APPROVAL SHEET

DM-ADTTR-018

Designed in China

目录

1 History 3
2 OverView 4
3 Feature 5
4 Parameter 5
5 OSD 6
5.1 5 button 6
5.2 6 button 6
5.3 7 button 6
6 Connector 7
6.1 Power Input（CN100） 7
6.2 Power Input （J100） 7
6.3 LVDS/eDP Output（J300） 7
6.4 eDP FPC Output（CN300） 8
6.5 OSD Interface（J202） 8
6.6 Backlight Interface（J301） 8
6.7 Analog RGB Input（J400） 9
6.8 DVI Input（J500） 9
6.9 HDMI Input（J600） 9
6.10 Light sensing, remote control and reserved control port（J200） 10
6.11 Serial Interface（J401） 10
6.12 Audio Input（J801） 10
6.13 Speaker Output（J800） 10
6.14 Other（J203） 10
7 Picture 11
8 Size 12

1 History

Revision No.	Revision Date	Revision	Description	Writer
1	Dec 1	1.0		

2 Overview

Before connecting the LCD screen, please confirm that all accessories are in accordance with the accessories. Please pay special attention to the LVDS line specification.

This driver board is mainly used to support TFT LCD screen. The driver board has 1 channel VGA, 1 channel DVI and 1 channel HDMI interface, and supports LVDS output interface and eDP output interface. The motherboard adopts MTK signal processing chip, which has powerful processing function and can support various standard and non-standard signals. The use of high specifications of the device, with good working performance.

* **Operating temperature range : -20 ~ 65℃。**
* **Optional addition of automatic light sensitive control**
* **Maximum resolution :1920x1200。**
* **receive remote control function**
* **Basic resolution up to 85Hz (if the LCD screen works at 85Hz)**
* **Supports LVDS output and eDP output**
* **Maximum amplifier support ：2X10W**
* **Supports serial protocol control**

3 Feature

OUTPUT	Maximum Resolution	Max：1920x1200				
	Interface	Single/Dual/ LVDS				
Signal	Analog RGB：	Horizontal Freq	30—120KHz			
		Vertical Freq	50—75Hz			
		0.7Vp-p@75ohm				
		Separate / Composite / SOG sync support				
	HDMI/DVI:	Horizontal Freq	30—120KHz			
		Vertical Freq	50—75Hz			
Button	Power, Menu, Exit, Plus, Minus					
Menu Type		Graphical menu				
Language		8 languages including Chinese and English				
Function	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:				

Note1: Please test the maximum power consumption according to the actual use

4 Parameter

Item	Description	Min	Typ	Max	Unit	Note
Vin	Input voltage	10	12	16	V(dc)	Note1)
Iin	Input current		0.089		A	12V input (Board only)
Ir	Impulse current			1.5	A	
Vadj	The back light plate adjusts the voltage	0	T	5V	V(dc)	
Hst	Humidity of storage	10		90	%RH	
Hop	Operating humidity	10		90	%RH	
Tst	Storage temperature	-20		65	℃	
Top	Temperature of operation	-20		65	℃	

Note1) : Because the voltage of the backlight board is taken from the motherboard, please pay attention to the input voltage of the backlight board.

Note2) : The input current test does not include A power amplifier, the input current is 0.045A without signal, and the input current is 0.066A when the VGA signal is connected, and the DVI is connected,Or HDMI signal when the input current is 0.077A, three signals at the same time access to the input current is 0.089A.

5 OSD

5.1 5 button

5 button	Menu	shortcuts
POWER	Power switch button	Power switch button
MENU	Confirmation	Menu
E/S	Quit	Switch the signal source
UP	Move up/increase	Increase in brightness
DOWN	Move down/decrease	Automatic image adjustment under brightness reduction/VGA

5.2 6 button

6 button	Menu	shortcuts
POWER	Power switch button	Power switch button
MENU	Confirmation	Menu
E/S	Quit	Switch the signal source
UP	Move up/increase	Increase in brightness
DOWN	Move down/decrease	Decreased brightness
AUTO	None	Automatic image adjustment under VGA

5.3 7 button

7 button	Menu	shortcuts
POWER	Power switch button	Power switch button
MENU	Confirmation	Menu
E/S	Quit	Switch the signal source
UP	Move up	Increase in brightness
DOWN	Move down	Automatic image adjustment under brightness reduction/VGA
AUTO	decrease	The contrast is reduced
KEY1	increase	The contrast increases

