

LCD Television Service Manual

Chassis: MT5652

Ver 1.0

April, 2014

Contents

Contents	- 2 -
Service Manual	- 3 -
1. Precautions and notices.....	- 3 -
1.1 Warning.....	- 4 -
1.2 Notes.....	- 7 -
2. Product Function.....	- 9 -
3. Factory/Service OSD Menu and Adjustment.....	- 19 -
3.1 To enter the Factory OSD Menu	- 19 -
3.2 Factory OSD Menu	- 19 -
3.3 Designer Menu.....	- 22 -
4. Software Upgrading.....	- 24 -
4.1 USB Software Upgrading directly	- 24 -
4.2 USB upgrading unsuccessfully	- 24 -
4.3 Upgrading with the FlashTool0.6.0.exe	- 27 -
4.4 Network updating	- 30 -
5. Trouble shooting	- 36 -
5.1 Troubleshooting for Remote Control	- 37 -
5.2 Troubleshooting for Function Key.....	- 38 -
5.3 TV won't Power On.....	- 39 -
5.4 Troubleshooting for Audio.....	- 40 -
5.5 Troubleshooting for TV/VGA/HDMI input.....	- 41 -
5.6 Troubleshooting for YPbPr input.....	- 42 -
5.7 Troubleshooting for Video input	- 43 -
6. Signals Block Diagram and power assign:	- 44 -
7. Schematic circuit diagram	- 44 -
8. Explode View.....	- 44 -

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 Hisense 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 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, HISENSE 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. Hisense 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

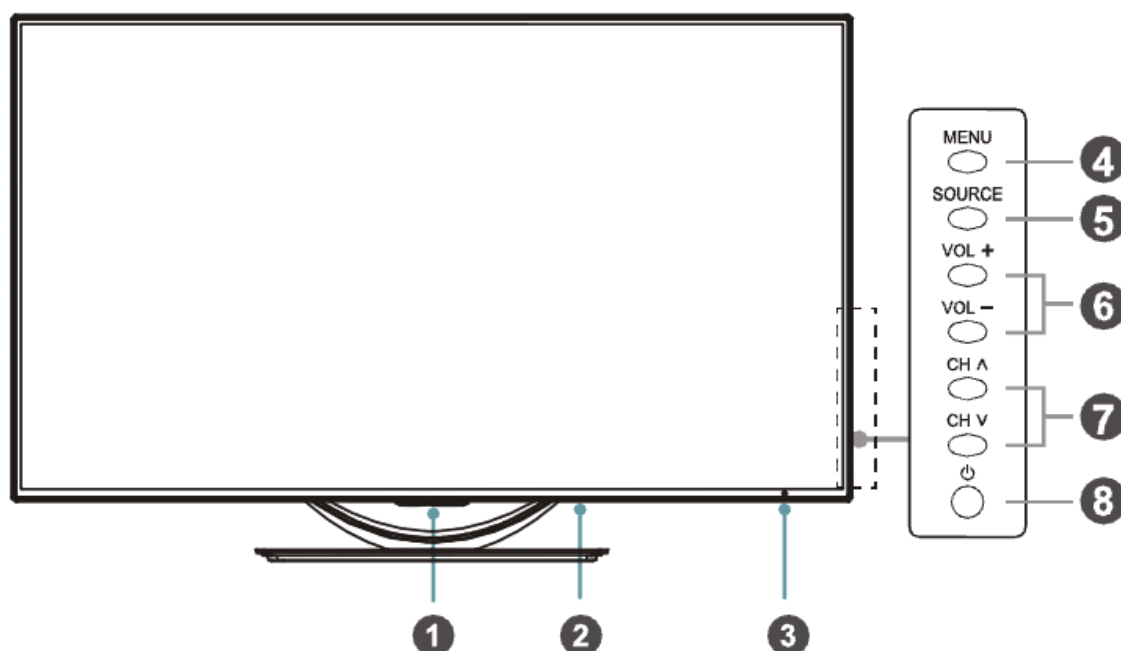
MTK5652 chassis includes:


Product	Main & Power board	chassis	Panel	LVDS cable (main board- panel)
LTDN65XT880NXWAM3D	5744、5013	MT5652+6M40	INX*V650DK1-KS2	1、HX2-2X21KLBB600P\ROH 2、HX2-2X26KLBB450-HS\ROH
LTDN65K680XWAM3D	5744、5013	MT5652+6M40	INX*V650DK1-LS1	1、HX2-2X26KLBB450-HS\ROH 2、HX2-2X21KLBB600P\ROH
LTDN50K610NWAMN	5419、5652	MTK5652	HE500HF-B53 (010)	FFC-51-594-1\ROH
LHD32N10WAM	5725、5268	MTK5652	HS*HE315GH-E77	HX2-2×20KLB400-BOE
LTDN42A300NWAM	5725、5030	MTK5652	HS*HE416GF-E01	FFC-51P-737\ROH
LHD32K160WAMN	5649、5023	MTK5652	HS*HE315GH-E77	HX2-2X15KLB400P-CM0-3\ROH
LTDN50K600XWAMN3D	5649、4903	MTK5652	CMI*V500HK1-LS6 (E4)	HX2-2X26KLBB450-HS\ROH
LTDN65XT780XWAM3D	5649、5275	MTK5652	HE650GFD-B51	FFC-51P-594\ROH
LTDN50K660RWAM3D	5649、5024	MTK5652	HE500HFR-B51 (2000)	FFC-51-594-1\ROH
LTDN40K160WAMN	5649、4737	MTK5652	HE400GF-B31 (100 0)	FFC-51-625-2A\ROH

Specification

TV Front

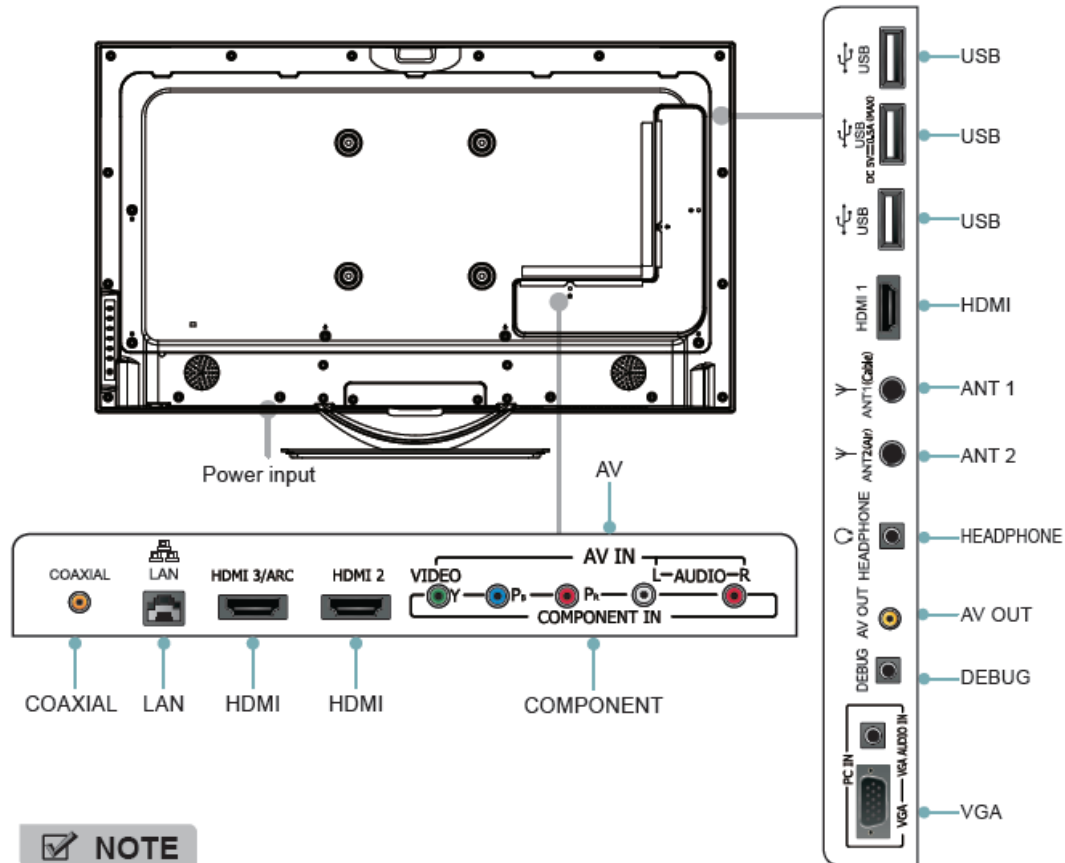
K660 Series



Item		Description
1	Standby indicator	Light up in standby mode.
2	Power switch I/O	Switch the I/O power on or off.
3	Remote sensor	Receive remote signal from the remote control. Do not put anything near the sensor, as its function may be affected.
4	MENU	Display menu settings.
5	SOURCE	Select among the different input signal sources.
6	VOL + / VOL -	Adjust the volume.
7	CH ^ / CH v	Switch between channels.
8	Power button 	Turn on the TV from the standby mode or switch the TV back to standby mode. Caution: The TV continues to consume the power even in standby mode.Please turn the I/O Power off or unplug the power cord to save the power.

K660 mould TV Back connections

TV Back



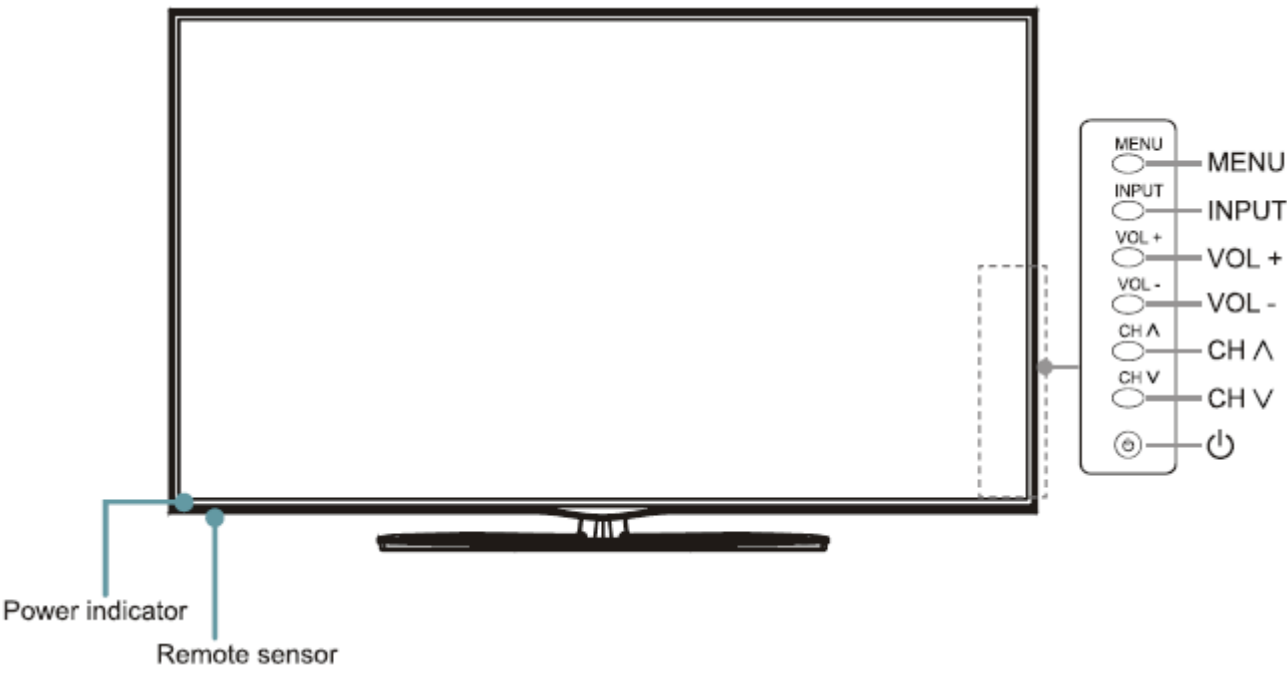
NOTE

Some external devices impossible insert to this set for individual difference. Please replace with appropriate external signal cable or increase the adapter to match with the port in such case.

Item	Description
ANT	Connect an antenna or cable to this jack.
HDMI	HDMI provides an uncompressed, all digital audio/video interface between this TV and any HDMI-device.
COMPONENT	Connect to a DVD player, Digital Set-Top-Box, or other A/V devices with component (YPbPr) video and audio.
AV	Connect to the composite video and audio (L/R) on external video devices.
VGA	Connect to a PC or other devices with a VGA interface.
AV OUT	Connect to the composite video and audio (L/R) output jacks on external devices with video input function and transmit the video signals being played to these devices.
HEADPHONE	Connect headphone for private listening.
COAXIAL	Connect to an external digital audio device.
USB	Port for Digital Media Player.
LAN	Connect an ethernet cable to access a Network or the Internet.
DEBUG	For factory debug.

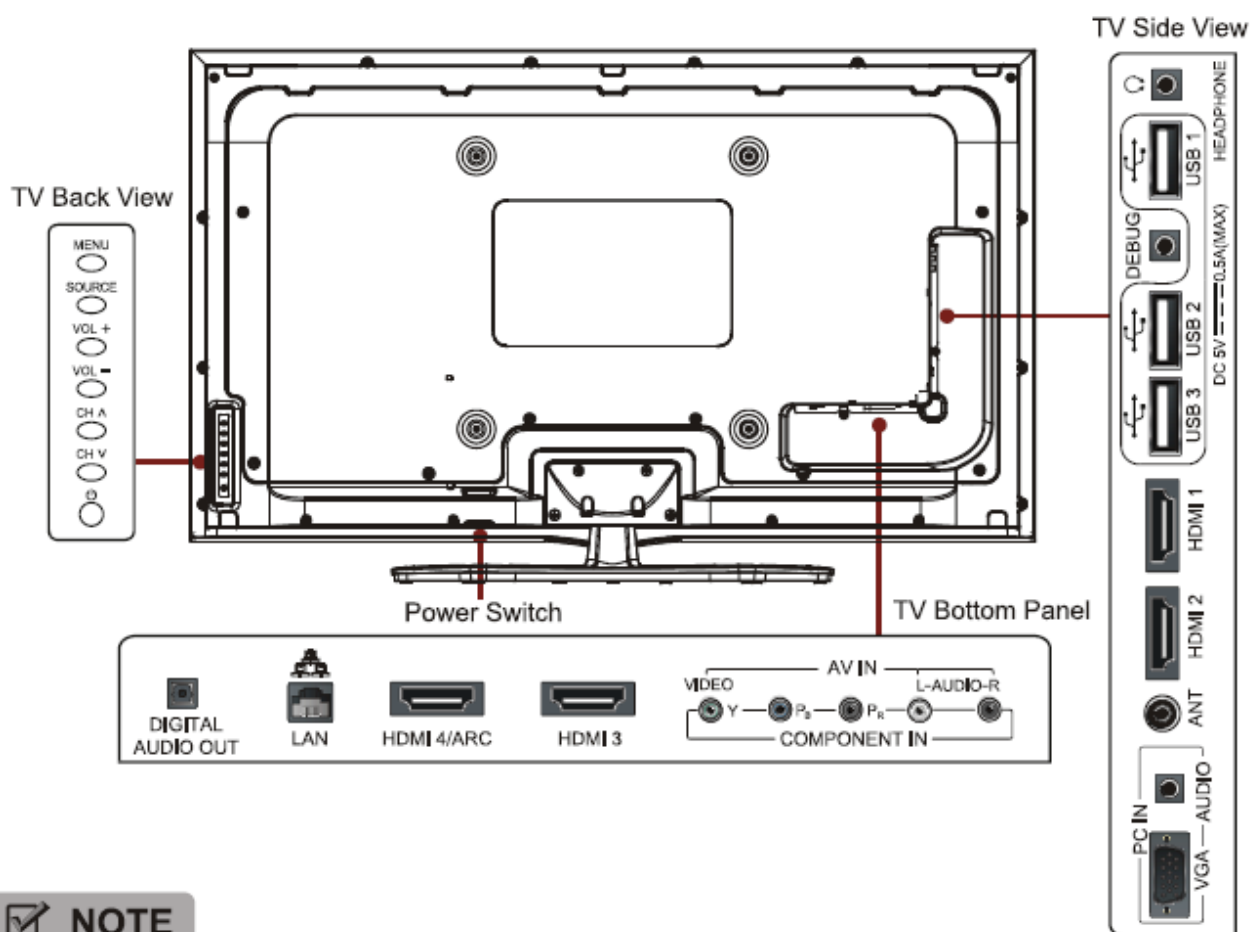
XT780

TV Front



XT780 mould TV Back connections

TV Back



NOTE

Some external devices impossible insert to this set for individual difference. Please replace with appropriate external signal cable or increase the adapter to match with the port in such case.

