



LCD Television Service Manual

Chassis: MTK8222

Ver 1.0

Hisense Electric Co., Ltd.

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Service Manual

1. Precautions and notices

BEFORE SERVICING THE LCD TV, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

WHEN REPLACEMENT PARTS ARE REQUIRED, BE SURE TO USE REPLACEMENT PARTS SPECIFIED BY THE MANUFACTURER.

Proper service and repair is important to the safe, reliable operation of all Hisense Electric Co., Ltd Equipment. The service procedures recommended by Hisense and described in this Service Guide are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Hisense could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Hisense has not undertaken any such broad evaluation. Accordingly, a serviceman that uses a service procedure or tools,

which are not recommended by Hisense, must first satisfy himself thoroughly that neither his safety nor the safe of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, Hisense Electric Co., Ltd will be referred to as Hisense.

1.1 Warning

1.1.1

Critical components having special safety characteristics are identified with a ▲ by the Ref. No. in the parts list. Use of substitute replacement parts, which do not have the same specified safety characteristics, may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Hisense. Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Serviceman assumes all liability.

DANGER CAUTION

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE GUIDE.

1.1.2.

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD).

Careless handling during repair can reduce life drastically. When repairing, make sure

that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.

1. Never replace modules or other components while the unit is switched on.

2. When making settings, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

1.1.3

To prevent electrical shock, do not use this polarized ac plug with an extension cord, receptacle, or the outlet unless the blades can be fully inserted to prevent blade exposure.

To prevent electrical shock, match wide blade or plug to wide slot, fully insert.

1.1.4

When replacement parts are required, be sure to use replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

1.1.5

Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points.

- Note: The wire trees should be routed correctly and fixed with the mounted cable clamps.

- The insulation of the mains lead should be checked for external damage.

1.1.6

- (1) Do not touch Signal and Power Connector while this product operates. Do not

touch EMI ground part and Heat Sink of Film Filter.

(2) Do not supply a voltage higher than that specified to this product. This may damage the product and may cause a fire.

(3) Do not use this product in locations where the humidity is extremely high, where it may be splashed with water, or where flammable materials surround it. Do not install or use the product in a location that does not satisfy the specified environmental conditions. This may damage the product and may cause a fire.

(4) If a foreign substance (such as water, metal, or liquid) gets inside the panel module, immediately turn off the power. Continuing to use the product may cause fire or electric shock.

(5) If the product emits smoke, and abnormal smell, or makes an abnormal sound, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.

(6) Do not disconnect or connect the connector while power to the product is on. It takes some time for the voltage to drop to a sufficiently low level after the power has been turned off. Confirm that the voltage has dropped to a safe level before disconnecting or connecting the connector.

(7) Do not pull out or insert the power cable from/to an outlet with wet hands. It may cause electric shock.

(8) Do not damage or modify the power cable. It may cause fire or electric shock.

(9) If the power cable is damaged, or if the connector is loose, do not use the product:

otherwise, this can lead to fire or electric shock.

(10) If the power connector or the connector of the power cable becomes dirty or dusty, wipe it with a dry cloth. Otherwise, this can lead to fire.

(11) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

1.2 Notes

Notes on Safe Handling of the LCD panel and during service

The work procedures shown with the Note indication are important for ensuring the safety of the product and the servicing work. Be sure to follow these instructions.

- Before starting the work, secure a sufficient working space.
- At all times other than when adjusting and checking the product, be sure to turn OFF the POWER Button and disconnect the power cable from the power source of the TV during servicing.
- To prevent electric shock and breakage of PC board, start the servicing work at least 30 seconds after the main power has been turned off. Especially when installing and removing the power board, start servicing at least 2 minutes after the main power has been turned off.
- While the main power is on, do not touch any parts or circuits other than the ones specified. If any connection other than the one specified is made between the measuring

equipment and the high voltage power supply block, it can result in electric shock or activation of the leakage-detection circuit breaker.

- When installing the LCD module in, and removing it from the packing carton, be sure to have at least two persons perform the work.
- When the surface of the panel comes into contact with the cushioning materials, be sure to confirm that there is no foreign matter on top of the cushioning materials before the surface of the panel comes into contact with the cushioning materials. Failure to observe this precaution may result in, the surface of the panel being scratched by foreign matter.
- When handling the circuit board, be sure to remove static electricity from your body before handling the circuit board.
- Be sure to handle the circuit board by holding the large parts as the heat sink or transformer. Failure to observe this precaution may result in the occurrence of an abnormality in the soldered areas.
- Do not stack the circuit boards. Failure to observe this precaution may result in problems resulting from scratches on the parts, the deformation of parts, and short-circuits due to residual electric charge.
- Routing of the wires and fixing them in position must be done in accordance with the original routing and fixing configuration when servicing is completed. All the wires are routed far away from the areas that become hot (such as the heat sink). These wires are fixed in position with the wire clamps so that the wires do not move, thereby ensuring

that they are not damaged and their materials do not deteriorate over long periods of time. Therefore, route the cables and fix the cables to the original position and states using the wire clamps.

- Perform a safety check when servicing is completed. Verify that the peripherals of the serviced points have not undergone any deterioration during servicing. Also verify that the screws, parts and cables removed for servicing purposes have all been returned to their proper locations in accordance with the original setup.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Factory/Service OSD Menu and Adjustment

2.1 To enter the Factory OSD Menu

a.. With user's RC

1. Power TV On
2. Press Menu button and call up User OSD Menu
3. Select Audio-> Balance
4. Enter 0->5->3 ->2 in sequence.
Note: If necessary, re-do number keys.
5. Factory OSD appears.
6. Press Menu again and leave factory OSD.

b. With user's RC

7. Power TV On
8. Press Menu button and call up User OSD Menu
9. Select Audio-> Balance
10. Enter 0->5->3 ->2 in sequence.
Note: If necessary, re-do number keys.
11. Factory OSD appears.
12. Press Menu again and leave factory OSD.

2.2 Factory OSD Menu

2.2.1 White Balance

Note: Different source has different WB values. Before adjusting, please change to desired source.

1. Auto Color

For VGA and Component Video sources, WB values must be adjusted. And at others signal sources, the "auto colour" does not work.

Before adjusting, prepare the signal instruments such as DVD or K-8256 first, and find the video picture with gray and color bars. Then please change to desired source.

	source	Timing	Pattern	Notes
1	ADC VGA	1024*768	gray-3color	For VGA source
2	ADC HDTV	720P	gray-3color	For Component Video

Notes:

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- a、Press “M” button and enter factory mode.
- b、Press “Menu” button and enter factory OSD menu.
- c、Select the item “Auto Color” .
- d、Press VOL+ button to auto color.
- e、Close the OSD menu after 5 seconds.

2.2.2 Factory Option

Item 0	Item 1	Note
White Balance	R DRV	Red Driver adjust
	G DRV	Green Driver adjust
	B DRV	Blue Driver adjust
	R CUT	Red Cut adjust
	G CUT	Green Cut adjust
	B CUT	Blue Cut adjust
Note: Before adjusting, please change to desired source. Different source has different WB values.		
Factory RESET	Zhong Shi	Qingdao Jiangxi Road factory
	Huang Dao	Huangdao Industrial Park
	Gui Yang	Gui Yang Industrial Park
	Liao Ning	Liao Ning Industrial Park
	Hungary	Hisense Hungary
	Australia	Hisense Australia
	France	Hisense France
	Clean Protected	Clean data except WB data and Auto Color data
	Clean All	Clean all data
Auto Color	For VGA and Component Video sources, WB values must be adjusted	And at others signal sources, the “auto colour “does not work.
Color Temp	Color	Standard
	R Offset	
	G Offset	
	B Offset	
Picture Mode	Brightness Min	Min Brightness
	Brightness Mid	Mid Brightness
	Brightness Max	Max Brightness
	Contrast Min	Min Contrast
	Contrast Mid	Mid Contrast
	Contrast Max	Max Contrast s
	Saturation Min	Min Saturation
	Saturation Mid	Mid Saturation

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	Saturation Max	Max Saturation
Factory Option	OSD	English
	Logo Option	Devant
	To FAC	M
MODE “M” is only used for factory production.		
SW Version	Version:	Current Software version
	Panel Info:	The date of current version
	Flash:	

Note: The factory menu date varies according to different sources. In case changing the factory data by error, you can choose to “Clean Protected”, by which you can resume the default value.

To clear the EEPROM:

- Select the item “Clean All”.
- Press VOL+ button to clear the EEPROM data.
- Close the OSD menu after 5 seconds.
- Restart the TV.

2.3 Designer Menu

Item 0	Item 1	Item 2	Note
Designer Menu	Picture Mode	SOURCE	The current program source
		Brightness Brightness	Brightness of VIVID mode
		Brightness Contrast	Contrast of VIVID mode
		Brightness Saturation	Saturation of VIVID mode
		STD Brightness	Brightness of STD mode
		STD Contrast	Contrast of STD mode
		STD Saturation	Saturation of STD mode
		Soft Brightness	Brightness of Movie mode
		Soft Contrast	Contrast of Movie mode
		Soft Saturation	Saturation of Movie mode
	Audio Set	Volume Min	When value is 1

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Think about the

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			Audio out power before adjusting
		Volume 25	When value is 25 Think about the Audio out power before adjusting
		Volume Mid	When value is 50 Think about the Audio out power before adjusting
		Volume 75	When value is 75 Think about the Audio out power before adjusting
		Volume Max	When value is 100 Think about the Audio out power before adjusting
	Audio Mode	Audio Mode	Standard 、 user 、 Music 、 Speech, Music
		120HZ	Different frequencies for different Audio Mode
		500HZ	
		1.5kHz	
		5kHz	
		10kHz	
	Backlight co	PVM 0-350	
		PVM 350-500	
		PVM500-1000	
		PVM 1000-10000	
		PVM 10000-	
	EMI	0	
	Power Mode	Last station	

The above “Factory/Service OSD Menu” are reference only, please refer to the actual units to determine the appearances.

3 Software Upgrading

The first upgrading method:

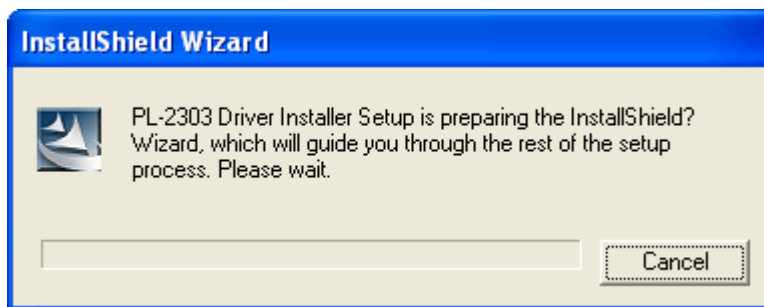
The software is upgraded by a burning tool-MtkTool, which can burn the program file *.bin to the main board of the unit.

3.1 Get ready for upgrading

3.1.1 Install the driver



Double click the icon MTKtools2.44.04+cp210xDriver.rar , install the driver.



Select the default value, the driver will be installed step by step.

