

Product Specifications

Product Model: H2E25BE_E_V3.0

Product Code: A00609

Drafting	Review	Approval
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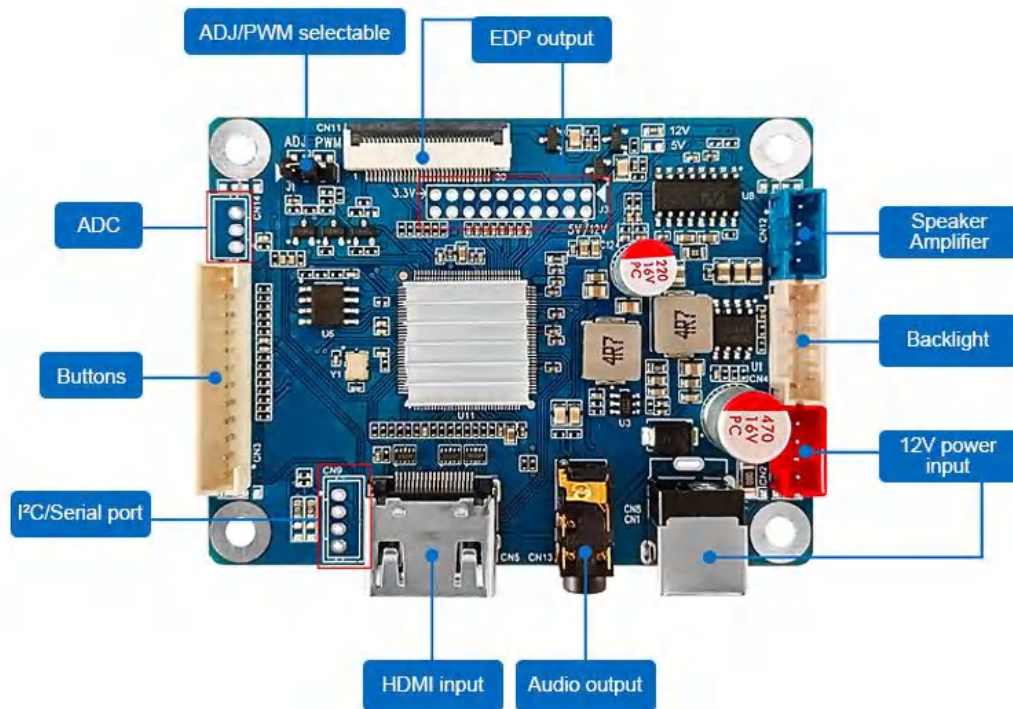
1. Product Overview.

The LRX_H2E25BE_E_V3.0 is a display driver board with 1 HDMI input and 2-lane eDP output, supporting resolutions up to 1920x1200@60Hz. It supports 3.5mm headphone output and 3W dual-channel audio amplifier output. It uses a 12V power input and has a standby power consumption of less than 0.2W.

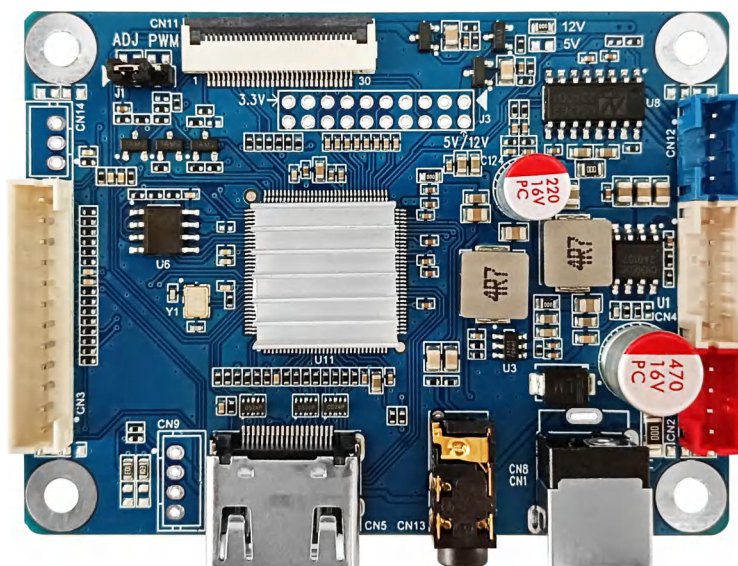
2. Interface function description.

