



LCD Television Service Manual

Chassis: MT5305

Product Type: L32C205

Ver 1.0

November, 2011

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Service Manual

1. Precautions and notices

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

USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.

USE OF NON-AUTHORIZED PARTS WILL VOID THE MANUFACTURE'S WARRANTY

Proper service and repair is important to the safe, reliable operation of all HITACHI Equipment. The service procedures recommended by HITACHI 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 and pose risk of personal injury

. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Service should only be performed by an experienced electronics

technician trained in the proper Television safety and service methods and procedures
Hereafter throughout this manual, HITACHI will be referred to.

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 non-manufacturer's recommended parts may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from RCA. HITACHI Eassumes no liability, express or implied, arising out of any unauthorized modification of design. Servicetech 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, be sure to use anti-static table mats and properly use a grounding wrist stra. Keep components and tools also at this same potential.

IMPORTANT:

Always disconnect the power cord from AC outlet before replacing parts or modules.

1.1.3

To prevent electrical shock, use only a properly grounded 3 prong outlet or extension cord.

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 and will void the manufacturer's warranty.

1.1.5

Safety regulations require that after a repair the set must be returned in its original condition. In addition, prior to closing set, check that:

-Note:

>All wire harnesses and flex cables are properly routed and secured with factory tape and/or mounted cable clamps.

> All cables and connectors are properly insulated and do not have any bare wires/lead exposed.

1.1.6

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

(2) Do not use this product:

> High humidity areas

> In an area where any water could enter or splash into the unit.

High humidity and water could damage the product and cause fire.

(3) 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.

(4) 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.

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

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

(7) 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.

(8) 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.

(9) 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 may trip the main 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.

- 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.
- 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.

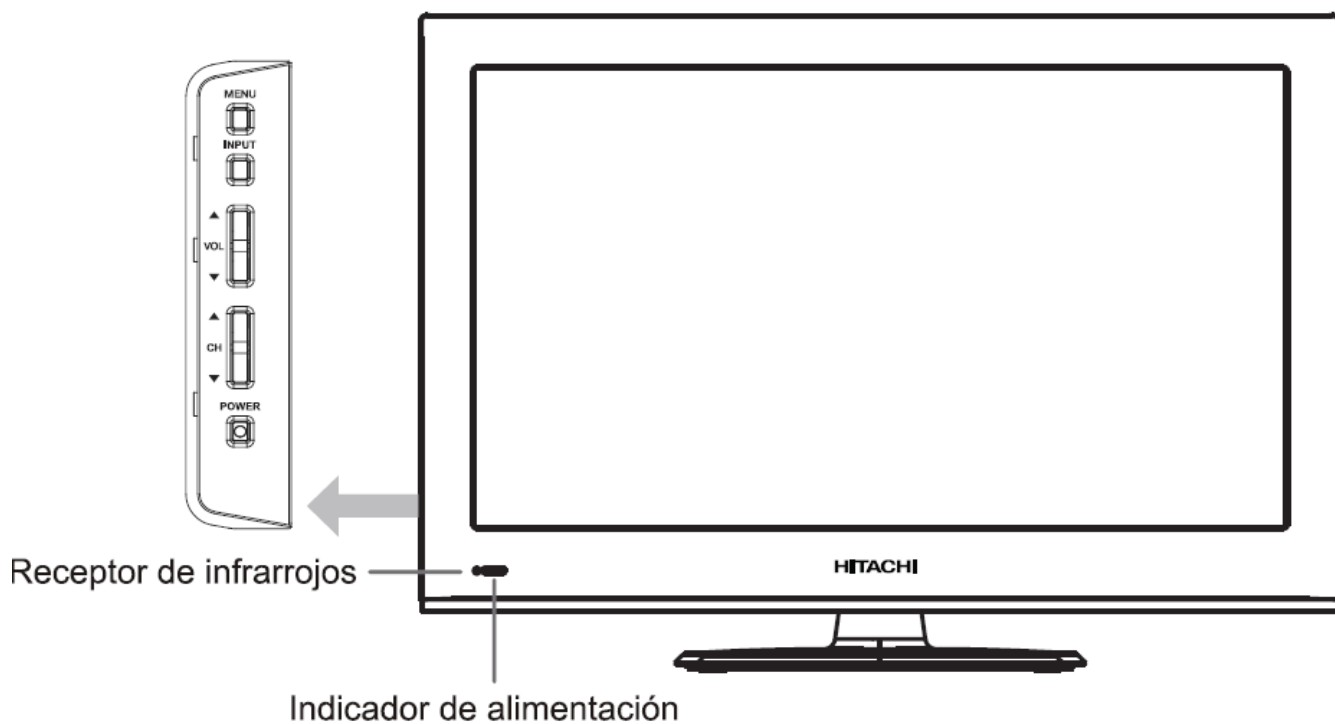


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Product Function Specifications

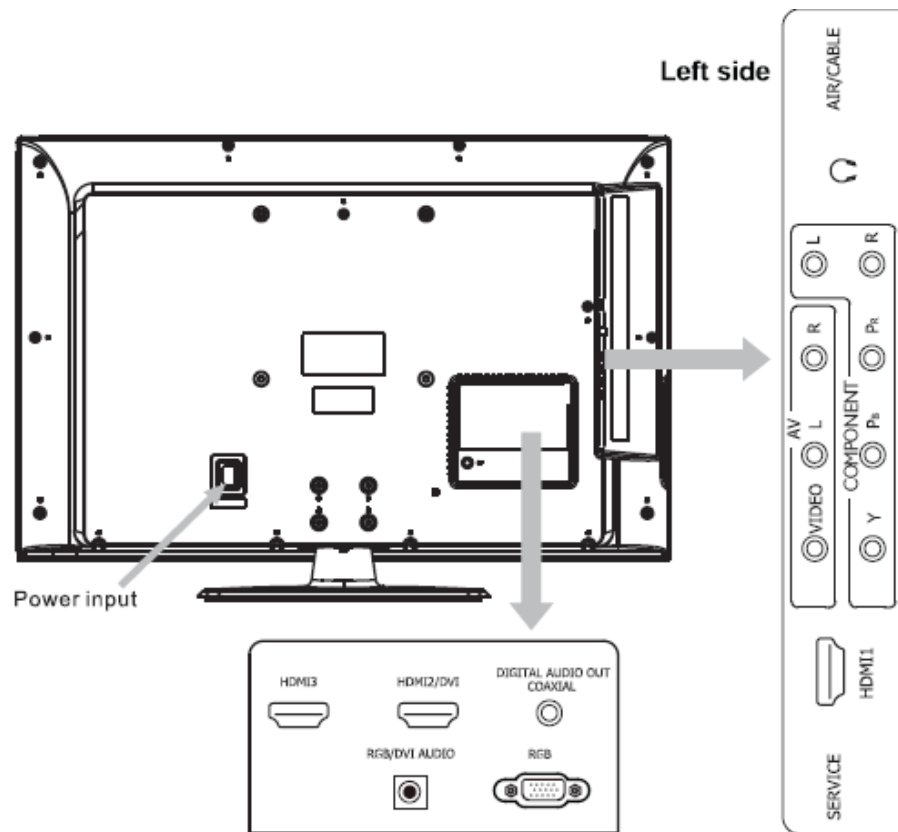
2.1 Product Function

Front Bezel:



Objeto	Descripción
IR (receptor de infrarrojos)	Recibe las señales infrarrojas del mando a distancia. No coloque ningún objeto cerca del sensor, ya que su función puede verse afectada.
INDICADOR DE ALIMENTACIÓN LED	Se ilumina en rojo cuando el televisor está en modo de espera y parpadea durante unos segundos al encender o apagar el televisor.
MENU	Muestra el menú OSD (On Screen Display)
ENTRADA	Selecciona entre las diferentes fuentes de señal de entrada.
VOL ▲▼	Ajusta el volumen. Selecciona el menú y ajusta la configuración de los menús OSD.
CH ▲▼	Selecciona un canal. Selecciona opciones del menú.
ALIMENTACION	Cambiar el televisor a modo de espera o encendido. Regresa el televisor de nuevo al modo de espera.

Rear:



2.3 Specifications

Specifications

ENGLISH

GENERAL	
Power supply	AC 120V 60Hz
Power consumption	Operation: 88W Standby: 0.7W
Weight	9.5kg (20.9lbs)
Dimensions(with stand)	Width: 792 mm (31.2 inches) Height: 561 mm (22.1 inches) Depth: 230 mm (9.1 inches)
Operating temperature	5°C - 40°C
Operating humidity	Less than 80% RH
TELEVISION	
Type	80 cm (32" class/ 31.51" diagonal)
Display method	Transmission TFT color LCD panel
Number of Pixels	1366 (H) x 768 (V)
Broadcasting system	US system M ATSC standard (8VSB), QAM
Receiving channels	VHF 2-13 UHF 14-69 CATV 1-125 Digital Terrestrial Broadcast(8VSB):2-69 Digital cable(64/256 QAM):1-135
Tuner type	Frequency synthesized
Inputs	Video: 1.0 V (p-p), 75 ohms Audio: 2V RMS max, 50k ohms terminated Component video: (Y) 1.0 V (p-p), 75 ohms (Pb)/(Pr) 0.7 V (p-p), 75 ohms HDMI: HDMI compliant (type A connector) HDCP compliant E-EDID compliant Suggested scan rates: 1080p, 1080i, 720p, 480p, 480i HDMI Audio: 2-channel PCM 32/44.1/48 kHz sampling frequency 16/20/24 bits per sample PC Monitor: Mini-Dsub 15pin x 1 Antenna: VHF/UHF In 75 ohms coaxial
Output	Digital audio: 0.7 V (p-p), 75 ohms terminated
Speaker	184mm×48.6mm×21.5mm(7.2 inch x 1.9 inches x 0.8 inches), 8 ohms x 2
Audio output power	6.0W + 6.0W
ACCESSORIES	Remote control/Batteries (AAA) x 2/Stand/Stand Screw x 3 /Owner's Guide/Easy Graphic Guide/AC Cord

- Designs and specifications are subject to change without notice.
- For information on our other products, please visit our website at www.hitachi.us/tv

3. Factory/Service OSD Menu and Adjustment

3.1 To enter the Factory OSD Menu

- a. With factory RC (remote control)
 1. Press “M” button and enter factory mode.
 2. Press “Menu” button and enter factory OSD menu.
 3. Press “CH+”/“CH-” button select the function menu, press “VOL+”/“VOL-” enter the selected function menu. Press “VOL+”/“VOL-” button adjust values in the menu.
- b. 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.

3.2 Factory OSD Menu

3.2.1 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.

Before adjusting, prepare the signal instruments such as DVD or K-8256 first, and find the video picture with 100% color bars. Then please change to desired source.

	source	Timing	Pattern	Notes
1	ADC VGA	1024*768	100% color bar	For VGA source
2	ADC HDTV	1080P	100% color bar	For Component Video

Notes:

- 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.

3.2.2 Factory Option

	Item	Default	Options	Notes
1	MODE	M	M, U	M-Can enter factory mode with factory RC or user RC. U-Can enter factory mode only with user' s RC.

Note: MODE “M” is only used for factory production.

3.2.3 Version Info

	Item	Default	Options	Note
1	Version			Software version
2	Date			The date of current version

Note: Software version info of the TV, readable only.

3.2.4 Clear the EEPROM

Item	Meaning	Note
Clean Protected	Clear partly	Clean data except WB data and Auto Color data
Clean All	Clear completely	Clean all data

Note: The factory menu date varies according to different sources. Incase 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.

3.3 Designer Menu

3.3.1 Video Mode

Standard:

	TV	AV	Component	VGA	HDMI
R Gain	128	128	128	128	128
G Gain	56	56	56	56	56
B Gain	38	38	38	38	38

Offset:

	TV	AV	Component	VGA	HDMI
R Offset	128	128	128	128	128
G Offset	128	128	128	128	128
B Offset	128	128	128	128	128

Cool:

	TV	AV	Component	VGA	HDMI
R Gain	108	108	108	108	108
G Gain	78	78	78	78	78
B Gain	128	128	128	128	128

Warm:

	TV	AV	Component	VGA	HDMI
R Gain	128	128	128	128	128
G Gain	128	128	128	128	128
B Gain	0	0	0	0	0

3.3.2 Video Curve:

	TV	AV	Component	VGA	HDMI
Bright Max	700	700	700	700	700
Bright Min	0	0	0	0	0
Bright Mid	500	500	500	500	500
Contrast Max	700	700	700	700	700
Contrast Min	0	0	0	0	0
Contrast Mid	500	500	500	500	500
Saturation Max	1000	1000	1000	1000	1000
Saturation Min	0	0	0	0	0
Saturation Mid	500	500	500	500	500

Hue Max	1000	1000	1000	1000	1000
Hue Min	0	0	0	0	0
Hue Mid	500	500	500	500	500

3.3.4 Volume Curve :

	Min	20	Mid	80	Max
TV	0	24	34	48	74
AV/ S-Video	0	25	35	52	75
component	0	26	35	52	84
HDMI	0	24	32	46	64
VGA	0	26	35	52	84

Note: Set Downmix to “Lt/Rt”.

3.4 To Exit the Aging Mode

If There is a red “M” moving on the screen, it means the TV is in Aging mode. To exit the Aging mode, use your user RC, and enter 8->0->8 ->7 in sequence.

Note:

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

4. Software Upgrading

Before upgrading, read the following.

- 1、 Before upgrading, Write down the ADC Calibration values of the channel of VGA and component.
- 2、 Upgrade the software.
- 3、 To clear the EEPROM .
 - A Select the item “Clear Unprotected”.
 - B Press VOL+ button to clear the EEPROM data.
 - C Close the OSD menu after 5 seconds.
 - D Restart the TV.
- 4 Write the ADC Calibration values copied just now into the channels of VGA and component.
- 5、 After the operation above all, necessarily, Renew search the channels for the users

4.1 USB directly Software Upgrading

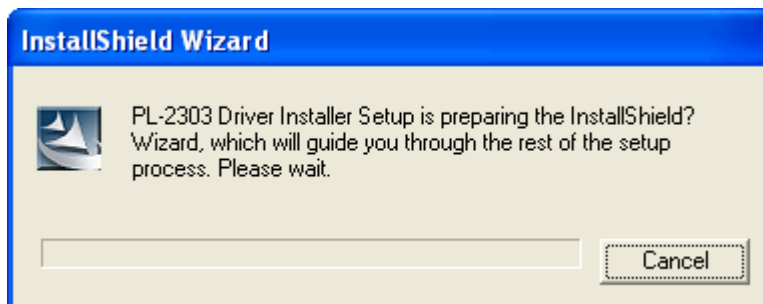
- 1)、 The software is upgraded by a burning toll-MtkTool, which can burn the program file *.bin to the main board of the unit.
- 2)、 The software can be upgraded by USB Disk.
 - First, copy the *.pkg file to USB Disk;
 - Second, rename the pkg file name. for example to LHD32V79US.pkg (L32C205)。
 - Power on the TV, and insert USB Disk to USB port
 - The TV will identify the software and upgrade automatically. Follow the instructions and do it.

