

A/D Board for High brightness color TFT-LCD module

Model: ITAD-H-VG-B

1. General description

AD board ITAD-H-VG-B series is designed for TFT module with dual LVDS signal interface and up to 1920x1200 resolution. Video signals include one HDMI input, one VGA input, CVBS input *2(internal), one CVBS output, and one USB port as multimedia playback input. Audio signal includes one PC audio, one CVBS input, and one set of speaker output 2*3W (8Ω).

Power 12V input supports DC jack connector or 4-pin jumper connector.

RoHS compliant.

2. Features

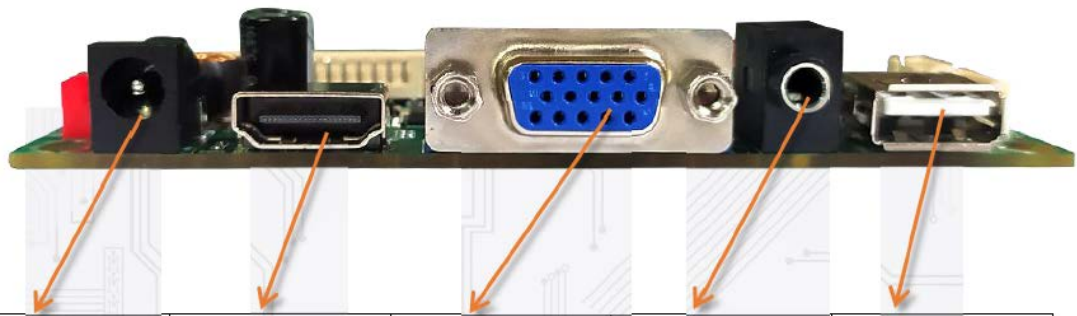
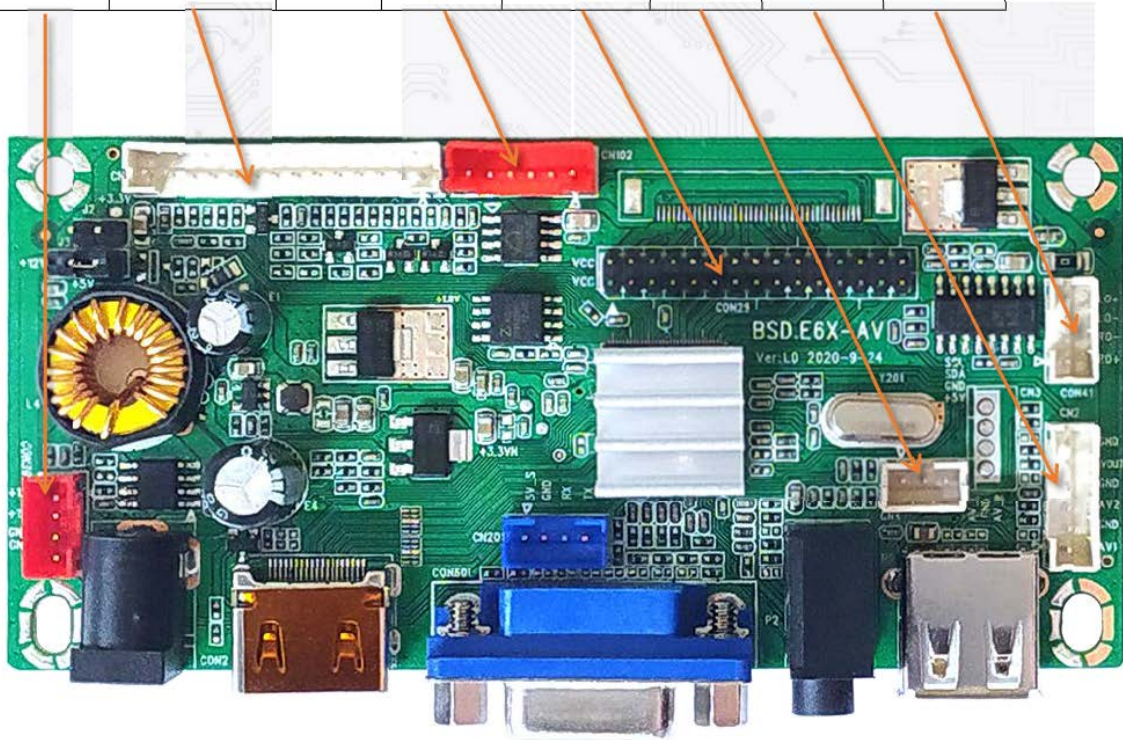
Video Input	VGA	Resolution	DOS, VGA, SVGA, XGA, SXGA, WXGA+, WSXGA+, WUXGA
		Colors	24BIT
		Horizontal Scanning	30-80KHz
		Vertical Scanning	56-75Hz
	HDMI(1.3)	480i, 480p, 576i, 576p, 720p, 1080i, 1080P	
Input	VGA/HDMI/PC-audio/CVBS-audio/DC 12V jack/DC 12V 4P*2.0/CVBS input*2 (internal)/USB		
Output	LVDS/audio/CVBS		
Power	Input voltage	DC12V(+/-0.6V)	
	Standby power	≤0.5W	
	Panel voltage select	12V/5V/3.3V	
	Speaker	2×3W(8Ω)	
Others	Comb Filter	3D	
	OSD key	Power/menu/vol-/vol+/down/up/input	
	OSD language	Chinese, English	