Seat number	Describe
CN1 / CN2	12V Power Input
CN3	Keypad
CN4	Backlight Control Interface
J1	Selectable ADJ or PWM, default is PWM. (If using CN4 for backlight, ADJ or PWM must be selected)
CN5	HDMI Signal Input
CN9	I ² C or Serial Interface (default no function, custom functions supported)
CN12	3W Dual-Channel Amplifier (8 ohm 5W speakers recommended)
CN13	3.5mm Headphone Output
CN14	ADC (default no function, custom functions supported)
CN11	EDP Output
J3	EDP Output (default empty, please confirm with sales personnel if needed)

Interface functions



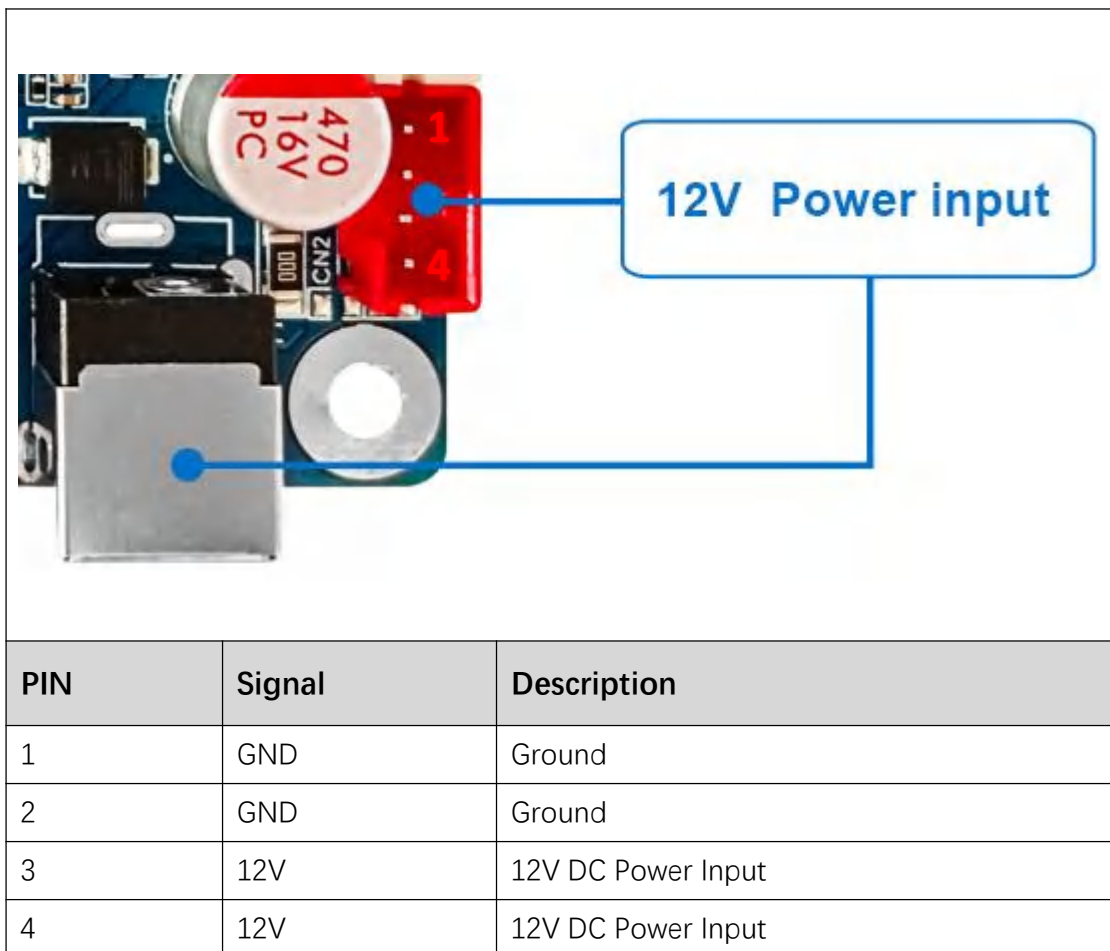
Actual product image



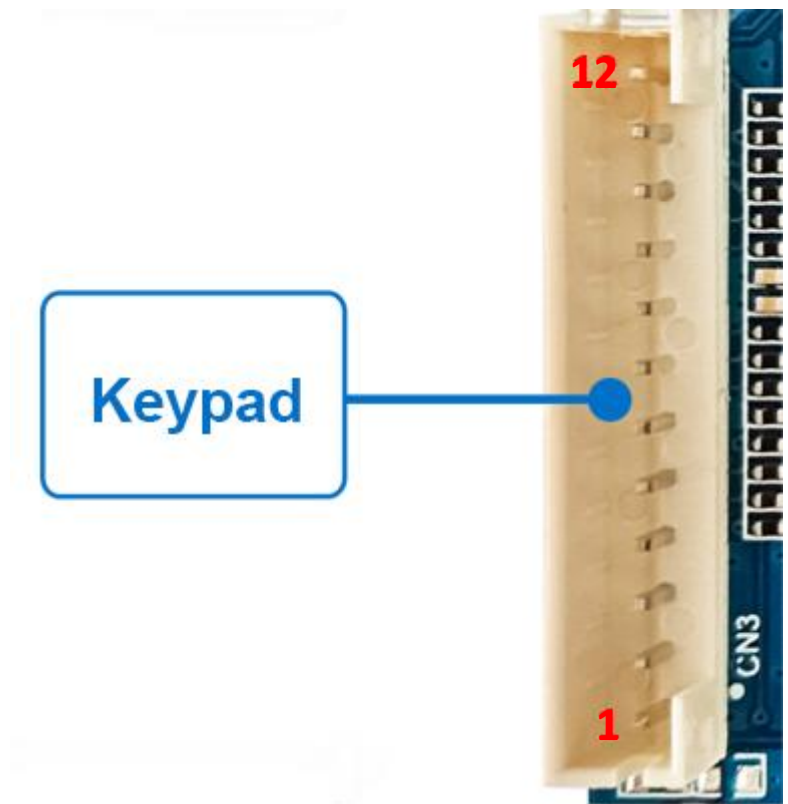
3. Interface definition.

