

Product Specifications

Product Model: LRX H2LVDS40P81 V2.0

Product Code: A00853

Update Date: 2025.11.27

Drafting	Review	Approval
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1. Product Overview.

The LRX_H2LVDS40P81_V2.0 is a multi-functional display driver board that supports one HDMI input and one LVDS output. The LVDS output supports a maximum resolution of 1366x768@60Hz and is commonly used to drive LVDS screens with resolutions of 12.1 inches and below. It supports functions such as button-controlled backlight brightness adjustment and scaling. It has a built-in backlight driver with a maximum output current of 260mA. It also includes a built-in USB interface for connecting USB touchscreens. Several serial/IIC/ADC/GPIO ports are reserved for unconventional applications such as serial control, light-sensing automatic dimming, and infrared remote control, but these functions are not enabled by default.

2. Product features.

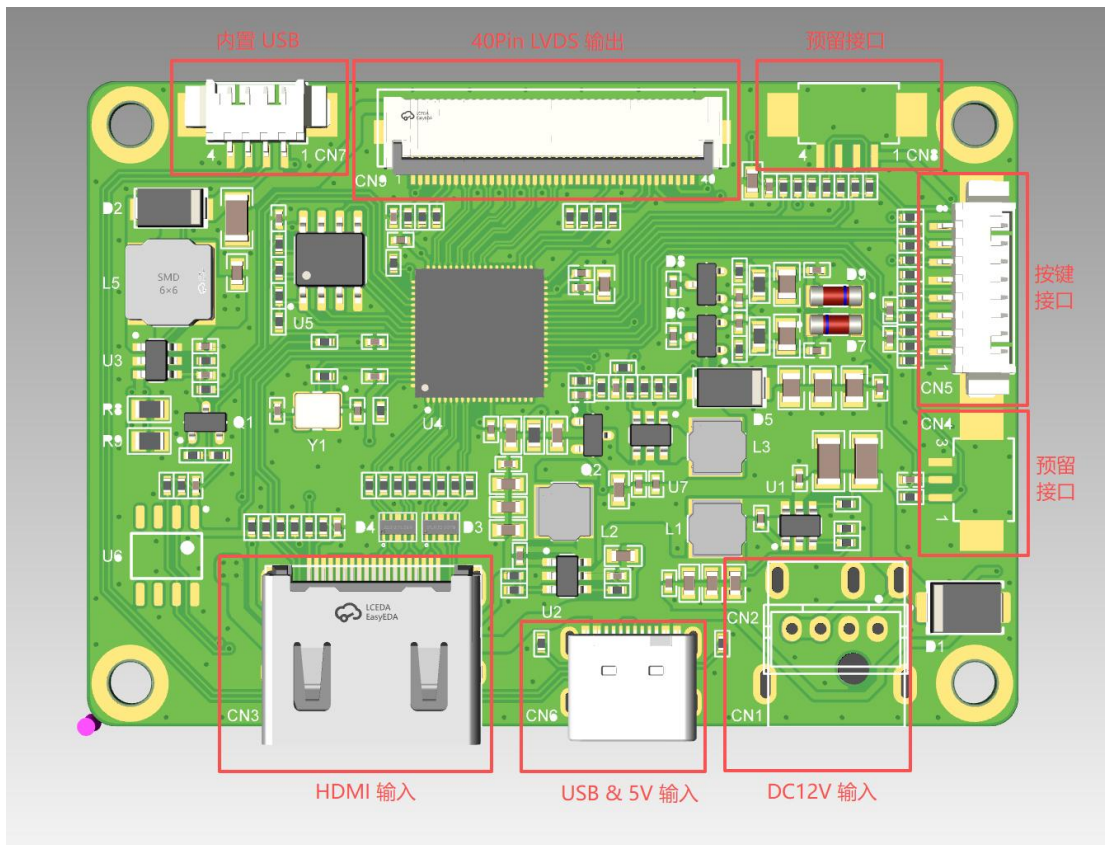
Functions	Describe
Power input	PD 5V / DC12V
Signal input	HDMI (maximum input support 1920x1200@60Hz)
Signal output	1-Port LVDS (40Pin)
Buttons	Adjustable language, backlight, brightness, contrast, etc.
Backlight	Interfaces are included in the 40Pin screen interface, maximum
Other	Serial port/IIC/ADC/GPIO

The backlight power is a maximum of 5W, and the maximum voltage is 26V. When using high power, please check if the USB power supply is sufficient to power the backlight.