3.1.2 Hardware connecting

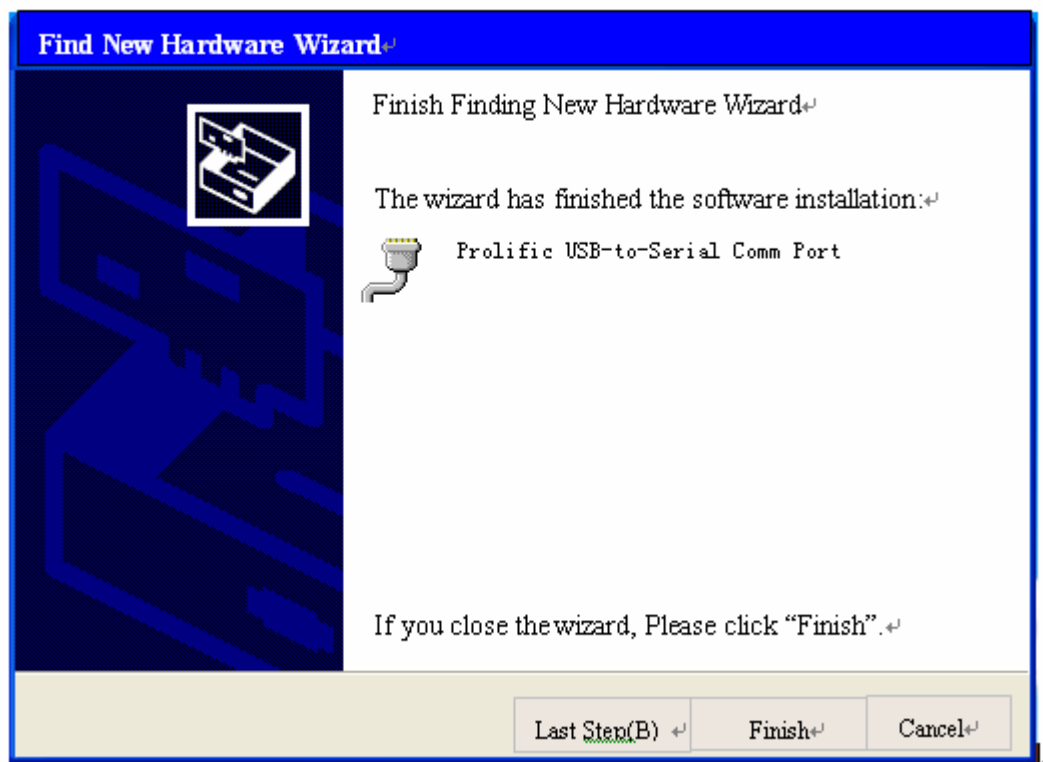
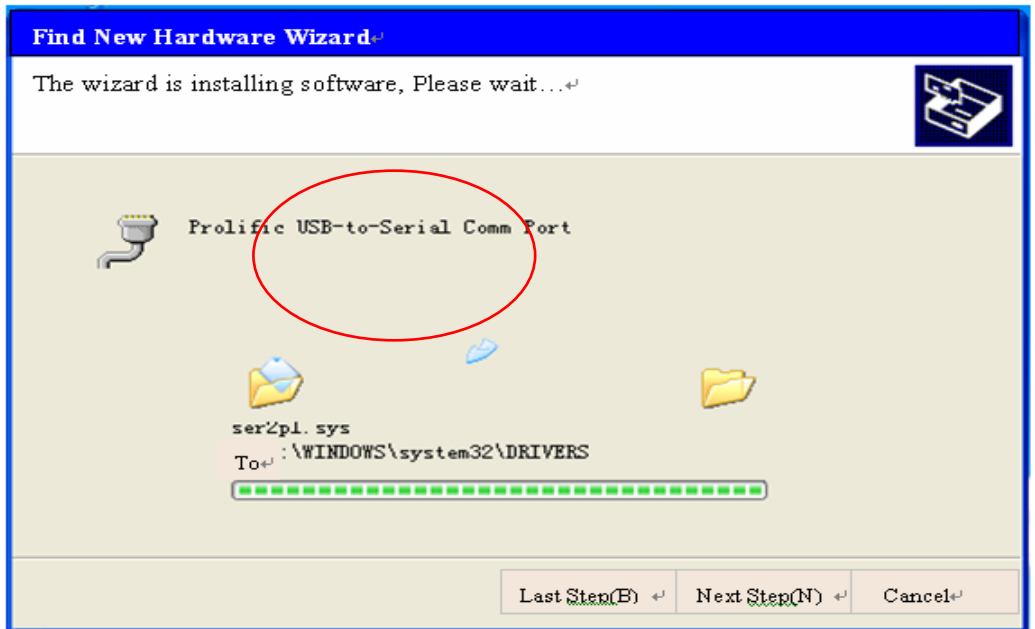
Connect the unit to your pc with a USB-to-serial port cable. USB port connects to your pc, and serial port to the TV's RS232 port.



USB connector: to PC.

Serial connector: to TV's RS232 port.

For the first connecting, the pc will recognize and automatically install the USB device. The process is just like the installation of a mini disk, see the following picture.



3.2 Upgrading with the MtkTool

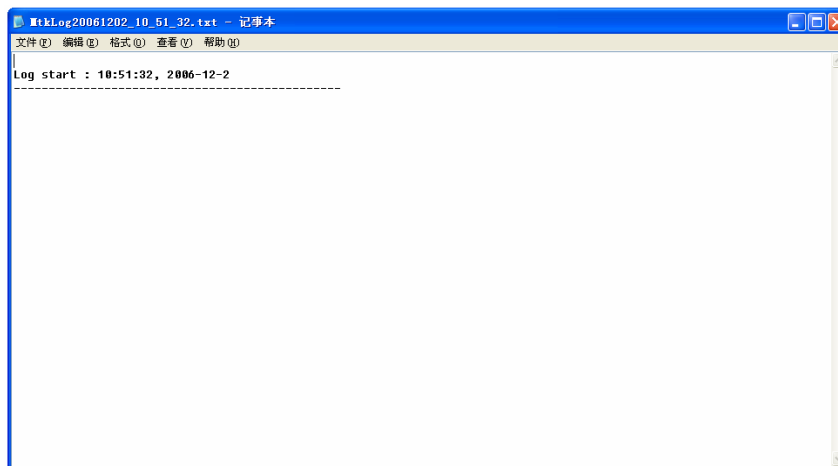
MTKtool is a green program needing no installation. It is saved in the folder



. There are five folders/files in this folder altogether.

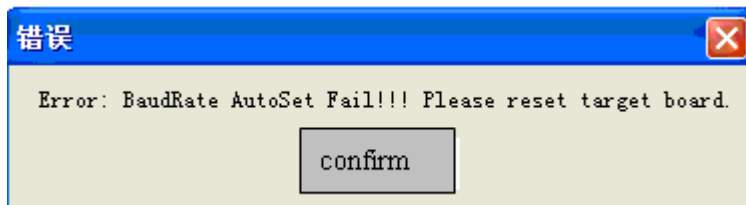


The MtkTool using log is restored in the MtkLog folder. It records the running time and date whenever the tool is used. The log will be a txt file named by the date and time.



After connecting the TV with your PC, double click  icon, open the MtkTool.

If following error appears, it means the related port is not be set properly.



Ignore these errors, click “Confirm” and enter the MtkTool main interface, see the following picture.

Flash chip model

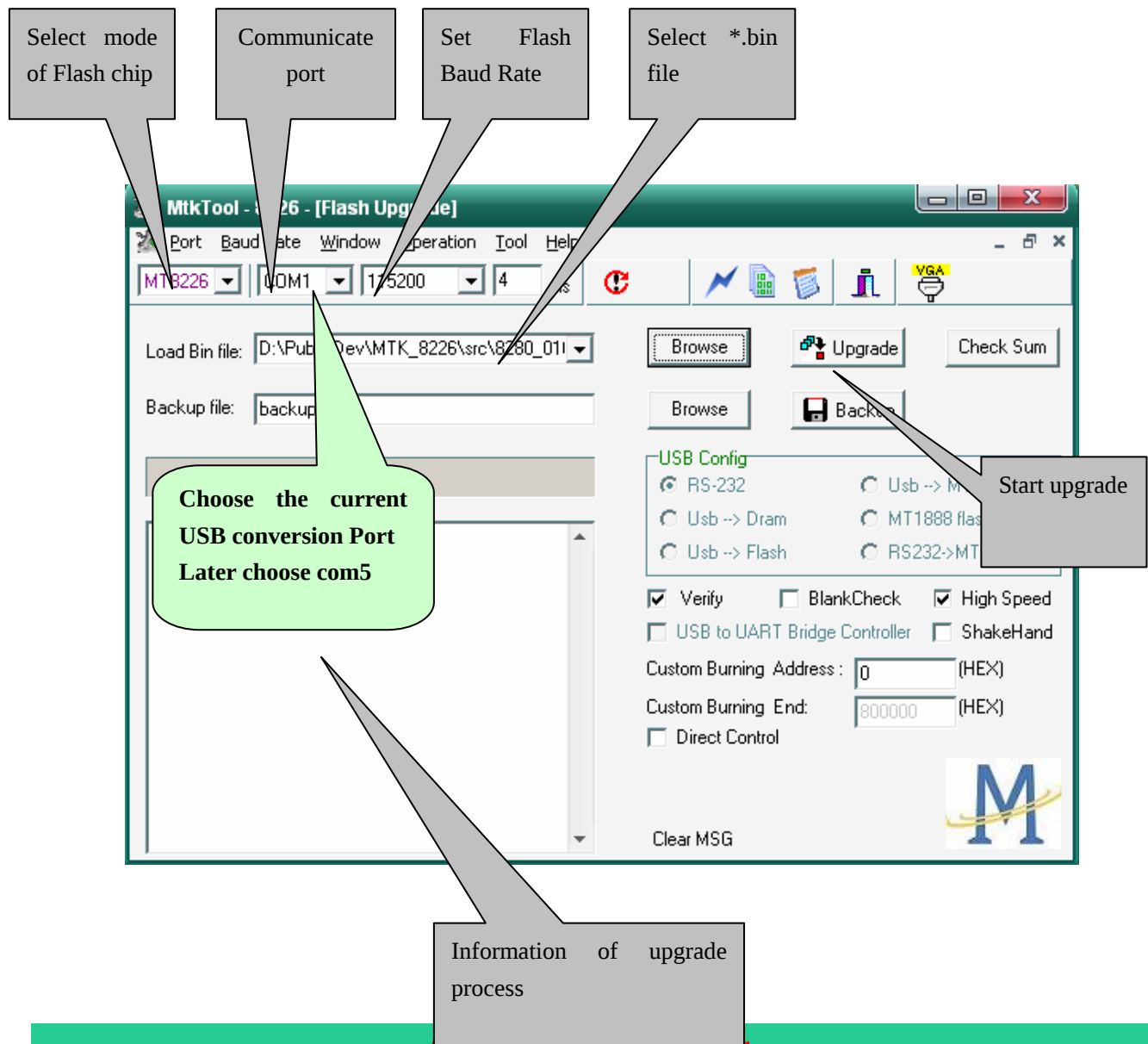
Please refer to follow steps to update the software:

1—Select mode of Flash chip to MT8226 as the below picture.

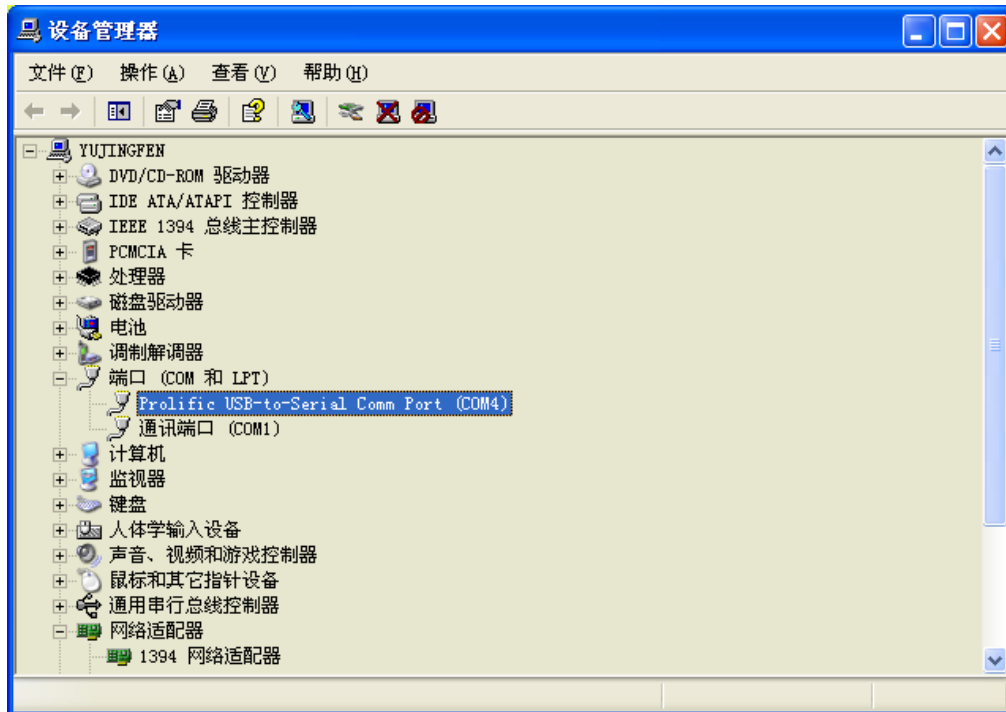
2—Refer to the next page instruction to select the communicate port.

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- 3—Press the icon beside the baud rate and make sure it is green as the below picture.
- 4—Set the flash baud rate to 115200 as the below picture.
- 5—Click the browse button to select the *.bin file that will be updated.
- 6—Click the “start” button to update software.



