



Coinel Technology Solutions LLP[®]

3.2" TFT BOARD User Manual





CoiNel Technology Solutions LLP[®]

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Revision Sheet:

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1.0 INTRODUCTION

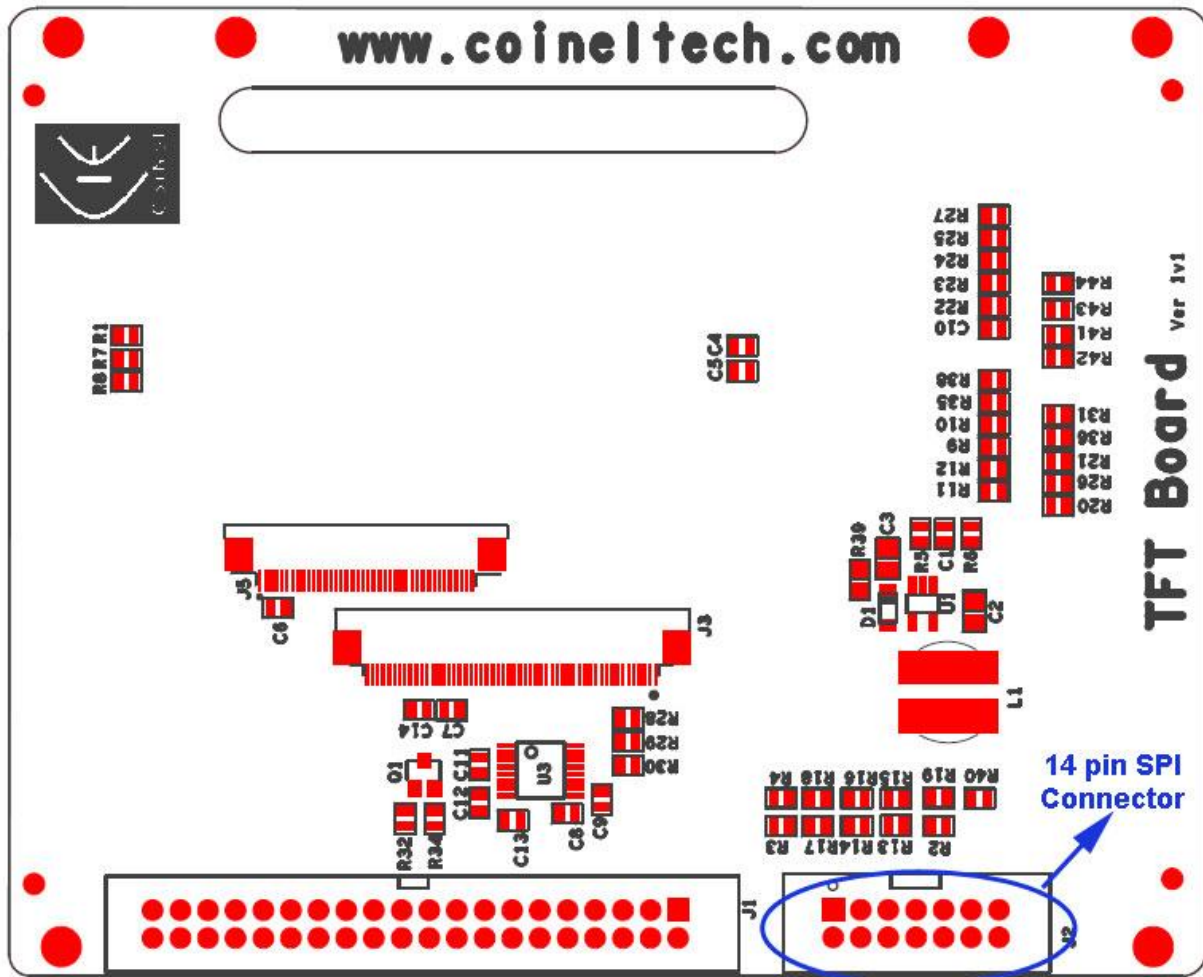
3.2" TFT Board is a product by Coinel Technology Solutions LLP, which comes with 320x240 pixel 3.2" color display and resistive touch screen on it. The interface is SPI for display as well as touch screen control. The Display module used is **KWH032ST05-F02** (with touch screen) from Formike.

ADS7846 / TSC2046 are 4-wire touch screen controller that is used, which converts the analog touch position data to digital (SPI) which is easier to interface with MCU. The chip outputs the active low interrupt when touch is sensed and the touch position data can be read using SPI lines by MCU.