4.2 Get ready for upgrading

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

4.2.1 Install the driver

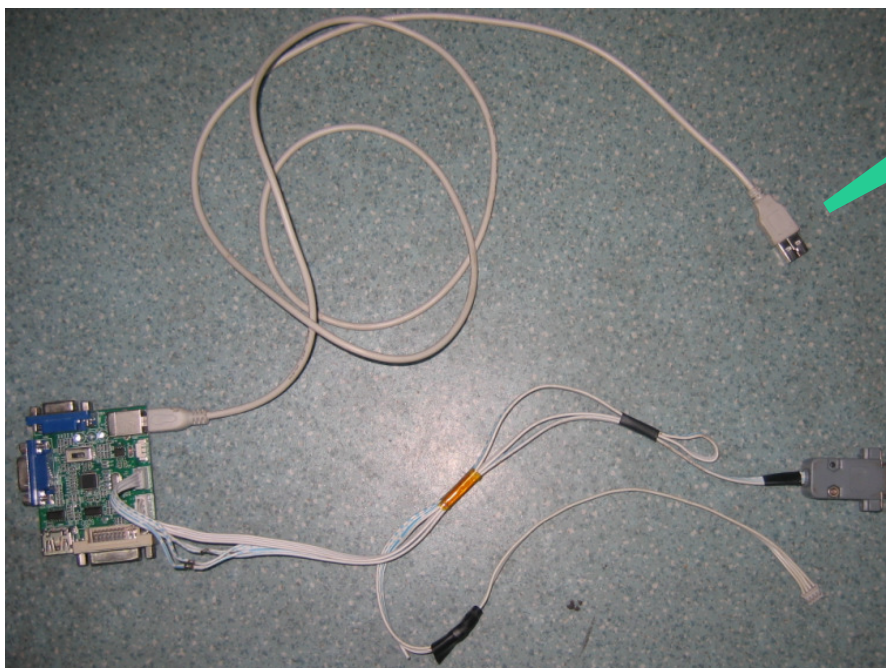
Double click the icon  , install the driver.



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

4.2.2 Hardware connecting

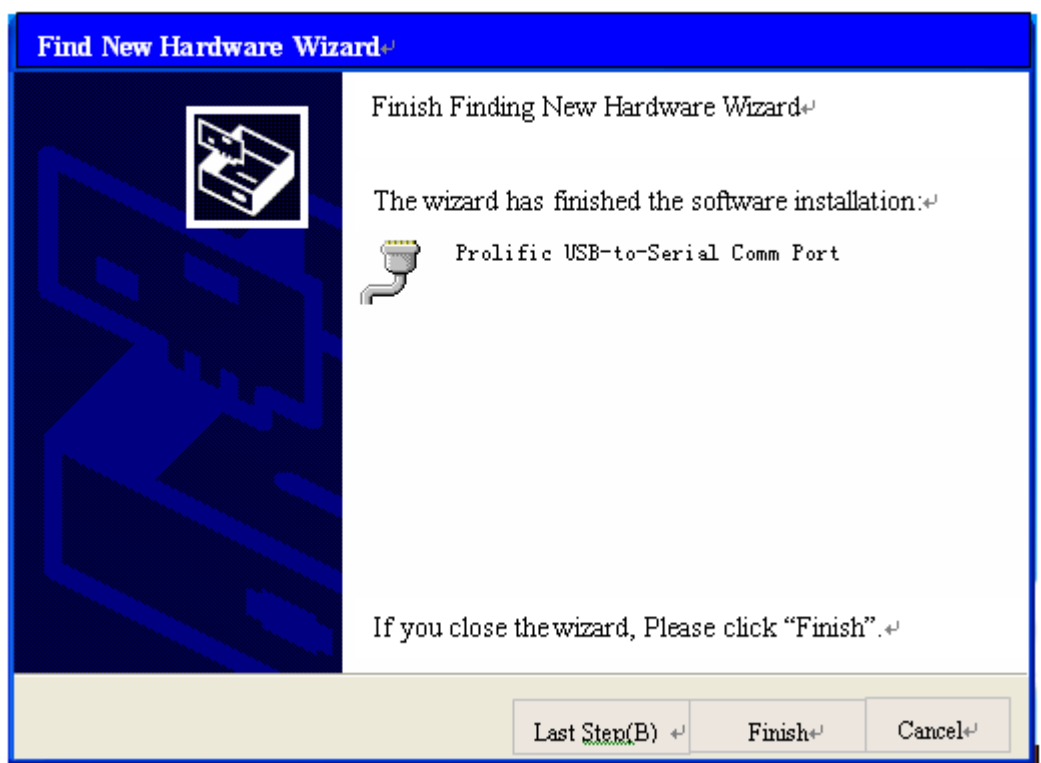
Connect the unit to your pc with a USB-to-serial port cable. USB port connects to your PC and serial port to the TV's VGA port.



USB Connect to the PC

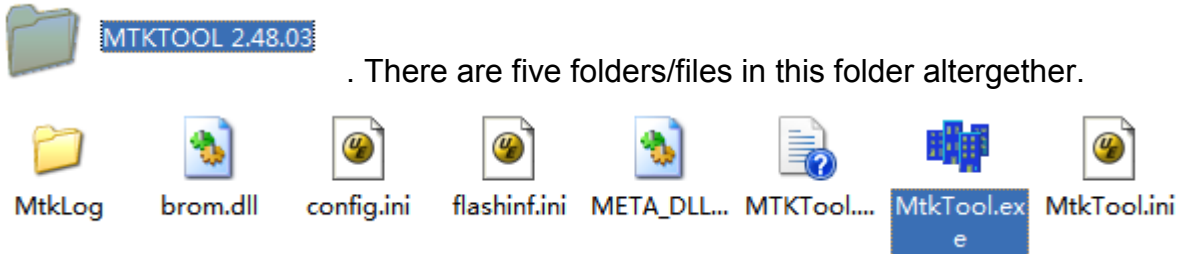
Connect to the TV VGA port

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.



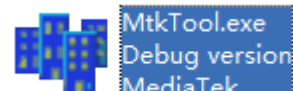
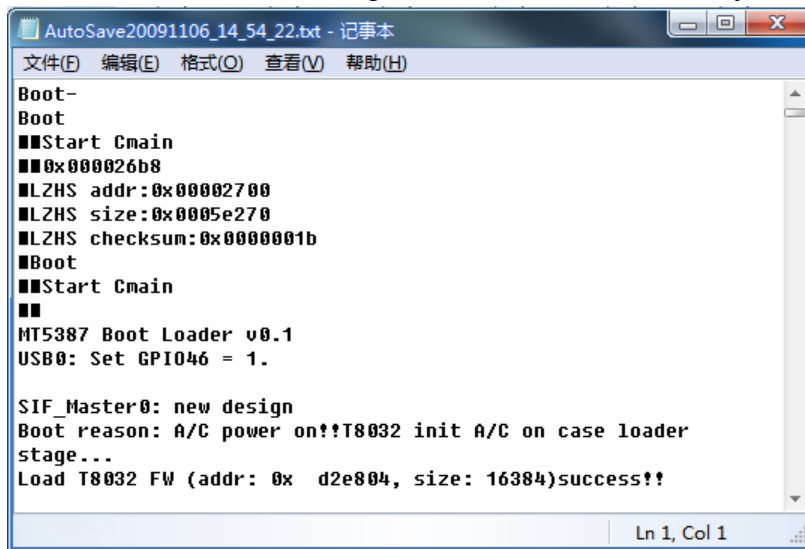
4.3 Upgrading with the MtkTool

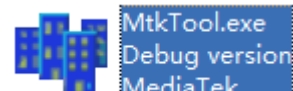
Mtktool is a green program needing no installation. It is saved in the folder



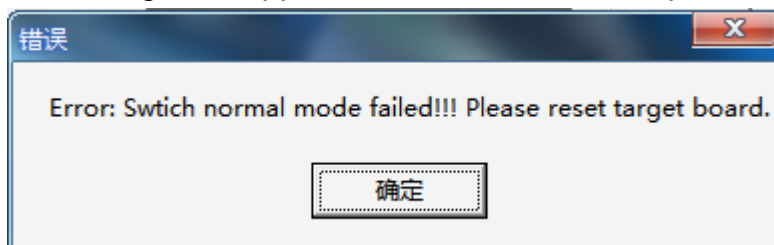
. There are five folders/files in this folder altergether.

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.

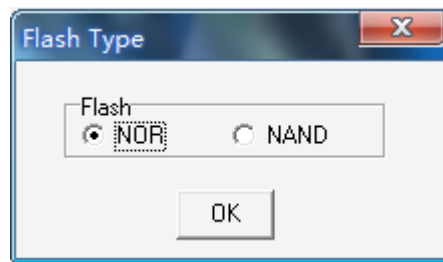


After connecting the TV with your PC, double click  icon, open the MtkTool.

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



Ignore these errors, click “Confirm” and enter the Flash Type interface:

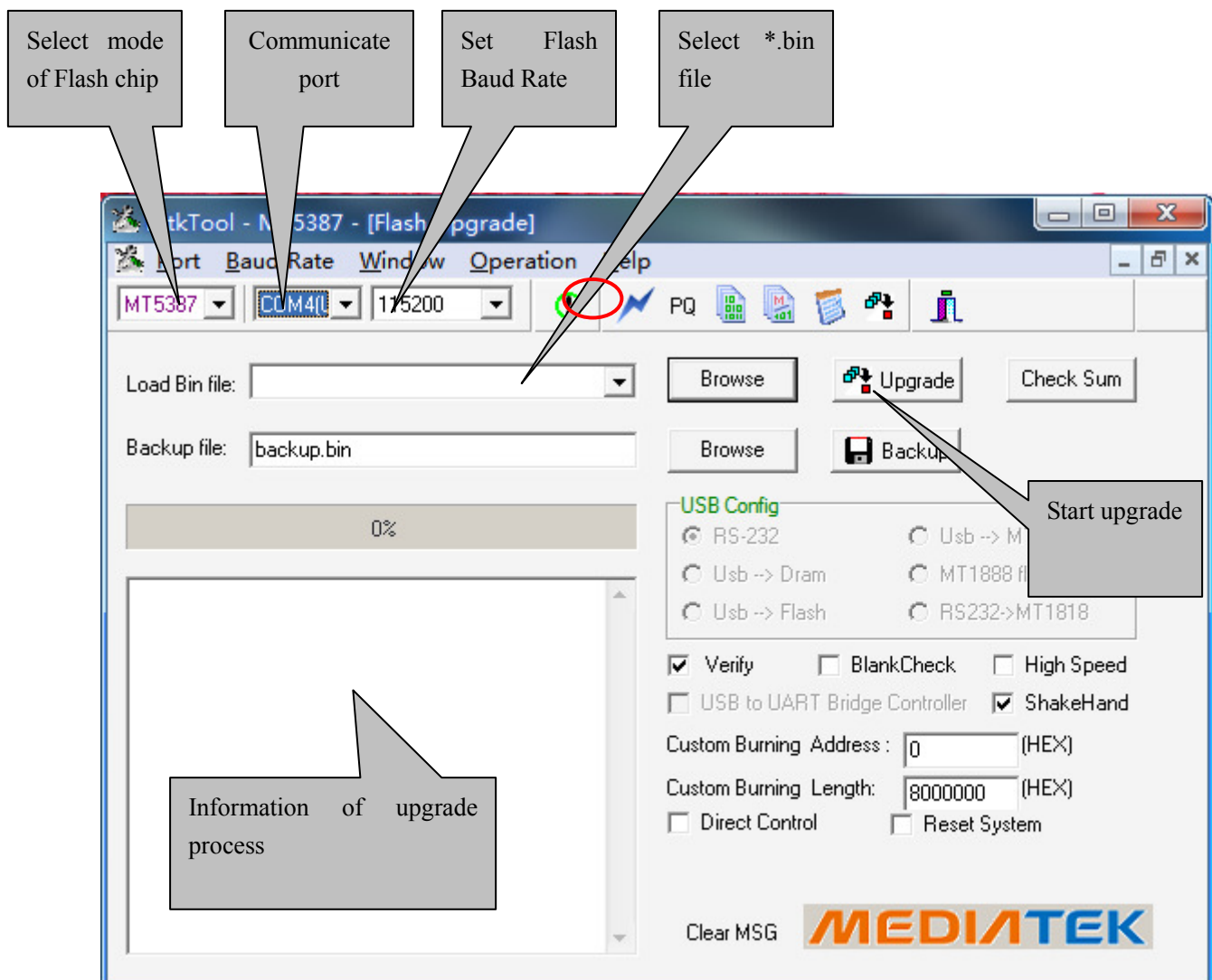


select "NOR", click "OK" and enter the MtkTool main interface, see the following picture.