3. Interface function description.

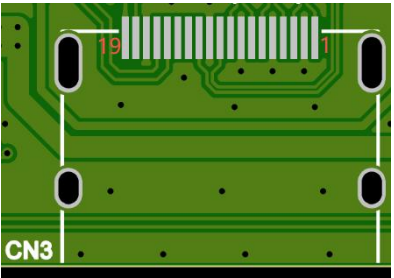
Seat number	Describe
CN1/CN2	DC 12V input
CN3	HDMI input
CN6	USB 5V power and USB input
CN5	Buttons
CN9	LVDS output
CN7	Built-in USB (parallel with CN6 USB)
CN8	Reserved
CN4	Reserved

Top view (interface description)

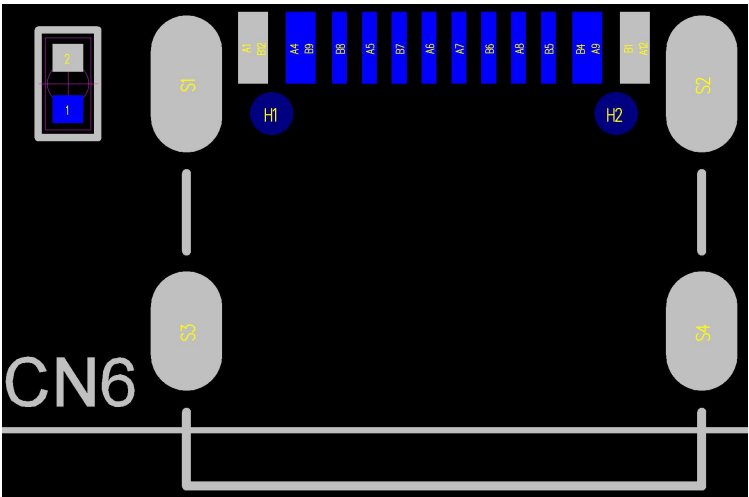


4. Interface definition.

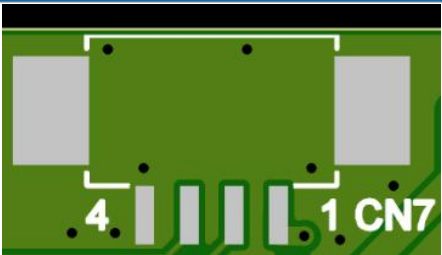
4.1 CN3: HDMI input

Pin	Pin marking	Pin	Pin marking	(Corresponding serial number in the top view)
1	DATA2+	11	CLK SHIELD	
2	DATA2 SHIELD	12	CLK-	
3	DATA2-	13	NC	
4	DATA1+	14	NC	
5	DATA1 SHIELD	15	SCL	
6	DATA1-	16	SDA	
7	DATA0+	17	GND	
8	DATA0 SHIELD	18	+5V POWER	
9	DATA0-	19	HOT PLUG	
10	CLK+			

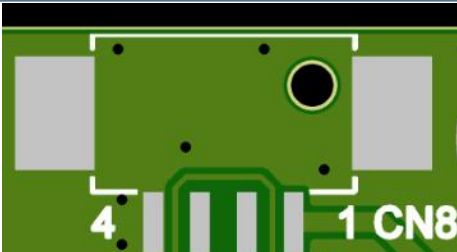
4.2 CN6: USB & 5V input

Pin	Pin marking	(Corresponding serial number in the top view)
A1	GND	
B12	GND	
A4	VBUS	
B9	VBUS	
B8	SBU2	
A5	CC1	
B7	DN2	
A6	DP1	
A7	DN1	
B6	DP1	
A8	SBU1	
B5	CC2	
B4	VBUS	
A9	VBUS	
B1	GND	
A12	GND	

