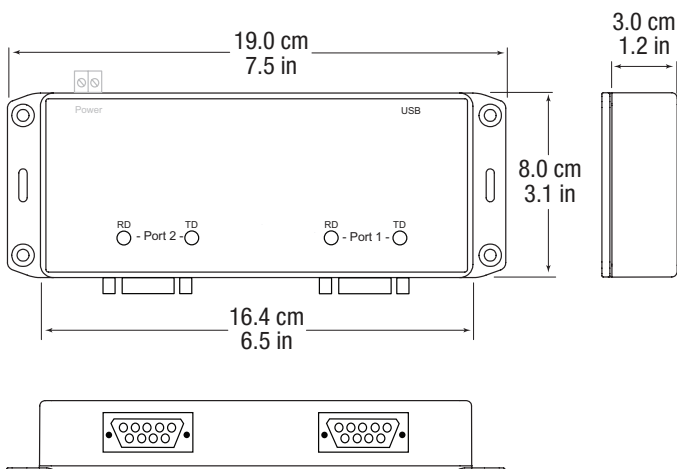


### SPECIFICATIONS

SERIAL TECHNOLOGY	
RS-232 Configuration	DTE
RS-232 Connector	DB9 Male (DTE)
Data Rate	460.8 kbps (max)
Isolation	2000 V (Port-to-Port) Optical
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
Input Voltage	5 VDC from USB Port or 10 - 30 VDC External Power Supply
Consumption	Higher Power Device (>100 mA) USO9ML2-2P: 3 Watts, External Power Supply USO9ML2-4P: 5 Watts, External Power Supply
SOFTWARE	
Driver CD	Windows 2000, XP, Vista, 7 (32/64 bit)
MECHANICAL	
Dimensions	16.4 x 3.0 x 8.0 cm (6.5 x 1.2 x 3.1 in) without flanges 19.0 x 3.0 x 8.0 cm (7.5 x 1.2 x 3.1 in) with flanges
Weight	2 Port 0.73 lbs (331.1 g), 4 Port 0.77 lbs (349.3 g)
ENVIRONMENTAL	
Operating Temp	32 to 158 °F (0 to 70 °C)
Storage Temp	-40 to 185 °F (-40 to 85 °C)
Operating Humidity	0 to 95% (Non-condensing)
MTBF (USO9ML2-2P)	118245 hours
MTBF (USO9ML2-4P)	61861 hours
MTBF Method	Parts Count Reliability Prediction
REGULATORY	
Approvals	FCC, CE, UL

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)

### MECHANICAL DIAGRAM - USO9ML2-2P



### MECHANICAL DIAGRAM - USO9ML2-4P

