

APPROVAL SHEET

TFT LCD AD Control Board

Model: VDH68 V1.1



VDH68 V1.1	
Function:	VGA/DVI/HDMI Max Resolution: 1920x1200

ROHS Compliant

Designed in China

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1.INTRODUCTION

JZ-VDH68 is a high-quality TFT LCD monitor controller board with VGA+DVI+HDMI inputs, As the board is designed to act as a full monitor interface and a eDP interface, besides the main functionality, also various appealing On-Screen-Display Menu layouts are possible on customer' s request.

Key features:

- * LVDS output resolution up to 1920x1200**
- * Light sensor (optional)**
- * Working temperature: -20 -- 65°C**
- * Function of remote control**
- * Support IR function**
- * Support LVDS and eDP interfaces**
- * The audio amplifier supports 2x10W at most**
- * Support serial port protocol control**

IMPORTANT USAGE NOTE

This equipment is for use by developers and integrators. The manufacturer accepts no liability for damage or injury caused by the use of this product. It is responsibility of the developer, integrators or other users of this product to:

- Ensure that all necessary and appropriate safety measures are taken.
- Obtain suitable regulatory approval as may be required.
- Check power settings to all component parts before connection.

DISCLAIMER

There is no implied or expressed warranty regarding this material.

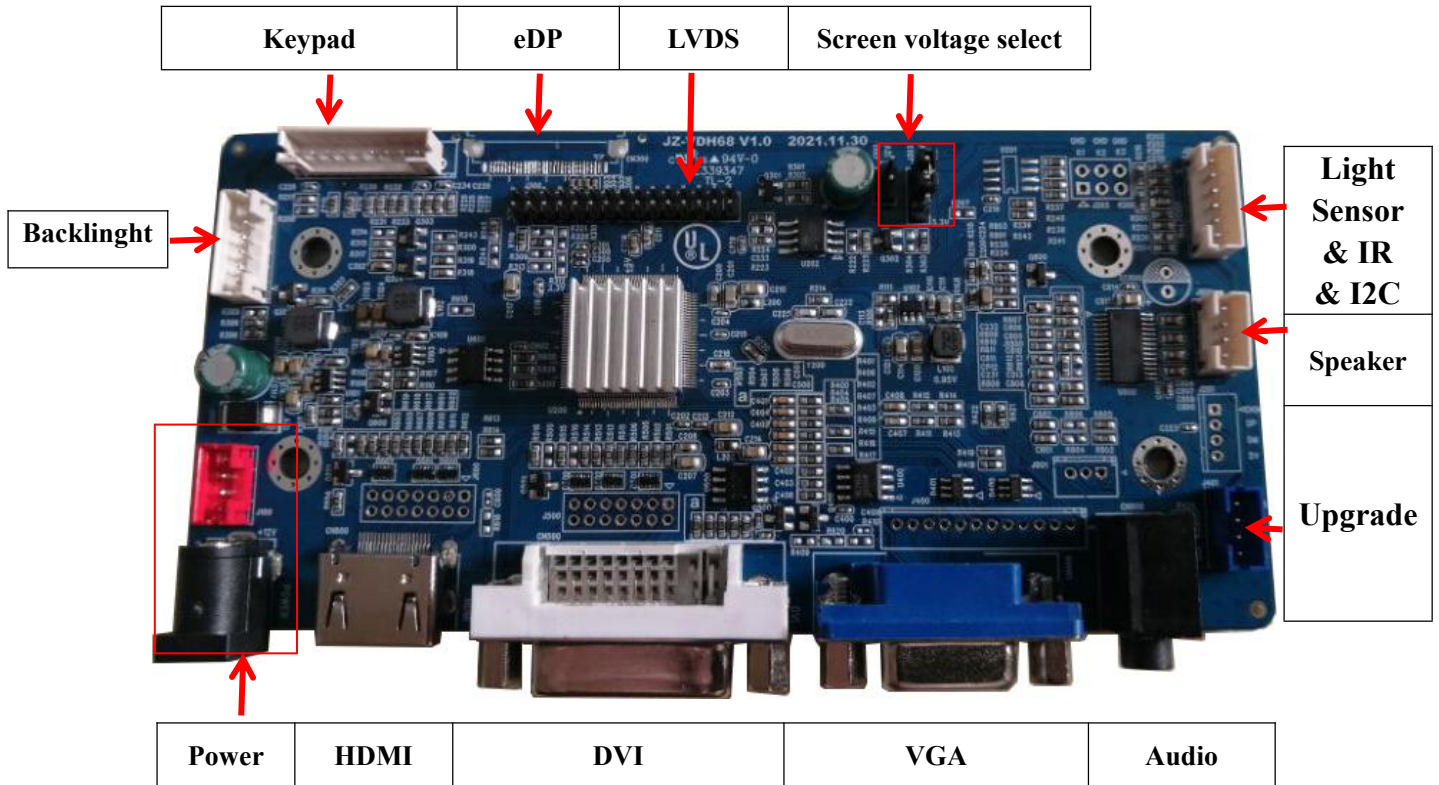
