4.3 inch TFT LCD Module User Guide

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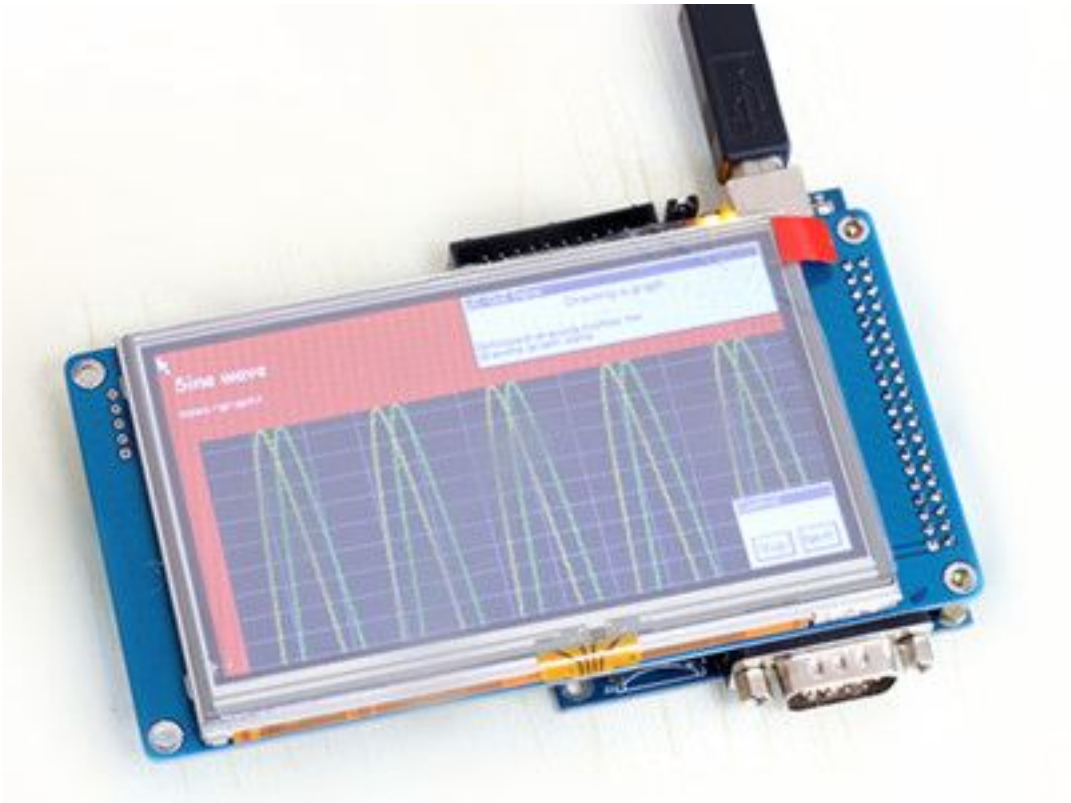

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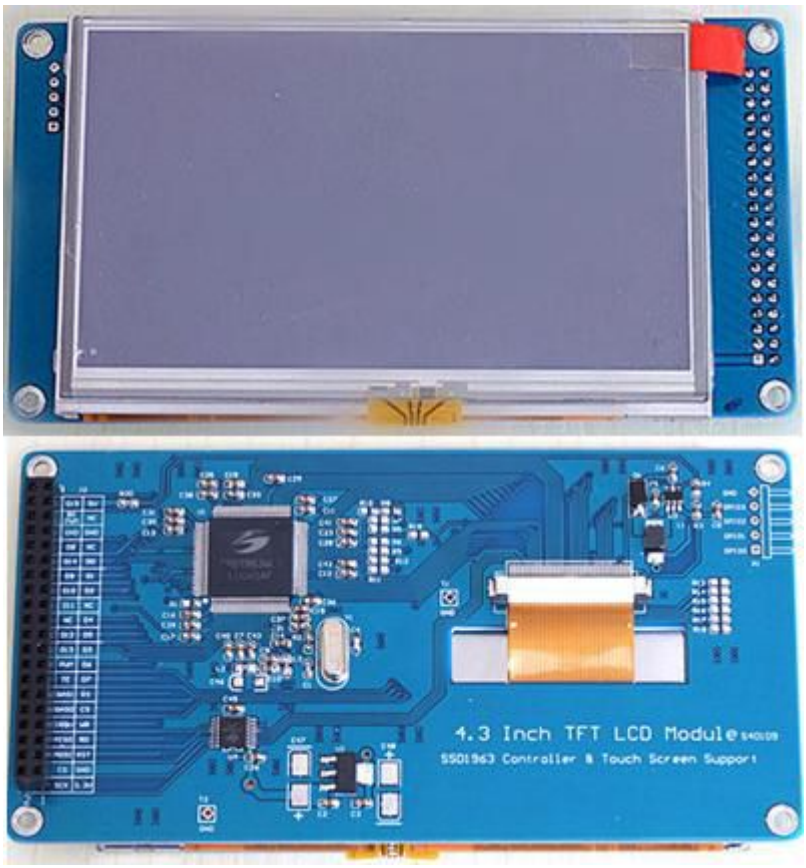
1 Introduction