3.1 CN1: 12V power input (DC-044A-2.0mm)

3.2 CN2: 12V power input (2.0mm-4Pin)

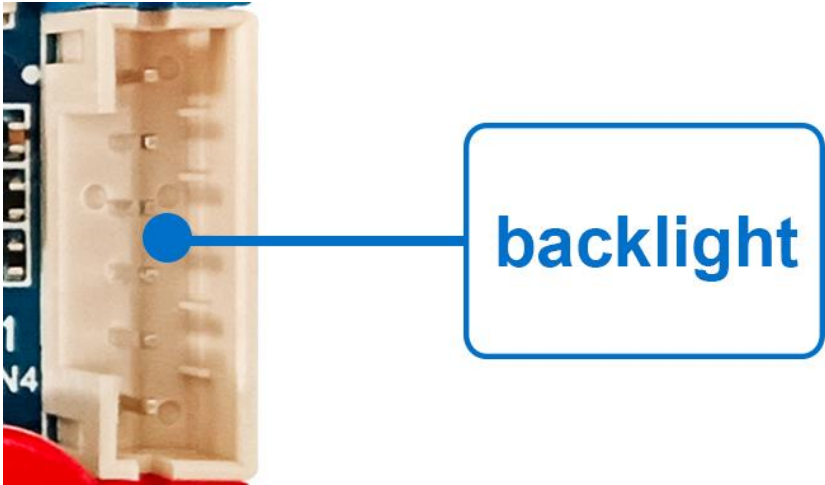


3.3 CN3: Keypad (2.0mm-12Pin)

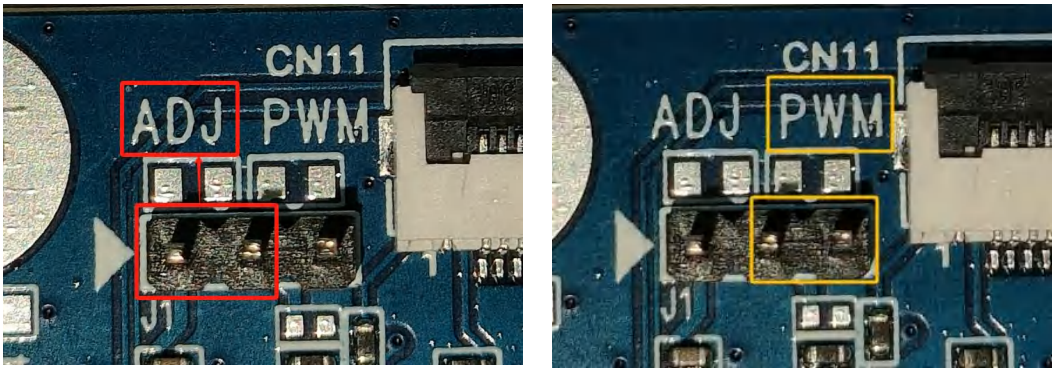


PIN	Signal	Description
1	5V	5V Power
2	IR	IR input (No functionality is provided by default, but custom functionality is supported.)
3	POWER	Power Key
4	LEDR	LED Red
5	LEDG	LED Green
6	GND	Ground
7	DOWN	Down Key
8	UP	Up Key
9	AUTO	Auto Key
10	MENU	Menu Key
11	K5	K5
12	K6	K6

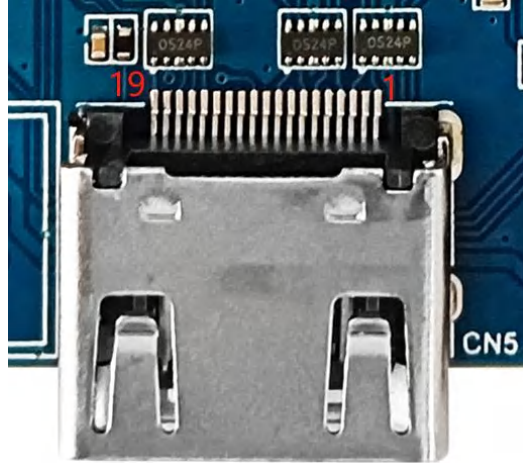
3.4 CN4: Backlight control interface (2.0mm-6Pin)

		
PIN	Signal	Description
1	12V	12V DC Power Supply
2	12V	12V DC Power Supply
3	BLO	Backlight Enable(active high signal)
4	ADJ/PWM	Backlight(J1 on the right is for PWM, J1 on the left is for ADJ)
5	GND	Ground
6	GND	Ground

