

Product Specifications

Product Model: LRX_VHD2LVDS513_V1.0

Product Code: A00781

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Drafting	Review	Approval
Sandy.Hu	Peter.Pan	Thanch.Li

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1. Product Overview.

The LRX_VHD2LVDS513_V1.0 is a multi-functional display driver board with 1 HDMI 1.4, 1 DVI 1.0, and 1 VGA input, dual-channel LVDS output supporting up to 186MHz, and features headphone input and output and a 3-watt dual-channel audio amplifier output. For features such as IIC, ADC, UART, and jumper-selectable screen parameters, please contact the manufacturer.

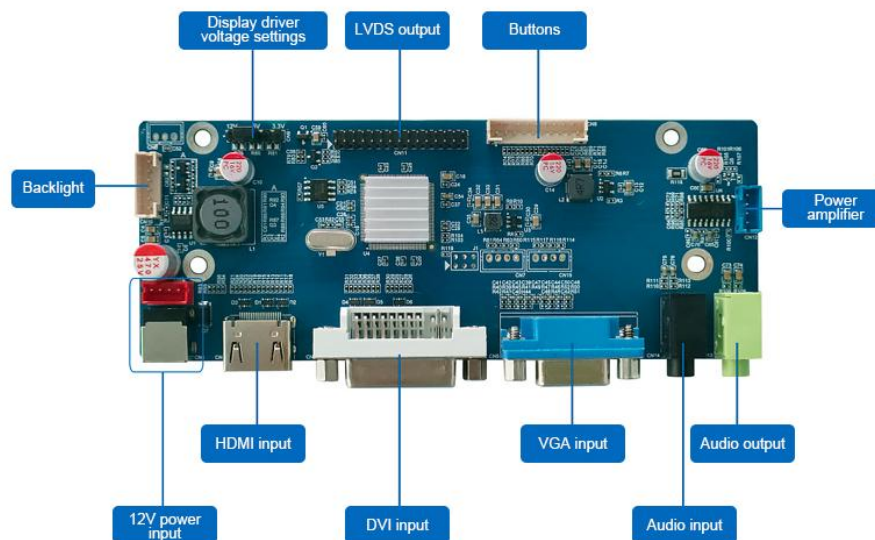
2.Product features.

Function	Description
Signal Input	HDMI 1.4, VGA, DVI input
Signal Output	2-port LVDS output; supports up to 186MHz
OSD Menu	Supports multi-language OSD menu operation and adjustment
Other	I ² C (reserved function)

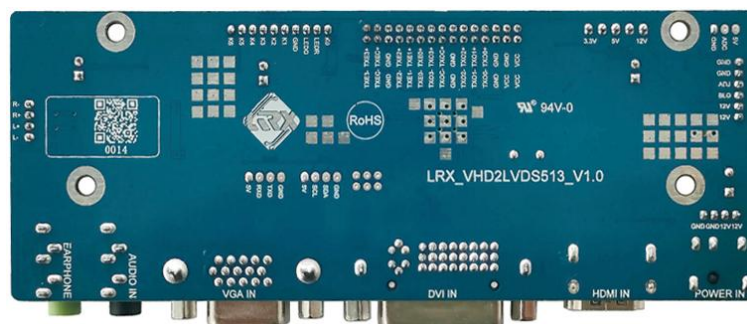
3.Interface Function Description.

Seat number	Describe
CN1 / CN2	12V power input
CN3	HDMI 1.4 input
CN4	DVI input
CN5	VGA input
CN6	ADC (default empty, can be added if needed)
CN8	Buttons
CN9	Screen driver voltage setting (3.3V, 5V, 12V selectable)
CN10	Backlight control
CN11	LVDS signal output (for connecting to LVDS screen)
CN12	Power amplifier output 2*3W (LR=4Ω)
CN13	Φ3.5 headphone output
CN14	Φ3.5 headphone input

Top view (interface description)

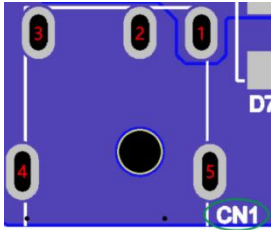


Bottom view (definition/description)

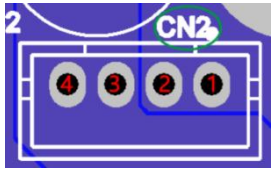


4.Interface definition.

