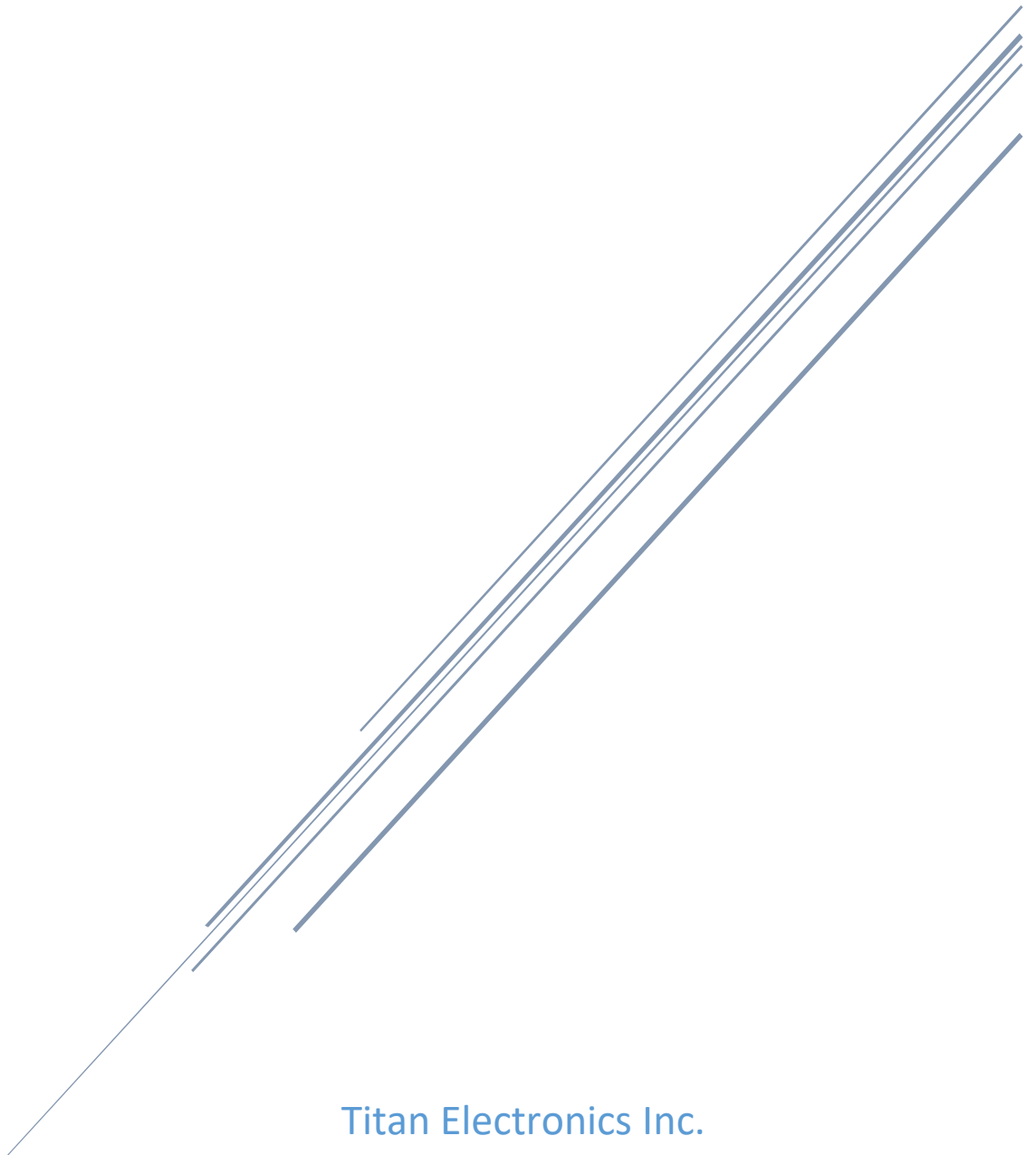


USB-TTL USER'S MANUAL

2017 May Edition



Titan Electronics Inc.
Web: www.titan.tw

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INTRODUCTION

The TITAN USB-TTL is a USB-to-TTL level serial converter board, which provides a simple way to link from a USB port to 5V or 3.3V TTL level serial interface devices. USB-TTL is designed with selectable I/O pins that can be configured flexibly to operate at 5V or 3.3V level to meet the different requirements of 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 the 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 connected to a computer and embedded system, the USB-TTL converter board looks like a virtual COM Port.

