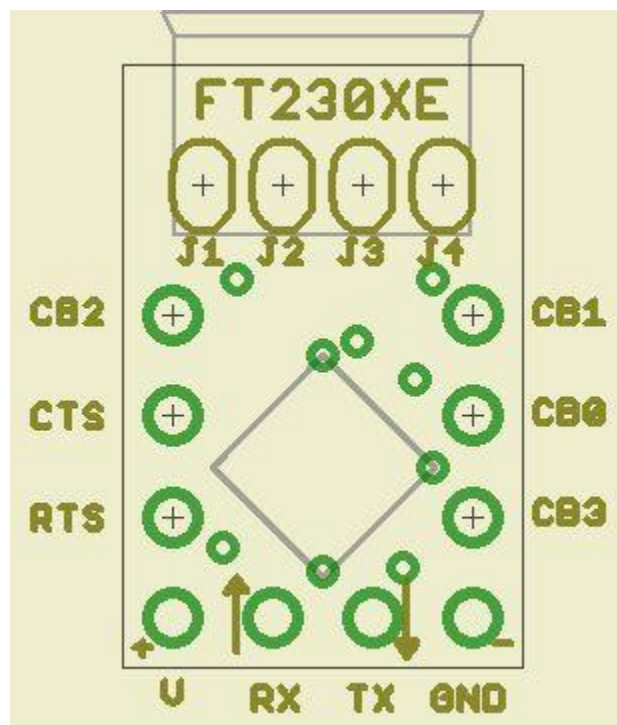


FT230XE USB TO BASIC UART MODULE

September 2013, Version 0.9



Key Hardware Features:

Single chip USB to asynchronous serial data transfer interface.

Entire USB protocol handled on the chip. No USB specific firmware programming required.

Fully integrated 2048 byte EEPROM for storing device descriptors and CBUS I/O configuration.

Fully integrated clock generation with no external crystal required plus optional clock output selection enabling a glue-less interface to external MCU or FPGA.

Data transfer rates from 300 baud to 3 Mbaud.

512 byte receive buffer and 512 byte transmit buffer utilising buffer smoothing technology to allow for high data throughput.

FTDI's royalty-free Virtual Com Port (VCP) and Direct (D2XX) drivers eliminate the requirement for USB driver development in most cases.

Configurable CBUS I/O pins.

Transmit and receive LED drive signals.

UART interface support for 7 or 8 data bits, 1 or 2 stop bits and odd / even / mark / space / no parity

Synchronous and asynchronous bit bang interface options with RD# and WR# strobes.

Battery Charger Detection. May be used by mobile devices to detect the presence of a charger on the USB port to enable higher current / faster charging of batteries.

Device supplied pre-programmed with unique USB serial number.

Supports bus powered, self powered and high-power bus powered USB configurations.

Integrated +3.3V level converter for USB I/O.

True 3.3V CMOS drive output and TTL input.

(operates down to 1V8 with external pull ups and is also 5V tolerant)

Configurable I/O pin output drive strength.

Integrated power-on-reset circuit.

UART signal inversion option.

Internal 3.3V/1.8V LDO regulators

Low operating current of 8mA (typical) and USB suspend current of 125uA (typical) current.

Low USB bandwidth consumption.

UHCI/OHCI/EHCI host controller compatible.

USB 2.0 Full Speed compatible.

Extended operating temperature range: -40°C to 85°C

FT230XE module features:

- Very small – only 10 x 15mm
- Micro-USB B connector
- Standard 0.1" headers for output pins
- Supports I/O voltages from 1.8V to 3.3V, with 5V tolerance
- Preconfigured for 5V output power supply from USB port and 3.3V I/O voltage



Configuration:

	J1	J2	J3	J4	'V' pin	I/O Voltage	Power
1/Default	closed	closed	open	closed	5V output	3.3V	USB
2	closed	open	closed	closed	3.3V output	3.3V	USB
3	closed	open	closed	open	1.8-3.3V input	1.8-3.3V	USB
4	open	closed	open	closed	5V input	3.3V	V pin
5	open	closed	closed	closed	3.3V input	3.3V	V pin
6	closed	open	open	closed	NC	3.3V	USB

Do not use other jumper combinations, it could damage the board!

Please check FT230XQ datasheet at <http://www.ftdichip.com/Products/ICs/FT230X.html>

Schematic diagram of FT230XE

