

客户名称/CUSTOMER:

客户代码/CUSTOMER CODE:



TOP-TECH

# 承 认 书

## PRODUCT SPECIFICATION

### Multi-Purpose LCD TV Control Board

产品名称/DESCRIPTION: MST182VG V2.0

客户型号/CUSTOMER MODEL: \_\_\_\_\_

承制方型号/MANUFACTURER MODEL: MST182VG V2.0

日期/DATE: 2012/2/15

#### 客户确认/CUSTOMER APPROVED

采购部 PURCHING	品管部 QC	研发部 RD	签章

#### 承制方确认/MANUFACTURER

拟制 DRAWING	审核 CHECKED	批准 RATIFY	签章
 2012.02.15	 2012.02.15	 2012.02.15	

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# RECORD OF REVISIONS

REVISION NO.	DATE	PAGE	DESCRIPTION

## 1. GENERAL DESCRIPTION

**MST182VG V2.0** is a multi-purpose LCD controller, it is suitable for the Asia market. It is designed to support FULL HD LCD panel.

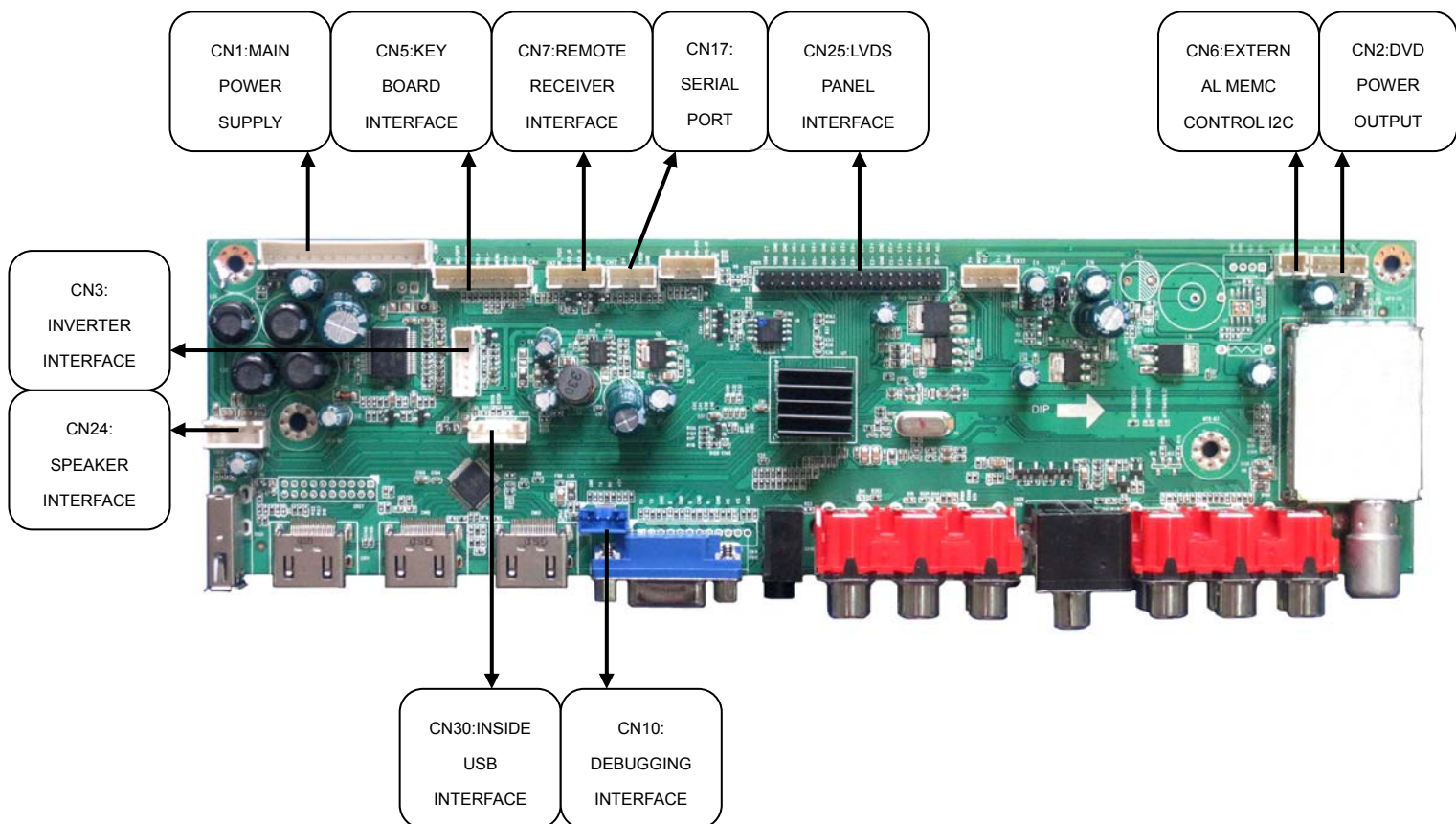
**MST182VG V2.0** can support PC-RGB, HDMI, S-Video, AV, YPBPR, USB, VGA, TV signal input. It can also support Earphone, AV and SPDIF output.