FEATURES

- 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 microcontrollers, 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: 300bps to 1Mbps
- Provides terminal block connector for easy connection
- Monitor LEDs of TxD, RxD indicating port status
- LEDs for power indication
- Dimensions: 60mm × 30mm, with USB A type connector
- 45mm × 30mm, without USB A type connector
- Virtual COM port drivers for Windows 10, 8.1, 8, 7, Vista, XP, 2000
- Powered by USB port, no external power adapter required
- CE, FCC approval

DIAGRAM OF USB-TTL

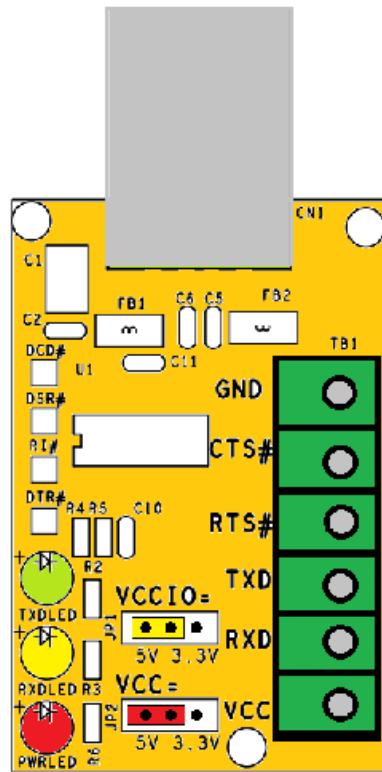


Diagram of USB-TTL

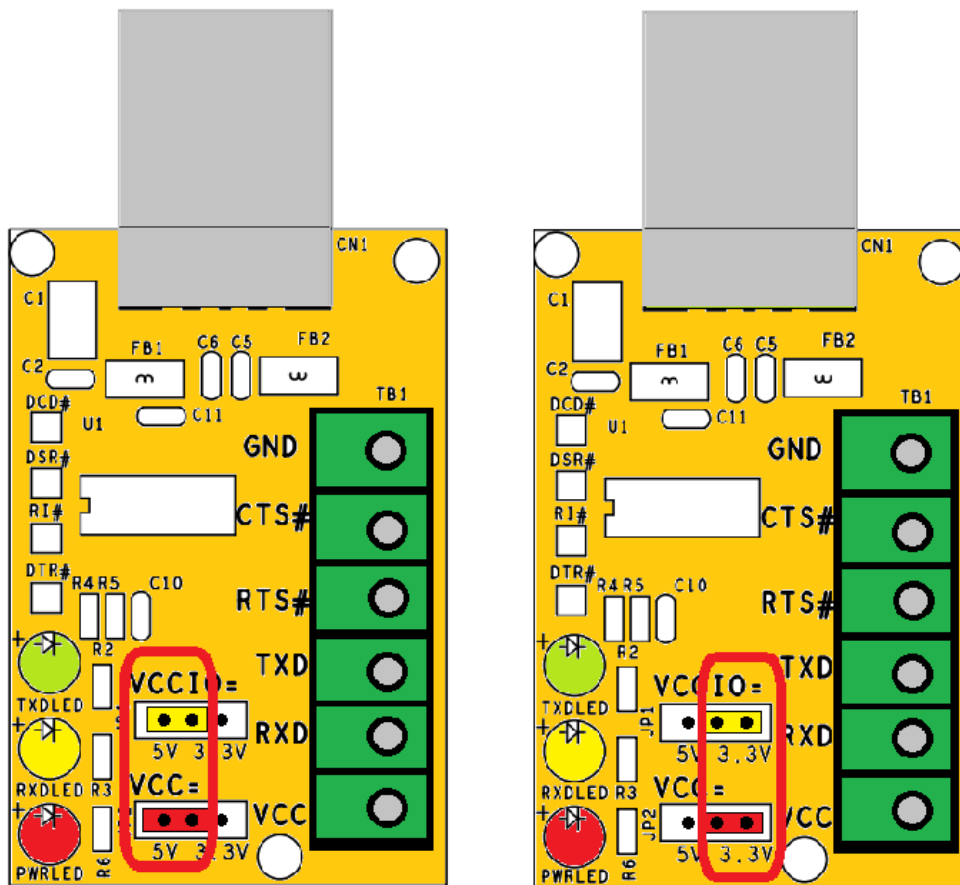
HARDWARE SETTINGS

Setting USB-TTL for 5V or 3.3V Operation

USB-TTL has two 1 × 3 jumper header blocks, which are used 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 (pin 1)
JP2 2-3	Provides a +3.3VDC output power for TB1 VCC pin (pin 1)

