

VS DISPLAY TECHNOLOGY (HK) LTD

SPECIFICATION FOR LCD MODULE

Model No.: VS-MD07080 V.2

ORGANIZED BY	CHECKED BY	APPROVED BY
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1. Application

VS-MD0708 V.2 Driver board is mainly designed for AT080TN42.AT080TN01.AT080TN03.AT070TN83V.3
AT070TN82 V.1.AT070TN92.AT080TN52V.1.AT102TN01.AT102TN03.A101VW01

2. Product Function Description

1. The input signal can be VGA, CVBS1 or CVBS2
2. Power supply: DC +12V
3. Multi function OSD Operation
4. Remote control (option)
5. Power ON/OFF (Green--ON, Reg--OFF)

3. Standard Signal Input

- 3.1 CVBS: 1.0V_{p-p}75 Ω

4. Work Temp

- 3.1 Work Temp : -10℃~+60℃
- 3.2 Operation Humidity : 90%RH

5. Storage Temp

- 4.1 Storage Temp: -20℃~+70℃
- 4.2 Storage Humidity : 90%RH

6. Operate Power Requirements (Ta=25 ℃)

ITEM	MIN	TYP	MAX	UNIT
Operate Voltage	10.5	+12	13.5	V
Operate Current	300	260	250	mA

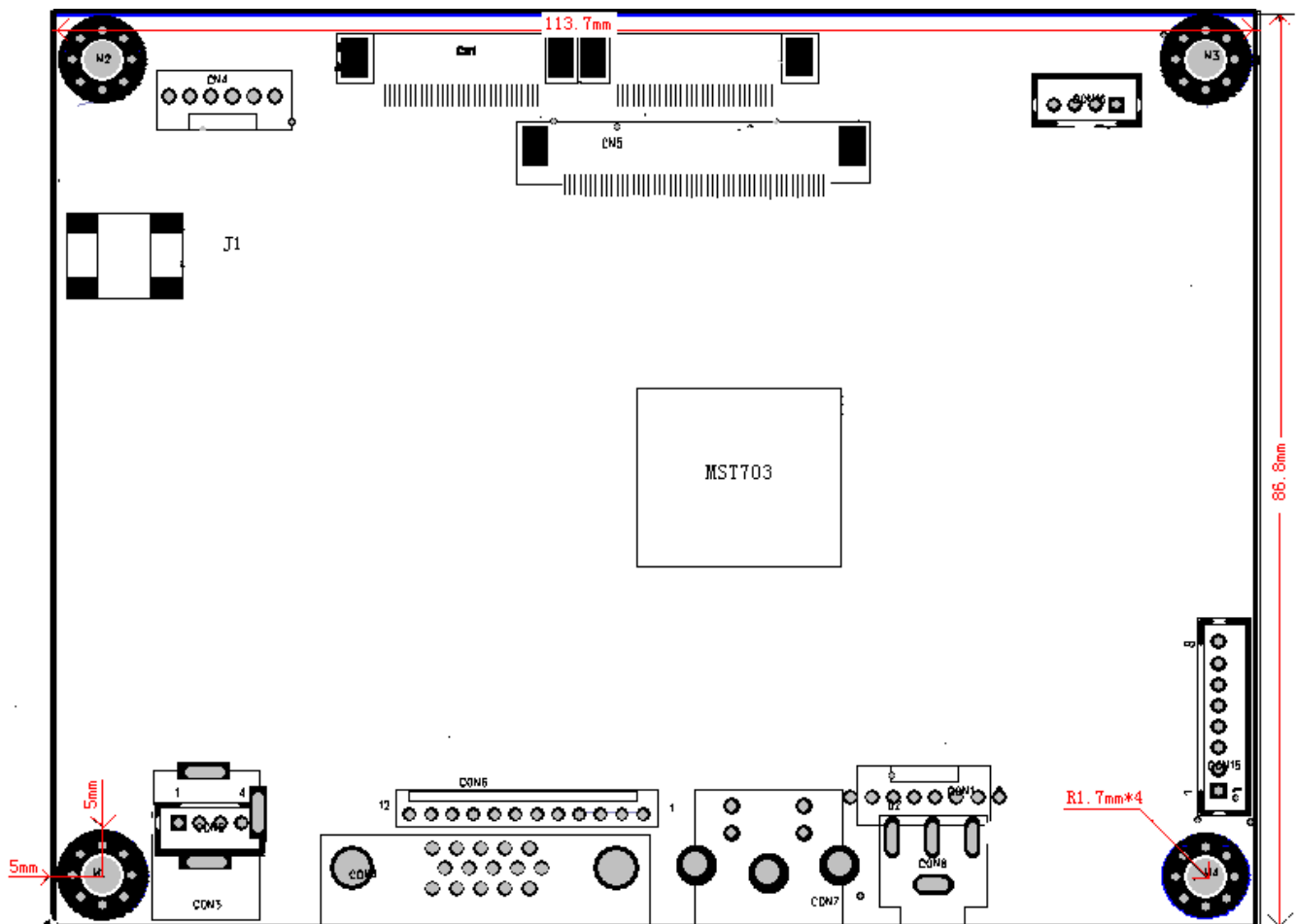
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7. Specification