Flash chip model

Please refer to follow steps to update the software:

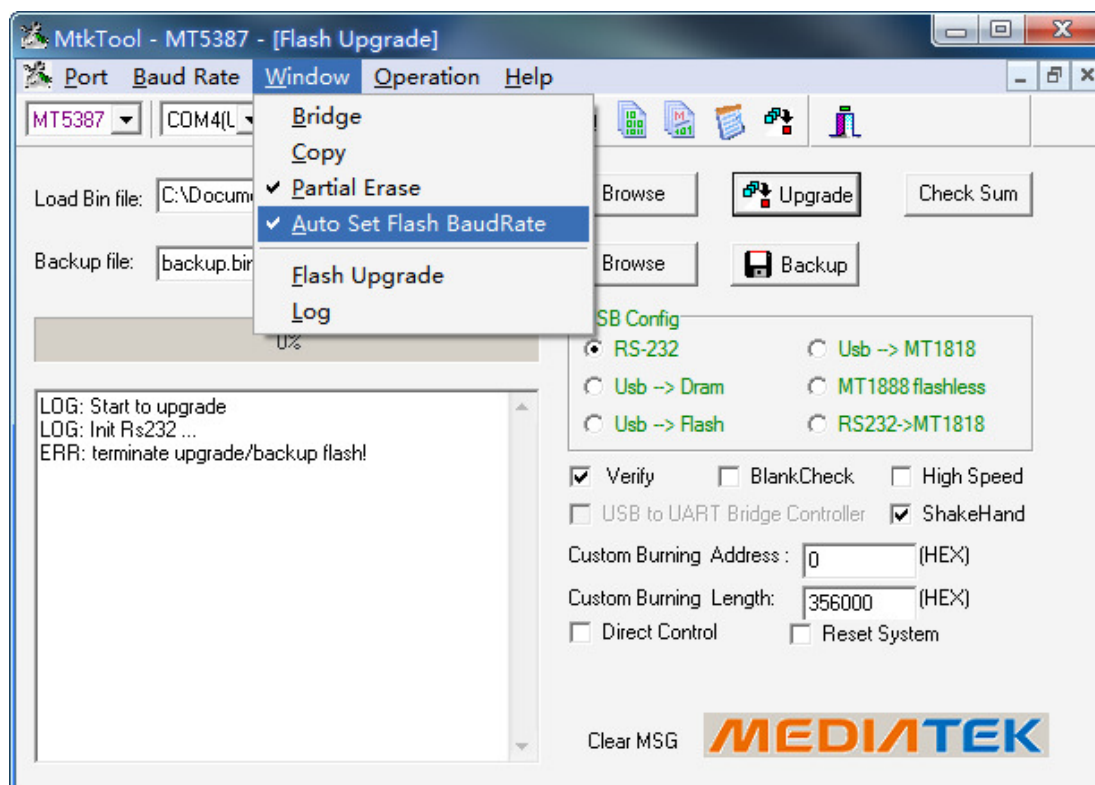
- 1—Select mode of Flash chip to MT5387 as the below picture.
- 2—Refer to the next page instruction to select the communicate port.
- 3—Press the icon beside the baud rate and make sure it is green as the below picture.
- 4—Set the flash baud rate to 115200 as the below picture.
- 5—Click the browse button to select the *.bin file that will be updated.
- 6—Click the "start" button to update software.





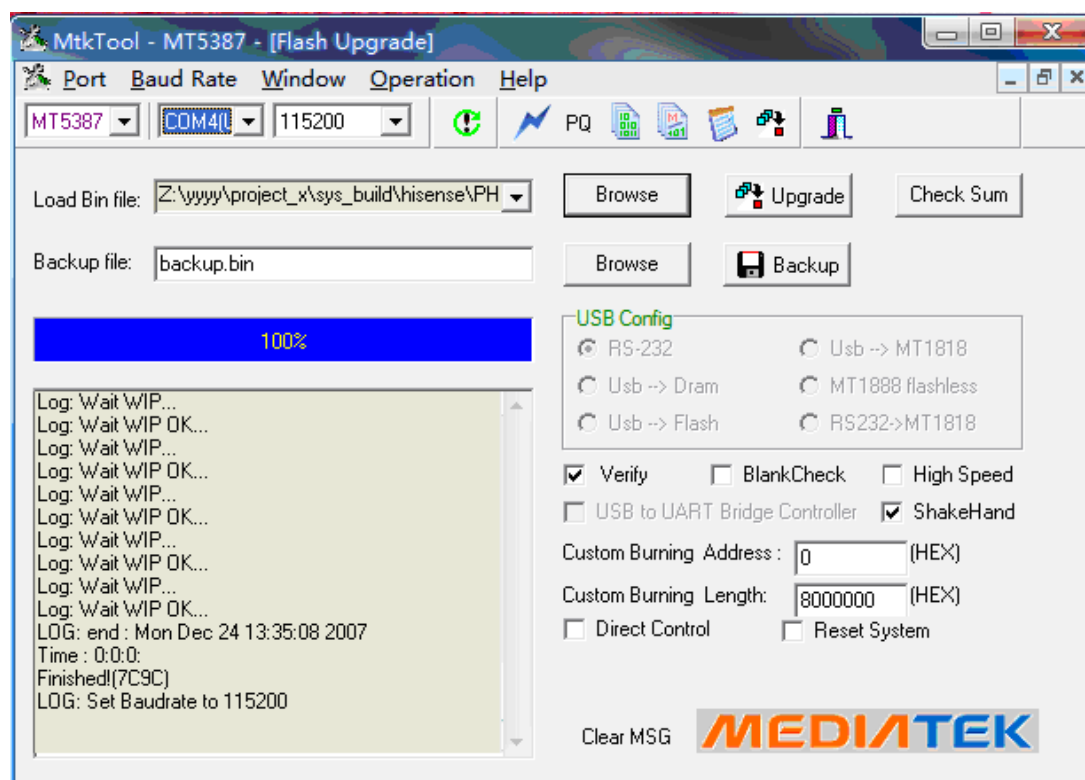
Open “Device Manager” and find which port is connected with the TV. In above picture, COM4 is connected to the TV; so, select “COM4” in the MtkTool main interface. Select the right baud rate according to chip model. For this unit(chip model is MT5387), select 115200.

Note: Where 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.



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.

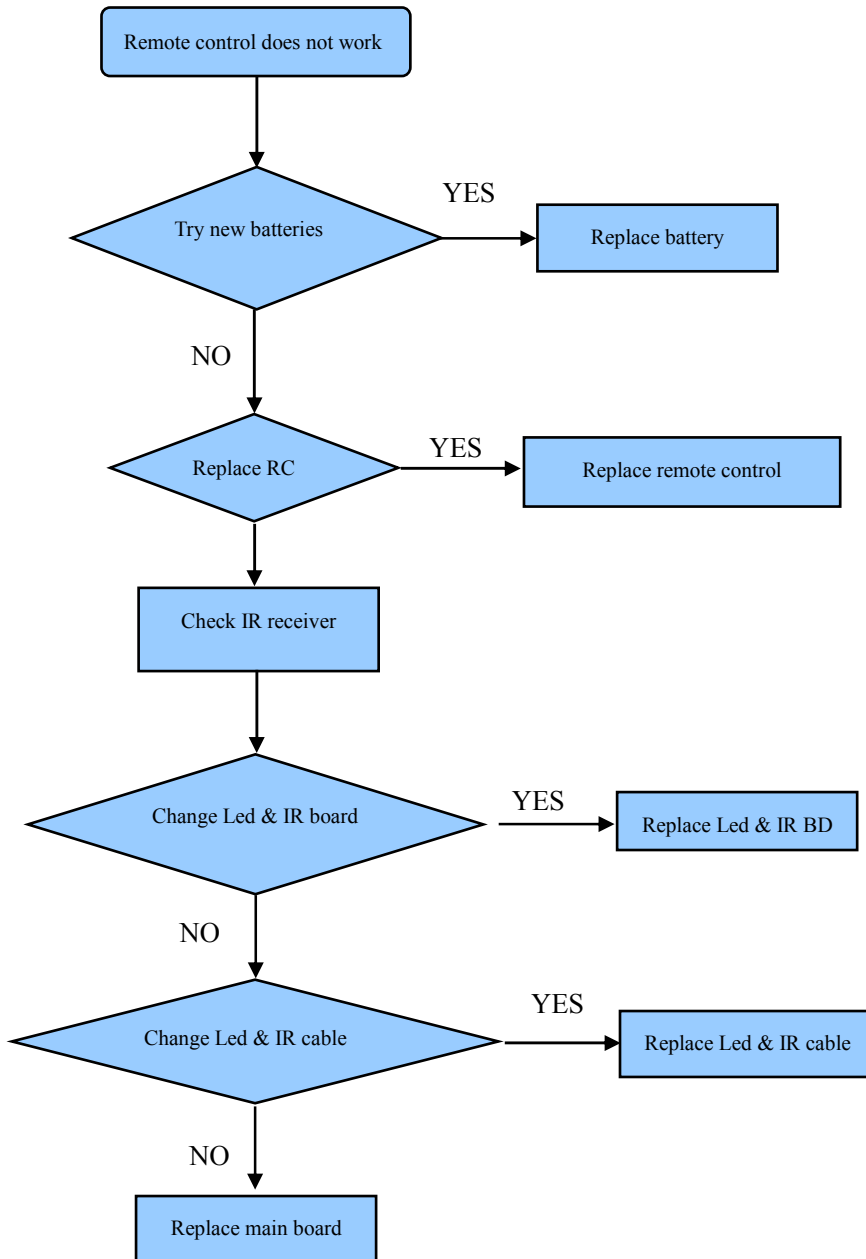


5. Trouble shooting

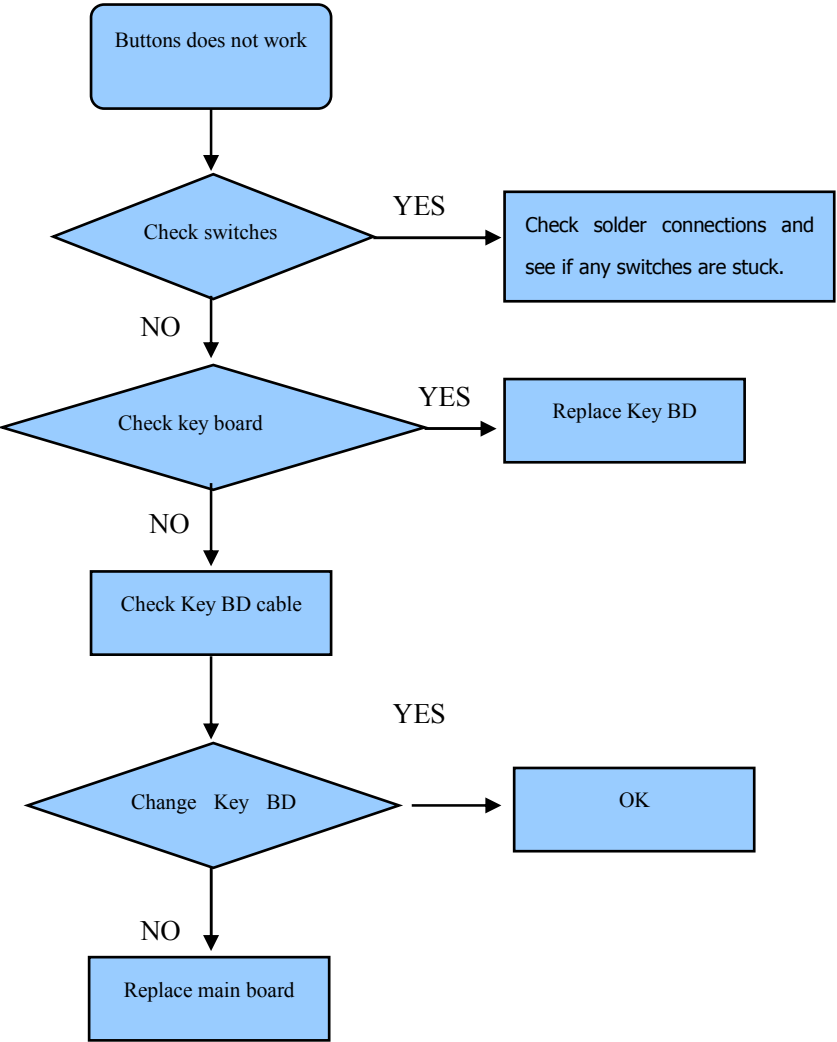
When there is something wrong with your TV, you can try turning off the TV and then restart it. You can also operate according to the follow chart. If the problems still can't be solved, please contact the profession technicianl.

No sound or picture	<ol style="list-style-type: none">1. Check if the power line is in the outlet and if it has electricity.2. Check if you have pressed Power button on the TV or Power button on the remote control3. Check the setting of picture brightness and contrast.4. Check the volume.
The picture is normal but there is no sound	<ol style="list-style-type: none">1. Check the volume.2. Check if Mute mode is set.
No picture and white or black picture	<ol style="list-style-type: none">1. Adjust Picture Setting.2. Check Color System.
The sound and picture are interfered	<ol style="list-style-type: none">1 Try to find the appliance affecting TV set, and move it far away from the TV set.2. Try to insert the power plug of the TV set into another outlet.
Unclear picture or picture with snow	<ol style="list-style-type: none">1. Check the direction, position and connection of your antenna.2. Adjust the direction of your antenna or reset or fine tune the channel
The remote control does not work	<ol style="list-style-type: none">1. Change the batteries in the remote control.2. Clean the upper side of the remote control (radiating window)3. Check the contacting points of the batteries.4. Check if there is obstruction between the remote control and the monitor.5. Check if the batteries are correctly installed.
H/V strip or the picture shaking	Check if there is an interfering source nearby, such as appliance or electric tools.
The cabinet of the TV makes "Click" sound	makes "Click" sound"Sometimes the room temperature change can cause the television cabinet to inflate or contra, which makes this sound. This does not mean the TV breaks down.

