

Stellaris LaunchPad LCD Boosterpack EB-LM4F120-L35

User Guide

1 EB-LM4F120-L35 Overview

The EB-LM4F120-L35 is a LCD boosterpack for the Stellaris LaunchPad (see [Figure 1](#)).

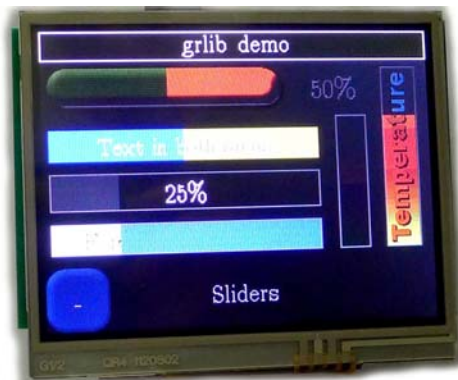


Figure 1. LCD boosterpack for Stellaris LaunchPad

The boosterpack include a 3.5 inch QVGA TFT LCD module (P/N: K350QVG-V2-F) and with build in LED backlight driver circuit. The LCD connector also can be interfaced to larger size LCD module from Kentec Display (4.3 inch: K430WQC-V3-FF; 5 inch: K50DWN2-V1-FF; 7 inch: K70DWN2-V1-FF; 9 inch: K90DWN2-V1-FF).

2 Expansion Board Dimensions

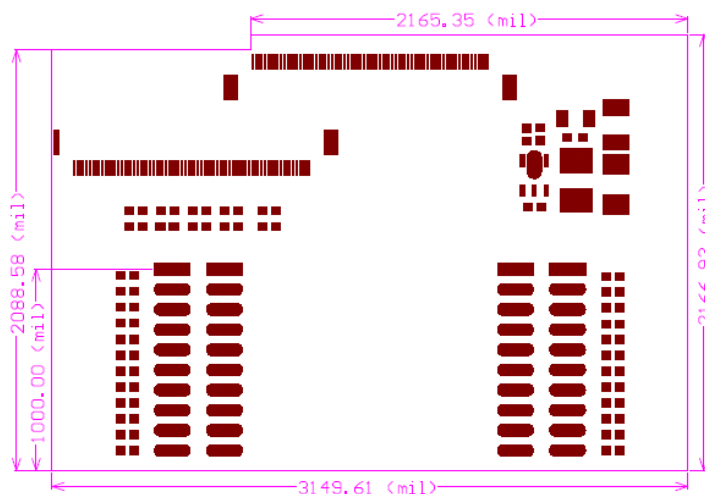


Figure 2. LCD connector Location (Bottom)

3 EB-LM4F120-L3 Interface

Table 1. Pin socket connect to Stellaris LaunchPad MCU board

J1 Pin	Symbol	LaunchPad Pin	Description
1	3V3	+3.3V	Power supply
2	LCD_D5	PB5	Data bit 5 for LCD
3	LCD_D0	PB0	Data bit 0 for LCD
4	LCD_D1	PB1	Data bit 1 for LCD

Continued Table 1, Main Interface Signal (Pin socket connect to EK-LM4F232 MCU board)

5	TOUCH_XP	PE4	Resistor touch screen terminal (Left)
6	TOUCH_YP	PE5	Resistor touch screen terminal (Top)
7	LCD_D4	PB4	Data bit 4 for LCD
8	LCD_WR	PA5	Write control signal for LCD
9	LCD_RS	PA6	Register/Data select for LCD
10	LCD_CS	PA7	Chip select for LCD
J2 Pin	Symbol	LaunchPad Pin	Description
1	GND	GND	Ground
2	LCD_D2	PB2	Data bit 2 for LCD
3	NC	PE0	No connection
4	NC	PF0	No connection
5	RESET	RST	Reset signal for LCD/MCU
6	LCD_D7	PB7	Data bit 7 for LCD
7	LCD_D6	PB6	Data bit 6 for LCD
8	LCD_RD	PA4	Read control signal for LCD
9	TOUCH_XN	PA3	Resistor touch screen terminal (Right)
10	TOUCH_YN	PA2	Resistor touch screen terminal (Bottom)
J3 Pin	Symbol	LaunchPad Pin	Description
1	5V0	VBUS	Power supply
2	GND	GND	Ground
3	NC	PD0	No connection
4	NC	PD1	No connection
5	NC	PD2	No connection
6	NC	PD3	No connection
7	NC	PE1	No connection
8	NC	PE2	No connection
9	NC	PE3	No connection
10	NC	PF1	No connection
J4 Pin	Symbol	LaunchPad Pin	Description
1	LCD_BL	PF2	LCD backlight ON/OFF control.
2	NC	PF3	No connection
3	LCD_D3	PB3	Data bit 3 for LCD
4	NC	PC4	No connection
5	NC	PC5	No connection
6	NC	PC6	No connection
7	NC	PC7	No connection
8	NC	PD6	No connection
9	NC	PD7	No connection
10	NC	PF4	No connection

Table 2. LCD Interface Signal (CN1 and CN2, 60pin ZIF connector to LCD module)

