

4K Board Specification

-----Model: LC508

-----Rev:Version 1.0

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Approved by: Leo

Content

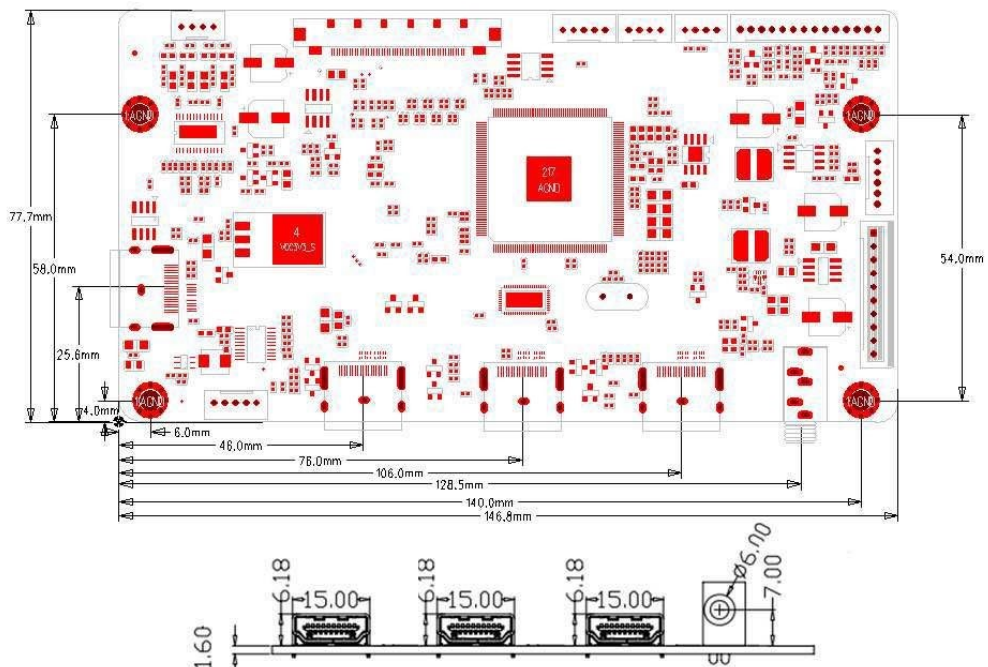
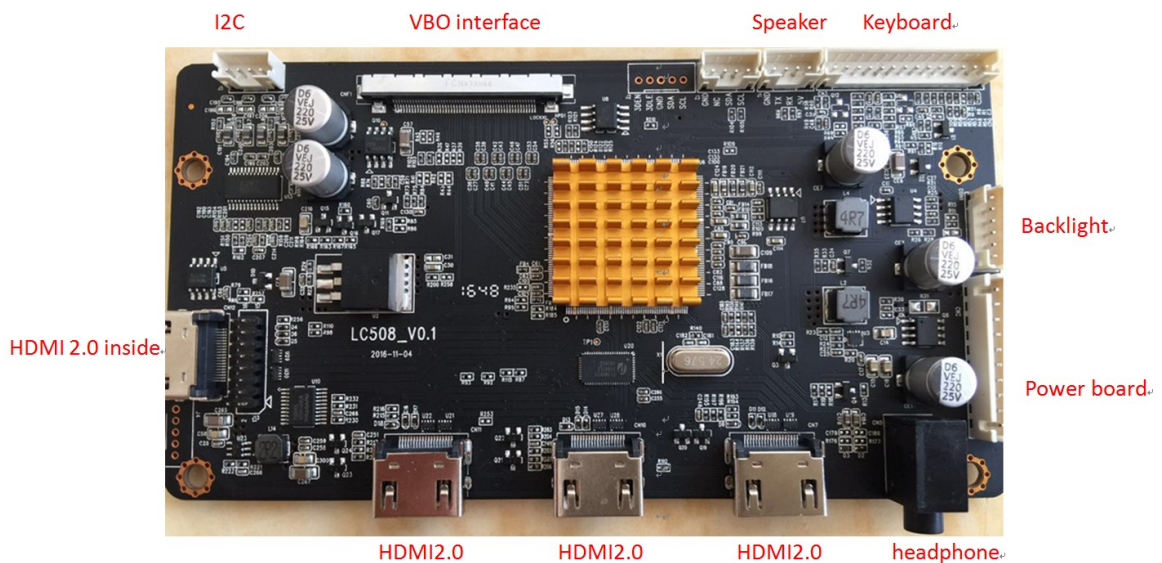
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1、General Description