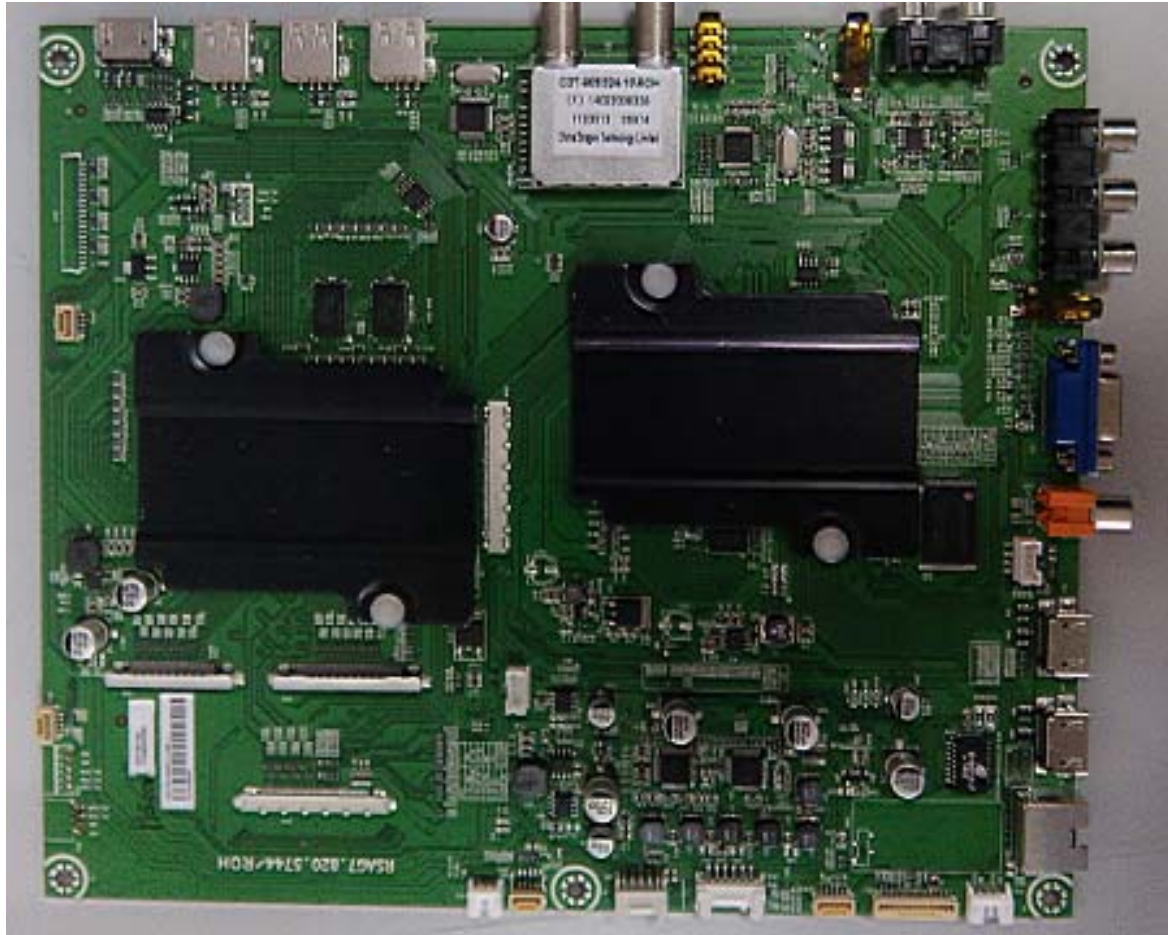
Item	Description
ANT 1(Cable) ANT 2(Air)	Connect an antenna or cable TV to this jack. Connect a satellite TV to this jack.
HDMI	HDMI provides an uncompressed, all digital audio/video interface between this TV and any HDMI-device.
COMPONENT	Connect to a DVD player, Digital Set-Top-Box, or other A/V devices with component (Y _P P _R) video and audio output jacks.
AV IN	Connect to the composite video and audio (L/R) output jacks on external video devices.
VGA/VGA AUDIO	Connect to a PC or other devices with a VGA interface.
AV OUT	Connect to external devices with video input function and transmit the video signals being played to theses devices.
HEADPHONE	Connect headphone for private listening.
COAXIAL	Connect to an external digital audio device.
USB	Port for Digital Media Player.

Main board layout t (5649)

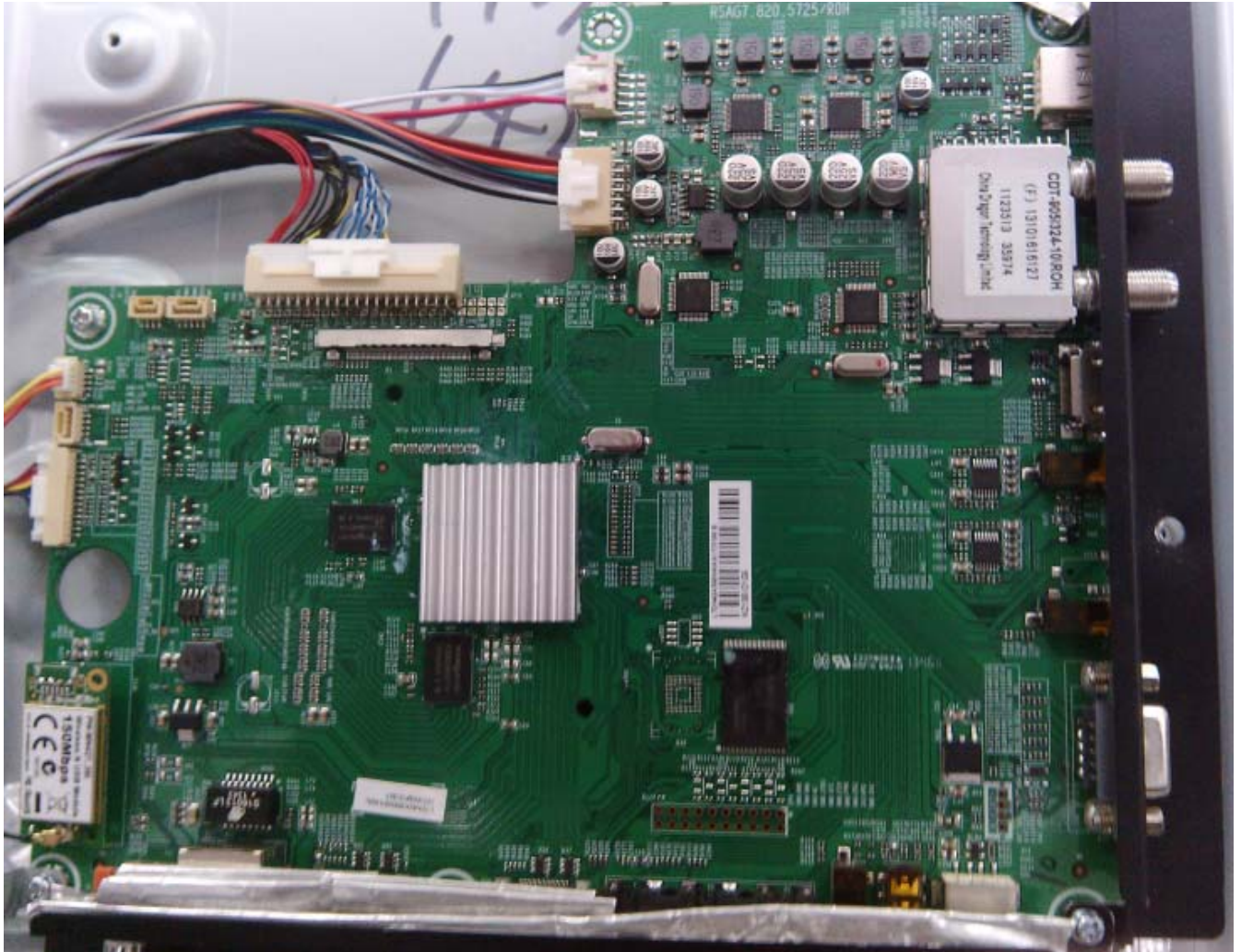


Main board layout t (5774)

The board is designed for UD (3840*2160)



Main board layout (5725)



Model Name		50HMB930
Dimension (mm)	Without Stand	1121x649x51
	With Stand	1121x722x275
Weight(kg)	Without Stand	1.9
	With Stand	2.2.5
LCD Panel Minimum size (diagonal)		50 inches
Screen resolution		1920 x 1080
Audio power		10W + 10 W
Power consumption		1.30W
Power supply		AC 100-240 V, 50/60 Hz
Receiving systems	RF	PAL-M, PAL-N, NTSC-M
	AV	PAL, NTSC
Environmental conditions		Temperature: 5°C~ 45°C Humidity: 20%-80% RH Atmospheric pressure: 86 kPa - 106 kPa
Component Input		480 I / 60 Hz, 480 P / 60 Hz, 720 P / 60 Hz, 1080 I / 60 Hz, 1080 P / 60 Hz
VGA Input		VGA (640×480 / 60 Hz), SVGA (800×600 / 60 Hz), XGA (1024×768 / 60 Hz)
HDMI Input		RGB / 60 Hz (640×480, 800×600, 1024×768) YUV / 60 Hz (480 I, 480 P, 720 P, 1080 I, 1080 P)

LTDN65XT780XWAM3D

Model Name		65WIZ831
Dimension	Without Stand (mm)	1466×860×66
	With Stand (mm)	1466×915×351
Weight	Without Stand	35.5 kg
	With Stand	40 kg
LCD Panel Minimum size (diagonal)		65 inches (163 cm)
Screen resolution		1920 × 1080
Audio power		10 W + 10W
Power consumption		160W
Power supply		AC 100-240 V 50/60 Hz
Receiving systems	RF	PAL-M/N, NTSC, ISDB-T
	AV	PAL, NTSC
Environmental conditions		Temperature: 5°C - 45°C Humidity: 20% - 80% RH Atmospheric pressure: 86 kPa - 106 kPa
Component Input		480 I / 60 Hz, 480 P / 60 Hz, 720 P / 60 Hz, 1080 I / 60 Hz, 1080 P / 60 Hz
VGA Input		VGA (640×480 / 60 Hz), SVGA (800×600 / 60 Hz), XGA (1024×768 / 60 Hz)
HDMI Input		RGB / 60 Hz (640×480, 800×600, 1024×768) YUV / 60 Hz (480 I, 480 P, 720 P, 1080 I, 1080 P)

Detail description look up the quick setup guide, please.

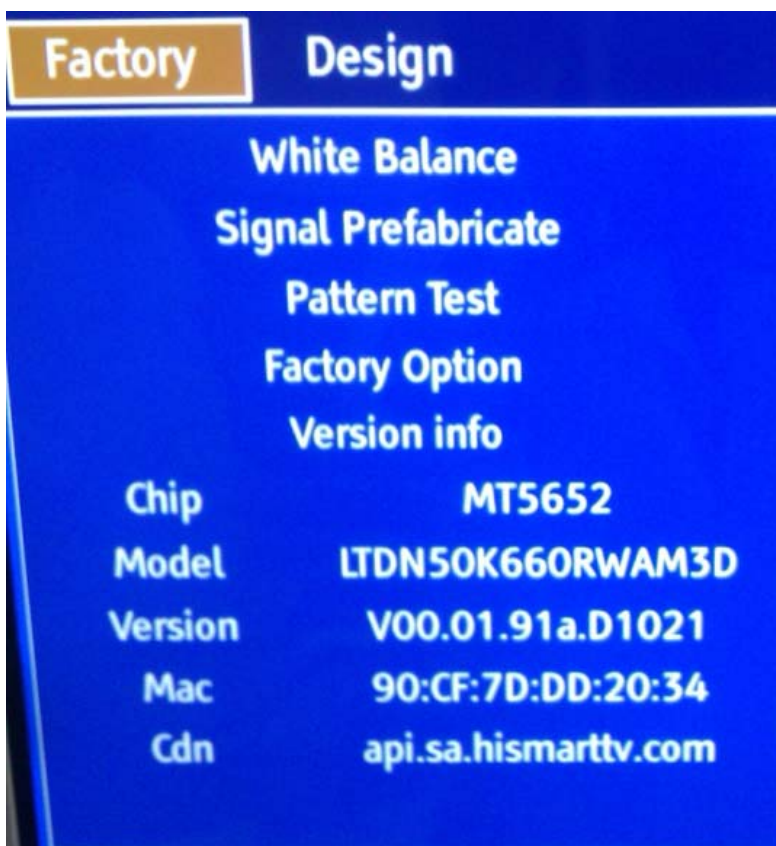
3. Factory/Service OSD Menu and Adjustment

3.1 To enter the Factory OSD Menu

With user's RC

1. Power TV On
2. Press Menu button and call up User OSD Menu
3. Select Audio-> Balance, when Balance is "0"
4. Enter 1->9->6->9 in sequence.
Note: If necessary, re-enter number keys.
5. Factory OSD appears.
6. Press Menu again and leave factory OSD.

3.2 Factory OSD Menu



3.2.1 White Balance

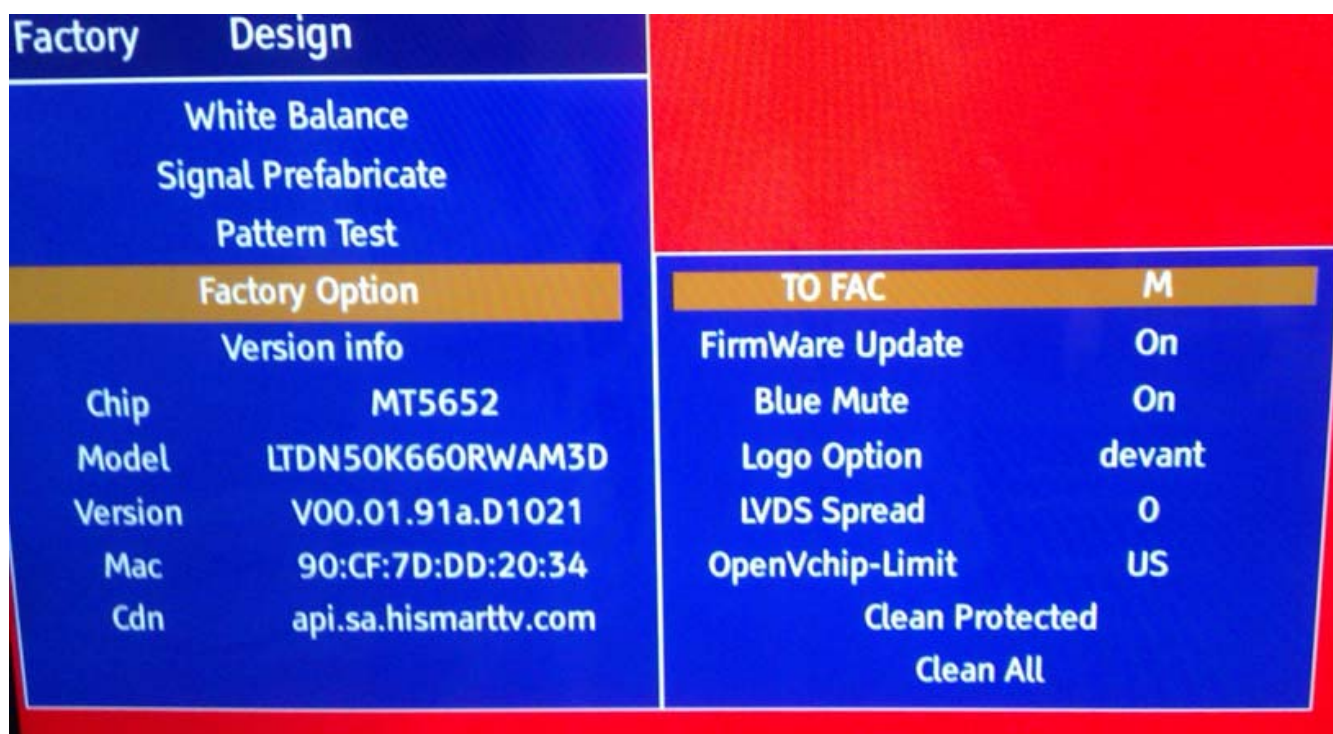
Note: Different source has different WB values. Before adjusting, please change to desired source.