3.5 J1: Backlight selection: PWM / ADJ (2.0mm-1*3Pin)
The default output is PWM.

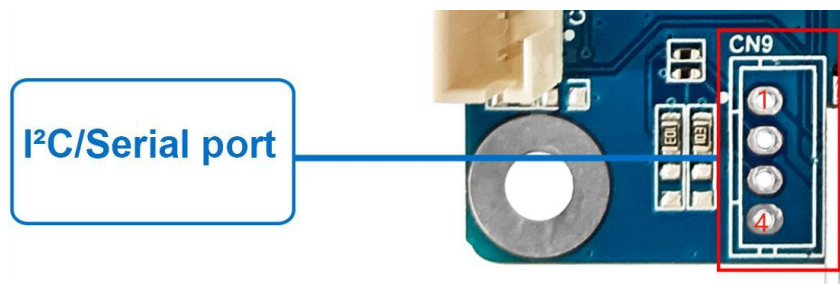


3.6 CN5: HDMI Signal input



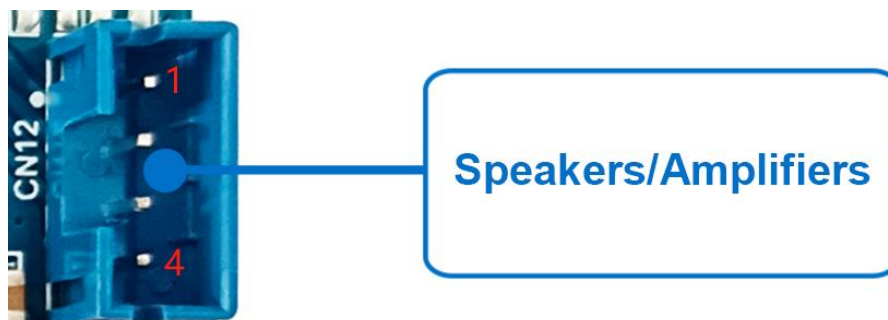
PIN	Signal	Description
1	DATA2+	HDMI Differential Signal Data 2+
2	DATA2 SHIELD	HDMI Differential Signal Data 2 Shield
3	DATA2-	HDMI Differential Signal Data 2-
4	DATA1+	HDMI Differential Signal Data 1+
5	DATA1 SHIELD	HDMI Differential Signal Data 1 Shield
6	DATA1-	HDMI Differential Signal Data 1-
7	DATA0+	HDMI Differential Signal Data 0+
8	DATA0 SHIELD	HDMI Differential Signal Data 0 Shield
9	DATA0-	HDMI Differential Signal Data 0-
10	CLK+	HDMI Differential Signal Data Clock+
11	CLK SHIELD	HDMI Differential Signal Data Clock Shield
12	CLK -	HDMI Differential Signal Data Clock-
13	NC	NO Connect
14	NC	NO Connect
15	SCL	Serial Clock Line for Display Data Channel
16	SDA	Serial Data Line for Display Data Channel
17	GND	Ground
18	+5V POWER	+5V Power Line
19	HOT PLUG	Hot Plug Detect