LC508 is a high integrated TFT LCD **monitor mainboard**, The mainboard supports 3840*2160(**up to 60HZ**) format and can display 16.7M colors(8-bit/color).It also supports **4*HDMI2.0** input and then **HDCP 2.2** included. The output is **V-BY-ONE interface**, It can supports most of 4K panel (CMI, LG, BOE, CSOT, etc.) No screen size inch requirement. A program can be changed for all LCD panel style by Key board. Product performance can use for 4K monitor, glasses-free 3D, professional monitor, advertising machine etc. Mainboard can be **customized**.

LC07 是高集成的显示器主板，他可以支持 3840*2160@60 赫兹，他有两路 HDMI 2.0 的输入，支持 HDCP2.2。输出接口 V-BY-ONE，可以支持大多数 4K 屏(奇美、LG、三星、京东方、华星光电等)，对尺寸无要求；屏参可以通过按键板切换；本产品可以应用在显示器、裸眼 3D(支持 TB/2D+Z/FP/SBS)、专业的显示设备、广告机等领域。主板也可以客制化；

2、Function Layout



3、Features:

Language	OSD	Chinese, English(can support 16 languages, need customized)
Interface	output	8 lane V-by-ONE
	input	HDMI 2.0 (inside) + HDMI 2.0 + HDMI 2.0+ HDMI 2.0
Size	Size(mm)	146.8*77.7
Panel	resolution	3840×2160/60Hz , Downward compatibility
	Panel	LG: 32/43/49/55/65/84; CMI:28/32/39.5/46/50/58/65/75/85
		BOE:55/65 CSOT:55/65 can support all panel for 4K VBO interface
Agreement	HDCP	HDCP 2.2 CEC support
Power	Power management	Standby power < 0.5W
	Power	DC 12V /12V+5V+5VS
Speaker	Speaker	8 0 10W
	Head phone	3.5 mm
Display	Ycbcr	4:4:4 / RGB / 4:2:2 / 4:2:0
	Pixel to Pixel	Yes
IR	IR	Supported
Channel	Channel switching	OK
Image overturn	Image overturn	OK
Customization	Customization	OK

