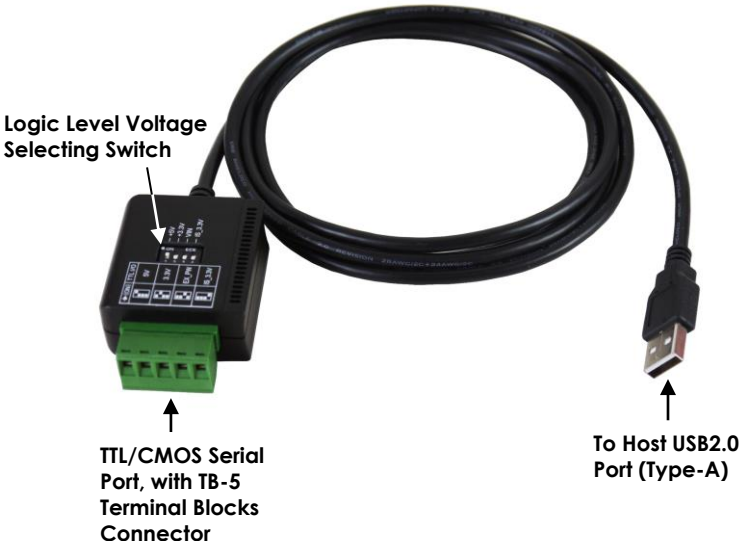
EX-1310-TTL / 1310IS-TTL
USB to RS232 TTL/CMOS Adapter Cable w/ 5-pin Terminal Blocks

1. Introduction

Thank you for purchasing this USB to RS232 TTL/CMOS Adapter Cable w/ 5-pin Terminal Blocks (the "Adapter Cable"). It is an intelligent expansion cable that connects to a PC or server via the Universal Serial Bus (USB), providing high-speed serial connectivity. The serial port is fully compatible with RS232 serial standard but with TTL/CMOS logic level instead. There are 2 models available, one is non-isolated and the other is isolated version. With the selectable logic level voltage, it is an ideal and instant solution for most critical applications.

2. Connector Layout

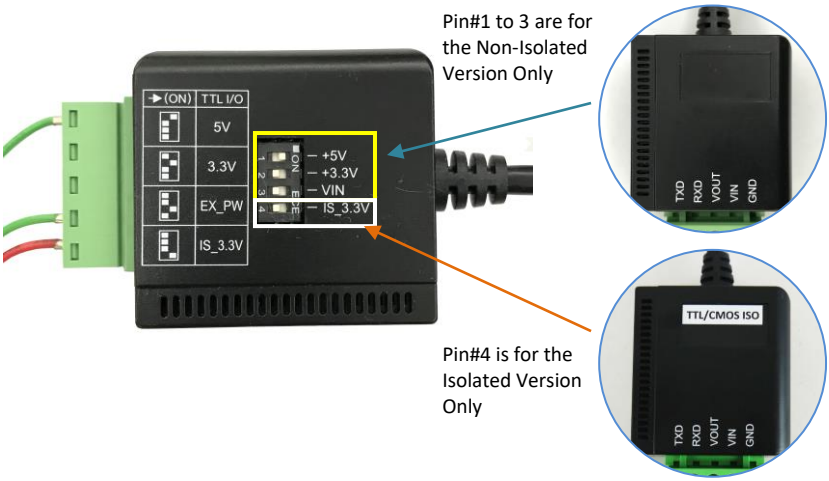


Features:

- ✓ Provides 1 TTL/CMOS RS232 Serial Port over USB Port
- ✓ Supports 3-Signal TTL/CMOS RS232 Conversion: (TXD, RXD, GND)
- ✓ The 2,500Vrms Isolation Model is Available
- ✓ Supports a 5-pin Terminal Blocks for TTL/COMS Signal Wiring
- ✓ 5V/3.3V/2.5V/1.8V Logic Level Selectable by DIP Switch
- ✓ Signal Levels are Similar to Standard RS232 but in TTL/CMOS Swing Level
- ✓ Easy Serial Port Expansion over USB Port
- ✓ USB1.1 and USB2.0 Forward Compatible
- ✓ Supports Serial Speed from 300bps to 921.6Kbps
- ✓ Supports 7,8 Data Bits
- ✓ Odd, Even, Mark, Space, None parity mode
- ✓ Supports 1, or 2 Stop Bits
- ✓ Supports Win98, Me, XP, CE, 2000, 2003, 2008 Win 7, Vista, Win 8.x, 10 Linux and Mac OS

3. Jumper Settings

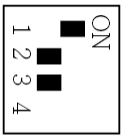
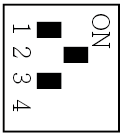
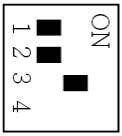
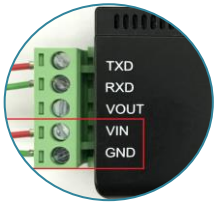
The configuration of the Adapter Cable is made via a DIP switch as shown by the following picture. The pin#1 to 3 is for non-Isolated version only. Pin#4 is dedicated for the isolated version only.