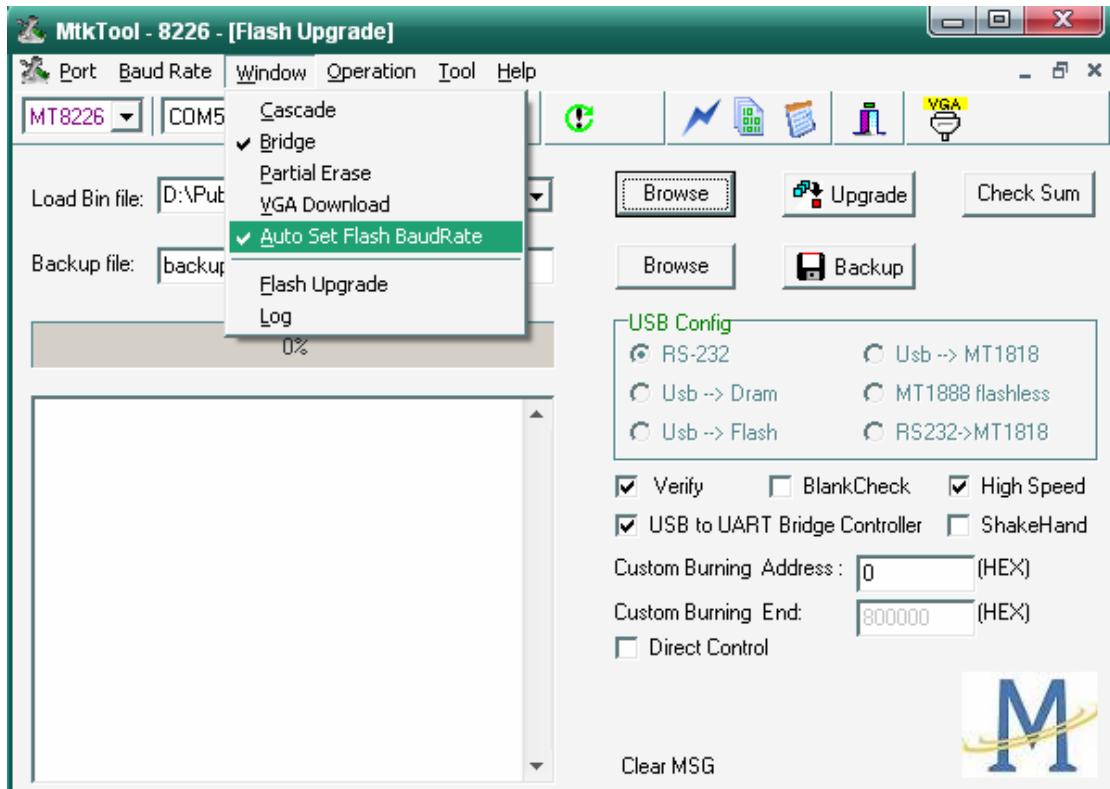
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Open “Device Manager” and find which port is connected with the TV. In this operation, COM5 is connected to the TV; so, select “COM5” in the MtkTool main interface. Select the right baud rate according to chip model. For this unit(chip model is MT8226), select 115200..So choose “Auto Set Flash BaudRate”

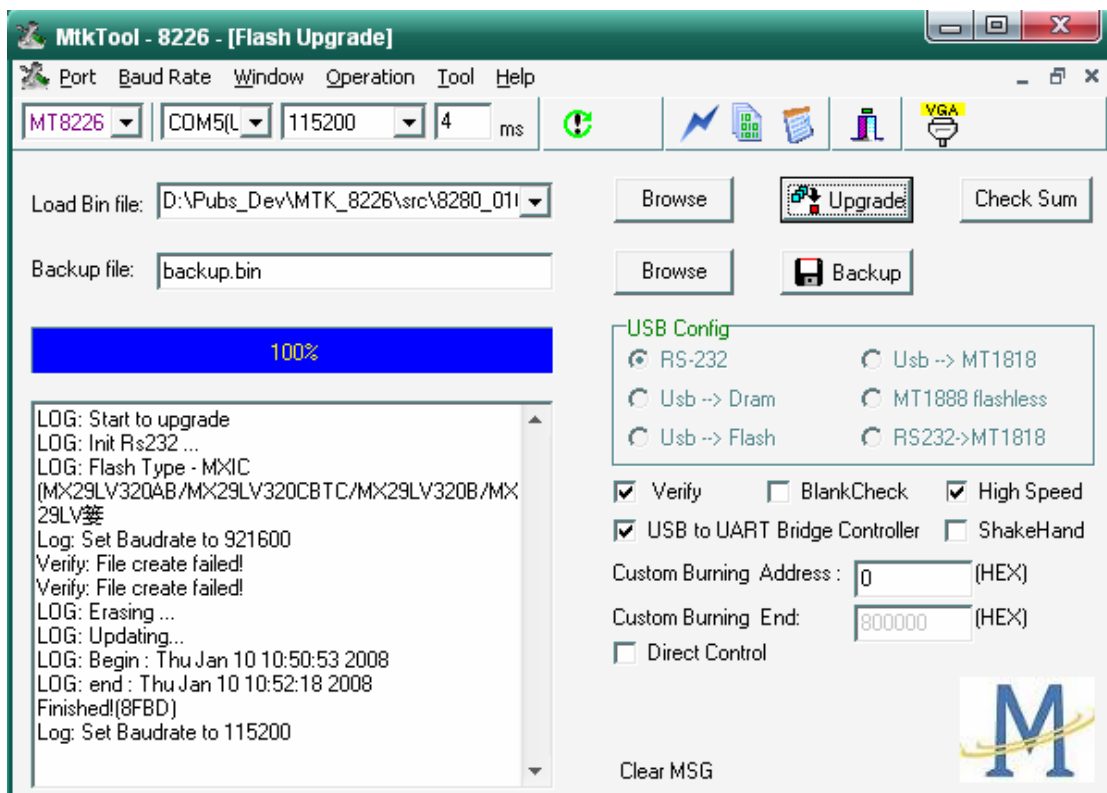
Note: Whether or not click the “Auto Set Flash Baud Rate” in the “window” menu depends on the chip type. If the flash chip does not support high speed transport, do not select this option; otherwise, reserve the selected mood.

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Click “Browse” button, find the upgrading program file, and select it. Press “Upgrade” button and start upgrading.

The following interface appears on the screen, indicating upgrading successfully.



3.3 Update with USB directly

The second update method is with USB directly:

MTK8222 Series can update with USB, the software name should be HISENSE.bin.

The Updating Steps is set the Source to "DMP interface", insert the USB(the update file HISENSE.bin,which should be in root directory),The TV automatic identify the upgrading software. step by step according as the informations of the upgrading process.



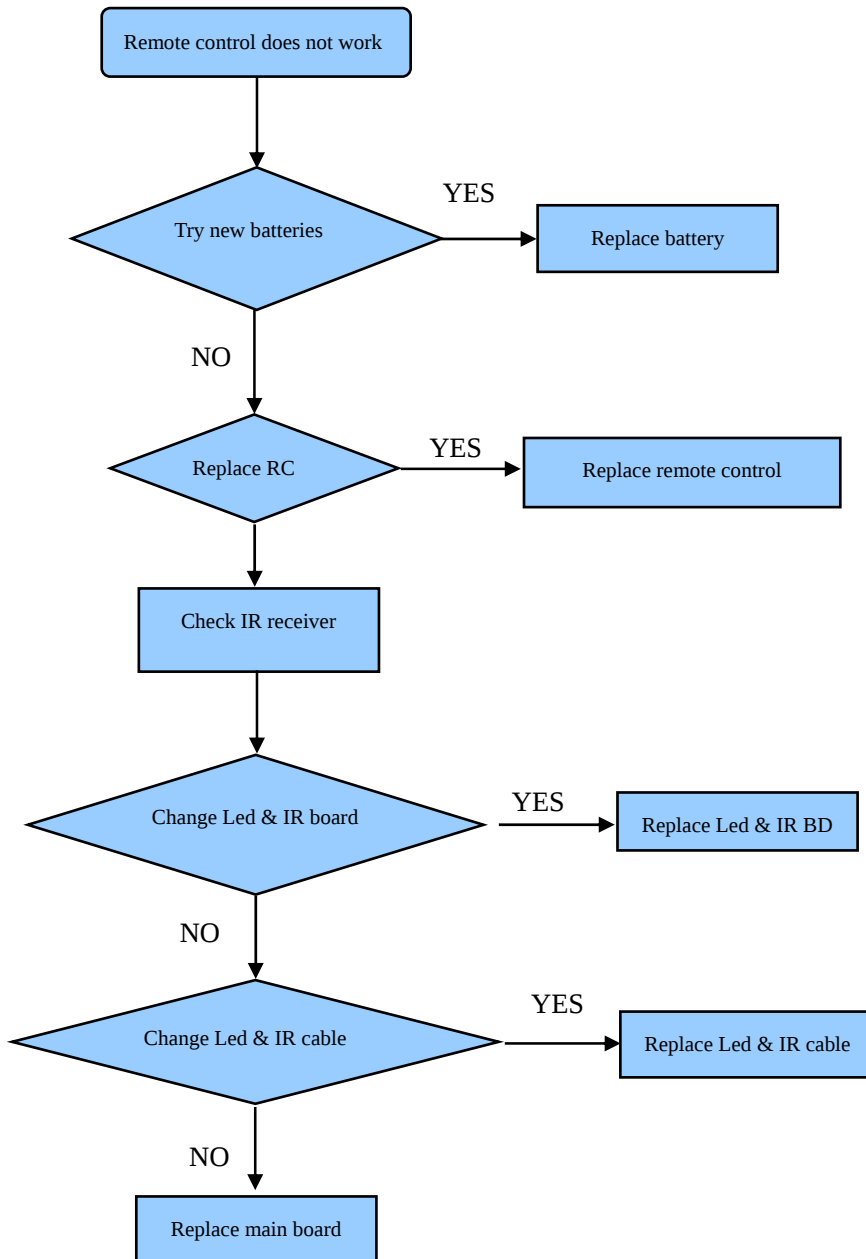
(USB to the Main board directly)



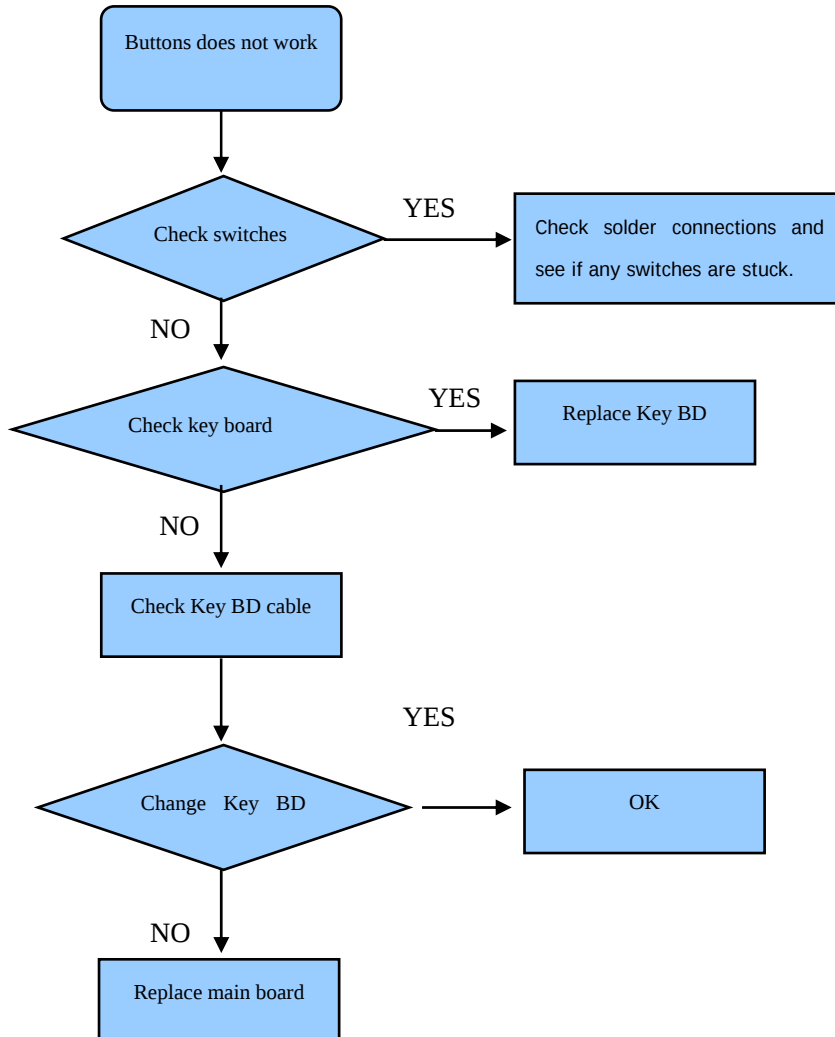
After upgrading, you must confirm the software in the Factory Menu and you'd better "CLEAR UNPROTECTLY".

