

APPROVAL SHEET

Industrial Driver Board

model number: FPD-QHD



FPD-QHD

Basic : **VGA / DVI / HDMI / DP**

Maximum Supported Resolution :
2560x1600 2560x2048

Displayport V1.2

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1. Product Overview

Thank you for purchasing our driver board product. Before connecting to the LCD panel, please confirm all accessories match specifications. Pay special attention to the LVDS cable specifications for panel connection. .

This driver board is designed for 2K TFT LCD panels, featuring 1x VGA, 1x DVI, 1x HDMI, and 1x DisplayPort input interfaces, supporting 4-channel LVDS output. The motherboard uses a high-definition signal processing chip with powerful capabilities to handle various standard and non-standard signals. High-quality components ensure reliable performance across a wide operating temperature range of -40°C to 70°C .

- * Optional automatic light sensor control
- * **Support Flip, Rotate Display**
- * **Support Frame Convert**
- * **Support Gray Display**
- * Maximum resolution up to **2560x1600,2560x1440,260x1080,2560x2048**
- * Built-in 2x8W audio amplifier
- * Supports HDMI 1.3, compatible with DisplayPort V1.2

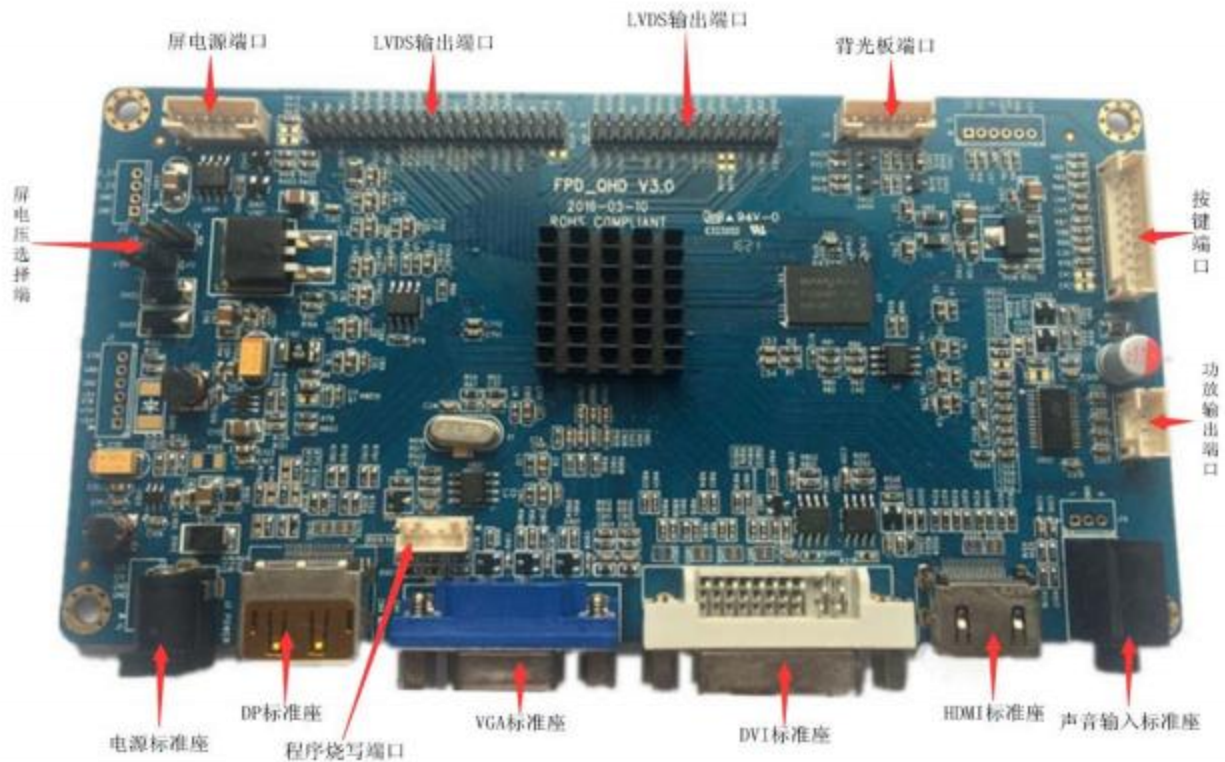
2. Product Features

Display Output:	Maximum resolution:	Max. 2560x1600
	output interaface:	Single/Dual/ LVDS
支持信号	模拟 RGB:	Horizontal Freq : 30—120KHz Vertical Freq : 50—75Hz 0.7Vp-p@75ohm Separate / Composite / SOG sync support
	数字 DVI:	Horizontal Freq : 30—120KHz Vertical Freq : 50—75Hz
	Displayport输入:	Supports 2.7Gbps and 1.62Gbps per lane 10.8Gbps bandwidth over 4 lanes
Buttons		Power, Menu, Exit, Plus, Minus
	Menu Type:	Graphical OSD
	Language Support:	Chinese, English, and 6 other languages
Function Operations	Picture	Mode/Brightness/Contrast/Saturation/Sharpness/Hue
	FUNCTION	Language/Reset/Color Temp.
	PC	Clock/Phase/H position/V position/Auto configure
电源	Stand-by	<1W 12Vstb/200mA

