V1.5

FRAME RATE CONVERSION BOARD SPECIFICATION

MODEL: PL.MS6M30.1B-1(QSC)

Part Number: PL-11082902

AUTHOR: 陈秋芬 2011.08.29 20:23:59 +08'00'

CHECKED BY: 刘台宝 2011.08.29 20:42:15 +08'00'

RECHEKED1 BY: 欧阳国强

RECHEKED2 BY: 2011.08.29 21:57:24 +08'00'

APPROVED BY: 2011.08.30 10:49:44 +08'00'

PUBLISH DATE: 2011-08-30

CONTENT

REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DISCRIPTION	AUTHOR
V1.5	2011.8.29	PL.MS6M30.1B-1 11325	2	Change the board picture and increase the circuit difference in part2; Increase chip model in part 3.	Fanny
V1.4	2011.08.09	PL.MS6M30.1B 11085	3	Increase chip functional differences in part 3;	Fanny
V1.3	2011.07.09	PL.MS6M30.1B 11085	2、3	Modify the Power Supply in part 2 and 5.	Fanny
V1.2	2011.03.22	PL.MS6M30.1B 11085	3、4	Modify the INTERFACE DEFINITION in part 5;	Fanny
V1.1	2011.01.08	PL.MS6M30.1B 10512	2	Modify the board picture in part 3;	Fanny
V1.0	2010.11.18	PL.MS6M30.1A 10446	All	First issued.	Fanny

1. GENERAL DESCRIPTION

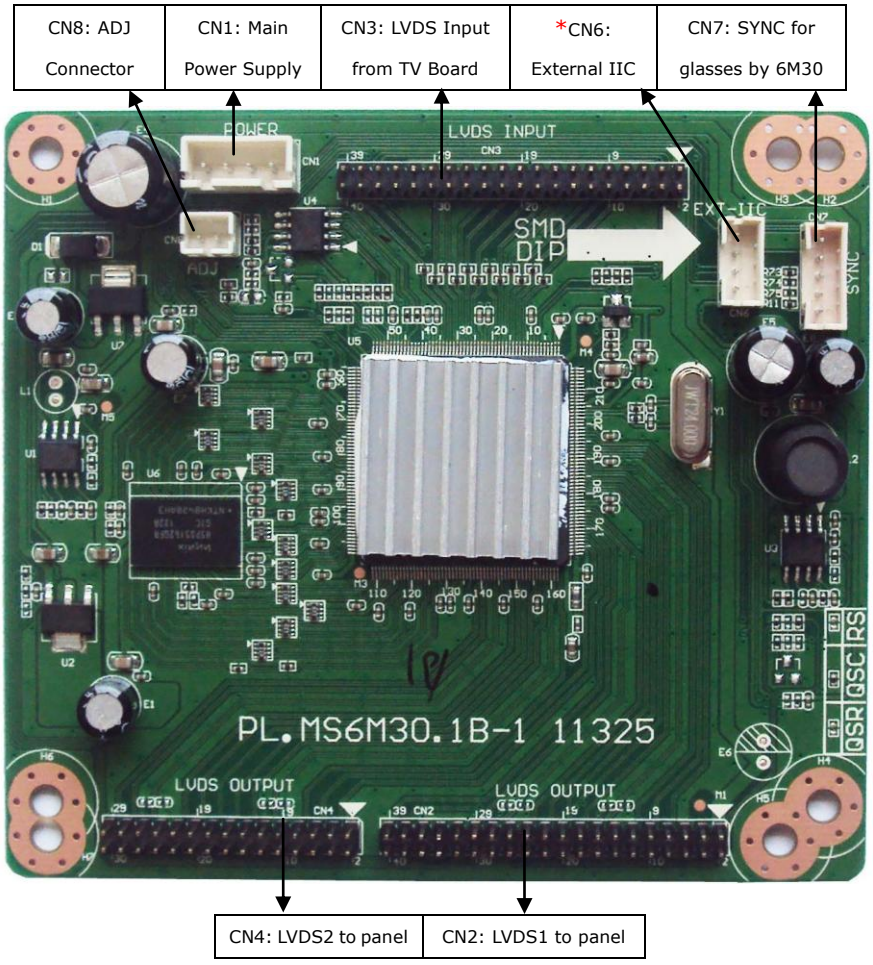
PL.MS6M30.1B-1doubles the frames (50Hz → 100Hz conversion, 60Hz → 120Hz conversion, 24Hz → 120Hz conversion, frame interpolation) of the video signal output (Full-HD signal byLVDS interface)from a TV control board and then supplies the frame-doubledvideo signal to a panel provided with LVDS input.

2. FUNCTION LAYOUT

The picture is for a reference only, the actual item is the standard.

The optional connectors and terminals are marked with "*".