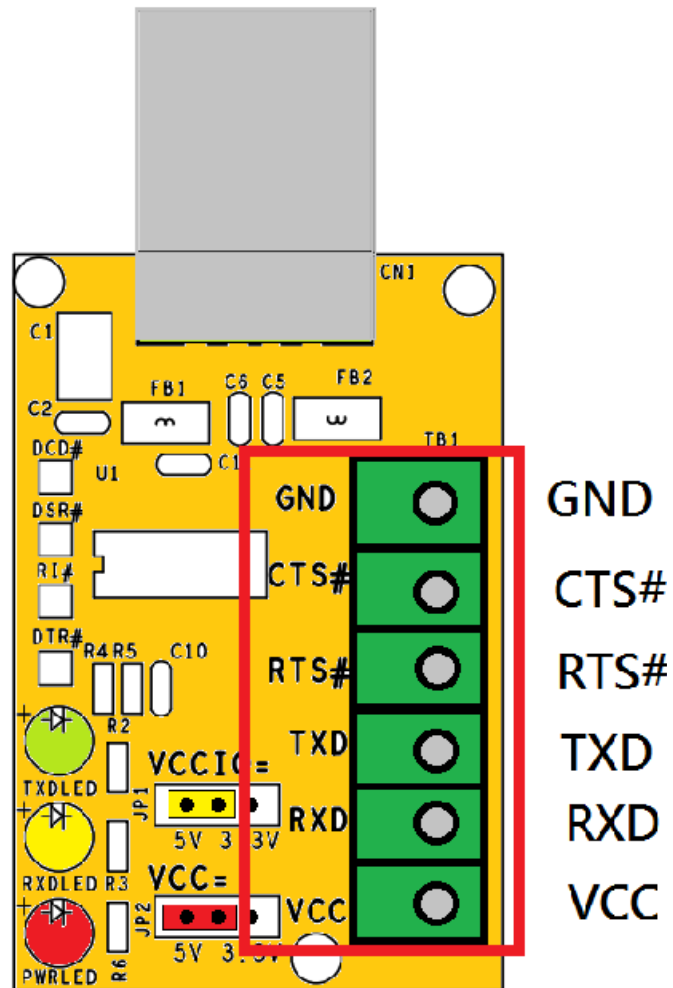
Pin 1, 2 of JP1 & JP2 are short together for 5V operation by default.



5V operation

3.3V operation

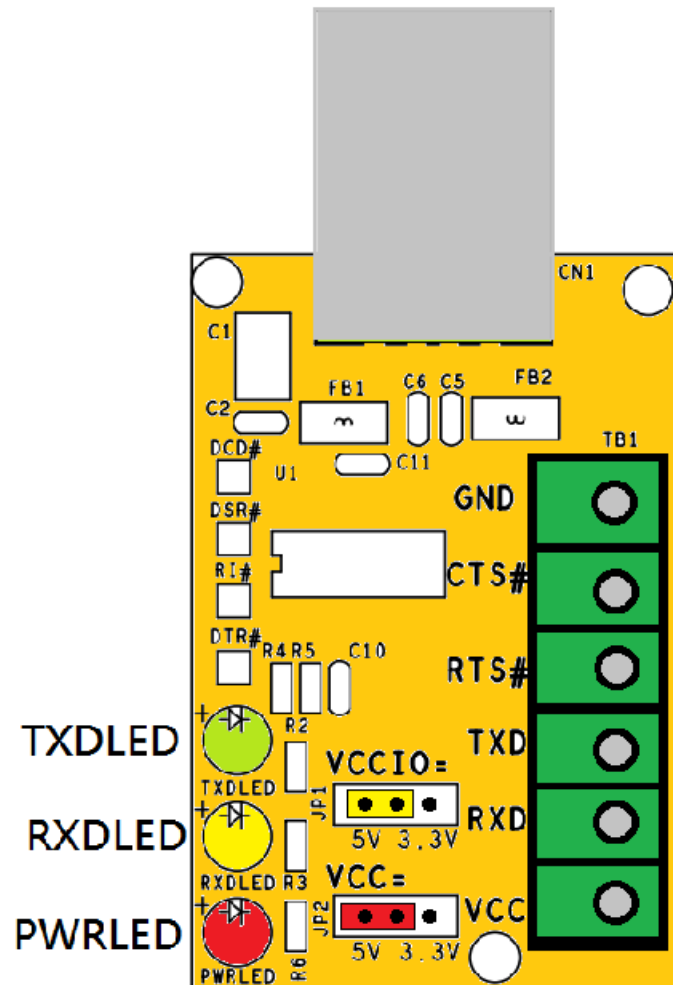
Terminal Block (TB1) Pin-out Information



Pin-out of TB1

Pin Number	Pin Type	Description
Pin 1 (VCC)	<i>Power</i>	+5VDC or +3.3VDC output power (select with JP2)
Pin 2 (RxD)	<i>Input</i>	RxD: Receive Data (TTL level)
Pin 3 (TxD)	<i>Output</i>	TxD: Transmit Data (TTL level)
Pin 4 (RTS#)	<i>Output</i>	RTS#: Request to Send, active low (TTL level)
Pin 5 (CTS#)	<i>Input</i>	CTS#: Clear to Send, active low (TTL level)
Pin 6 (GND)	<i>Ground</i>	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	<i>TxD LED</i>	Indicating data output to external serial device
Yellow	<i>RxD LED</i>	Indicating data input from external serial device
Red	<i>PWR LED</i>	Power on and output power is ready

INSTALLATION

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

Install in Windows 10, 8.1, 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>