

# INTERFACE SOLUTIONS Specifications

# EP-LTD

Approval

Rev.02





Issue Date.

2017. 09. 22

Doc No.

EP-LTD BOARD 01

Note | Specification is subject to change without notice.  
Consequently it is better to contact to our company before proceeding with the design of your product incorporating this board

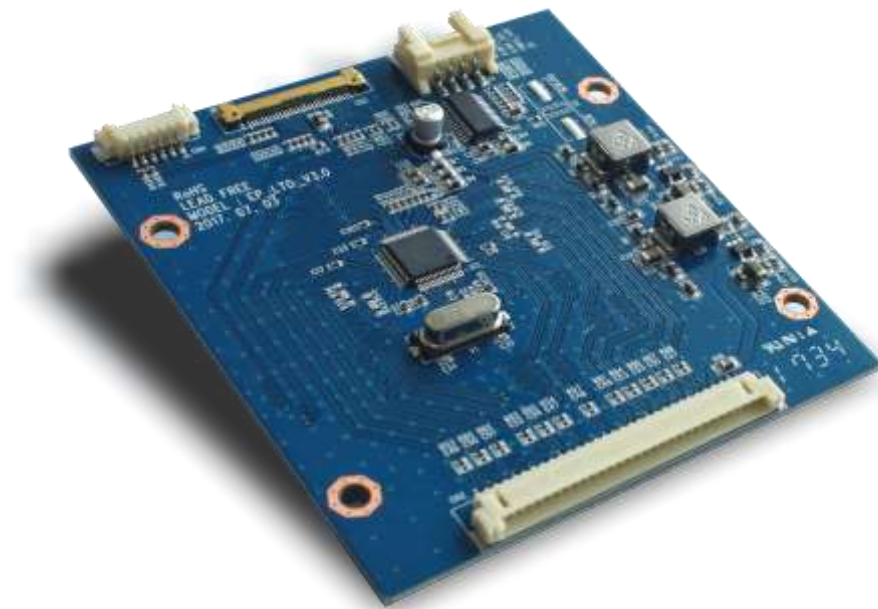
Prepared	Checked I	CheckedII	Approved
			
KB-PARK			Samuel. Lee

Revision History

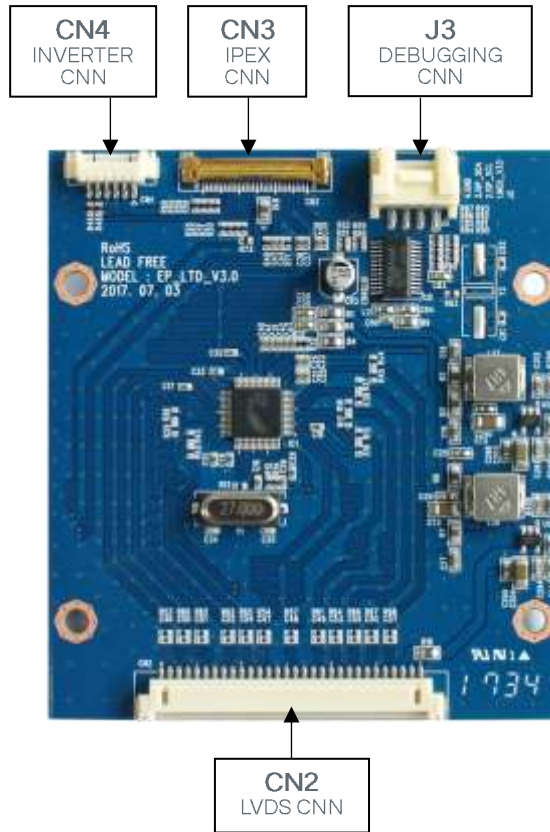
Rev.	ECN No.	Description of Changes	Date	Prepared
1		Initial Release	2017.04.13	KB. Park
2		Initial Release	2017.09.22	KB. Park

1. General Specification

No.	Item	Description	
1	Model Name	EP-LTD	
2	LCD Module	1366X768,1920X1080(Max) 8bit	
3	Board Size	W x H x D(mm)	72X80X7



6. CONNECTOR, PINOUT & JUMPERS



Summary:

Reference	Item	Description	Type	Manufacture
CN2	Connector	LVDS CONNECTOR	12507WR-30P	YEONHO
CN3	Connector	IPEX CONNECTOR	20455-030E-02	
CN4	Connector	INVERTER CONNECTOR	12505WR-30P	YEONHO
J3	Connector	DEBUGGING CONNECTOR	20037WR-04	YEONHO

CN2: LVDS Connector

Pin No.	Symbol	Description
1	R0E_A-	R0E Channel A Plus
2	R0E_A+	R0E Channel A Minus
3	R0E_B-	R0E Channel B Plus
4	R0E_B+	R0E Channel B Minus
5	R0E_C-	R0E Channel C Plus
6	R0E_C+	R0E Channel C Minus
7	GND	Ground
8	R0E_CLK-	R0E CLK Plus
9	R0E_CLK+	R0E CLK Minus
10	R0E_D-	R0E Channel D Minus
11	R0E_D+	R0E Channel D Plus
12	R1E_A-	R1E Channel A Minus
13	R1E_A+	R1E Channel A Plus
14	GND	Ground
15	R1E_B-	R1E Channel B Minus
16	R1E_B+	R1E Channel B Plus
17	GND	Ground
18	R1E_C-	R1E Channel C Minus
19	R1E_C+	R1E Channel C Plus
20	R1E_CLK-	R1E CLK Minus
21	R1E_CLK+	R1E CLK Plus
22	R1E_D-	R1E Channel D Minus
23	R1E_D+	R1E Channel D Plus
24	R0E_E-	R0E Channel E Minus
25	R0E_E+	R0E Channel E Plus
26	R1E_E-	R1E Channel E Minus
27	R1E_E+	R1E Channel E Plus
28	PANEL-VCC	POWER OUTPUT
29	PANEL-VCC	POWER OUTPUT
30	PANEL-VCC	POWER OUTPUT

CN4: INVERTER Connector

Pin No.	Symbol	Description
1	VCC	12V
2	VCC	12V
3	GND	Ground
4	GND	Ground
5	ON/OFF	Backlight on signal
6	BL_PWM	Backlight dimming signal