3. VGA support timing table

Mode	resolution	H Freq. (KHz)	V Freq. (Hz)	Standard
WUXGA	1920X1200	74.6	60	CVTRed. Blanking
WSXGA+	1680X1050	65.3	60	CVT
WXGA+	1440 X 900	55.5	60	VESA
SXGA+	1400 X 1050	64.7	60	VESA
WXGA	1280 X768	47.7	60	VESA
SXGA	1280X1024	64.0	60	VESA
		80.0	75	
XGA	1024X768	48.4	60	VESA
		56.5	70	
		60.0	75	
SVGA	800X600	37.9	60	VESA
		48.1	72	
		46.9	75	
VGA	640X480	31.5	60	Industry
		37.9	72	VESA
		37.5	75	VESA

4. Product picture and main interface definitions

DC 12V input (CN39)	OSD key pad (CN1)		Backlight (CN102)	LVDS (CON29)	CVBS audio input (CN4)	CVBS input (CN2)	Speakers (CON41)
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DC12V DC jack	HDMI input	VGA input	PC-audio input	USB
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5. Connector description

CN1 (14PIN/2.0): Key pad connector		
pin		Function
1	NC	
2	K6	Signal source
3	K5	Left/vol-
4	K4	Right/vol+
5	K3	Down
6	K2	Up
7	K1	Menu
8	GND	Ground
9	LEDG	Green indicator
10	LEDR	Red indicator
11	K0	Power on/off
12	GND	ground
13	IR	IR in
14	5V	+5V

CN102 (6PIN/2.0): Backlight		
pin		Function
1	GND	Ground
2	GND	Ground
3	ADJ	Brightness adjustment
4	ENABLE	Backlight on/off
5	12V	+12V
6	12V	+12V

CN41 (4PIN/2.0): audio output		
pin		Function
1	RO+	Rout+
2	RO-	Rout-
3	LO-	Lout-
4	LO+	Lout+

CN4 (3PIN/2.0): CVBS audio input		
pin		Function
1	AV_L	AV left
2	GND	Ground
3	AV_R	AV right

CN2 (6PIN/2.0): CVBS input/output		
pin		Function
1	AV1	AV1 input
2	GND	Ground
3	AV2	AV2 input
4	GND	Ground
5	AVOUT	AV output
6	GND	ground

