

# Multi-touch LCD Module (MTL)

## 1. Overview



The Terasic Multi-touch LCD Module (MTL) is an all-purpose capacitive touch-screen for FPGA applications and provides multi-touch gesture and single-touch support. An IDE cable with an IDE to GPIO adapter (ITG) is used to interface with various Terasic FPGA development boards through a 2x20 GPIO interface on the MTL.

The kit provides everything you need to develop multimedia applications using a digital multi-touch panel and includes complete reference designs and source code for implementing a photo viewer demonstration and a color painter.

## 2. Specification

### Features

#### LCD

- 7-inch panel
- **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**

- 800x480 pixels
- 24-bits color depth
- TTL interface

## Multi-touch













- Capacitive Touch Screen
- Multi-touch Gestures
- Single Touch Support

## Interface

- IDE Connector
- 2x20 GPIO connector with ITG (IDE to GPIO) adapter

## Gesture Table

- One Point

<i>Single North</i>	<i>Single North-East</i>	<i>Single East</i>	<i>Single South-East</i>	<i>Single South</i>	<i>Single South-West</i>
					
<i>Single West</i>	<i>Single North-West</i>	<i>Right Loop</i>	<i>Left Loop</i>	<i>Single Tap Once</i>	<i>Single Tap Twice</i>
					

- Two Point

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<i>Double North</i>	<i>Double North-East</i>	<i>Double East</i>	<i>Double South-East</i>	<i>Double South</i>	<i>Double South-West</i>
					
<i>Double West</i>	<i>Double North-West</i>	<i>Double Tap Once</i>	<i>Double Tap Twice</i>	<i>Zoom-in</i>	<i>Zoom-out</i>
					

## Connectivity

The MTL can be connected to the following Terasic FPGA Development Boards:  
For more information on the MTL for DE3 and DE4 users, please consult [this page](#) .

### ➔ Connect DE4



### ➔ Connect DE3

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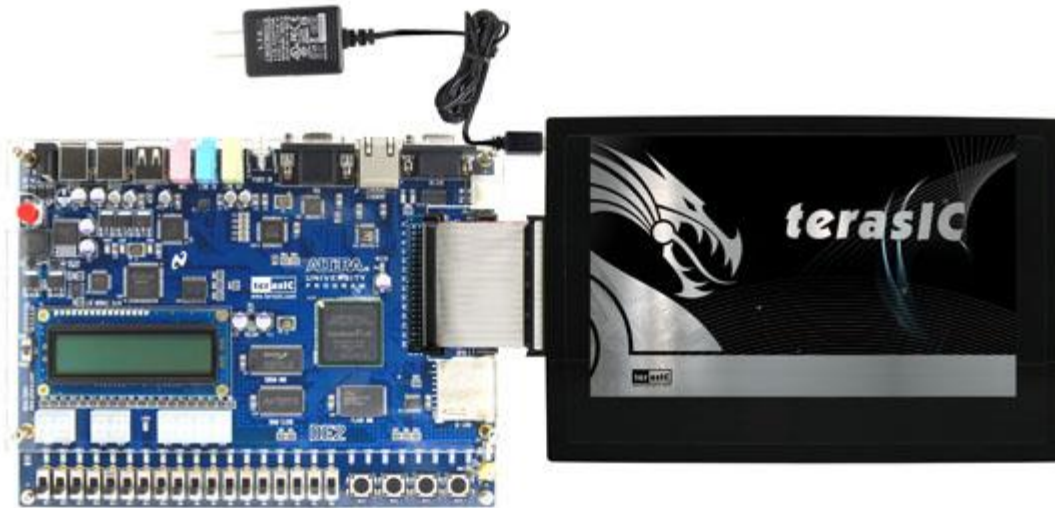


➔ Connect DE2-115



➔ Connect DE2

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### ➔ Connect DE0-Nano-SoC(Atlas-SoC)