	Input	12V/dc	Note1)
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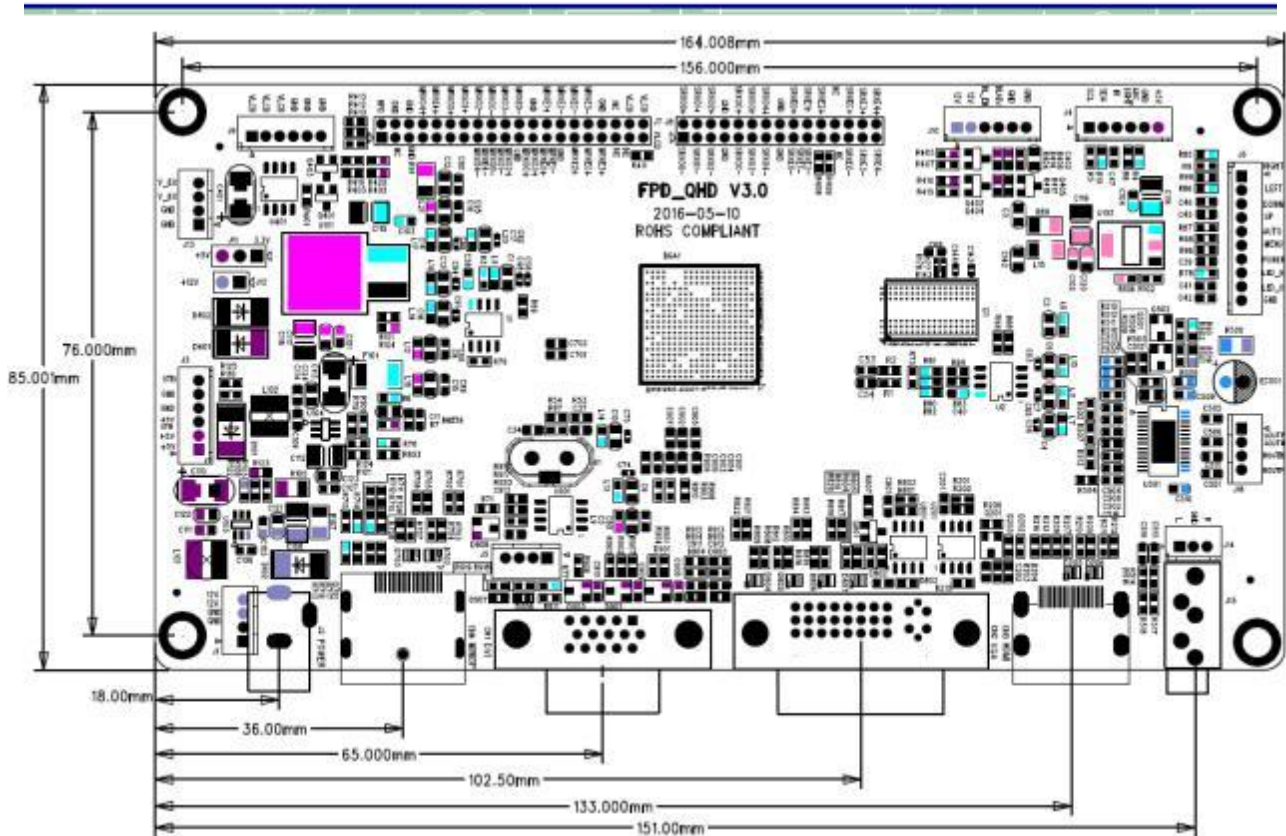
Note1)最大功耗请依据实际使用情况测试

3. 产品图片



4. 尺寸说明

PCB 板厚度 : 1.6 mm
 总高度: 16 mm
 尺寸大小: 164 x 85 mm



5. 性能参数

项目	描述	最小	额定	最大	Unit	注释
Vin	输入电压	10	12	16	V(dc)	Note1)
Iin	输入电流		0.6		A	12V input (Board only)
Ir	冲击电流			1.5	A	
Vadj	背光板调整电压	0	T	5V	V(dc)	
Hst	存储湿度	10		90	%RH	
Hop	操作湿度	10		90	%RH	
Tst	存储温度	-40		70	℃	
Top	操作温度	-40		70	℃	

Note1) : 因为背光板的电压取自主板，请注意背光板的输入电压

6.操作菜单



6.1 OSD 菜单功能键

Menu	菜单/返回上一级菜单
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Exit	信号切换/确认
Plus	上移、增加以及进入图形手动调整
Minus	下移、减少以及进入图形手动调整
Power	电源键

