APPROVAL SHEET

Industrial-grade driver board

model number: JZ-V53 V1.1

JZ-V53 V1.1
Basic : **1 VGA / 1 HDMI/2 CVBS(I)/1CVBS(O)**
Maximum support resolution : **1920x1080**

Designed in China

目录

1 Version History

Revision No.	Revision Date	Revision	Description	Writer
1	January. 22	1.1	工业规格	JOWEN

2. Product Overview

Thank you for purchasing our driver board product. Before connecting to the LCD screen, please confirm that all accessories are compatible. Pay special attention to the specifications of the LVDS cable for driving the screen.
This driver board is mainly used to support TFT LCD screens. The driver board is equipped with 1 VGA input, 2 CVBS inputs, 1 CVBS output, 1 USB port, 1 YpBpR input, and 1 HDMI/DVI interface, and supports LVDS (6-bit, 8-bit) output. The main board uses an Mstar signal processing chip with powerful processing capabilities, which can support various standard and non-standard signals. High-specification components are used, ensuring good performance.
Operating temperature range: -20 to 60° C
Maximum supported resolution: 1920x1080
Supports remote control function

3. Product Features

2 CVBS signal inputs, 1 CVBS output, 1 VGA, 1 HDMI/DVI, 1 YPBPR, 1 USB
Supported video standards: NTSC M, NTSC-J, NTSC 4.43, PAL (B, D, G, H, M, N, I, Nc), 3D image filtering
On-Screen Display (OSD) and control
Supports boot-up screen
Supports infrared remote control signal
Supports flip function
Audio input function
Optional FM output

Special Features

High-definition multimedia decoding, full support for 1080P, and the board can be optionally equipped with a 2x8W power amplifier.
True-color boot-up screen.

4. Performance Parameters

Item	Description	min	typ	max	Unit	Note
Vin	Input voltage	**10**	**12**	**16**	**V(dc)**	**Note1)**
Iin	Input current		**0.6**		**A**	**12V input (Board only)**
Ir	Incrush current			**1.5**	**A**	
Vadj	Backlight Board Adjustment Voltage	**0**	**T**	**5V**	**V(dc)**	
Hst	Storage Humidity	**5**		**85**	**%RH**	
Hop	Operating Humidity	**20**		**80**	**%RH**	
Tst	Storage Temperature	**-20**		**60**	**℃**	
Top	Operating Temperature	**-20**		**60**	**℃**	

Note1) : Since the voltage of the backlight board is taken from the main board, please pay attention to the input voltage of the backlight board.。

5 Operation Menu

5.1 OSD Menu Function Keys

POWER	Power On/Off Button
MENU	**Menu / Confirm**
EXIT	Return / Signal Switch
UP	Move Up / Increase
DOWN	Move Down / Decrease
SOURCE	Reserved
LEFT	Reserved
RIGHT	Reserved

5.2 OSD Menu Item Instructions

5.2.1 Shortcut Menu Operations

In VGA mode, press DOWN to enter the automatic imag adjustment.

Press UP to enter the backlight adjustment (software adjustable).

Press EXIT to switch channels.

6 Connection Terminal Definitions

6.1 Standard Power Input Terminal（CN100）

CN100 is the standard power socket for power input (positive inside, negative outside)

6.2 Row Socket Power Input Terminal（J101）

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

6.3 LVDS输出端（J301）

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

Note: When connecting a single-channel LVDS screen with single or dual-channel eight-bit data, please connect the O (odd channel) closest to the power pin.

6.4 Button Port (J201)

Pin No.	Function	Pin No.	Function
1	+5V	8	K1(LEFT)
2	IR-IN	9	K2(DOWN)
3	GND	10	K3(UP)
4	Ko(EXIT)	11	K4(MENU)
5	LED_R	12	K5(RIGHT)
6	LED_G	13	K6(SOURCE)
7	GND	14	K7(POWER)

6.5 Backlight Board Port (J304)

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

6.6 Analog RGB Input Single Row Socket Port (J600)

Pin No.	Function	Pin No.	Function
1	GND	8	VS
2	RIN	9	GND
3	GND	10	TX
4	GIN	11	RX
5	GND	12	GND
6	BIN	13	NC
7	HS		

6.7 Digital HDMI Input Double Row Socket Port (J400)

Pin No.	Function	Pin No.	Function
1	GND	8	RXC+
2	RX2+	9	RXC-
3	RX2-	10	GND
4	RX1+	11	DDC_SCL
5	RX1-	12	DDC_SDA
6	RX0+	13	5V
7	RX0-	14	HP1

