



产品承认书

SPECIFICATION FOR APPROVAL

客户名称 (CUSTOMER)	
客户料号 (PART NO.)	
客户品名 (DESCRIPTION)	LVDS-TTL31
日期 (Date)	2013-07-10

版本 Version	发行日期 Date	修改内容 Modifications	备注 Notes
V1	2013-7-10	初次制订 Initial Formulation	



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1. Scope of Application 适用范围

Industrial control X8 motherboard_Android motherboard_AD driver board_LVDS signal drive TTL screen solution

工控X8主板_安卓主板_AD驱动板_LVDS信号驱动TTL屏的解决方案

2. Product Function Description 产品功能描述

This product converts the LVDS signal of the industrial control motherboard into a TTL signal, and the driving circuit only needs to be added to the backlight of the screen to facilitate operation. (The resolution of the LVDS output of the motherboard needs to be set according to the actual resolution of the driver screen.)

本产品对工控主板的LVDS信号进行转换成TTL信号，驱动电路只点屏背光需外加，方便操作。（主板的LVDS输出的分辨率需根据驱动屏的实际分辨率设置）

3. Working Environment 工作环境

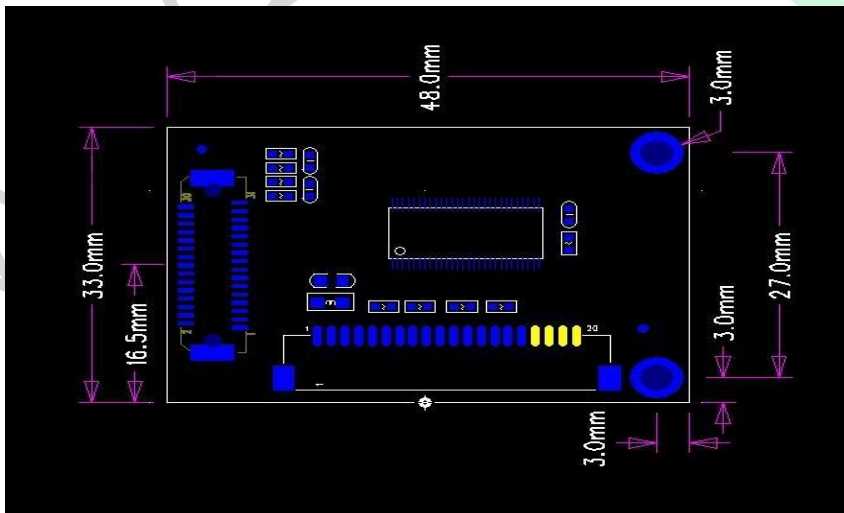
工作温度 Operating Temperature	10°C~+70°C
工作湿度 Operating Humidity	90%RH（不可有结露） 90% RH (no condensation)

4. Storage Environment 保存环境

保存温度 Storage Temperature	-20°C~+80°C
保存湿度 Storage Humidity	90%RH（不可有结露） 90% RH (no condensation)

5. Product Specifications 产品规格

- The product shape and structure are 48*33 (unit: mm) - finished board
产品外形结构48*33（单位：mm）——成品板





● Product interface definition 产品接口定义

CON1 LCD screen interface TTL31

Pin No.	Symbol	Function	Polarity
1	GND	—	
2	CK	Clock signal for sampling each datum	
3	Hsync	Horizontal Sync signal	Negative
4	Vsync	Vertical Sync signal	Negative
5	GND		
6	R0	RED Data signal (LSB)	
7	R1	RED Data signal	
8	R2	RED Data signal	
9	R3	RED Data signal	
10	R4	RED Data signal	
11	R5	RED Data signal (MSB)	
12	GND		
13	G0	GREEN data signal (LSB)	
14	G1	GREEN data signal	
15	G2	GREEN data signal	
16	G3	GREEN data signal	
17	G4	GREEN data signal	
18	G5	GREEN data signal (MSB)	
19	GND		
20	B0	BLUE data signal (LSB)	
21	B1	BLUE data signal	
22	B2	BLUE data signal	
23	B3	BLUE data signal	
24	B4	BLUE data signal	
25	B5	BLUE data signal (MSB)	
26	GND		
27	ENAB	Data Enable signal (Control signal for image location in horizontal direction)	[Note 1]
28	Vcc	Power supply in	
29		(Please supply the same voltage to Pin28 and Pin29.)	
30	R/L	Horizontal scanning direction control signal (built in pull-up resistor)	[Note 2,3]
31	U/D	Vertical scanning direction control signal (built in pull-up resistor)	[Note 2,3]