1. Non-Isolated Version Settings:

NOTE:

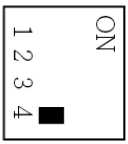
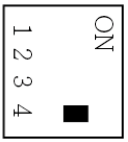
Only one of the 3 DIP switch pins (pin#1~3) is allowed to be set to ON anytime. Set 2 or more DIP switch pins ON will make the logic level voltage incorrectly merged together and cause the hardware conflict

DIP Switch Settings	Description
 +5V +3.3V VIN IS_3.3V	5V Logic Level (Default)
 +5V +3.3V VIN IS_3.3V	3.3V Logic Level
 +5V +3.3V VIN IS_3.3V	Logic Level is determined by the external DC voltage value applied on the Pin#4 of the 5-pin Terminal Blocks. If 2.5V is applied, then the Logic level is set to 2.5V 

2. Isolated Version Settings:

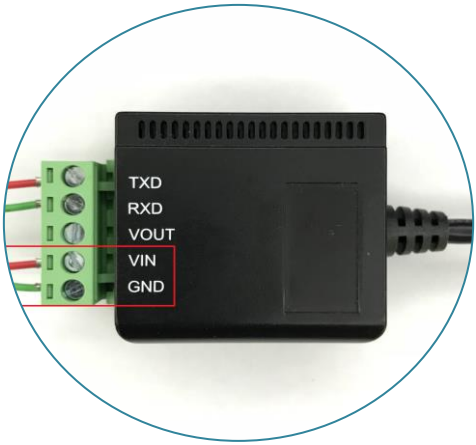
The Isolated version setting is very simple, only 5V or 3.3V depends on the Pin#4 DIP switch settings. The default is set at 5V.

DIP Switch Settings	Description

	+5V +3.3V VIN IS_3.3V	5V Logic Level (Default)
	+5V +3.3V VIN IS_3.3V	3.3V Logic Level

4. Plugging the Adapter Cable

1. Plug the USB Type-A end of the Adapter Cable into the USB host port of your PC or into an available USB port on a USB hub.
2. Connect the RS232 Serial Device to the TB-5 connector of the Adapter Cable.
3. The default logic level of this Adapter Cable is 5V. If your Serial Device's logic level is not 5V, you need to change the DIP settings to match it.



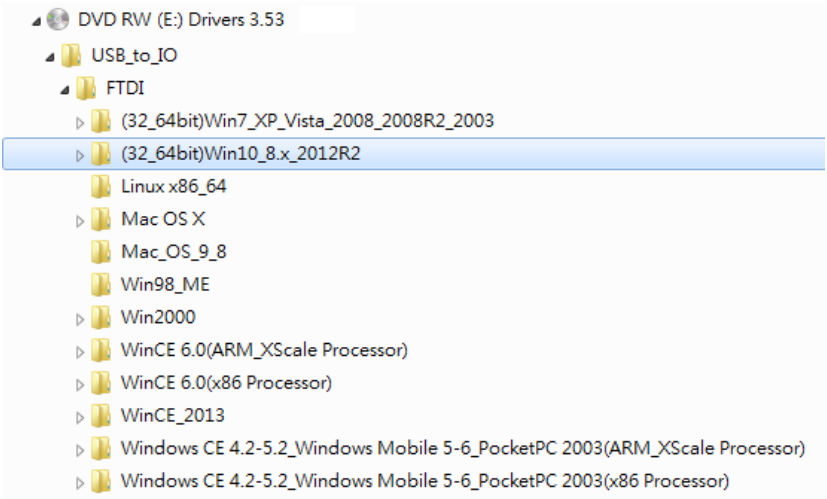
4. Proceed with the next section "Installing Drivers" to install the virtual COM port drivers for your Operating System.

5. Installing Drivers

The 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 following folder on the supplied driver CD.

1. **Driver Locations on the CD**

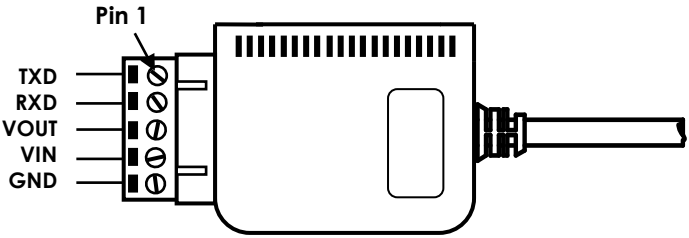
These instructions are for installing the drivers from the CD supplied with the product. If you are installing Windows drivers, when prompted for the location of the drivers, specify your CD-ROM drive and the locations according to the following table:



2. **Installing Drivers with Installer:**

- Insert the Driver CD supplied with the Adapter Cable.
- Run (or double click) the Installer Program (e.g. **CDM v2.12.06 WHQL Certified.exe**) in the corresponding folder for the OS on the driver CD:
- Follows the instructions of the installer program to complete the setup procedures.
- Plugging the Adapter Cable will hook the drivers into the Windows kernel automatically.

6. 5-pin Terminator Block Pinouts and Cable Wiring



5-pin TB	Signal
1	TXD
2	RXD
3	VOUT
4	VIN
5	GND

NOTE: Pin#3 (VOUT) of the TB-5 connector is an output voltage which indicates the logic level it is working at. Check the voltage value between it and the GND pin (TB-5's pin#5) will verify if this Adapter Cable is working at the correct logic level you want.

7. Environmental Specifications

Power requirements: 5V DC, 135mA (max)

Operating temperature: 0 to 558C (32 to 1318F)

Operating humidity: 5 to 95% RH