6.8 Component Video (J500)

Pin No.	Function	Pin No.	Function
1	GND	4	HD-PB
2	HD-Y	5	GND
3	GND	6	HD-PR

6.9 Pre-Amplifier Audio Output (J802)

Pin No.	Function	Pin No.	Function
1	FM_R	3	GND
2	GND	4	FM_L

6.10 CVBS Port

CVBS1 输入端口（J503）：

Pin No.	Function	Pin No.	Function
1	AV1	2	GND

CVBS2 输入端口（J501）：

Pin No.	Function	Pin No.	Function
1	AV2	2	GND

CVBS 输出端口（J502）：

Pin No.	Function	Pin No.	Function
1	AV	2	GND

6.11 USB Input port

USB1(J700)：

Pin No.	Function	Pin No.	Function
1	GND	3	USB1-
2	USB1+	4	+5V

USB(CN700) 此端口为标准座（D-SUB 接口定义）

6.12 Speaker output（J800）

Pin No.	Function	Pin No.	Function
1	SPL+	3	SPR-
2	SPL-	4	SPR+

6.13 External Input Screen Voltage(J300)

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

6.14 Audio Input (J801)

Pin No.	Function	Pin No.	Function
1	AU_R	3	AU_L
2	GND		

6.15 Others(J202)

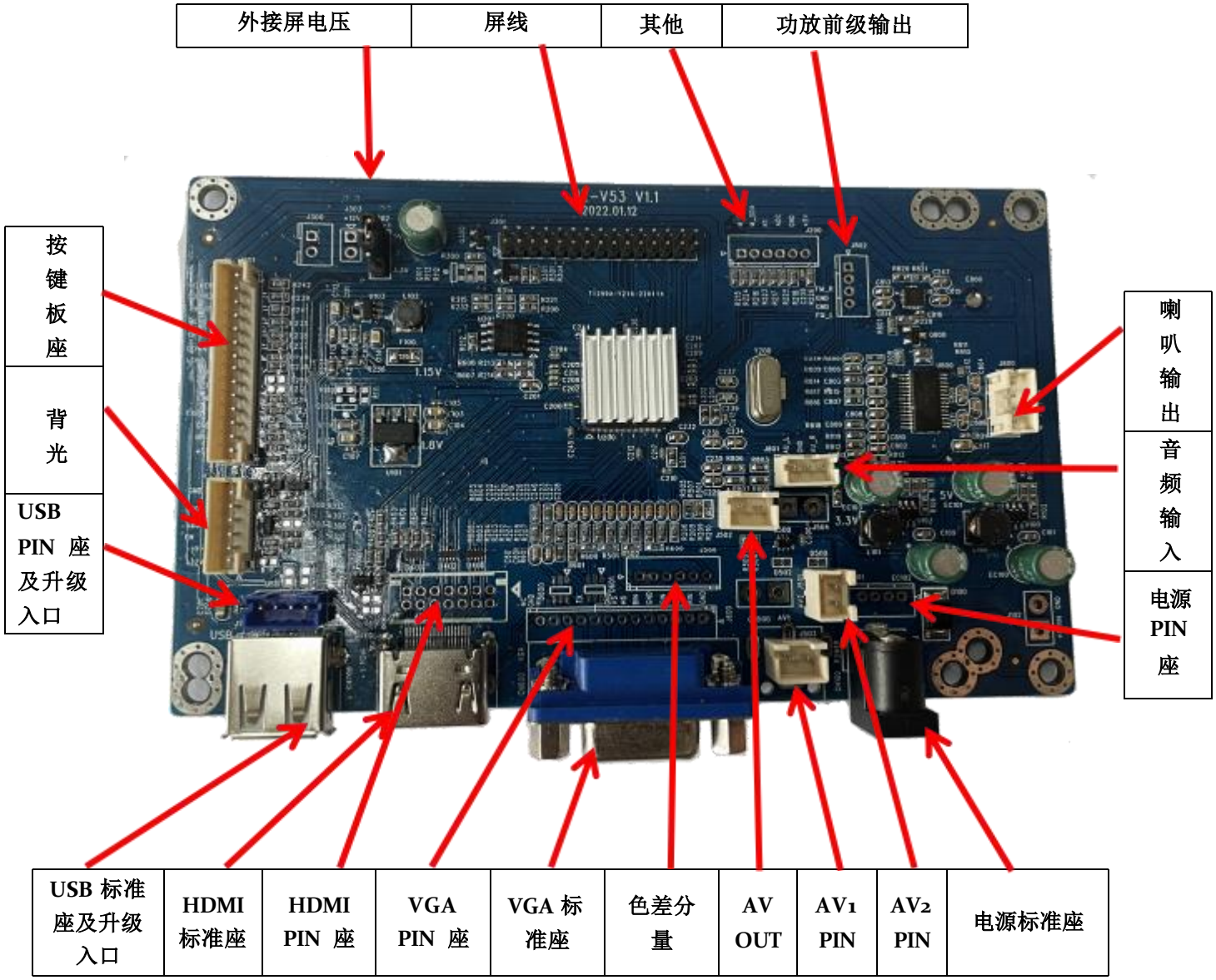
Pin No.	Function	Pin No.	Function
1	M_SCL	4	ADC
2	M_SDA	5	GND
3	K1	6	5V