4、Use Direction

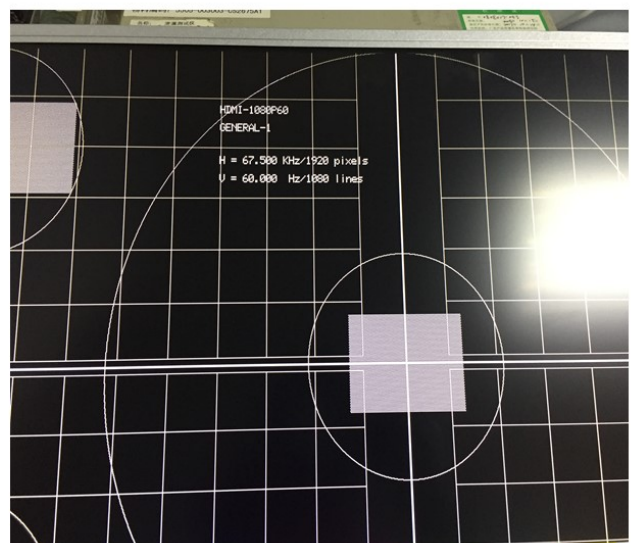
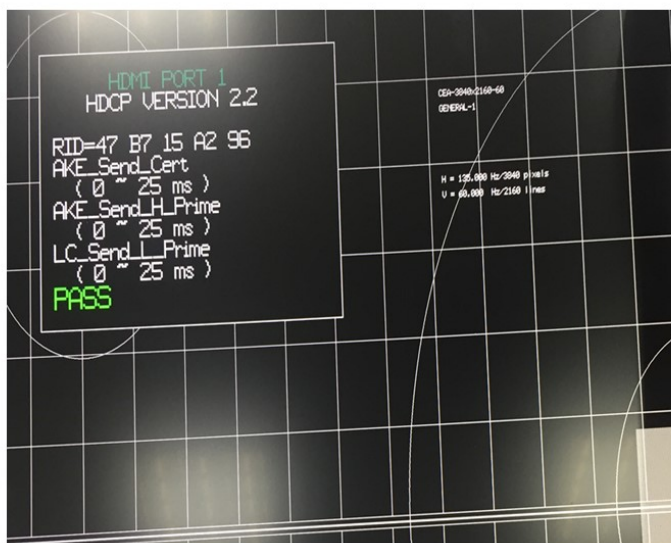
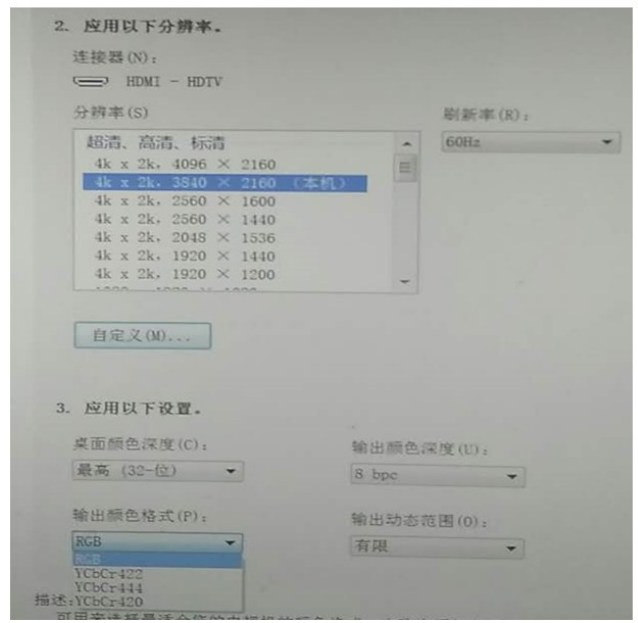
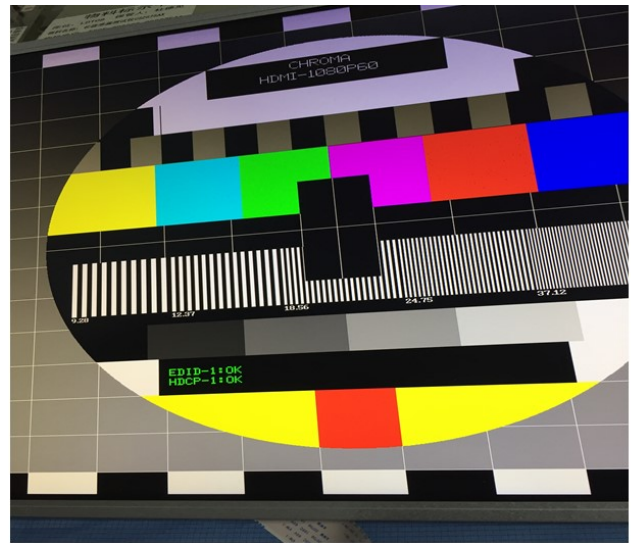
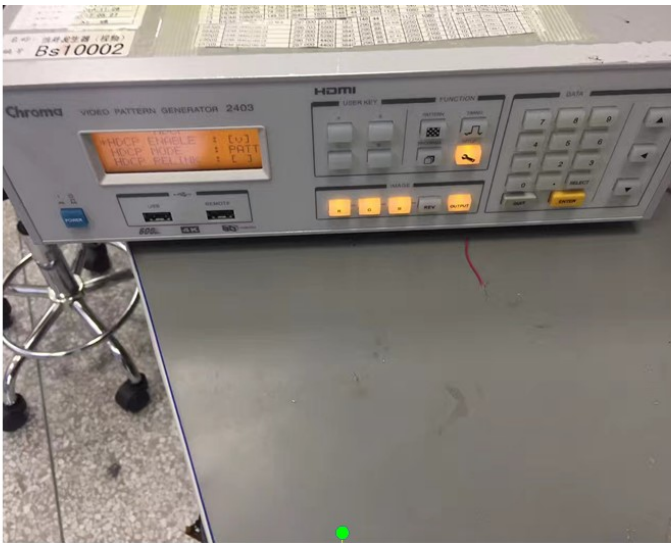
Key board	Aging mode	Press down K3 and K8 at the same time when there is no signal
	Switching program	When you encounter a different panel, Press once K6 and K7, Until the program is correct
IR	Channel switching	Press P1 to change channel; PC、HDMI1、HDMI2、HDMI3
	Image overturn	P2
Program update	Program update	HDMI

