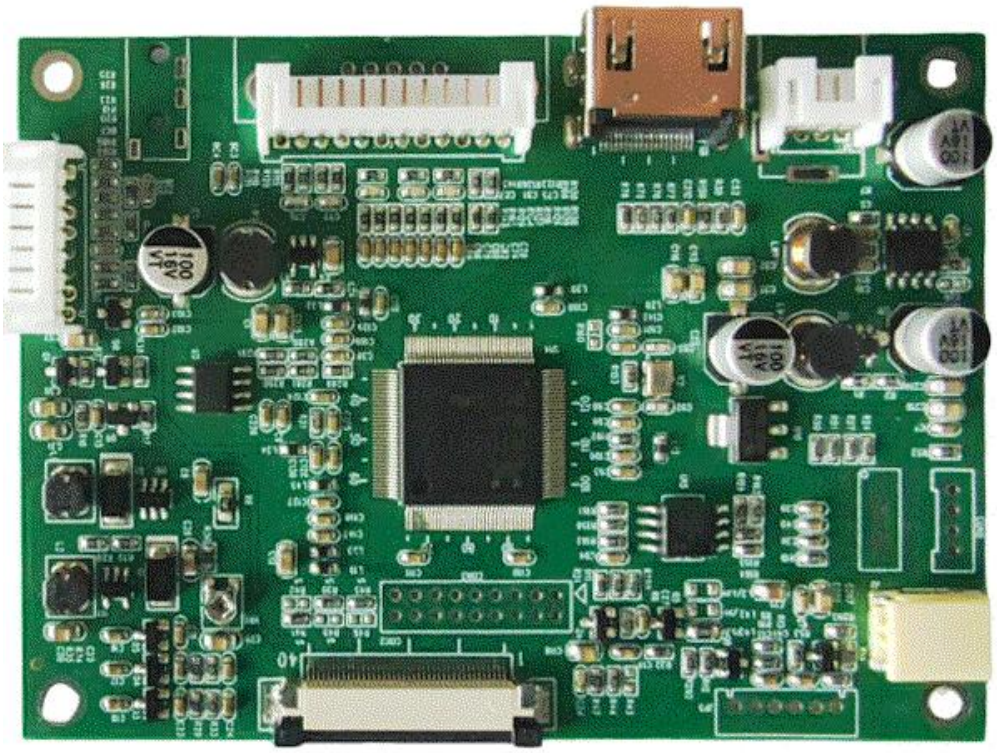
SPECIFICATION FOR APPROVAL



客　户　名　称（CUSTOMER）：_____

客　户　料　号（PART NO.）：_____

客　户　品　名（DESCRIPTION）：_____

客　户　品　名（DESCRIPTION）：2513A

日　　期　　（DATE）：2015-11-25

Table of Contents

Change Description

Version	Release Date	Modification Content	Remarks
V1.0	2015.11.25	Initial formulation	

1. Scope of Application

Inspection of the LVDS driver board for Innolux EJ101IA - 01G and EE101IA - 01D high - definition 40 - PIN liquid crystal display modules.

