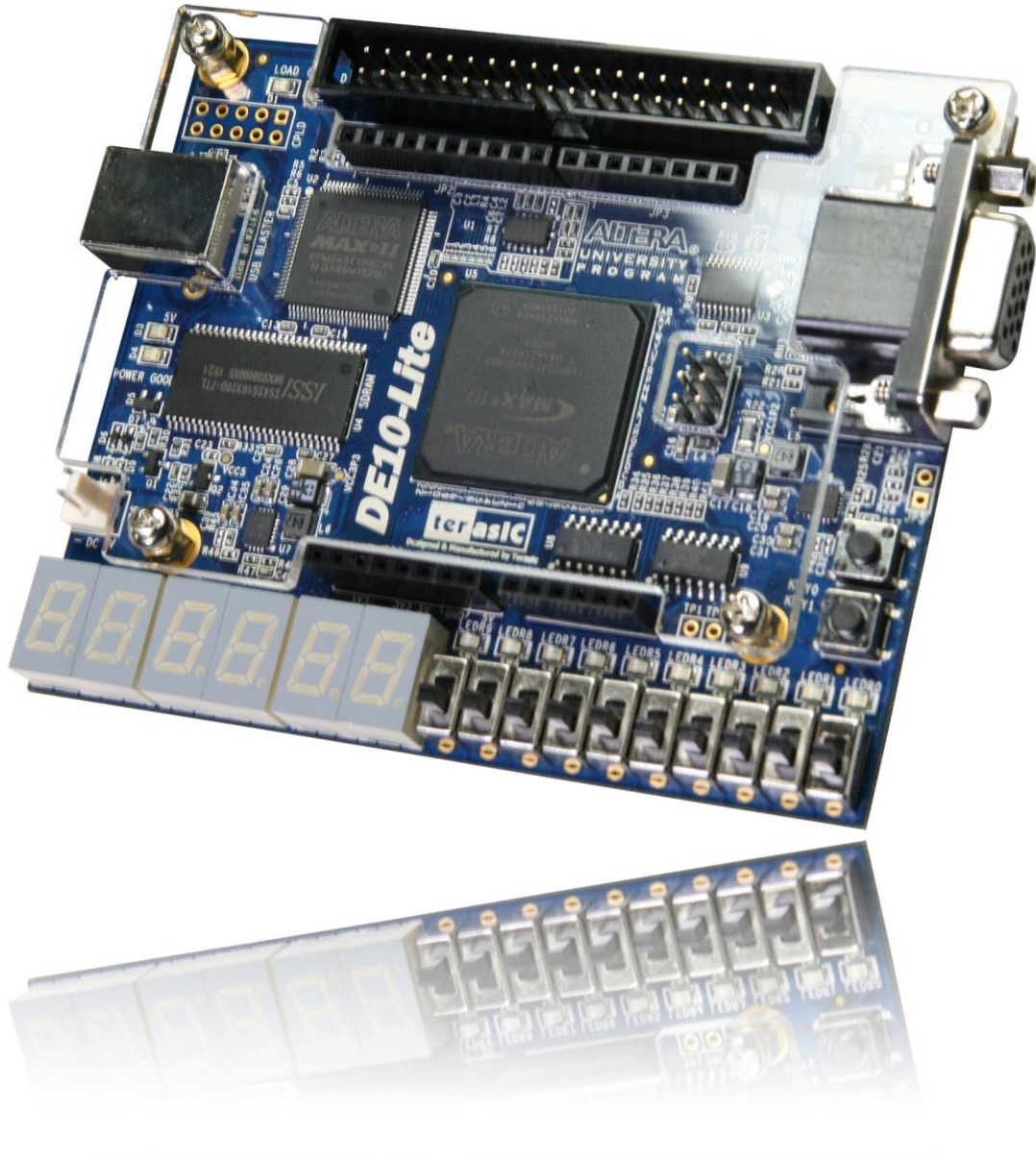


DE10-Lite Board

1. Overview



Terasic DE10-Lite is a cost-effective Altera MAX 10 based FPGA board. The board utilizes the maximum capacity MAX 10 FPGA, which has around 50K logic elements(LEs) and on-die analog-to-digital converter (ADC). It features on-board USB-Blaster, SDRAM, accelerometer, VGA output, 2x20 GPIO expansion connector, and an Arduino UNO R3 expansion connector in

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a compact size. The kit provides the perfect system-level prototyping solution for industrial, automotive, consumer, and many other market applications.

The DE10-Lite kit also contains lots of reference designs and software utilities for users to easily develop their applications based on these design resources.

2. Specification

FPGA Device

- MAX 10 10M50DAF484C7G Device
- Integrated dual ADCs, each ADC supports 1 dedicated analog input and 8 dual function pins
- 50K programmable logic elements
- 1,638 Kbit M9K Memory
- 144 18 × 18 Multiplier
- 4 PLLs

Programming and Configuration

- On-Board USB Blaster (Normal type B USB connector)

Memory Device

- 64MB SDRAM, x16 bits data bus

Sensor

- Accelerometer

Expansion Connectors

- One 2x20 GPIO Connector(voltage levels: 3.3V)
- Arduino Uno R3 Connector, including six ADC channels.