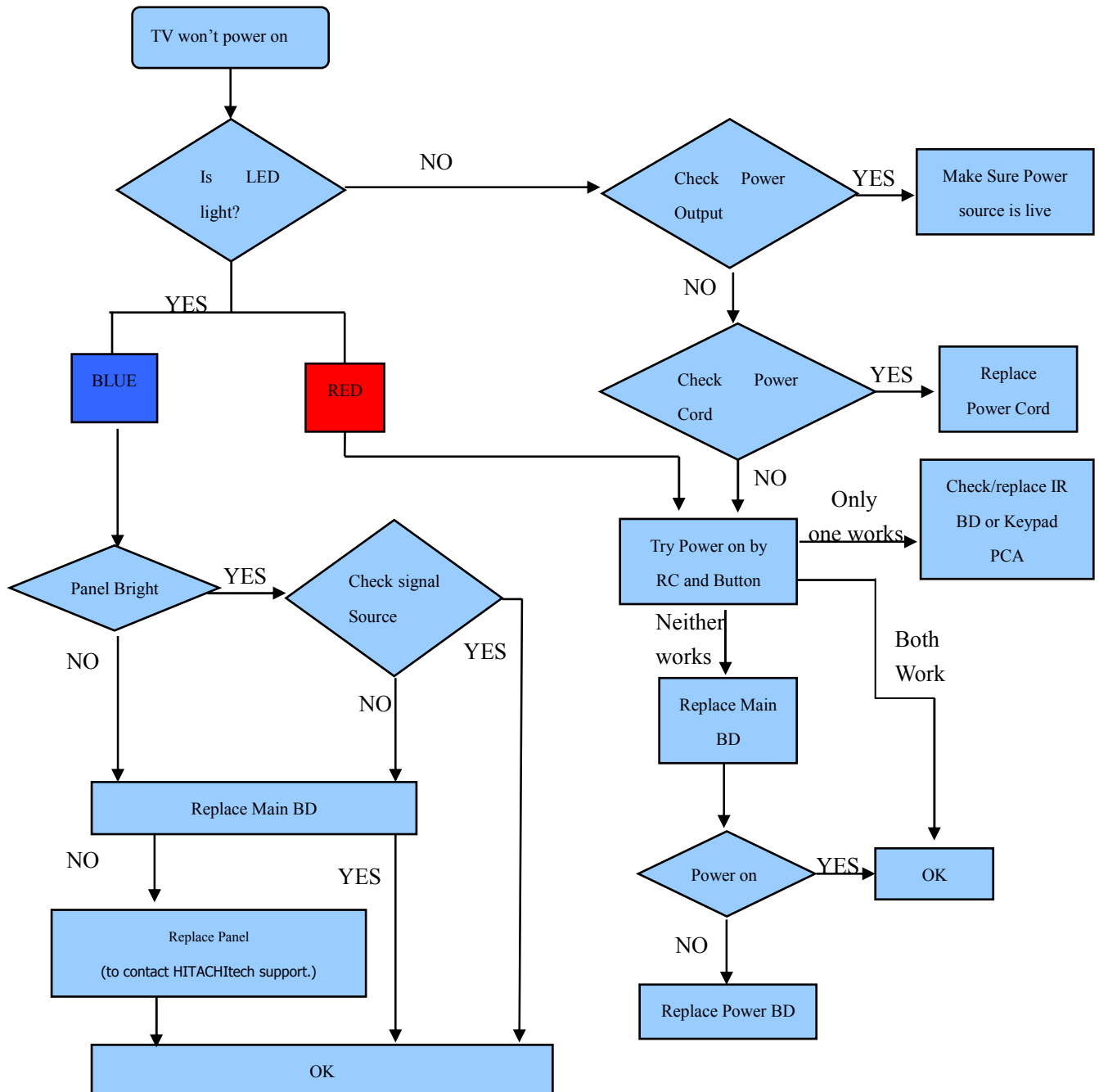
5.1 Troubleshooting for Remote Control



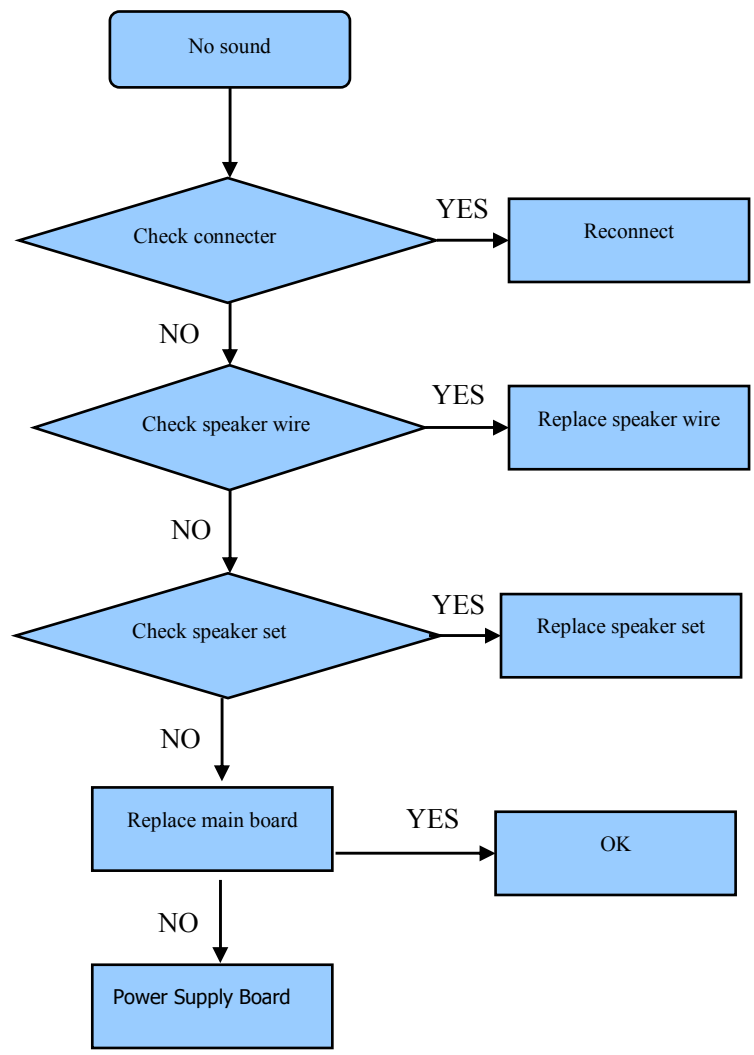
5.2 Troubleshooting for Function Key



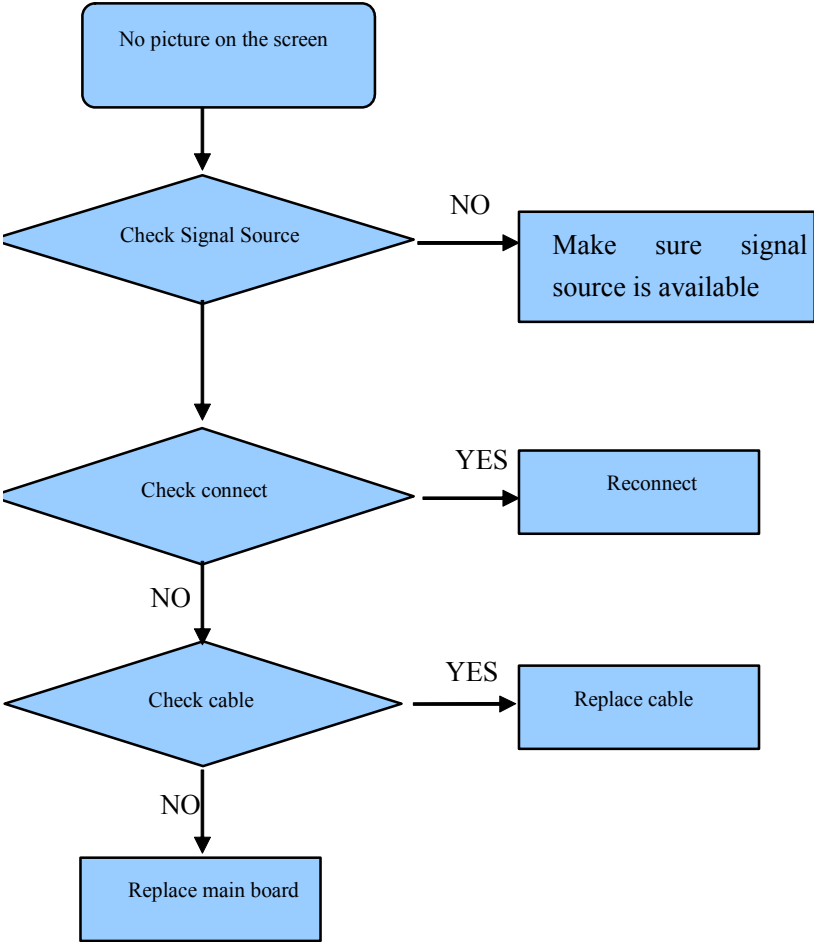
5.3 TV won't Power On



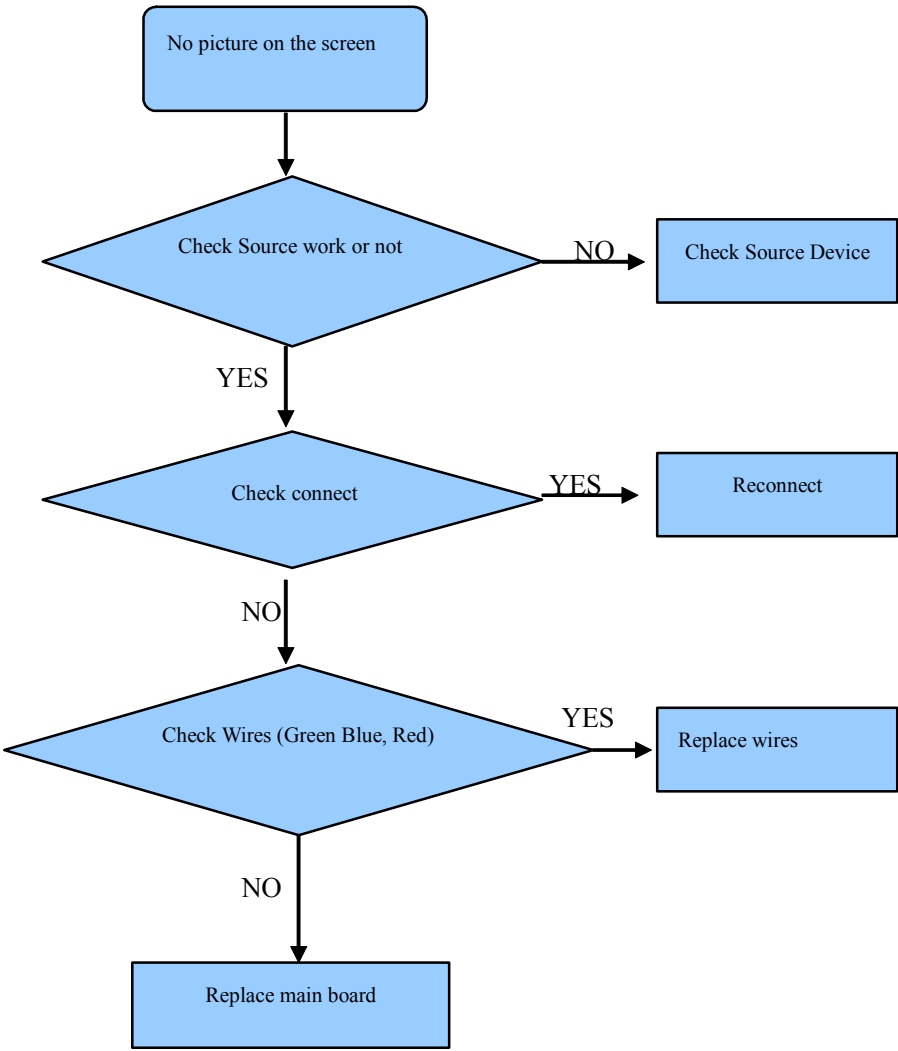
5.4 Troubleshooting for Audio



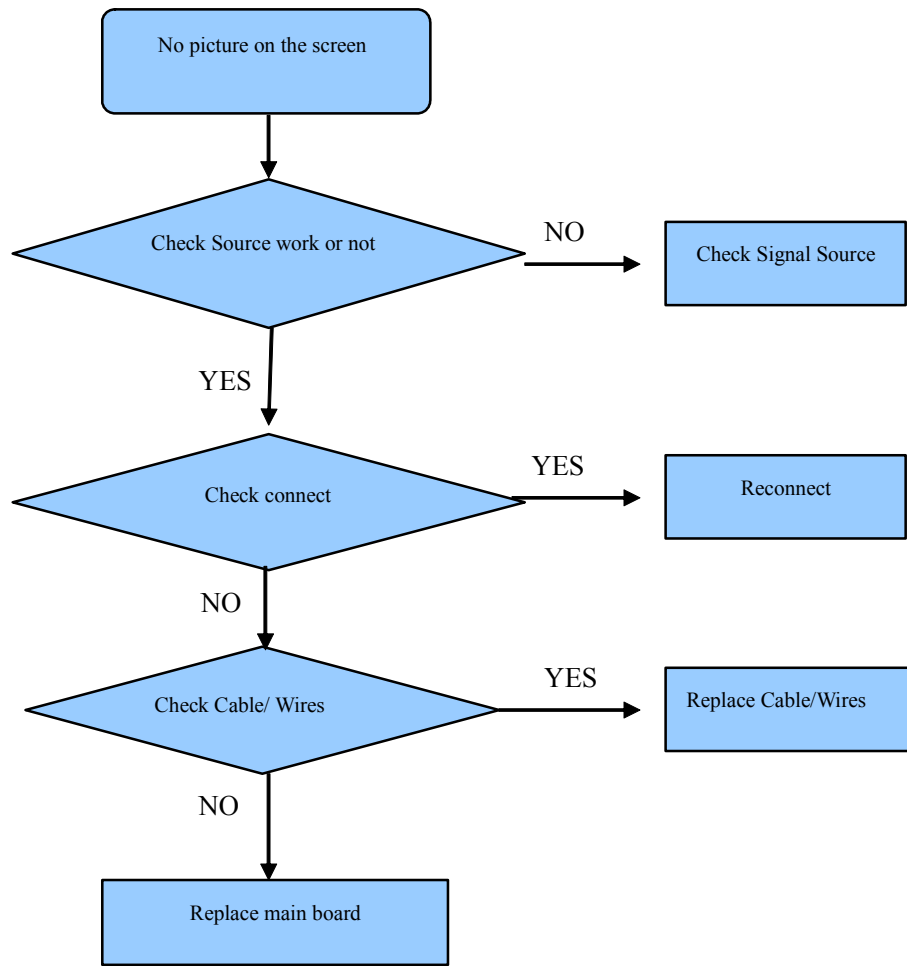
5.5 Troubleshooting for TV/VGA/HDMI input



