

HI-MEDIA_USB

Approval

Rev. 01



Issue Date.

2016. 10. 05

Doc No.

HI-MEDIA_USB BOARD 01

Note | Specification is subject to change without notice.
Consequently it is better to contact to our company before proceeding with the design of your product incorporating this board

Prepared	Checked I	CheckedII	Approved
			
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1. General Specification

No.	Item	Description		
1	Model Name	HI-MEDIA_USB		
2	LCD Module	LVDS 1024X768		
3	Input	USB, AUDIO		
4	Resolution Support	H: 31 ~ 80kH		
		V: 55 ~ 76Hz		
5	Plug & Play	VESA DDC 2B Ver1.4		
6	Power Consumption	Supply Voltage	12Vdc	
		Power	1.6 Watt	Board Only
7	Board Size	W x H x D(mm)	137 x 40 x 12	



2. ELECTRICAL SPECIFICATION

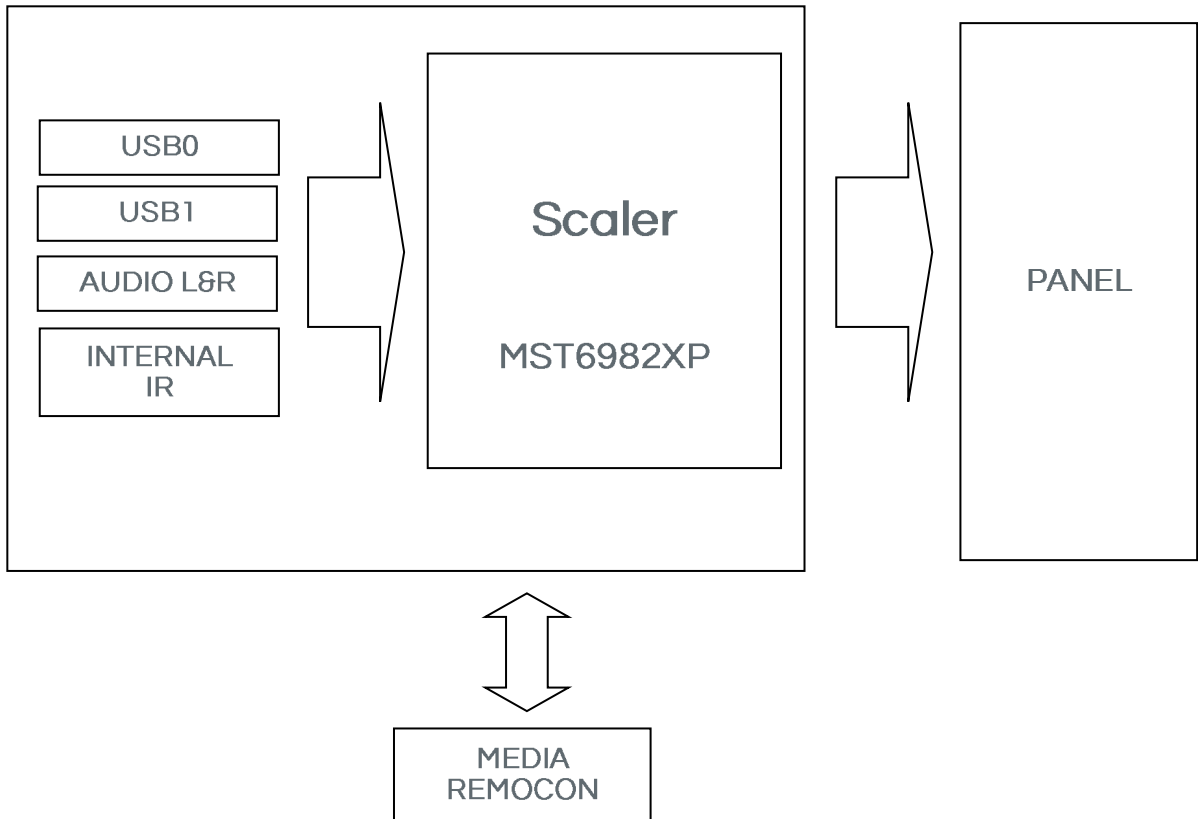
2.1. Input characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
Power In (12Vdc)						
	Input	12VDC	11.4	12	12.6	
	Consumption	Watt		1.6		Board Only