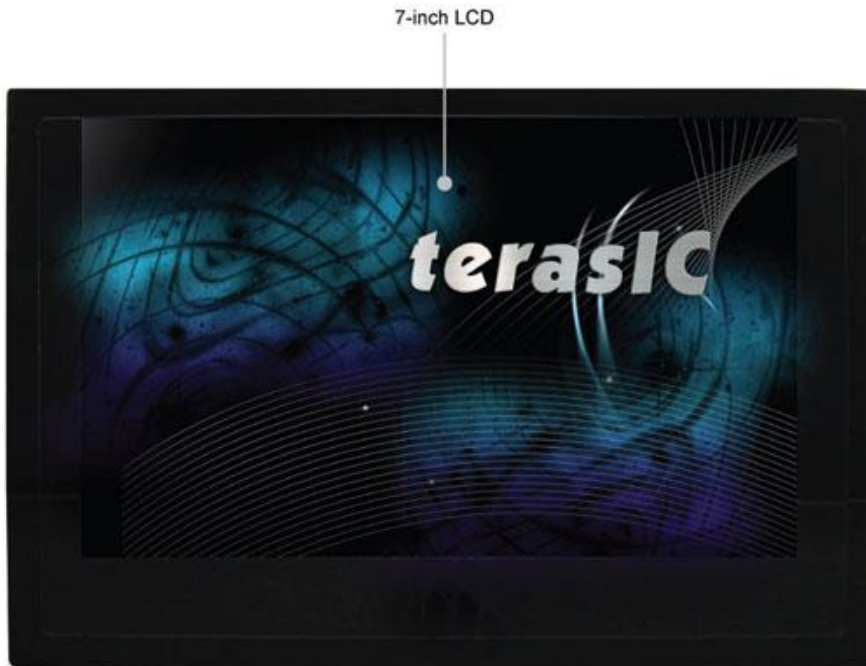


### 3. Layout

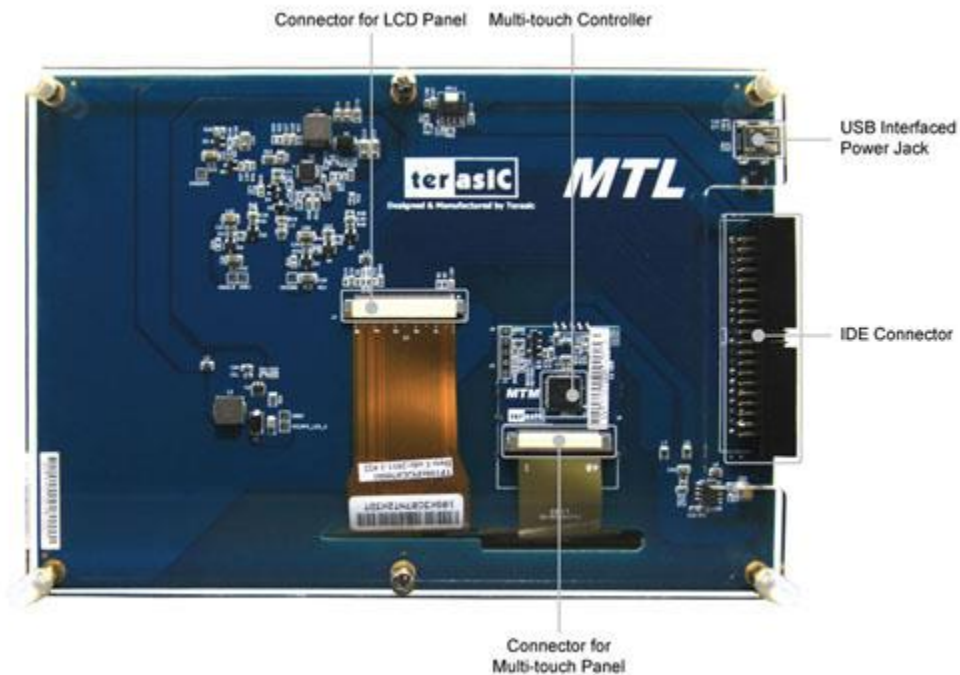
- Top View of MTL

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- Bottom View of MTL

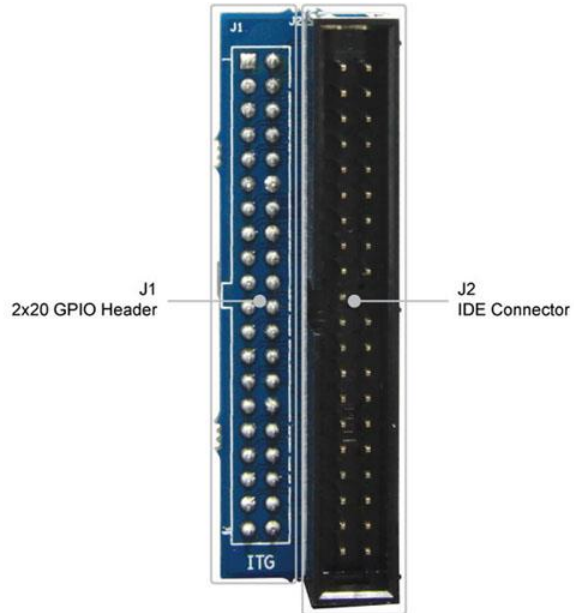


Size : 188\*130\*20 mm

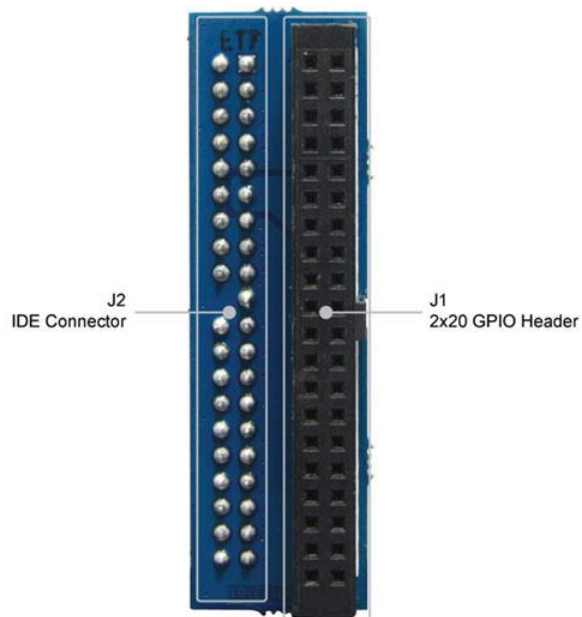
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## IDE to GPIO Adapter (ITG)

- Top View of ITG Adapter



- Bottom View of ITG Adapter



Size : 38\*124\*20 mm

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#### 4. Kit content



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