Pin	Symbol	Description
1, 2	LED_K	LED power supply (-)
3, 4	LED_A	LED power supply (+)
5	GND	Ground (0V)
6	XR	4-wire resistor touch screen terminal
7	YD	
8	XL	
9	YU	
10	GND	Ground (0V)
11~13	NC	No Connection
14	Reset	Reset input signal for LCD
15	CS	Chip select for LCD
16~19	NC	No Connection
20	D0	Data bit 0, default connected to GND on MCU board
21~25	D1~D5	Data bit 1 ~ bit 5
26, 27	NC	No Connection
28~30	D6~D8	Data bit 6 ~ bit 8
31	D9	Data bit 9, default connected to GND on MCU board
32, 33	D10, D11	Data bit 10 ~ bit 11
34, 35	NC	No Connection
36~41	D12~D17	Data bit 12 ~ bit 17
42~44	GND	Ground (0V)
45, 46	AVDD	Power supply (3.3V)
47, 48	VCC	Power supply (3.3V)
49	RS	Command/Data select signal for LCD
50	RD	Read control signal for LCD
51	WR	Write control signal for LCD
52	PS0	LCD interface select pin for K350QVG-V2-F, default set to i8080 16-bit parallel.
53	PS1	
54	PS2	
55	PS3	
56, 57	NC	No connection
58~60	GND	Ground (0V)

4 Schematics

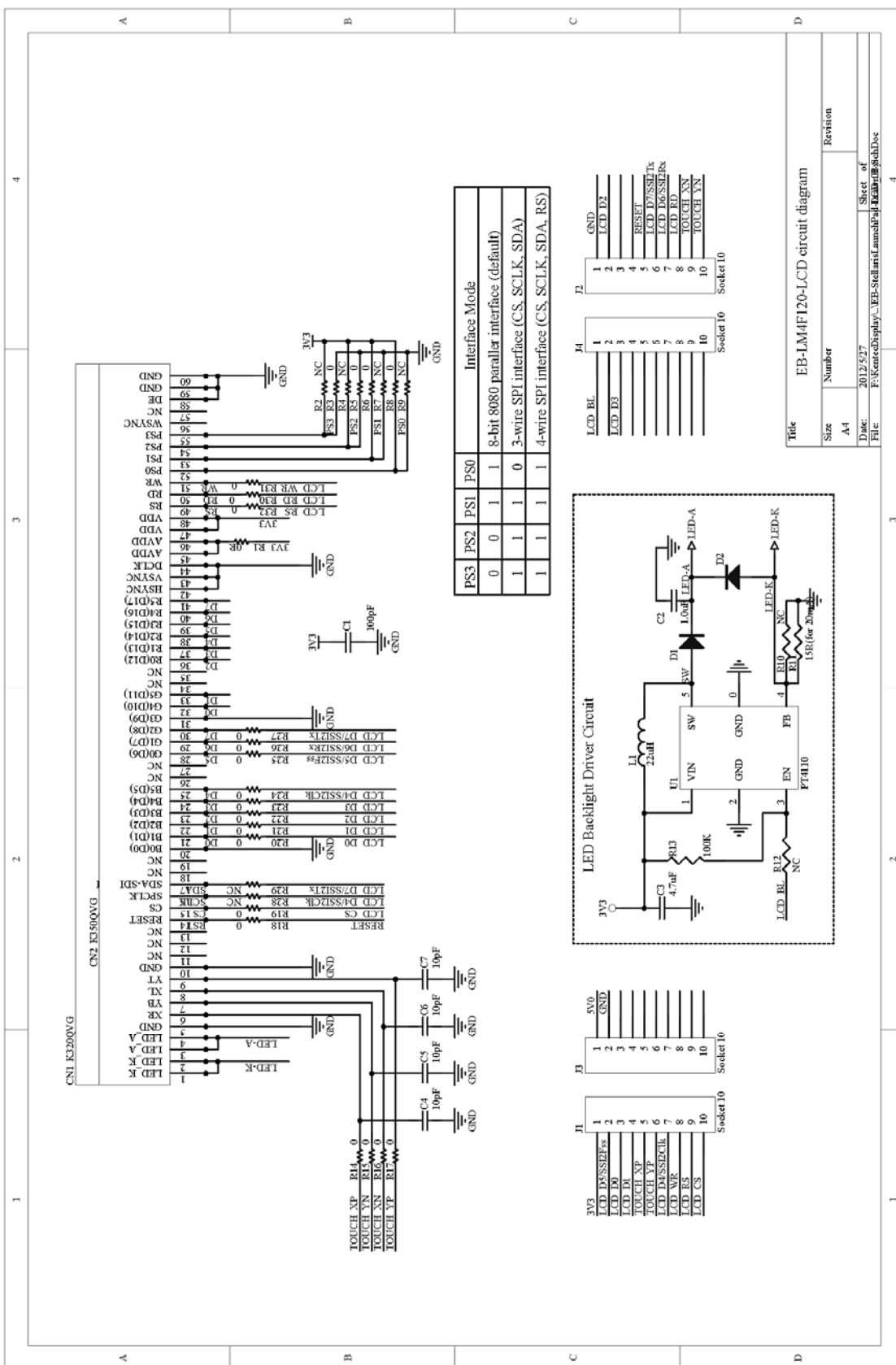


Figure 3. Expansion board schematic

5 LCD driver code examples

Bellow attachment is the source code for the K350QVG-V2-F (EB-LM4F120-L35).

NO.	Document	Attachment
1	Source code package	

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