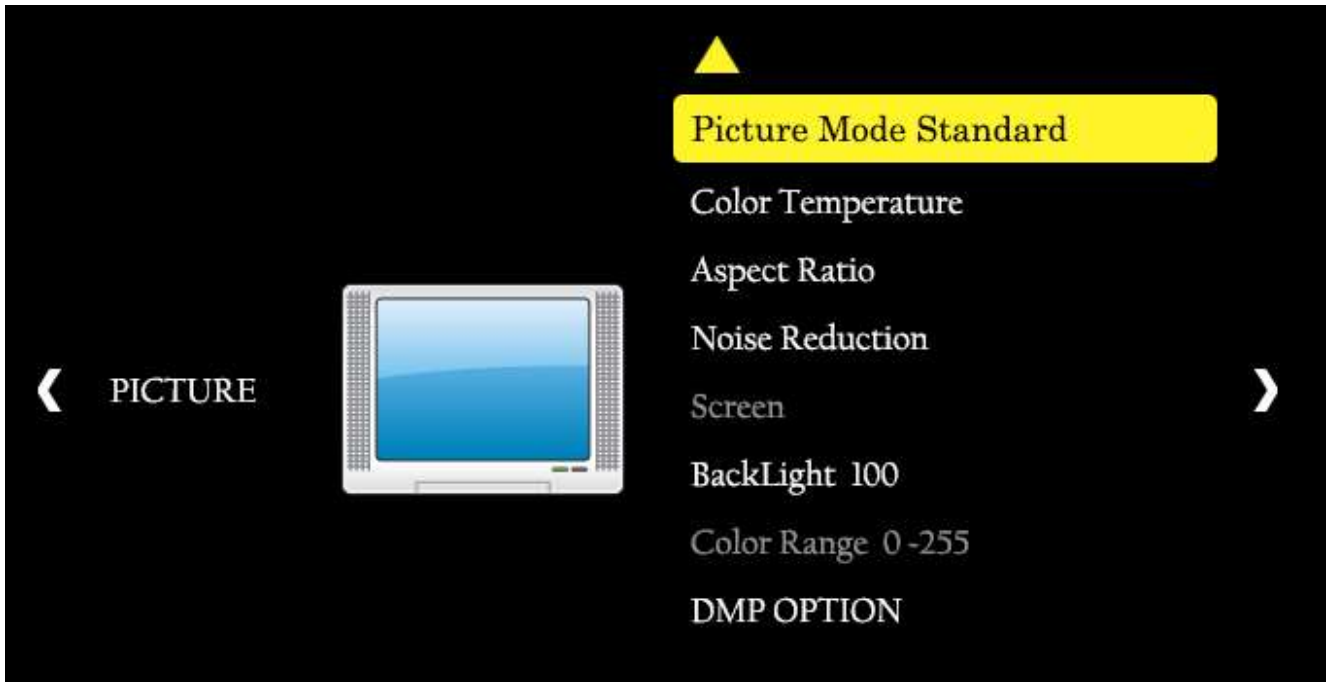
2.2. Output characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
Panel Power						
	LCD Power(12V)	VDC	11.4	12	12.6	
	LCD Power(5V)	VDC	4.5	5	5.5	
	LCD Power(3.3V)	VDC	3.16	3.3	3.5	
LVDS Interface						
	Differential output	Vp-p (mV)	250	350	450	Differential +/-
Inverter Interface						
	Power	V	11.4	12	12.6	Depends on Power
	On/Off control	V	0		3.3	L=off, H=on
	Brightness control	V	3.3		0	Option
			0		4.0	Option