2.GENERAL SPECIFICATION

Output signal:	Max resolution:	Max. 1920x1200
	Output:	Single/Dual LVDS
Signal Input:	Analog RGB:	Horizontal Freq : 30—120KHz Vertical Freq : 50—75Hz 0.7Vp-p@75ohm Separate / Composite / SOG sync support
	DVI/HDM:	Horizontal Freq : 30—120KHz Vertical Freq : 50—75Hz
OSD Keypad:		Power, Menu, Exit, Plus, Minus
	Menu type:	Bitmap Menu
	Language:	English/Chinese/ (optional multi-language)
OSD MENU:	Picture	Mode/Brightness/Contrast/Saturation/Sharpness/Hue
	FUNCTION	Language/Reset/Color Temp.
	PC	Clock/Phase/H position/V position/Auto configure
POWER	Stand-by	<0.5W 12Vstb/200mA
	Input	12V/dc Note1)

Note 1) Max power is depending on the subject display to be used.

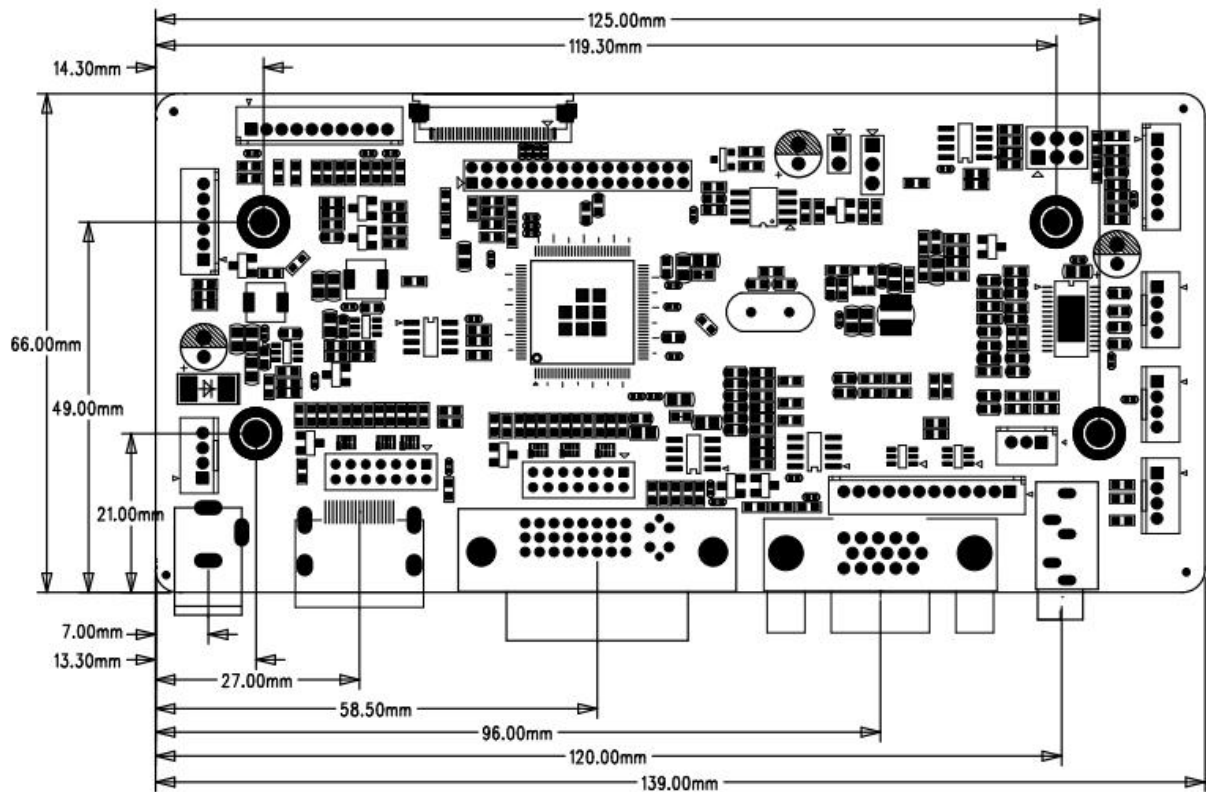
- **EDID data is controllable to change the necessary information. Preferred resolution.**
- **Optional support DDC/CI.**

3. CONTROLLER PICTURE



4. CONTROLLER DIMENSIONS

PCB height: 1.6 mm
Total height: 15.0 mm
Length and width: 139.0 x 66.0 mm



5.ELECTRICAL SPECIFICATION

Subject	Description	Min	Typical	Max	Unit	Remark
Vin	Input voltage	10	12	16	V(dc)	Note1)
Iin	Input current		0.089		A	12V input (Board only)
Ir	Rush current			1.5	A	
Vadj	Backlight ADJ voltage	0	T	5V	V(dc)	
Hst	Storage humidity	10		90	%RH	
Hop	Working humidity	10		90	%RH	
Tst	Storage Temperature	-20		65	°C	
Top	Working Temperature	-20		65	°C	

Note1): Attention: input power of LED Backlight board and LCD panel.