Factory	Design		
White Balance		Panel	B1
Signal Prefabricate		R Gain	128
Pattern Test		G Gain	128
Factory Option		B Gain	128
Version info		R Offset	128
Chip	MT5652	G Offset	128
Model	LTDN50K660RWAM3D	B Offset	128
Version	V00.01.91a.D1021		
Mac	90:CF:7D:DD:20:34		
Cdn	api.sa.hismarttv.com		

3.2.2 Signal prefabricate

Factory	Design		
White Balance			
Signal Prefabricate		Zhong Shi	
Pattern Test		Huang Dao	
Factory Option		Gui Yang	
Version info		Liao Ning	
Chip	MT5652	Hungary	
Model	LTDN50K660RWAM3D	Australia	
Version	V00.01.91a.D1021	France	
Mac	90:CF:7D:DD:20:34		
Cdn	api.sa.hismarttv.com		

3.2.3 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.

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

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

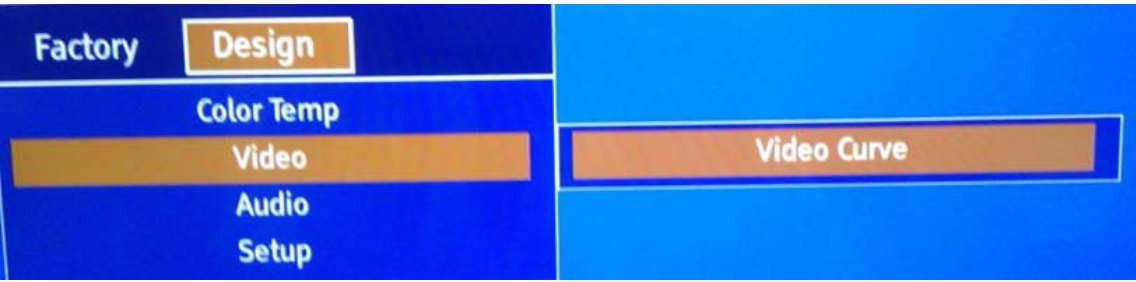
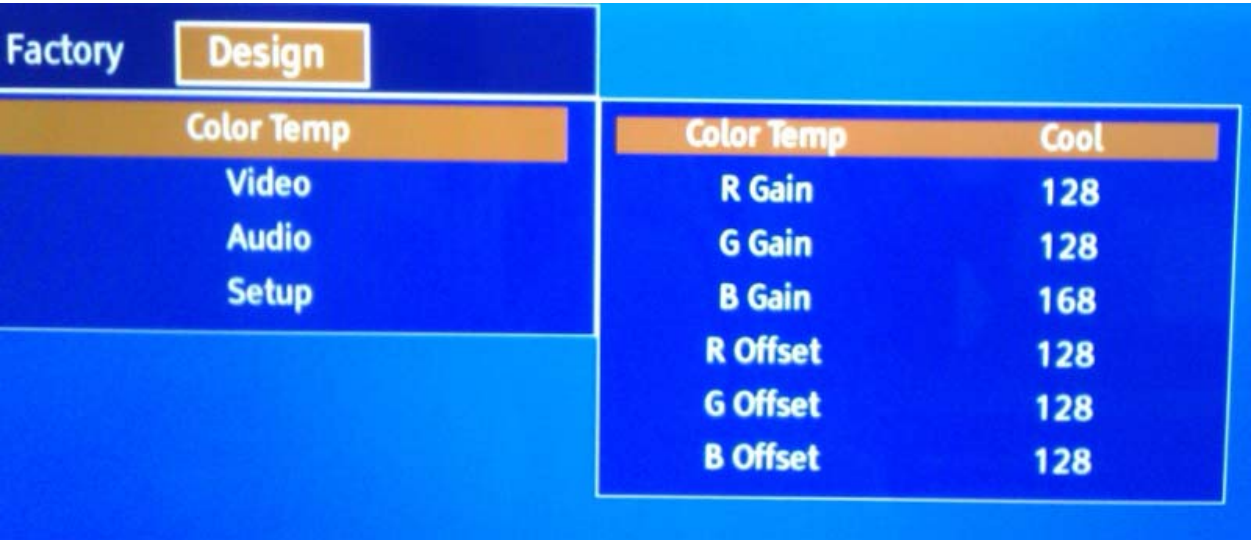
Item	Meaning	Note
Clean Protected	Clear partly	Clean data except WB data and Auto Color data
Clean All	Clear completely	Clean all data

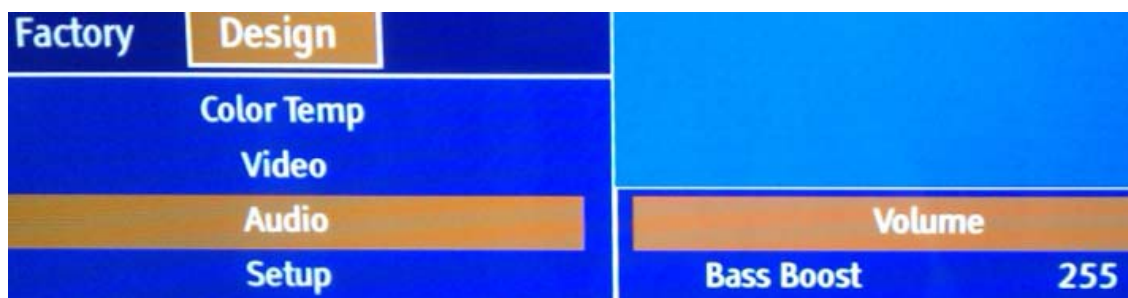
Note: The factory menu date varies according to different sources. Incase changing the factory data by error, you can choose to “Clean Protected”, by which you can resume the default value.

To clear the EEPROM:

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

3.3 Designer Menu





Note:

The above “Factory/Service OSD Menu” is reference for chassis MTK5652 , please refer to the actual units to determine the appearances for different TV.

4. Software Upgrading

4.1 USB Software Upgrading directly

The software can be upgraded by USB Disk.

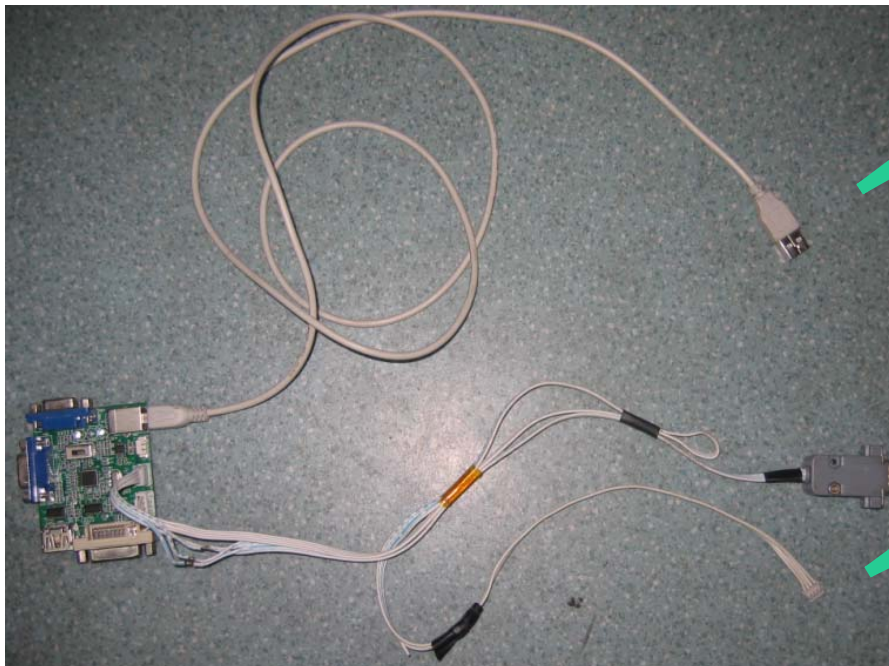
- First, copy the upgrade_loader.pkg file to USB Disk;.
- Second, make sure there is no other .pkg file in the root directory of USB Disk.
- Insert USB Disk to USB port, and then power on the TV.
- The TV will identify the software and upgrade automatically.

4.2 USB upgrading unsuccessfully

If USB upgrading unsuccessfully, then need burning the Nand Flash program file“ *.bin ”to the Nand Flash.

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. As following

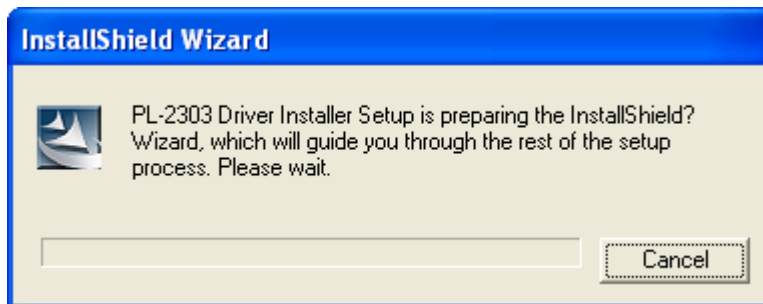


USB Connect to
the PC

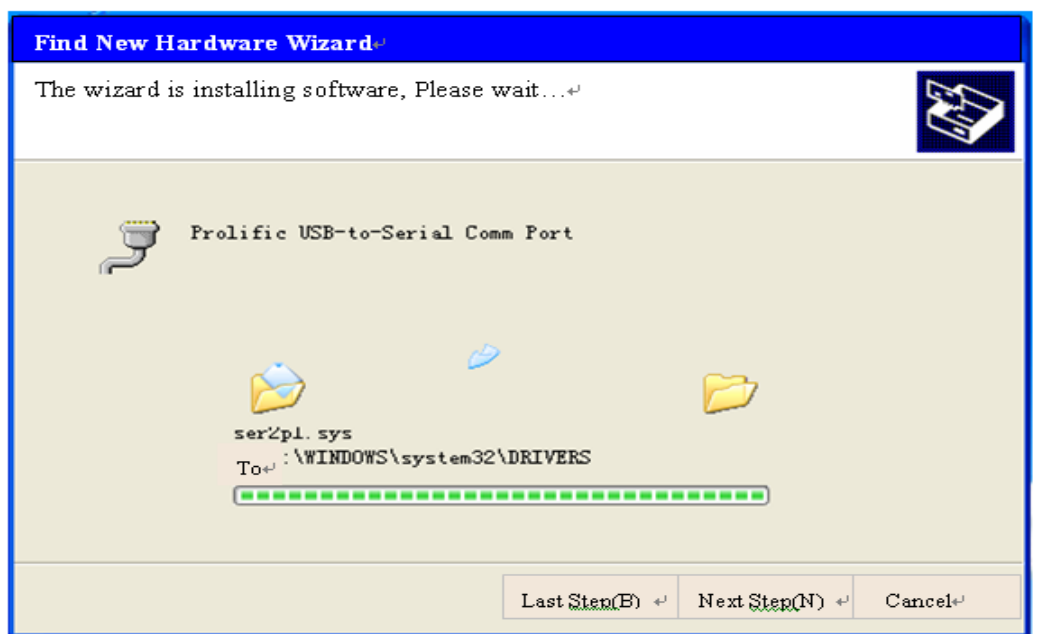
Connect to
the TV RS232
port

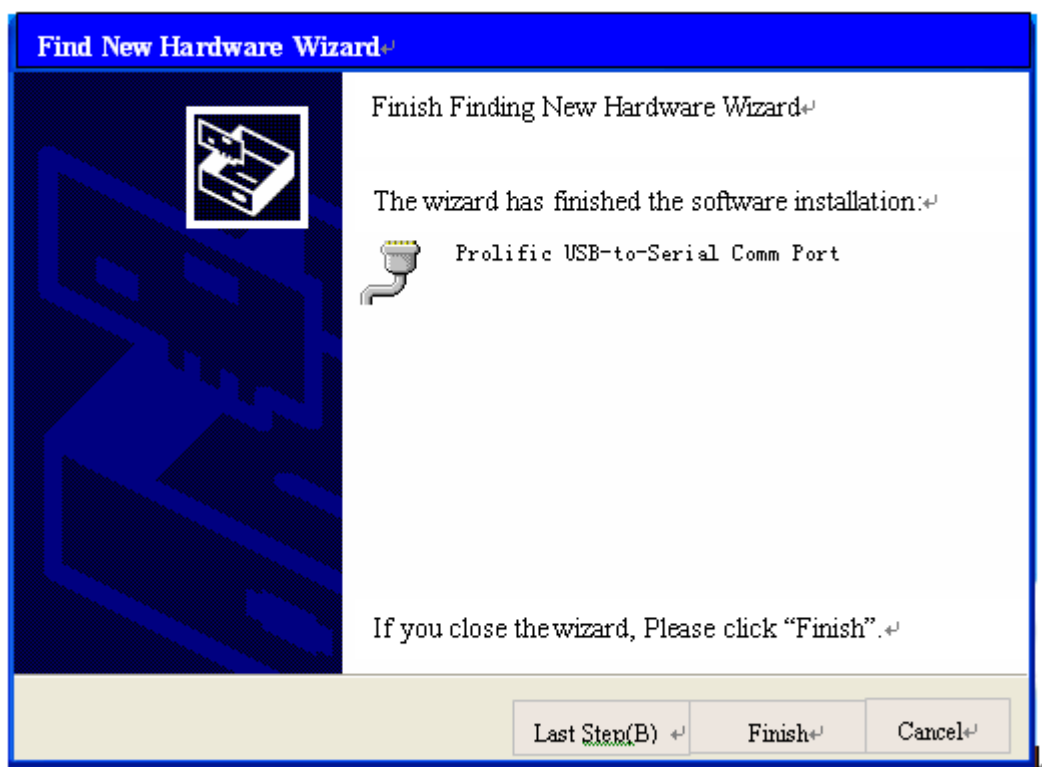
4.2.1 Install the driver

Double click the icon  **PL-2303 Driver Installer.exe**, install the driver.



