

BTP-LC-V53UHV Spec.

(LCD drive board:VGA+HDMI+USB)

DATE : 2024/ 03/ 21

APPROVED BY	NOTE
CUSTOMER SIGNATURE (S)	

ISSUED BY_____CHECKED BY_____APPROVED BY_____

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Version Record

Edition ver	Date date	Page number page	Description describe
V0.9	2024.03.21	A1~A11	First Edition

Note: This specification is for reference only; please refer to the actual product for any discrepancies.

1. Performance Introduction

- This product is an LCD monitor solution featuring the MSTAR single-chip TV processing IC, offering a resolution of 1920×1080 pixels at 60 Hz, full-color display quality, and a mature system design, specifically designed for EDP signal LCD screens with sizes up to 15.6 inches.
- Supports full 3D interlacing, 2D video decoding, 2D digital noise reduction, and USB functionality.
- Input signals: VGA x1, HDMI (1.4), USB (2.0).

2. Main Technical Parameters

Video in	Computer	Resolution ratio	Maximum: 1920*1080	
		Horizontal frequency	30~90KHz	
		Field frequency	56~75Hz	
	VGA	Regular		
Source	Input voltage	12V		
	Backlight voltage	12V		
	Standby current	Low power consumption; standby power consumption <1 W		
OSD language		Chinese, English, German, French, Russian, Italian, Spanish, Arabic, and other optional languages		
Button Functions		POWER/MENU/SOURCE/UP/DOWN/LEFT/RIGHT		
Comb Filter		3D	De-Interlace	3D
Denoise		3D	Liyin	Have
TXT		Yes (optional)	V-CHIP,CC,WSS,VPS	Yes (optional)
Screen Resolution		1920*1080		

Formats Supported by USB (Digital Multimedia)

