



USB to TTL Level Serial Converter Board User Guide

Model : USB-TTL

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Manual Part Number TN-070
Issue Date: 2013-06-20

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Introduction & Features of USB to TTL Level Serial Converter Board

Introduction of USB-TTL

The TITAN USB-TTL is a USB to TTL Level Serial Converter Board, which provides a simple way to link from USB port on computer to connect 5V or 3.3V TTL level serial interface devices. The USB-TTL Serial is designed with selectable I/O pins that can be configured flexibly to operate at 5V or 3.3V level to meet the requirement by different microcontrollers of embedded systems. This USB-TTL converter board is suitable for most microcontroller interfaces.

In addition to the signals of RxD, TxD, RTS#, CTS#, the USB-TTL can provide +5VDC or +3.3VDC power output from corresponding 5V or 3.3V TTL level serial interface setting. VCC power from pin-1 on the green terminal block connector can be configured for +5VDC or +3.3VDC output at 350mA. By default, +5VDC is enabled.

The USB-TTL is very easy to use. When it is interfaced with computer and embedded system, the USB-TTL converter board looks like a virtual COM Port.

Features of USB-TTL

- Adds a high speed TTL level serial interface via USB connection.
- Provides 3.3V or 5V TTL level serial interface for most microcontroller interfaces.
- Provides +5VDC or +3.3VDC power for external devices such as microcontroller, Wi-Fi, Bluetooth, Xbee, etc.
- 384 bytes receive data buffer.
- 128 bytes transmit data buffer for high speed throughput.
- Signals: RxD, TxD, RTS#, CTS#.
- Requires no IRQ, DMA, I/O port.
- Data rates: 300 bps to 1M bps.
- Provides terminal block connector for easy connection.
- Monitor LEDs of TxD, RxD indicating port status.
- LEDs for power indication.
- Dimensions : 60mm X 30mm, with USB A type connector.
45mm X 30mm, without USB A type connector.
- Virtual COM port drivers for Windows 8, 7, Vista, XP, 2000.
- Powered by USB port. No external power adapter required.
- CE, FCC approval.

