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USB to RS232 Isolated TTL | CMOS Adapter Cable with TB

Product Manual

Coolgear, Inc.
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Model Number: USB-232TTLMOS-IS

Revision History

Revision	Date	Author	Comments
1.0	07/14/2015	Coolgear	Original format
1.1	01/31/2018	Coolgear	New Manual Format

About this document

This product manual outlines installation and features of the USB-232TTLMOS-IS USB to RS232 Isolated TTL | CMOS Adapter Cable with TB.

Scope

The scope of this manual is to give the user of the product an understanding of its use with detailed diagrams and verbiage. The manual allows the users to apply the product to their application.

Intended Audience

This product is intended for use in numerous industries including but not limited to applications such as; Data Centers, Automotive peripheral installation, Machine Equipment, Kiosk, Office, and others.

Product Support

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1. Introduction

The USB-232TTLMOS-IS USB to serial conversion cable is designed for PC, thin client, or server to provide an instant TTL/CMOS RS232 port expansion via the Universal Serial Bus (USB). The USB-232TTLMOS-IS provides a USB to RS232 port with 5V/3.3V TTL/CMOS compatible Logic levels. The RS232 signals include TXD, RXD, and GND. The USB-232TTLMOS-IS provides the scalability to quickly adapt to new USB technologies. Multiple modules can be added to a single USB interface allowing you to add instant connectivity as needed. Complete product line offer many choices help you to expand and make your applications grow rapidly.

WEIGHT	.22 lbs
DIMENSIONS	1.77"(L)x1.65"(W)x1.15"(H) (4.49 x 4.18 x 2.20 cm)
UPC	736983902382
WARRANTY	1 year from date of purchase
COLOR	Black
CONNECTIONS	1 USB Type-A Male / 1 5-Pin Terminal Block
SYSTEM REQUIREMENTS	Compatible with all USB enabled operating systems.

1.1 Features

- Provides 1 TTL/CMOS RS232 Serial Port over USB Port
- Supports 3-Signal TTL/CMOS RS232 Conversion: (TXD, RXD, GND)
- Supports a 5-pin Terminal Blocks for TTL/COMS Signal Wiring
- 5V/3.3V Logic Level Selectable by DIP Switch
- Signal Levels are Similar to Standard RS232 but in TTL/CMOS Swing Level
- Supports 2,500Vrms Isolation for TTL/CMOS Signals

- Easy Serial Port Expansion over USB Port
- USB1.1 and USB2.0 Forward Compatible
- Built-in FTDI USB UART Chip
- 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, 10 Linux and Mac OS

1.2 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.
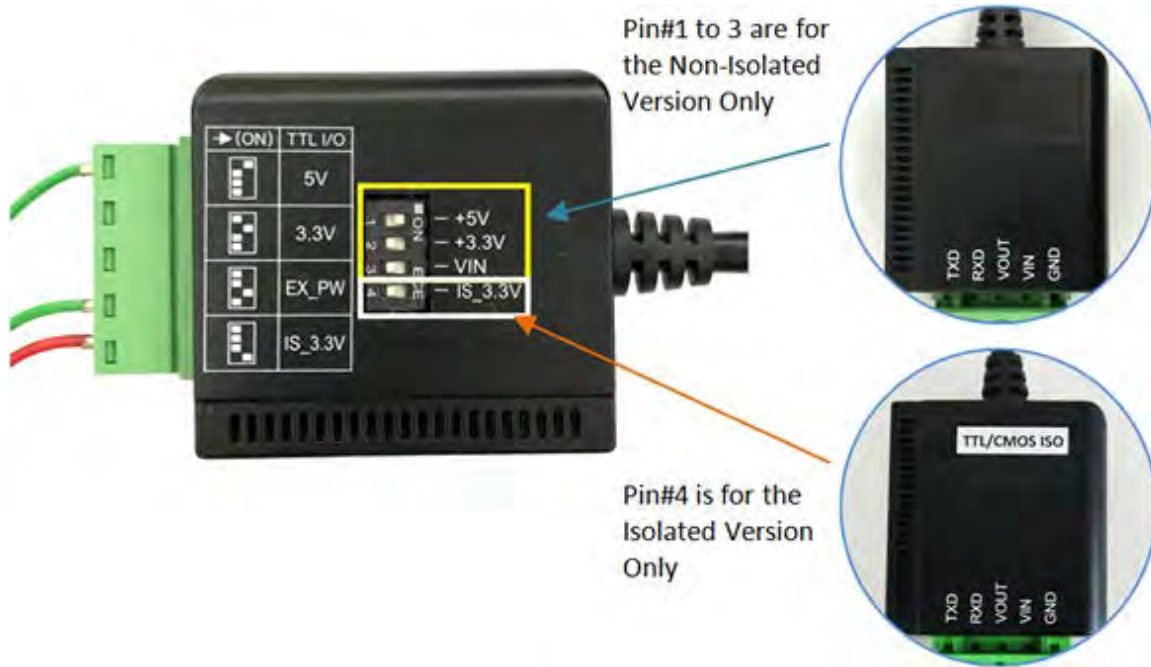

Figure 1

1.3 DIP Switch 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

1.4 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.

