



Product Specification

AD-1037

☐ Preliminary Specifications

☒ Final Specifications

Module	LCD Controller Board (AD Board) For Bar Display
Model Name	AD-1037
Document Version	Rev.0

Coutomer

Approved by

Date

Notice : This Specification is subject to change without notice.

Approved By	Prepared By
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Product Specification

AD-1037

Contents

1. Contents	2
2. RevisionHistory	3
3. General Function.....	4
4. Specification	4
5. Interface	5
6. Support PC Timing.....	5
7. Signal input connections.....	6
8. LCD Controller Board Dimension	10

Revised Record

Version	Date	Revised Content/Summary	Page	Remark
0	2018/09/06	First Edition	All	

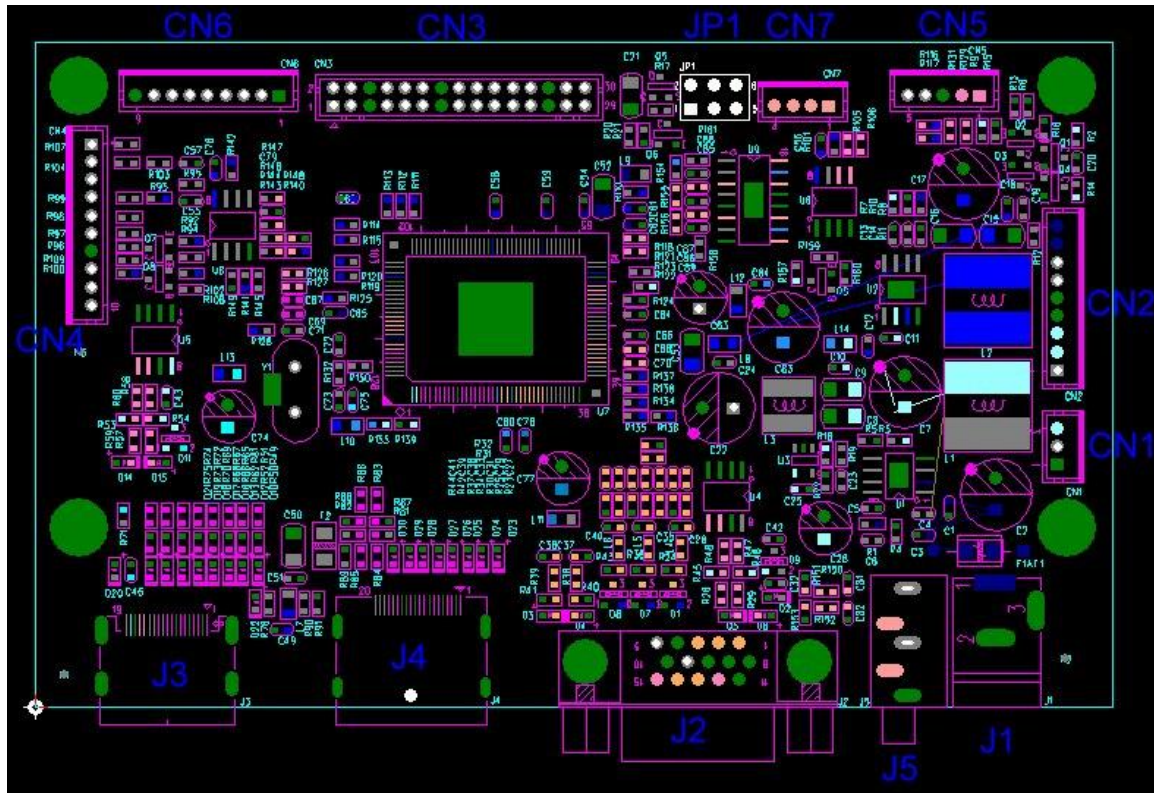
3.GENERAL FUNCTION

- A. TFT-LCD MODULE DRIVE BOARD.
- B. RESOLUTION BASE ON PANEL SPEC (1920x360)@60Hz
- C. 15 PIN D-SUB VGA CONNECTOR INPUT.
- D. HDMI CONNECTOR INPUT
- E. DISPLAY PORT CONNECTOR INPUT.
- F. LVDS INTERFACE OUTPUT TO PANEL.
- G. OSD (On Screen Display) CONTROL MENU.
- H. SUPPORTING DDC/CI PROTOCOL.(OPTIONAL)

4.Specification

Model	AD-1037
Panel Compatibility	FOR Bar Display Resolution depends on panel spec
Maximum Resolution	Base on panel spec (1920x360)
Vertical Refresh Rate	60Hz
Input Source	VGA analog (15 pin D-Sub) , HDMI 1.4a Display Port 1.2
Audio Output	1.6W+1.6W at 8 Ohm speaker
Dot Clock Maximum (Pixel clock)	VGA : 56 MHz HDMI : 56 MHz
User Controls	Power On/Off OSD Menu Adjust — Adjust + Auto
Board Dimension	120 x 74 x 14.5 mm
Voltage for LCD Panel	12V , 5V , 3.3V DC (Jump Select)
Storage Temperature Limits	Temperature -40C~70C
Operation Temperature Limits	Temperature -20C~70C Humidity : Less than 85%

5.INTERFACE



- 5-1.J1 : 2.5 mm DC Jack (DC 12V Input)
- 5-2.J2 : 15PIN D-SUB VGA Input
- 5-3.J3 : HDMI Connect (HDMI Signal Input)
- 5-4.J4 : Display Port Connect (Display Port Signal Input)
- 5-5.J5 : 3.5 Earphone Connect (VGA Audio Input)
- 5-6.CN1 : 5V Output
- 5-7.CN2 : Backlight Control and External Power Input
- 5-8.CN3 : LVDS Output
- 5-9.CN4 : OSD Key Input
- 5-10.CN5 : IR and Light Sensor Input
- 5-11.CN6 : Digital Audio Output
- 5-12.CN7 : Audio Output
- 5-13.JP1 : Panel Power Select

