Capacitive Multi-Touch LCD with Camera Module (MTLC)

1. Overview

The Terasic Capacitive Multi-Touch LCD with Camera Module (MTLC) is not only equipped with a 7" LCD screen, it also comes with a 5-Megapixel digital image sensor module, G-sensor and light sensor. All of these sensors connect to the FPGA device via the HSMC connector and they can be controlled and used directly by the FPGA device.

The kit comes with everything you need to develop multimedia applications using a digital multi-touch panel. Complete reference designs and source codes for implementing a photo viewer demonstration and a color painter is included in the kit.

2. Specification

Capacitive Multi-Touch LCD and Camera Module

- 7-inch TFT LCD with pixel resolution of 800*480
- 16 million colors (8-bit RGB)
- LED backlight

- **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**

5-Megapixel Digital Image Sensor

- 2,592H x 1,944V active pixels with Bayer color arrangement
- Programmable frame rate up to 70FPS (VGA)
- Snapshot-mode mode to take frames on demand
- Simple two-wire serial control interface

Digital Accelerometer

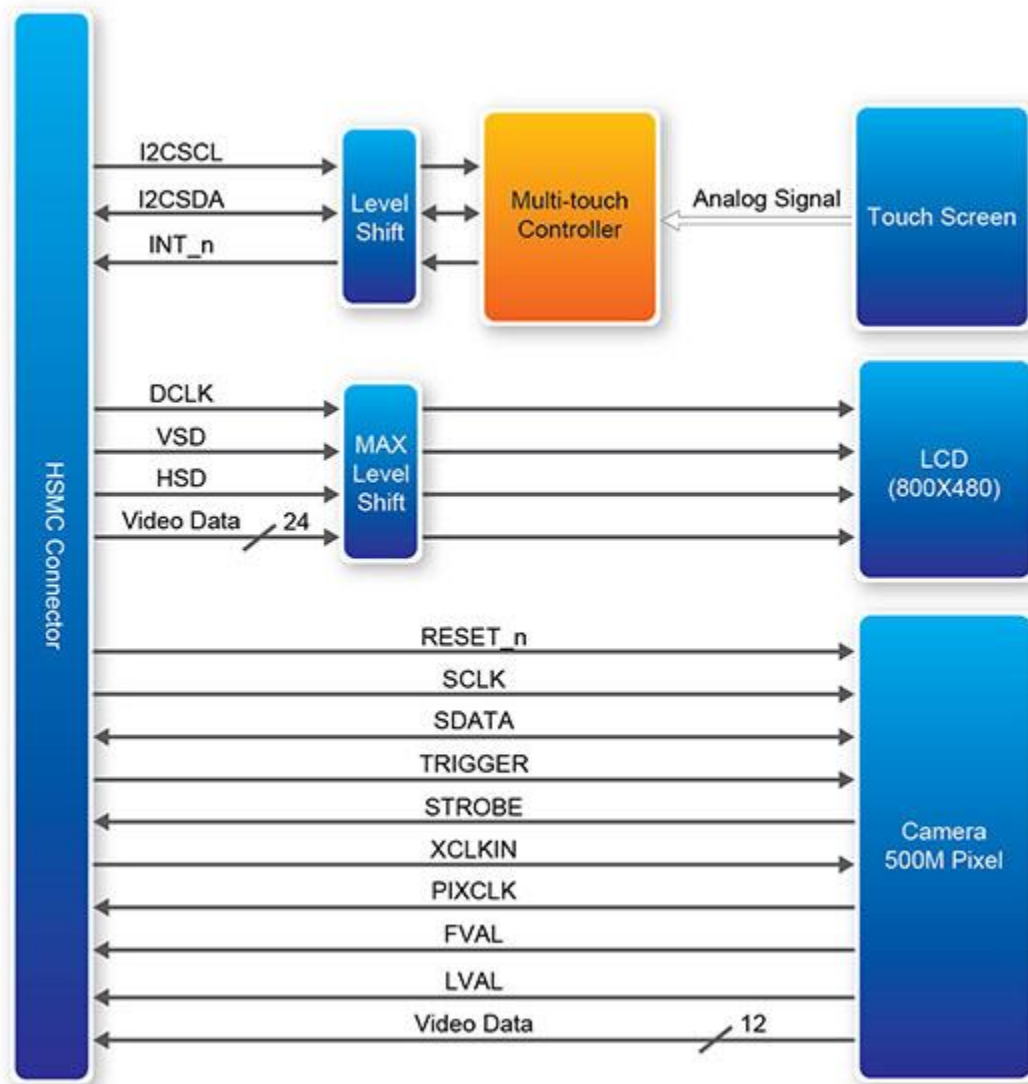- Up to 13-bit resolution at +/- 16g
- SPI (3- and 4-wire) digital interface
- Flexible interrupts modes

Ambient Light Sensor

- Precise illumination measurement under diverse lighting conditions
- Programmable interrupts
- 16-bit digital output with I2C fast-mode at 400 kHz
- Programmable analog gain and Integration time
- 50/60Hz lighting ripple rejection

MTLC Block Diagram

Connectivity

The MTLC can be connected to the following Terasic FPGA Development Boards:

➡ **Connect SoCKit**

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Connect TR4

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Connect DE2-115

Connect Altera C5SOC

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Upgrade to VEEK-MT-SoCKit

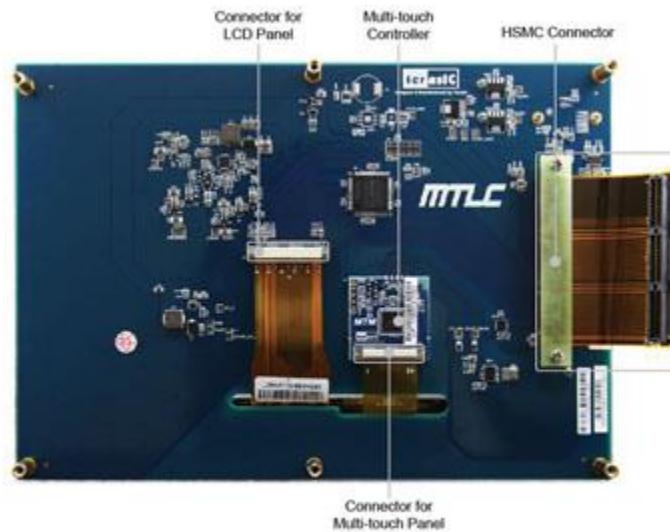For details, please go to: **VEEK-MT for SoCKit**

Top View

Bottom View

3. Layout

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5-Megapixel Digital Camera

Ambient Light Sensor

7"LCD Touch Panel

Connector for LCD Panel

Multi-touch Controller

HSMC Connector

Connector for Multi-touch Panel

•Size：223*160*13 mm

4. Kit content

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❶ Capacitive Multi-Touch LCD and Camera Module

❷ Screw and copper pillar package

•Size：223*160*47 mm

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