3. FUNCTIONAL BLOCK DIAGRAM



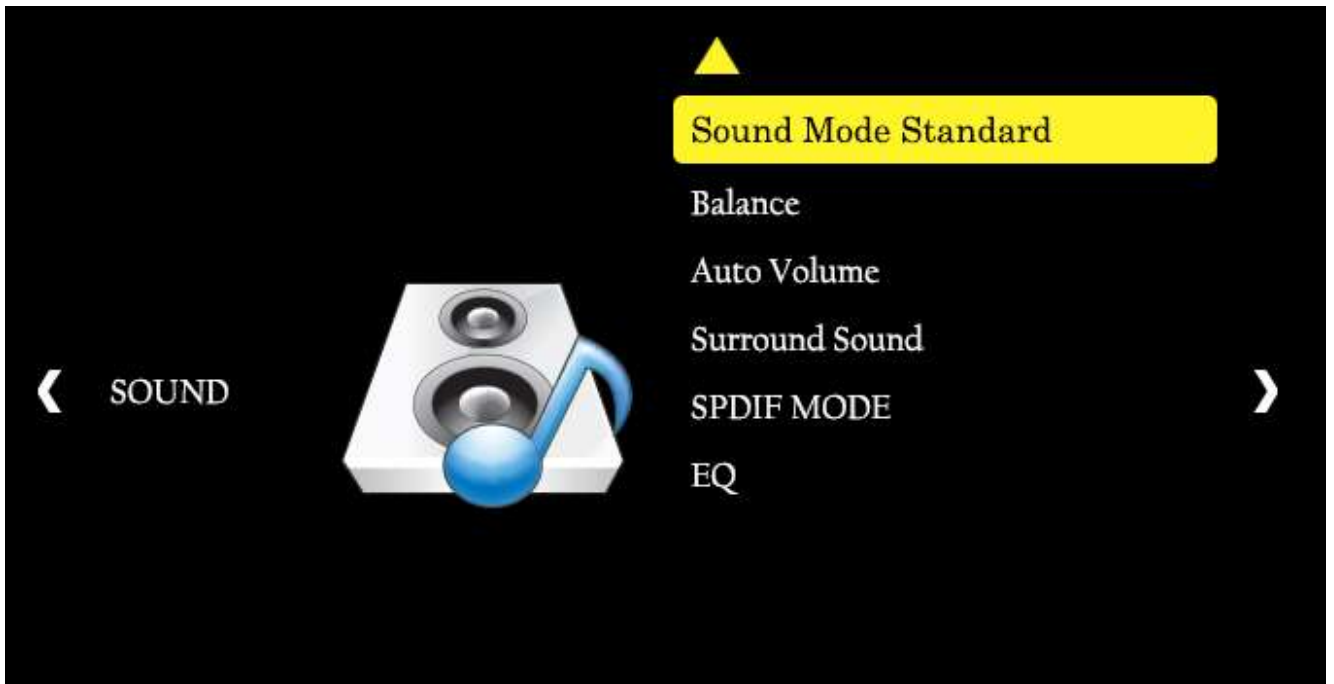
4-1. OSD FUNCTION



Picture Page

OSD Menu		
Picture Mode	Picture Mode Select	
	Mode	Standard
		Mild
		Dynamic
		User
Color Temperature	Color Temperature Mode Select	
	Mode	11000K
		9300K
		6500K
		User
Aspect Ratio	Aspect Ration Mode Select	
	Mode	Auto
		4:3
		16:9
		Full Screen
Noise Reduction	Noise Reduction Mode Select	
	Mode	OFF
		Low
		Middle
		High
Screen	NOT SUPPORTED	
BackLight	BackLight level Control	
	MIN	0
	MAX	100
Color Range	NOT SUPPORTED	
DMP OPTION	DMP OPTION Select	
	Option	AutoPlay
		Show Effect
		Slide Time

4-2. OSD FUNCTION



Sound page

OSD Menu			
Sound Mode	Sound Mode Select		
	Mode	Standard	
		Music	
		Movie	
		Sports	
		User	
Balance	Sound Balance level Control		
	Range of Value	MIN	-50
		MAX	+50
Auto Volume	Auto Volume Mode Select		
	Mode	OFF	
		ON	
Surround Sound	Surround Sound Mode Select		
	Mode	OFF	
		Surround	
		SRS TruSurround XT	
SPDIF MODE	SPDIF MODE Select		
	Mode	PCM	
		AUTO	
EQ	EQ Mode Select		
	Mode	120Hz 50	
		500Hz 50	
		1.5KHz 50	
		5KHz 50	
		10KHz 50	

