

EM-LPC1700 LCD Interface Expansion Board (EB-LPC1700-LCD) User Guide

1 EB-LPC1700-LCD Overview

The EB-LPC1700-LCD is an extension board for the EM-LPC1700 Development Board (see [Figure 1](#)).

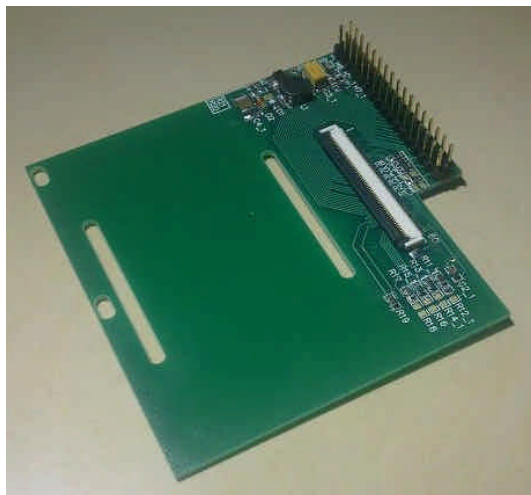


Figure 1. LCD connector expansion board for EM-LPC1700

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-LPC1700-LCD Dimensions

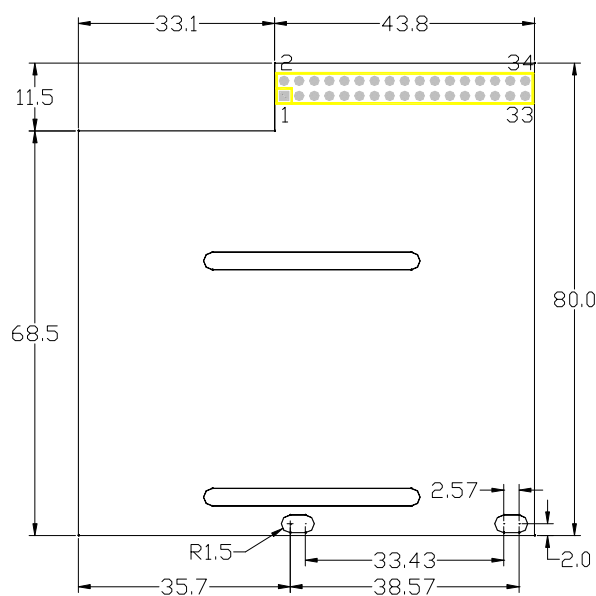


Figure 2. Outline Dimensions (Top)

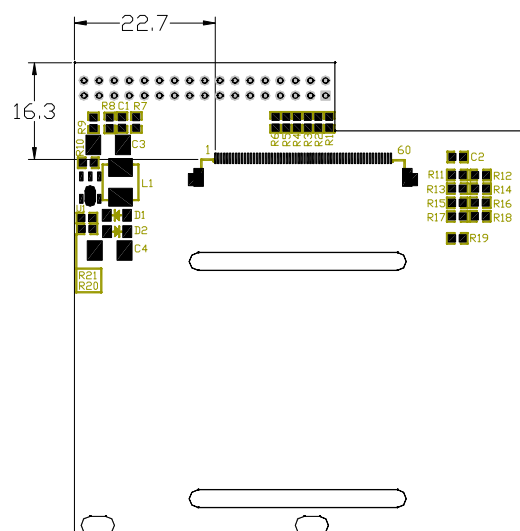


Figure 2. LCD connector Location (Bottom)

3 EB-LPC1700-LCD Interface

Table 1. Main Interface Signal (40pin header connect to EM-LPC1700 MCU board)

Pin	Symbol	Description
1	CS	Chip select signal for LCD
2	NC	Default connected to GND on MCU board.
3	SCL	Serial clock input for LCD
4	NC	Default connected to GND on MCU board.
5	Reset	Reset input signal for LCD
6~21	D0~D15	16-bit data bus, not used.
22	GND	Ground (0V)
23	RS	Command/Data select input for LCD
24, 25	VDD	Power Supply (3.3V)
26, 27	GND	Ground (0V)
28	VDD	Power Supply (3.3V)
29	NC	No connection
30	SDI	Serial data input for LCD
31	XL	Reserved for 4-wire resistive touch screen
32	XR	
33	YD	
34	YU	