5.6 Troubleshooting for YPbPr input



5.7 Troubleshooting for Video input



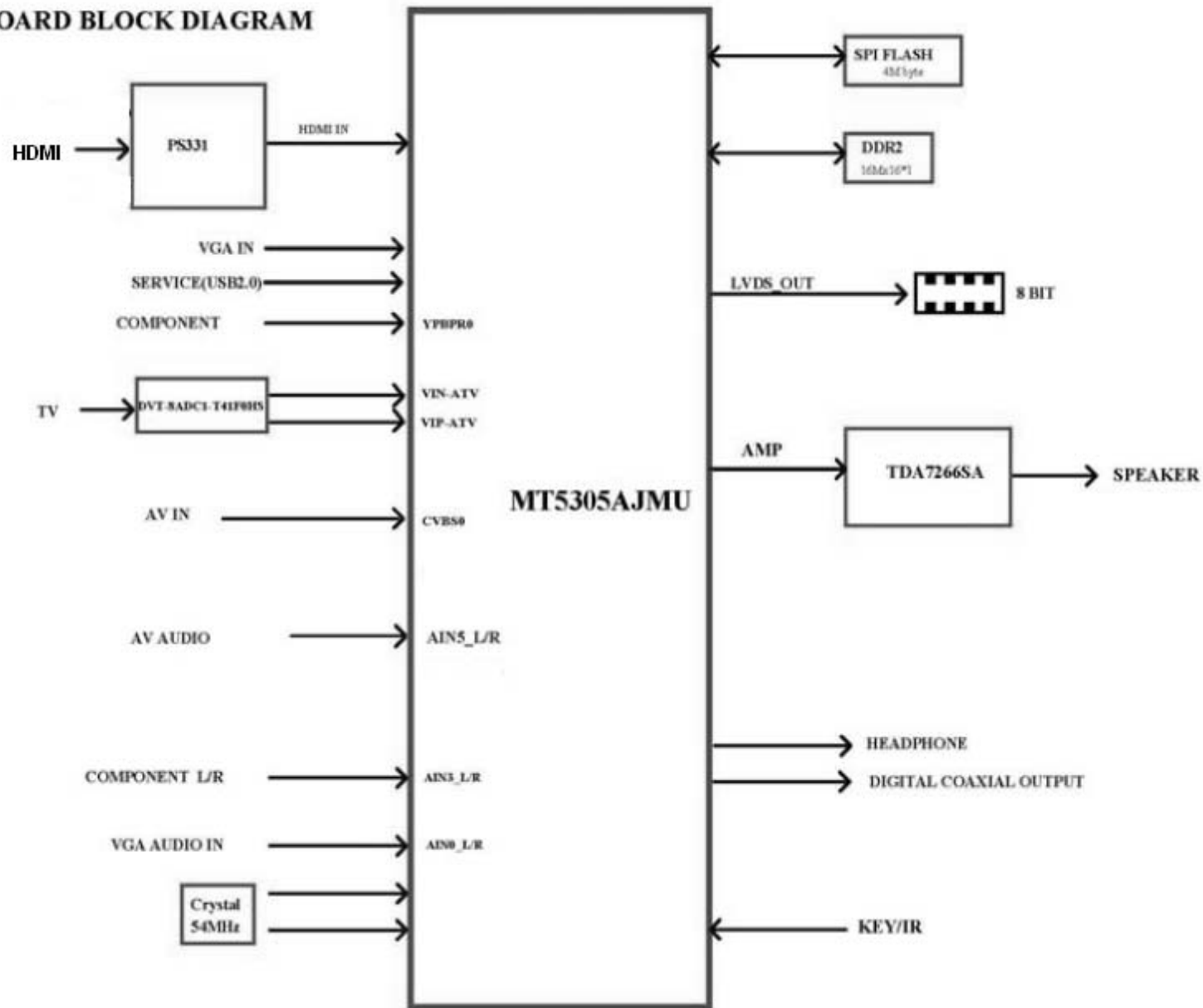
6. Signals Block Diagram

The next page, Please.

7. Schematic circuit diagram

8. Explode View

BOARD BLOCK DIAGRAM



MT5387 _DDR2_- 2 LAYERS

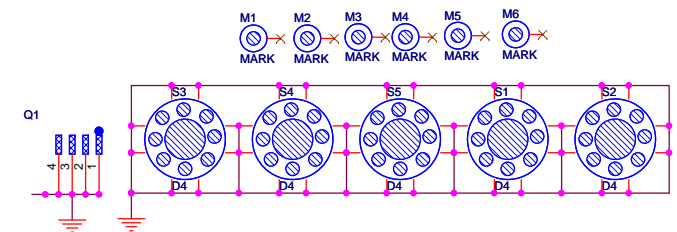
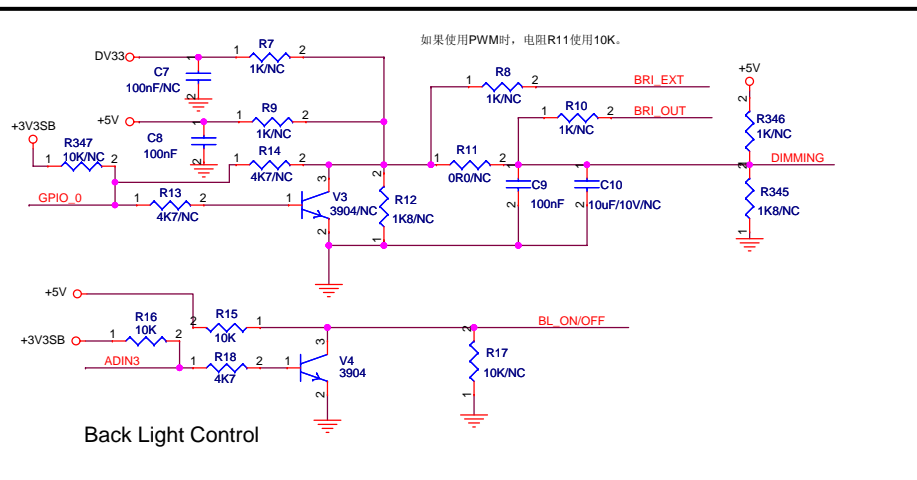
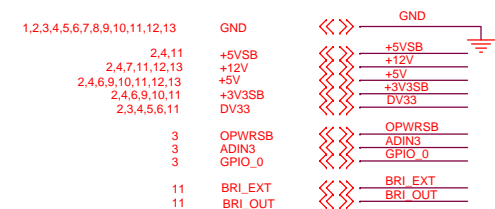
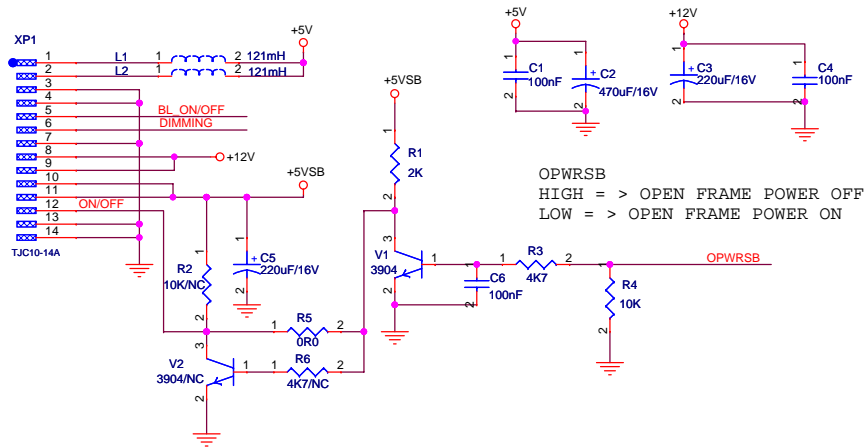
5387 GPIO Definition

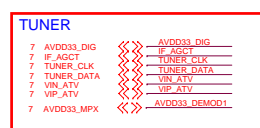
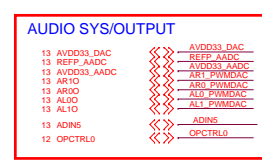
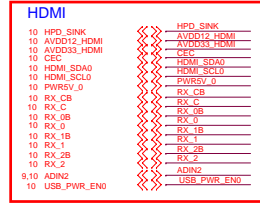
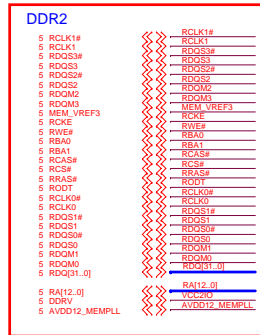
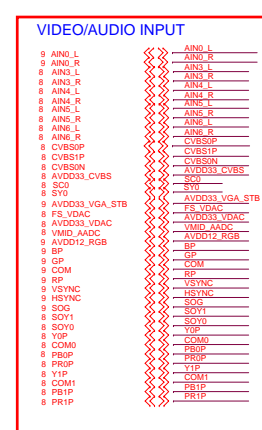
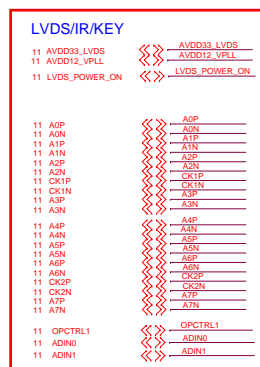
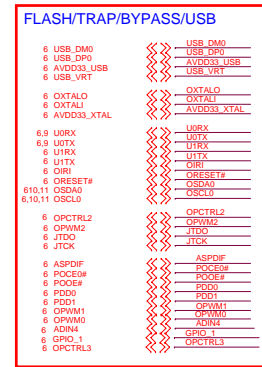
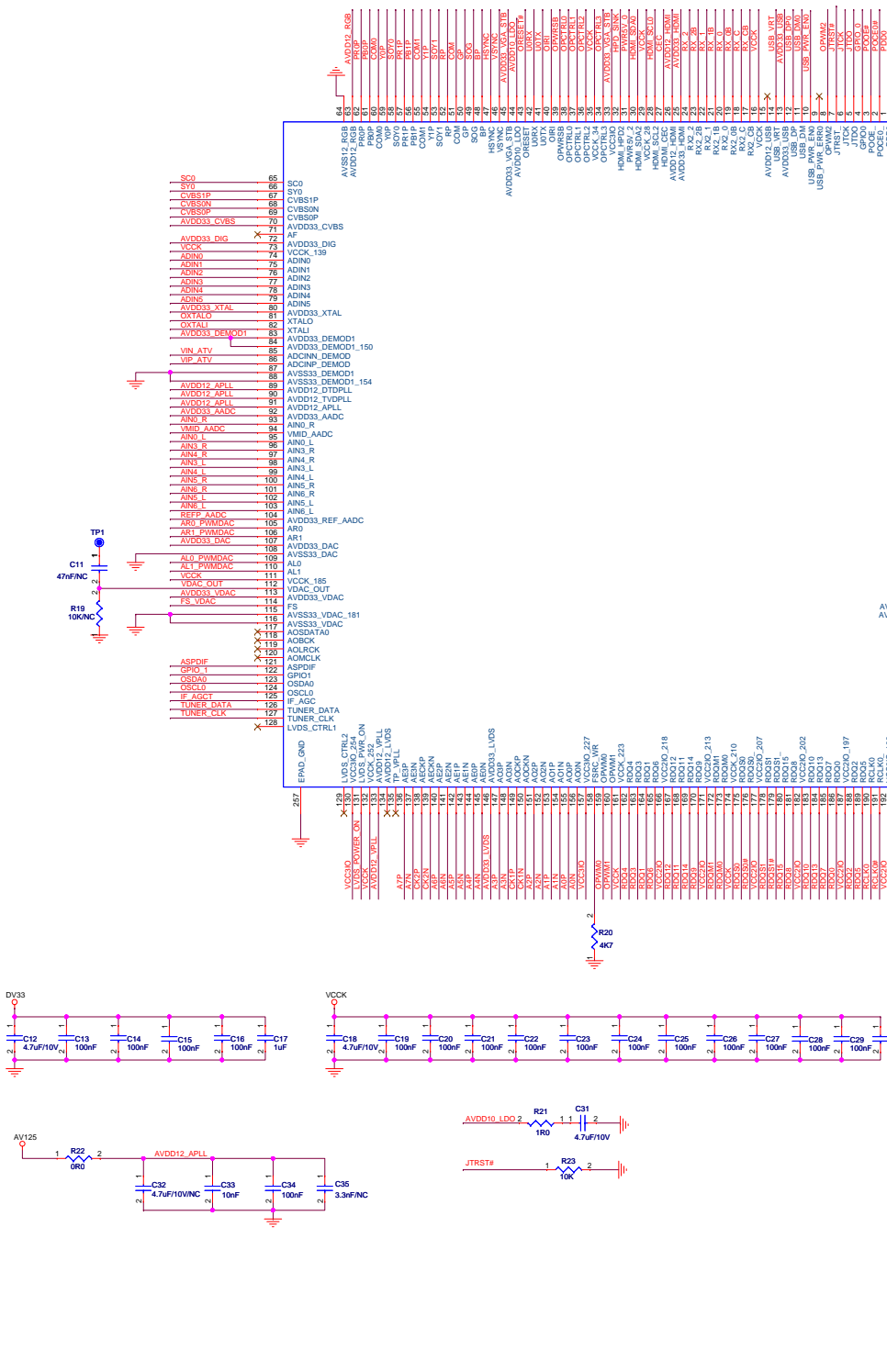
PIN NAME	NET NAME	Function define
GPIO_0	GPIO_0	DIMMING/PWM
GPIO_1	GPIO_1	STRAP_3_
ADIN0	ADIN0	KEY0
ADIN1	ADIN1	KEY1
ADIN2	ADIN2	VGA/HDMI EEPROM WP
ADIN3	ADIN3	BL_ON/OFF_PULL H_
ADIN4	ADIN4	SYSTEM EEPROM WP
ADIN5	ADIN5	HP_DET#
OPCTRL0	OPCTRL0	MUTE AMP
OPCTRL1	OPCTRL1	
OPCTRL2	OPCTRL2	JTMS
OPCTRL3	OPCTRL3	STRAP_4_
OPWM0	OPWM0	STRAP_1_
OPWM1	OPWM1	STRAP_0_
OPWM2	OPWM2	JTDI
TP_VPLL	TP_VPLL	CMO 120HZ MEMC0
OPWRSB	OPWRSB	POWER MODULE ON/OFF
ASPDIF	ASPDIF	STRAP_2_
HPD_SINK	HPD_SINK	HPD_SINK
LVDS_PWR_ON	LVDS_PWR_ON	LVDS_PWR_ON
AOSDATA0	AOSDATA0	
LVDS_CTRL1	LVDS_CTRL1	CMO 120HZ MEMC1
LVDS_CTRL2	LVDS_CTRL2	CMO 120HZ MEMCEN
U1RX		
U1TX		
USB_PWR_EN0	USB_PWR_EN0	HDMI POWER CONTROL
USB_PWR_ERR0		

Rev	History	P#	DATE
V1.0			2009-09-01

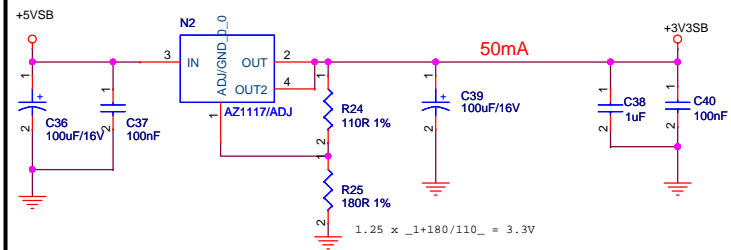
01. GPIO CONFIG
02. POWER AND INVERTOR
03. MT5387
04. DIGITAL/ANALOG POWER
05. DDR2 DRAM
06. PERIPHERAL
07. TUNER
08. COMPONENT/AV INPUT
09. VGA INPUT
10. HDMI
11. LVDS/IR/KEY
12. AMP/MUTE
13. HEADPHONE/AUDIO OUT