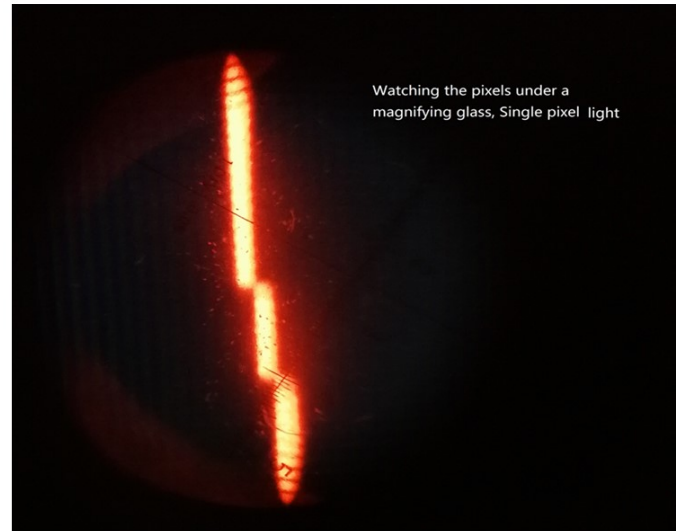
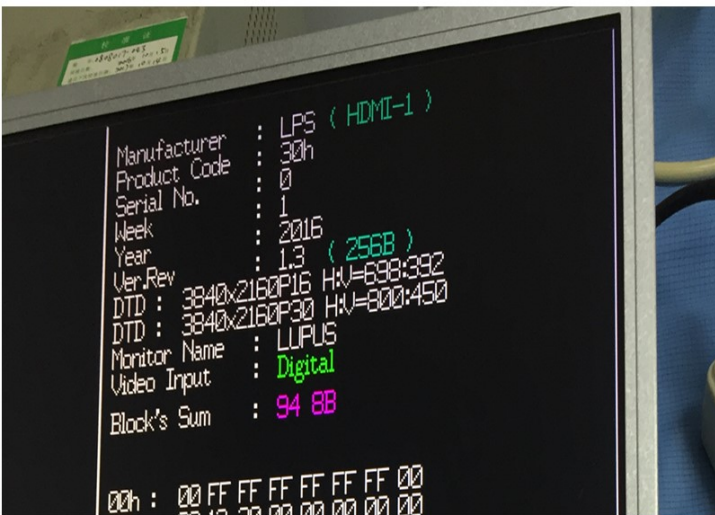
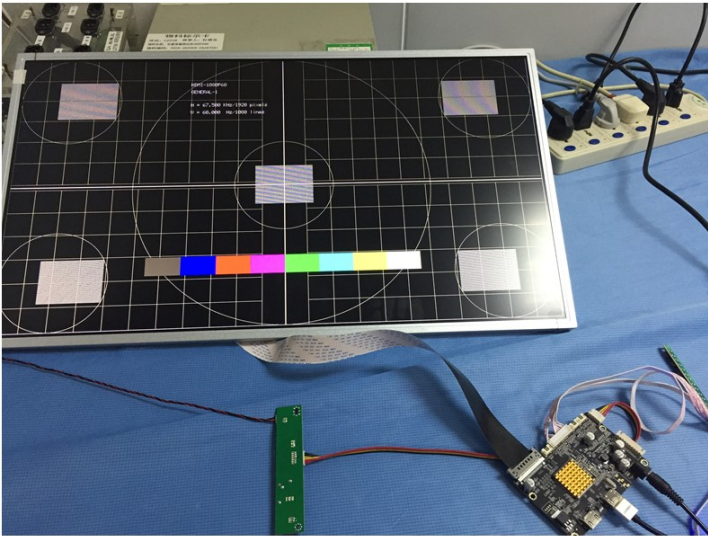
5、Test Show

Here are some test details for your reference

- ① 、High and low temperature test chamber
- ② 、Chroma 2403/7233
- ③ 、PC: all kinds of computer graphics
- ④ 、Android: /RK3288/RK3369

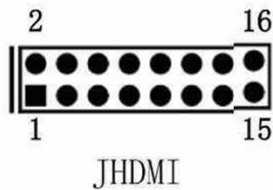
etc.