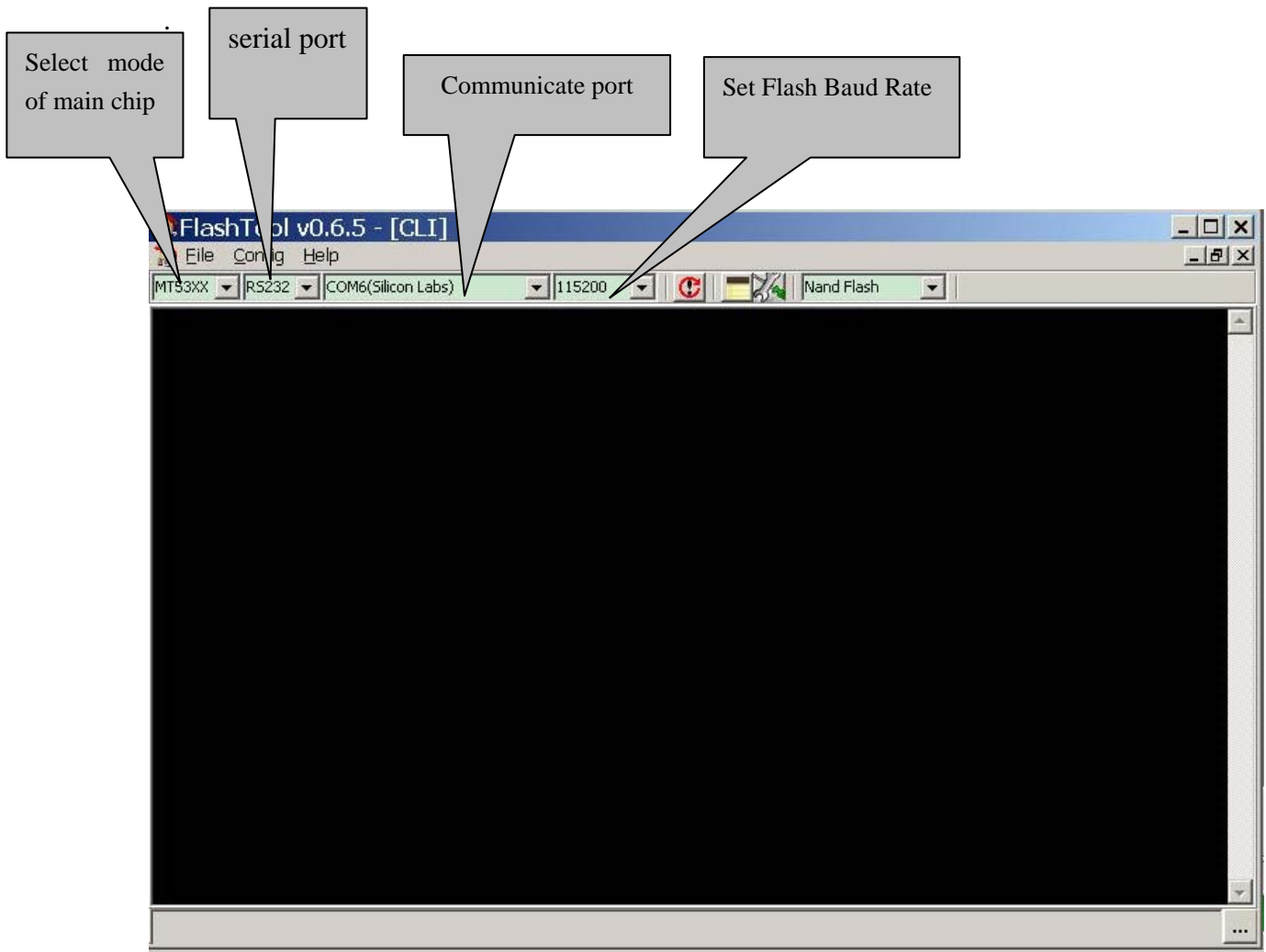
Select the default value, the driver will be installed step by step.



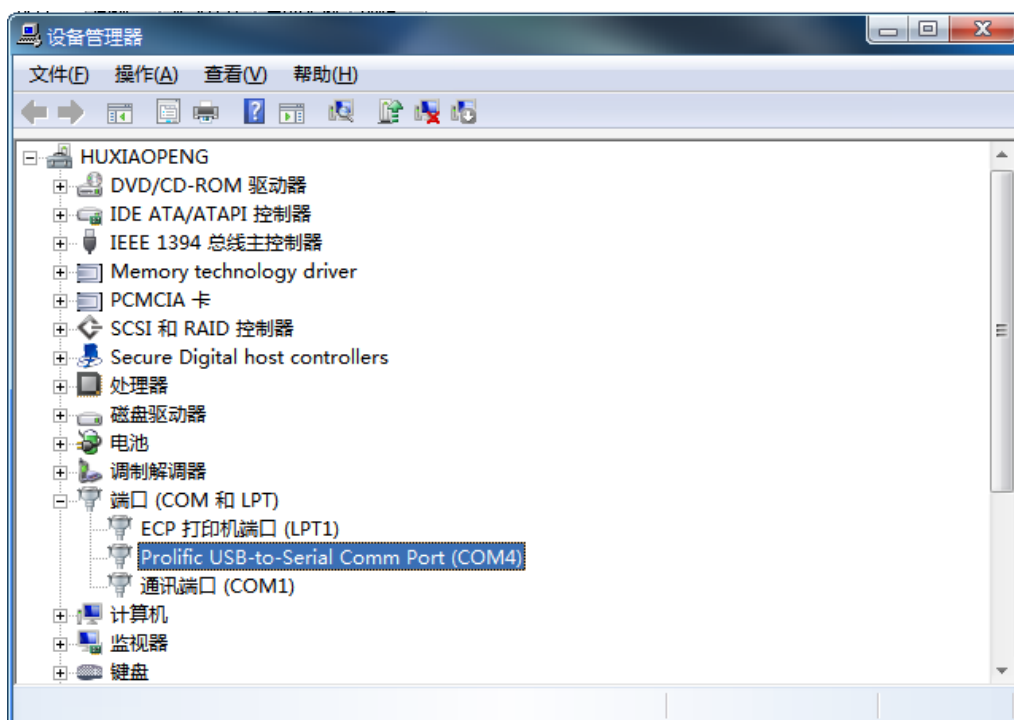


4.3 Upgrading with the FlashTool0.6.0.exe




1、FlashTool is a green program needing no installation. After Connect the unit to your pc with a USB-to-serial port cable, run FlashTool0.6.0.exe. Please refer to the following steps to set.

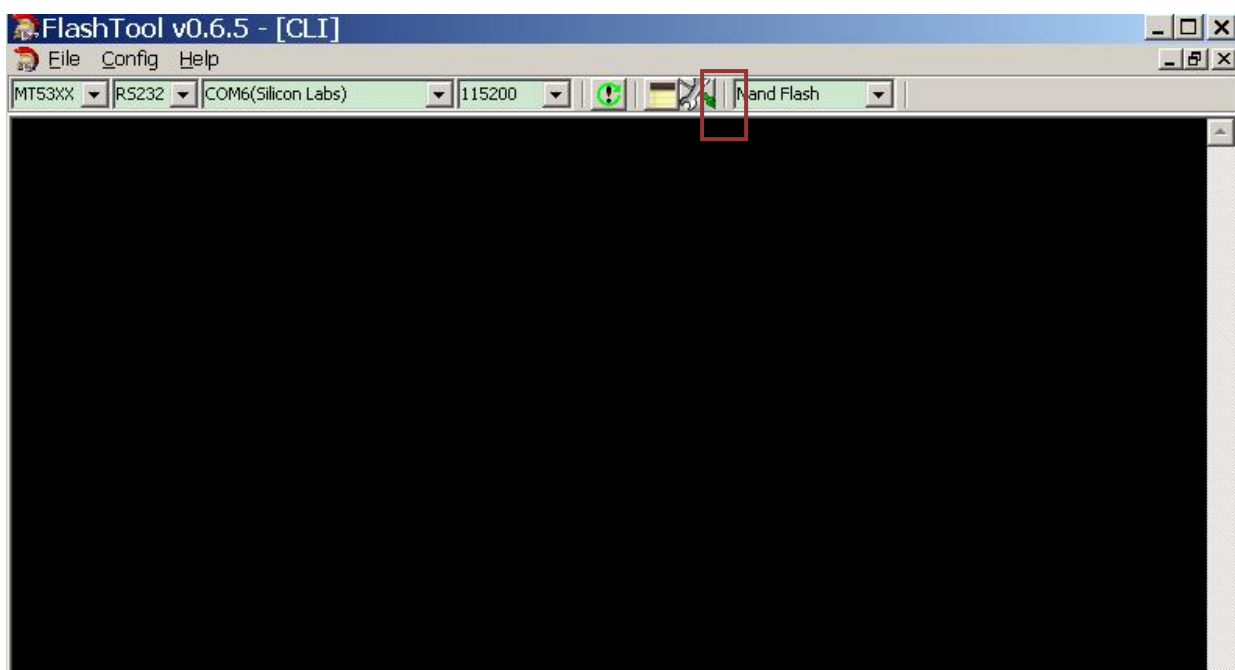



How to choose Communicate port and flash baud rate? See the following instruction..

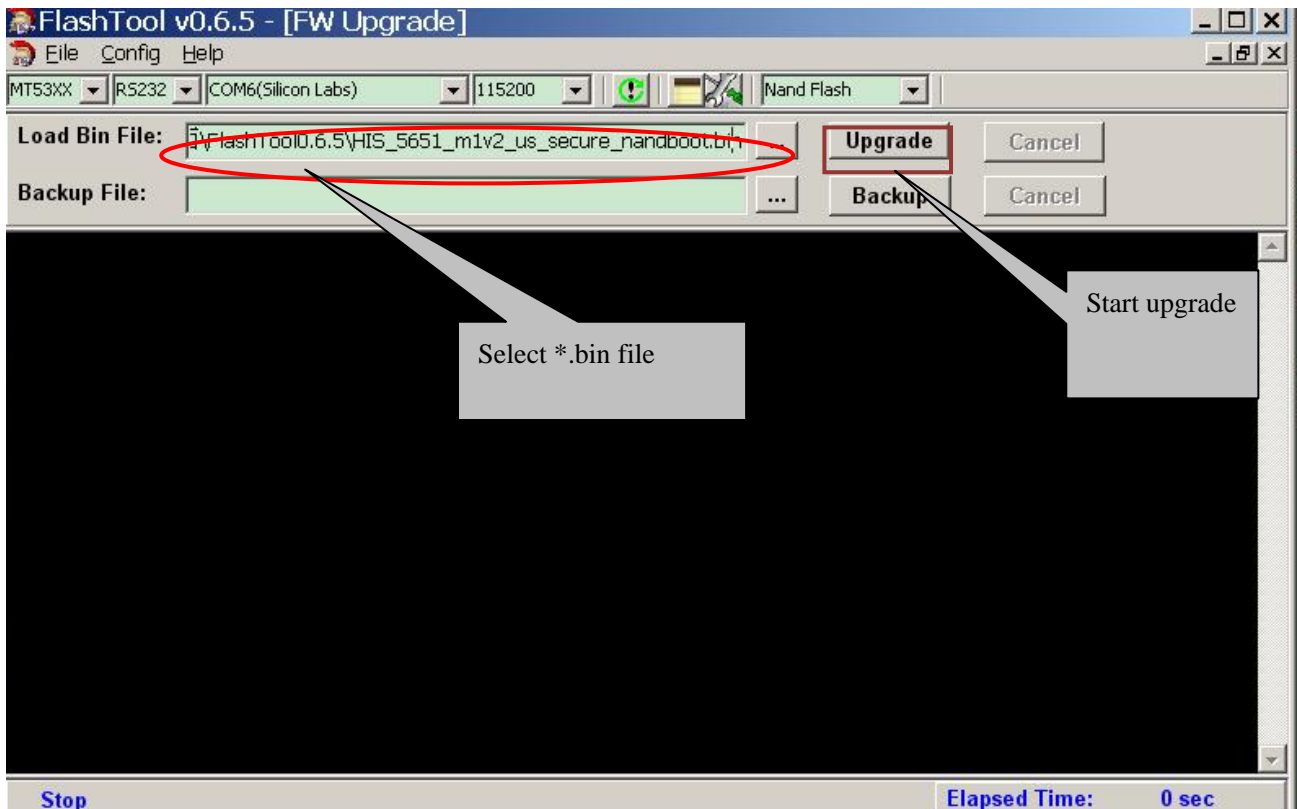


Open “Device Manager” and find which port is connected with the TV. In above picture, COM4 is connected to the TV, so, select “COM4” and if COM6 is connected to the TV, so select “COM6”. Select the right baud rate according to chip model. For this unit(chip model is MT5652), select 115200.

2、 Click  to connect, if connect successfully then button  from red turn green .



Click , bounce the following dialog box. Load Bin File: find the upgrading program file, and select it. for example: HIS_5651_m1v2_oceania_secure_nandboot.bin. Press “Upgrade” button and start upgrading., if update defeat, try again.



If bootloader Tool upgrading is ok, then need renew USB upgrading.reference to 4.1(US B Software Upgrading directly)

4.4 Network updating

Network updating includes three ways. Auto Upgrade 、 Network upgrade and USB upgrade.

No matter Auto Upgrade is ON or Off, Network Upgrade is validated

4.4.1 Auto Upgrade---- When set to “on”, system can automatically check whether or not have any new updating file in servers after have connected to the network. Customer can download and update according to the guide.

Network upgrade ---- Check the process and it will prompt you to upgrade the software.

Network upgrade

Press “menu” key with RC, select as following.