POWER INPUT

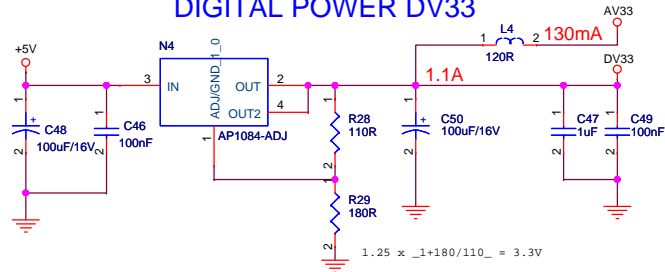




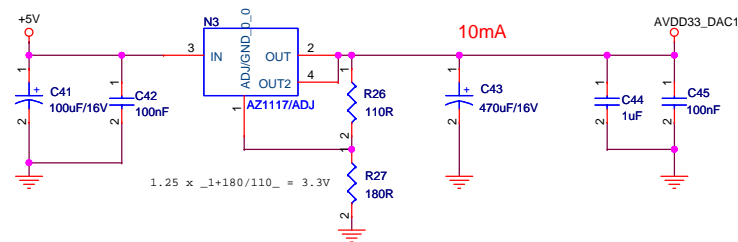
STANDBY POWER



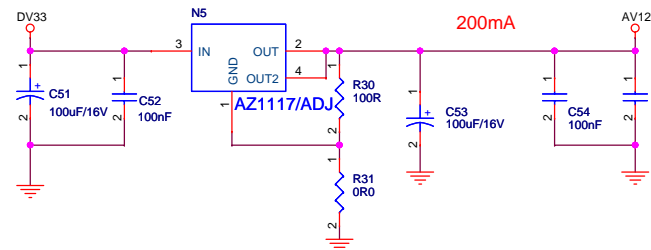
DIGITAL POWER DV33



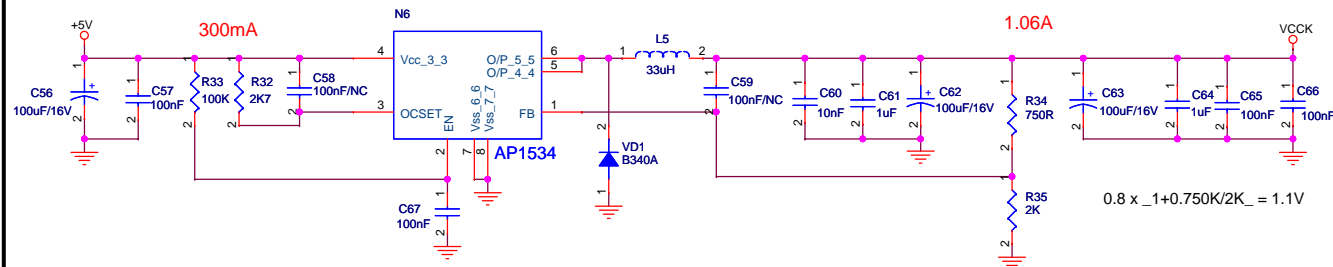
AUDIO DVC POWER



ANALOG POWER AV125



CORE POWER DV10



shielding of 20-mil ground width

1,2,3,4,5,6,7,8,9,10,11,12,13	GND	<<>>	GND
2,4,6,9,10,11,12,13	+5V	<<>>	+5V
2,4,11	+5VSB	<<>>	+5VSB
2,4,6,9,10,11	+3V3SB	<<>>	+3V3SB
2,3,4,5,6,11	DV33	<<>>	DV33
4,6,7,8,10,11,12,13	AV33	<<>>	AV33
3,4,5,6,9,10,11	AV125	<<>>	AV125
2,4,7,11,12,13	+12V	<<>>	+12V
3,4	VCCCK	<<>>	VCCCK
4,13	AVDD33_DAC1	<<>>	AVDD33_DAC1

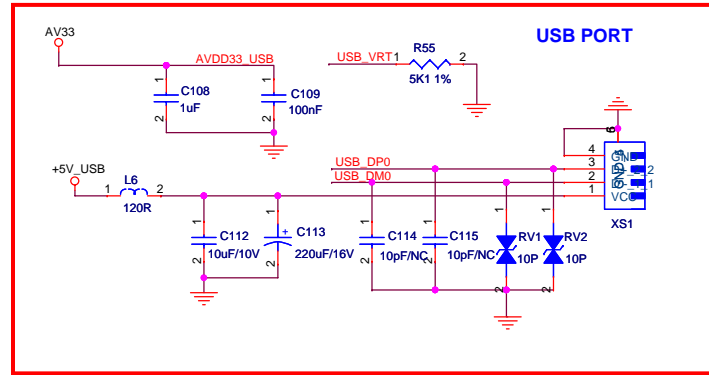
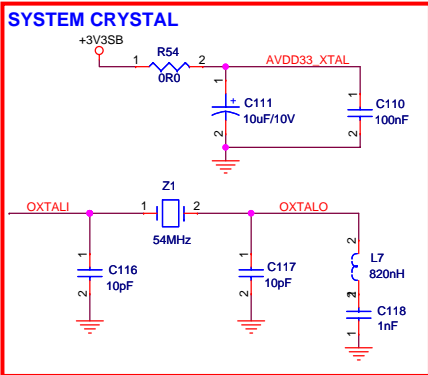
Hisense Electric Co.,LTD

Title	DIGITAL/ANALOG POWER		
Size	Document Number	Rev	
A3	MT5305	1.0	
Date:	Thursday, April 01, 2010	Sheet	4 of 13

Title			
DDR2 DRAM			
Size	Document Number		Rev
A3	MTS305		1.0
Date:	Thursday, April 01, 2010	Sheet	5 of 13

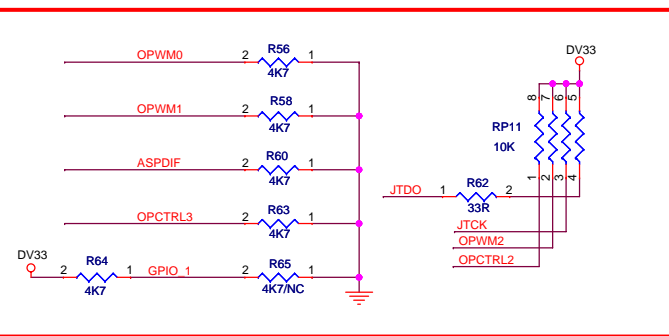
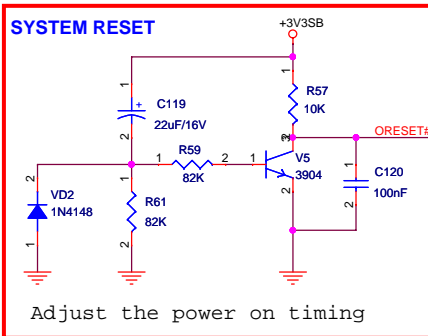
SYSTEM CRYSTAL

The diagram illustrates a system crystal circuit. It features a +3V3SB power supply connected to a 0R0 resistor (R54) in series with a crystal (Z1, 54MHz). The crystal is connected to two capacitors, C116 (10pF) and C117 (10pF), which are connected to ground. The crystal output is connected to a transformer (L7, 820nH) and a capacitor (C118, 1nF), which are also connected to ground. The crystal is also connected to a 10uF/10V capacitor (C111) and a 100nF capacitor (C110), which are connected to ground. The crystal is labeled AVDD33_XTAL.



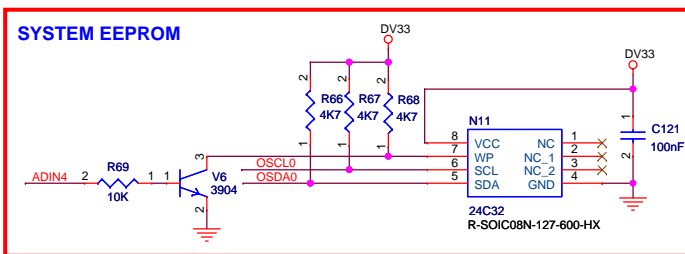
SYSTEM RESET

Adjust the power on timing



SYSTEM EEPROM

The schematic diagram illustrates the SYSTEM EEPROM circuit. It features an ADIN4 input connected to the base of a 3904 transistor (V8) through a 10K resistor (R69). The emitter of V8 is grounded, and its collector is connected to the OSCL0 pin of an N11 EEPROM (24C32). The OSCL0 pin is also connected to a 4K7 resistor (R66) which is connected to DV33. The OSDA0 pin of the EEPROM is connected to a 4K7 resistor (R67) which is also connected to DV33. The SCL pin is connected to a 4K7 resistor (R68) which is connected to DV33. The VCC pin of the EEPROM is connected to DV33. The WP pin is connected to a 4K7 resistor (R69) which is connected to DV33. The SDA pin is connected to a 4K7 resistor (R70) which is connected to DV33. The NC pins are connected to GND. The EEPROM is labeled 24C32 and R-SOIC08N-127-600-HX. A 100nF capacitor (C12) is connected between DV33 and GND.



SYSTEM FLASH

SYSTEM FLASH

N10 M25P32

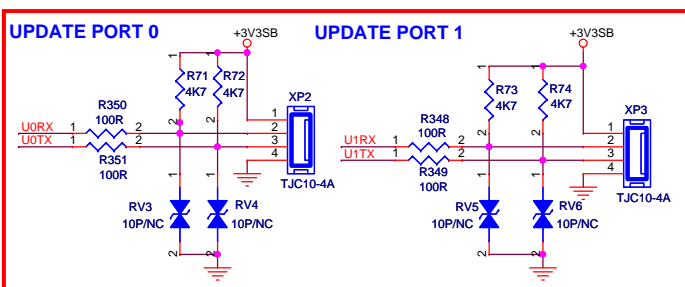
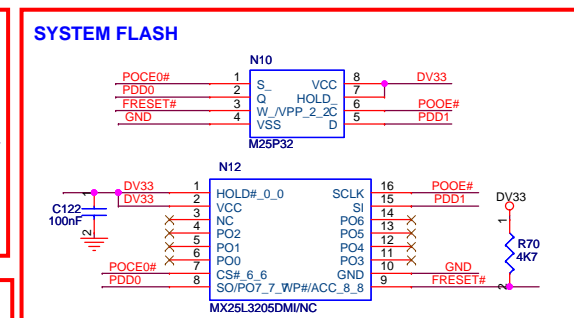
POCE0# 1 S VCC 7 DV33
PDD0 2 Q HOLD 8
FRESET# 3 W_VPP_2_2C 6 POOE#
GND 4 VSS 5 PDD1

N12 MX25L3205DMI/NC

HOLD#_0_0 1 SCLK 16 POOE# DV33
VCC 2 SI 15 PDD1
NC 3 PO6 14
PO2 4 PO5 13
PO0 5 PO4 12
CS#_6_6 6 PO3 11
POI7_7_WP#/ACC_8_8 8 GND 10
GND 9 FRESET#

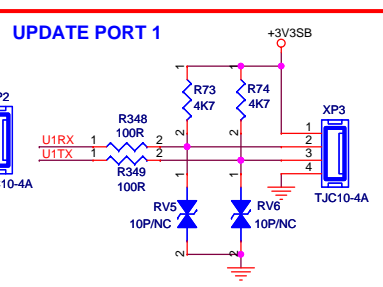
C122 100nF

R70 4K7



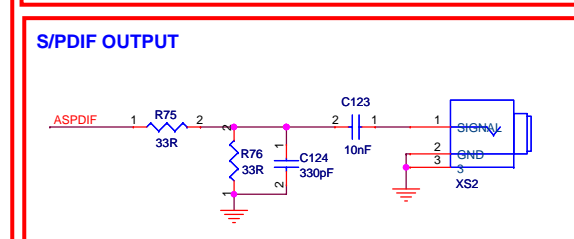
UPDATE PORT 1

The diagram illustrates the circuit for Update Port 1. It features a 3V3SB power supply connected to a network of resistors (R73, R74, R348, R349) and diodes (RV5, RV6). The circuit is connected to a JTAG connector (XP3) and a TJC10-4A component. Labels include U1RX, U1TX, and 10-4A.