6.2 OSD 菜单项说明

6.2.1 快捷菜单操作

-  按 Exit 键为信号切换
-  按 Minus/Plus 键进入图形手动调整

6.2.2 用户模式设定



注：1.此为进入菜单时所显示，可进入自己需要调节子菜单进行参数调控。
2.其它预制按键功能或者定制功能请联系我们。

6.3 OSD 菜单功能

主菜单		子菜单/功能	
	图形自动调整菜单	图形自动调整	/
	亮度和对比度调节菜单	对比度调节	
		亮度调节	
	输入信号选择菜单	(选择需要的信号)	

	音频调整	可选择音量大小和静音	
	色彩调整	sRGB	
		偏蓝色调	
		预设	
		用户自定义色彩	
	信息	显示屏参数	
	图像手动调整	水平/垂直位置	
		水平宽度	
		微调	
		清晰度	
		动态对比度	
		宽高比	
		ECO 模式	
		蓝光过滤器	
		音像调校	
	设定菜单	语言选择	
		分辨率提示	
		菜单位置	
		菜单显示时间	
		菜单背景色	
		自动关机	
		电源指示灯	
	恢复设定	恢复默认设置	/

注：此为简单介绍菜单，详细功能不清楚可联系我们！

7. 连接端子定义

1) J1 排座电源输入端

Pin No.	Function	Pin No.	Function
1	GND	2	GND
3	12V	4	12V

2) J2 标准电源输入端

Pin No.	Function	Pin No.	Function
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1	12V	2	GND
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3) J3 外部电源控制端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	+5V	3	5VSTB	5	GND
2	+5V	4	GND	6	STB_ON

4) J4 光感、人体感应预留控制端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	SCL	2	SDA	3	IR
4	ADC_LIGHT	5	GND	6	+5V

5) J5 程序烧写端口

Pin No.	Function	Pin No.	Function
1	NC	2	DDCA-SDA
3	DDCA-SCL	4	GND

6) J6 按键端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	Right	5	Auto/Select	9	LED-R
2	Left	6	Menu	10	GND
3	Down	7	Power		
4	Up	8	LED-G		

7) J7 LVDS 输出端

Pin No.	Function	Pin No.	Function	Pin No.	Function	Pin No.	Function
1	Reserve (预留)	11	MRX00-	21	MRX03+	31	MRXEC+
2	HDP	12	MRX00+	22	MRXE0-	32	MRXE3-
3	NC	13	MRX01-	23	MRXE0+	33	MRXE3+
4	GND	14	MRX01+	24	GND	34	GND
5	GND	15	MRX02-	25	MRXE1-	35	NC
6	GND	16	MRX02+	26	MRXE1+	36	NC
7	MRX04-	17	GND	27	GND	37	NC
8	MRX04+	18	MRX0C-	28	MRXE2-	38	VCC
9	MRXE4-	19	MRX0C+	29	MRXE2+	39	VCC
10	MRXE4+	20	MRX03-	30	MRXEC-	40	VCC

8) J8 LVDS 输出

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	SRX00-	11	SRX03-	21	SRXE2-
2	SRX00+	12	SRX03+	22	SRXE2+
3	SRX01-	13	SRX04-	23	NC
4	SRX01+	14	SRX04+	24	NC
5	SRX02-	15	GND	25	SRXEC-
6	SRX02+	16	GND	26	SRXEC+
7	GND	17	SRXE0-	27	SRXE3-
8	GND	18	SRXE0+	28	SRXE3+
9	SRXOC-	19	SRXE1-	29	SRXE4-
10	SRXOC+	20	SRXE1+	30	SRXE4+

Notes:

For 1920x1080 and lower resolution panels, use J7 (30-pin compatible with our standard interface). For single-channel LVDS panels, connect J7-E (even-numbered channels near power pins)

9) J9 屏电源端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	VLCD	3	VLCD	5	GND
2	VLCD	4	GND	6	GND

Note: Additional screen power port, some screens need it!

10) J10 背光板端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	12V	3	INV-ON	5	GND
2	12V	4	BRIGHT	6	GND

11) J11 屏电压选择端口

Pin No.	Function	Pin No.	Function
1	3.3 V	2	GND
3	5V		

12) J12 12V 屏电压端口

Pin No.	Function	Pin No.	Function
1	GND	2	12 V

Note: Select appropriate panel voltage (J11/J12) before powering on to prevent damage!

13) J14 声音输入 PIN 座端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	L	2	GND	3	R

14) J16 功放输出端口

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	LOUTP	2	LOUTN	3	ROUTN
4	ROUTP				

8. 补充事项

1) J13 是外部屏电压输入端口，当碰到特殊的屏需要供 18V 或者 24V 的电压时候，可以从这个端口接入给屏供电，如不清楚，详细请联系我们。

2) Regarding the “Factory Menu”, Please contact with us.