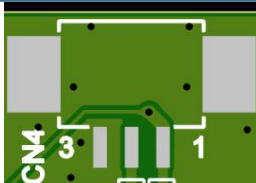
4.3 CN7: Built-in USB

Pin	Pin marking	(Corresponding serial number in the top view)
1	VBUS	
2	DM	
3	DP	
4	GND	

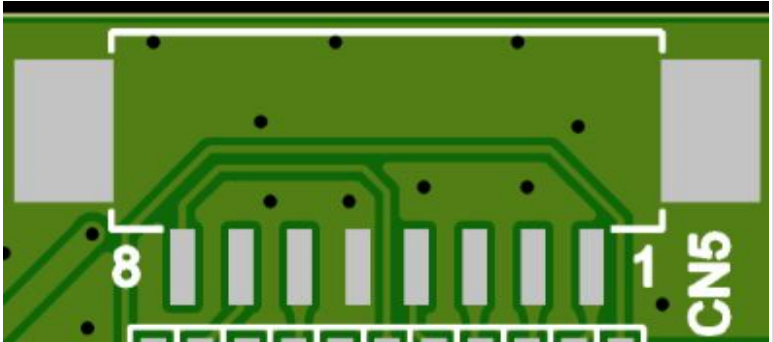
4.4 CN8: 预留接口

Pin	Pin marking	(Corresponding serial number in the top view)
1	5V	
2	C/R	
3	D/T	
4	GND	

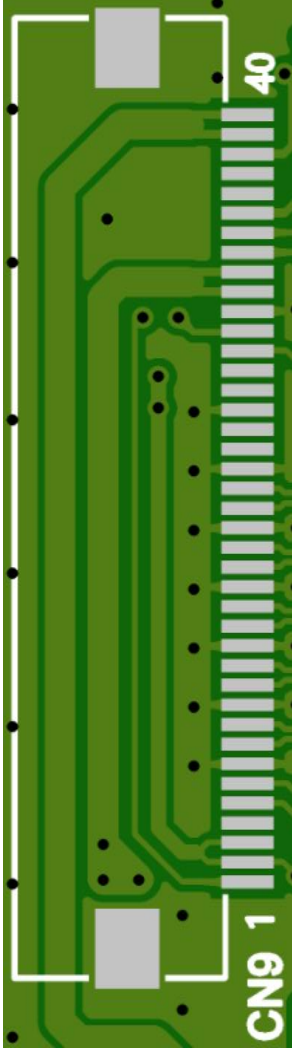
4.5 CN4: Reserved interface

Pin	Pin marking	(Corresponding serial number in the top view)
1	3.3V	
2	ADC	
3	GND	

4.6 CN5: Keypad interface

Pin	Pin marking	(Corresponding serial number in the top view)
1	MENU	
2	EXIT	
3	DOWN	
4	UP	
5	GND	
6	LEDG	
7	LEDR	
8	POWER	

4.7 CN9: LVDS output

Pin	Pin marking	(Corresponding serial number in the top view)
1	VCOM	
2	VDD	
3	VDD	
4	NC	
5	RESET	
6	STBYB	
7	GND	
8	TX0-	
9	TX0+	
10	GND	
11	TX1-	
12	TX1+	
13	GND	
14	TX2-	
15	TX2+	
16	GND	
17	TXC-	
18	TXC+	
19	GND	
20	TX3-	
21	TX3+	
22	GND	
23	NC	
24	NC	
25	GND	
26	NC	
27	NC	
28	DITH	
29	AVDD	
30	GND	
31	LED-	
32	LED-	
33	LR	
34	UD	
35	VGL	
36	NC	
37	NC	
38	VGH	
39	LED+	