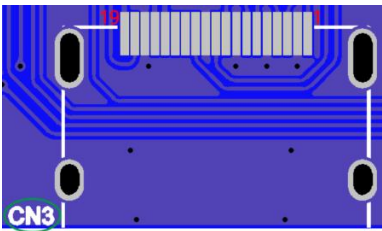
4.1 CN1: 12V Power input

Pin	Pinout markings	Top view corresponding to serial number (Interface description: DC-044A 5.5*2.1mm)
1	12V	
2	GND	
3	GND	
4	GND	
5	GND	

4.2 CN2: 12V Power input

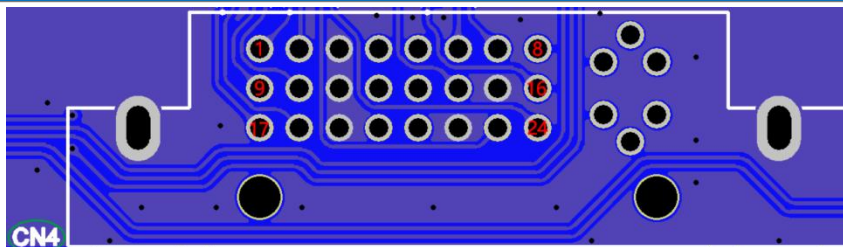
Pin	Pinout markings	Top view corresponding to serial number (Interface description: PH2.0mm-4Pin)
1	GND	
2	GND	
3	12V	
4	12V	

4.3 CN3: HDMI input

Pin	Pinout markings	Pin	Pinout markings	(Corresponding serial number in the top view)
1	DATA2+	11	CLK SHIELD	Interface parameters can be  referenced from the following models:HYC10-HDMIA19-600 B
2	DATA2	12	CLK-	
3	DATA2-	13	NC	
4	DATA1+	14	NC	
5	DATA1	15	SCL	
6	DATA1-	16	SDA	
7	DATA0+	17	GND	
8	DATA0	18	+5V	
9	DATA0-	19	HOT PLUG	
10	CLK+			

4.4 CN4: DVI input

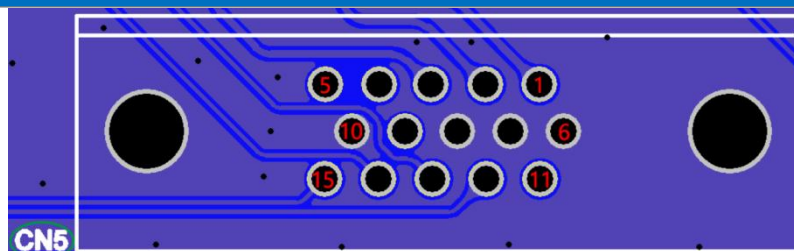
Top view corresponding serial number (Interface parameters can be referenced from model: DS1091-VN0X)



Pin	Pinout markings	Pin	Pinout markings
1	D2-	13	NC
2	D2+	14	5V
3	GND	15	GND
4	NC	16	HPD
5	NC	17	D0-
6	SCL	18	D0+
7	SDA	19	GND
8	NC	20	NC
9	D1-	21	NC
10	D1+	22	GND
11	GND	23	C+
12	NC	24	C-

4.5 CN5: VGA input

Top view corresponding serial number (For interface parameters, please refer to model: X0615FT7BL3)



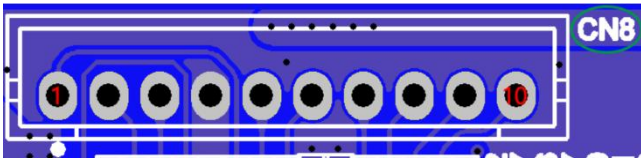
Pin	Pinout markings	Pin	Pinout markings
1	R+	9	NC
2	G+	10	GND
3	B+	11	NC
4	NC	12	SDA