4. Troubleshooting

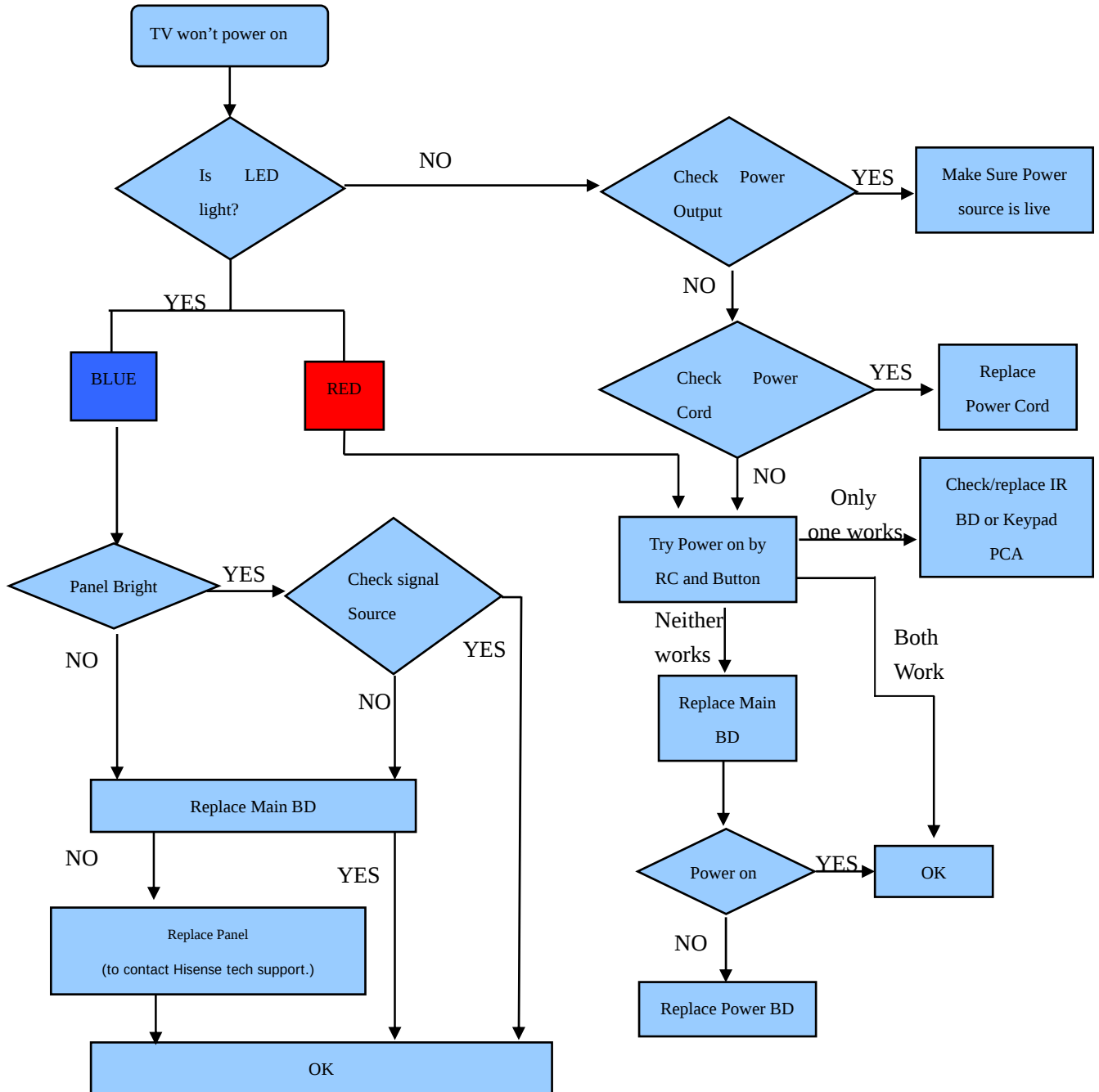
4.1 Troubleshooting for Remote Control



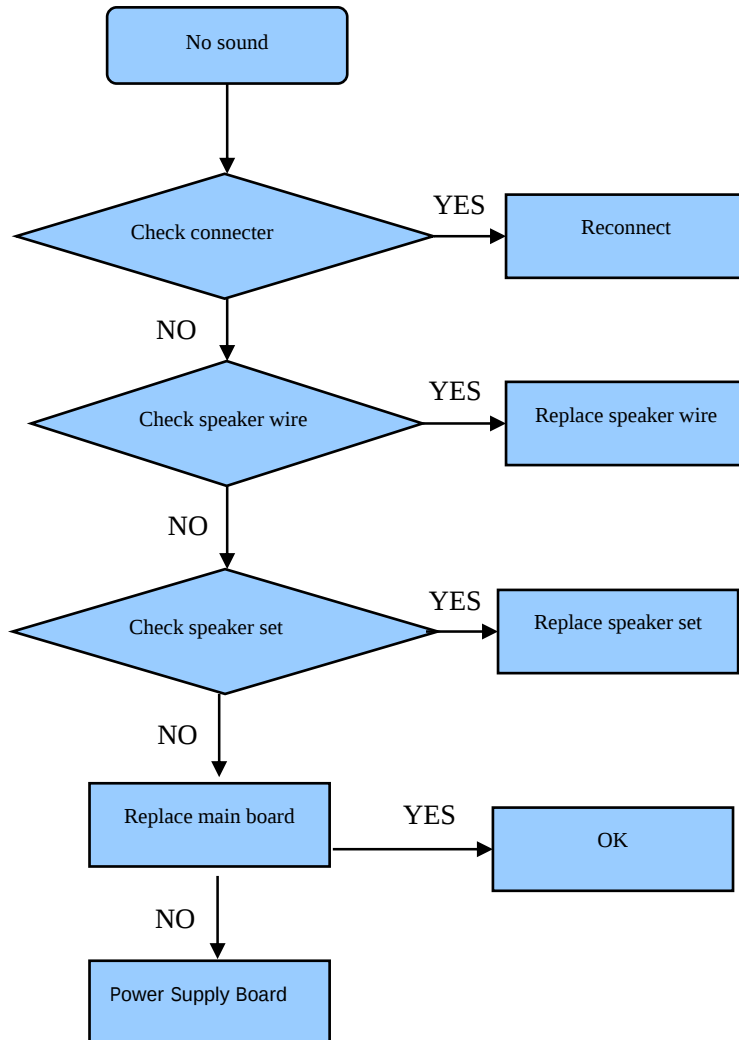
4.2 Troubleshooting for Function Key



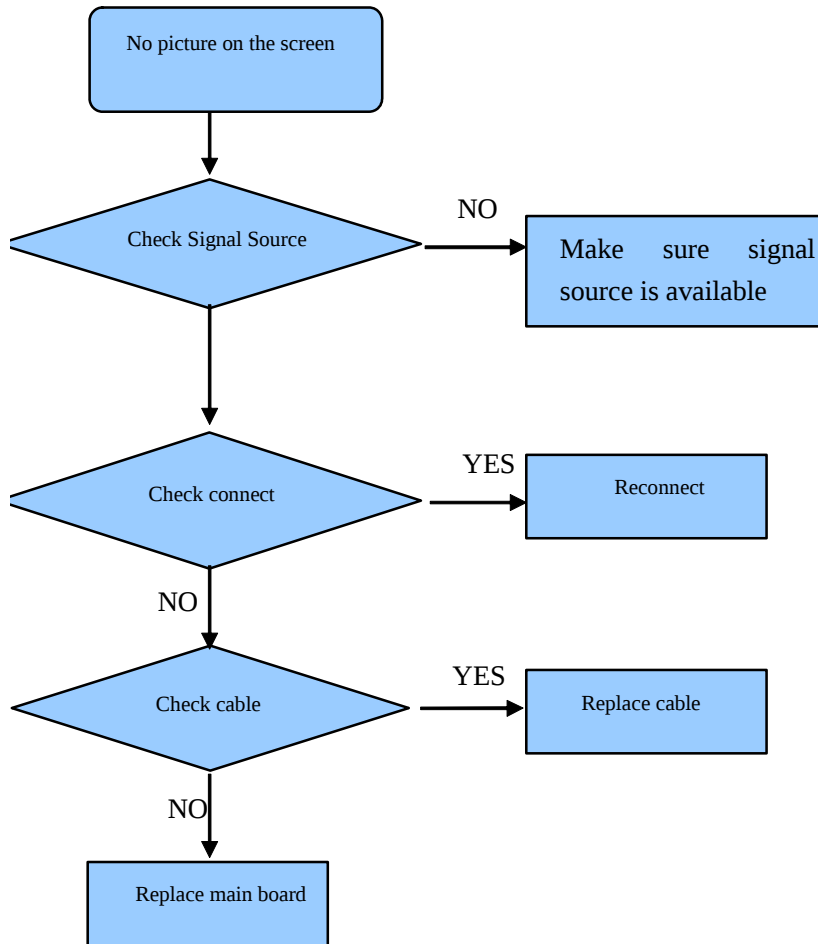
4.3 TV won't Power On



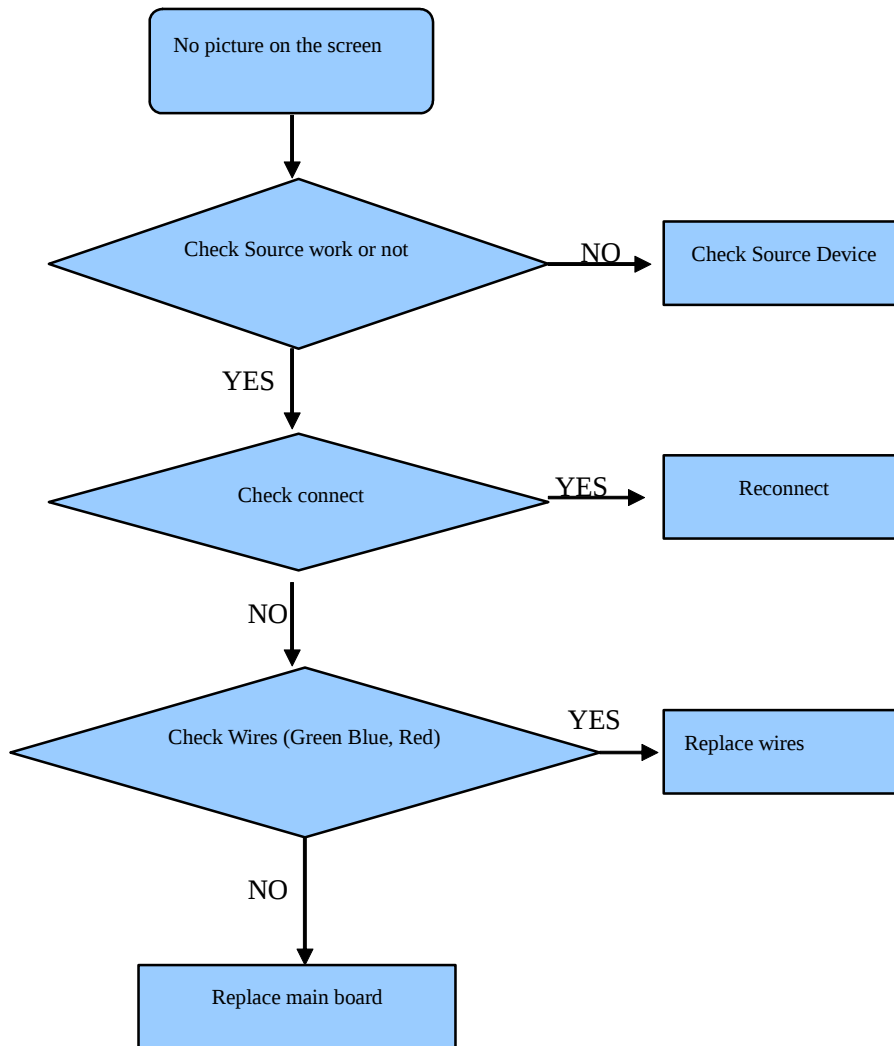
4.4 Troubleshooting for Audio



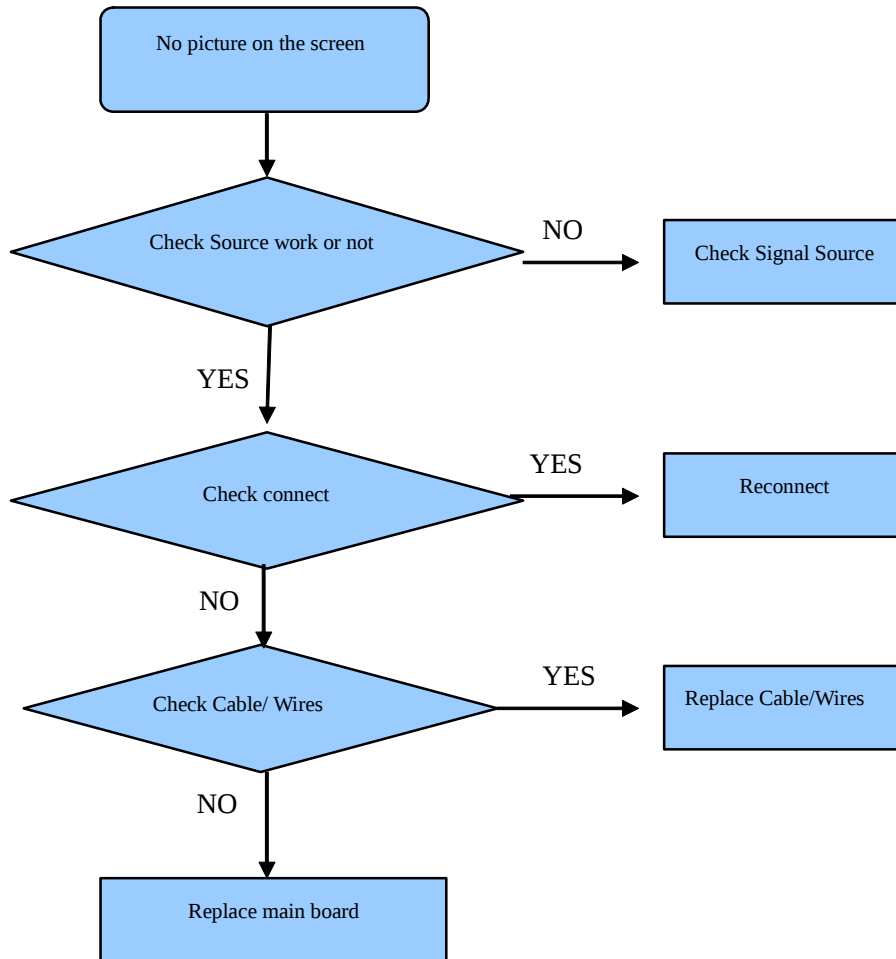
4.5 Troubleshooting for TV/VGA/HDMI input



4.6 Troubleshooting for YPbPr input

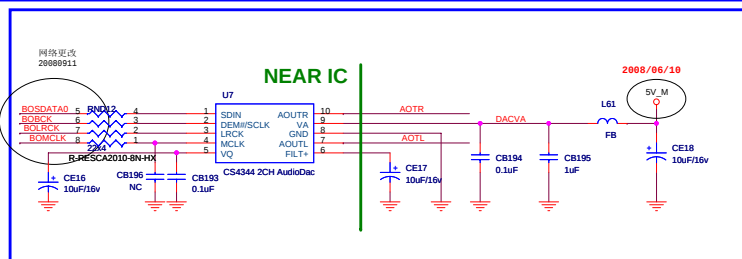
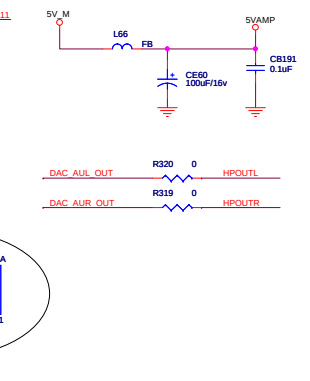
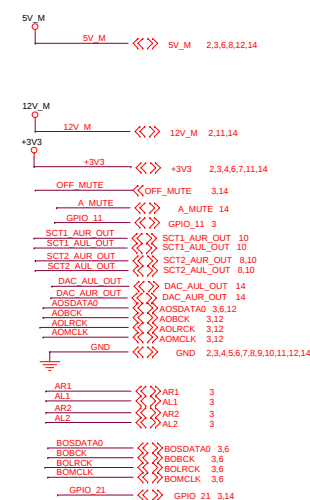


4.7 Troubleshooting for Video/S-Video input



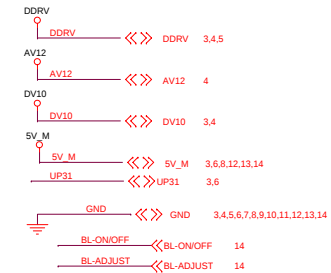
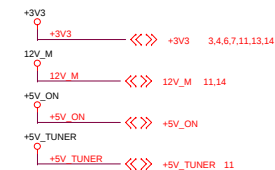
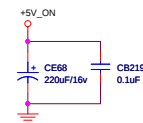
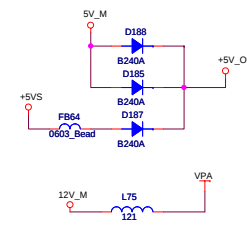
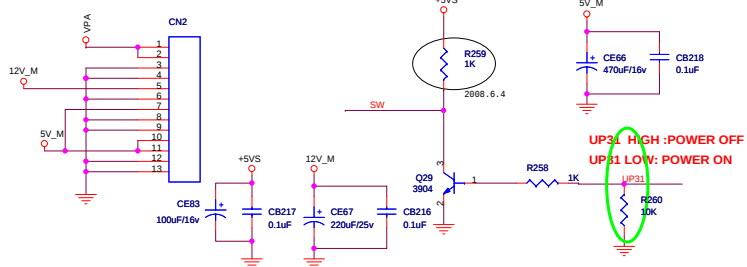
5. Explode View

6. Schematic circuit diagram

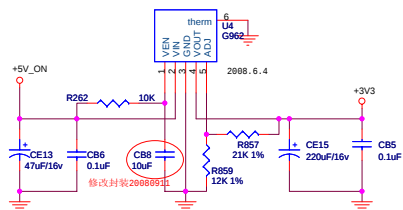