6、Interface Definition

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JHDMI1 接口定义

管脚	信号名称	管脚	信号名称
1	TXP2	2	SCLDDC
3	TXN2	4	SDADDC
5	TXP1	6	NC
7	TXN1	8	PLUGC
9	TXP0	10	5V_HDMI
11	TXN0	12	GND
13	TXCP	14	GND
15	TXCN	16	GND

◆ CN3 (14PIN/2.0MM) :KEY definition





item		Describe
1	5V	
2	IR	
3	GND	
4	KEY8	Power
	LED-R	
6	LED-G	
7	GND	
8	KEY7	Left/Source
9	KEY6	Right/backlight
10	KEY5	NC
11	KEY4	Menu/OK
12	KEY3	Back
13	KEY2	NC
14	KEY1	NC

◆ CNF1:V_by_one to panel definition: / FI-RE51HL

Pin	SYMBOL	NOTES
1	AGND	GND
2	VB7p	Positive V-by-ONE Differential Data Output
3	VB7n	Negative V-by-ONE Differential Data Output
4	AGND	GND
5	VB6p	Positive V-by-ONE Differential Data Output
6	VB6n	Negative V-by-ONE Differential Data Output
7	AGND	GND
8	VB5p	Positive V-by-ONE Differential Data Output
9	VB5n	Negative V-by-ONE Differential Data Output
10	AGND	GND
11	VB4p	Positive V-by-ONE Differential Data Output
12	VB4n	Negative V-by-ONE Differential Data Output
13	AGND	GND
14	VB3p	Positive V-by-ONE Differential Data Output
15	VB3n	Negative V-by-ONE Differential Data Output
16	AGND	GND
17	VB2p	Positive V-by-ONE Differential Data Output
18	VB2n	Negative V-by-ONE Differential Data Output
19	AGND	GND

20	VBYP	Positive V-by-ONE Differential Data Output
21	VBYN	Negative V-by-ONE Differential Data Output
22	AGND	GND
23	VBYP	Positive V-by-ONE Differential Data Output
24	VBYN	Negative V-by-ONE Differential Data Output
25	AGND	GND
26	LOCKN	LOCKN Output
27	HTPDN	HTPDN Output
28	AGND	GND
29	AGND	GND
30	LD-EN	LD-EN
31	BIT-SET	BIT-SET
32	NC	No define
33	SCL	IIC SCL
34	SDA	IIC SDA
35	3D-EN	3D-EN
36	Fomat1	D_Fomat1
37	Fomat0	D_Fomat0
38	AGND	GND
39	AGND	GND
40	AGND	GND
41	AGND	GND
42	AGND	GND
43	NC	No define
44	VCC	PANEL VCC_12V
45	VCC	PANEL VCC_12V
46	VCC	PANEL VCC_12V
47	VCC	PANEL VCC_12V
48	VCC	PANEL VCC_12V
49	VCC	PANEL VCC_12V
50	VCC	PANEL VCC_12V
51	VCC	PANEL VCC_12V

7、Product List

Model	Interface		Features	State
	IN	OUT		
LC507	2*HDMI 2.0	V-BY-ONE	For 4K panel	MP 
LC508	3*HDMI 2.0 (outside) +1HDMI 2.0 (inside)	V-BY-ONE	For 4K panel	MP 
LC608	1*DP 1.2+2*HDMI 2.0+1*DVI	V-BY-ONE	For 4K panel	MP 
6M60	V-BY-ONE/LVDS	V-BY-ONE 120 HZ	For 4K 120 HZ panel	MP 
LA223	1*HDMI2.0 IN+2*USB(Outside) +3*USB(Inside)+TF card+Wifi+RS45	V-BY-ONE	RK3288+LC507 (2+8)	MVT (Mass Verification test)
LE507	2*HDMI 2.0	EDP(For real 4K)	EDP interface For 4K panel	2017-04-22
LM9104		LVDS	144 HZ	2017-05-01