# EM-STM3210E LCD Interface Expansion Board (EB-STM3210E-LCD) User Guide

#### 1 EB-STM3210E-LCD Overview

The EB-STM3210E-LCD is an extension board for the EM-STM3210E Development Board (see Figure 1).



Figure 1. LCD connector expansion board for EM-STM3210C

The expansion board has build 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-STM3210E-LCD Dimensions

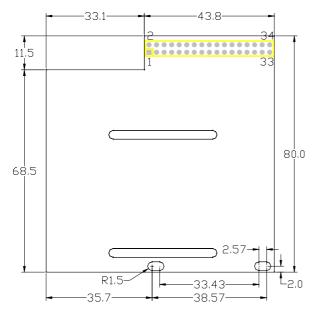


Figure 2. Outline Dimensions (Top)

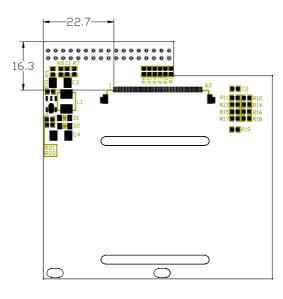


Figure 2. LCD connector Location (Bottom)

### 3 EB-STM3210E-LCD Interface

Table 1. Main Interface Signal (40pin header connect to EM-STM3210E MCU board)

Pin	Symbol	Description
1	cs	Chip select signal for LCD
2	RS	Command/Data select input for LCD
3	WR	Write control signal for LCD
4	RD	Read control signal for LCD
5	Reset	Reset input signal for LCD
6~21	D0~D15	16-bit data bus
22	GND	Ground (0V)
23	BL_ON	LCD Backlight control input.
24, 25	VDD	Power Supply (3.3V)
26, 27	GND	Ground (0V)
28	VDD	Power Supply (3.3V)
29, 30	NC	No connection
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)

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