RS422/485 to USB Serial Adapter w/ Isolation and Surge Protection

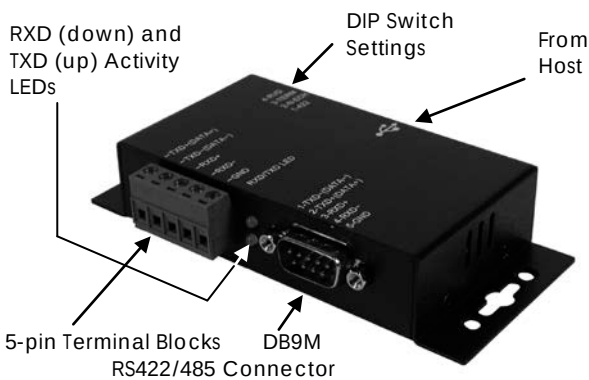
Installation Guide

1. Introduction

Thank you for purchasing this RS422/485 to USB Serial Adapter with Isolation and Surge Protection. It is an intelligent expansion module that connects to a PC or server via the Universal Serial Bus (USB), providing high-speed serial connectivity. The RS485 port supports Auto-Transceiver-Turn-Around feature to support any kind of application software controlling the transmitter driver. With its complete software kit, it is an ideal solution for most critical applications.

Features:

- ✓ USB Screw Lock Mechanism for Enhanced Reliability
- ✓ Provides one RS422/485 Port over USB Port
- ✓ Supports 4-wire RS-422 and 2-wire RS-485 applications
- ✓ Supports RS-485 Auto Transceiver Turn Around by Unique Featured ATTA™ Hardware
- ✓ Supports USB Bus Power
- ✓ RS422/485 Baud Rate up to 921.6Kbps
- ✓ USB1.1 and USB2.0 Backward Compatible
- ✓ Supports DB9-Male and Terminal Block Connector
- ✓ Supports 2500Vrms Optical Isolation and Surge Protection
- ✓ Supports Win98S, ME, 2000, XP, 2003, Vista, Linux



Note:
The DB9M and Terminal Blocks are connected to the same signals internally, they are not 2 individual ports.

2. Switch Settings

- **RS485 User:** Since the factory settings are initially set at 2-wire RS485 mode. There is no need to change any switch settings from the default settings.
- **RS422 User:** Change the mode pin to **"422"** positions(ON). Keep the other settings unchanged.

Switch Description:

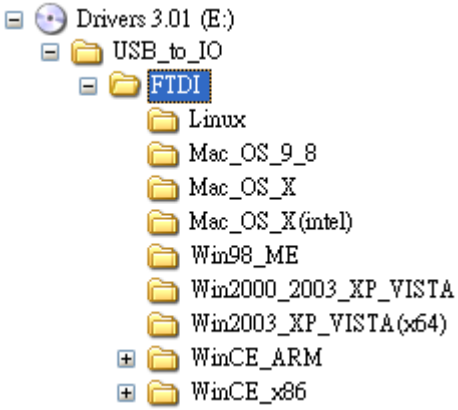
Switch Pin#	Switch Name (Switch States)	Switch Positions	Description
1	485/422 (OFF/ON)	**485 (Default)**	2-wire RS485 mode
		422	4-wire RS422 mode
2	ECHO/NO ECHO (OFF/ON)	ECHO	Transmitting data will be echoed back
		NO ECHO (Default)	No echo data
3	NO TERM/TERM (OFF/ON)	**NO TERM (Default)**	Termination Resistor is Disabled
		TERM	Termination Resistor is Enabled
4	RVD	**(OFF)**	Reserved for Future Use
		(ON)	Reserved for Future Use

- **Please note that if the mode were set at "422" mode, the ECHO setting will take no effect.**
- **The Echo mode is useful for the application program to detect if the RS485 bus were in a collision. If the echoed data was not equal to the transmitted data, then the bus was in a collision.**

3. Installing Drivers

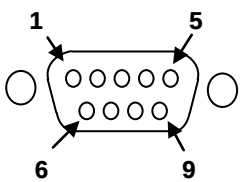
The RS422/485 Adapter Cable can be hot-plugged to the USB port of your computer due to the specifications of USB. It supports the following operating systems. The drivers are shipped in the corresponding folder on the supplied driver CD. If you are installing drivers for Win98, ME, 2000, 2003, XP or Vista, when prompted for the

location of the drivers, specify your CD-ROM drive and the locations according to the following folder list:



4. Male DB9 Pin Assignments and Cable Wiring

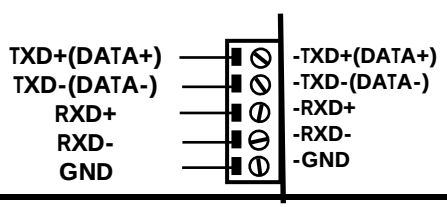
DB9-Male Pin Assignment:



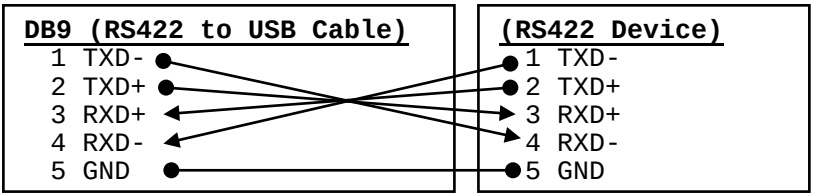
9 Pins	Signal
1	TXD- (DATA-)
2	TXD+ (DATA+)
3	RXD+
4	RXD-
5	GND
6	NC
7	NC
8	NC
9	NC

NC = No connection

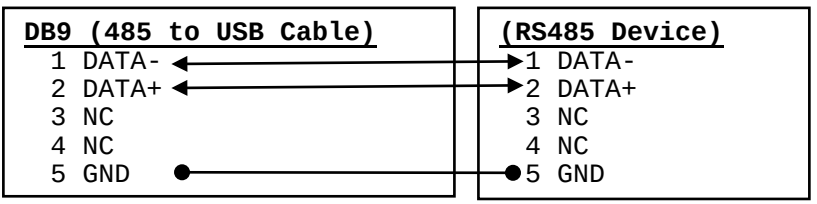
5-pin Terminal Blocks Pin Assignment:



RS422 Cable Wiring:



RS485 Cable Wiring:



5. Specifications

Type	Specifications
Connectors	USB type-A, DB9 Male
Number of Ports	1 RS422/485 (for DB9M or Terminal Blocks)
RS422 Signals	TXD+, TXD-, RXD+, RXD-, GND
RS485 Signals (2-wire)	DATA+, DATA-, GND
Baud Rate	300 bps to 921.6Kbps
Data Bits	7,8
Stop Bits	1, 2
Parity	None, Even, Odd, Mark, Space
Isolation	2500Vrms
Surge Protection	500Watts
Power Requirement	5V/200mA (USB Bus Powered)
Operating Temperature	0 to 55°C(32 to 132°F)
Operating Humidity	5 to 95% RH
Storage Temperature	-20 to 85°C (-4 to 185°F)