3.7 CN9: I²C or serial interface (2.0mm-4Pin)



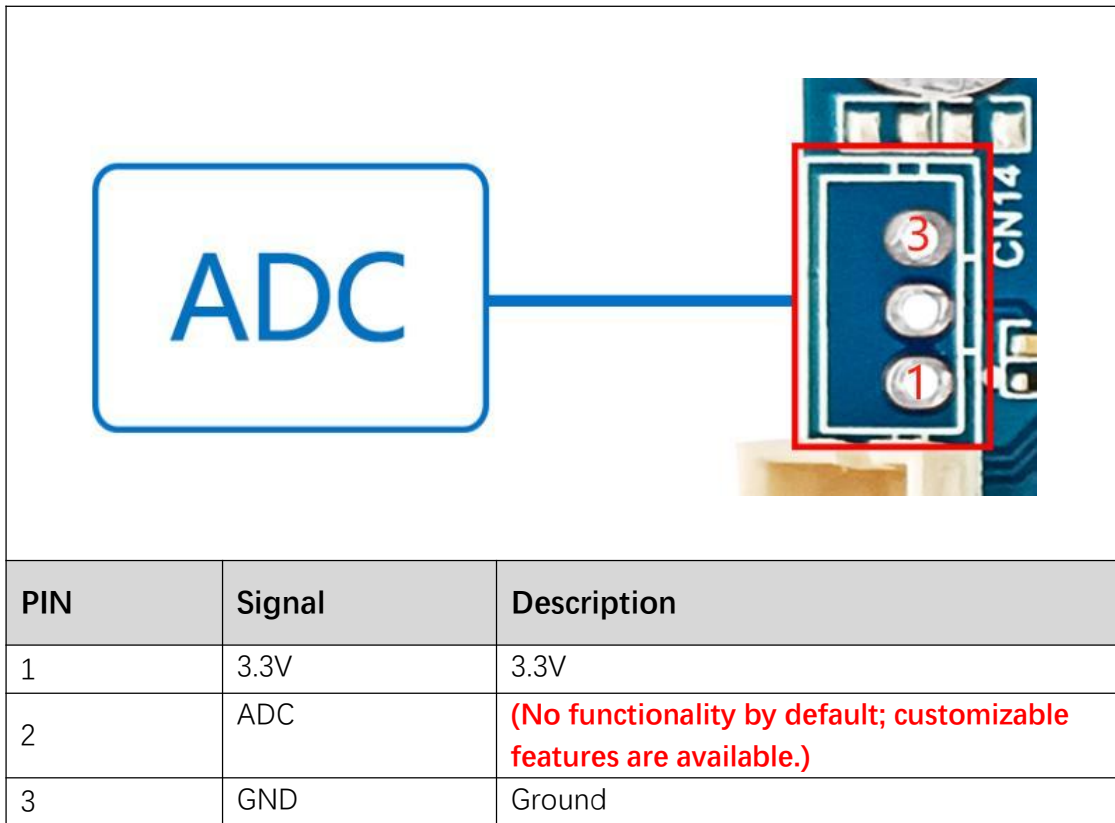
PIN	Signal	Description
1	5V	5V
2	SCL/RXD	I2C SCL/RXD(No functionality by default; customizable features are available.)
3	SDA/TXD	I2C SDA/TXD(No functionality by default; customizable features are available.)
4	GND	Ground

3.8 CN12: Amplifier/Speaker (2.0mm-4Pin)

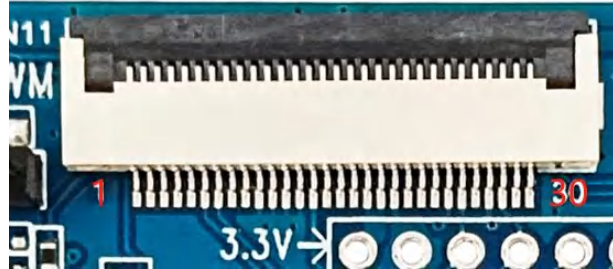


PIN	Signal	Description
1	L-	Left Channel Output-
2	L+	Left Channel Output+
3	R+	Right Channel Output+
4	R-	Right Channel Output-

3.9 CN14: ADC interface (2.0mm-3Pin)



3.10 CN11: EDP signal output (0.5mm-30Pin bottom contact surface)



PIN	Signal	Description
1	NC	NO Connect
2	LED_VCCS	LED Power
3	LED_VCCS	LED Power
4	LED_VCCS	LED Power
5	LED_VCCS	LED Power
6	NC	NO Connect
7	NC	NO Connect
8	LED_PWM	LED Backlight Adjust
9	LED_EN	LED Backlight Enable
10	GND	Ground
11	GND	Ground
12	GND	Ground
13	GND	Ground
14	HPD	Hot Plug Detect
15	GND	Ground
16	GND	Ground
17	NC	NO Connect
18	3V3_PANEL	Panel Power
19	3V3_PANEL	Panel Power
20	GND	Ground
21	AUX-	Component Signal for Auxiliary Channel
22	AUX+	True Signal for Auxiliary Channel
23	GND	Ground
24	D0-	Display Port Lane 0- Output
25	D0+	Display Port Lane 0+ Output
26	GND	Ground
27	D1-	Display Port Lane 1- Output