SPDIF OUTPUT

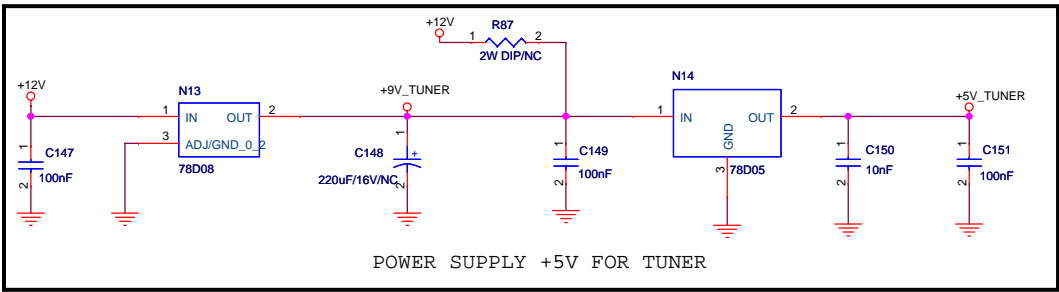
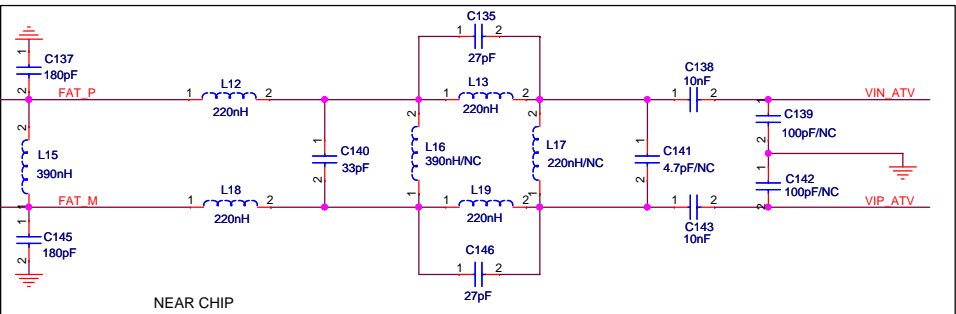
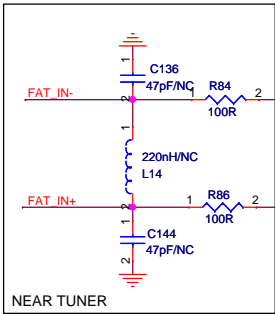
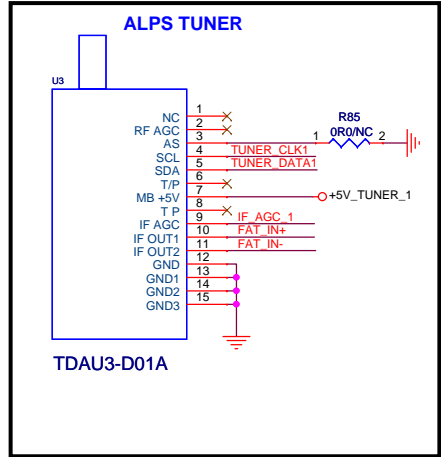
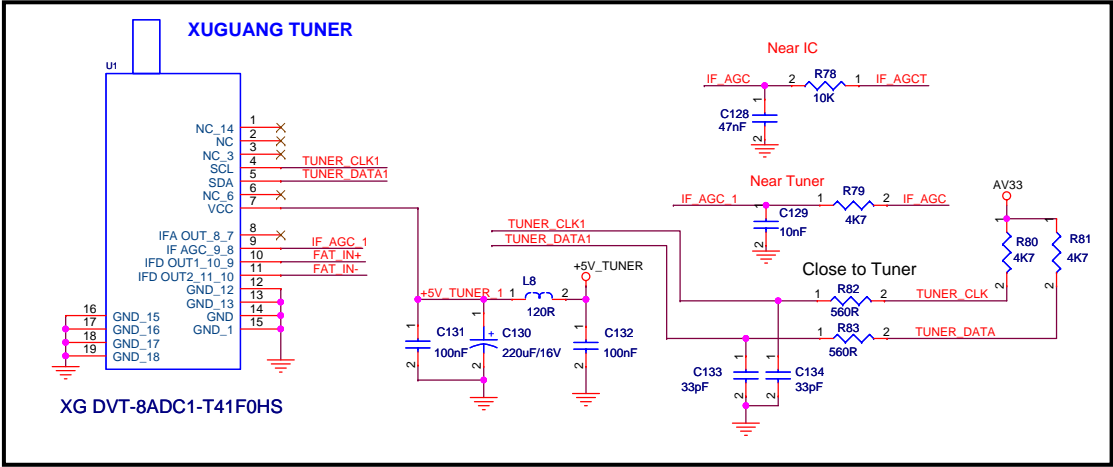
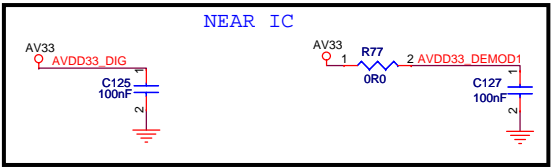
The schematic diagram illustrates the SPDIF output circuit. It begins with an input line labeled **ASPDIF** (red) connected to a 33R resistor (R75). The output of R75 is connected to a 33R resistor (R76). The output of R76 is connected to a 330pF capacitor (C124) and a 10nF capacitor (C123) in parallel. The output of C123 is connected to a 3-pin connector (XS2) labeled **SIGNAL**, **GND**, and **GND**.



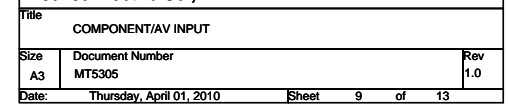
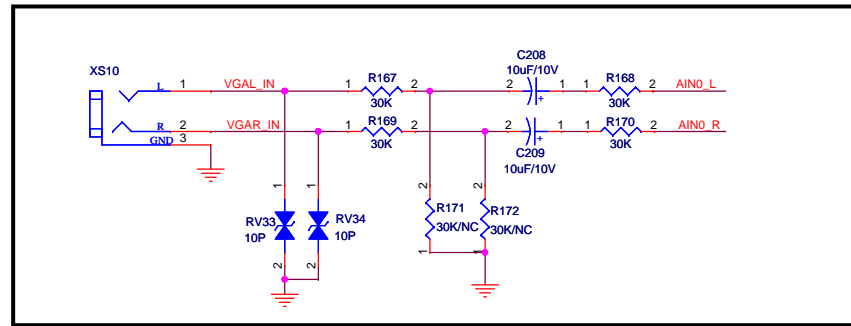
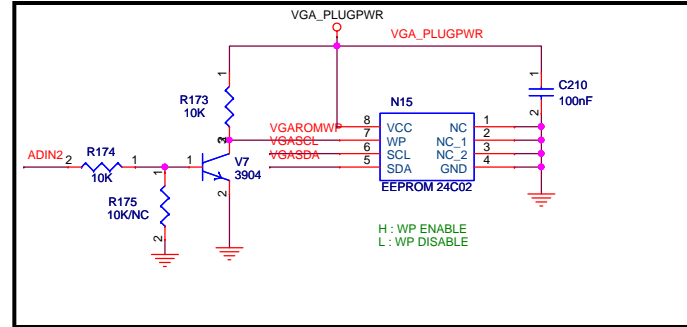
Strapping Mode	ASPDIF(O)	OPWM0(O)	OPWM1(O)
ICE mode + Serial boot	0	0	0

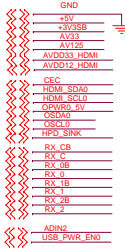
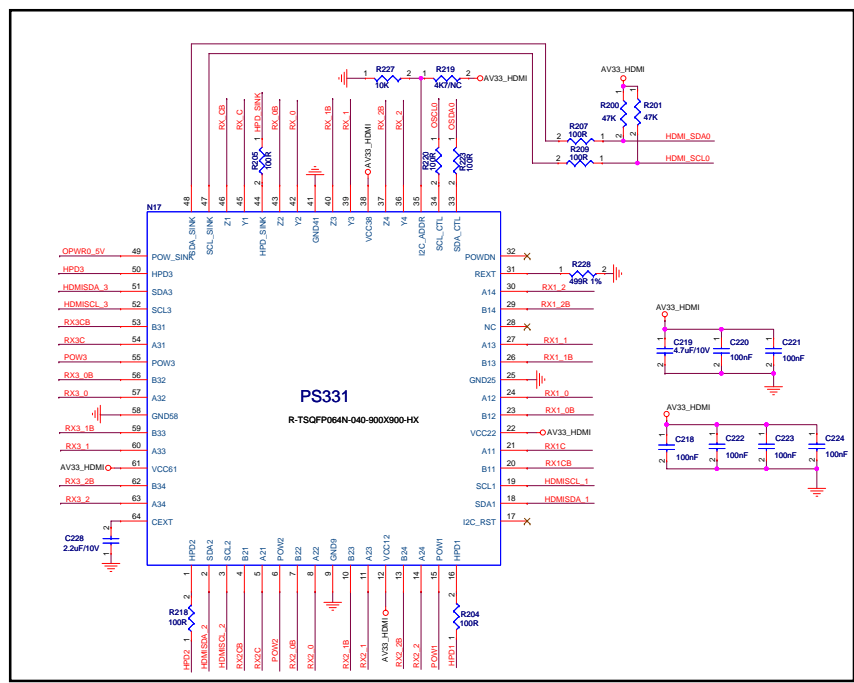
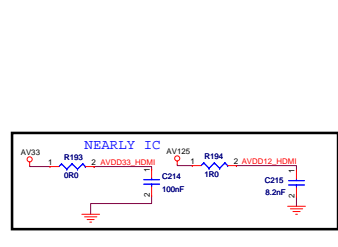
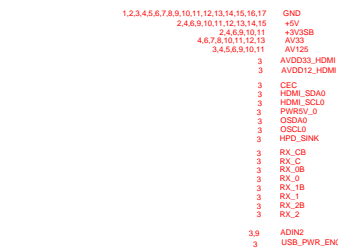
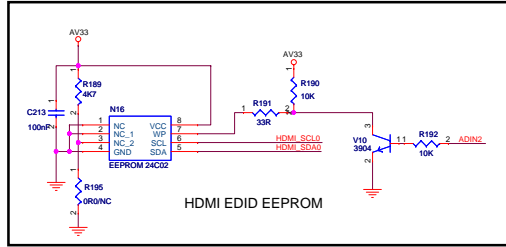
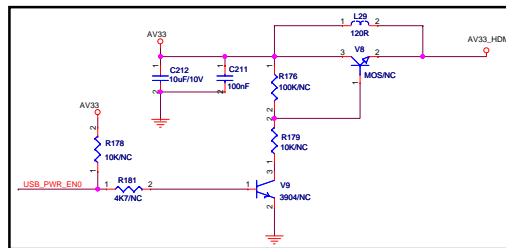
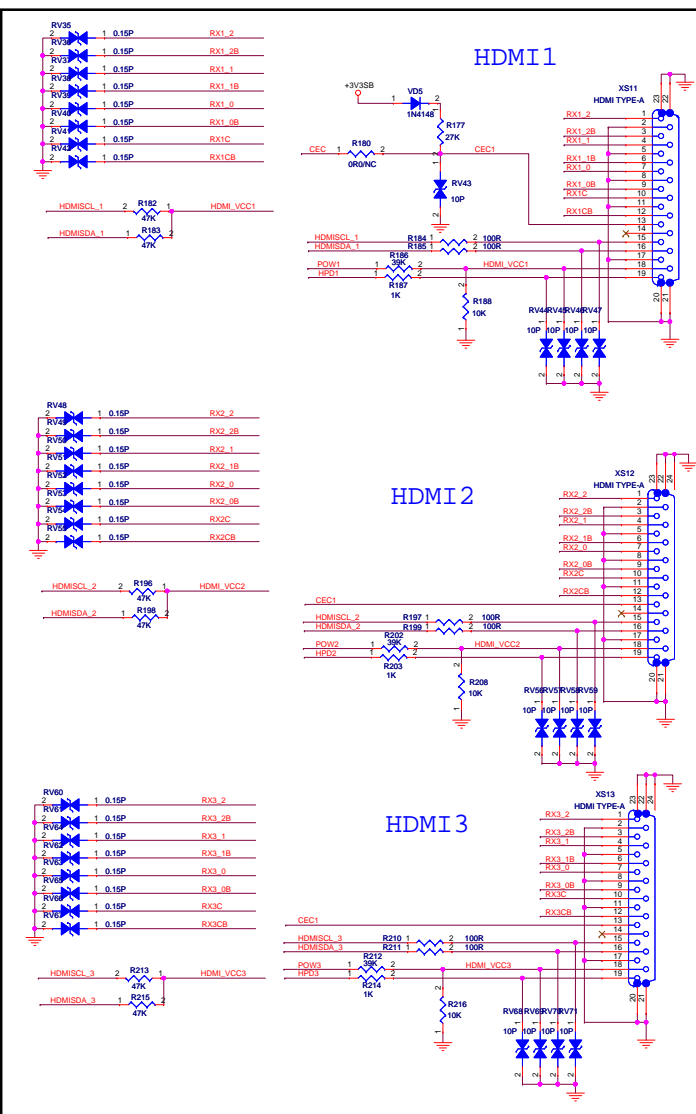
Strapping Mode	GPIO1
XTAL 27M	0
XTAL 54M	1

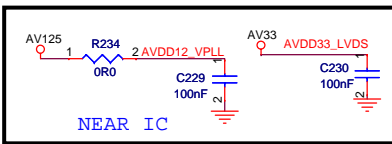
Strapping Mode	OPCTRL3(O)
PDWNC Normal	0