7.1 MIN PARTS

No	Name	Specifications	Manufactures	Amount	Notes
1	IC	MST717C	Mstar	1PCS	U2
		PM25LV010		1PCS	U301
2	Crystal	12.000MHz		1PCS	Y1

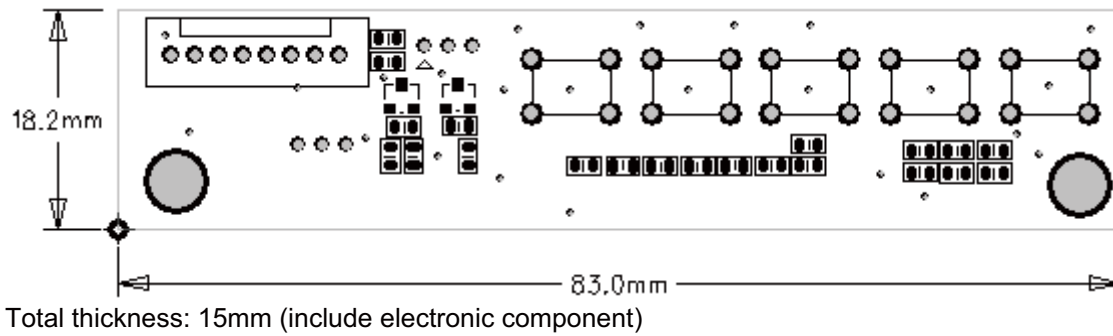
7.2 OUTLINE STRUCTURE (UNIT:mm)



Length = 114.0mm

Wide = 86.4mm

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Appendix : Connection definition

CON1(Signal input) 6PIN/2.0

Pin	Define	Description
1	C+	s-video color single
2	GND	Ground
3	Y+	s-video brightness single
4	GND	Ground
5	CVBS	AV input
6	GND	Ground

CON6(VGA input) 12PIN/2.0

Pin	Define	Description
1	NC	—
2	VS	VPOSITION sync signal
3	HS	Horizontal sync signal
4	NC	—
5	R+	Red data+-
6	GND	Ground
7	G+	Green data +
8	GND	Ground
9	B+	Blue data +
10	GND	Ground
11	SDA	I2C channels
12	SCL	I2C channels

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CN4 (INVERTER control) 6PIN/2.0

Pin	Define	Description
1	VCC_12V	INVERTER DC 12V
2	VCC_12V	INVERTER DC12V
3	On/off	switch
4	+5V	+5V
5	GND	Ground
6	GND	Ground

CON15(Keyboard define) 8PIN/2.0

Pin	Define	Description
1	VCC +5V	Key board power
2	GND	Ground
3	IR INT	Infrared accept
4	LED GREEN	Key board LED
5	LED RED	Key board LED
6	GND	Ground
7	SAR0	Key board AD interface
8	SAR1	Key board AD interface

CON5 (Power) 4PIN/2.0

Pin	Define	Description
1	+12V	power
2	+12V	power
3	GND	ground
4	GND	ground

CON16 (Debug interface) 4PIN/2.0

Pin	Define	Description
1	+5V	Debug Power
2	GND	Ground
3	TX	Serial port out put
4	RX	Serial port out put

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J1 (Blacklight interface) 2PIN

Pin	Define	Description
1	LED+	LED +
2	LED-	LED -

CN1 (FPC define) 30PIN*2/ 0.5

Pin	Define	Description
1	POL	Polarity Selection
2	STVD	Vertical start
3	OEV	Output enable
4	CKV	Vertical clock
5	STVU	Vertical start
6	GND	Power ground
7	EDGSL	Select rising
8	V _{CC}	Power supply
9	V9	Gamma voltage
10	V _{GL}	Gate OFF
11	V2	Gamma voltage
12	V _{GH}	Gate ON
13	V6	Gamma voltage
14	U/D	Up/down selection
15	V _{COM}	Common voltage
16	GND	Power ground
17	AV _{DD}	Power supply
18	V14	Gamma voltage
19	V11	Gamma voltage
20	V8	Gamma voltage
21	V5	Gamma voltage
22	V3	Gamma voltage
23	GND	Power ground
24	R5	Red data(MSB)
25	R4	Red data
26	R3	Red data
27	R2	Red data
28	R1	Red data
29	R0	Red data(LSB)
30	GND	Power ground
31	GND	Power ground