4-3. OSD FUNCTION



Time page

OSD Menu	
Clock	This mode can change current time
Off Time	Off Time Mode Select
	Off
	Once
	Every Day
	Monday To Friday
	Monday To Saturday
	Saturday To Sunday
	Sunday
On Time	On Time Mode Select
	Off
	Once
	Every Day
	Monday To Friday
	Monday To Saturday
	Saturday To Sunday
	Sunday
Sleep Timer	Sleep Timer Mode Select
	Off
	10 Min
	20 Min
	30 Min
	60 Min
	90 Min
	120 Min
	180 Min
	240 Min
Auto Sleep	Auto Sleep Mode Select
	Off
	On

4-4. OSD FUNCTION

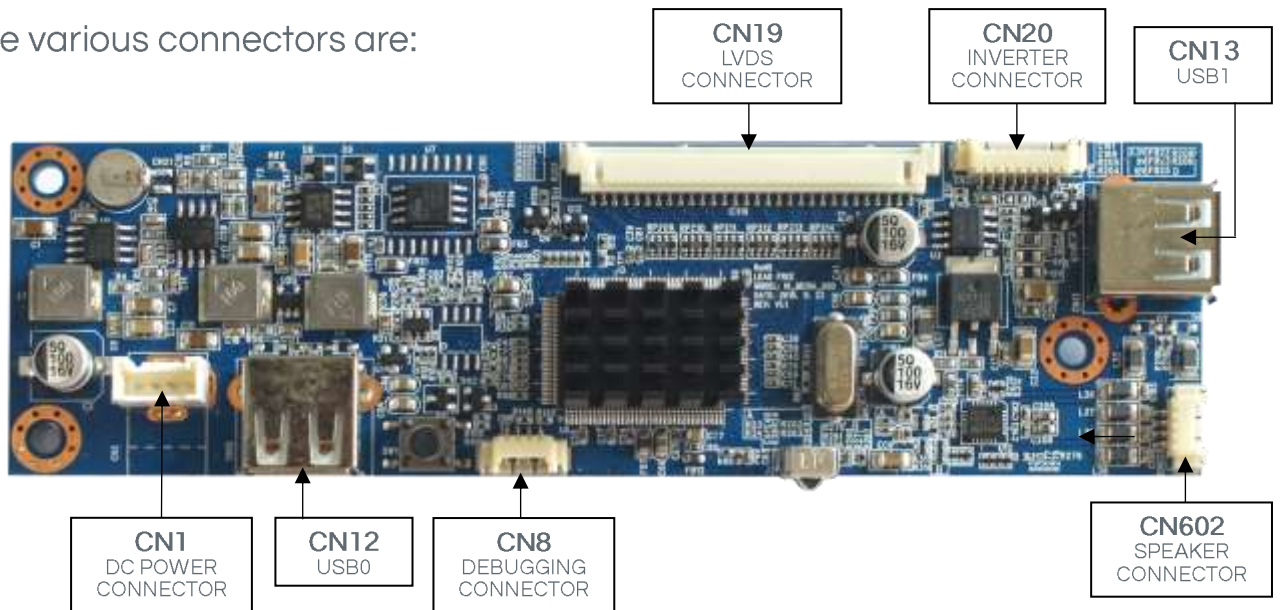


Option page

OSD Menu				
OSD Language	OSD Language Select			
	English	Spanish	French	German
	Italian	Portuguese	Russian	Chinese
Restore Factory Default	Restore Factory Default Mode Select			
	Mode	Yes		
		No		
OSD Transparency	OSD Transparency Mode Select			
	Mode	Off		
		Low		
		Middle		
		High		
OsdDuration	OsdDuration Mode Select			
	Mode	Off		
		5Sec		
		10Sec		
		15Sec		
Software Update(USB)	You can update the software via USB			