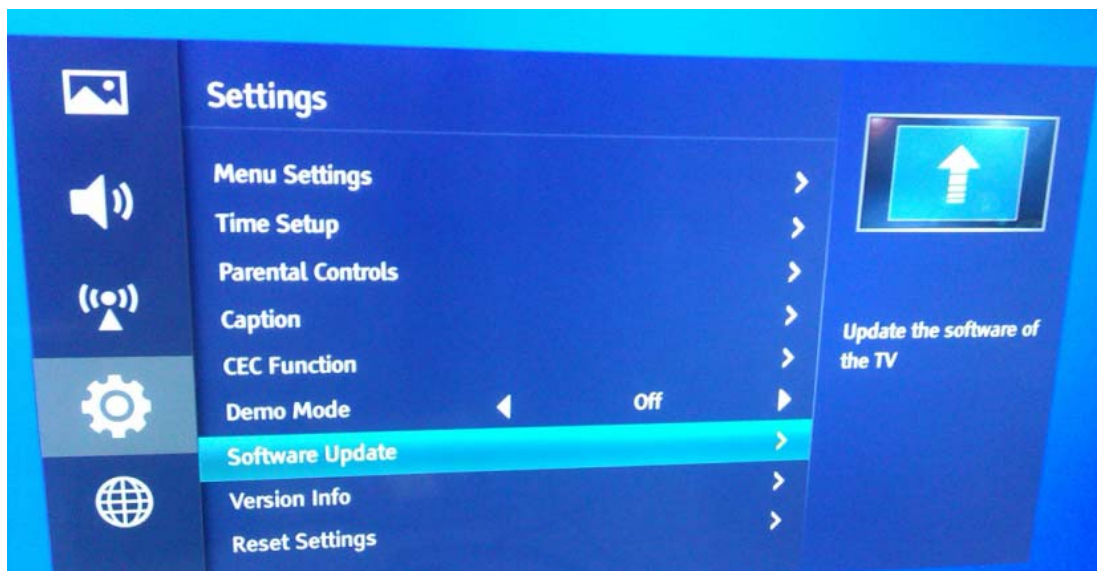


Figure-1

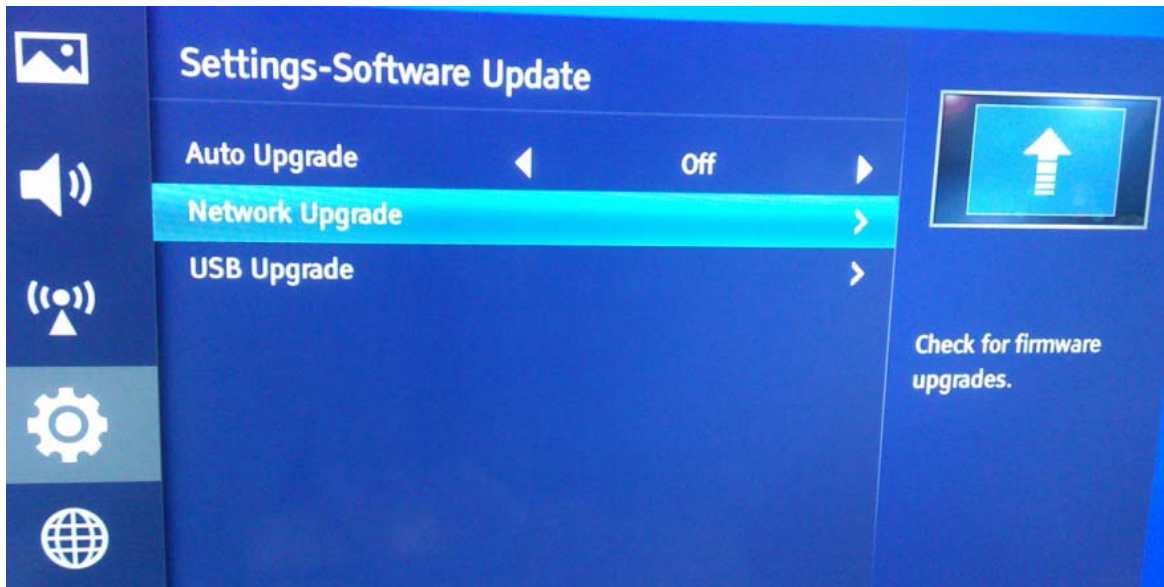


Figure-2

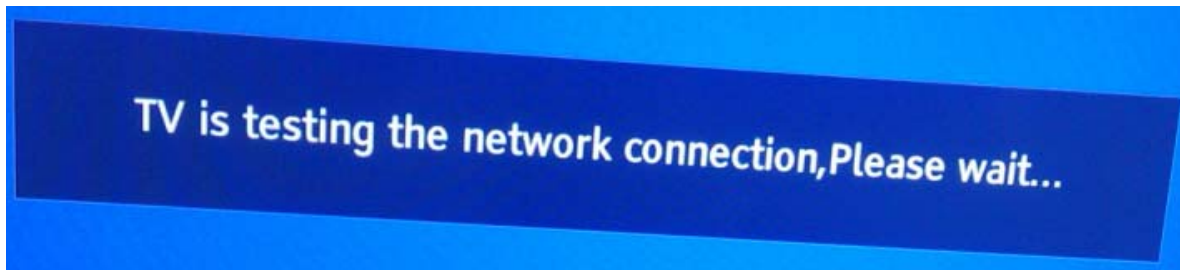


Figure-3

Check new version, bounce the following.

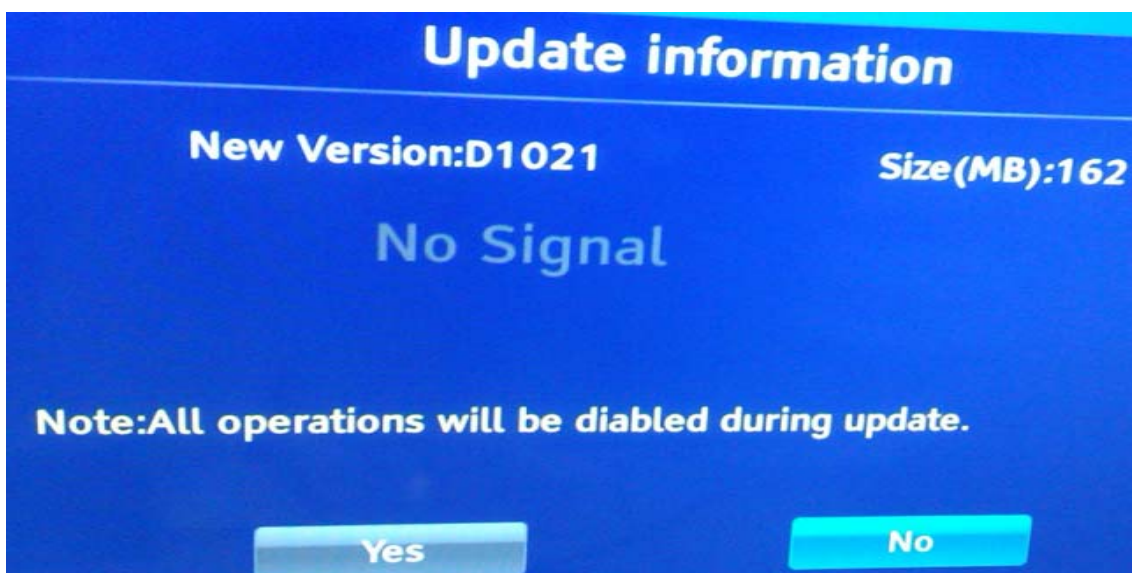


Figure-4

Select Yes to downloading.....

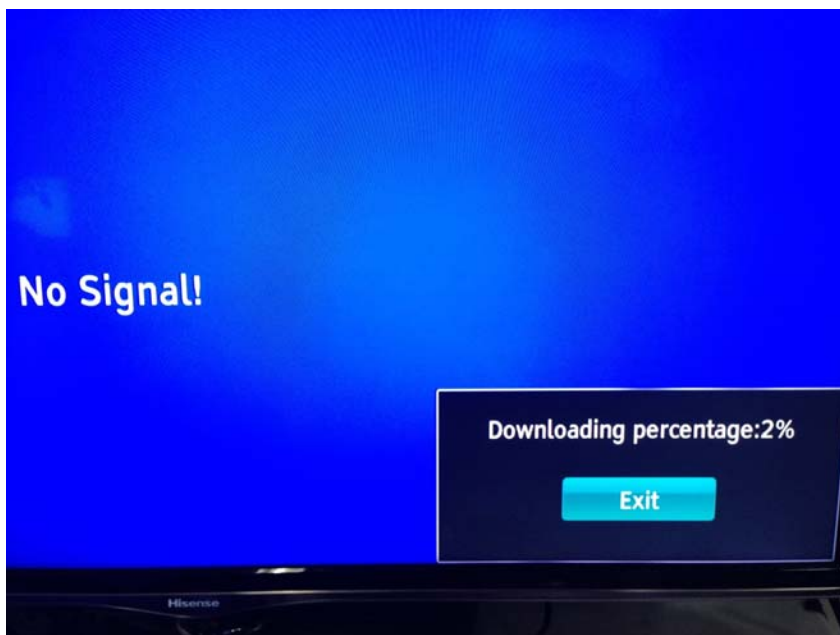


Figure-5

After verify, bounce dialog to select “yes” to update the firmware. Waiting.....

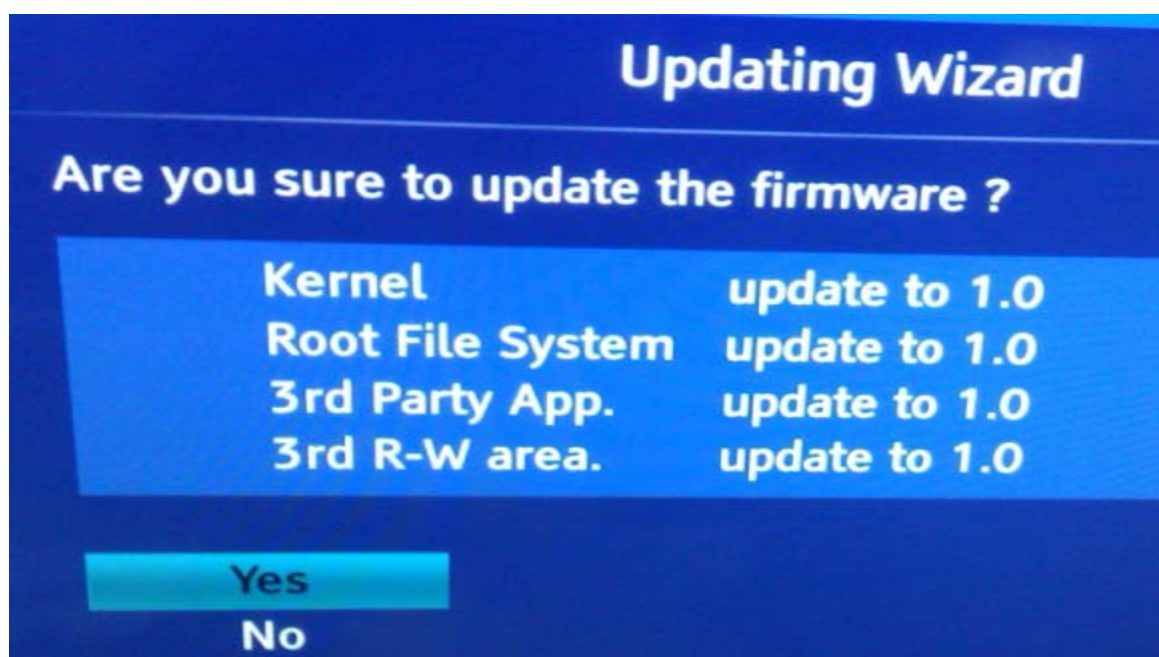


Figure-6

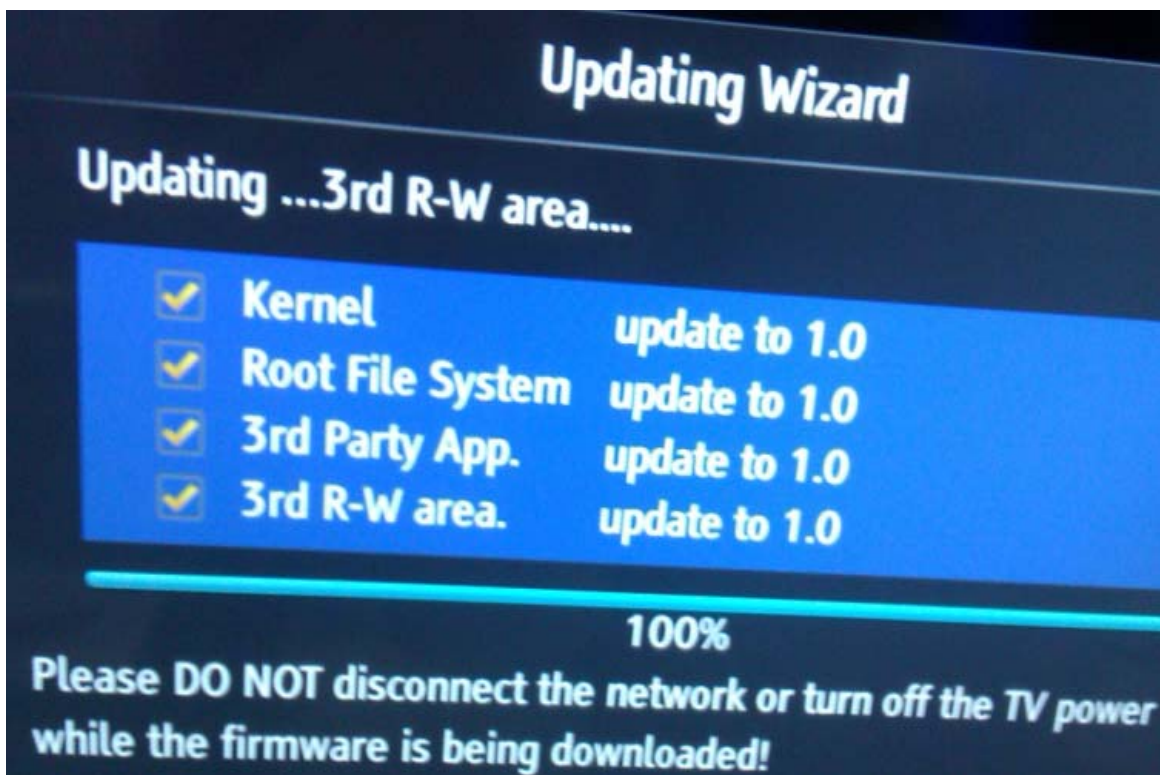
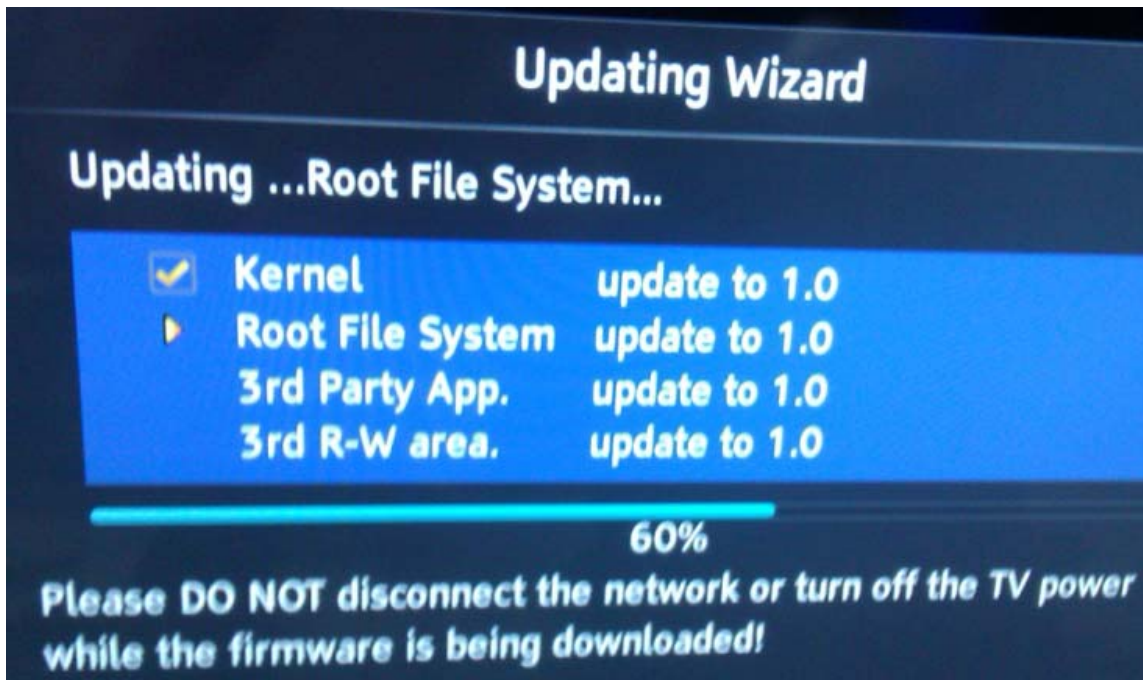


Figure-7

Bounding the following interface that indicates firmware update is successful.