2. Product Function Description

1.1 HDMI and VGA signal input.
2.2 Power input: DC +12V.
2.3 Auto - power - off when no signal is detected.

3. Signal Input Standards

3.1 HDMI: (Universal version 1.4).
3.2 VGA: (Refresh rate 60HZ - 75HZ).

4. Operating Environment

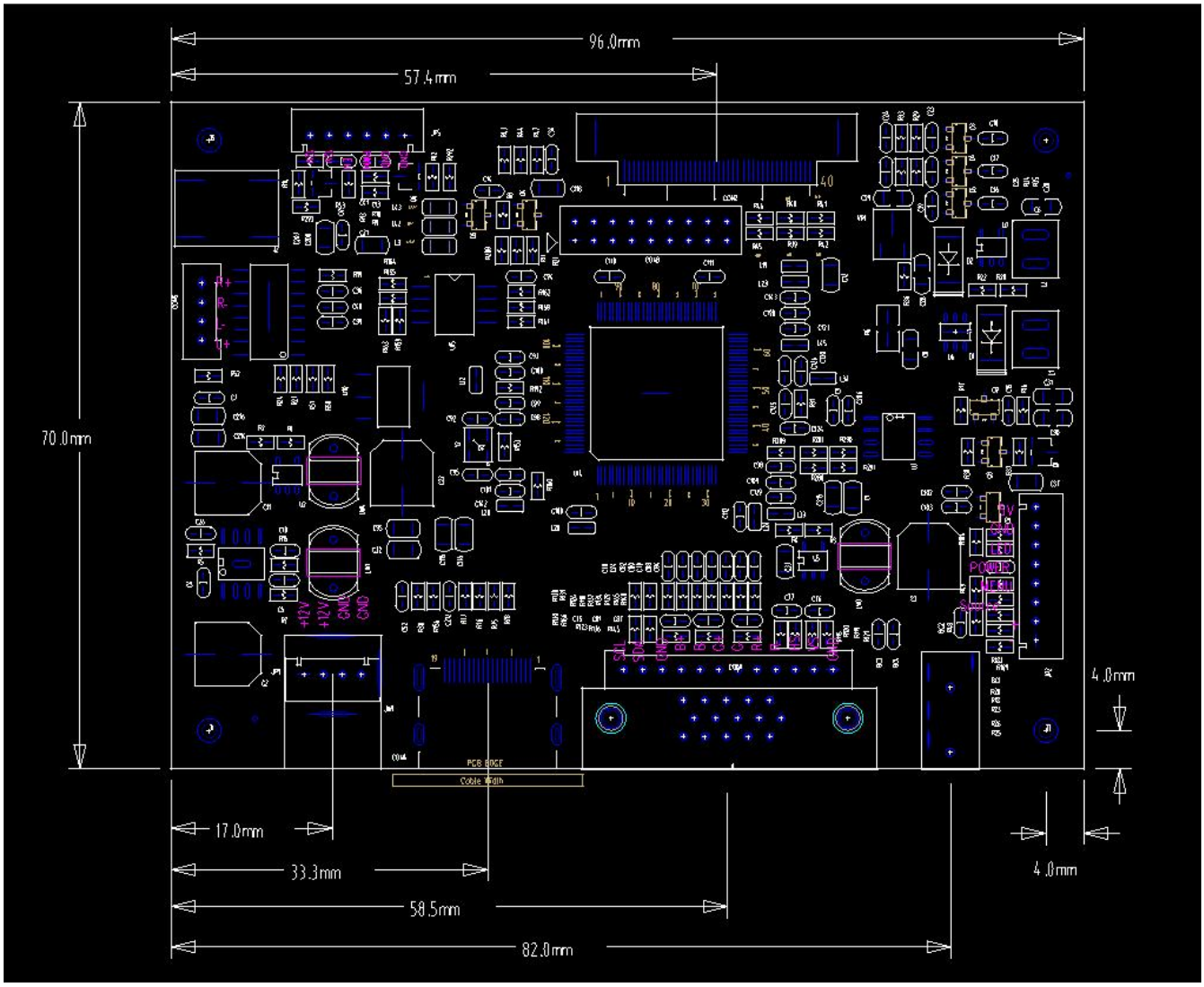
4.1 Operating temperature: - 10℃ - +60℃.
4.2 Operating humidity: 90%RH (no condensation allowed).