Note: All ports have a 2.0mm pitch (except the CVBS terminal with a 2.54mm pitch).

7 Supported Decoding Formats

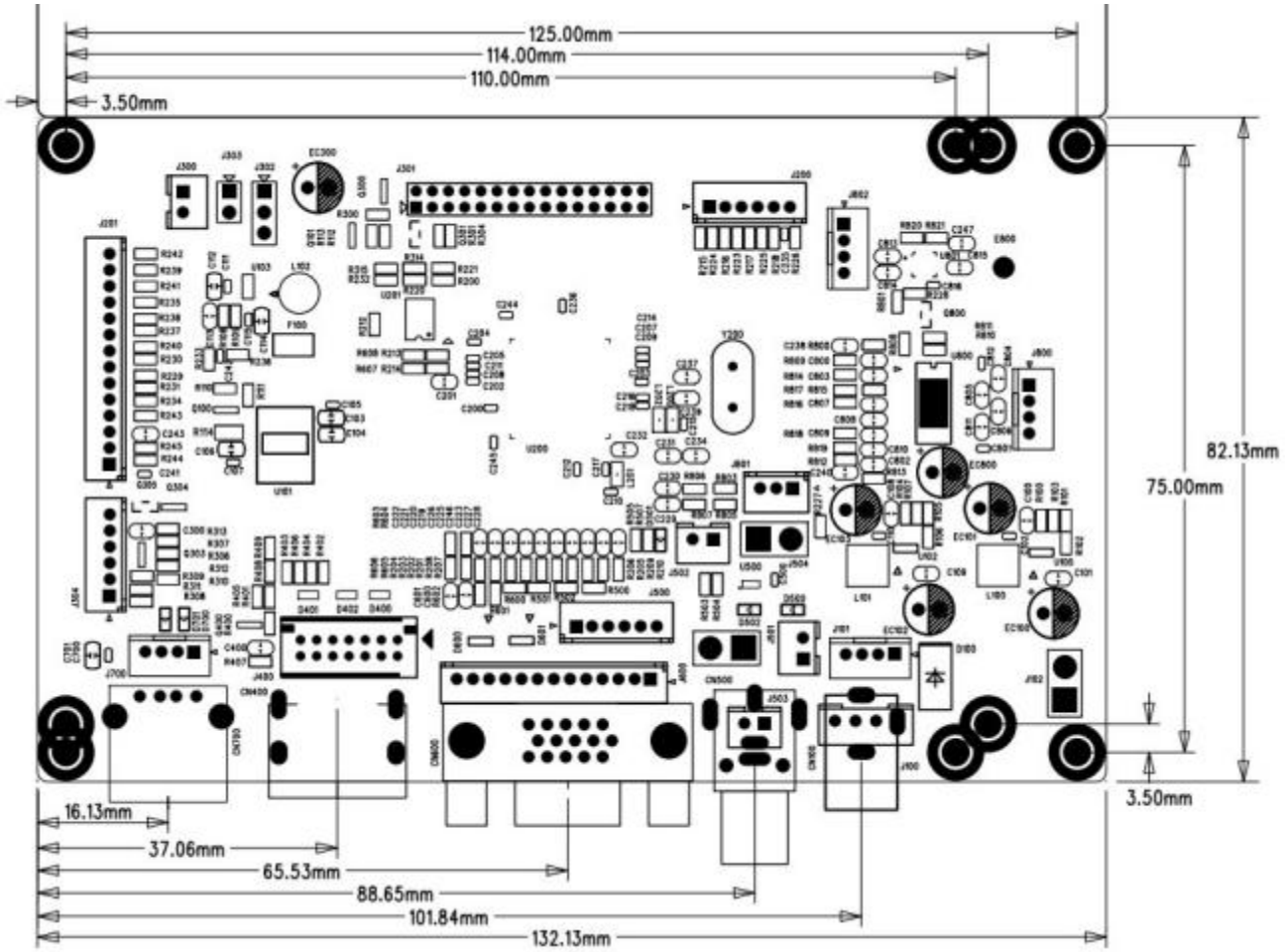
<table>
<tr><td rowspan="11">MOVIE</td><td rowspan="4">AVI</td><td>MJPEG</td><td rowspan="9">MP3,
WMA,
AAC,
MP2
PCM</td><td>TheMaxResolutionAndFrame
Rate:1080p@30fps
Max Data Rate:10Mbps</td></tr>
<tr><td>MPEG-4</td><td rowspan="5">The MaxResolution And Frame
Rate:1080p@30fps
Max Data Rate:20Mbps</td></tr>
<tr><td>MPEG-2</td></tr>
<tr><td>XVID</td></tr>
<tr><td rowspan="2">MP4.
H.264</td><td>MPEG-2</td></tr>
<tr><td>MPEG-4</td></tr>
<tr><td>TS/TRP</td><td>MPEG-2</td></tr>
<tr><td rowspan="2">MPG</td><td>MPEG-1</td></tr>
<tr><td>MPEG-2</td></tr>
<tr><td>DAT</td><td>MPEG-1</td><td rowspan="2">MP2</td><td>The Max Resolution:352x288
Max Data Rate:20Mbps</td></tr>
<tr><td>VOB</td><td>MPEG-2</td><td>The Max Resolution:720x576
Max Data Rate:20Mbps</td></tr>
<tr><td>RM/RMVB</td><td>RV8,RV9,RV10</td><td>COOK</td><td>TheMaxResolutionAndFrame
Rate:1080p@30fps
Max Data Rate:10Mbps</td></tr>
<tr><td rowspan="4">PHOTO</td><td>JPG</td><td>Progressive JPEG</td><td></td><td>Max Resolution:1024x768</td></tr>
<tr><td>JPEG</td><td>Baseline JPEG</td><td></td><td>Max Resolution:15360x8640</td></tr>
<tr><td>BMP</td><td>---</td><td></td><td>Max Resolution:9600x6400
Pixel Depth:1/4/8/16/4/32 bpp</td></tr>