**Note:** The specification of the board includes the description of all functions. Therefore, our clients can select the functions which they require to produce the board. But the specification can be introduced universally.

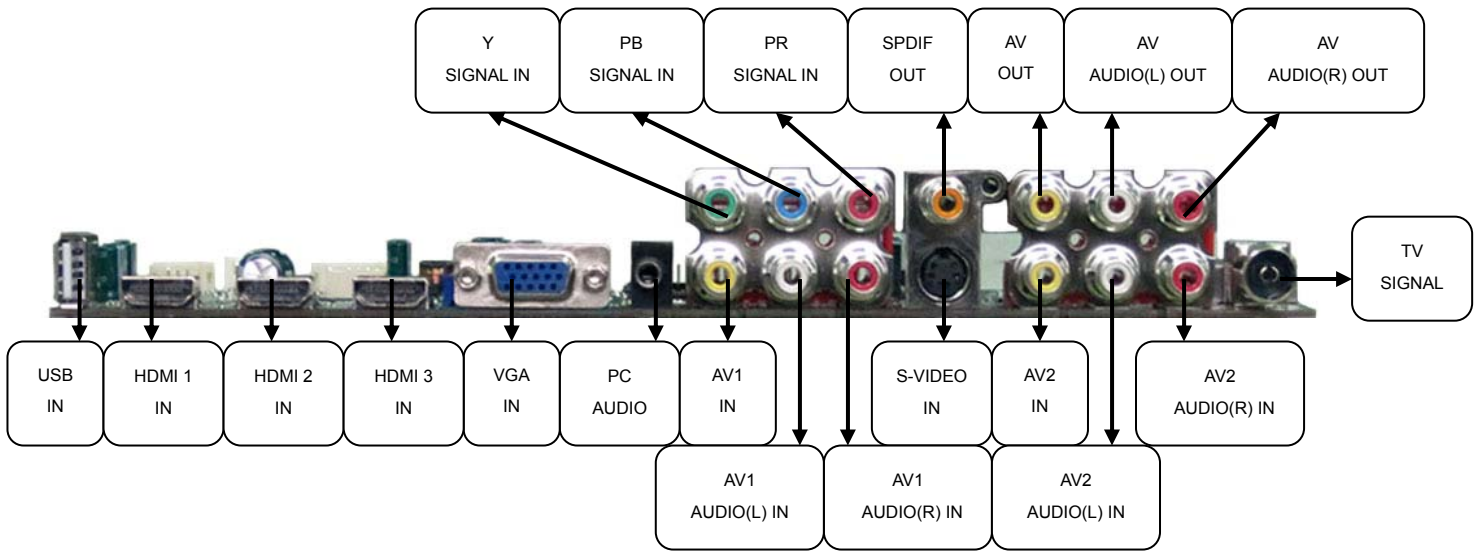
## 2. FUNCTION LAYOUT

The following all pictures are a reference only. Please take the actual objects as a standard.

### Elevation of MST182VG V2.0



### Side Elevation of MST182VG V2.0



### 3. FEATURES

Below you will find the detailed feature.

