

EM-AT91SAM3U LCD Interface Expansion Board (EB-AT91SAM3U-LCD) User Guide

1 EB-AT91SAM3U-LCD Overview

The EB-AT91SAM3U-LCD is an extension board for the EM-AT91SAM3U Development Board (see [Figure 1](#)).

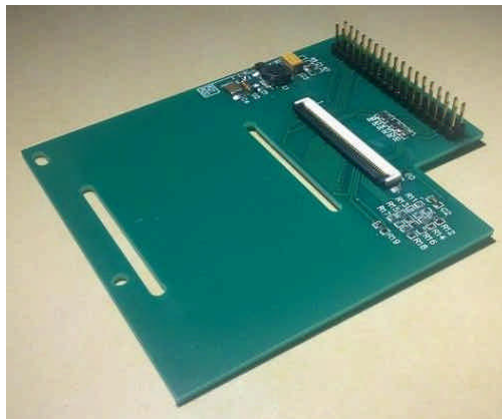


Figure 1. LCD connector expansion board for EM-AT91SAM3U

The expansion board has built in LED backlight driver circuit and 60pin FPC connector for the Kentec LCDs (3.5 inch: K350QVG-V2-F; 4.3 inch: K430WQC-V3-FF; 5.0 inch: K50DWN2-V1-FF; 7.0 inch: K70DWN2-V1-FF; 9.0 inch: K90DWN2-V1-FF).

2 EB-AT91SAM3U-LCD Dimensions

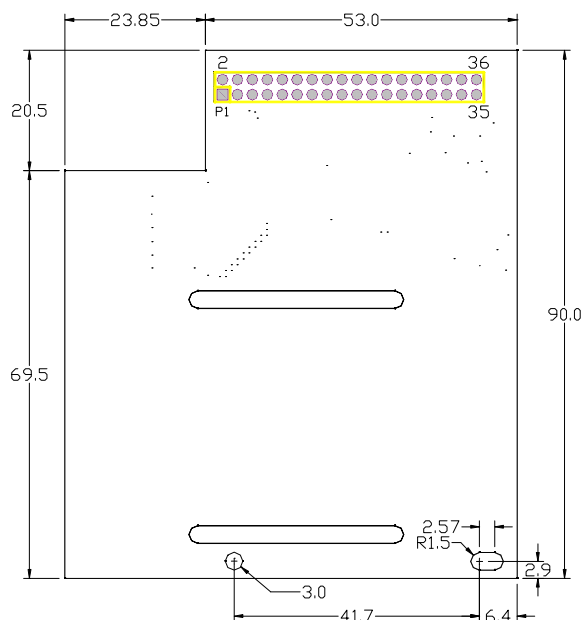


Figure 2. Outline Dimensions (Top)

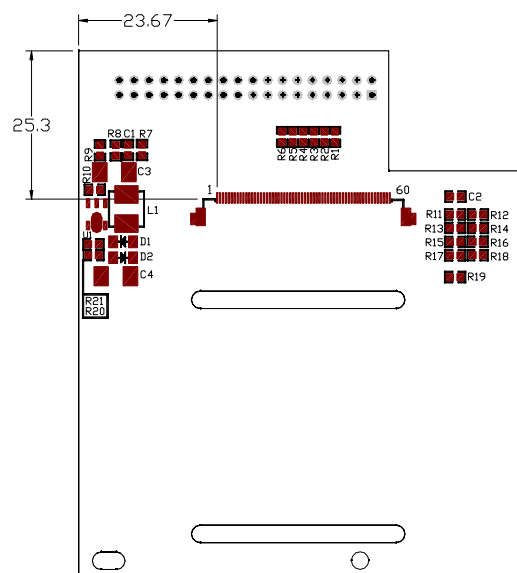


Figure 2. LCD connector Location (Bottom)

3 EB-AT91SAM3U-LCD Interface

Table 1. Main Interface Signal (40pin header connect to EM-AT91SAM3U MCU board)

Pin	Symbol	Description
1	CS	Chip select signal for LCD
2	RS	Command/Data control signal for LCD
3	WR	Write control signal for LCD
4	RD	Read control signal for LCD
5	D0	Data bit 0, default connected to GND on MCU board
6~13	D1~D8	Lower 8-bit data bus
14	D9	Data bit 9, default connected to GND on MCU board
15~22	D10~D17	Upper 8-bit data bus
23, 24	GND	Ground (0V)
25	Reset	Reset input signal for LCD
26	BL_ON	Backlight control input, "H": ON, "L": OFF, PWM for dimming control
27, 28	GND	Ground (0V)
29	XR	Reserved for 4-wire resistor touch screen terminal
30	YU	
31	XL	
32	YD	
33, 34	GND	Ground (0V)
35, 36	3.3V	Power Supply (3.3V)