Video Multimedia Playback Supported Specifications

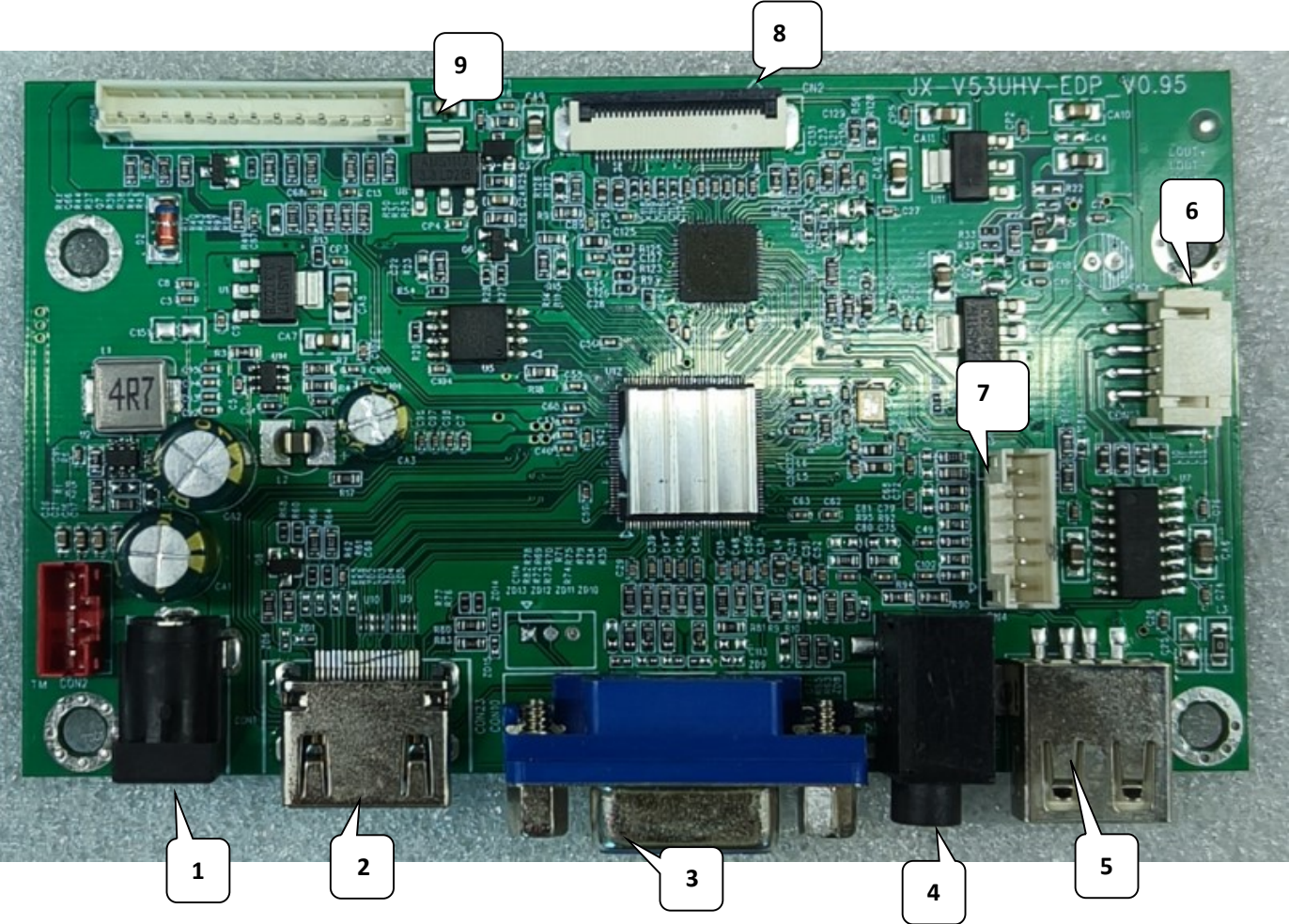
Document name	Explanatory note	Frequency Decoding	Specifications	Bit rate
dat, mpg, mpeg	MPG,MPEG	Mpeg1,2	1920x1080@ 30P	20Mbit/sec
ts, trp, tp	MPEG2 -TS H264-TS	MPEG2 ,H.264	1920x1080 @ 30P	20Mbit/sec
vob	MPEG2 -PS	MPEG2	1920x1080 @ 30P	20Mbit/sec
mp4	AVI, MP4	MPEG4 Divx 3.11, Divx 4.12, Divx 5.x, Divx 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2 H.264	1920x1080 @ 30P	20Mbit/sec
rm, rmvb	RMVB, RM	rm code RV8, RV9, RV10	1280x720 @ 30P	10Mbit/sec
mkv	MKV	H.264, MPEG1,2,4	1920x1080 @ 30P	20Mbit/sec
divx, avi	AVI(1.0, 2.0), DMF0,1,2	MPEG2, MPEG4 Divx 3.11, Divx 4.Divx 5, Divx 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2 H.264	1920x1080 @ 30P	20Mbit/sec
asf	ASF (Revision 01.20.03)	VC1	1920x1080 @ 30P	20Mbit/sec

Digital Multimedia Supports Image Specifications

Explanatory note	Picture	Resolution T2 & Pluto	Resolution T3/T4
JPEG	Base-line	8192x8192	15360x8640
	Progressive	1024x768	1024x768
PNG	non-interlace	9000x6000	9600x6400
	interlace	1200x768	1200x800
BMP		9000x6000	9600x6400

Note: Some video and audio formats require customers to provide corresponding patents for access; examples include AC3 and DIVX.

3. Exterior Images Appearance



4. Main Interface Definitions

Order number	Description	Order number	Description
1	DC Power Input Port	2	HDMI input end
3	VGA input end	4	VGA Audio Input
5	USB multi-media	6	Audio Output Interface
7	AV Channel and Audio Input	8	EDP 30-pin Output Port
9	Indication light, IR, button interface		

1、DC power supply port Pin number: CON1 (DC_JACK 3P connector with 2.0 mm smooth round tip)Pin definitions:

Position Number	Name	Explain
1	+12V	12V Input
2	GND	The earth
3	GND	The earth

2、Indication light, IR, button panel Pin number: CON6 (PH2.0MM*13PIN)

Pin Definition Description:

Position Number	Name	Explain
1	CH-	Program Key Shortcuts/Direction/或其他 Definitions
2	CH+	Program Key/Direction/或其他 Definition
3	MENU	Menu Keys/Other Definitions
4	SOURCE	Program Source Key/或其他 Definitions
5	VOL-	Volume Down Key/Direction/或其他 Definitions
6	VOL+	Volume Up Key/Direction Key/或其他 Definition
7	GND	The earth
8	LED-G	Green indicator light / On when operating normally
9	LED-R	Red indicator light / On during standby mode
10	POWER	Power Key/或其他 Definitions
11	GND	The earth
12	IR-IN	Remote Control Signal Reception Port
13	VCC	5V power supply (for remote control)

3、EDP Output Port Number: CN2 (SIP2.0MM*30PIN)

Pin Definition Description:

Position Number	Name	Explain
1	NC	Nonuse
2	GND	The earth
3	Lane1_N	EDP LANE1 Signal-
4	Lane1_P	EDP LANE1 Signal +
5	GND	The earth
6	Lane0_N	EDP LANE0 Signal-
7	Lane0_P	EDP LANE0 Signal +
8	GND	The earth
9	AUX_CH_P	Cue signal +
10	AUX_CH_N	Cue signal -
11	GND	The earth
12	VCC	Screen Logic Board _ 3.3V
13	VCC	Screen Logic Board _ 3.3V
14	NC	Nonuse
15	GND	The earth
16	GND	The earth
17	HPD	Hot-swapping identification signal
18	GND	The earth
19	GND	The earth
20	GND	The earth
21	GND	The earth
22	EN	Backlight Switch
23	PWM	Backlight PWM Brightness Adjustm-ent
24	NC/SDA	Nonuse
25	NC/SCL	Nonuse
26	VLED	12V backlight power supply
27	VLED	12V backlight power supply
28	VLED	12V backlight power supply
29	VLED	12V backlight power supply
30	NC/GND	Nonuse

4、 VGA Input Pin Number: CON10 (HDR15F-3.08 DB15A Small SMAL 90° Bent Pin)

Position Number	Name	Explain
1	RIN	Red Video Signal
2	GIN	Green Video Signal
3	BIN	Blue video signal
4	NC	Not defined
5,6,7,8	GND	The earth
9	NC	Not defined
10	GND	The earth
11	NC	Not defined
12	SDA	DDC communication data signal (可用于 data read/write operations)
13	HS	Horizontal Synchronization Signal Input
14	VS	Vertical Synchronous Signal Input
15	SCL	DDC communication data signal (可用于 data read/write operations)

5、 HDMI Input Port Number: CON23 (HDMI Does Not Have Screw Holes or Lugs; 19-Pin)