Diagram of USB-TTL

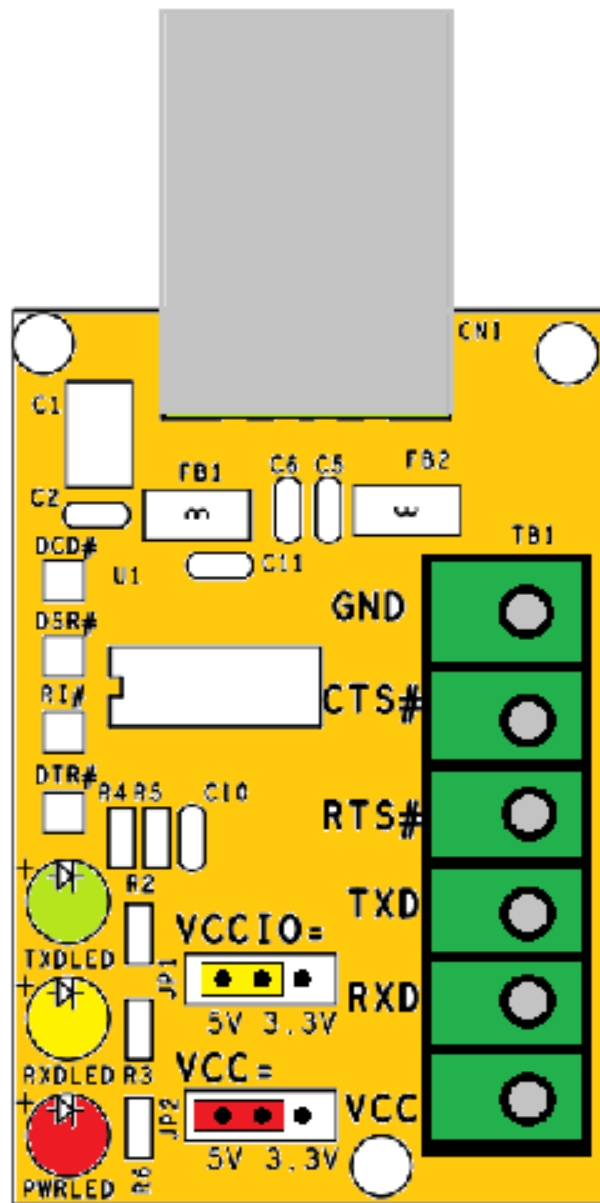


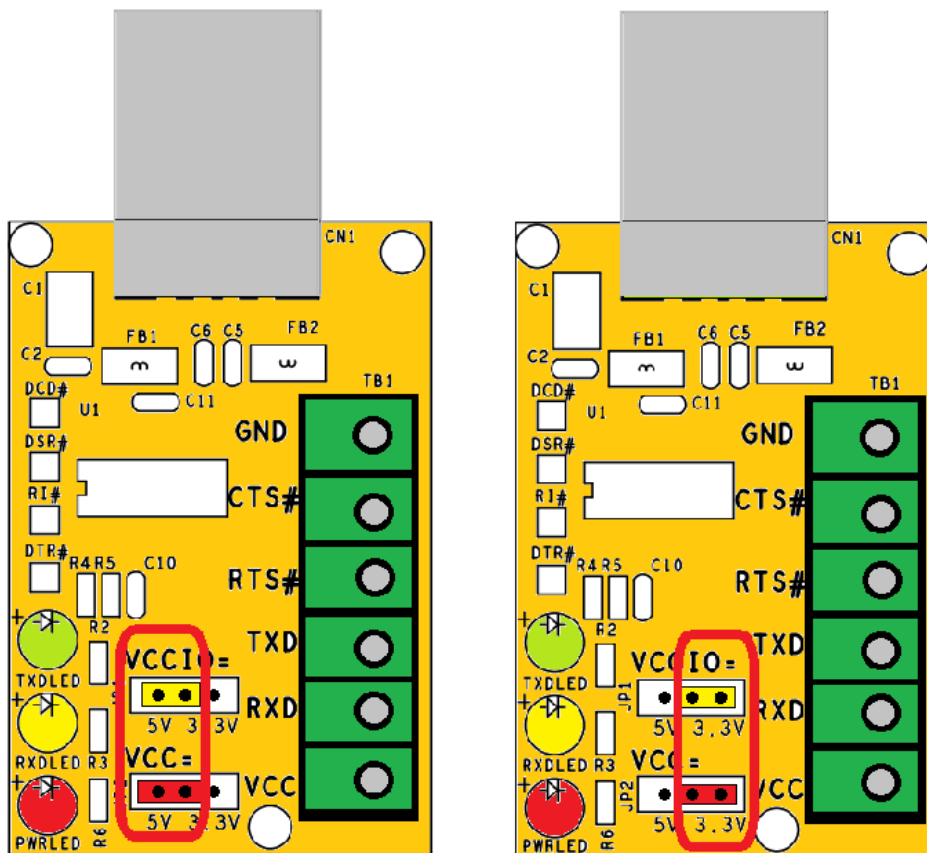
Diagram of USB-TTL

Setting USB-TTL for 5V or 3.3V Operation

USB-TTL has two 1x3 header blocks, which have jumpers to enable the output power (**JP2**) and TTL level of serial interface for 5V or 3.3V operation (**JP1**). Please refer to below the illustration of the jumper setting for 5V and 3.3V operation.

Jumper	Function
JP1 1-2	Sets serial interface to 5V TTL level.
JP1 2-3	Sets serial interface to 3.3V TTL level.
JP2 1-2	Provides a +5VDC output power for TB1 VCC pin (pin1).
JP2 2-3	Provides a +3.3VDC output power for TB1 VCC pin (pin1).