<b>CHIPSET</b>	MST6M182VG			
<b>MARKET AREA</b>	Asia			
<b>OSD LANGUAGE</b>	English,Chinese,(French,Spanish,Polish,Portuguese,Italian,German,Dutch,Russian)(Option )			
<b>VIDEO INPUT</b>	TV	VIDEO SYSTEM	PAL/SECAM,NTSC(Option)	
		SOUND SYSTEM	BG ,DK ,I, M	
		RECEIVE CHANNEL	ATV:200	
	CVBS	1.0Vp-p +/-5%		
	YPbPr / YCbCr	480i、 480p、 576i、 576p、 720p、 1080i、 1080p		
	PC-RGB	Format	Up to 1920*1080@60HZ	
		Color	16bit, 24bit, 32bit	
HDMI	480i、 480p、 576i、 576p、 720p、 1080i、 1080p			
<b>POWER</b>	Build-in power supply	5V,5VS,12V or only 12V (Option)		
	To panel	3.3V,5V,12V		
	DC Adapter	12V Input		
	Manage	Low power consumable mode: standby ≤0.5W		
<b>AUDIO INPUT</b>	CVBS	Left and right audio input		
	PC-RGB	YES		
	AV Audio Input	YES		
<b>EXPANSION FUNCTION</b>	USB	YES		
<b>PANEL</b>	Support up to 10-bit dual LVDS			

<b>RESOLUTIONS</b>	FULL HD panel interface		
<b>KEY FUNCTIONS</b>	CH-,CH+,MENU,VOL-,VOL+,SOURCE,ON/OFF		
<b>AUDIO OUTPUT</b>	2*8 W @ 8Ω		
<b>COMB FILTER</b>	3D	<b>DE-INTERLACE</b>	3D
<b>WEAK SIGNAL ENHANCEMENT</b>	YES		
<b>NOISE REDUCTION</b>	3D		
<b>NICAM/A2, TELETEXT,BTSC,CC,VCHIP</b>	YES		
<b>TERMINALS</b>	Input	TV Input	1 IEC 75 Ω
		PC-RGB Input	1D-SUB 15PIN terminal blue color
		HDMI Input	3HDMI terminal
		CVBS Input	1RCA terminal yellow color
		YPbPr Input	3RCA terminal green color,blue color and red color
		YPbPr Audio Input	2*2RCA terminal white color, red color
		CVBS Audio Input	
		USB	1 USB terminal
	Output	To Panel	Double LVDS 38PIN/2.0 jack
		Earphone Out	1earphone terminal black color
		AV Out	1RCA terminal yellow color
		SPDIF Out	1RCA terminal orange color

**USB MULTIMEDIA PLAYBACK FORMAT**

<b>MEDIA</b>	<b>FILE EXTENSION</b>	
Picture	JPEG、BMP、PNG	.jpg、.bmp、.png
Movie	MPEG1、MPEG2、MPEG4、H264、RM、RMVB、MOV、MJPEG、VC1、Divx、FLV	.avi、.mpg、.dat、.vob、.div、.mov、.mkv、.rm、.rmvb、.mp4、.mjpeg、ts、.trp、.wmv、.asf、.flv
Music	WMA、MP3、M4A、AAC	.wma、.mp3、.m4a

<b>FILE TYPE\THE RELEVANT PARAMETERS</b>	<b>RESOLUTION</b>	<b>COMPRESSION OPTION</b>	<b>SUPPORT BOUNDARIES</b>
JPEG	15360*8640	Progressive JPEG	Resolution Only Support 1024*768

		Baseline ("standard")	support
		Baseline optimized	support
BMP	9600*6400	homochromatism	Support
		16color	Support
		256color	Support
		16bit	Support
		24bit	Support
		32bit	support
PNG	9600*6400	No interlacing	Support
		Interlaced	Resolution Only Support 1200*800

**\*Realize that only when you gain the copyright of the corresponding USB functions, can the above-mentioned USB functions be used.**

#### 4. INTERFACE DEFINITION

##### CN1 ( 13PIN/2.0 ) MAIN POWER SUPPLY

NO.	SYMBOL	DESCRIPTION	ELECTRIC CHARACTER
1	12VA	+12V DC Power supply	2A+Panel Electric Current +electric Current of extended module
2	12VA		
3	GND	Ground	---
4	GND		
5	GND		
6	5V	+5V DC Power supply	2A+Panel Electric Current + electric Current of extended module
7	5V		
8	5VS	+5V DC Power standby	1A
9	PW	ON/OFF	---
10	5V	+5V DC Power supply	2A+Panel Electric Current + electric Current of extended module
11	5V		
12	GND	Ground	---
13	GND		