Display

- 4-bit Resistor VGA

Switches/Buttons/LEDs/7-Segment Display

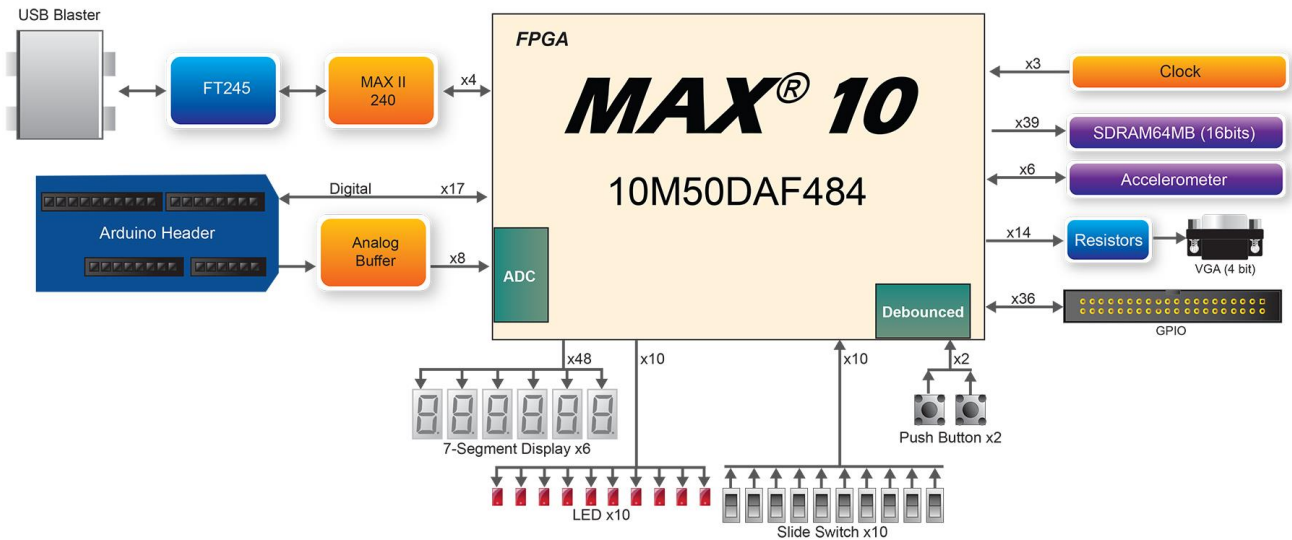
- 10 LEDs
- 10 Slide Switches
- 2 Push Buttons
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- Six 7-Segments Display

Power

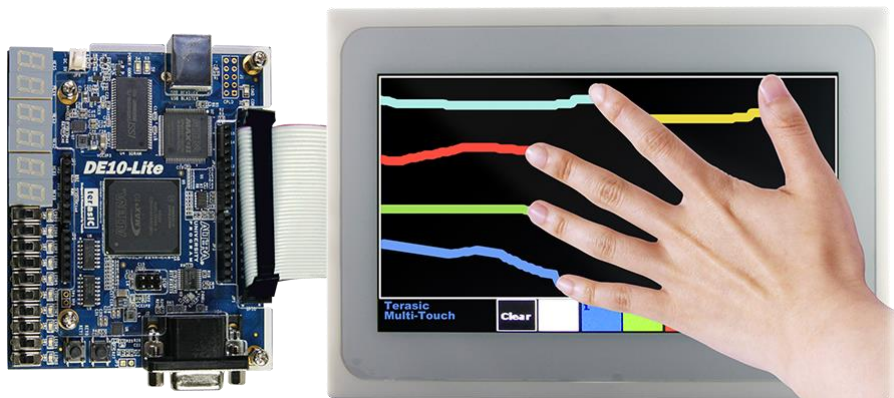
- 5V DC input

Block Diagram of the DE10-Lite Board



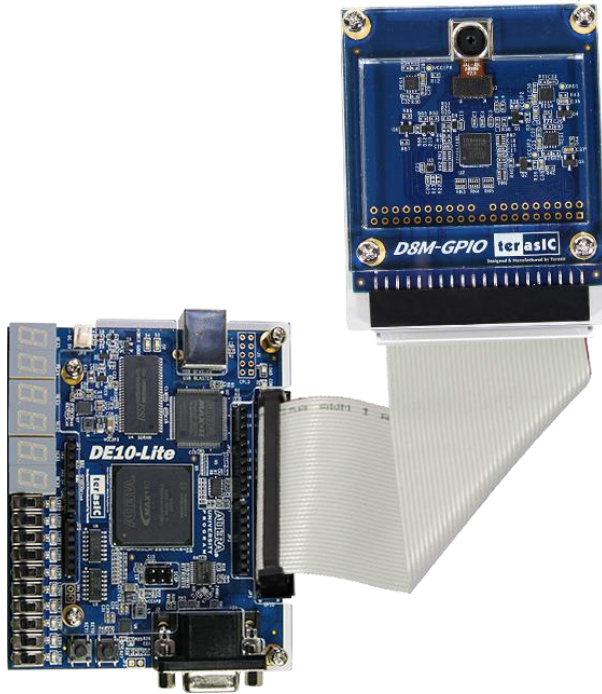
Connectivity

- Connect with [MTL2](#)