Pin 1 connection diagram for the CN1 connector. The diagram shows a 14-pin connector with the following connections:

- Pin 1: +5V_M
- Pin 2: BL-ON/OFF
- Pin 3: BL-ADJUST
- Pin 4: +12V_M
- Pin 5: +5VS
- Pin 6: SW
- Pins 7, 8, 9, 10, 11, 12, 13, and 14: Ground



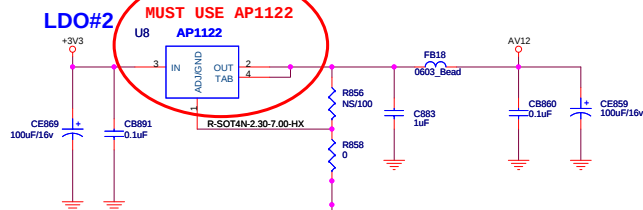
LDO#1



5V to 3.3V

Estimated Power consumed : ??? A

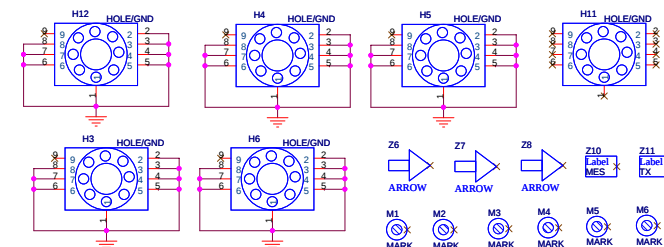
LDO#2



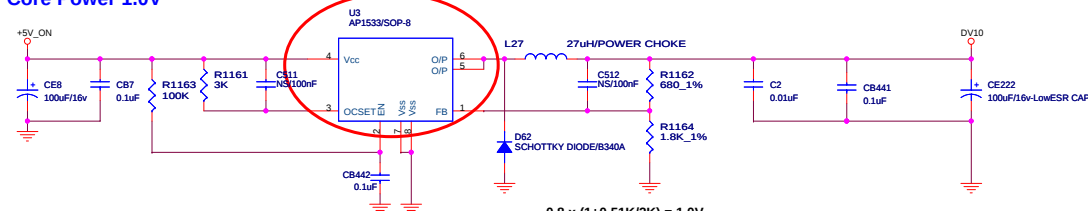
3.3V to 1.2V

Estimated Power consumed : ??? A

**Test GND Pin
(Spread Around PCB)**



Switch Regulator Core Power 1.0V MUST USE AP1533

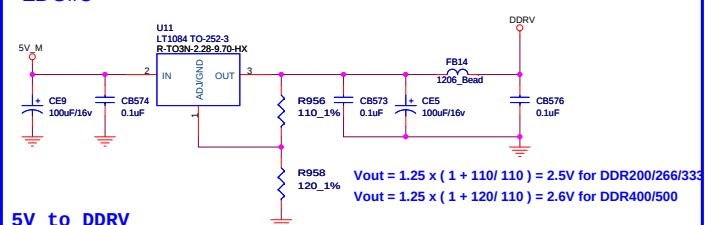

$$0.8 \times (1 + 0.51K/2K) = 1.0V$$

5V to 1.0V

Estimated Power consumed : ??? A

Works at normal mode

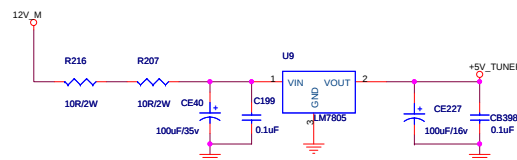
LDO#3



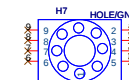
$V_{out} = 1.25 \times (1 + 110/110) = 2.5V$ for DDR200/266/333
 $V_{out} = 1.25 \times (1 + 120/110) = 2.6V$ for DDR400/500

