



Model: 485USBTB-2W & 485USBTB-4W  
USB to RS-485 Mini-Converter



### Features

- ✓ Connects an RS-485 2-Wire or 4-Wire device to your USB Port
- ✓ High Retention USB Connector
- ✓ Terminal Block for RS-485 Connection
- ✓ USB Port Powered
- ✓ USB 2.0 Compatible
- ✓ RS-485 Data Rates up to 921.6 kbps
- ✓ Automatic Configuration on Windows 98, ME, 2000, XP, and Vista

### Functional Description

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-485 interface. To connect these devices to modern PCs, you need a simple and reliable conversion solution. The 485USBTB-2W and 485USBTB-4W offer this solution in a space saving, USB Port powered package. 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 an additional COM port in the Windows Device Manager which is fully compatible with your Windows applications. A one meter USB cable is included.

### Ordering Information

Model Number	Description
485USBTB-2W	USB to RS-485 2-Wire Converter with Terminal Block
485USBTB-4W	USB to RS-485 4-Wire Converter with Terminal Block
<b>Accessory Items</b>	
USBAMBM-3F (One Included )	1 m (3ft) USB Cable
USBAMBM-6F	2 m (6ft) USB Cable

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## Operation

- Drivers are included on the Compact Disk included with the converter. Simply connect the converter to an available USB port and insert the CD into the drive. The “Found New Hardware Wizard” will guide you through the installation process. The drivers are not available via Microsoft Windows Updates. When prompted to connect to Windows Updates to search for drivers, select “No, not at this time” and follow the instructions for installing from the CD.
- When the driver software is installed, the converter will show up in Windows Device Manager as the next available COM port labeled “RS-485 Port.” Configure the COM port for your application. The default setup is 9600 baud, 8 data bits, no parity, 1 stop bit, no flow control. The converter will also be listed under USB Controllers.
- To uninstall the drivers, follow the instructions contained in the uninstall “read me” file.
- Use the 485USBTB-2W for RS-485 2-Wire systems. In the 2-Wire configuration, the receiver toggles with the transmit data. Bias is provided by 4.7 KΩ pull-up and pull-down resistors.
- Use the 485USBTB-4W for RS-485 4-Wire systems. In the 4-Wire configuration, the receiver is always active. Bias is provided by 4.7 KΩ pull-up and pull-down resistors on the receive pair. Bias should be provided on the transmit pair by the end of line slave device.
- In most applications, termination is not required. If your application does require termination, it must be installed external to the converter.
- Refer to B&B’s RS-422/485 Application Note for more information regarding biasing and termination.

**Table 1**  
**485USBTB-2W Terminal Block Layout**

Label	Use
A(-)	Data A (-)
B(+)	Data B (+)
A(-)	Data A (-)
B(+)	Data B (+)
GND	Ground


**Table 2**  
**485USBTB-4W Terminal Block Layout**

Label	Use
TDA(-)	Transmit Data A (-)
TDB(+)	Transmit Data B (+)
RDA(-)	Receive Data A (-)
RDB(+)	Receive Data B (+)
GND	Ground

## General Specifications

Input Power	5VDC from USB Port
Current Draw	Low Power Device (<100 mA)
Operating Temperature	-40 to 176 °F (-40 to 80 °C)
Operating Humidity	0 to 95% Non-condensing
USB Connector	USB type B Female
RS-485 Connector	Terminal Block
USB Data Rate	12 Mbps
RS-485 Data Rate	921.6 kbps
USB Standard	2.0 (Backward Compatible)
Dimensions	2.6 x 1.3 x .6 in (6.5 x 3.2 x 1.6 cm)
MTBF (485USB9F-2W)	2130833 hours
MTBF (485USB9F-4W)	1869313 hours
Approvals	CE, FCC

## CE Declaration of Conformity

<b>Manufacturer's Name:</b>	B&B Electronics Manufacturing Company
<b>Manufacturer's Address:</b>	PO Box 1040 707 Dayton Road Ottawa, IL 61350 USA
<b>Model Number:</b>	485USBTB-2W and 485USBTB-4W
<b>Description:</b>	USB to RS-485 Converter
<b>Type:</b>	Light Industrial ITE Equipment
<b>Application of Council Directive:</b>	89/336/EEC
<b>Standards:</b>	EN55022 EN 61000-6-1 EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)
 Michael J. Fahrion, Director of Engineering	

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