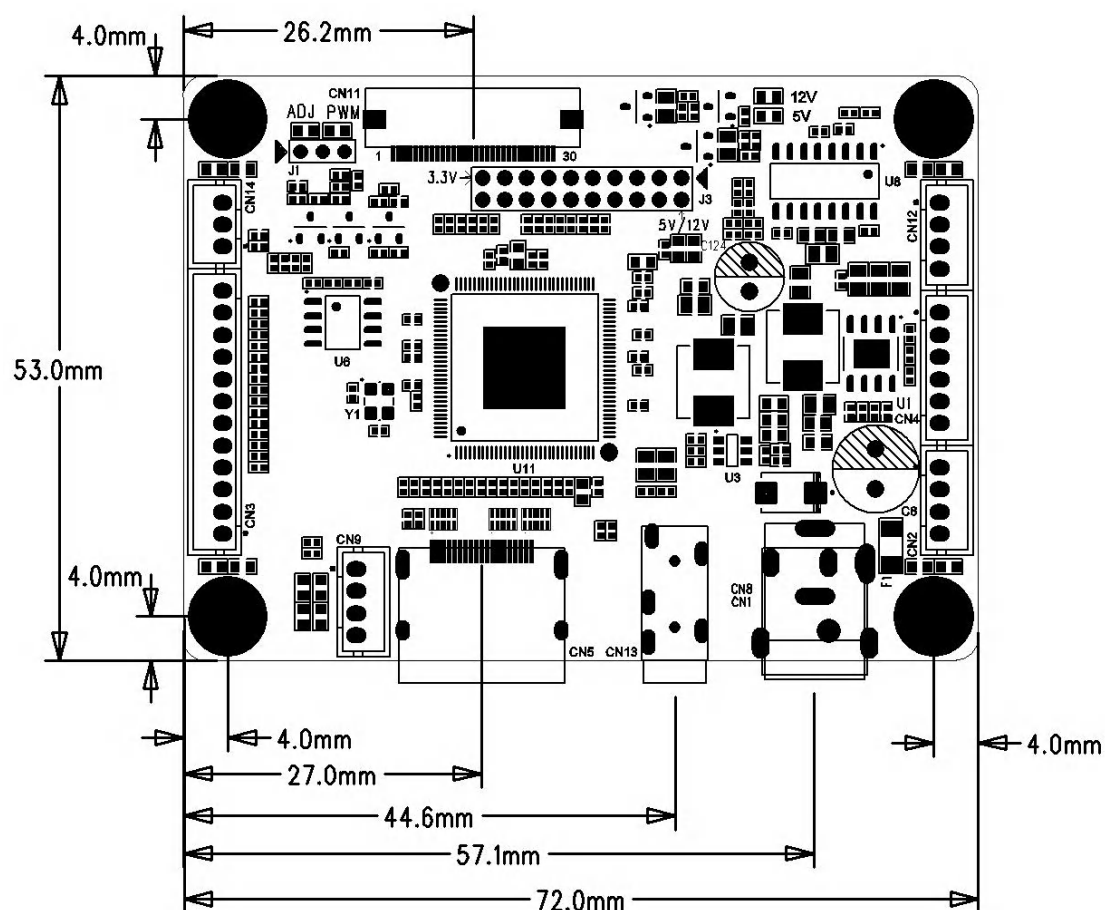
19	3.3V	Supply Voltage 3.3V
20	HPD	Hot Plug Detect

4. Product dimensions.

PCB mechanical dimensions

Unit: mm

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



5. Usage environment.

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

6. Precautions.

- Keep the circuit board away from strong static electricity.
- Ensure the connection direction and screen voltage are correct before powering on, otherwise the LCD module may be damaged.
- Avoid dropping metal objects onto the circuit board while it is operating.
- Do not push or pull the 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).

7. Version update.

Version Number	Date	Remarks
V1.0	2023-07-19	
V2.0	2024-03-01	
V3.0	2024-03-11	
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