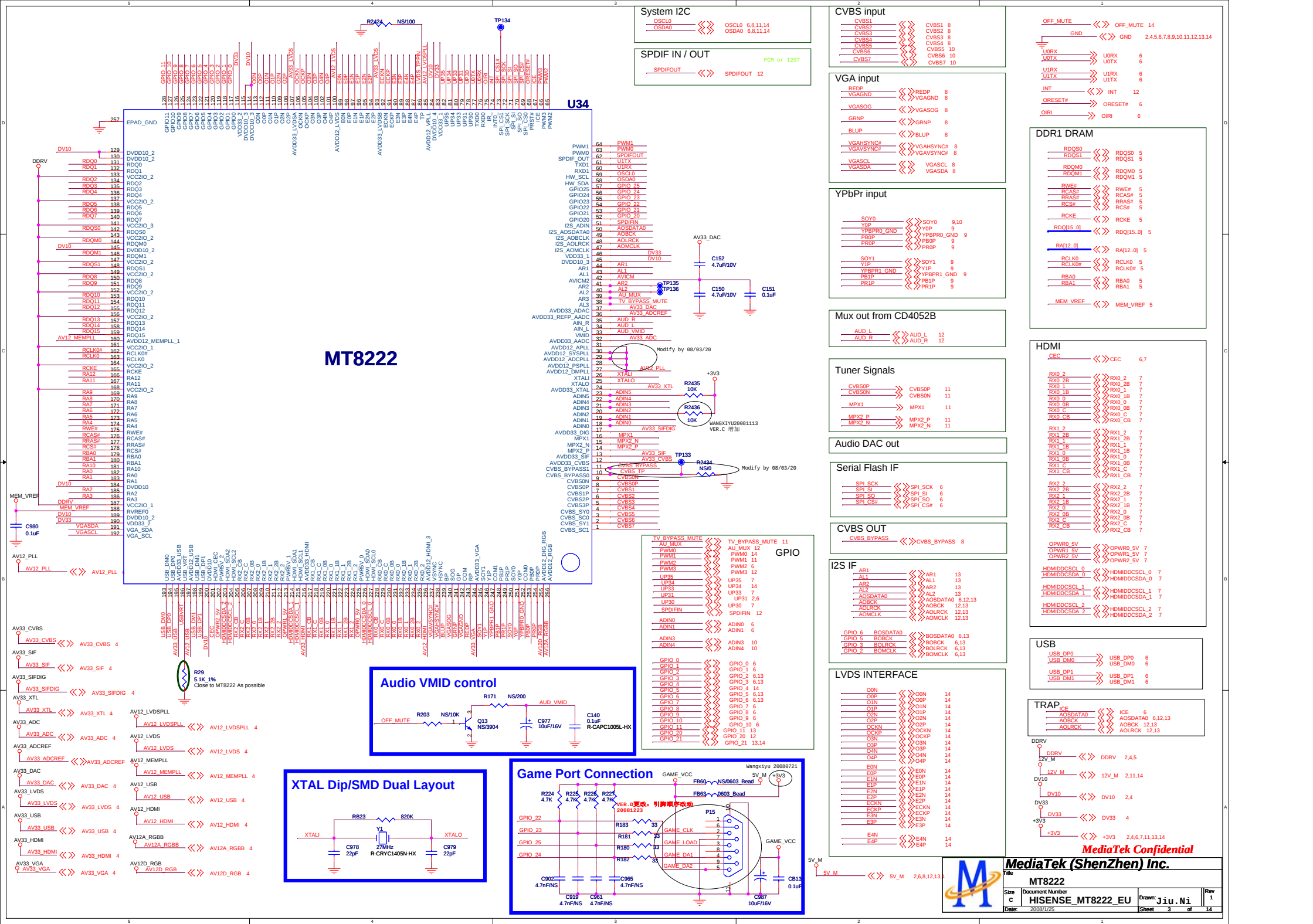
5V to DDRV

Estimated Power consumed : ??? A

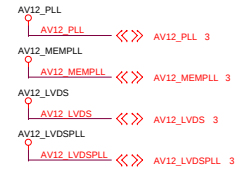
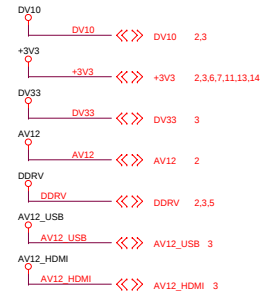
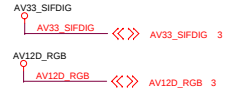
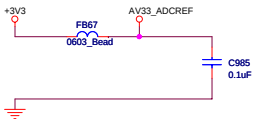
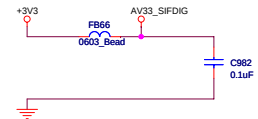
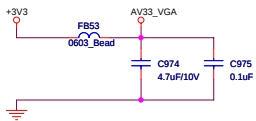
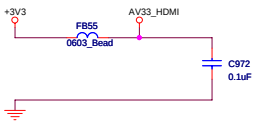
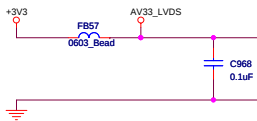
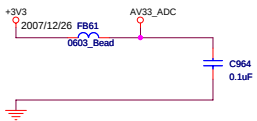
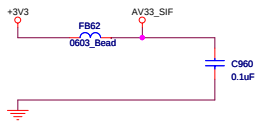
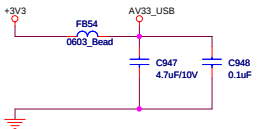
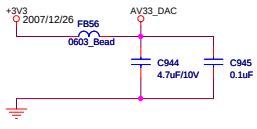
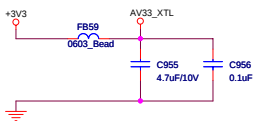
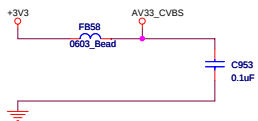
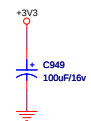
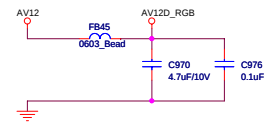
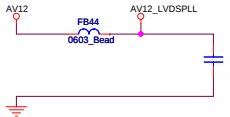
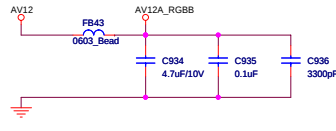
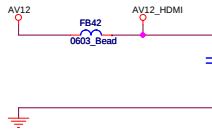
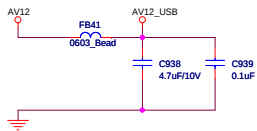
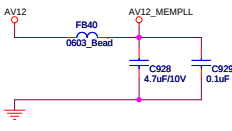
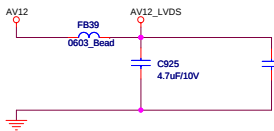
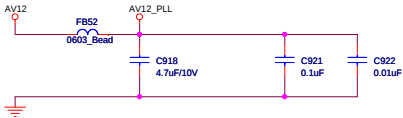
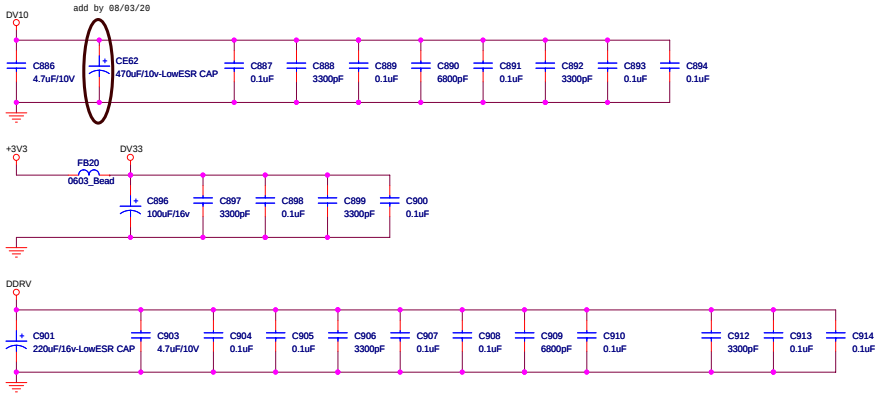


12V to 5V
For Tuner 5V power

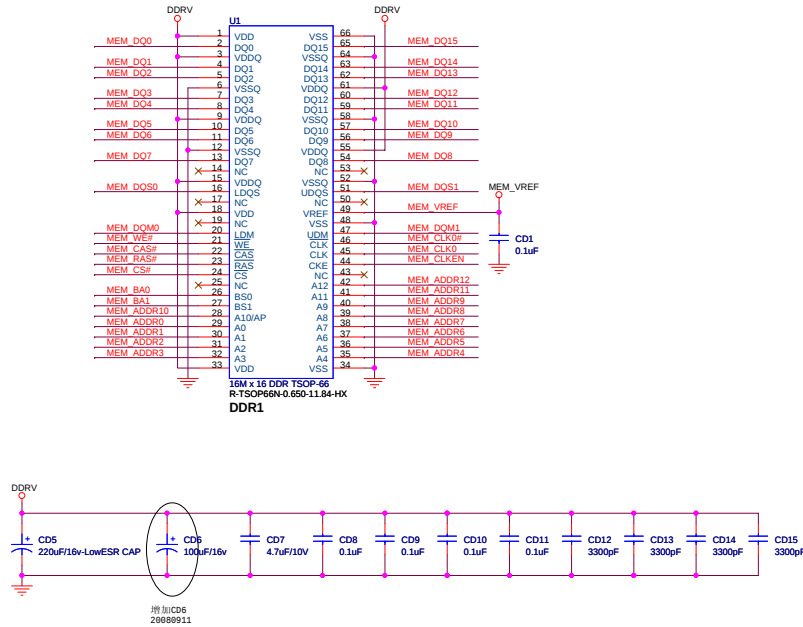




(Bypass CAPs around MT8222)



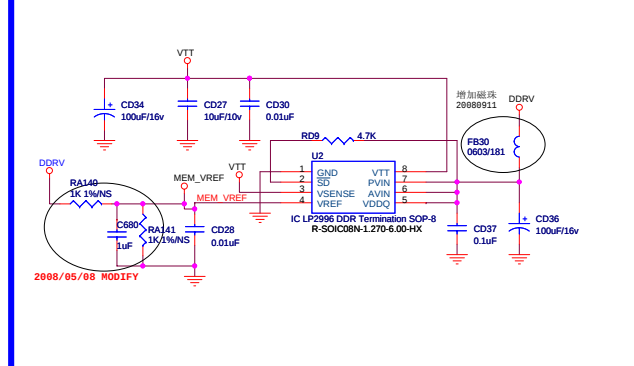
(DDR1 DRAM With Termination)



If use sdram CD34 CD26 CD27 RD9 CD28 CD29 CD30 UD2 NC

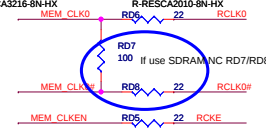
If use ddr CD34 CD26 CD27 RD9 CD28 CD29 CD30 UD2 ON

LP2996 for Vref and VTT of DDR1



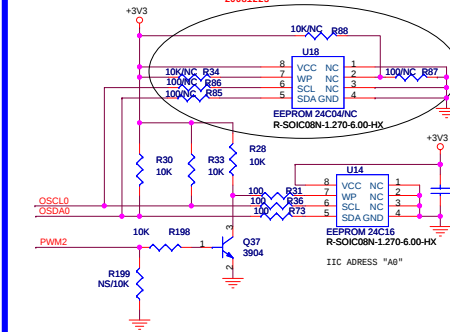
add in 2008/06/02

2008.6.4

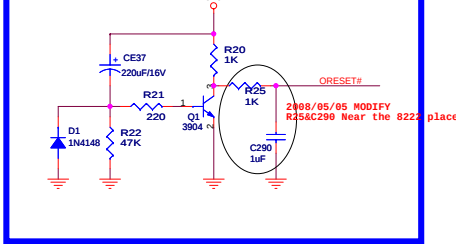


RDQ0	RDQ0	3
RDQ1	RDQ1	3
RDQ2	RDQ2	3
RDQ3	RDQ3	3
RDQ4	RDQ4	3
RDQ5	RDQ5	3
RDQ6	RDQ6	3
RDQ7	RDQ7	3
RDQ8	RDQ8	3
RDQ9	RDQ9	3
RDQ10	RDQ10	3
RDQ11	RDQ11	3
RDQ12	RDQ12	3
RDQ13	RDQ13	3
RDQ14	RDQ14	3
RDQ15	RDQ15	3
RDQ16	RDQ16	3
RDQ17	RDQ17	3
RDQ18	RDQ18	3
RDQ19	RDQ19	3
RDQ20	RDQ20	3
RDQ21	RDQ21	3
RDQ22	RDQ22	3
RDQ23	RDQ23	3
RDQ24	RDQ24	3
RDQ25	RDQ25	3
RDQ26	RDQ26	3
RDQ27	RDQ27	3
RDQ28	RDQ28	3
RDQ29	RDQ29	3
RDQ30	RDQ30	3
RDQ31	RDQ31	3
RDQ32	RDQ32	3
RDQ33	RDQ33	3
RDQ34	RDQ34	3
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RDQ78	RDQ78	3
RDQ79	RDQ79	3
RDQ80	RDQ80	3
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RDQ82	RDQ82	3
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RDQ84	RDQ84	3
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RDQ86	RDQ86	3
RDQ87	RDQ87	3
RDQ88	RDQ88	3
RDQ89	RDQ89	3
RDQ90	RDQ90	3
RDQ91	RDQ91	3
RDQ92	RDQ92	3
RDQ93	RDQ93	3
RDQ94	RDQ94	3
RDQ95	RDQ95	3
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RDQ98	RDQ98	3
RDQ99	RDQ99	3
RDQ100	RDQ100	3

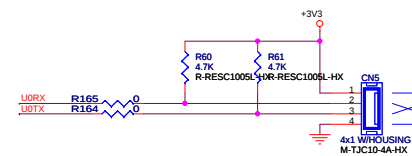
System E2PROM



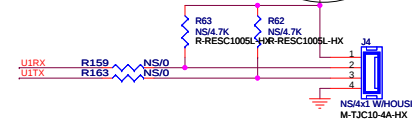
System Reset#



1st UART IF (For Code download and Debug)

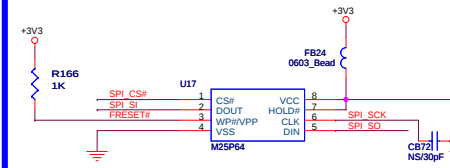


2nd UART IF

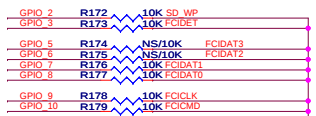


Serial Flash

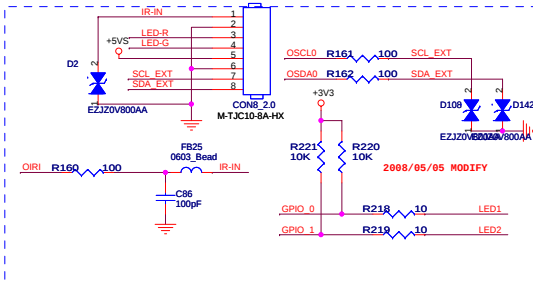
位置尽量靠近8222, 附近若有IO需要串磁珠并且避让, EMC问题



MEMORY CARD I/F GPIO RESERVED



IR



MT8222 Trapping

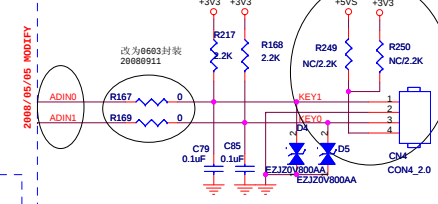
Wangxiyu 20080721



Status	ICE	A0BCLK	A0LRCK	Description
Normal	0v	0v	0v	Normal operation ST/SST
TEST_ICE	1v	0v	0v	ICE mode
TEST_CPM	1v	0v	1v	Used in simulation and pattern generation
TEST_SCAN	1v	1v	0v	Used to generate ATPG test patterns
OLT_MODE	1v	1v	1v	OLT mode