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32	G5	Green data(MSB)
33	G4	Green data
34	G3	Green data
35	G2	Green data
36	G1	Green data
37	G0	Green data(LSB)
38	STHL	Horizontal start
39	INV	Control signal
40	GND	Power ground
41	DCLK	Sample clock
42	V _{cc}	Voltage for digital circuit
43	STHR	Horizontal start pulse input when R/L = L
44	LD	Latches the polarity of outputs and switches the new data to outputs
45	B5	Blue data (MSB)
46	B4	Blue data
47	B3	Blue data
48	B2	Blue data
49	B1	Blue data
50	B0	Blue data
51	R/L	Right/left
52	V1	Gamma voltage
53	V4	Gamma voltage
54	V7	Gamma voltage
55	V10	Gamma voltage
56	V12	Gamma voltage
57	V13	Gamma voltage
58	AV _{DD}	Voltage for analog circuit
59	GND	Power ground
60	V _{COM}	Common voltage

CN5(FPC) 50PIN 0.5

Pin No.	Symbol	I/O	Function	Remark
1	NC		No connection	
2	NC		No connection	
3	NC		No connection	
4	NC		No connection	

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5	GND	P	Power ground	
6	V _{COM}	I	Common voltage	
7	V _{CC}	P	Power for Digital circuit	
8	MODE	I	DE/SYNC mode select	Note3
9	DE	I	Data Input Enable	
10	VS	I	Vertical Sync Input	
11	HS	I	Horizontal Sync Input	
12	B7	I	Blue data(MSB)	
13	B6	I	Blue data	
14	B5	I	Blue data	
15	B4	I	Blue data	
16	B3	I	Blue data	
17	B2	I	Blue data	
18	B1	I	Blue data	
19	B0	I	Blue data(LSB)	
20	G7	I	Green data (MSB)	
21	G6	I	Green data	
22	G5	I	Green data	
23	G4	I	Green data	
24	G3	I	Green data	
25	G2	I	Green data	
26	G1	I	Green data	
27	G0	I	Green data (LSB)	
28	R7	I	Red data (MSB)	
29	R6	I	Red data	
30	R5	I	Red data	
31	R4	I	Red data	
32	R3	I	Red data	
33	R2	I	Red data	
34	R1	I	Red data	
35	R0	I	Red data (LSB)	
36	GND	P	Power ground	
37	DCLK	I	Sample clock	
38	GND	P	Power ground	
39	L/R	I	Right/ left selection	Note2,5
40	U/D	I	Up/down selection	Note2,5
41	V _{GH}	P	Gate ON voltage	
42	V _{GL}	P	Gate OFF voltage	

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43	AV _{DD}	P	Power for Analog circuit	
44	RESET	I	Global reset pin.	Note1
45	NC		No connection	
46	V _{COM}	I	Common voltage	
47	DITHB	I	Dithering function	Note 4
48	GND	P	Power ground	
49	NC		No connection	
50	NC		No connection	

OSD function

1.keys description:

The are POWER、MENU、SOURCE/UP、LEFT、RIGHT five buttons。

1.1 Definition:

POWER: press “ POWER” to control it on/off

SOURCE/UP: it's source while there is no OSD menu,it's up while it's have.

MENU: PICTURE、OPTION、SYSTEM、CLOCK、 EXIT。

LEFT: volmue-/date-。

RIGHT: volmue+/date+。

1.2 MENU's definition in the AV/S-VIDEO state

The meun have PICTURE、AUDIO、FUNCTION、 SYSTEM AND their functions are as follows:

PICTURE

BRIGHTNESS: adjust the photo brightness

CONTRAST: adjust the photo contrast

COLOR: adjust the

ENGLISH; select the language.

OPTION

NORMAL: image flip up/down

SYSTEM

AV: AV/VGA

CLOCK

SLEEP; Sleep and turn over

TIME; clock

OFF-TIME; the time of turn off

ON-TIME; the time of trun on

1.3 The menu's Definition with the VGA state

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The menu have PICTURE、AUDIO、FUNCTION、SYSTEM **and** their functions are as follows:

PICTURE

BRIGHTNESS: adjust the photo's brightness

CONTRAST: adjust the photo's contrast

ENGLISH; select the language.

OPTION

NORMAL: flip image up/down

HPOSITION; hposition adjust the image

VPOSITION; vposition adjust the image

AUTO; adjust image auto

SYSTEM

VGA; AV/VAG

CLOCK

SLEEP; Sleep and turn over

TIME; clock

OFF-TIME; the time of turn off

ON-TIME; the time of trun on

1.4 Description:

Press" MENU", press "SOURCE/UP"to select while it will be show red .Press"LEFT/RIGHT"can adjust the information.

In the PICTURE window, select BRIGHTNESS、 CONTRAST、 COLOR, press"LEFT/RIGHT" to adjust.

In the OPTION Window, press"LEFT/RIGHT" to adjust NORMAL /UP/HPOSITION/VPOSITION/AUTO

In the SYSTEM (It's valid in the AV/S-VIDEO state) window, press"LEFT/RIGHT"to select AV/VGA.

2. The description of the remote:

The remote have POWER、 MENU、 LEFT、 RIGHT、 UP、 DOWN five buttons, its operation are the same as the buttons.