

Arduino XBee/Bluetooth Bee USB Adapter

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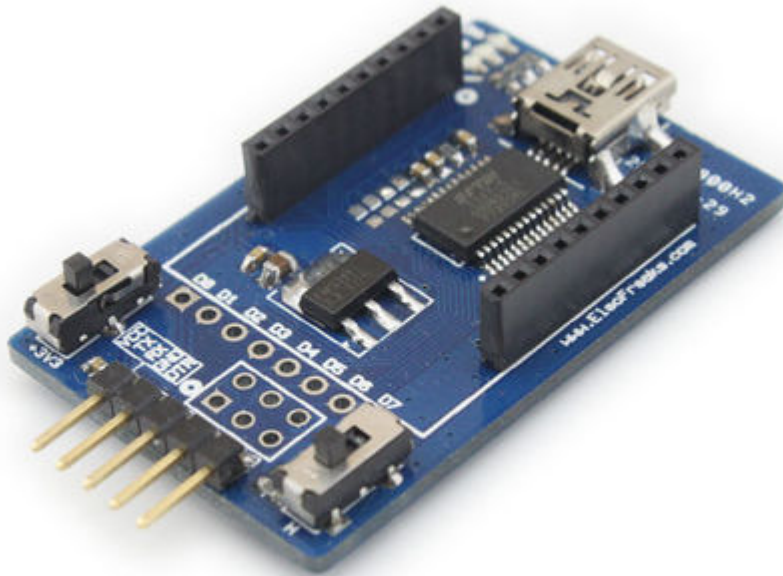
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Introduction

Bee Adapter is a compact USB to serial adapter equipped with BEE (20pin 2.0mm) sockets. With integrated FT232RL IC, It can be used for programming or communicating with board which basic Arduino but without USB interface,like Sniffer Nano. On the other hand, you may connect your PC to various wireless applications via the BEE compatible modules.

The adapter also support XBee module interface.



Feature

- 3.3V and 5V dual power output
- 3.3V and 5V IO compatible
- USB 2.0 protocol
- BitBang mode ready
- Easily connected to a PC via mini USB cable
- XBee-setting support software X-CTU