Figure 2

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

1.5 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.

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:
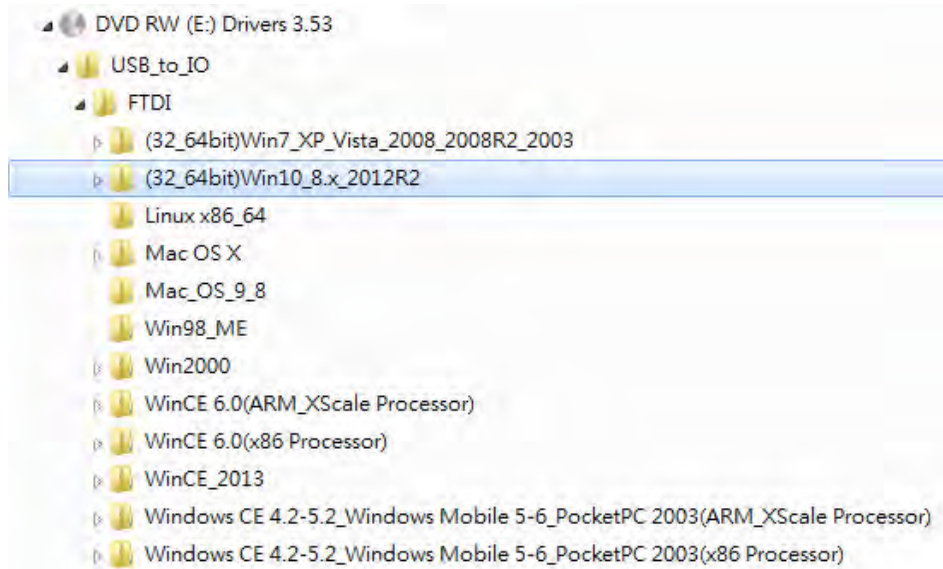
Figure 3

1.6 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:
- Follow the instructions of the installer program to complete the setup procedure.
- Plugging the Adapter Cable will hook the drivers into the Windows kernel automatically.

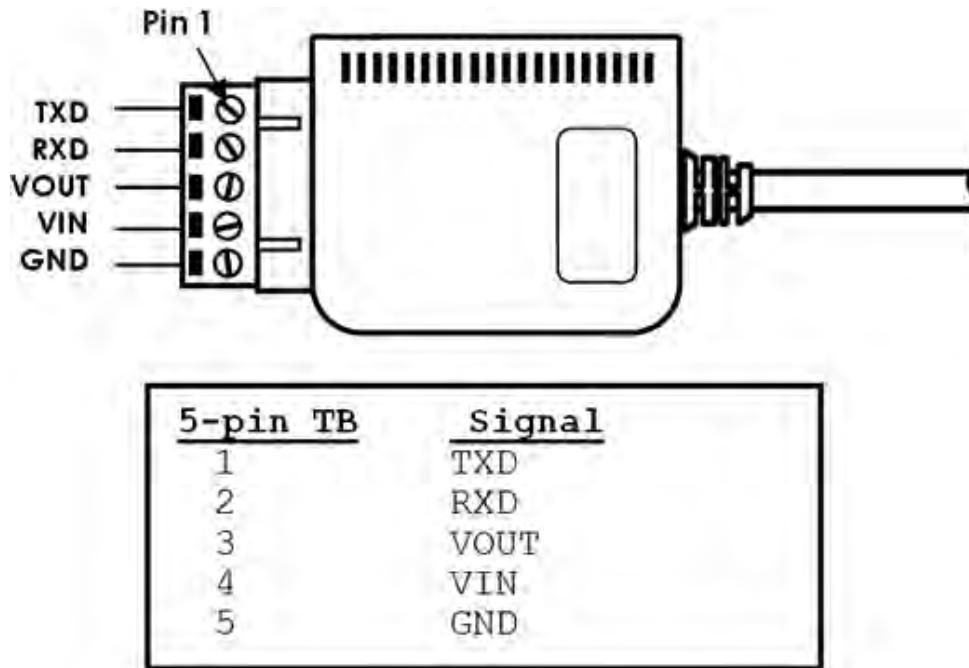## 2. 5-pin Terminal Block Pinouts and Cable Wiring

Figure 4

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.

2.1 Environmental Specifications

Specification	Data
Power Requirements:	5V DC, 135mA (max)
Operating Temperature:	0-55°C (32 to 131°F)
Operating Humidity:	5 to 95% RH

3. Notes, Tips, Warnings, and Safety

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. (*Reference section 2*)

Tip	N/A

Warning	**Non-Isolated Version Settings:** 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. (*Reference section 1.3*)

Safety	• Read the entire Product Manual before implementing this product for your application. This manual contains important information about electrical connections that must be followed for safe and proper operation. • Inspect the product closely for visual defects before putting it to use. • Keep away from areas where moisture builds, this product contains electrical components that can be damaged by moisture build up, this can adversely affect your equipment connected to it. • Do not disassemble the product. • If this product is not functioning properly, email our support team at support@coolgear.com.

4. Supporting References

Document	Link
Website Product Page	https://www.coolgear.com/product/usb-to-rs232-isolated-ttl-cmos-adapter-cable-with-tb