##### CN2 (5PIN/2.0) DVD POWER OUTPUT

NO.	SYMBOL	DESCRIPTION
1	12V	+12V Output

2	GND	Ground
3	GND	
4	5V	+5V Output
5	5V	

**CN3( 6PIN/2.0 ) INVERTER INTERFACE**

NO.	SYMBOL	DESCRIPTION	ELECTRIC CHARACTER
1	GND	Ground	---
2	GND		
3	ADJUST	Brightness adjustment	0-5V adjustable
4	ON/OFF	Back-light ON/OFF control	5V , 1K ohm output impedance
5	12VA	+12V DC Power supply	INVERTER Power Supply
6	12VA	+12V DC Power supply	INVERTER Power Supply

**CN5 (9PIN/2.0) KEY BOARD INTERFACE**

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	CH-	CH- key
3	CH+	CH+ Key
4	MENU	MENU Key
5	VOL-	VOL- Key
6	VOL+	VOL+ Key
7	SOURCE	SOURCE Key
8	ON/OFF	ON/OFF key
9	NC	NC

**CN6 (2PIN/2.0) EXTERNAL MEMC CONTROL I2C**

NO.	SYMBOL	DESCRIPTION
1	SDA	I2C Master bus for SDA
2	SCL	I2C Master bus for SCL

**CN7 (5PIN/2.0) REMOTE RECEIVER INTERFACE**

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	IR_IN	Remote receiver
3	LED_G	Green indicator
4	LED_R	Red indicator
5	IR_VCC	+5V DC Power supply

### CN10 (4PIN/2.0) DEBUGGING INTERFACE

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	ISP-TXD	Transmit data
3	ISP-RXD	Receive data
4	+5V_Standby	+5V Power supply

### CN17 (4PIN/2.0) UART INTERFACE

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	TXD	Transmit data
3	RXD	Receive data
4	+5V_Standby	+5V Power supply

### CN24 (4PIN/2.54) SPEAKER INTERFACE

NO.	SYMBOL	DESCRIPTION
1	R+	Positive right audio channel out
2	R-	Negative right audio channel out
3	L-	Negative left audio channel out
4	L+	Positive left audio channel out

### CN25 (2\*19PIN/2.0) LVDS PANEL INTERFACE

NO.	SYMBOL	DESCRIPTION
1	VDD	Power for panel
2	CT	mode pin for panel
3	VDD	Power for panel
4	GND	Ground
5	GND	
6	GND	
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	
15	RXOC-	LVDS ODD Clock- Signal



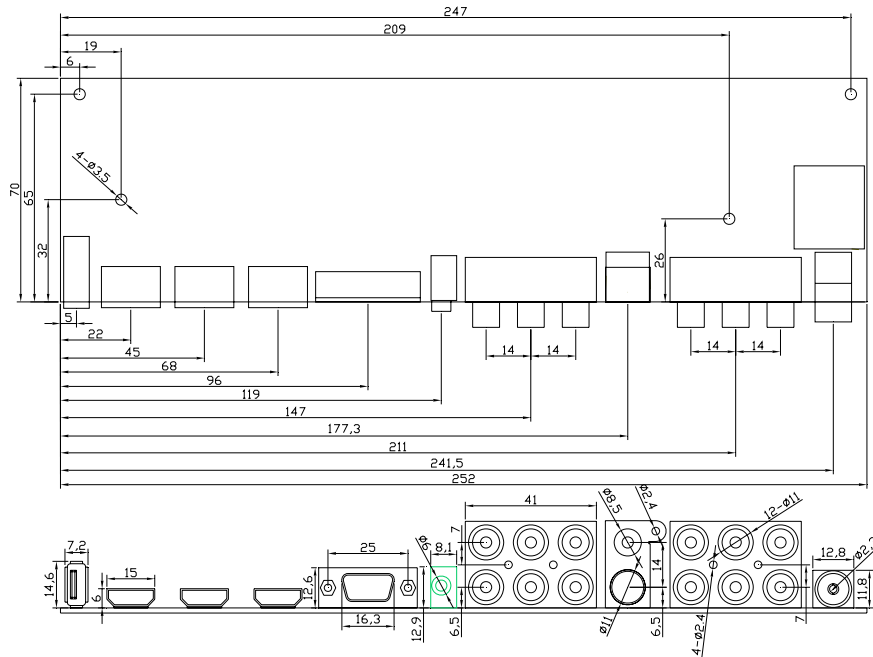
16	RXOC+	LVDS ODD Clock+ Signal
17	RXO3-	LVDS ODD 3- Signal
18	RXO3+	LVDS ODD 3+ Signal
19	RXE0-	LVDS EVEN 0- Signal
20	RXE0+	LVDS EVEN 0+ Signal
21	RXE1-	LVDS EVEN 1- Signal
22	RXE1+	LVDS EVEN 1+ Signal
23	RXE2-	LVDS EVEN 2- Signal
24	RXE2+	LVDS EVEN 2+ Signal
25	GND	Ground
26	GND	
27	RXEC-	LVDS EVEN Clock- Signal
28	RXEC+	LVDS EVEN Clock+ Signal
29	RXE3-	LVDS EVEN 3- Signal
30	RXE3+	LVDS EVEN 3+ Signal
31	RXE4-	LVDS EVEN 4- Signal
32	RXE4+	LVDS EVEN 4+ Signal
33	RXO4-	LVDS ODD 4- Signal
34	RXO4+	LVDS ODD 4+ Signal
35	TUNER_SCL	SCL
36	TUNER_SDA	SDA
37	3D_FLAG	3D flag
38	PB_ADJUST	Back-light brightness adjustment