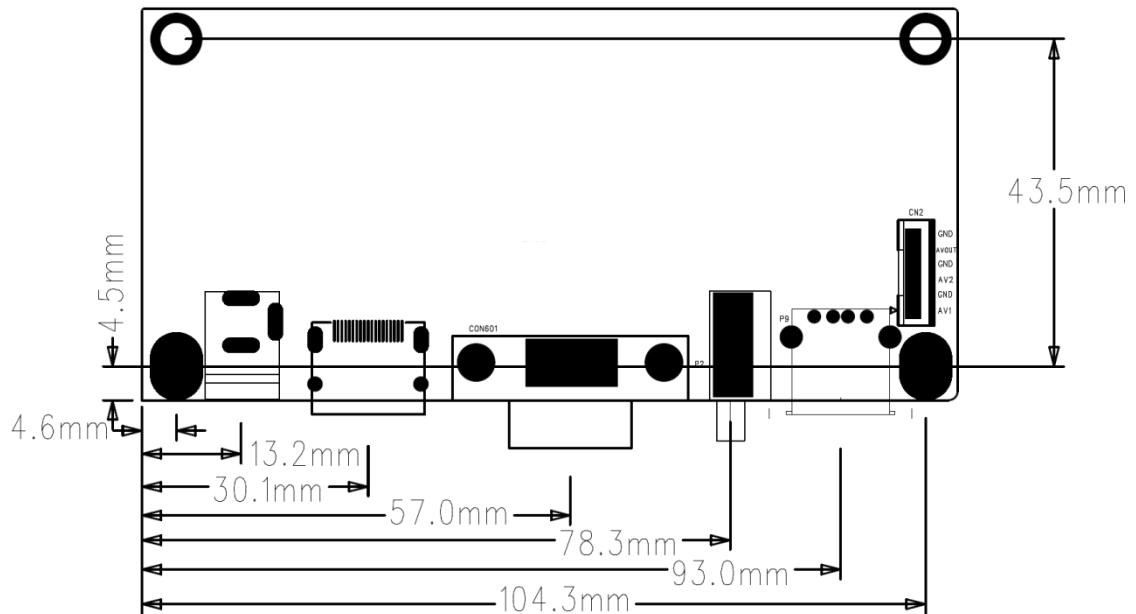
CON29 (30PIN/2.0): LVDS		
pin		Function
1	PANEL-VCC	Power for Panel(+12v/5v)
2	PANEL-VCC	Power for Panel(+12v/5v)
3	PANEL-VCC	Power for Panel(+12v/5v)
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	RX00-	LVDS ODD 0 - Signal
8	RX00+	LVDS ODD 0 + Signal
9	RX01-	LVDS ODD 1 - Signal
10	RX01+	LVDS ODD 1 + Signal
11	RX02-	LVDS ODD 2 - Signal
12	RX02+	LVDS ODD 2 + Signal
13	GND	Ground
14	GND	Ground
15	RXOC-	LVDS ODD Clock - Signal
16	RXOC+	LVDS ODD Clock + Signal
17	RX03-	LVDS ODD 3 - Signal
18	RX03+	LVDS ODD 3 + Signal
19	RXE0-	LVDS EVEN 0 - Signal
20	RXE0+	LVDS EVEN 0 + Signal
21	RXE1-	LVDS EVEN 1 - Signal
22	RXE1+	LVDS EVEN 1 + Signal
23	RXE2-	LVDS EVEN 2 - Signal
24	RXE2+	LVDS EVEN 2 + Signal
25	GND	Ground
26	GND	Ground
27	RXEC-	LVDS EVEN Clock - Signal
28	RXEC+	LVDS EVEN Clock + Signal
29	RXE3-	LVDS EVEN 3 - Signal
30	RXE3+	LVDS EVEN 3 + Signal

6. PCB Drawing

Maximum thickness (PCB + connector)=15mm

PCB size 104.3*43.5mm

Screw holes $\phi 3.5\text{mm}$



7. Reliability

Item	Description	Min.	Typ.	Max	Unit	Note
Vin	Input voltage	11.4	12	12.6	V(dc)	
Iin	Input current		0.6		A	12V input (Board only)
I _r	Inrush			1.5	A	
H _{st}	Storage humidity	10		80	%RH	without condensation
H _{op}	Operation humidity	10		80	%RH	without condensation
T _{st}	Storage temp.	-10		60	°C	
T _{op}	Operation temp.	-10		65	°C	