5. Storage Environment

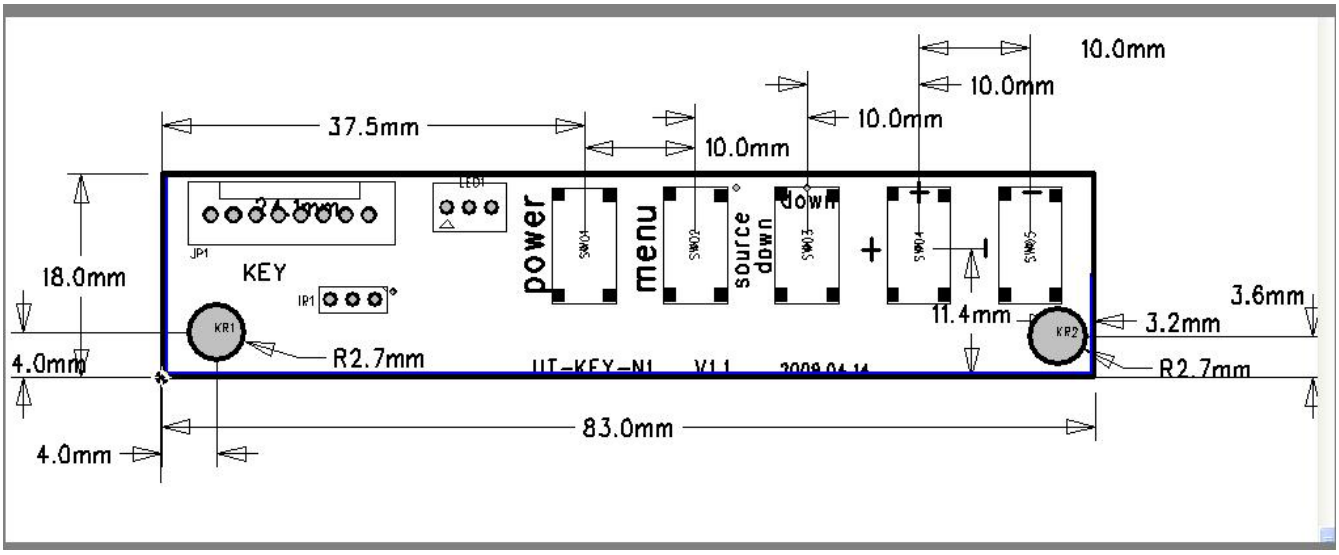
5.1 Storage temperature: - 20℃ - +70℃.
5.2 Storage humidity: 90%RH (no condensation allowed).

7. Product Specifications

7.1 Product Appearance Structure and Physical Picture (Unit: mm)



8. Key Structure Diagram



Product Interface Definition

CON1 (VGA Input) 12PIN/2.0

Pin Number	Definition	Description
1	GND	Empty
2	VS	Vertical Synchronization Signal
3	HS	Horizontal Synchronization Signal
4	GND	Empty
5	R+	Red Signal
6	GND	Ground
7	G+	Green Signal+
8	GND	+Ground
9	B+	Blue Signal+
10	GND	Ground
11	SDA	I2C Channel
12	SCL	I2C Channel

Ground		
3	PWM	PWM
4	ON/OFF	Input Backlight Voltage Switch
5	VCC_12V	INVERTER Power Supply 12V
6	VCC_12V	INVERTER Power Supply 12V

JP2 (Keypad Definition) 9PIN/2.0

Pin Number	Definition	Description
1	VCC	5v Power Supply
2	GND	Ground
3	LED	Power Indicator
4	POWER	Switch
5	MENU	Menu
6	SOURCE	Signal Switch Menu
7	LEFT	Increase Key
8	RIGH	Decrease Key
9	AOUT	Auto - Adjustment Key (Optional)

JP1 (Power Interface) 4PIN/2.0

Pin Number	Definition	Description
1	+12V	Power Supply
2	+12V	Power Supply
3	GND	Ground

Pin Number	Definition	Description
4	GND	Ground

J2 (Backlight Interface) 2PIN Narrow - Mouth High - Voltage Socket

Pin Number	Definition	Description
1	LED+	LED Voltage Positive Terminal
2	LED-	LED Voltage Negative Terminal