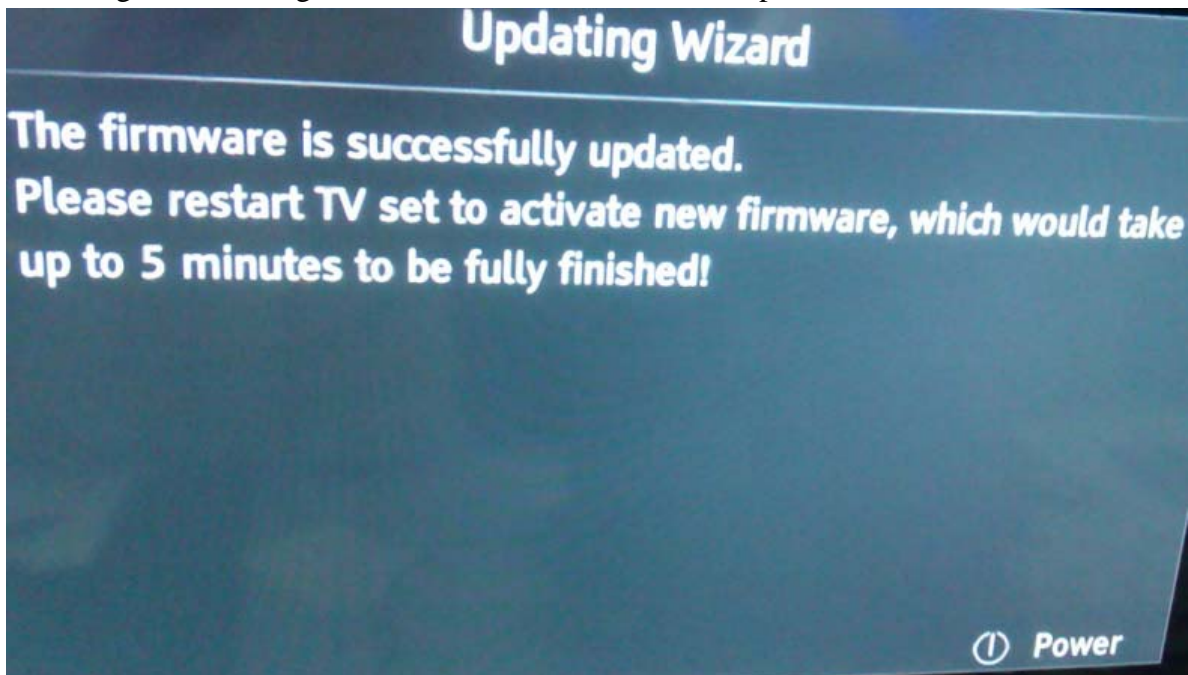


Figure-8

Remote control Power off and restart TV. indication led is linking .about 5 minutes , TV bounce following prompt message. otherwise upgrade is defeated.

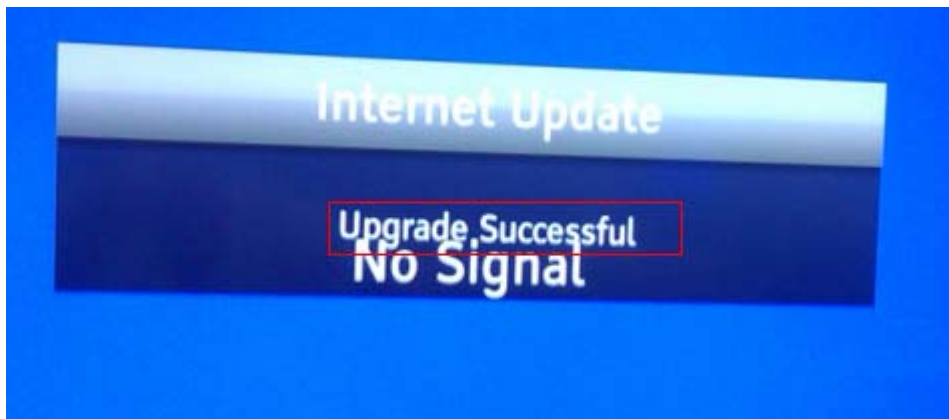


Figure-9

USB upgrade:

1. Copy the upgrade_loader.pkg file to USB Disk;
2. Make sure there is no other .pkg file in the root directory of USB Disk.
3. Insert USB Disk to USB port. and then turn on the TV.

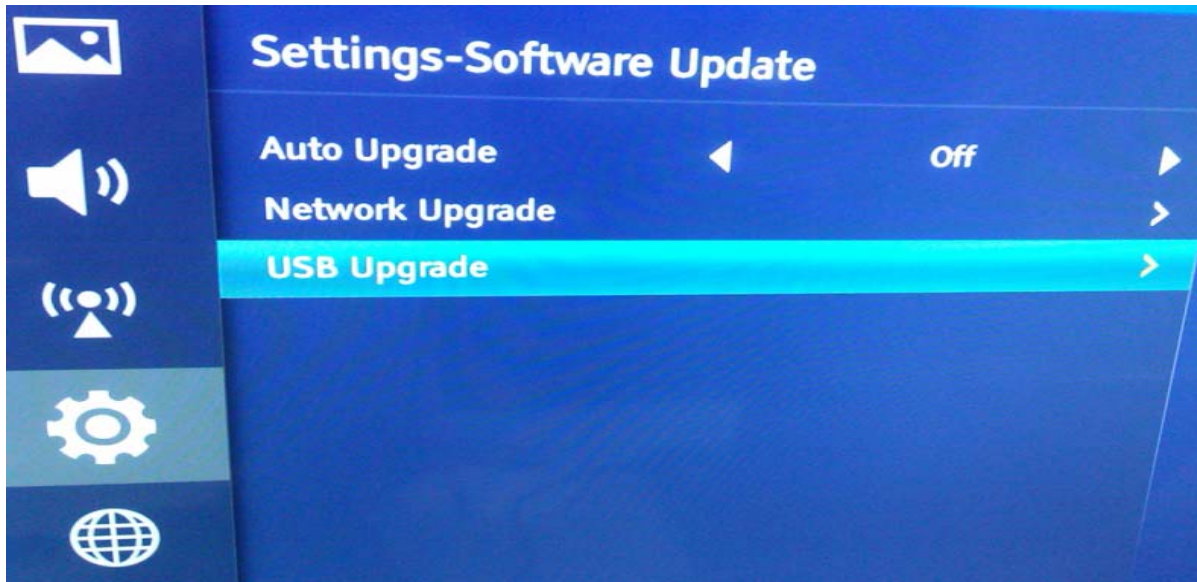
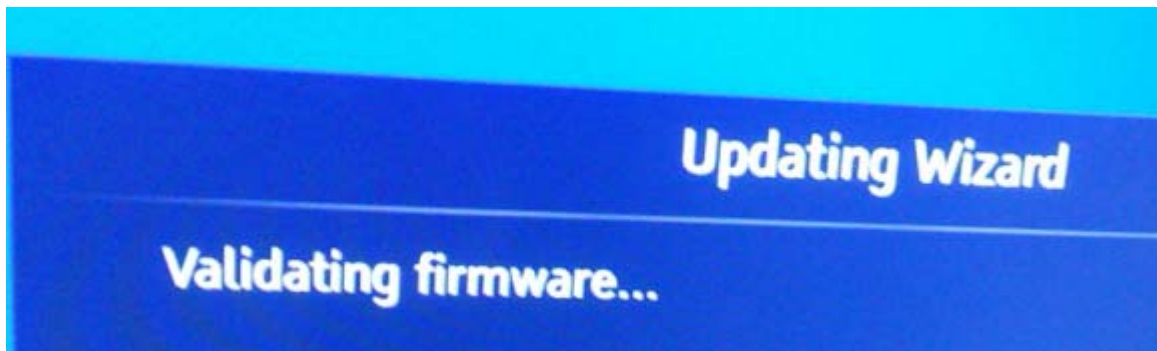


figure-2



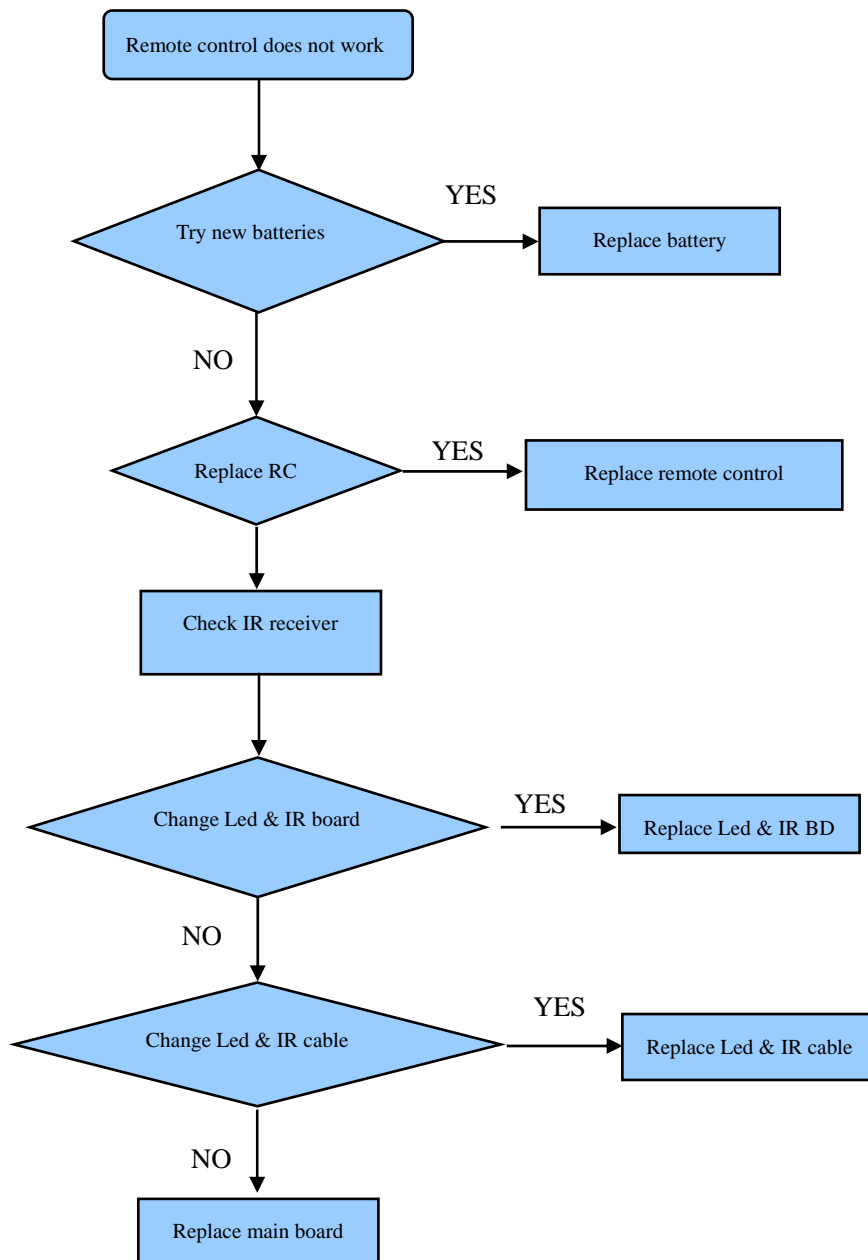
Next update steps can according to the network upgrade.

5. Trouble shooting

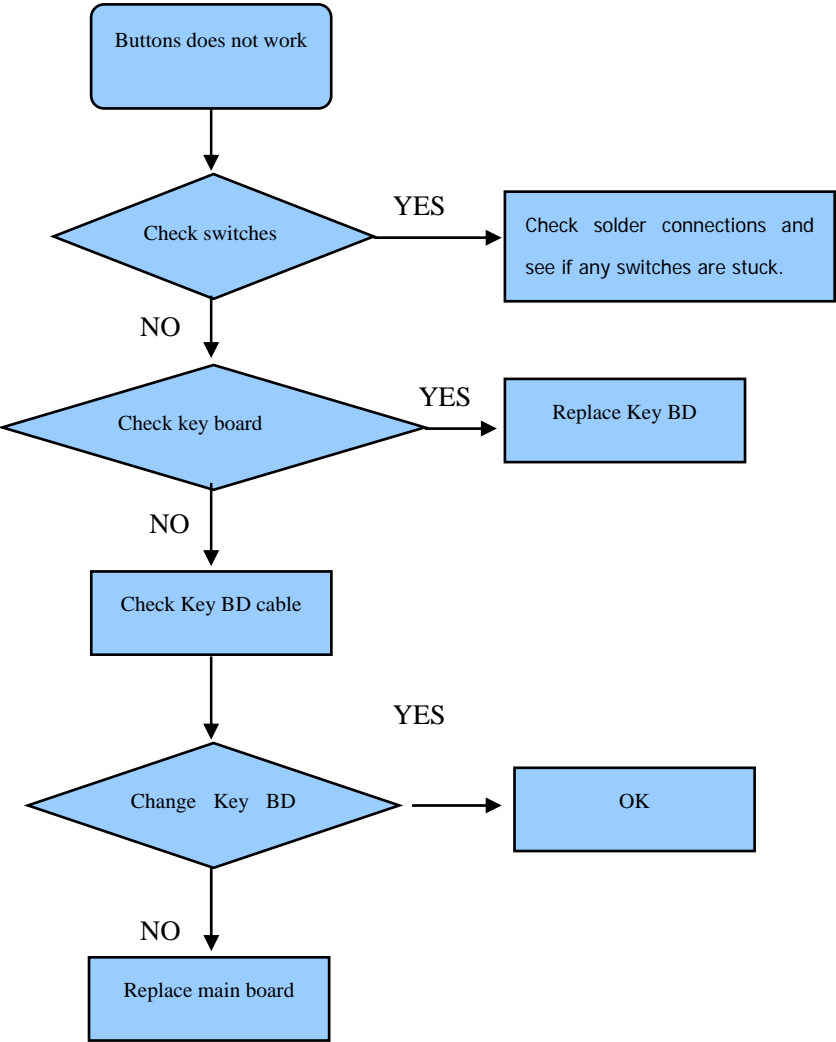
When there is something wrong with your TV, you can try turning off the TV and then restart it. You can also operate according to the follow chart. If the problems still can't be solved, please contact the profession technician.

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.

