

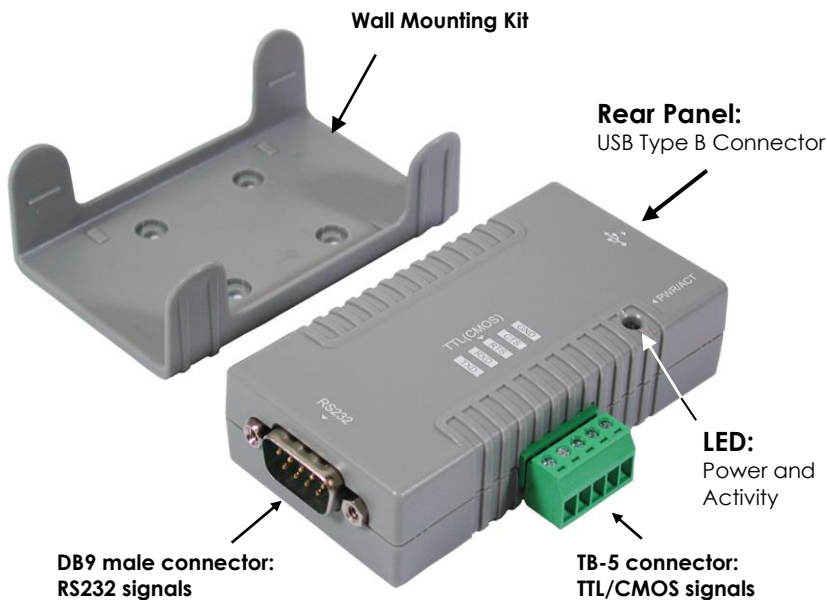
EX-1331TTL-VIS

RS232/TTL(CMOS) to USB2.0 Adapter, w/ Isolation and Surge Protection

1. Introduction

Thank you for purchasing this RS232/TTL(CMS) to USB2.0 Adapter. It is an intelligent expansion module that connects to a PC or server via the Universal Serial Bus (USB2.0), providing a high-speed serial connectivity to either RS232 or TTL/CMOS signal device. The serial port provides RS232 signals on DB9 and TTL/CMOS signals on the 5-pin terminal blocks respectively (only one works at a time, not simultaneously). They are fully compatible with RS232 and TTL/CMOS standard logic level. With the complete bundled virtual COM port drivers, wall and DIN RAIL flexible mounting options, it is an ideal solution for most critical and industrial applications.

2. Connector Layout



Features:

- ✓ Provides 1 RS232/TTL(CMOS) Serial Port over USB2.0 Port
- ✓ Supports USB 2.0 High Speed (480Mbps) and Full Speed (12Mbps)
- ✓ Provides a DSUB-9 Connector for RS232 Serial Port
- ✓ Provides a 5-pin Terminal Blocks for TTL(CMOS) Serial Port
- ✓ Supports 2,500Vrms Isolation and Surge Protection
- ✓ USB Screw Lock Mechanism Enhances the Reliability
- ✓ Baud Rate up to 921.6Kbps
- ✓ Supports 7,8 Data Bits
- ✓ Odd, Even, Mark, Space, or None parity mode
- ✓ Supports 1, or 2 Stop Bits
- ✓ Powered by USB Bus Power, no AC Adapter is Required
- ✓ Supports Wall Kit and Optional DIN RAIL Mounting Kit
- ✓ Supports Win98, Me, XP, CE, 2000, 2003, 2008, Vista, Win7, Linux and Mac OS

3. Installing the Adapter

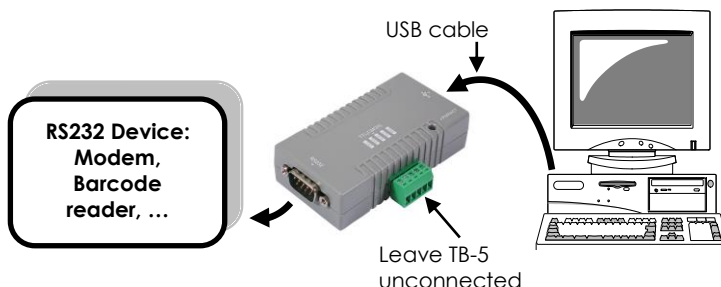


Note:

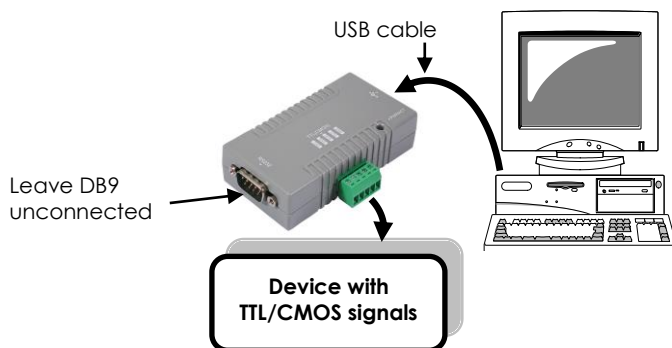
In general case, this product does not need any external AC power adapter since it is powered by the USB port. The built-in DC jack is used to inject 5V DC only if your USB host could not provide enough power.

