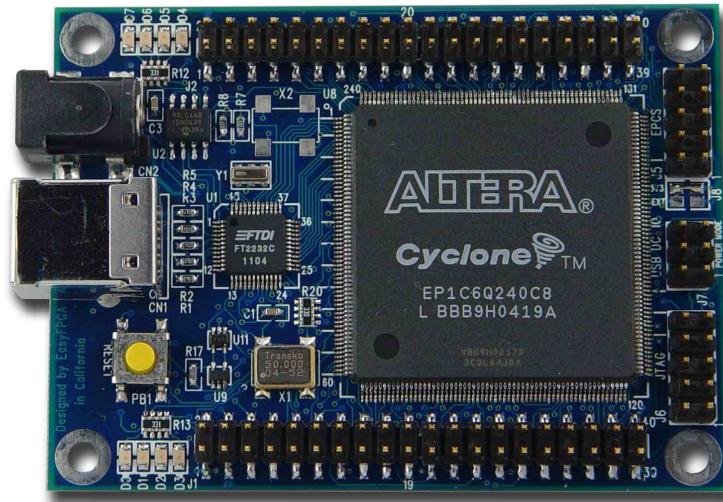# EZ1CUSB - Altera Cyclone FPGA Development Board

FPGA Development board with USB interface

The EZ1CUSB development kit provides a complete, low cost solution for developing designs and applications based on the Altera Cyclone FPGA family and FTDI FT2232C USB controller. The EZ1CUSB Development kit is the perfect solution for FPGA and system designers who need an advanced, flexible and feature rich prototype platform.

Features

- Connects to the host PC via USB
- USB data transfer up to 1MB per second
- Easy configuration via USB or JTAG
- High Density FPGA (5,980 to 12,060 LEs, up to 240k RAM bits, 2 PLLs)
- Unlimited reprogramability
- Serial Configuration Device EPCS4
- Supports Nios/Nios II processors
- Self-powered or USB-powered
- On-board clock oscillator and reset circuitry
- 128 I/O pins
- 4 dedicated clock pins
- Internal Clock Output/ External Clock Input
- External Reset Input
- Eight LEDs
- Reset Push-button
- Royalty free USB driver (Win. 98/Me/2000/XP)
- No USB-specific firmware programming required
- VB6/VB.NET/Delphi application examples
- VHDL examples

Warranty

- One year - parts, labor, technical support
- Free software upgrades

Featured FPGAs

- EZ1CUSB-6: Altera Cyclone EP1C6Q240C8
  Logic Elements (LEs): 5,980, M4K RAM blocks: 20
  Total RAM bits: 92,160, PLLs: 2
- EZ1CUSB-12: Altera Cyclone EP1C12Q240C8
  Logic Elements (LEs): 12,060, M4K RAM blocks: 52
  Total RAM bits: 239,616, PLLs: 2

System Specification

- Physical dimensions: 3.0" x 2.2"
- DC Input: 6V, 250 mA, 2.1 mm power jack
- Two 40 pin 0.100" pitch headers (top side)
- Two 40 pin 0.100" pitch headers (bottom side)
- USB (type "B") connector

Cables And Accessories

- DC Power Supply
- USB A->B cable
- Documentation
- USB Drivers
- Complete reference designs with source code
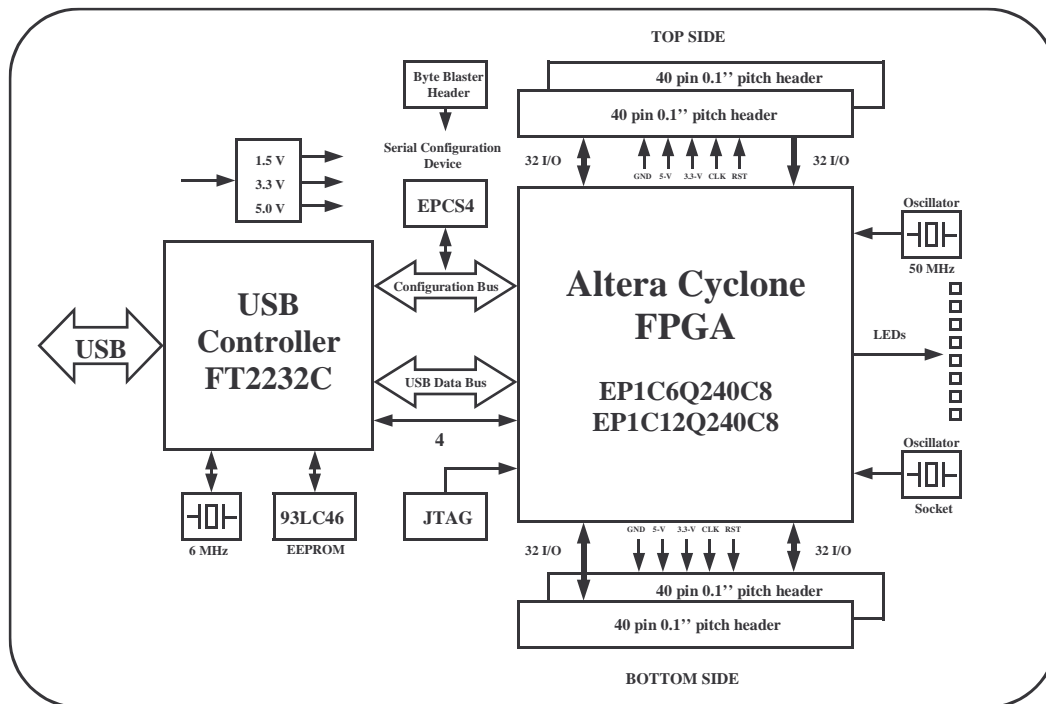
Applications

- Rapid prototyping and development of Altera Cyclone designs
- Nios/Nios II soft processor development
- IP development and testing
- Digital Signal Processing
- Data acquisition and control
- Embedded Controller

EZ1CUSB - Altera Cyclone FPGA Development Board

TOP SIDE

40 pin 0.1'' pitch header

40 pin 0.1'' pitch header

Byte Blaster Header

Serial Configuration Device

1.5 V
3.3 V
5.0 V

EPCS4

32 I/O

GND 5-V 3.3-V CLK RST

32 I/O

Oscillator

50 MHz

USB
Controller
FT2232C

Configuration Bus

Altera Cyclone
FPGA

EP1C6Q240C8
EP1C12Q240C8

LEDs

USB

USB Data Bus

4

Oscillator

Socket

6 MHz

93LC46

EEPROM

JTAG

32 I/O

GND 5-V 3.3-V CLK RST

32 I/O

40 pin 0.1'' pitch header

40 pin 0.1'' pitch header

BOTTOM SIDE

EZ1CUSB Block Diagram

Ordering Information

Item ID: EZ1CUSB-6

FPGA:
Altera Cyclone EP1C6Q240C8

USB:
FTDI FT2232C

Configuration Device:
Altera EPCS4

Cables and Accessories:
DC power supply (U.S. only)
USB A->B cable
Documentation
USB Drivers
Altera Quartus II Software Starter Suite CD
VB6/VB.NET/Delphi/C++ application examples
VHDL code examples
Schematics

Item ID: EZ1CUSB-12

FPGA:
Altera Cyclone EP1C12Q240C8

USB:
FTDI FT2232C

Configuration Device:
Altera EPCS4

Cables and Accessories:
DC power supply (U.S. only)
USB A->B cable
Documentation
USB Drivers
Altera Quartus II Software Starter Suite CD
VB6/VB.NET/Delphi/C++ application examples
VHDL code examples
Schematics