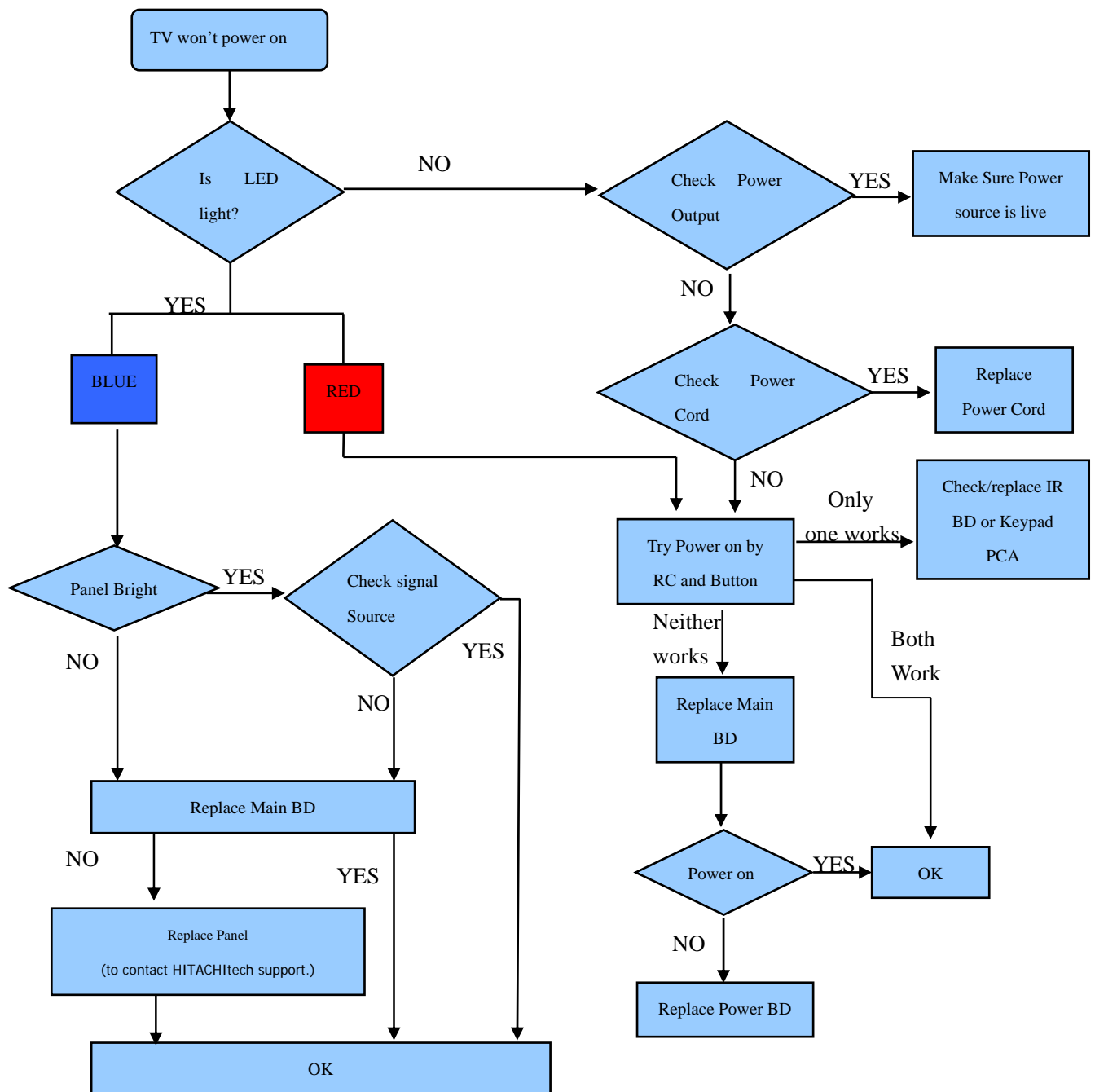
5.1 Troubleshooting for Remote Control



5.2 Troubleshooting for Function Key



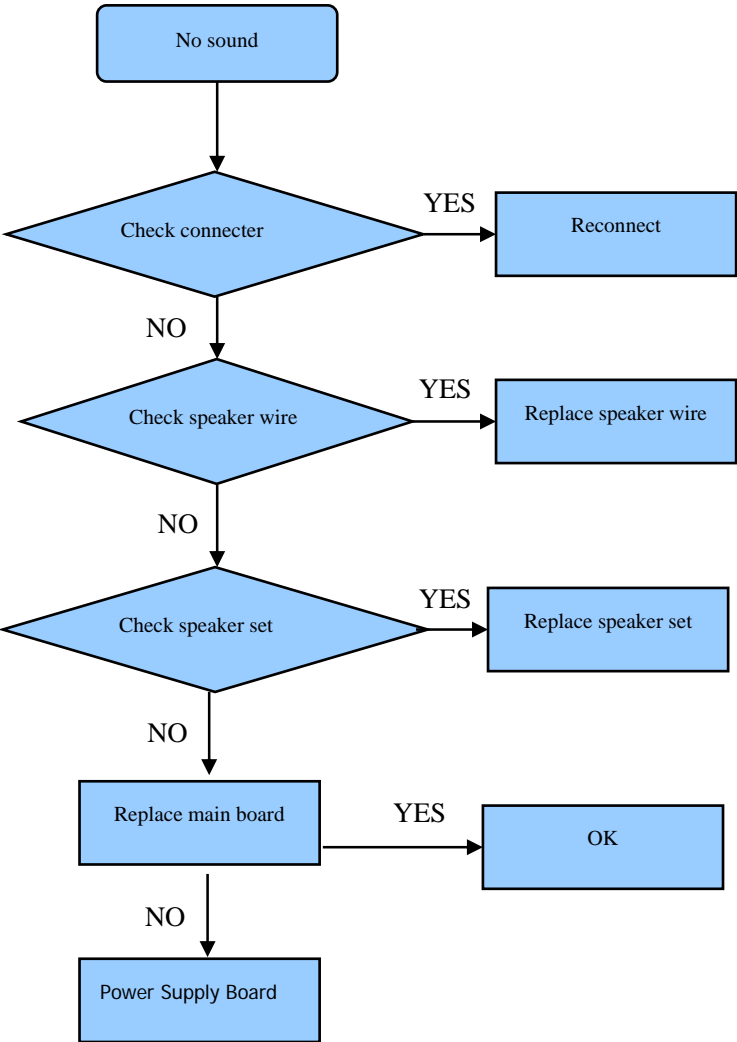
5.3 TV won't Power On



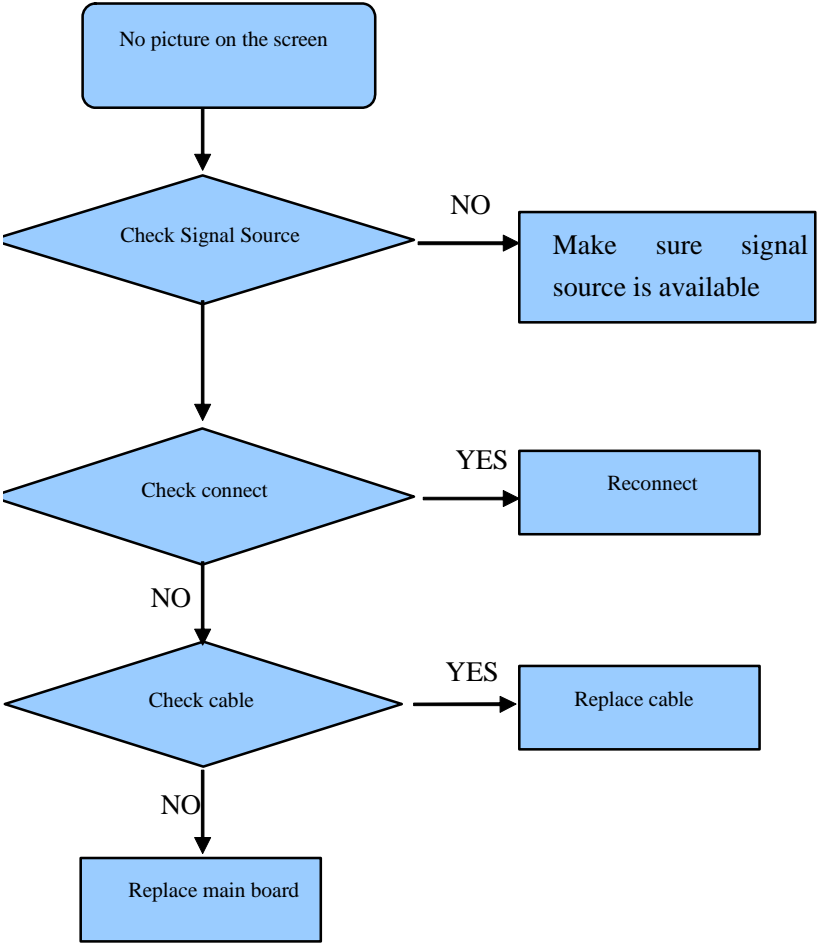
Note:

Above the indicated led color is only for standby is red , normal is blue.

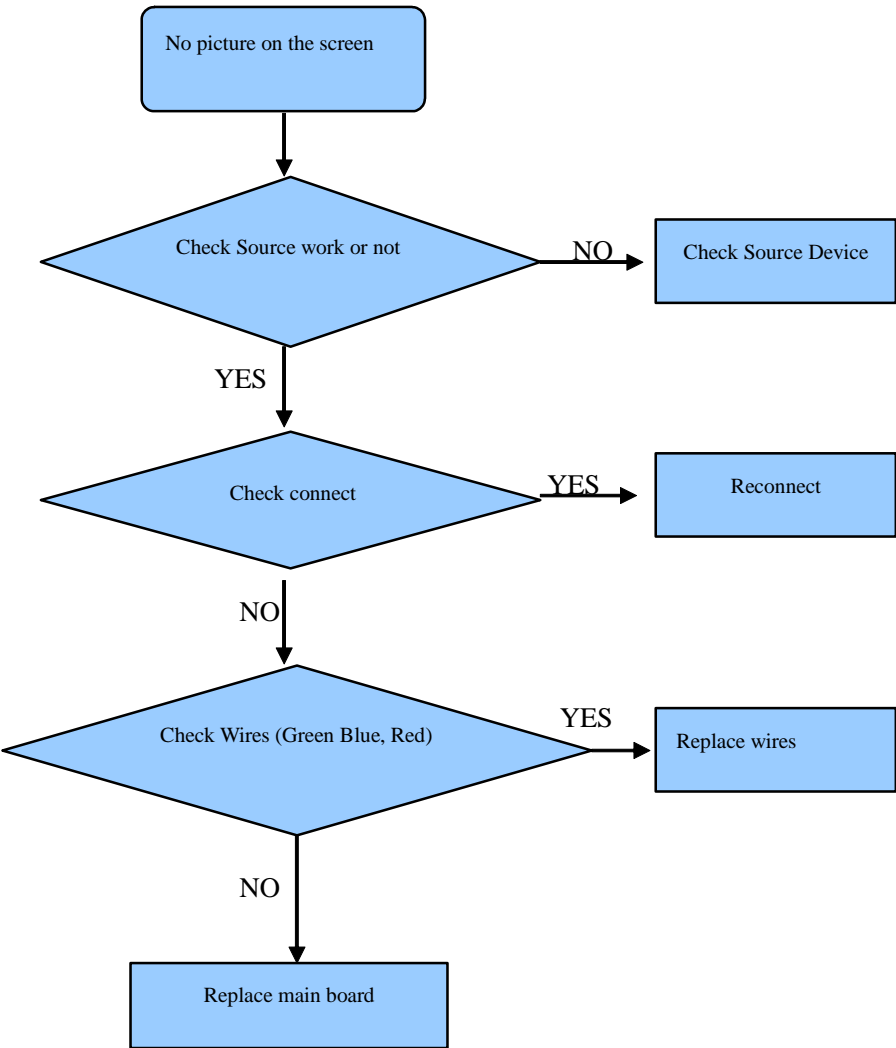
5.4 Troubleshooting for Audio



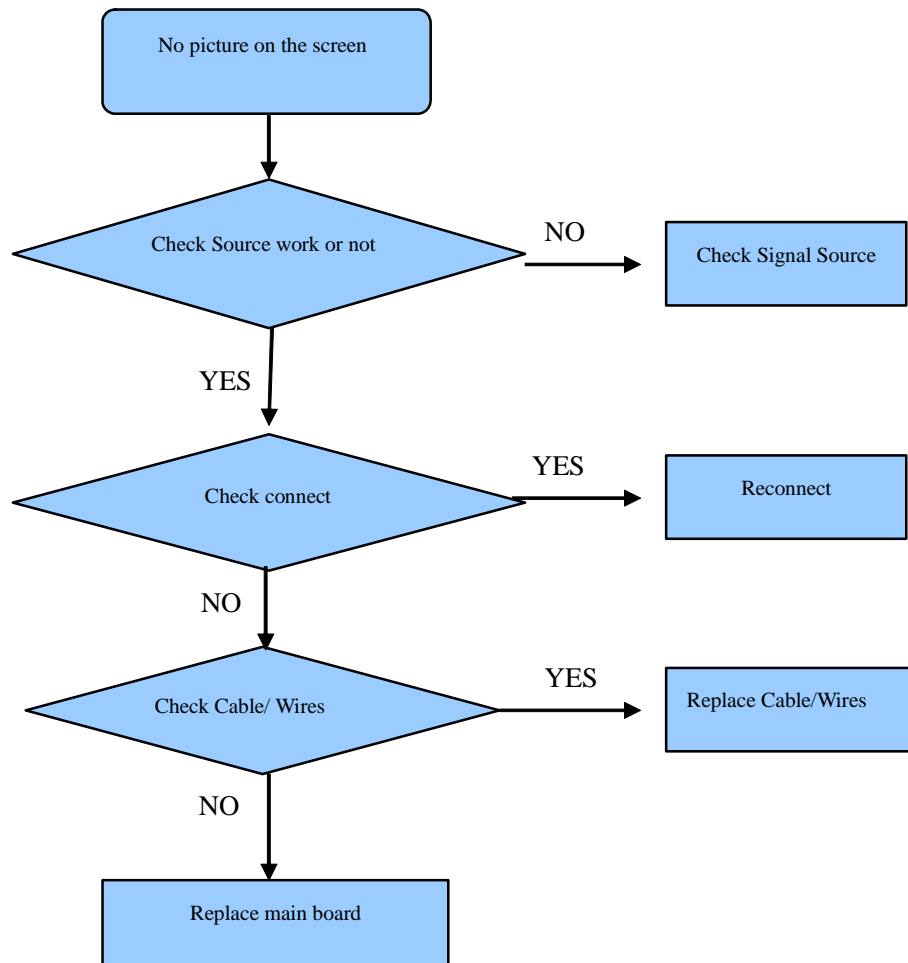
5.5 Troubleshooting for TV/VGA/HDMI input