The 4.3 inch TFT LCD module is 480x272 resolution with RGB666 which provide 262K colors. The module integrate a SSD1963 LCD controller and touch screen controller ADS7843 which simplifier the user interface , graphic memory management and special effects to LCD panel. The module can be easily be controlled by any MCUs , ARM , DSP , FPGA and etc via the parallel bus. It also can be used to directly connect to Mini-STM32 develop board which can be found in our eBay store, demonstration C source projects is based on this develop board.



2 Features

- Display resolution: 480 x 272
- Display mode: 18bit RGB666
- Graphic memory: 1215K byte
- Support touch screen
- 16bits parallel user interface
- Hardware rotation of 0, 90, 180, 270 degree
- Hardware display mirroring
- Hardware windowing
- Dynamic Backlight Control (DBC) via PWM signal
- Programmable brightness, contrast and saturation control

3 Hardware Connection

3.1 module output to display panel

Pin	Signals	External Connection	Function Description
1	LED-	LED Power Supply	Backlight GND
2	LED+	LED Power Supply	Backlight Power (32mA @ 20~22V)
3	GND	Power Supply	GND
4	VCC	Power Supply	Power supply for LCD and logic (3.3V)
5-12	[R0-R7]	MPU	Red Data Signals
3-20	[G0-G7]	MPU	Green Data Signals
21-28	[B0-B7]	MPU	Blue Data Signals
29	GND	Power Supply	GND
30	PCLK	MPU	Data sample Clock signal
31	DISP	MPU	Display ON/OFF signal
32	HSYNC	MPU	Line synchronization signal
33	VSYNC	MPU	Frame synchronization signal
34	DE	MPU	Data Enable signal
35	AVDD	Power Supply	AVDD (5V)
36	GND	Power Supply	GND
37	XR	Touch Panel MPU	Touch Panel RIGHT
38	YD	Touch Panel MPU	Touch Panel DOWN
39	XL	Touch Panel MPU	Touch Panel LEFT
40	YU	Touch Panel MPU	Touch Panel UP

3.2 module inputs from user MPU interface

Pin	Signals	External Connection	Function Description
1	3.3V	Power Supply	Power supply for LCD and logic (3.3V)
2	SCK	TP	Backlight Power (32mA @ 20~22V)
3,35,36	GND	Power Supply	GND
4	CS	TP	Touch panel SPI CS
5	RST	MPU	Active LOW Reset signal
6	MOSI	TP	Touch panel SPI MOSI
7	RD	MPU	8080 MPU Read Signal active LOW
8	MISO	TP	Touch panel SPI MISO
9	WR	MPU	8080 MPU Write Signal active LOW
10	IRQn	TP	Touch panel SPI IRQn
11	CS	MPU	Active LOW Chip Select signal
12	GAS0	GPIO	Gamma selection for panel from SSD1963
13	RS	MPU	Register Select. RS=1: Command, RS=0: Data
14	GAS1	GPIO	Gamma selection for panel from SSD1963
15	D7	MPU	16-bit bidirectional data bus
16	TE	GPIO	Tearing effect output from SSD1963
17	D6	MPU	16-bit bidirectional data bus
18	PWM	GPIO	PWM output for SSD1963
19	D3	MPU	16-bit bidirectional data bus
20	D13	MPU	16-bit bidirectional data bus
21	D5	MPU	16-bit bidirectional data bus
22	D12	MPU	16-bit bidirectional data bus
23	D4	MPU	16-bit bidirectional data bus
24,25,33,37	NC	-	No Connect
26	D11	MPU	16-bit bidirectional data bus
27	D2	MPU	16-bit bidirectional data bus
28	D10	MPU	16-bit bidirectional data bus
29	D1	MPU	16-bit bidirectional data bus
30	D9	MPU	16-bit bidirectional data bus
31	D0	MPU	16-bit bidirectional data bus
32	D14	MPU	16-bit bidirectional data bus
34	D8	MPU	16-bit bidirectional data bus
38	BK_PWM	GPIO	PWM input for backlight
39	5V	Power Supply	Power supply for LCD (5V)
40	D15	MPU	16-bit bidirectional data bus

4 Mechanical dimension

Note: All dimensions are calculated by mm unit