### **CN30 (5PIN/2.0) INSIDE USB INTERFACE**

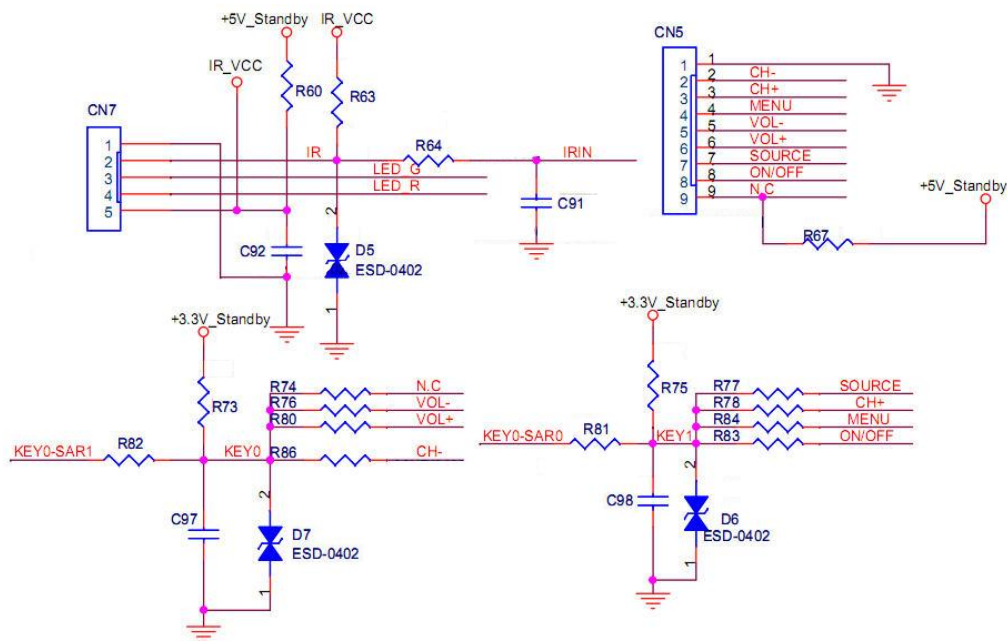
<b>NO.</b>	<b>SYMBOL</b>	<b>DESCRIPTION</b>
1	5V_USB2	5V Power supply
2	USB1_DMO	USB data-
3	USB1_DPO	USB data+
4	GND	Ground
5	USB_I/O	GPIO Control (RESERVE)

### **5. CONTROLLER DIMENSIONS**

The dimension is identical to the actual objects. But maybe exist the slight error of measures about 1%. It is allowed in design.



## 6. KEY & IR BOARD SYSTEM SCHEMATIC



## 7. OPERATION REQUIREMENT

- Do not pressed and distorted.
- Keep away from static and water.
- Relative humidity :  $\leq 80\%$
- Storage temperature:  $-10 \sim +60^{\circ}\text{C}$
- Operation temperature:  $0 \sim +40^{\circ}\text{C}$