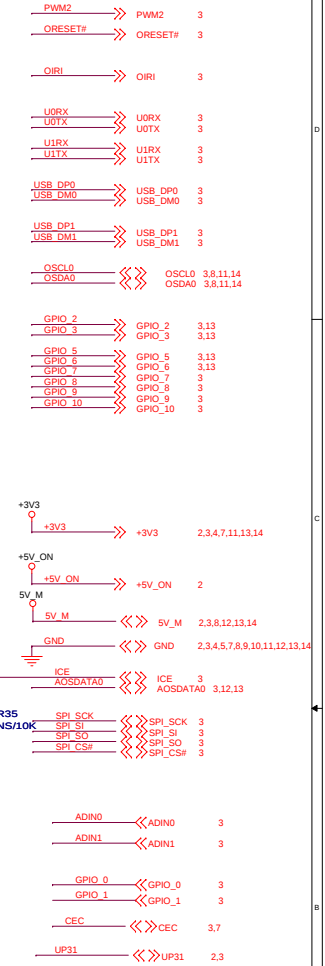
A0SDATA0	Description
0v	ST/SST flash
1v	ATMEL flash

ADC KEYPAD



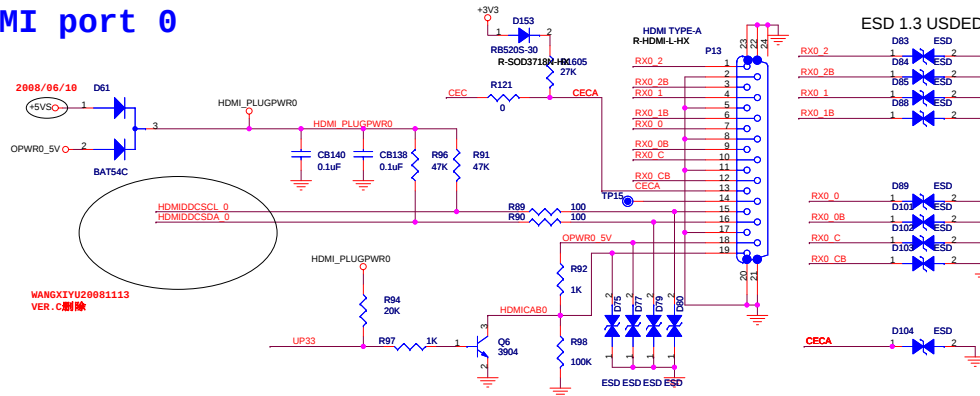
OPTION for CEC Stand by Function

VER.D更改: 删除CEC部分元器件
王西瑜20090105

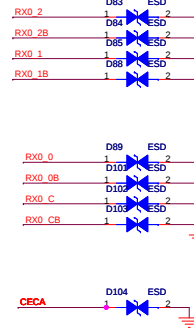


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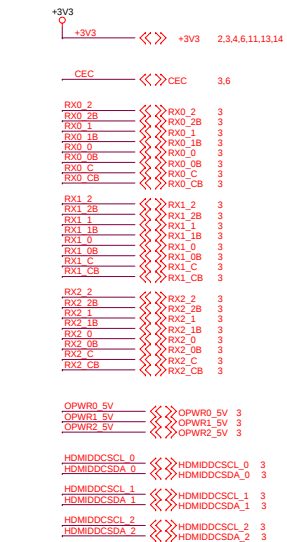
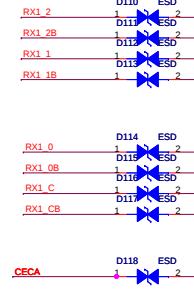
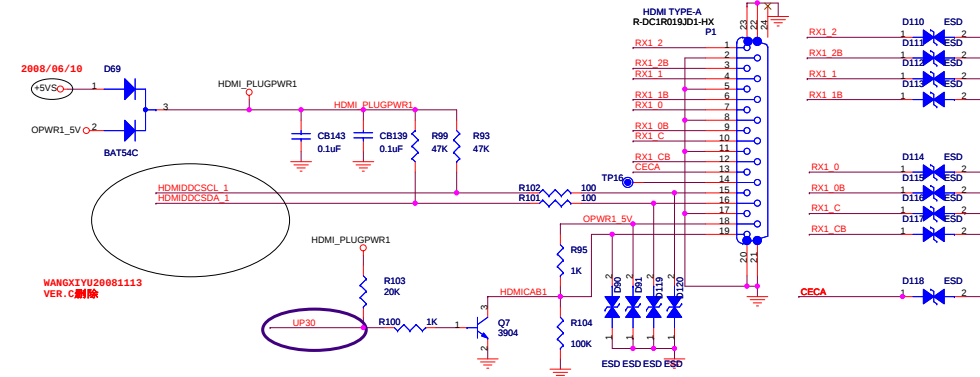
HDMI port 0



ESD 1.3 USED



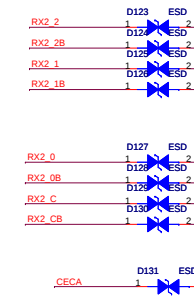
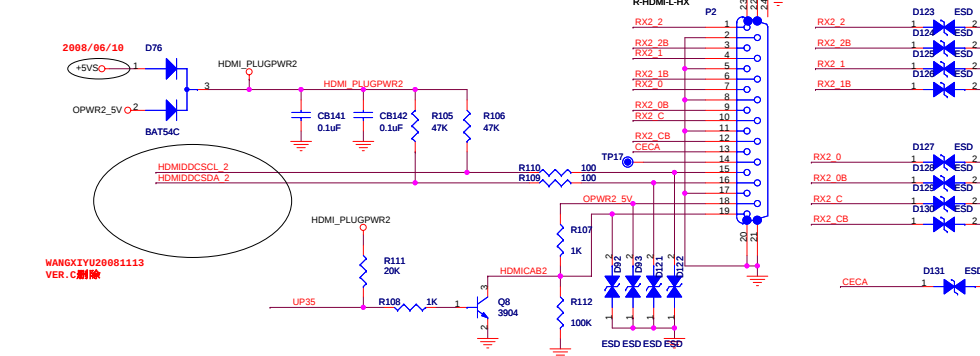
HDMI port 1



(HDMI Hot Plug Detect)

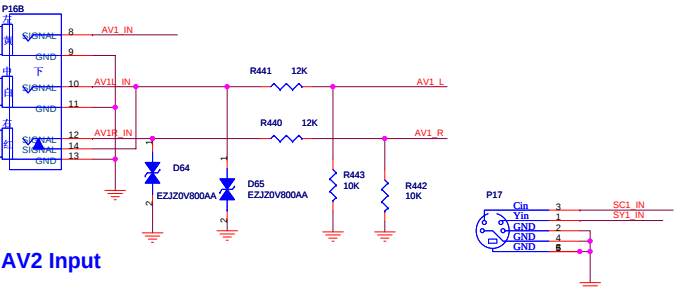


HDMI port 2

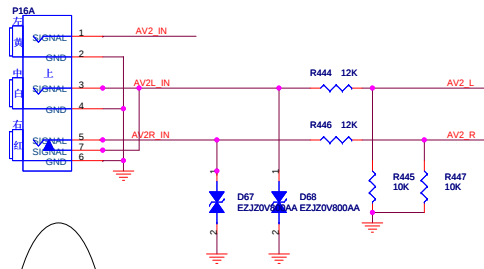


1. E2P供电更改
2. 各信号上ESD器件更改

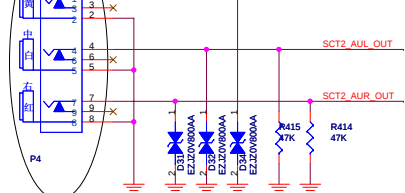
AV1+S-Video Input



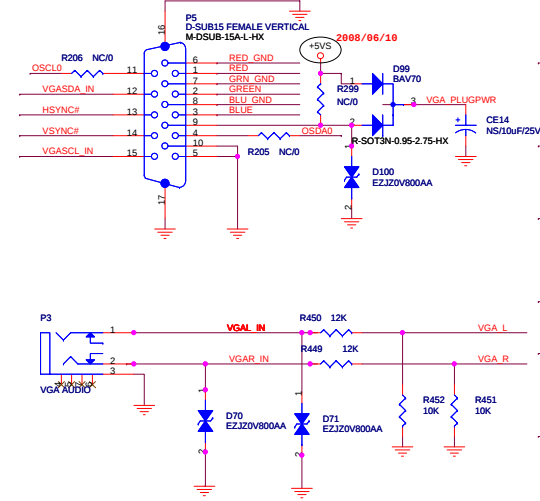
AV2 Input



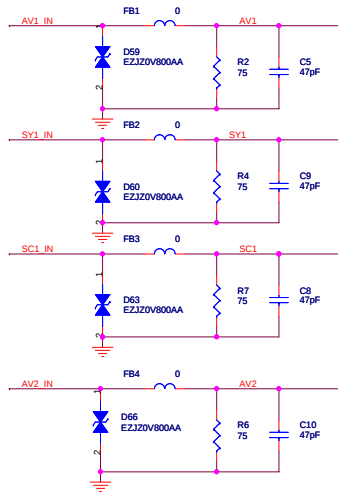
AV OUTPUT



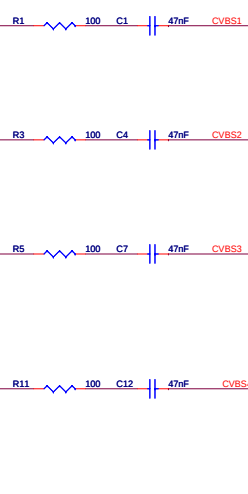
Only for US, EU not stuff



NEAR CONNECTOR



NEAR IC



CVBS1 3
CVBS2 3
CVBS3 3
CVBS4 3

GND 2,3,4,5,6,7,9,10,11,12,13,14

AV1_L 12
AV1_R 12
AV2_L 12
AV2_R 12

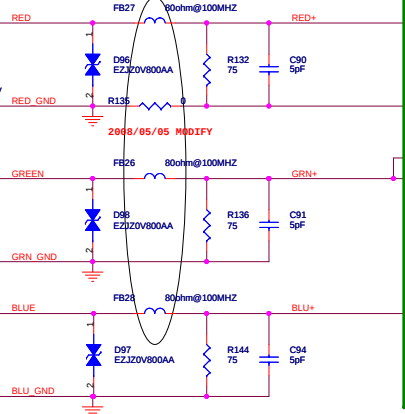
Video output



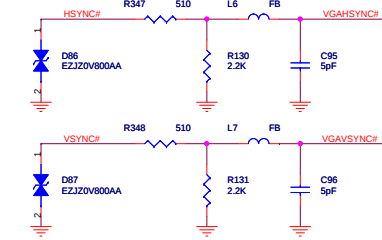
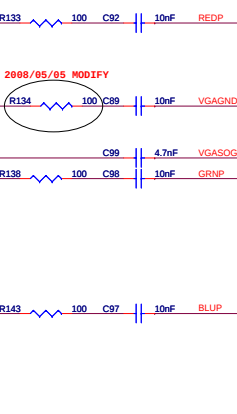
SV_M 2,3,6,12,13,14

SCT2_AV_OUT 10
SCT2_AUR_OUT 10,13
SCT2_AUL_OUT 10,13
CVBS_BYPASS 3

NEAR CONNECTOR



NEAR IC



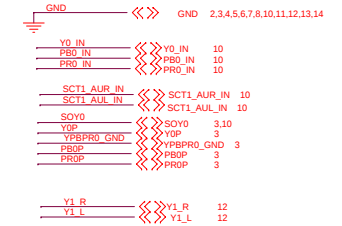
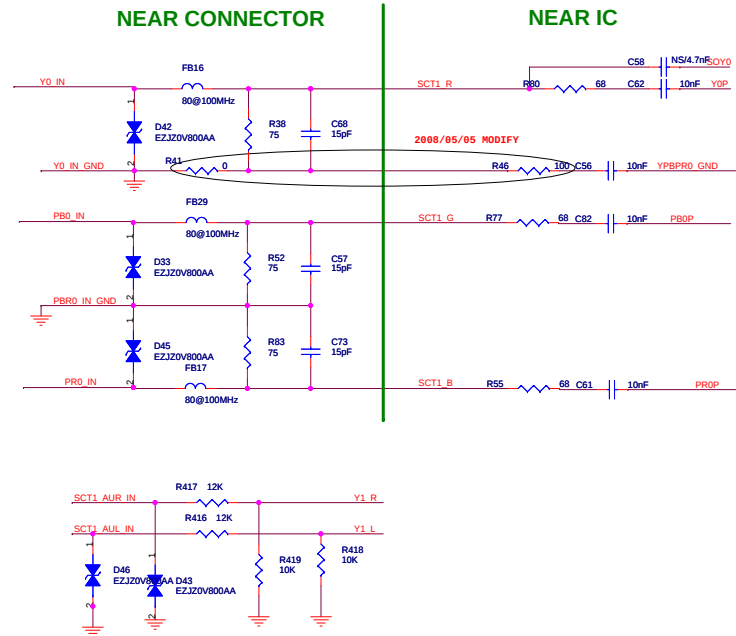
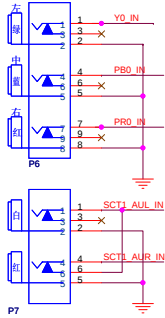
+5V_ON 2
VGASOG 3
REDP 3
VGAGND 3
GRNP 3
BLUP 3
VGAHsync# 3
VGAHsync# 3
VGAHsync# 3
SV_M 2,3,6,12,13,14