CN3: IPEX Connector

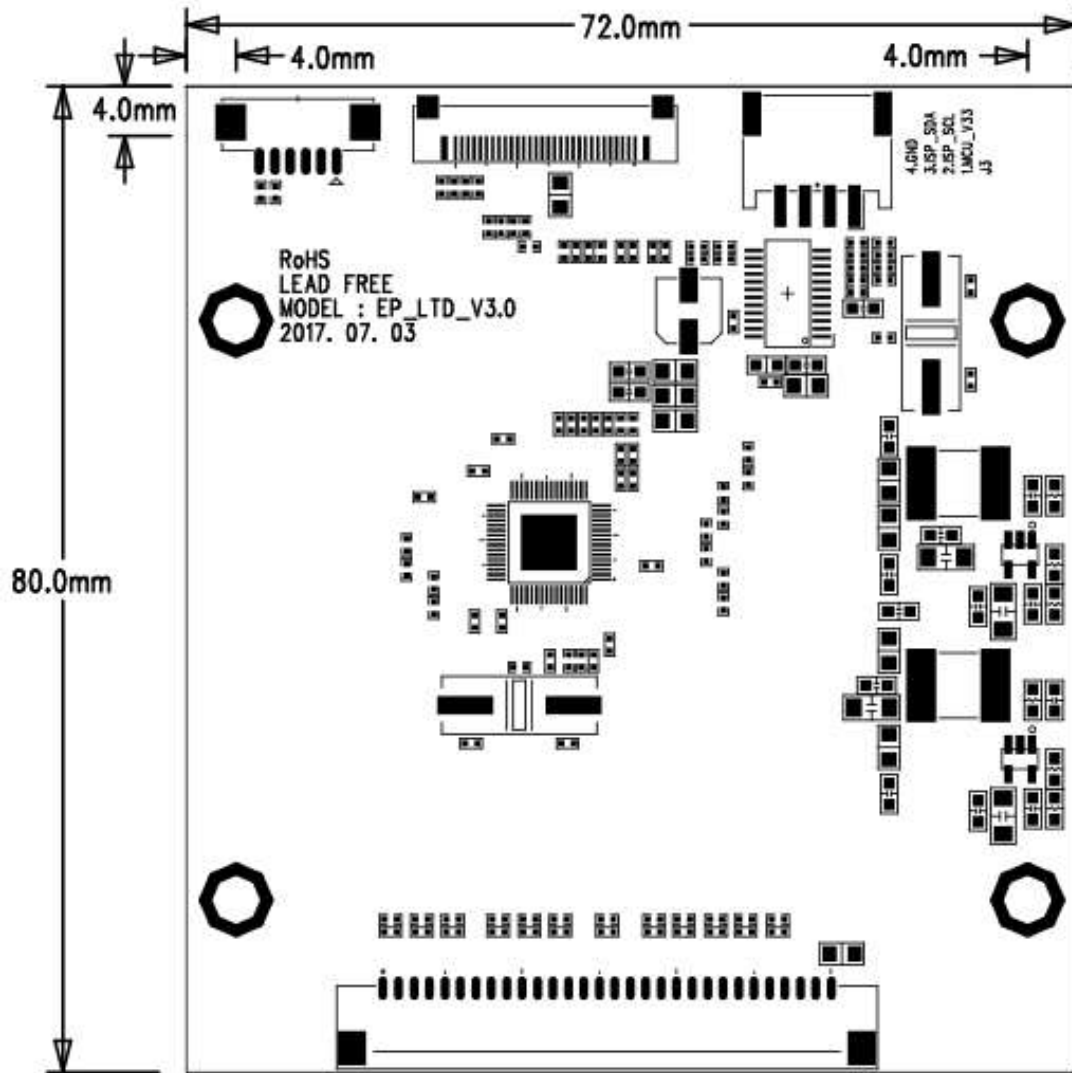
Pin No.	Symbol	Description
1	NC	No Connection
2	GND	Ground
3	DP_TX1N	DP/eDP Data Lane 1 output (Negative)
4	DP_TX1P	DP/eDP Data Lane 1 output (Positive)
5	GND	Ground
6	DP_TX0N	DP/eDP Data Lane 0 output(Negative)
7	DP_TX0P	DP/eDP Data Lane 0 output (Positive)
8	GND	Ground
9	DP_AUXP	eDP Channel Aux+
10	DP_AUXN	eDP Channel Aux-
11	GND	Ground
12	DP_3V3	DP 3.3V
13	DP_3V3	DP 3.3V
14	NC	No Connection
15	GND	Ground
16	GND	Ground
17	DP_HPDP	Hot-Plug Detect
18	GND	Ground
19	GND	Ground
20	GND	Ground
21	GND	Ground
22	ON/OFF	Backlight on signal
23	BL_PWM	Backlight dimming signal
24	NC	No Connection
25	NC	No Connection
26	VCC	12V
27	VCC	12V
28	VCC	12V
29	VCC	12V
30	NC	No Connection

J3: DEBUGGING Connector

Pin No.	Symbol	Description
1	MCU_V33	MCU 3.3V
2	ISP_SCL	ISP SCL
3	ISP_SDA	ISP SDA
4	GND	Ground

# EP-LTD

## 3. CONTROLLER DIMENSIONS



[DIMENSION DOWNLOAD](#)

## 4. APPLICATION NOTES

### A. USING THE CONTROLLER WITHOUT BOTTONS ATTACHED:

This is very straightforward:

- ▷ Firstly setup the controller/display system with the buttons. With the attached controllers and display system active make any settings for color, contrast and image position as required then switch everything off.
- ▷ Remove the control switches, the 7-way cable.
- ▷ Refer to inverter specifications for details as to fixing brightness to a desired level, this may require a resistor, an open circuit or closed circuit depending on inverter

### B. INVERTER CONNECTION:

There are 3 potential issues to consider with inverter connection:

- ▷ Power
- ▷ ON/OFF
- ▷ Brightness (DIM-ADJ)

Inverter power : This should be matched with the inverter specification.

Inverter ON/OFF : This is a pin provided on some inverter for ON/OFF function and is used by this panel controller for VESA DPMS compliance. If the inverter does not have on/off pin or the on/off pin is not used DPMS will not operate. Pin5 should be matched to the inverter specification for the ON/OFF pin.

Brightness Dimming control : This controller boards are supported analog dimming and PWM dimming control method too. And it is important to consider the specifications for the inverter to be used.