6 Connector

6.1 Power Input（CN100）

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

6.2 Power Input（J100）

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

6.3 LVDS/eDP Output（J300）

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

Note：1. When connecting to a single LVDS screen, please connect to the one near the power pin。

2. Marked in red is the point eDP panel card end definition, not our standard eDP dupont seat definition.

6.4 eDP FPC Output（CN300）

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

6.5 OSD Interface（J202）

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

6.6 Backlight Interface（J301）

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

Note： ADJ supports both voltage and PWM to adjust brightness. When connected to a screen with a built-in backlight board constant current source, please connect this pin to the 'PWM' of the LCD screen, and then choose our program with PWM logo

6.7 Analog RGB Interface（J400）

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

6.8 DVI Input（J500）

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

6.9 HDMI Input（J600）

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

6.10 Light sensing, remote control and reserved control port（J200）

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

6.11 Serial Interface（J401）

Pin No.	Function	Pin No.	Function
1	+3.3V(可不接)	3	SCL
2	GND	4	SDA

6.12 Audio Input（J801）

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

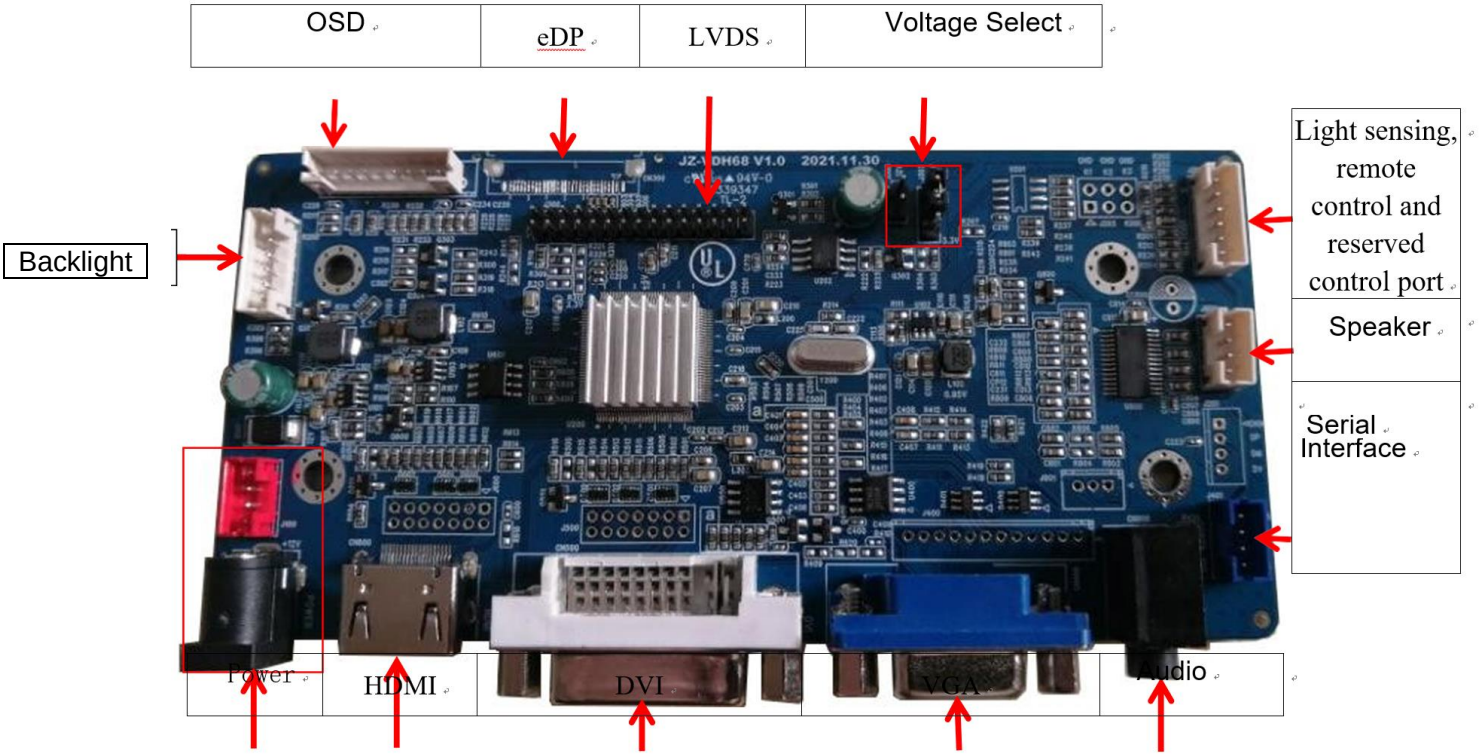
6.13 Speaker Output（J800）

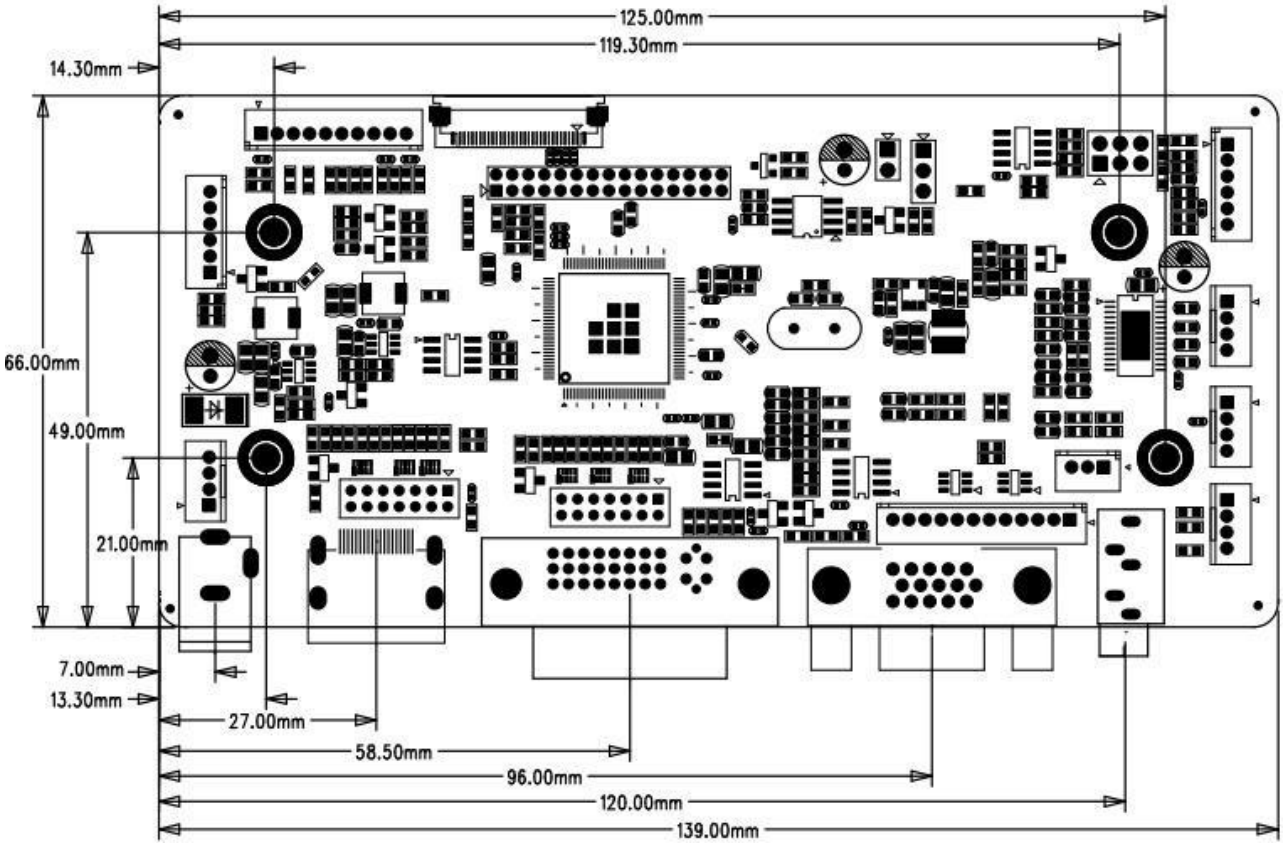
Pin No.	Function	Pin No.	Function
1	LP	3	RN
2	LN	4	RP

6.14 Other（J203）

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

7 Picture


OSD
eDP
LVDS
Voltage Select
Backlight
Light sensing, remote control and reserved control port
Speaker
Serial Interface
Power
HDMI
DVI
VGA
Audio

8 Size

PCB Thickness : 1.60 mm
Totol Thickness: 15.0 mm
Size: 139.0 x 66.0 mm