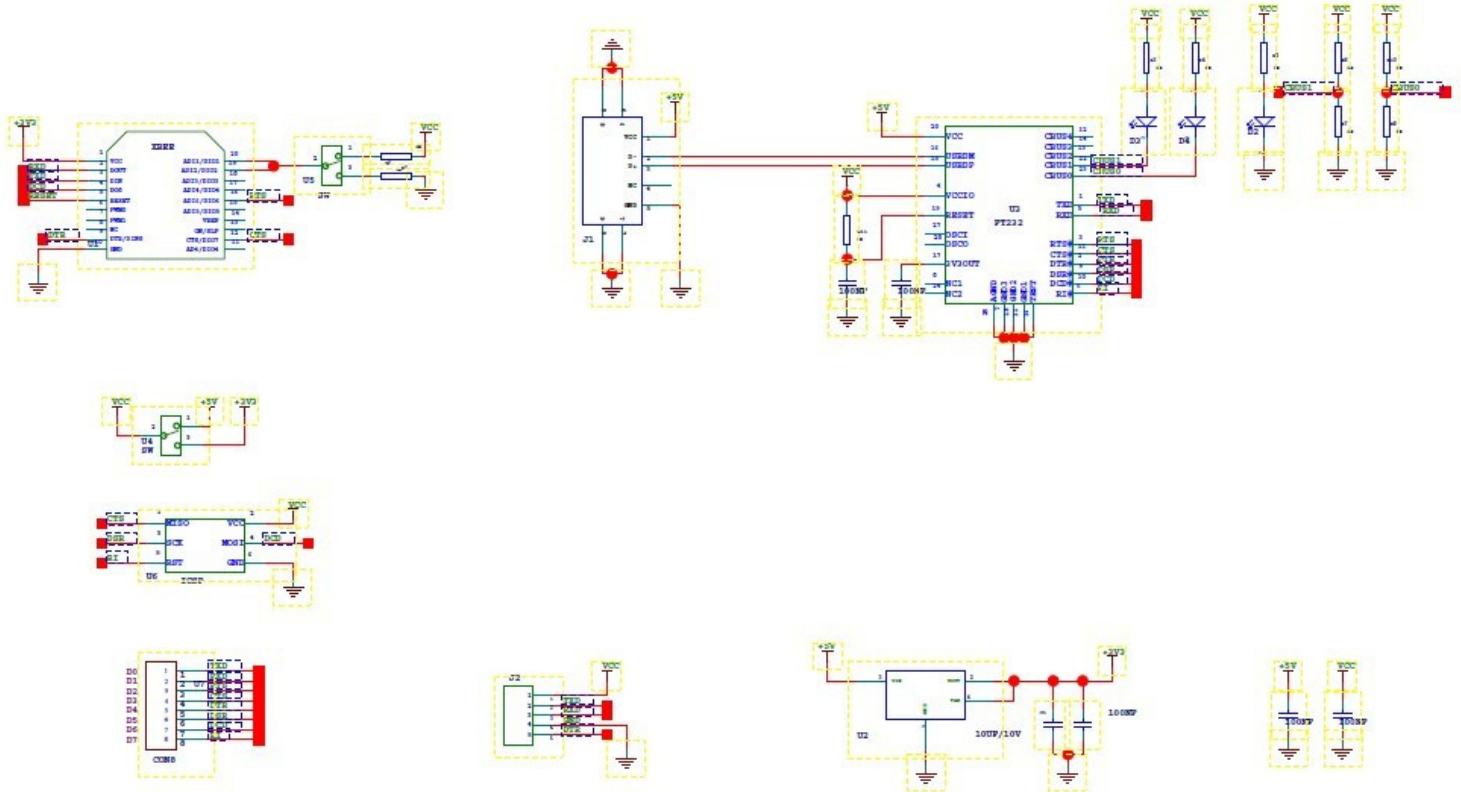
Application Ideas

- USB Adapter for XBee BTBee.
- USB to Serial adapter for communicating with TTL/CMOS level Serial devices.
- Programmer for Arduino boards without USB interface, like Sniffer Nano.
- Programmer for micro-controllers / CPLDs using ISP (in-circuit-serial-programming).
- 3.3V / 5V power source for a breadboard MCU applications

Cautions

- **When you used Bee Adapter V1.0 as a programmer, make sure your target power supply voltage then set the 3.3V/5V switch correctly. Both power supply voltage and IO level will be changed.**
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Schematic