Note2): Make sure correct jumper and switches setting to match the target LCD panel.

Note3): The audio amplifier is not included in the input current test. Input current test results:

No signal: 0.045A; VGA: 0.066A; DVI/HDMI: 0.077A;Connect all signals: 0.089A.

6. OSD Keypad

1) 5 keys

5 keys	Menu	Shortcut key
POWER	Power key	Power key
MENU	Enter	Menu key
E/S	Turn off	Select input source
UP	Move up/ Increase	Increase brightness
DOWN	Move down/ Reduce	Reduce brightness

2) 6 keys

6 keys	Menu	Shortcut key
POWER	Power key	Power key
MENU	Enter	Menu key
E/S	Turn off	Select input source
UP	Move up/ Increase	Increase brightness
DOWN	Move down/ Reduce	Reduce brightness
AUTO	Nothing	Auto adjust image

3) 7 keys

7 keys	Menu	Shortcut key
POWER	Power key	Power key
MENU	Enter	Menu key
E/S	Turn off	Select input source
UP	Move up/ Increase	Increase brightness
DOWN	Move down/ Reduce	Reduce brightness
AUTO	Reduce	Increase contrast
KEY1	Increase	Reduce contrast

7. CONNECTOR, PINOUT

1) CN100 INPUT DC POWER Connector

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

2) J100 INPUT PIN POWER Connector

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

3) J300 LCD Interface (LVDS/eDP)

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	VCC	11	RXO2-/LANE1_N	21	RXE1-
2	VCC	12	RXO2+/LANE1_P	22	RXE1+
3	VCC	13	GND	23	RXE2-
4	AUX_CH_P	14	GND	24	RXE2+
5	AUX_CH_N	15	RXOC-	25	GND
6	GND	16	RXOC+	26	GND
7	RXO0-	17	RXO3-	27	RXEC-
8	RXO0+/eDP_HPD	18	RXO3+	28	RXEC+
9	RXO1-/LANE0_N	19	RXE0-	29	RXE3-
10	RXO1+/LANE0_P	20	RXE0+	30	RXE3+

Attention: 1) LCD PANEL voltage 'VCC JUMPER' setting.

2) When connecting a single LVDS panel, please connect the one near the power pin.

3) The ones in red are eDP definitions, non-standard definition.

4) CN300 eDP FPC Interface

Pin No.	Function	Pin No.	Function
1	NC	16	GND
2	GND	17	eDP_HPD
3	LANE1_N	18	GND
4	LANE1_P	19	GND
5	GND	20	GND
6	LANE0_N	21	GND
7	LANE0_P	22	EN
8	GND	23	ADJ
9	AUX_CH_P	24	NC

10	AUX_CH_N	25	NC
11	GND	26	+12V
12	VLCD	27	+12V
13	VLCD	28	+12V
14	NC	29	+12V
15	GND	30	NC

5) J202 Keypad Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	POWER	5	UP	9	E/S
2	LED_R	6	DOWN	10	KEY1
3	LED_G	7	AUTO		
4	GND	8	MENU		

6) J301 Backlight Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	12V	3	EN	5	GND
2	12V	4	ADJ	6	GND

7) J400 Analog RGB (VGA) PIN Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	GND	5	R	9	B
2	VS	6	GND	10	GND
3	HS	7	G	11	DAT(SDA)
4	GND	8	GND	12	CLK(SCL)

8) J600 HDMI PIN Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	GND	6	DAT0+	11	SCL
2	DAT2+	7	DAT0-	12	SDA
3	DAT2-	8	DCLK +	13	5V(HDMI5V)
4	DAT1+	9	DCLK -	14	HPD
5	DAT1-	10	GND		

9) J500 DVI PIN Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	GND	6	DAT0+	11	SCL
2	DAT2+	7	DAT0-	12	SDA
3	DAT2-	8	DCLK +	13	5V(DVI5V)
4	DAT1+	9	DCLK -	14	HPD
5	DAT1-	10	GND		

10) J801 External input Audio Connector

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	LINE_L	2	GND	3	LINE_R

11) J800 Audio amplifier Connector

Pin No.	Function	Pin No.	Function
1	LP	3	RN
2	LN	4	RP

12) J200 Light Sensor & IR & I2C Connector (optional)

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	MSCL	3	IR	5	GND
2	MSDA	4	ADC	6	5V

13) J203 Other

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	K1	3	K2	5	K3
2	GND	4	GND	6	GND

14) J401 Upgrade Connector

Pin No.	Function	Pin No.	Function
1	3.3V	3	SCL
2	GND	4	SDA

8. MISC

Press the '+' key and the '-' key at the same time to enter the factory menu and start the aging mode.