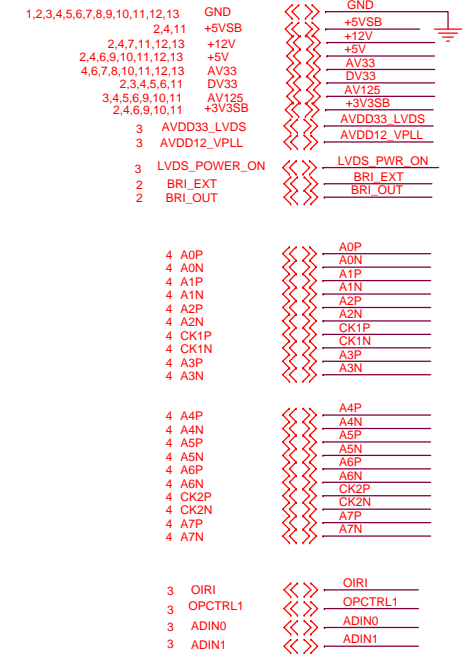
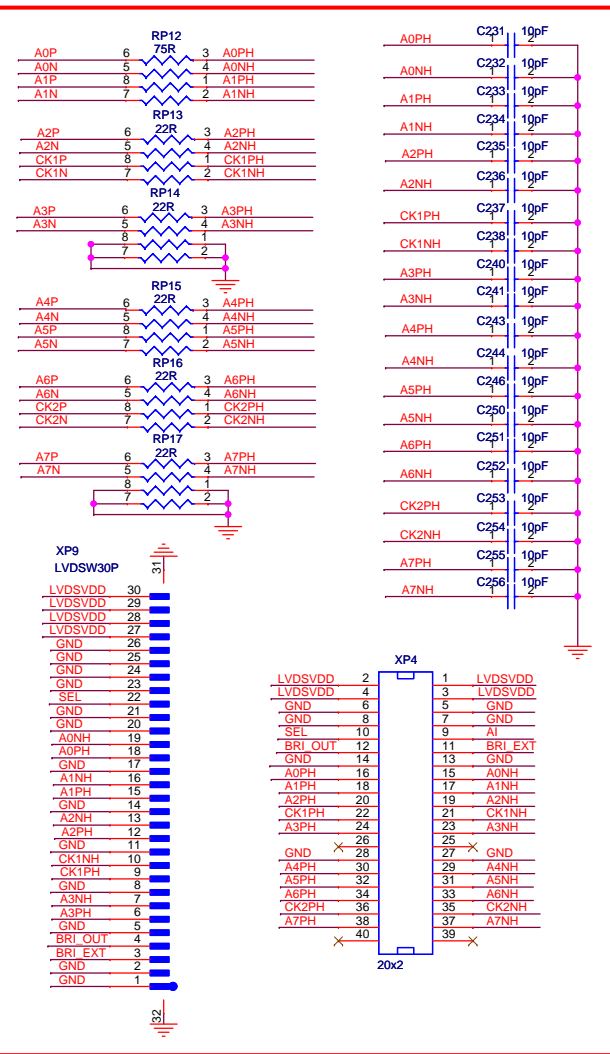
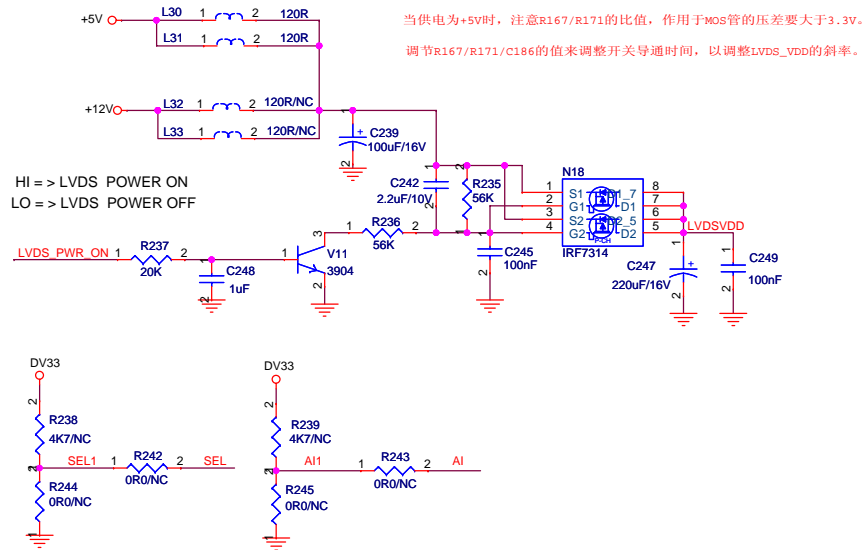
1,2,3,4,5,6,7,8,9,10,11,12,13	GND	<<>	GND
2,4,7,11,12,13	+12V	<<>	+12V
4,6,7,8,10,11,12,13	AV33	<<>	AV33
3	AVDD33_DIG	<<>	AVDD33_DIG
3	AVDD33_MPX	<<>	AVDD33_DEMOD1
3	IF_AGC1	<<>	IF_AGC1
3	TUNER_CLK	<<>	TUNER_CLK
3	TUNER_DATA	<<>	TUNER_DATA
3	VIN_ATV	<<>	VIN_ATV
3	VIP_ATV	<<>	VIP_ATV



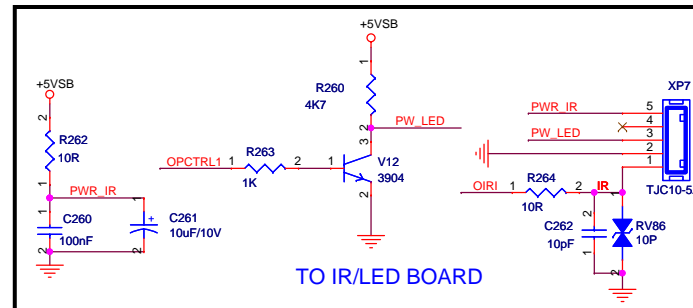
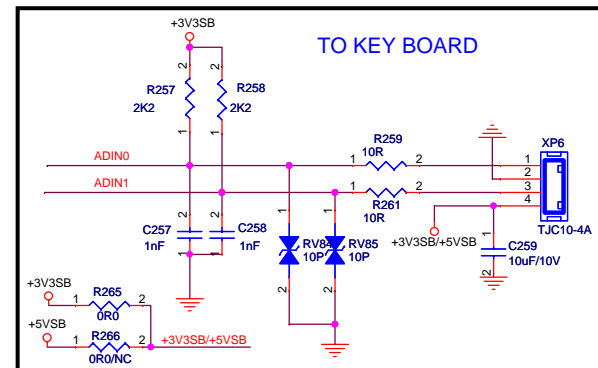




LVDS OUT

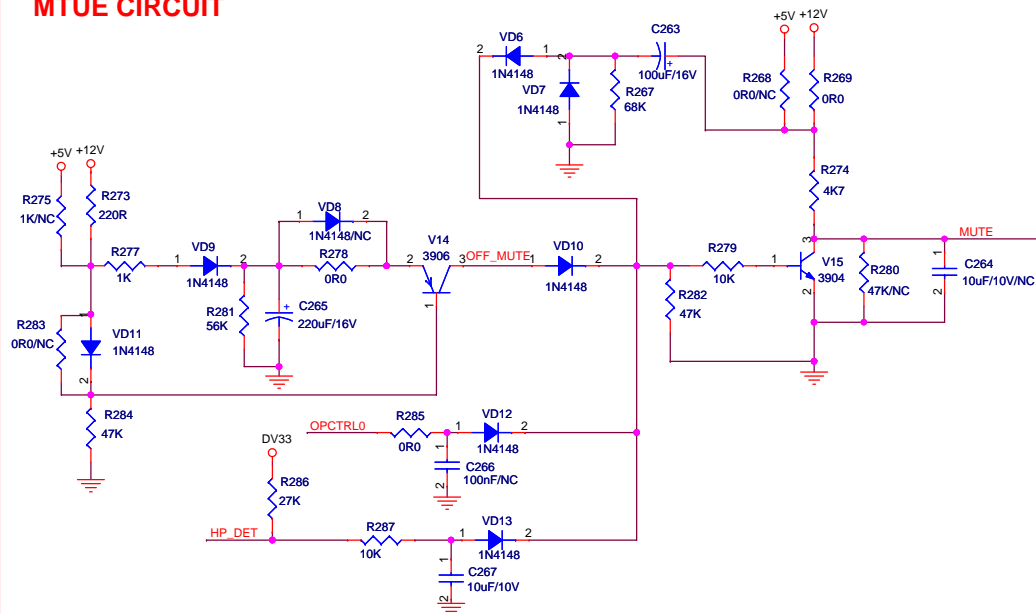


LVDS PART

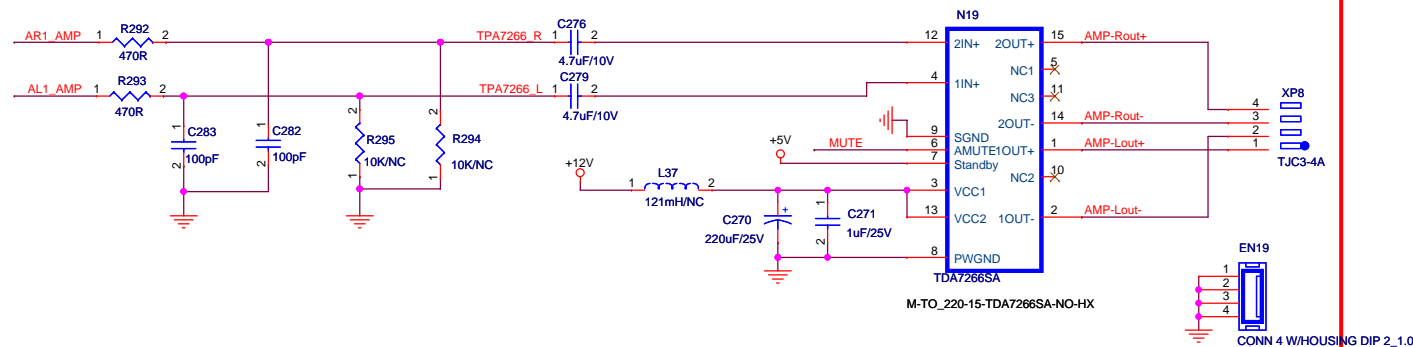


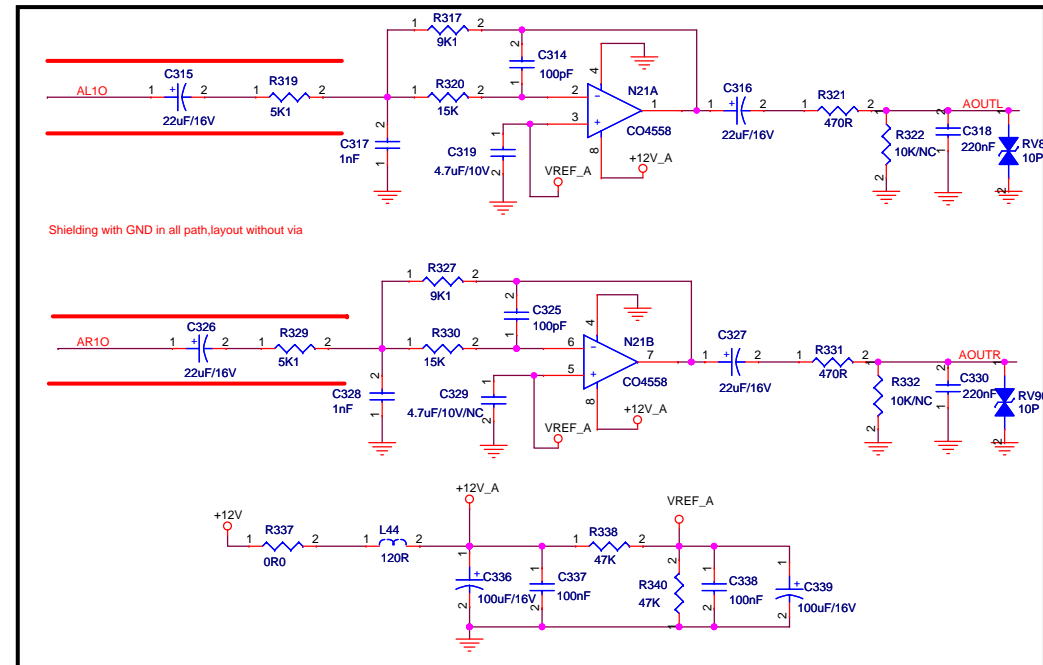
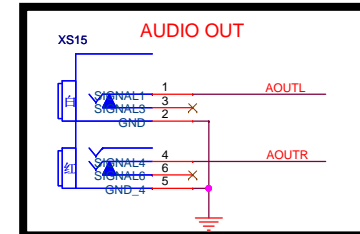
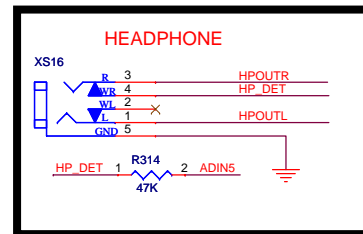
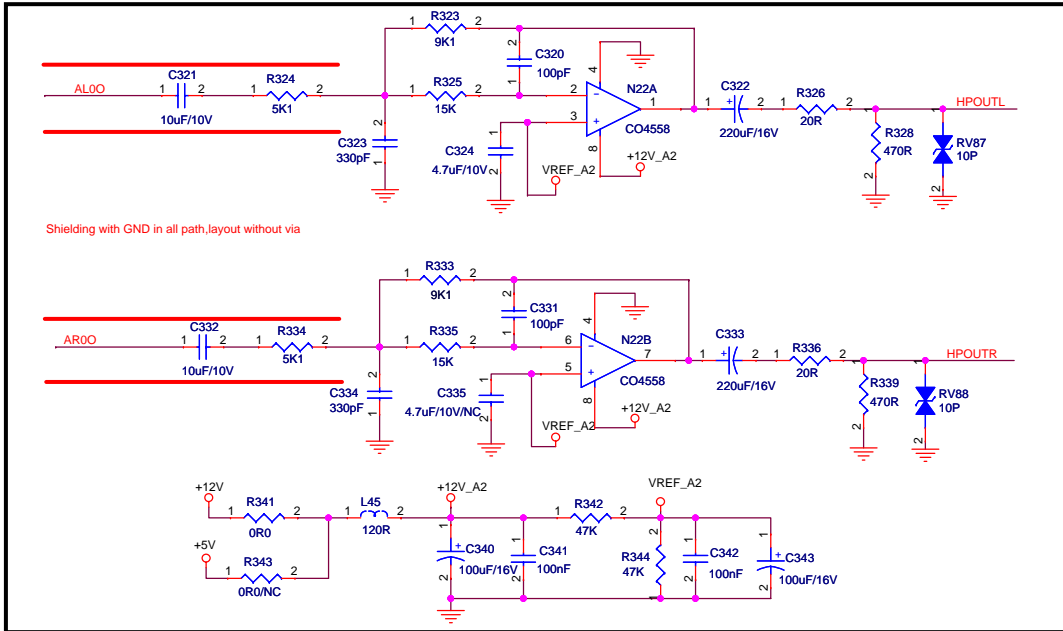
IR AND KEY PART

MTUE CIRCUIT



1,2,3,4,5,6,7,8,9,10,11,12,13	GND	<<>>	GND
2,4,6,9,10,11,12,13	+5V	<<>>	+5V
2,4,11	+5VSB	<<>>	+5VSB
2,4,7,11,12,13	+12V	<<>>	+12V
4,6,7,8,10,11,12,13	DV33	<<>>	DV33
13	AL1_AMP	<<>>	AL1_AMP
13	AR1_AMP	<<>>	AR1_AMP
3	OPCTRL0	<<>>	OPCTRL0
13	HP_DET	<<>>	HP_DET





Pin	Signal	Pin	Signal
1,2,3,4,5,6,7,8,9,10,11,12,13	GND	1,2,3,4,5,6,7,8,9,10,11,12,13	GND
2,4,6,9,10,11,12,13	+5V	2,4,6,9,10,11,12,13	+5V
4,6,7,8,10,11,12,13	AV33	4,6,7,8,10,11,12,13	AV33
2,4,7,11,12,13	+12V	2,4,7,11,12,13	+12V
4	AVDD33_DAC1	4	AVDD33_DAC1
3	AVDD33_DAC	3	AVDD33_DAC
3	REFP_AADC	3	REFP_AADC
3	AVDD33_AADC	3	AVDD33_AADC
12	AL1_AMP	12	AL1_AMP
12	AR1_AMP	12	AR1_AMP
3	AR1O	3	AR1O
3	AL1O	3	AL1O
3	AR0O	3	AR0O
3	AL0O	3	AL0O
3	ADIN5	3	ADIN5
12	HP_DET	12	HP_DET

Brand	HITACHI
Retail model number	L32C205
Version	
Factory model number	LHD32V79US

