Product Overview

Front View

USB Port   LED Indicators   DB9 Connector

Pinout
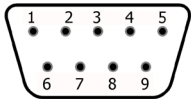
Pin	Description
1	•••••
2	RDA (-)
3	TDB (+)
4	GND
5	•••••
6	GND
7	RDB(+)
8	TDA (-)

1 Install Drivers

Your system will detect the USO9ML4 when you plug it in. If you are attached to the Internet you can get the drivers via Windows Update. This may take a few minutes.

You can download the drivers directly from the B&B Electronics web site.

Vista users should use an account with administrative rights.

After connecting the device you can check Device Manager to learn which Com port number was assigned (Control Panel/ System/Hardware/Device Manager/Ports/COM & LPT.

You can re-assign COM numbers by clicking the Advanced Settings button on the Port Settings screen.

2 Set DIP Switches

OFF=left   ON=right

| DIP Switch Position		
Switch	OFF	ON
1	TD always enabled (TD 422)	TD only enabled during data transmission (TD 485)
2	RD always enabled (ECHO ON)	RD disabled during data transmission (ECHO OFF)
3	4-wire mode (4-Wire)	2-wire mode (2-Wire)
4	4-wire mode (4-Wire)	2-wire mode (2-Wire)

3 Wire the Converter
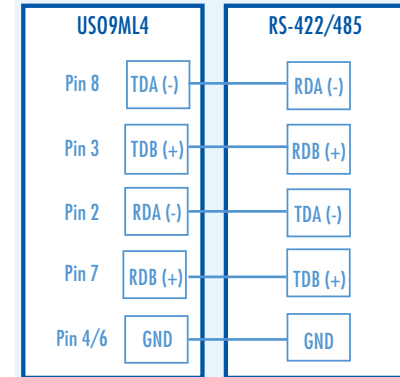
2-Wire RS-485

- All DIP Switches = ON

2 Wire Set-up

USO9ML4		RS-485
Pin 8	TDA (-)	NEG (-)
Pin 3	TDB (+)	POS (+)
	RDA (-)	
	RDB (+)	
Pin 4/6	GND	GND
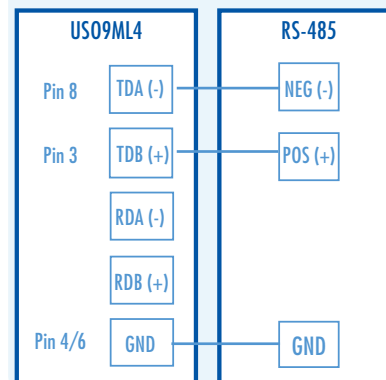
4-Wire RS-422/485

- RS-422 = All DIP Switches off
- RS-485 = DIP 1 ON, DIP 2, 3 and 4 OFF

4 Wire Set-up

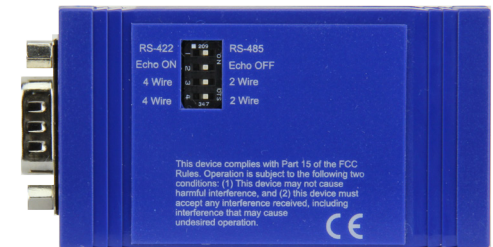| USO9ML4		RS-422/485
Pin 8	TDA (-)	RDA (-)
Pin 3	TDB (+)	RDB (+)
Pin 2	RDA (-)	TDA (-)
Pin 7	RDB (+)	TDB (+)
Pin 4/6	GND	GND

4 Loopback Test

Set DIP Switches to RS-485, Echo ON, 2 Wire, 2 Wire.

Use HyperTerminal or another terminal program to confirm passage of data through the converter.

5 Check LEDs

When everything is installed and connected the LEDs will blink to let you know that data traffic is passing through the converter

Troubleshooting

What baud rates can be used?
Baud rates up to 921 Kbps.

What operating systems are supported?
Windows 2000, XP, Vista 32/64 bit, Win 7 32/64 bit, Win 8 32/64.

Which USB cables can I use?
A one meter (3ft) cable is included. Other lengths can be purchased separately. The maximum range for USB is 15 ft. We sell USB extenders if you need to go further than 15 ft.

Can I get a version with a terminal block instead of the DB9?
Yes. The part number is USOPTL4.

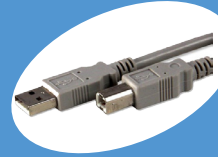**How can I test the USO9ML4 to make sure it is working correctly?**
Do a loopback test.

A quick way to test is to set the dipswitches to 485, Echo ON, 2 wire, 2 wire. Then use HyperTerminal to do the loopback. Visit our technical library for instructions and screen shots:

http://www.bb-elec.com/technical_library.asp

Recommended Accessories

6 ft USB Cable
http://www.bb-elec.com/Products/
Power-Supplies-Accessories/USB-
Cables/USB-cables.aspx

4-Port Powered USB Hub
UHR304
http://www.bb-elec.com/Products/
USB-Connectivity/USB-2-0-Hubs/
Industrial-Grade-USB-Hubs.aspx

Fast, Easy Answers

- **First, check step 5.**

- **Then use your smart phone to access complete documentation on our web site. Simply scan the code to the right.**

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QUICK START GUIDE

B&B Electronics

USO9ML4
Isolated USB to RS-422/485 Converter

✓ First Things First...
Before you begin, be sure you have the following:

○ USO9ML4
○ One meter USB cable

B&B Electronics
Make The Right Connections

Fast and easy on the web: www.bb-elec.com