1. Connect the Product to PC's Host USB port with the standard A-to-B USB cable. Once the USB port supplies power, the LED will light up.
2. The serial port provides 2 connectors. The DB9 male is for RS232 signal applications. The 5-pin terminal blocks is used for TTL/CMOS level (RS232 protocol, but different voltage level) serial applications. These 2 connectors CANNOT be used simultaneously.

- DB9 male RS232 connection:



- TB-5 TTL(CMOS) connection:

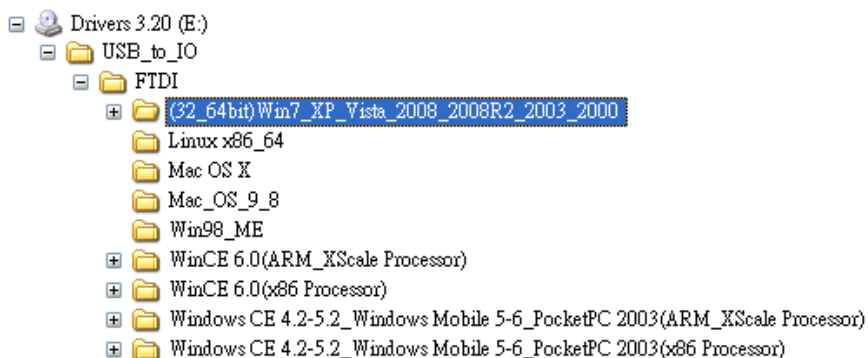


4. Installing Drivers

The RS232/TTL(CMOS) Adapter 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 drivers for Win98, ME, 2000 or XP, when prompted for the location of the drivers, specify your CD-ROM drive and the locations according to the following table:

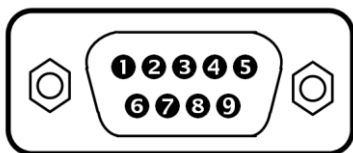


- All Windows 32 and 64-bit
- Linux 32 and 64-bit
- Mac OS X
- Mac OS 9.x, 8.x
- Windows 98, 98SE, ME
- Windows CE for ARM

2. Installing Drivers for (32-bit and 64-bit) Win7, XP, Vista, 2008, 2003 and 2000:

- Insert the Driver CD supplied with the Adapter
- Run (or double click) the Installer Program (e.g. **CDM20824_Setup.exe**) in the following folder of the driver CD:
\\USB_to_IO\\FTDI\\(32_64bit)Win7_XP_Vista_2008_2008R2_2003_2000
- Follows the instructions of the installer program to complete the setup procedures.
- Plug the RS232/TTL(CMOS) Adapter will hook the drivers into the Windows kernel automatically.

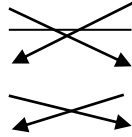
5. RS232 Male-DB9 Pin Assignment and Wiring



<u>9 Pins</u>	<u>Signal</u>
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

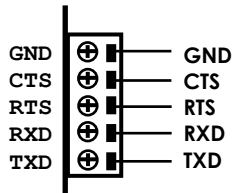
DB9(Male) RS232 to DB9(Male) RS232 Wiring

<u>DB9 (USB Adapter)</u>		<u>DB9 (Serial Device)</u>
1 DCD	←	1 DCD
2 RXD	↔	2 RXD
3 TXD	↔	3 TXD
4 DTR		4 DTR
5 GND		5 GND

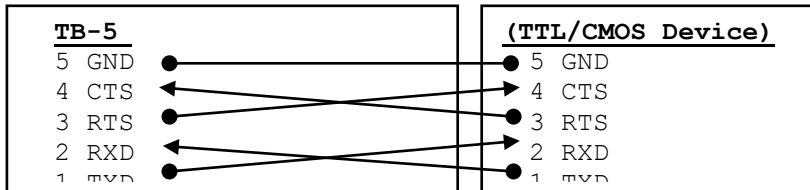


6. TB-5 Pin Assignment and Wiring

5-pin Terminal Blocks (TB-5) Pin Assignment:



TB-5 TTL(CMOS) Cable Wiring:



TTL/CMOS Electrical Characteristics

Parameters	Values
TTL/CMOS Input (RXD, CTS)	
Low	< 0.8V
High	> 2.0V
TTL/CMOS Output (TXD, RTS)	
Low	< 0.55V
High	> 2.4V

7. Environmental Specifications

Power requirements: 5V DC, 385mA (max)

Operating temp.: 0 to 55°C (32 to 131°F)

Operating humidity: 5 to 95% RH