TOP VIEW OF PL.MS6M30.1B-1



Note: The pin No.35 and No.36 of CN3' LVDS Input' should be connected with the TV board to ensure the normal use.

Circuit difference between 5 V and 12 V power supply

5V Power Supply (without L1)

12V Power Supply (with L1)

3. FEATURES

CHIPSET	MST6M30QSC
POWER REQUIREMENT	Default 5V
MAX POWER CONSUMPTION	4W

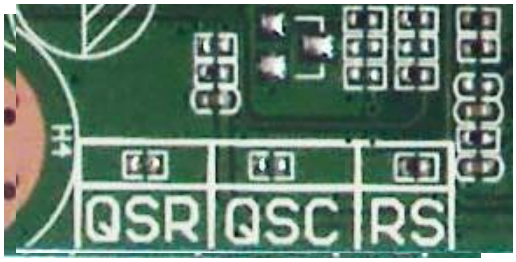
Note: You can distinguish 5V or 12V Power Supply for the board with"L1". If there is no "L1" on your board,that means your board is 5V Power Supply.Otherwise, it means your boardis 12V Power Supply.

	INPUT(50Hz/60Hz)	→	**OUTPUT(100Hz/120Hz)**
FREQUENCY	1 phase, Max 83MHz	→	2 phase, Max 83MHz
	2 phase, Max 74.25MHz	→	4 Phase, Max 74.25MHz
VIDEO SIGNAL	WXGA 768p (1366x768)	→	WXGA 768p (1366x768)
	Full-HD 1080p (1920x1080)	→	Full-HD 1080p (1920x1080)

CHIP FUNCTIONAL DIFFERENCES

	MST6M30QSC	**MST6M30QSR-LF**	**MST6M30RS-LF**
2D to 3D	×	√（SW）	√（HW）
3D	√	√	√
3D MEMC（SG）			
2D MEMC			
Local Diming	×	√	√
ISP Address	0x94		

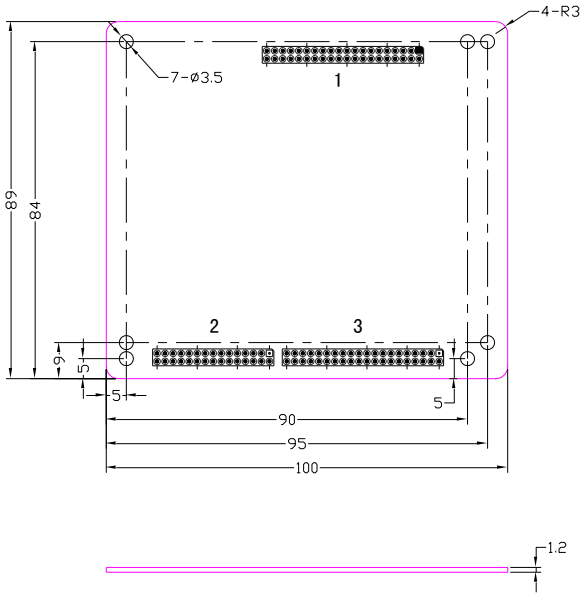
Note: The chip can be identified through thelogo resistance on the board, as the fellow picture.



Logo resistance

4. PCB DIMENSIONS

The overall height of PL.MS6M30.1B-1 is16mm.



5. INTERFACE DEFINITION

The optional connectors are marked with "*".

◆ CN1(4PIN/2.54): MAIN POWER INPUT CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	VCC	Power Supply Input(Default 5V)
2	VCC	
3	GND	Ground
4	GND	

◆ CN2(2x20PIN/2.0): LVDS1 TO PANELCONNECTOR

NO.	SYMBOL	DESCRIPTION
1	VCC-PANEL	Power for Panel(Follow with the main board)
2	VCC-PANEL	
3	VCC-PANEL	
4	GND	Ground
5	GND	
6	GND	
7	A0M	LVDS 0 A- Signal

8	A0P	LVDS 0 A+ Signal
9	A1M	LVDS 1 A- Signal
10	A1P	LVDS 1 A+ Signal
11	A2M	LVDS 2 A- Signal
12	A2P	LVDS 2 A+ Signal
13	GND	Ground
14	GND	
15	ACKM	LVDS Clock A- Signal
16	ACKP	LVDS Clock A+ Signal
17	A3M	LVDS 3 A- Signal
18	A3P	LVDS 3 A+ Signal
19	B0M	LVDS 0 B- Signal
20	B0P	LVDS 0 B+ Signal
21	B1M	LVDS 1 B- Signal
22	B1P	LVDS 1 B+ Signal
23	B2M	LVDS 2 B- Signal
24	B2P	LVDS 2 B+ Signal
25	GND	Ground
26	L/R_IN	Input signal for Left Right eye frame synchronousforPanel
27	BCKM	LVDS Clock B- Signal
28	BCKP	LVDS Clock B+ Signal
29	B3M	LVDS 3 B- Signal
30	B3P	LVDS 3 B+ Signal
31	LD_EN	Local Dimming Enable(default for High)forPanel
32	GND	Ground
33	SELLVDS	JEDIA/VESA format selection(Follow with the main board)
34	L/R_O	Output signal for Left Right Glasses controlfrom Panel
35	2D/3D	2D/3D mode Control selectionfor Panel(Connect to the GPIO of 6M30)
36	BL_ADJ	Backlight on/off control signal , H: B/L off, L: B/L onfrom Panel
37	A4M	TX LVDS 4 A- Signal
38	A4P	TX LVDS 4 A+ Signal
39	B4M	TX LVDS 4 B- Signal
40	B4P	TX LVDS 4 B+ Signal