5	NC	13	HS
6	R_GND	14	VS
7	G_GND	15	SCL
8	B_GND		

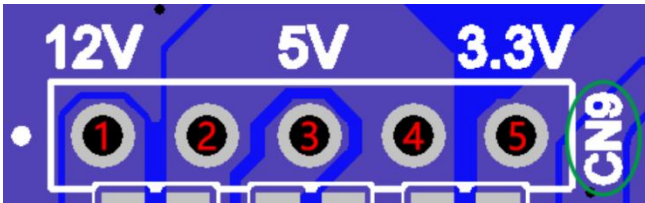
4.6 CN6: ADC

Pin	Pinout markings	(Corresponding serial number in the top view) Default is empty; add if needed.
1	5V	Interface description: PH2.0mm-3Pin 
2	ADC	
3	GND	

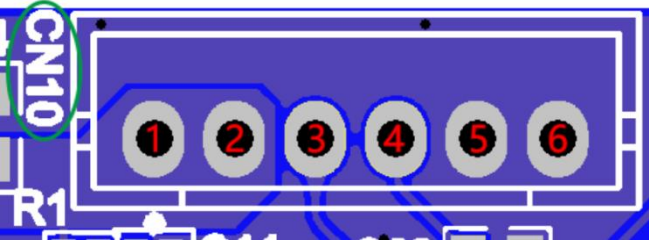
4.7 CN8: Keypad

Pin	Pinout markings	(Corresponding to the top view diagram) Interface description: PH2.0mm-10Pin
1	K0	
2	LEDR	
3	LEDG	
4	GND	
5	K1	
6	K2	
7	K3	
8	K4	
9	K5 (No function by default)	
10	K6 (No function by default)	

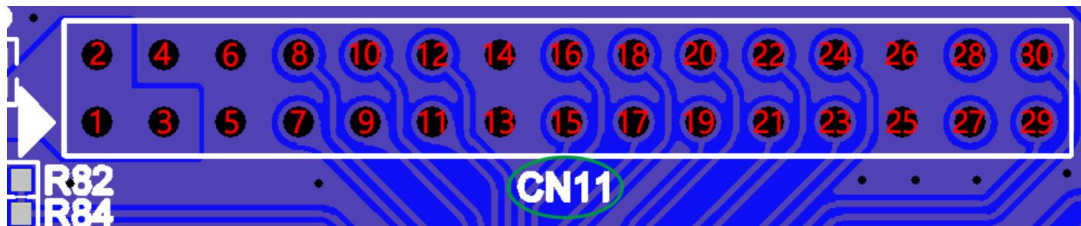
4.8 CN9: Screen drive voltage settings

Pin	Pinout markings	(Top view corresponding to the sequence number) Interface description: 2.54mm-1*5Pin
1-2 short circuit	12V	
2-3 short circuit	5V	
3-4 short circuit		
4-5 short circuit	3.3V	

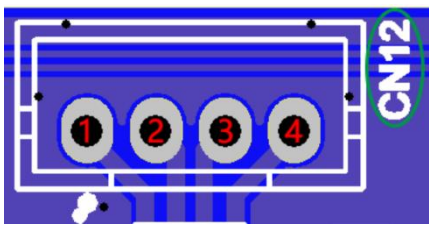
4.9 CN10: Backlight control

Pin	Pinout markings	Top view corresponding to serial number (Interface description: PH2.0mm-6Pin)
1	12V	
2	12V	
3	BLO	
4	ADJ	
5	GND	
6	GND	

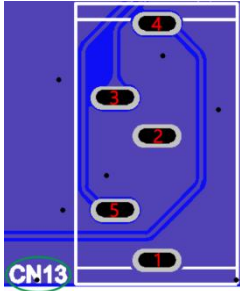
4.10 CN11: LVDS input

Top view corresponding to serial number (Interface description: 2.0mm-2*15Pin)			
			
Pin	Pinout markings	Pin	Pinout markings
1	VCC	16	TXEC+
2	VCC	17	TXE3-
3	VCC	18	TXE3+
4	GND	19	TXO0-
5	GND	20	TXO0+
6	GND	21	TXO1-
7	TXE0-	22	TXO1+
8	TXE0+	23	TXO2-
9	TXE1-	24	TXO2+
10	TXE1+	25	GND
11	TXE2-	26	GND
12	TXE2+	27	TXEC-
13	GND	28	TXEC+
14	GND	29	TCO3-
15	TXEC-	30	TXO3+