- Connect with [D8M-GPIO](#)

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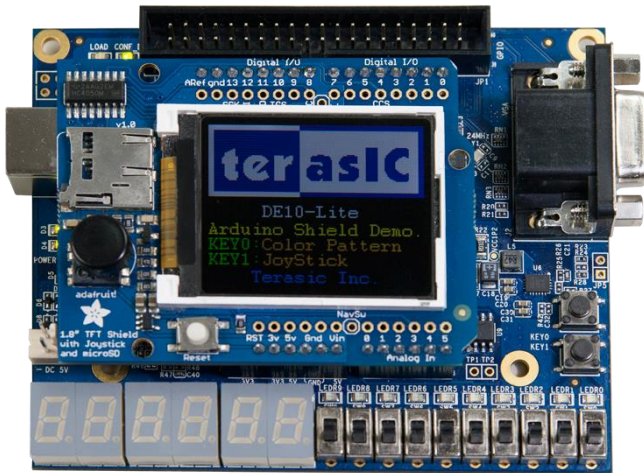


- Connect with [DSM](#)

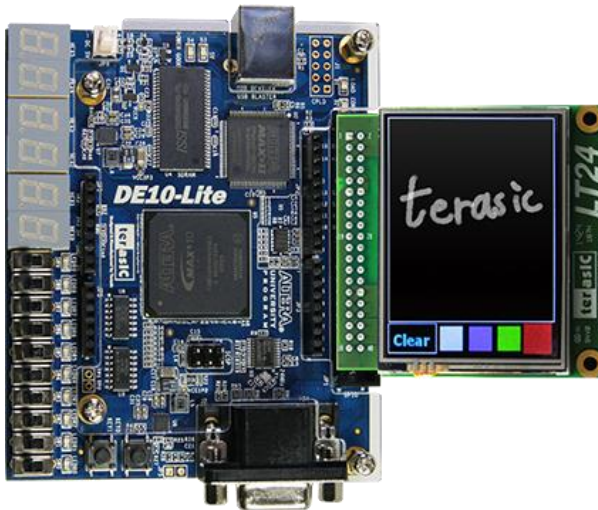


- Connect with Arduino Shield

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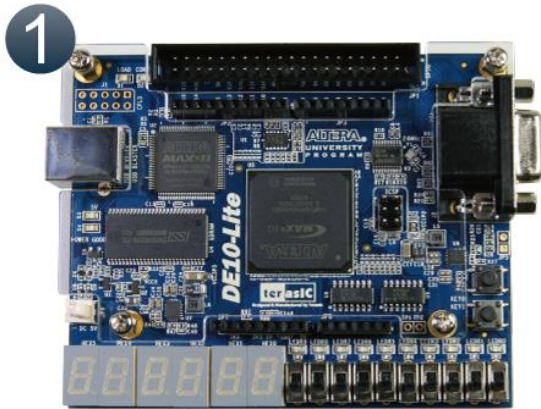


- Connect with [LT24](#)



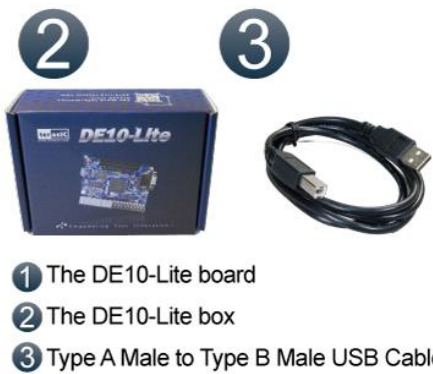
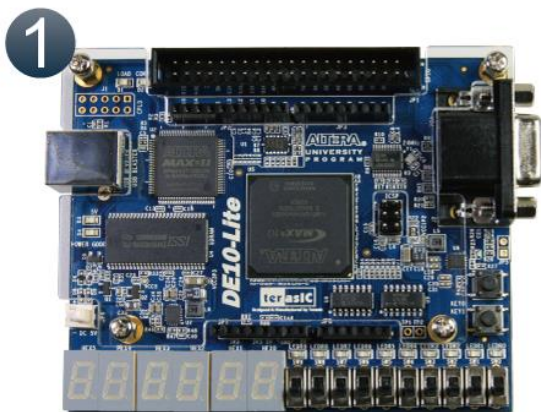
3. Kit content

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- 1 The DE10-Lite board
- 2 The DE10-Lite box
- 3 Type A Male to Type B Male USB Cable

4. Layout



- 1 The DE10-Lite board
- 2 The DE10-Lite box
- 3 Type A Male to Type B Male USB Cable

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