5. CONNECTOR, PINOUT & JUMPERS

The various connectors are:



Summary:

Reference	Item	Description	Type	Manufacturer
CN1	CONNECTOR	DC POWER CONNECTOR	SMW200-04P-2.0mm	YEONHO
CN8	CONNECTOR	DEBUGGING CONNECTOR	12505WR-04P	YEONHO
CN12	CONNECTOR	USB0 CONNECTOR	USB RIGHT ANGLE	
CN13	CONNECTOR	USB1 CONNECTOR	USB RIGHT ANGLE	
CN19	CONNECTOR	LVDS DUAL INTERFACE CONNECTOR	12505WR-30P	YEONHO
CN20	CONNECTOR	INVERTER CONNECTOR	12505WR-08P	YEONHO
CN602	CONNECTOR	SPEAKER CONNECTOR	12505WR-04P	YEONHO

CN1: DC POWER CONNECTOR

Pin No.	Symbol	Description
1	+12V_DC-BKLPWR	12V
2	+12V_DC-BKLPWR	12V
3	GND	Ground
4	GND	Ground

CN8: Debugging Connector

Pin No.	Symbol	Description
1	3_3V	3.3V -
2	GND	Ground
3	UART-RX	RX Data Input of Micro-Processor F8031-
4	UART-TX	TX Data Input of Micro-Processor F8031

CN12: USB0 Connector

Pin No.	Symbol	Description
1	+5V	5V
2	USB0_D-	USB0 DATA-
3	USB0_D+	USB0 DATA+
4	GND	Ground
5	GND	Ground
6	GND	Ground

CN13: USB1 Connector

Pin No.	Symbol	Description
1	+5V	5V
2	USB1_D-	USB1 DATA-
3	USB1_D+	USB1 DATA+
4	GND	Ground
5	GND	Ground
6	GND	Ground

CN602: Speaker CONNECTOR

Pin No.	Symbol	Description
1	OUT1B	Speaker Right +
2	OUT1A	Speaker Right -
3	OUT2A	Speaker Left -
4	OUT2B	Speaker Left +