6.Support PC Timing

**** Bar Display Resolution depends on panel spec

7.Signal input connections

7-1 Power Input

Location – J1 : DC JACK DC=2.5mm, 12V DC Input

7-2 VGA Signal Input

Location J2 - 15 pin Hi-Density Female D-SUB

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	RED IN	6	R-GND	11	GND
2	GREEN IN	7	G-GND	12	DDC SDA
3	BLUE IN	8	B-GND	13	SYNC. H
4	GND	9	PC 5V	14	SYNC. V
5	VGA DET	10	GND	15	DDC SCL

7-3 HDMI Input

Location J3 - HDMI CONNECTOR

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	DATA2+	8	DATA0 Shield	15	DDC_SCL
2	DATA2 Shield	9	DATA0-	16	DDC_SDA
3	DATA2-	10	CLK+	17	GND
4	DATA1+	11	HDMI DET	18	HDMI_5V
5	DATA1 Shield	12	CLK-	19	HPD
6	DATA1-	13	NC		
7	DATA0+	14	NC		

7-4 Display Port Input

Location J4 – Display Port CONNECTOR

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	LANE3-	8	GND	15	AUX_CHP
2	GND	9	LANE1+	16	DP DET
3	LANE3+	10	LANE0-	17	AUX_CHN
4	LANE2-	11	GND	18	HPD
5	GND	12	LANE0+	19	RETURN
6	LANE2+	13	GND	20	DP_5V
7	LANE1-	14	GND		

7-5 Audio Input

Location – J5 : 3.5mm Earphone For VGA only

7-6 5V Power Output : 500mA MAX

Location – CN1 PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL
1	GND	4	
2	NC	5	
3	5V Output	6	

7-7 Backlight Control Connector

Case1: Power from J1 Connect Input

Location – CN2 6 PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL
1	GND	4	Backlight ON/OFF
2	GND	5	12V
3	Backlight Adjust	6	12V

Case2: For External Power Input

Location – CN2 9 PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL
1	AC Power ON/OFF	6	Backlight Adjust
2	DC 5V Input	7	Backlight ON/OFF
3	DC 5V Input	8	DC 12V Input
4	GND	9	DC 12V Input
5	GND		

Note: Standard Status in Case1

7-8 LVDS OUTPUT

Location – CN3 :2X15 PIN, PITCH 2.0mm

Pin Assign and Definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	VLCD for Panel	12	LVDS RXE_2+	23	LVDS RXO_2-
2	VLCD for Panel	13	GND	24	LVDS RXO_2+
3	VLCD For Panel	14	GND	25	GND
4	NC	15	LVDS RXE_CLK-	26	GND
5	GND	16	LVDS RXE_CLK+	27	LVDS RXO_CLK-
6	GND	17	LVDS RXE_3-	28	LVDS RXO_CLK+
7	LVDS RXE_0-	18	LVDS RXE_3+	29	LVDS RXO_3-
8	LVDS RXE_0+	19	LVDS RXO_0-	30	LVDS RXO_3+
9	LVDS RXE_1-	20	LVDS RXO_0+	----	-----
10	LVDS RXE_1+	21	LVDS RXO_1-	----	-----
11	LVDS RXE_2-	22	LVDS RXO_1+	----	-----

7-9 OSD Key Input Connector

Case1: For 5Key

Location – CN4: 8PIN WAFER PITCH 2.0mm 90D

All Key Active Low Level., All LED Active HI Level , Output Current 10mA MAX

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	MENU KEY	4	UP KEY	7	LED_O
2	AUTO KEY	5	GND	8	POWER KEY
3	DOWN KEY	6	LED_G	9	

Case2: For 7Key

Location – CN4: 10PIN WAFER PITCH 2.0mm 90D

All Key Active Low Level., All LED Active HI Level , Output Current 10mA MAX

Pin assign and definition

Pin No.	SYMBOL	Pin No.	SYMBOL	Pin No.	SYMBOL
1	ADJ+ KEY	5	DOWN KEY	9	LED_O
2	ADJ- KEY	6	UP KEY	10	POWER KEY
3	MENU KEY	7	GND		
4	AUTO KEY	8	LED_G		

Note: Standard Status in Case1

7-10 IR and Light Sensor Input (Option)

Location – CN5 5PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	Define	Pin No.	Define
1	5V	4	Light Sensor Input
2	IR	5	GND
3	GND		

7-11 Digital Audio Output (Option)

Location – CN6 9PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	Define	Pin No.	Define
1	GND	6	IIS MCK
2	SPDIF3	7	IIS SCK
3	SPDIF2	8	IIS WS
4	SPDIF1	9	GND
5	SPDIF0		

7-12 Audio Output (SPK)

Location – CN7 4PIN WAFER PITCH 2.0mm 90D

Pin assign and definition

Pin No.	Define	Pin No.	Define
1	R+	3	L+
2	R-	4	L-

7-13 Panel Power Select

Location – JP1 2X3 PIN, PITCH 2.5mm

Pin assign and definition

Pin No.	Define		
PIN1,PIN2 Short	Panel Power =12V		
PIN3,PIN4 Short	Panel Power = 3.3V		
PIN5,PIN6 Short	Panel Power = 5V		

8. LCD Controller Board Dimension