VGASCL_IN 3
VGASDA_IN 3
VGA_L 12
VGA_R 12

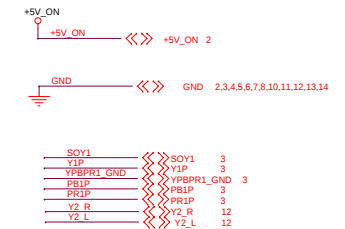
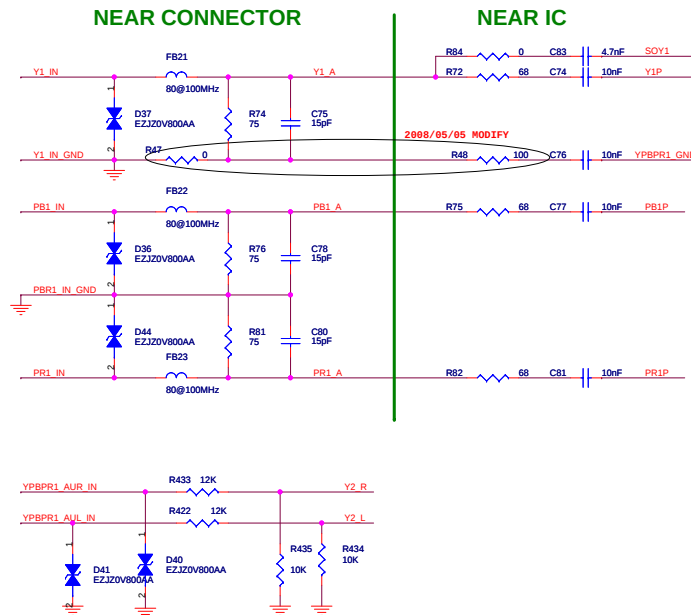
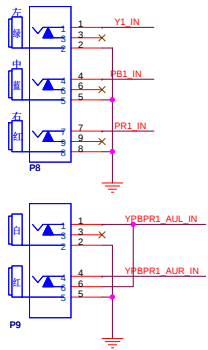
OSDA0 3,6,11,14
OSCL0 3,6,11,14

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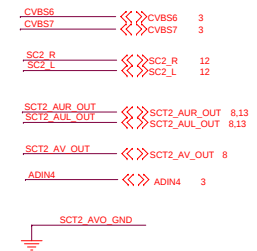
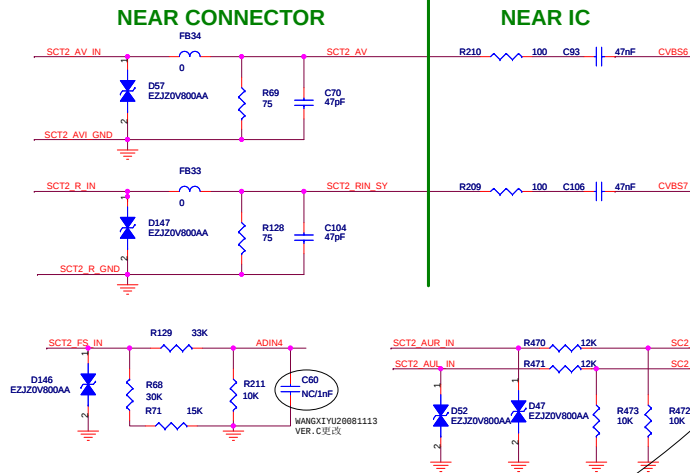
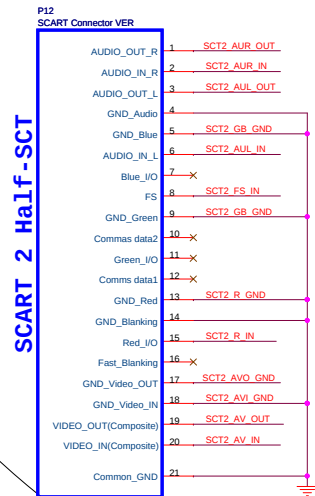
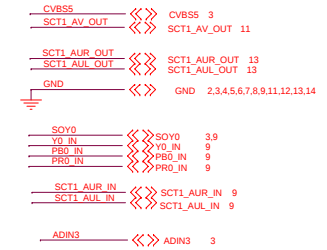
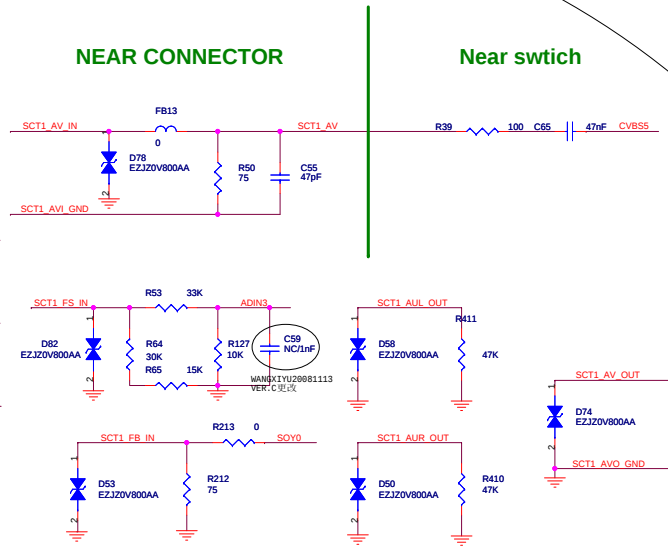
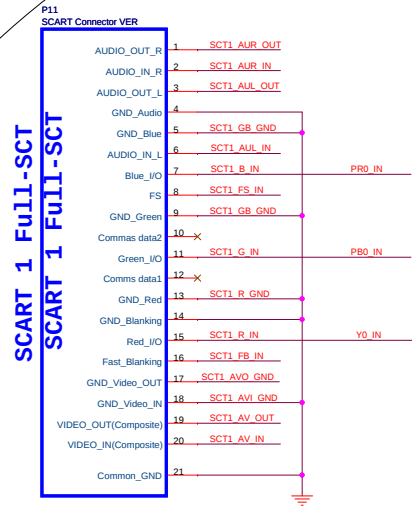
YPbPr0 port



YPbPr1 port

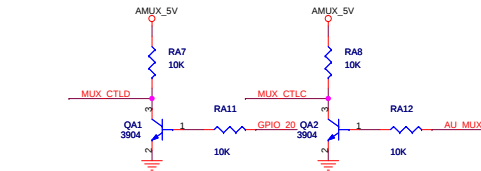
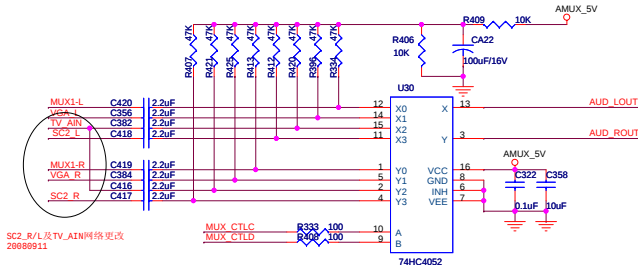
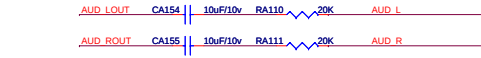
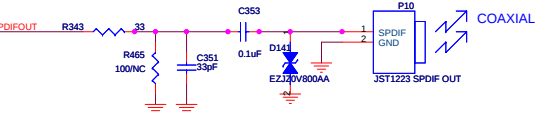
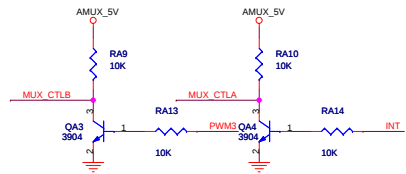
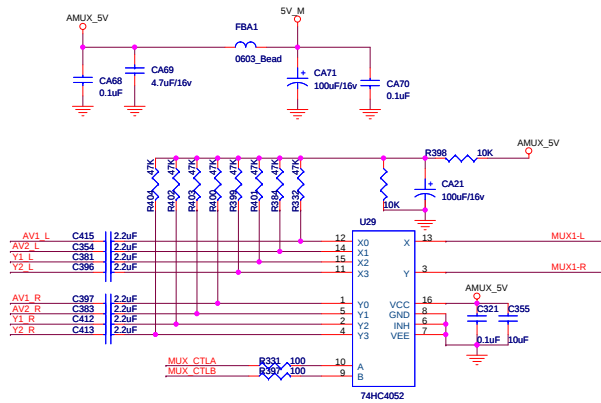


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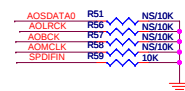
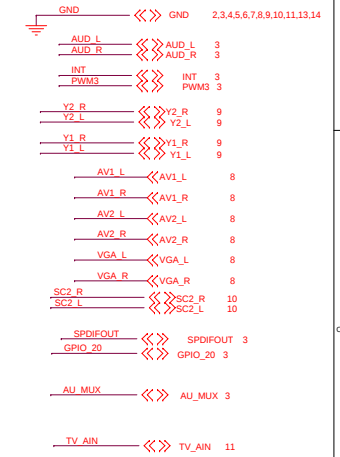
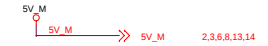


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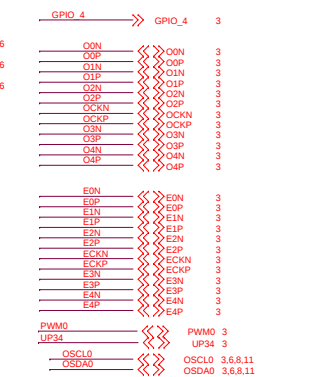
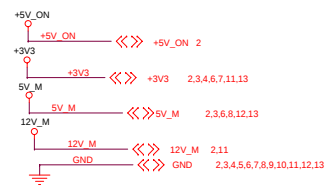
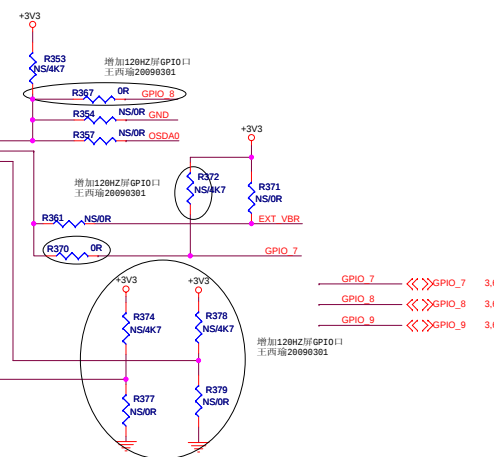
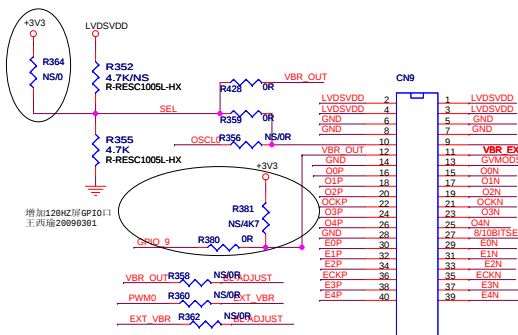
		MediaTek (ShenZhen) Inc.	
		SCART1/2	
Size	Document Number	Drawn: Jiu.Ni	Rev
C	HISENSE MT8222 EU	1	1
Date:	Sheet	10	of 14



PWM3	INT	GPIO_20	AU_MUX	AUDIO OUTPUT
1	1	1	1	AV1 OUT
1	0	1	1	AV2 OUT
0	1	1	1	YPBPR1 OUT
0	0	1	1	YPBPR2 OUT
X	X	1	0	VGA OUT
X	X	0	1	TV AUDIO OUT
X	X	0	0	SCART2 OUT



VER.D更改: LVDS-SEL預留3.3V
20081223



MUTEL: LOW FOR MUTE	Amplifier Gain(dB)	AGAIN1	AGAIN0
	20	0	0
	26	0	1
	32	1	0
	36	1	1

件音功放左右输入反
20080911