CON2 (FPC Socket Definition) 40PIN/0.5MM

Pin	Symbol	I/O	Remarks
1	VCOM	P	
2	VDD	P	
3	VDD	P	
4	NC		
5	RESET	I	
6	STBYB	I	
7	GND	P	
8	RXINO-	I	
9	RXINO+	I	
10	GND	P	
11	RXIN1-	I	
12	RXIN1+	I	
13	GND	P	
14	RXIN2-	I	
15	RXIN2+	I	
16	GND	P	

Pin	Symbol	I/O	Remarks
17	RXCLKIN-	I	
18	RXCLKIN+	I	
19	GND	P	
20	RXIN3-	I	
21	RXIN3+	I	
22	GND	P	
23	NC		
24	NC		
25	GND	P	
26	NC		
27	DIMO	O	
28	SELB	I	
29	AVDD	P	
30	GND	P	
31	LED-	P	
32	LED-	P	
33	L/R	I	
34	U/D	I	
35	VGL	P	
36	NC		
37	NC		
38	VGH	P	
39	LED+	P	
40	LED+	P	

CON03 (LVDS) 18P/2.0 Spacing

Pin	Symbol	Remarks
1	VCC	
2	VCC	
3	VCC	
4	GND	
5	GND	
6	GND	
7	RX00-	
8	RX00+	
9	RX01-	
10	RX01+	
11	RX02-	
12	RX02+	
13	GND	
14	GND	
15	RX0COLK-	
16	RX0COLK+	
17	RX03-	
18	RX03+	

9. Electrical Parameters

9.1 Power Consumption Details of the Driver Board (EJ101IA - 01G)

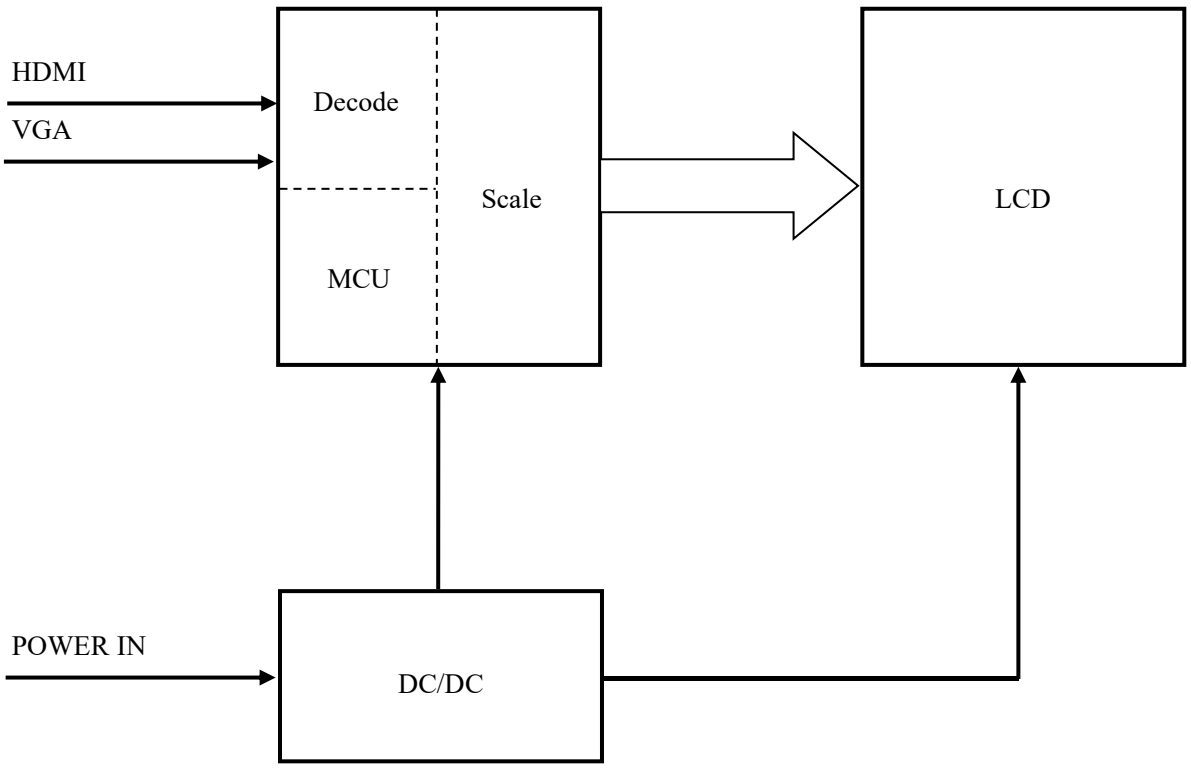
Input Voltage (VIN)	Input Current (IIN)	Input Current (IIN)	Input Current (IIN)	Input Current (IIN)	Remarks