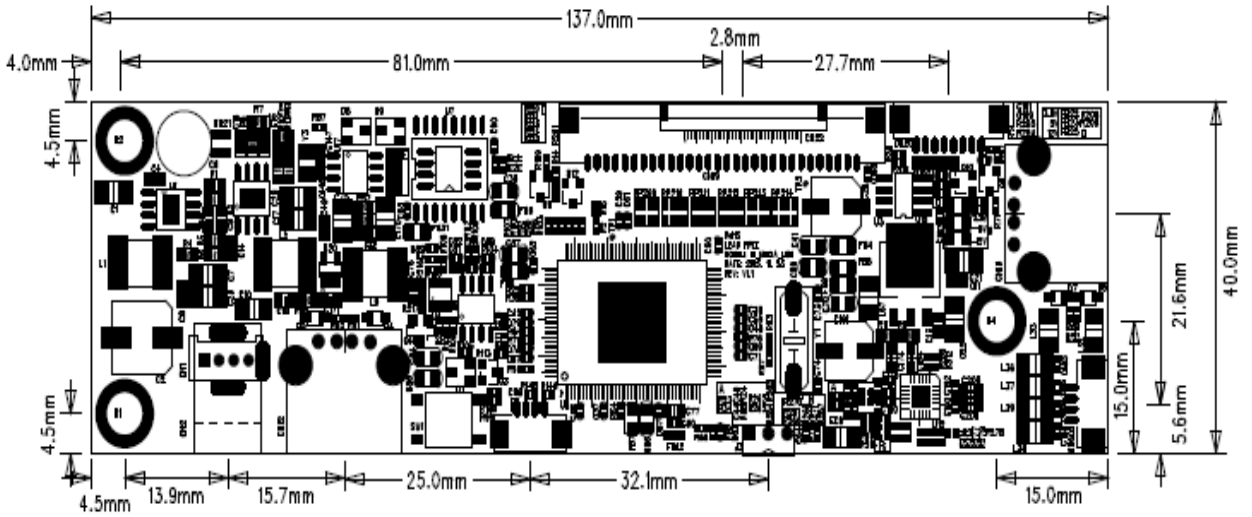
CN19: LVDS Dual Interface Connector

3	Symbol	Description
1	PANEL-VCC	Panel Power
2	PANEL-VCC	Panel Power
3	PANEL-VCC	Panel Power
4	NC	No Connection
5	NC	No Connection
6	NC	No Connection
7	GND	Ground
8	B3_RXE3+	Positive(+) LVDS differential first 3 data(B Port)
9	B2_RXE3-	Negative(-) LVDS differential first 3 data(B Port)
10	B5_RXEC+	Positive(+) LVDS differential first Clock(B Port)
11	B4_RXEC-	Negative(-) LVDS differential first Clock(B Port)
12	B7_RXE2+	Positive(+) LVDS differential first 2 data(B Port)
13	B6_RXE2-	Negative(-) LVDS differential first 2 data(B Port)
14	GND	Ground
15	G1_RXE1+	Positive(+) LVDS differential first 1 data(B Port)
16	G0_RXE1-	Negative(-) LVDS differential first 1 data(B Port)
17	GND	Ground
18	G3_RXE0+	Positive(+) LVDS differential first 0 data(B Port)
19	G2_RXE0-	Negative(-) LVDS differential first 0 data(B Port)
20	G7_RX03+	Positive(+) LVDS differential second 3 data(A Port)
21	G6_RX03-	Negative(-) LVDS differential second 3 data(A Port)
22	R1_RX0C+	Positive(+) LVDS differential second Clock(A Port)
23	R0_RX0C-	Negative(-) LVDS differential f second Clock(A Port)
24	GND	Ground
25	R3_RX02+	Positive(+) LVDS differential second 2 data(A Port)
26	R2_RX02-	Negative(-) LVDS differential second 2 data(A Port)
27	R5_RX01+	Positive(+) LVDS differential second 1 data(A Port)
28	R4_RX01-	Negative(-) LVDS differential second 1 data(A Port)
29	R7_RX00+	Positive(+) LVDS differential second 0 data(A Port)
30	R6_RX00-	Negative(-) LVDS differential second 0 data(A Port)
31	GND	Ground
32	GND	Ground

CN20: Inverter Connector

Pin No.	Symbol	Description
1	+12V_DC-BKLPWER	12V
2	+12V_DC-BKLPWER	12V
3	+5V	5V
4	BKL_PWM	Backlight PWM Dimming
5	GND	Ground
6	GND	Ground
7	BKL_EN	Backlight On/Off
8	ADJ	DIM-adjustment analog dimming control signal
9	GND	Ground
10	GND	Ground

6. CONTROLLER DIMENSIONS



[DIMENSION DOWNLOAD](#)

7. APPLICATION NOTES

A. USING THE CONTROLLER WITHOUT BOTTONS ATTACHED:

This is very straightforward:

- ▷ Firstly setup the controller/display system with the buttons. With the attached controllers and display system active make any settings for color, contrast and image position as required then switch everything off.
- ▷ Remove the control switches, the 7-way cable.
- ▷ Refer to inverter specifications for details as to fixing brightness to a desired level, this may require a resistor, an open circuit or closed circuit depending on inverter

B. INVERTER CONNECTION:

There are 3 potential issues to consider with inverter connection:

- ▷ Power
- ▷ ON/OFF
- ▷ Brightness (DIM-ADJ)

Inverter power : This should be matched with the inverter specification.

Inverter ON/OFF : This is a pin provided on some inverter for ON/OFF function and is used by this panel controller for VESA DPMS compliance. If the inverter does not have on/off pin or the on/off pin is not used DPMS will not operate. Pin5 should be matched to the inverter specification for the ON/OFF pin.

Brightness Dimming control : This controller boards are supported analog dimming and PWM dimming control method too. And it is important to consider the specifications for the inverter to be used.

8. ACCESSORY

REMOCON