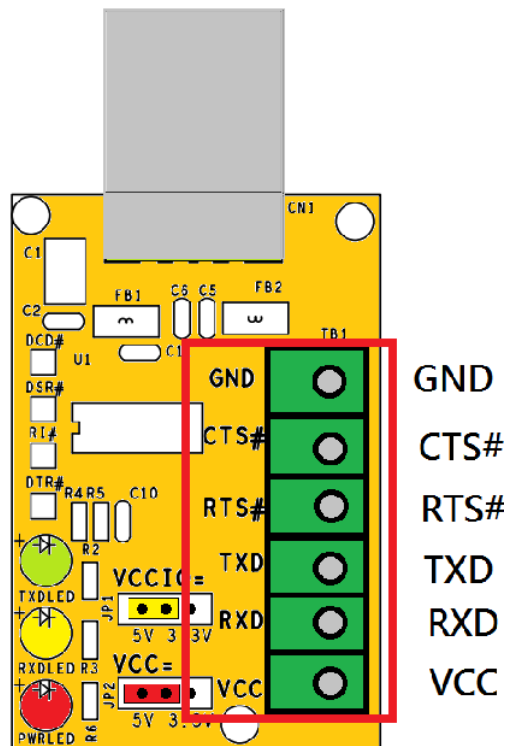
PIN 1, 2 of JP1 & JP2 short for 5V operation (factory default setting)



5V operation

3.3V operation

Terminal Block (TB1) Pinout Information

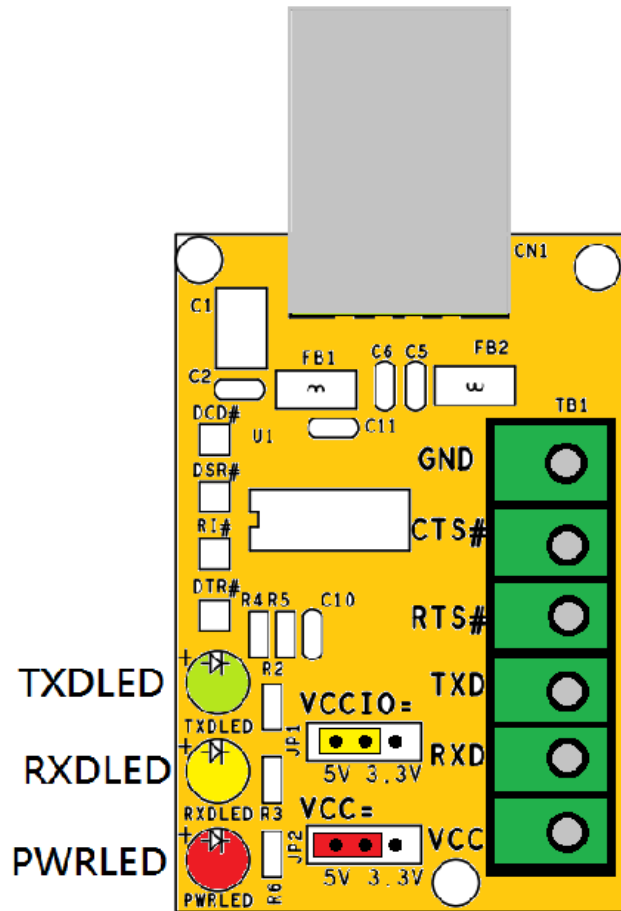


Pin-out of TB1

The table below shows the pinout of the six-pin terminal block connector.

Pin Number	Pin Type	Description
VCC (pin1)	Power	+5VDC or +3.3VDC output power (select by JP2)
RXD (pin2)	Input	RXD: Receive Data (TTL level)
TXD (pin3)	Output	TXD: Transmit Data (TTL level)
RTS# (pin4)	Output	RTS# : Request To Send, Active low (TTL level)
CTS# (pin5)	Input	CTS# : Clear To Send, Active low (TTL level)
GND (pin6)	Ground	GND: Signal Ground

LED Indication



LED indication

USB-TTL uses three LEDs to indicate Power, Data Output (TxD) & Input (RxD) Status.

LED color	Name	Description
Green	TXDLED	Indicating the data output to external serial device
Yellow	RXDLED	Indicating the data input from external serial device
Red	PWRLED	Power on and output power is ready

Driver Installation

In most cases, the driver of USB-TTL will be installed automatically.

Install in Windows 8, 7, Server 2008 R2

Connect your computer to Internet and plug USB-TTL to the USB port.
The driver will be installed automatically via Internet.

Install in Windows XP, Vista, Server 2003 and 2008

When asked to install the drivers, allow your computer to search the Internet to load and install the drivers automatically.

Install in Windows 2000, 98, SE and ME

Download drivers from <http://www.titan.tw/download/driver.html>

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