Input Voltage (VIN)	Input Current (IIN)	Input Current (IIN)	Input Current (IIN)	Input Current (IIN)	Remarks
	Minimum Value	Typical Value	Maximum Value	Unit	
+12V	260	280	300	mA	

10. LCD Specifications (EJ101IA - 01G)

Item	Specification	Unit
Screen Size	10.1 (Diagonal)	inch
Pixel Number	1280×(R,G,B)×800	dot
Effective Display Area	216.96(H)×135.6(V)	mm
Pixel Size	0.1695×0.1695 mm (H×V)	mm

11. Electrical Circuit



12. Basic Operation Instructions

12.1 Key Operations:
There are five operation keys in total: POWER, MENU, SOURCE, LEFT, and RIGHT. (Six keys can be selected.)
12.1.1 Key Definitions:

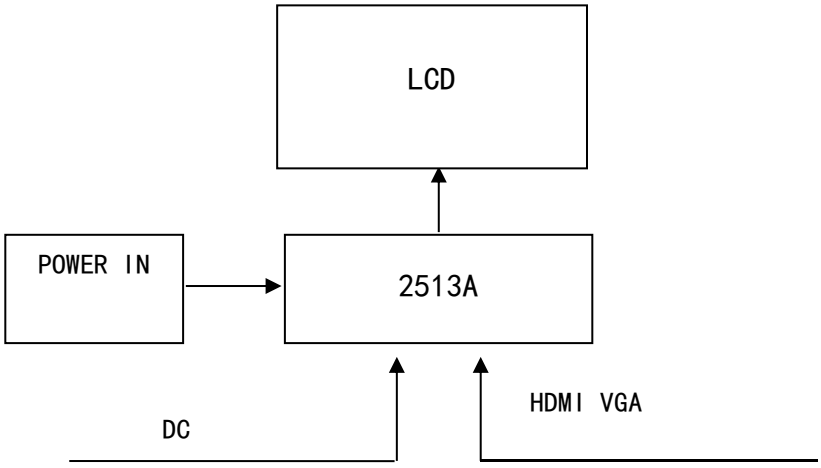
- POWER: In the shutdown state, press the POWER key once to turn on the device. In the startup state, press the POWER key once to turn off the device.
- SOURCE: When there is no OSD menu, it is used for source switching. When the OSD menu is present, it functions as the ESC key.
- MENU: It is the main menu. Press it again when the menu appears to select and confirm.
- +: When the menu is not selected, it is used as the DOWN key. When the menu is selected, it is used as the LEFT key.
- -: When the menu is not selected, it is used as the UP key. When the menu is selected, it is used as the RIGHT key.
  12.1.2 Remote Control Operations:
  The remote control has six operation keys: POWER, MENU, LEFT, RIGHT, UP, and DOWN, and the operations are the same as those of the keys.

13. Testing Equipment

13.1 PHILIPS PM - 5418TD Video Signal Generator;
13.2 PS - 305D DC Power Supply;
13.3 Fluke 45 Multimeter;
13.4 Lecroy Wave Surfer 454/Tektronix TDS 1012 Oscilloscope;
13.5 Temperature - Humidity Chamber.