<tr><td rowspan="2">PNG</td><td>Non-Interlaced</td><td></td><td>Max Resolution:9600x6400</td></tr>
<tr><td>Interlaced</td><td></td><td>Max Resolution:1200x800</td></tr>
<tr><td rowspan="3">MUSIC</td><td>MP3</td><td>---</td><td>MP3</td><td rowspan="2">Sample Rate:32K～48KHz
Bit Rate:32K～320Kbps
Channel:Mono/Stereo</td></tr>
<tr><td>WMA</td><td>---</td><td>WMA</td></tr>
<tr><td>MP4A/AAC</td><td>---</td><td>AAC</td><td>Sample Rate:8K～48KHz
Bit Rate:24K～320Kbps
Channel:Mono/Stereo</td></tr>
<tr><td colspan="5">其他：
1） 支持硬盘，最大可支持 400G
2） 文件夹最深可支持 30 级
3） 每个文件夹最多可支持 5000 个文件
4） 文件系统支持 Hi Speed FS,FAT32,FAT16,NTFS(NTFS compressed 不支持)</td></tr>
</table>

8 Product image



9 Size clarification

PCB 板厚度： 1.60 mm
尺寸大小： 132.13 x 82.13 mm
总高度: 15 mm



10 Our remote control style

如需配接客户遥控器，请联系我们。

11 Factory menu settings

1) How to enter the factory menu
Press "LEFT" + "LEFT" + "RIGHT" + "RIGHT" + "MENU" on the remote control to enter the factory menu.

2) Some factory menu settings
The flip mode, signal channel switch and FM transmission frequency can be set through the factory menu.

1) Flip mode: Enter the factory menu--->Others--->Invert screen-->ON/OFF.

2) Signal channel switch: You can set the switch of AV, RGB, YPbPr, HDMI, and USB channels. Enter the factory menu--->Input source--->Set the switch of each channel separately.