

# Isolated USB 2 or 4 Port RS-422/485 Converters

## USOPTL4-2P & USOPTL4-4P

**B+B SMARTWORX**

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### PRODUCT FEATURES

- Connect Multiple RS-422/485 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 Connectors Ensure Reliable Connection
- RS-422/485 Data Rates Up to 921.6 kbps
- LEDs Indicate Data Flow on Serial Ports
- Removable Terminal Blocks on Serial Ports Make Wiring Easy
- Automatic Configuration on Windows 2000, XP, Vista, 7 (32/64 bit)

Connect RS-422 and RS-485 (2-wire and 4-wire) devices to a USB port and gain 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-422/485 interface. To connect these devices to modern PCs and provide protection from electrical transients, you need a simple and reliable conversion solution.

The USOPTL4-2P and USOPTL4-4P offer this solution and are great for any application that requires long range or multi-drop capabilities. Both models offer a high retention USB interface, removable terminal blocks on the serial side and have LED's to indicate data flow. 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>USOPTL4-2P</b>	Isolated USB to 2 Port RS-422/485 Converter
<b>USOPTL4-4P</b>	Isolated USB to 4 Port RS-422/485 Converter

### ACCESSORIES

USBAMB-3F - 3 ft. (1 m) USB Cable (one included)
USBAMB-6F - 2 m (6 ft.) USB Cable
MDR-20-24 - DIN Rail Mount, 24 VDC, 1 A Power Supply
12DC1AST - DC Power Supply, Unregulated 12VDC@1000mA

All product specifications are subject to change without notice.  
USOPTL4-2P & USOPTL4-4P\_2417ds

# Isolated USB 2 or 4 Port RS-422/485 Converters

## USOPTL4-2P & USOPTL4-4P



### SPECIFICATIONS

SERIAL TECHNOLOGY	
RS-422/485 Connectors	Removable Terminal Blocks
RS-422/485 Data Rate	921.6 kbps (maximum)
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) USOPTL4-2P: 3 Watts, External Power Supply USOPTL4-4P: 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 0.75 lbs (340.2 g), 4 Port 0.80 lbs (362.9 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 (USOPTL4-2P)	125224 hours
MTBF (USOPTL4-4P)	72749 hours
MTBF Method	Parts Count Reliability Prediction
REGULATORY	
Approvals	FCC, CE, UL

### DIP SWITCH LEGEND

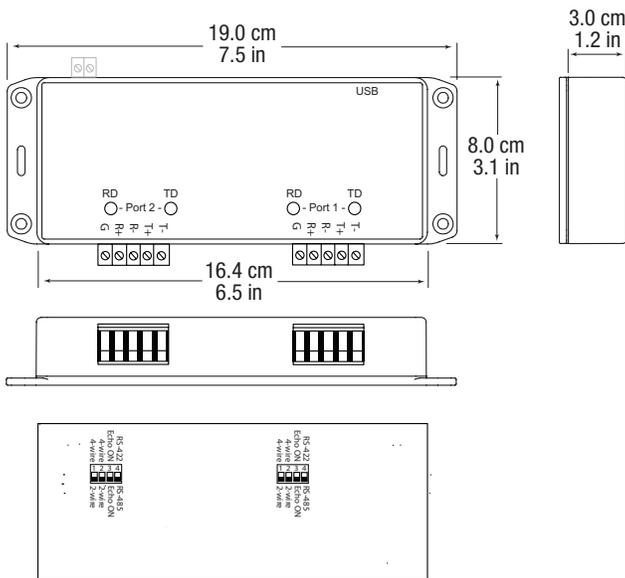
Position	OFF	ON
1	RS-422	RS-485
2	Echo ON	Echo OFF
3	4-Wire	2-Wire
4	4-Wire	2-Wire

Factory default = all switches off

### TERMINAL BOARD LAYOUT

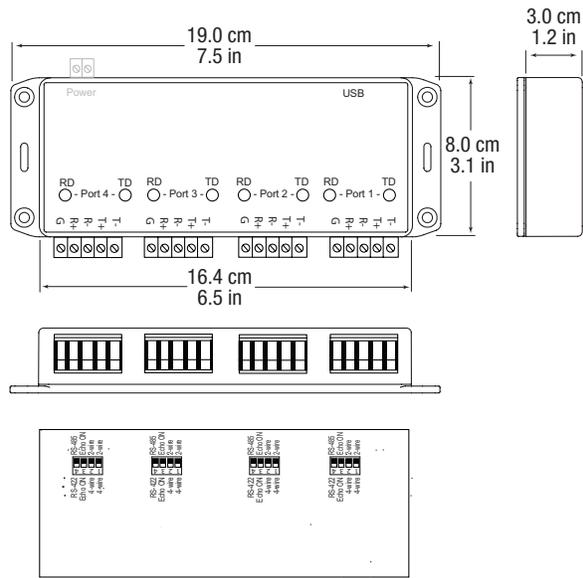
TB Position	Signal Name
1	TDA(-)
2	TDB(+)
3	RDA(-)
4	RDB(+)
5	Ground

### MECHANICAL DIAGRAM - USOPTL4-2P



Bottom Switch Detail  
(factory default)

### MECHANICAL DIAGRAM - USOPTL4-4P



Bottom Switch Detail  
(factory default)