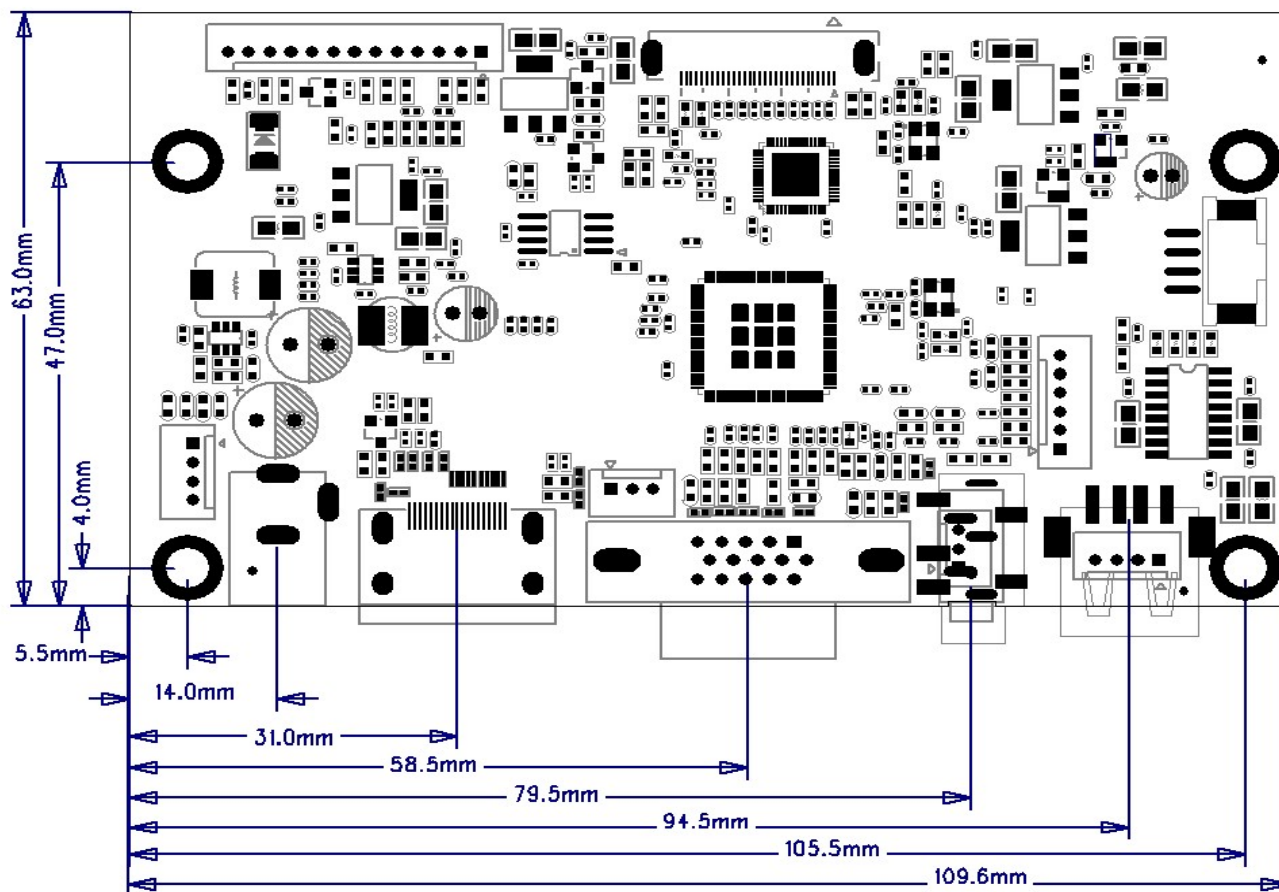
Position Number	Name	Explain
1	DA2+	HDMI Data 2+
2,5,8,11,17	GND	The earth
3	DA2-	HDMI Data 2-
4	DA1+	HDMI Data 1+
6	DA1-	HDMI Data 1-
7	DA0+	HDMI Data 0+
9	DA0-	HDMI Data 0-
10	CLK+	HDMI clock +
12	CLK-	HDMI clock -
13	HDMI-CEC	HDMI-CEC
14	NC	NC
15	HDMI-SCL	DDC Communication Clock Signal
16	HDMI-SDA	DDC Communication Clock Signal
18	HDMI-5V	HDMI-5V
19	HDMI-HPD	HDMI-HPD

6、 USB signal input port Number: con11 (standard 2.0 terminal)

Pin Definition Description:

Position Number		name		explain
1		+5V		5V Input
2	DM	Signal-3	DP	signal +
4		GND		the earth

5.Structural Dimensions



6. Electrical Properties

Parameter	Minimum (MIN)	Standard (TYP)	Maximum (MAX)	Unit (UNIT)
Working voltage	9	12	20	V
Standby current	2	3	5	MA
Working tempera- ture	-12		75	℃
Storage Temperat- ure	-20		85	℃
Working Humidity	40		95	%
Storage Humidity	40		95	%

7. Notes Matters requiring attention

- 1、 Before powering on the device, always check that the power cable is properly connected and that the display receives the correct voltage; otherwise, it may damage the motherboard, power supply, or display.
- 2、 During storage and installation, strict attention must be paid to anti-static and leakage current protection measures; otherwise, the motherboard and components may be damaged.
- 3、 Before installation, customers should first verify that the motherboard functions meet the requirements. Avoid waiting until after installation to realize this issue, as it may lead to serious consequences.
- 4、 When operating the drive board, do not move the motherboard or plug/unplug power connectors arbitrarily to avoid contact with conductive objects and potential damage.
- 5、 If defective products are found during installation, please place them in an anti-static bag before storage and return them to our company for repair. Do not dispose of them indiscriminately.
- 6、 If there are stains on the board surface, turn off the power and clean them with a dry soft cloth.
- 7、 Do not subject to excessive pressure, bending, or rain exposure, as this may cause damage.

Note: Remarks

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