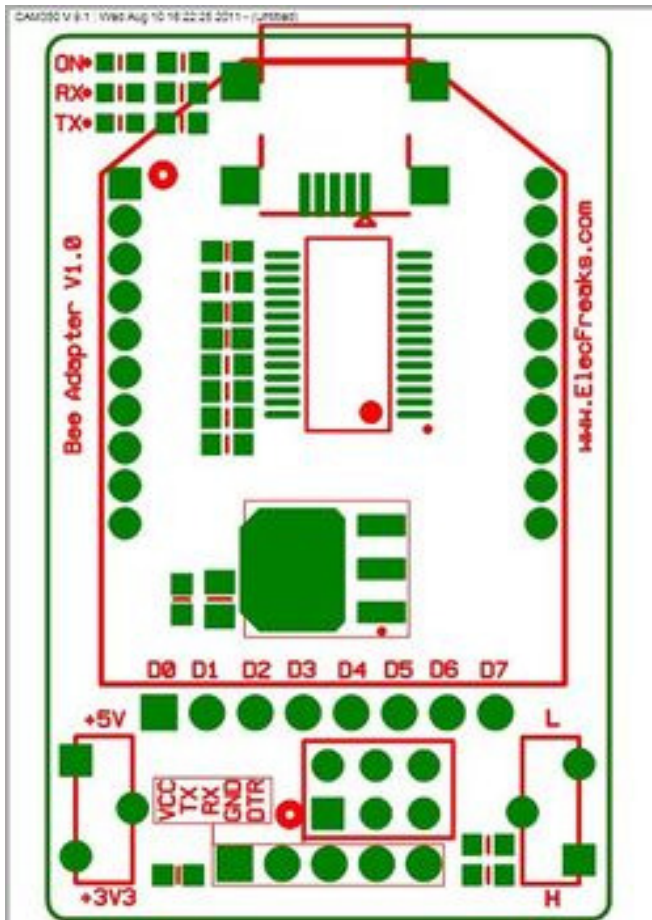


Specification

Microprocessor	FT232RL
PCB size	3.0cm x 4.7cm
Power supply	3.3V and 5V DC
Interface	Mini-B USB, 2.54mm pitch pin header
Adapter socket	XBee compatible 2.0mm pitch female pin header
Connectivity	USB
Communication Protocol	UART, Bit Bang I/O, SPI

Pin definition and Rating

Mechanic Dimensions

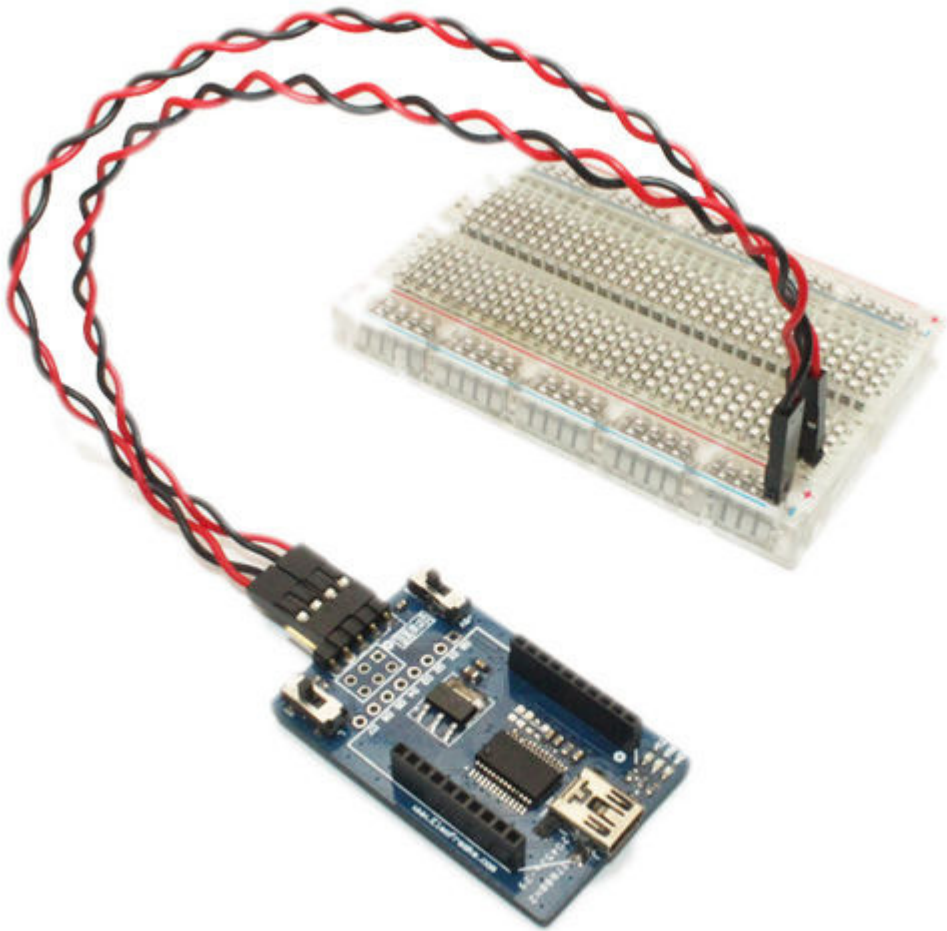
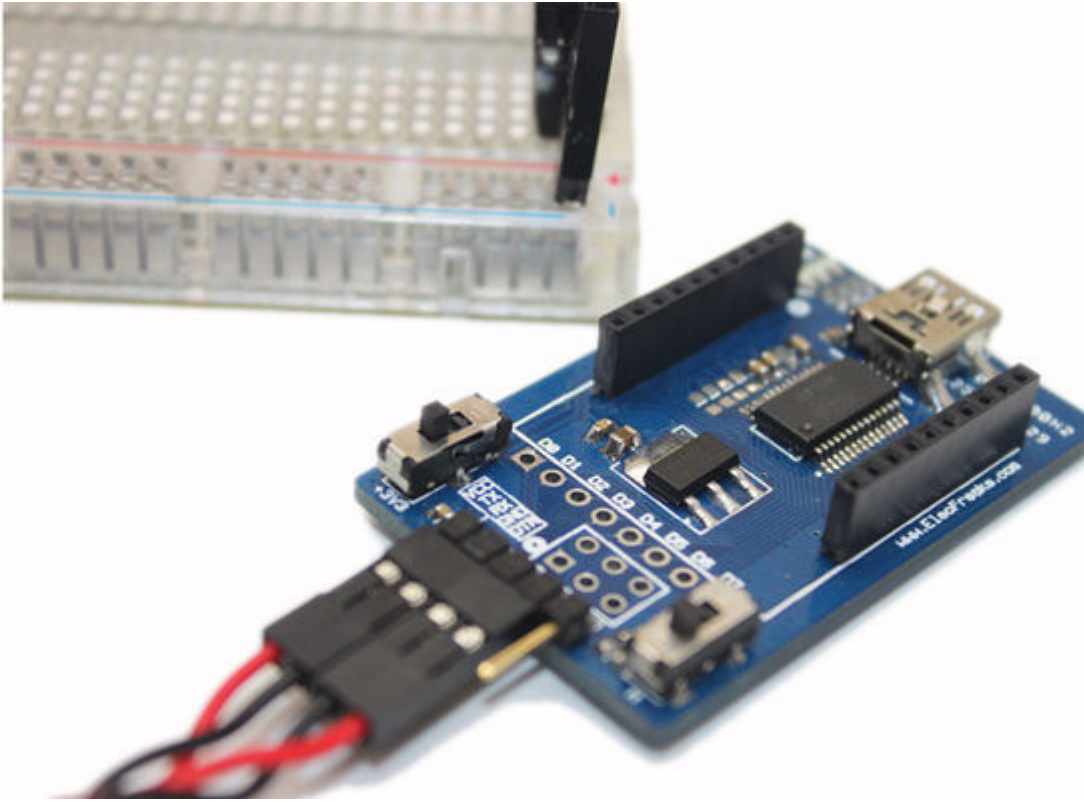


Usage

Bee Adapter V1.0 is commonly used as USB to Serial Port (COM port) interface. This kind of configuration can be used to communicate with a MCU serial port or to program a MCU which support UART based ISP.

You can even use it to be a BreadBoard Power adapter 3.3V/5v by switch and also has UART Port for which could be used for debug or other purposes...

The UART Pin order is : **VCC** , **TX** , **RX** , **GND**



Version Tracker

Revision	Descriptions	Release
Bee Adapt V1.0	Initial public release	Aug 10, 2011

Resources

- [\[1\]FTDI FT232RL product Page](#)
- [\http://www.ftdichip.com/Drivers/VCP.htm FTDI Virtual COM Port (VCP) drivers
- [FTDI D2XX drivers](#)
- [FTDI Bit-Bang mode application note](#)

Open Source Drivers

- [libFTDI](#)
- [libUSB](#)

Other Sources of FT232RL application information

- [Hackaday - Introduction to bit-bang mode](#)
- [FT232R JTAG implementation with OpenOCD](#)
- [FT232R SPI Bitbang Mode example](#)
- [Flashing Arduino with FT232R bitbang mode](#)