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 4-wire SPI interface.
53	PS1	
54	PS2	
55	PS3	
56, 57	NC	No connection
58~60	GND	Ground (0V)

4 Schematics

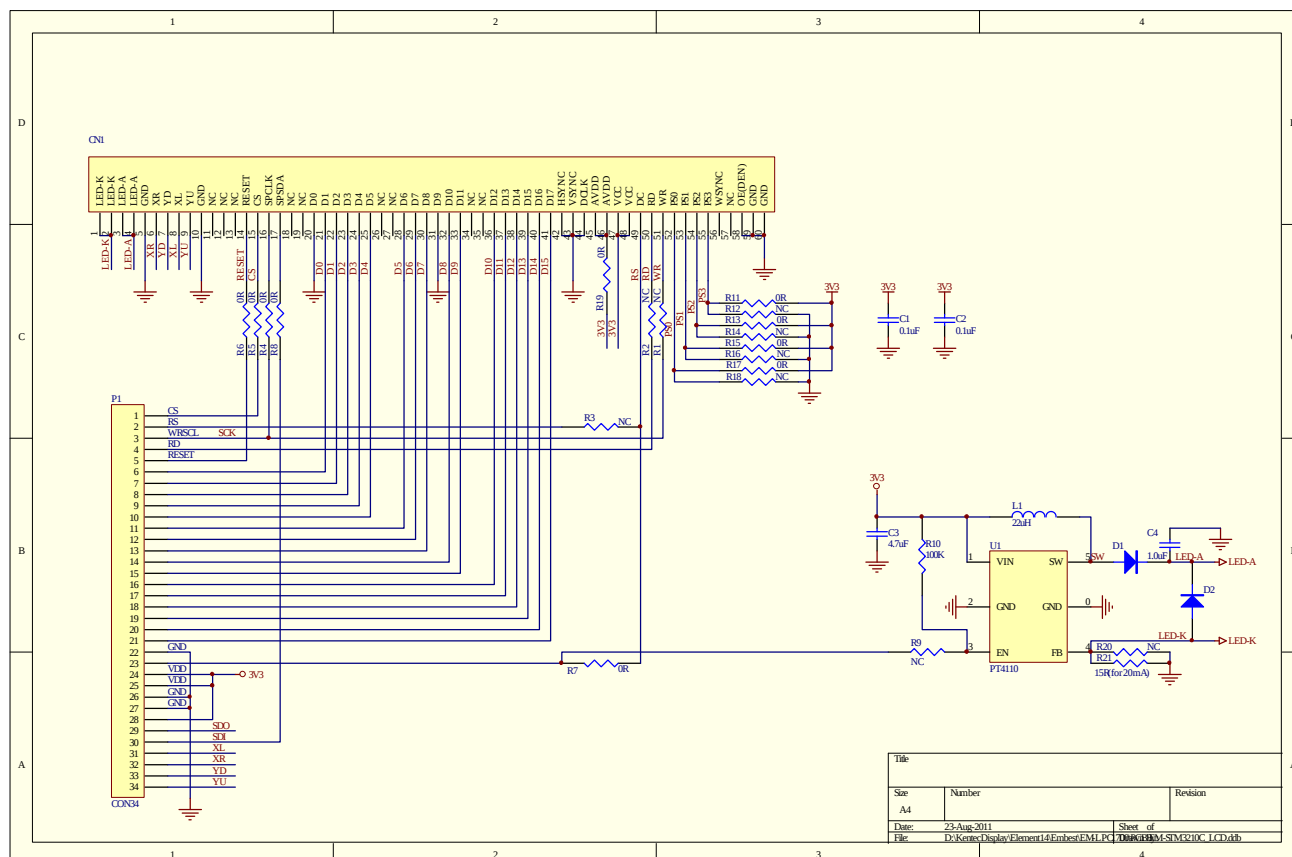


Figure 3. Expansion board schematic

5 LCD driver code examples

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

NO.	Document	Attachment
1	Source code package	