Table 2. LCD Interface Signal (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

Continued Table 2, LCD Interface Signal (60pin ZIF connector to LCD module)

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

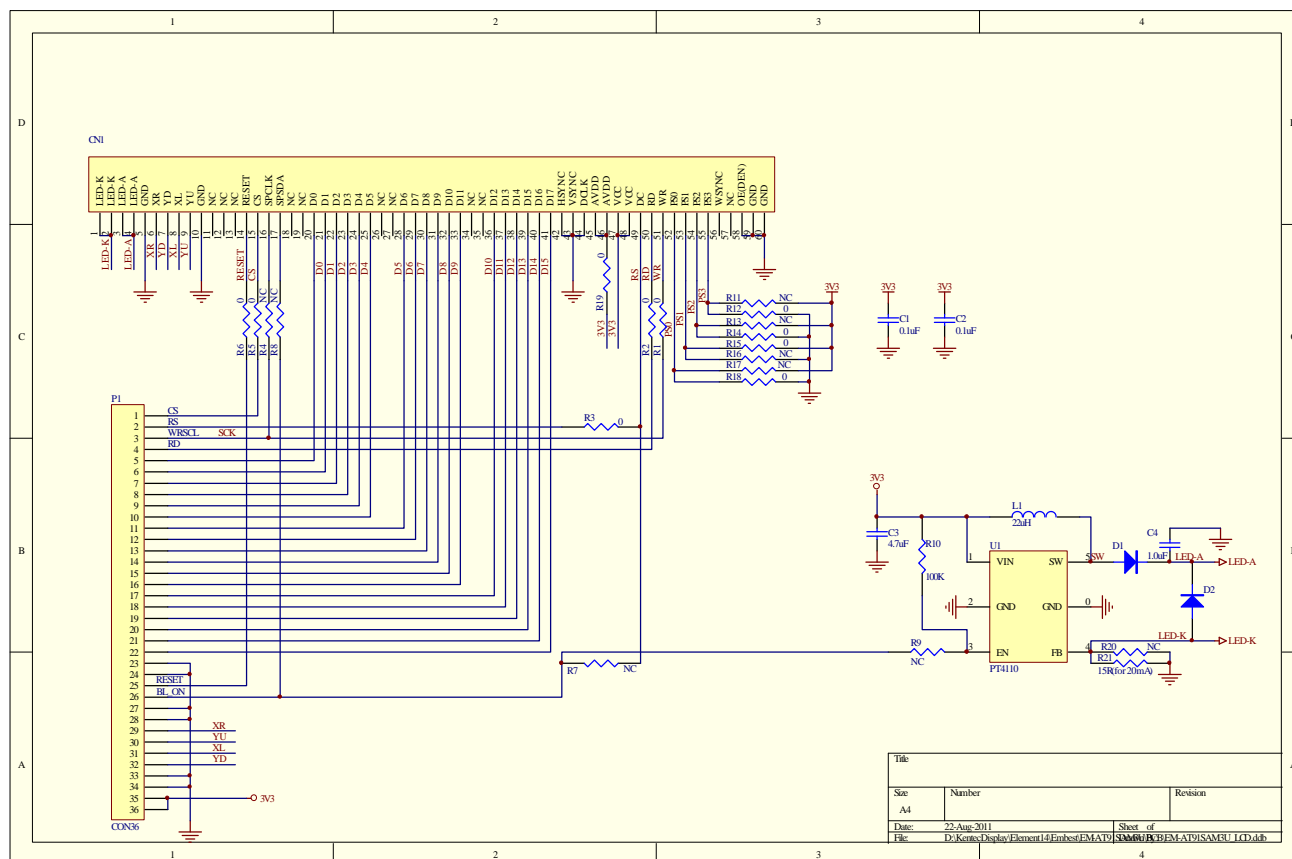


Figure 3. Expansion board schematic

5 LCD driver code examples

Bellow attachment is the source code for the K350QVG-V2-F.

NO.	Document	Attachment
1	Source code package	