2. PCB Layout:

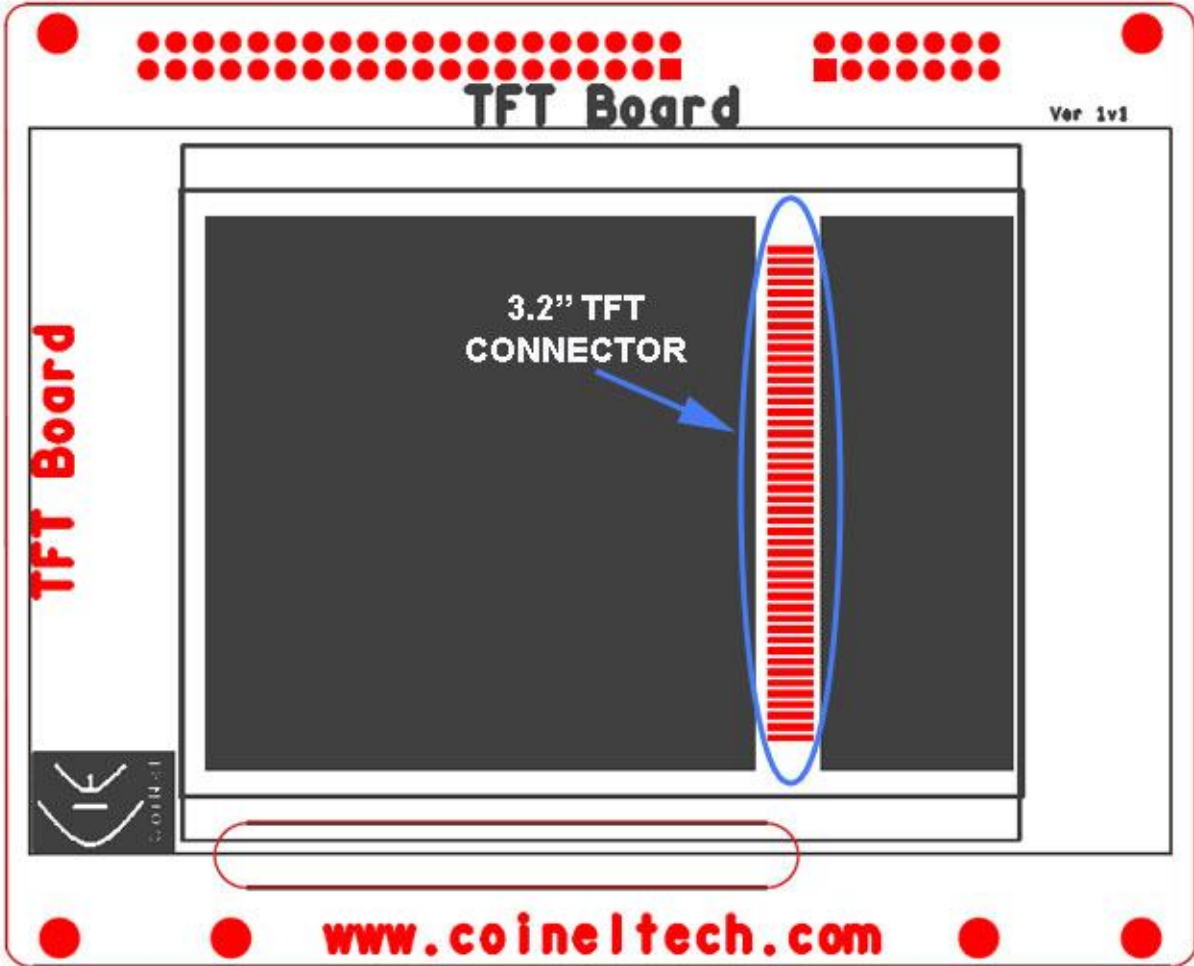
2.1 Bottom Layout:



Note: Only 14 pin SPI connector is used for 3.2" TFT Board interface. Other Connectors in the board are not used.



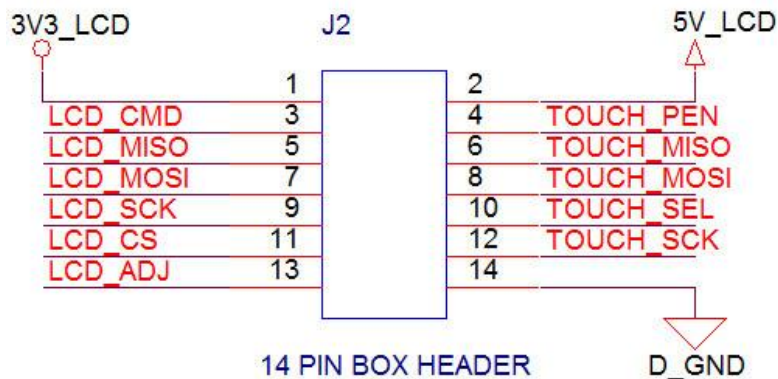
2.2 Top Layout:





3. Connector Details:

The 3.2" TFT board comes with a 14pin box header to interface with MCU. The 14 pin connectivity is specifically for SPI interface for TFT as well as Touch screen. 5V is used for backlight of TFT and 3.3V is logic supply for Display and Touch screen controller.



- LCD_MISO, LCD_MOSI, LCD_SCK and LCD_CS pins are SPI lines for TFT control.
- LCD_CMD Serves as command or parameter select.
- LCD_ADJ is used to control the BACKLIGHT. The brightness can be controlled by the use of PWM signal.
- TOUCH_MISO, TOUCH_MOSI, TOUCH_SCK and TOUCH_CS pins are SPI lines for TOUCH SCREEN control.
- TOUCH_PEN is the active low interrupt output when touch is sensed on touch screen.

Note: Check TFT Datasheet to know more about SPI communication control that is needed



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CLARIFICATIONS

Coinel is at your service, and we have special Technical Support Engineers to provide support and consultation in forms of telephone and E-mail.

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