14. Function Testing (Ta = 25℃)

14.1 Display Test under CVBS Input Signal
14.1.1 Connect the PCB to be tested as shown in the following figure.

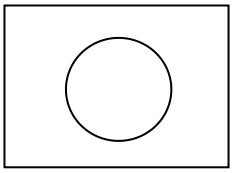


14.1.2 Connect the power supply and signal, and carefully observe whether the display screen shows normally.

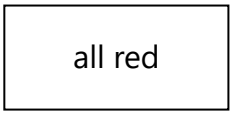
14.1.4 Select the gray - scale output on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show gray bars.

14.1.5 Select the color bar on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show color bars of eight colors (black, blue, red, magenta, green, cyan, yellow, and white).

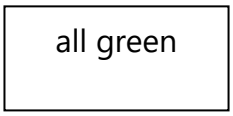
14.1.6 Select the electronic circle on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show the following pattern.



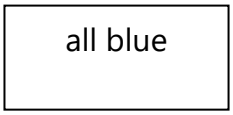
14.1.7 Select the red primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show all red.



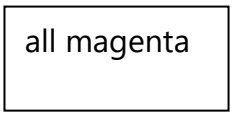
14.1.8 Select the green primary color on the testing instrument PM5418D, and carefully observe the display effect of the display screen. It should show all green.



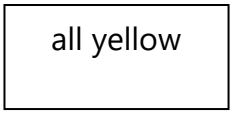
14.1.9 Select the blue primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show all blue.



14.1.10 Select the red - blue primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show all magenta.

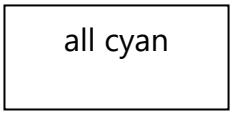


14.1.11 Select the red - green primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show all yellow.

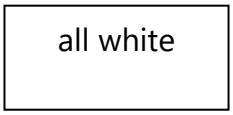


14.1.12 Select the blue - green primary color on the testing instrument PM5418TD, and

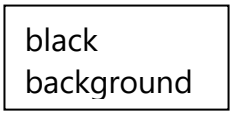
carefully observe the display effect of the display screen. It should show all cyan.



14.1.13 Select the red - green - blue primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show all white.



14.1.14 Turn off the primary color on the testing instrument PM5418TD, and carefully observe the display effect of the display screen. It should show a black background.



14.1.15 Record the test results in the report.

14.2 Display Test under VGA Input Signal

Switch to the VGA input signal, connect to a PC, and refer to the test content in 14.1 for testing.

15. Reliability Tests

Category	Test Item	Test Conditions	Number of Tests	Judgment Criteria
Storage Environment Tests	High - Temperature Test	+70℃, 96Hr	2	Normal after returning to room temperature
	Low - Temperature Test	-20℃, 96Hr	2	
Operating Environment Tests	High - Temperature Test	+60℃, 96Hr	2	Normal operation during the experiment
	Low - Temperature Test	-10℃, 96Hr	2	

Category	Test Item	Test Conditions	Number of Tests	Judgment Criteria
Cold Start Test	Cold Start Test	After storing at -20℃ for 40 minutes, start once. After storing for 2 hours, start 4 times (once every 5 minutes). After storing for 4 hours, repeat starting 4 times (once every 5 minutes), and check if it can start normally after 8 hours.	2	
Thermal Cycle Test	Thermal Cycle Test	Continuous operation for 30 cycles	2	
Constant Temperature and Humidity Test	Constant Temperature and Humidity Test	+60℃, 90%RH, continuous operation for 240 hours	2	

Remarks:

1. The tests should be carried out under non - condensing conditions.
2. After the tests, the product should be placed in the test chamber. It can be taken out after 24 hours at normal temperature and humidity.

16. Outgoing Inspection Standards

NO.	Inspection Item	Inspection Method	Sampling Level	Inspection Level
1	Electrical Performance	GB2828 - 2003	II	Critical Defect: CR = 0
2	Dimensions			Major Defect: AQL = 0.65
3	Appearance, Packaging			Minor Defect: AQL = 1.0