◆ CN4(2x15PIN/2.0): LVDS2 TO PANELCONNECTOR

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	GND	

3	C0M	LVDS 0 C- Signal
4	C0P	LVDS 0 C+ Signal
5	C1M	LVDS 1 C- Signal
6	C1P	LVDS 1 C+ Signal
7	C2M	LVDS 2 C- Signal
8	C2P	LVDS 2 C+ Signal
9	GND	Ground
10	GND	
11	CCKM	LVDS Clock C- Signal
12	CCKP	LVDSClock C+ Signal
13	C3M	LVDS 3 C- Signal
14	C3P	LVDS 3 C+ Signal
15	C4M	LVDS 4 C- Signal
16	C4P	LVDS 4 C+ Signal
17	D0M	LVDS 0 D- Signal
18	D0P	LVDS 0 D+ Signal
19	D1M	LVDS 1 D- Signal
20	D1P	LVDS 1 D+ Signal
21	D2M	LVDS 2 D- Signal
22	D2P	LVDS 2 D+ Signal
23	GND	Ground
24	GND	
25	DCKM	LVDSClock D- Signal
26	DCKP	LVDSClock D+ Signal
27	D3M	LVDS 3 D- Signal
28	D3P	LVDS 3 D+ Signal
29	D4M	LVDS 4 D- Signal
30	D4P	LVDS 4 D+ Signal

◆ CN3(2x20PIN/2.0): LVDS FROM TV BOARDCONNECTOR

NO.	SYMBOL	DESCRIPTION
1	VCC-PANEL	Power for Panel(Follow with the main board)
2	VCC-PANEL	
3	VCC-PANEL	
4	GND	Ground
5	GND	
6	GND	
7	RXO0-	LVDS ODD 0- Signal

8	RXO0+	LVDS ODD 0+ Signal
9	RXO1-	LVDS ODD 1- Signal
10	RXO1+	LVDS ODD 1+ Signal
11	RXO2-	LVDS ODD 2- Signal
12	RXO2+	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	GND	Ground
32	GND	
33	SELLVDS	JEDIA/VESA format selection(Follow with the main board)
34	3D_Flag	The left or right image flag for 6M30
35	I2C SCL	6M30 I^2C SCL(Must connect to the main board)
36	I2C SDA	6M30 I2C SDA(Must connect to the main board)
37	RXO4-	LVDS ODD4- Signal
38	RXO4+	LVDS ODD4+ Signal
39	RXE4-	LVDS EVEN 4- Signal
40	RXE4+	LVDS EVEN 4+ Signal

◆ *CN6(4PIN/2.0): EXTERNAL IIC CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	3V3	+3.3V Power Input
2	SCL	DDC CLOCK

3	SDA	DDC DATA
4	GND	Ground

◆ CN7(5PIN/2.0):SYNC SIGNAL FORGLASSESBY 6M30

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	SG_SYNC	Sync for 3D glasses (Default connect to the PIN34 of CN2)
3	RXD	Receive Date（reserved）
4	TXD	Transfer Date（reserved）
5	VCC	VCC Power Supply for Launch box of 3D glasses(Follow with the board Power supply)

NOTE: If the board is 12V Power supply,the VCC of CN7 cannot use as power for the launch box of 3D glasses.

◆ CN8(2PIN/2.0): ADJ CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	GND	Ground
2	ADJ	Brightness Adjustment for Panel(Default connect to the PIN36 of CN2)

6. CONFIGURATION & GENERAL PRECAUTIONS

- **Relative humidity: ≤ 80%.**
- **Storage temperature: -10~60°C.**
- **Operation temperature: 0~40°C.**
- **Protect the control board from static, it may cause damage to the IC.**
- **Disconnect the TV before the power supply of panel is connected correctly.**
- **Do not drop any metal on the control board when it is working.**
- **Do not push or pull the connector when the control board is working.**
- **Do not disassemble the module.**
- **If the surface or the control board is dirty, clean it with soft dry cloth.**
- **Can't be pressed and distorted.**