40	LED+	
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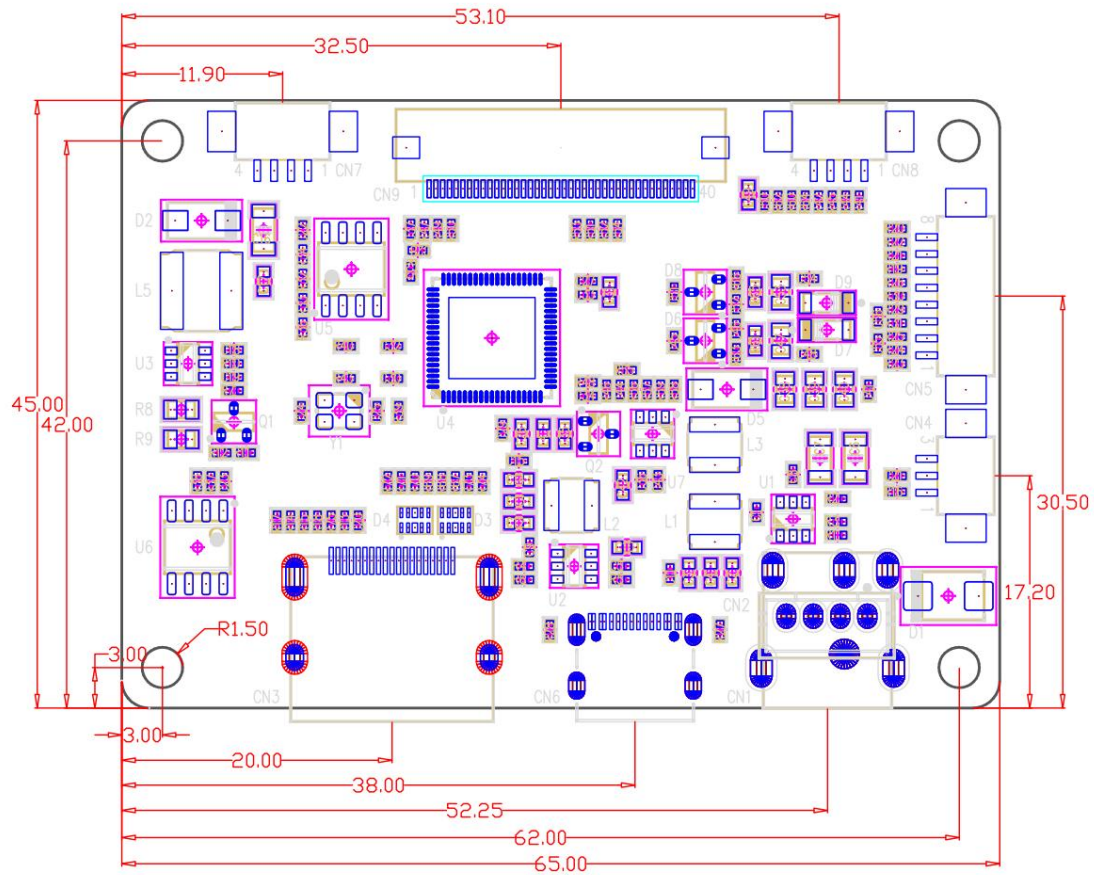
5. Product dimensions.

PCB Mechanical Dimensions

Unit: mm

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

PCB Thickness: 1.6mm



6. Usage environment.

- Relative humidity (non-condensing): $\leq 80\%$
- Storage conditions: Temperature -30°C to $+85^{\circ}\text{C}$; Relative humidity 5-85%
- Operating conditions: Temperature 20°C to $+70^{\circ}\text{C}$; 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, carefully check the direction of the connecting cables and ensure the screen voltage is 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 mainboard surface is dirty, please clean it with a soft cloth (not a wet cloth).

8. Version update.

Rev.	Date	Note
V1.0	2025-10-22	
V2.0	2025-11-27	