CON2 (LVDS signal input) 20PIN/1.25MM

管脚序号 Pin Serial No.	定义 Definition	描述 Description
1	VCC	+3.3V
2	VCC	+3.3V
3	GND	地 Ground
4	GND	地 Ground
5	RXIN0-	输入信号 0- Input Signal 0-
6	RXIN0+	输入信号 0+ Input signal 0+
7	GND	地 Ground
8	RXIN1-	输入信号 1- Input Signal 1-
9	RXIN1+	输入信号 1+ Input signal 1+
10	GND	地 Ground
11	RXIN2-	输入信号 2- Input Signal 2-
12	RXIN2+	输入信号 2+ Input signal 2+
13	GND	地 Ground
14	CLKIN-	输入时钟- Input Clock-
15	CLKIN+	输入时钟+ Input Clock+
16	GND	地 Ground
17	NC	空 No Connection
18	NC	空 No Connection
19	NC	空 No Connection
20	NC	空 No Connection



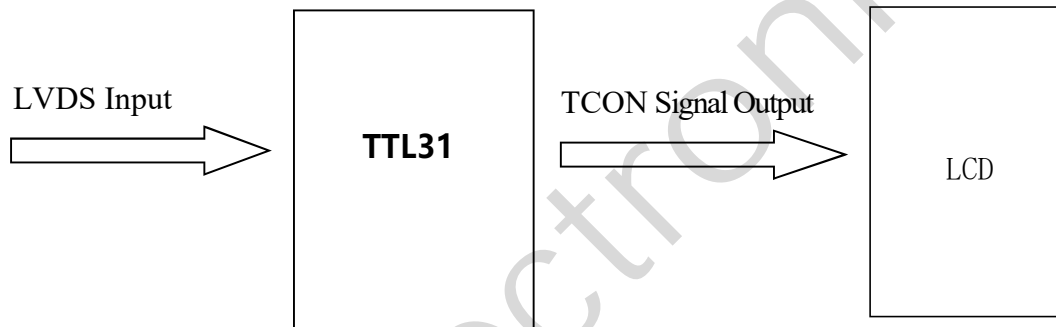
6. Electrical Parameters 电气参数

Driver Board Power Consumption Details Table (TM057KDH01) (Ta=25°C)

输入电压 Input Voltage (V _{IN})	输入电流 Input current (I _{IN})				备注 Remark
	最小值 Minimum	典型值 Typical	最大值 Maximum	单位 Unit	
3.3V	/	80	/	mA	

7. Electric Circuit 电气回路

LVDS Signal Input



8. Reliability Test 可信赖性试验

Category	Test Items	Test Conditions	Number of trials	Defining Principle
Preservation Environment Test	High Temperature	+70℃ 96Hr	2	Normal after ordinary temperature
	Low Temperature	-20℃ 96Hr	2	
Work Environmental Test	High Temperature	+60℃ 96Hr	2	The experimental process should be able to work normally
	Low Temperature	-10℃ 96Hr	2	
Cold Start Test	Cold Start Test	Start once after storing at -20℃ for 40 minutes, start four times after 2 hours (every 5 minutes), repeat four times after 4 hours (every 5 minutes), and check if it starts normally after 8 hours	2	
Heat Cycle Test	Heat Cycle Test	-20℃ $\xrightarrow{30min}$ 25℃ $\xrightarrow{30min}$ 60℃ continuous operation for 30 cycles	2	
Constant temperature and humidity test		+60℃ 90%RH Continuous work for 240 hours	2	

Notes:

1. The experiment should be conducted without condensation;
2. After the experiment, it needs to be placed in a testing box at ordinary temperature and constant humidity for 24 hours before the product can be taken;

9. Shipment inspection level 出货检验水准

NO.	检查项目 Inspection Items	检验方法 Inspection Method	抽样水准 Sampling level	检验水准 Inspection level
1	电气性能 Electrical Performance	GB2828-2003	II	严重缺点: CR=0 Serious disadvantage: CR=0
2	尺寸 Dimensions			主要缺点: AQL=0.65 Main disadvantage: AQL=0.65
3	外观、包装 Appearance and Packaging			次要缺点: AQL=1.0 Minor disadvantage: AQL=1.0