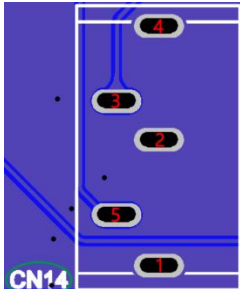
4.11 CN12: Power amplifier output

Pin	Pinout markings	Top view corresponding to serial number (Interface description: PH2.0mm-4Pin)
1	R-	
2	R+	
3	L+	
4	L-	

4.12 CN13: Headphone output

Pin	Pinout markings	Top view corresponding serial number (Interface description: PJ-325)
1	GND	
2	GND	
3	R	
4	GND	
5	L	

4.13 CN14: Headphone input

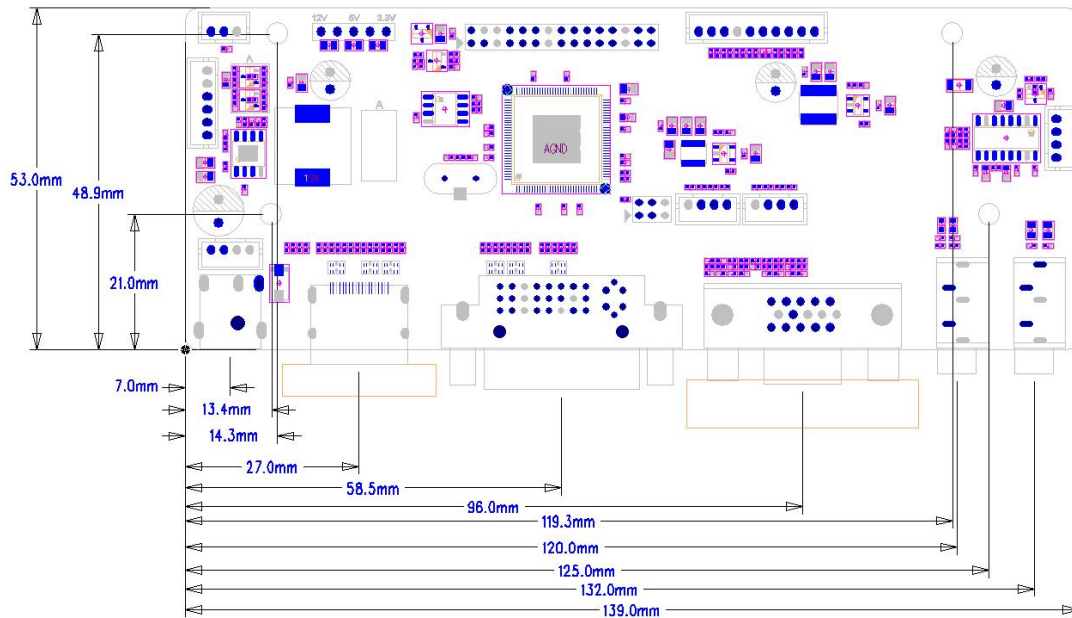
Pin	Pinout markings	Top view corresponding serial number (Interface description: PJ-325)
1	GND	
2	GND	
3	R	
4	GND	
5	L	

5.Product dimensions.

PCB mechanical dimensions

Unit: mm

Tolerance: $\pm 0.3\text{mm}$



6.Usage environment.

- Relative humidity (non-condensing): $\leq 80\%$
- Storage conditions: Temperature $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$; Relative humidity 5-85%
- Operating conditions: Temperature $-20^{\circ}\text{C} \sim +85^{\circ}\text{C}$; Relative humidity 20-80%

7.Precautions.

- Keep the circuit board away from strong static electricity.
- Ensure you use a suitable power adapter; overvoltage or undervoltage may cause abnormal operation or even damage.
- Before powering on, check that the connection direction and screen voltage are correct; otherwise, the LCD module may be damaged.
- Avoid dropping metal objects onto the circuit board while it is operating.
- Do not plug or unplug connectors while the circuit board is operating.
- Do not disassemble the module.
- If the main board surface is dirty, please clean it with a soft cloth (not a wet cloth).

8. Version update.

Rev.	Date	Note
V1.0	2025-05-07	
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