#### **DE0-CV Board**

#### 1. Overview



The optimized DE0-CV is a robust hardware design platform which uses the Altera Cyclone V FPGA device as the center control for its peripherals such as the on-board USB Blaster, video capabilities and much more. With this amazing platform, you will get the power and the performance you need for high-volume applications, including prototyping bridging, motor control drives, capture cards and handheld devices at the lowest costs. The DE0-CV is the perfect showcasing and evaluation solution which we've kept all the prototyping features on a small 128x99mm development board.

The DE0-CV contains all components needed to use the board in conjunction with a computer that runs the Microsoft Windows XP or later.

#### 2. Specification

## **FPGA Device**

- Cyclone V 5CEBA4F23C7N Device
- Company: Terasic
- Tel: +886-3-5750880
- Fax:+886-3-5726690
- Add: 9F., No.176, Sec.2, Gongdao 5th Rd, East Dist, Hsinchu City, 30070. Taiwa

- 49K Programmable Logic Elements
- 3080 Kbits embedded memory
- 4 Fractional PLLs

# **Configuration and Debug**

- Serial Configuration device EPCS64 on FPGA
- On-Board USB Blaster (Normal type B USB connector)
- JTAG and AS mode configuration supported

### **Memory Device**

• 64MB SDRAM, x16 bits data bus

## Communication

• PS/2 mouse/keyboard

# Connectors

• Two 2x20 GPIO Header (voltage levels: 3.3V)

# Display

• 4-bit Resistor VGA

# Micro SD Card Socket

• Provides SPI and 4-bit SD mode for Micro SD Card access

## Switches/Buttons/LEDs

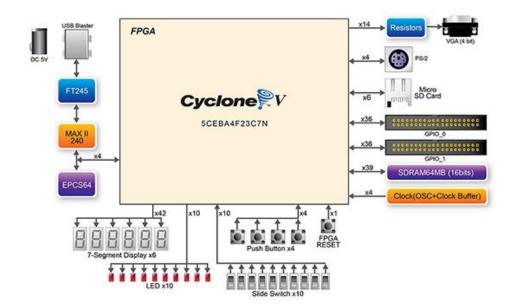
- 10 LEDs
- 10 Slide Switches
- 4 Debounced Push Buttons
- 1 CPU reset Push Buttons
- Six 7-Segments

## Power

• 5V DC input

# **Block Diagram of the DE0-CV Board**

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#### 3. Kit content

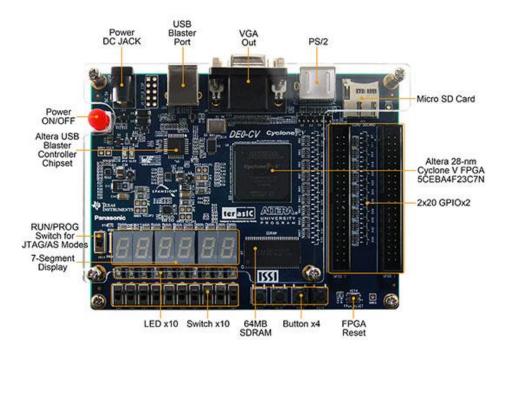


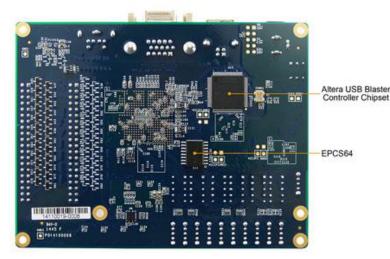
- The DE0-CV board
- 5V DC Power Supply
- Type A Male to Type B Male USB Cable

4. Layout

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