5.6 Troubleshooting for YPbPr input



5.7 Troubleshooting for Video input

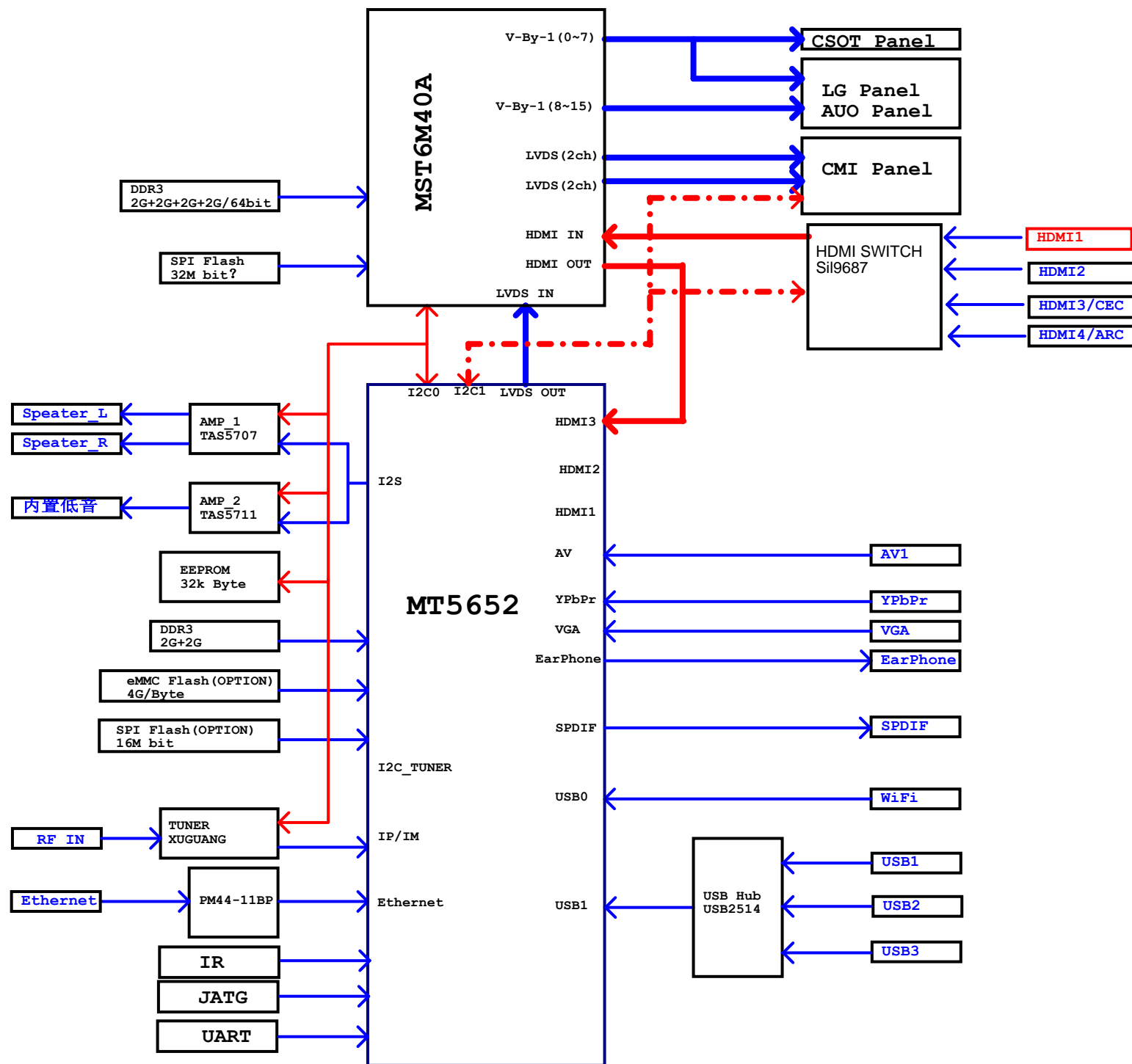


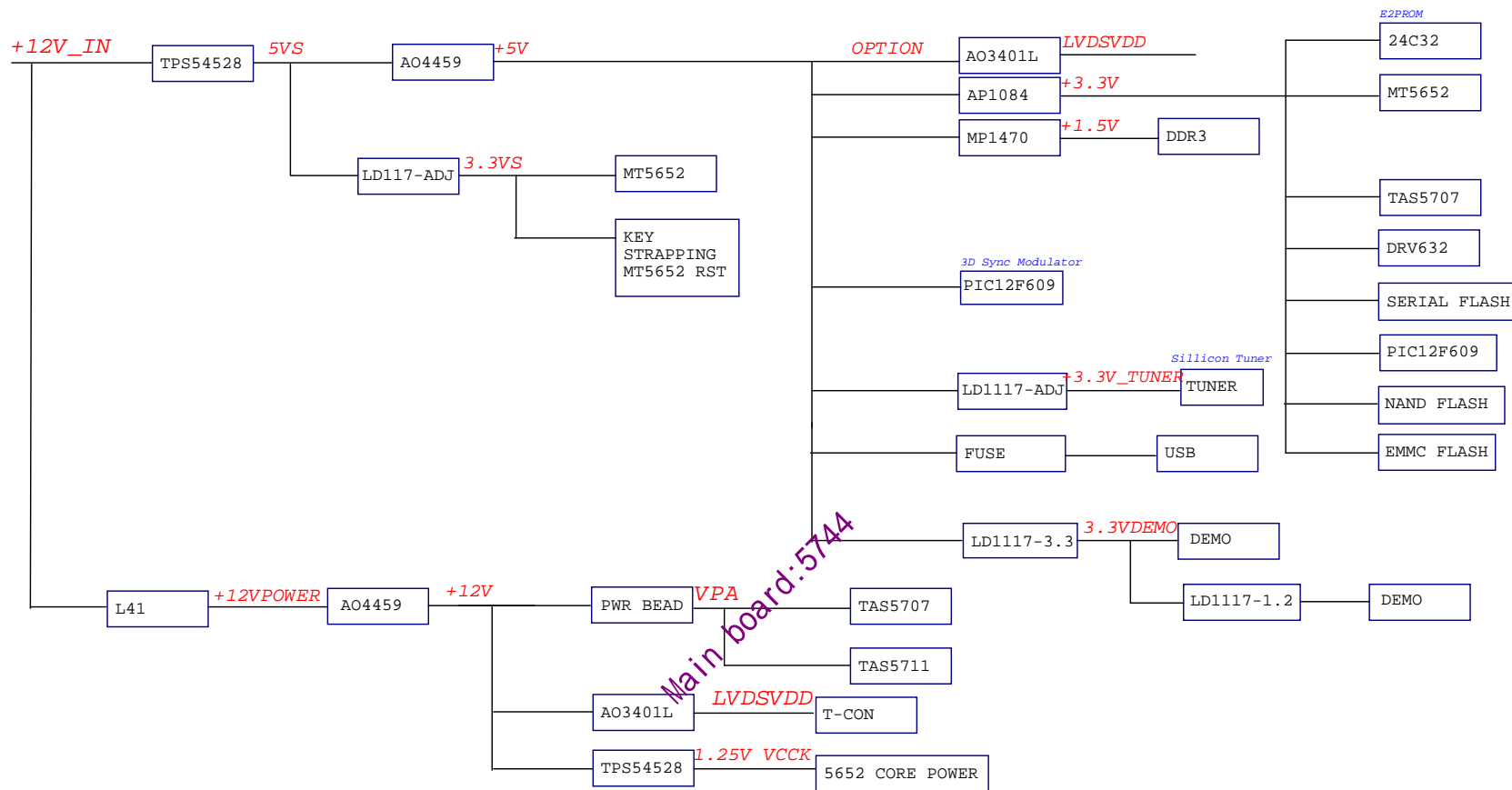
6. Signals Block Diagram and power assign:

(The next page)

7. Schematic circuit diagram

8. Explode View





Hisense Electric Co.,LTD		
Title: Power Tree		

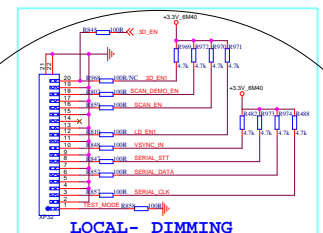
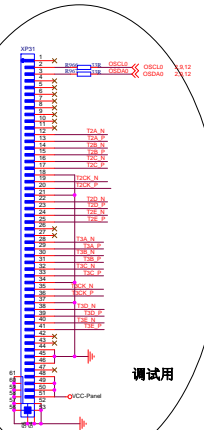
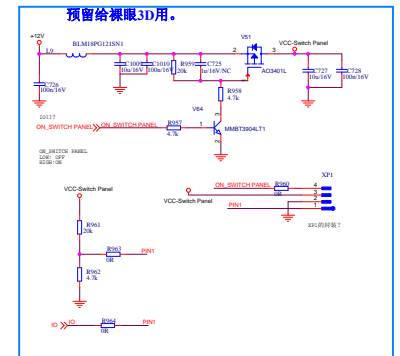
[illegible]

HDMI RX

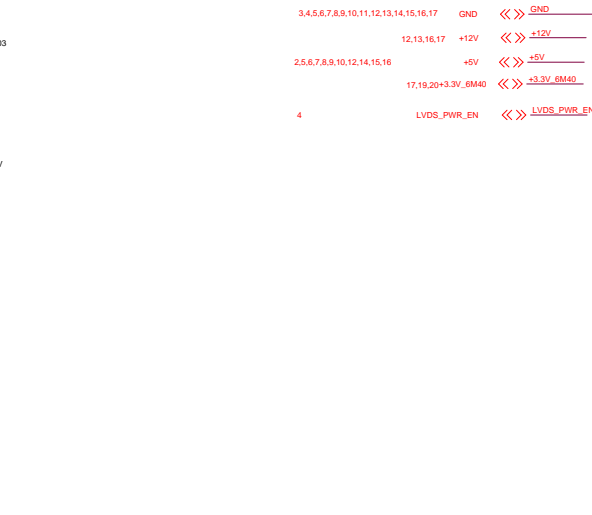
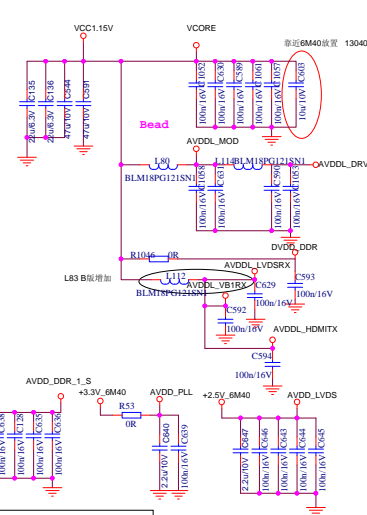
Pin	Signal
1	NC
2	NC
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC
10	NC
11	NC
12	NC
13	NC
14	NC
15	NC
16	NC
17	NC
18	NC
19	NC
20	NC
21	NC
22	NC
23	NC
24	NC
25	NC
26	NC
27	NC
28	NC
29	NC
30	NC
31	NC
32	NC
33	NC
34	NC
35	NC
36	NC
37	NC
38	NC
39	NC
40	NC
41	NC
42	NC
43	NC
44	NC
45	NC
46	NC
47	NC
48	NC
49	NC
50	NC
51	NC
52	NC
53	NC
54	NC
55	NC
56	NC
57	NC
58	NC
59	NC
60	NC
61	NC
62	NC
63	NC
64	NC
65	NC
66	NC
67	NC
68	NC
69	NC
70	NC
71	NC
72	NC
73	NC
74	NC
75	NC
76	NC
77	NC
78	NC
79	NC
80	NC
81	NC
82	NC
83	NC
84	NC
85	NC
86	NC
87	NC
88	NC
89	NC
90	NC
91	NC
92	NC
93	NC
94	NC
95	NC
96	NC
97	NC
98	NC
99	NC
100	NC

HDMI TX

Pin	Signal
1	NC
2	NC
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC
10	NC
11	NC
12	NC
13	NC
14	NC
15	NC
16	NC
17	NC
18	NC
19	NC
20	NC
21	NC
22	NC
23	NC
24	NC
25	NC
26	NC
27	NC
28	NC
29	NC
30	NC
31	NC
32	NC
33	NC
34	NC
35	NC
36	NC
37	NC
38	NC
39	NC
40	NC
41	NC
42	NC
43	NC
44	NC
45	NC
46	NC
47	NC
48	NC
49	NC
50	NC
51	NC
52	NC
53	NC
54	NC
55	NC
56	NC
57	NC
58	NC
59	NC
60	NC
61	NC
62	NC
63	NC
64	NC
65	NC
66	NC
67	NC
68	NC
69	NC
70	NC
71	NC
72	NC
73	NC
74	NC
75	NC
76	NC
77	NC
78	NC
79	NC
80	NC

[illegible][illegible]

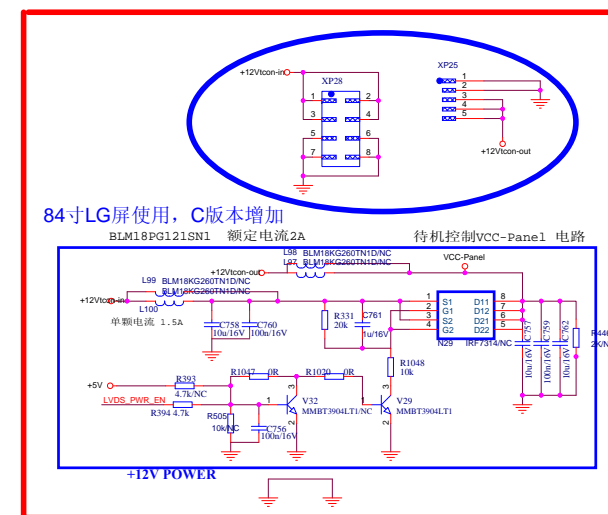
三星75寸 背光控制 ADD BYdiaochunnuan



MST6M40 POWER



C47,C69,C544尽量靠近主芯片引脚放置
Bi Chunguang
20130222

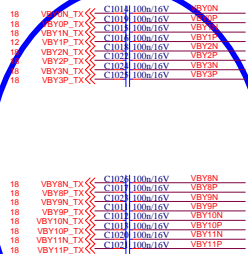


84寸LG屏使用，C版本增加

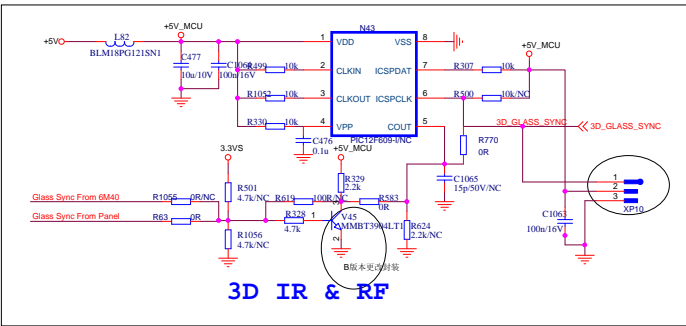
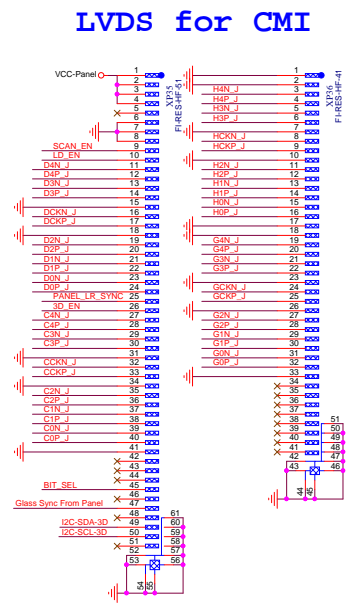
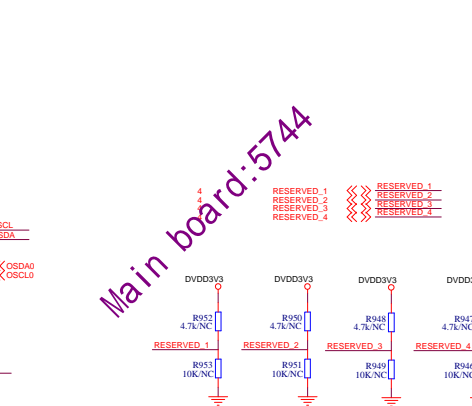
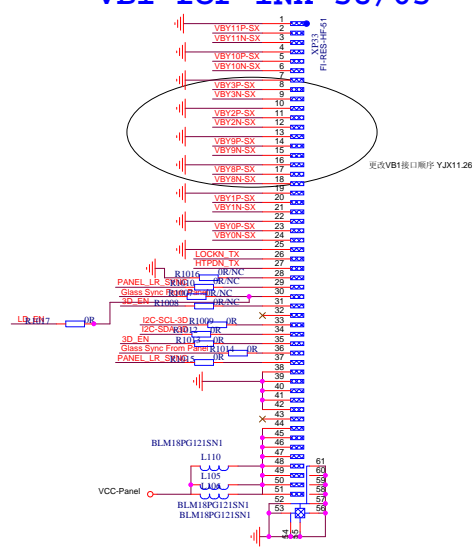
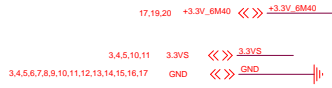
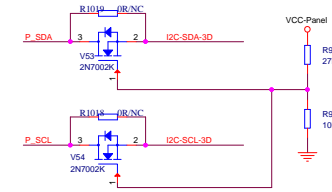
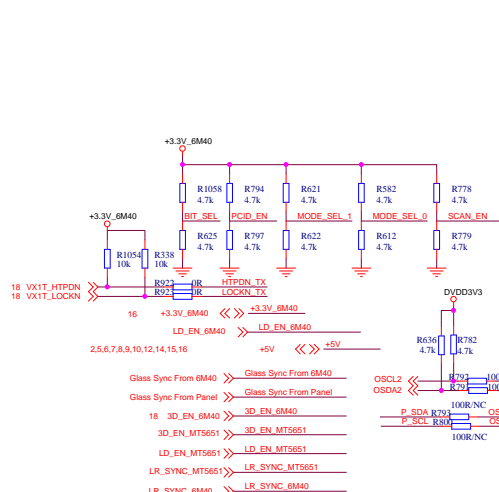
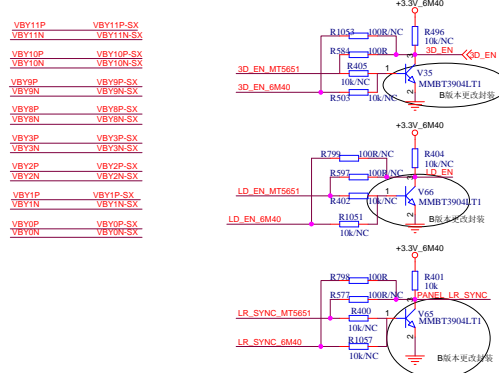
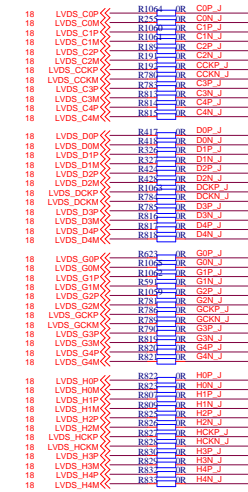
BLM18PG121SN1 额定电流2A 待机控制VCC-Panel 电路

VB1 for INX 58/65

LVDS for CMI



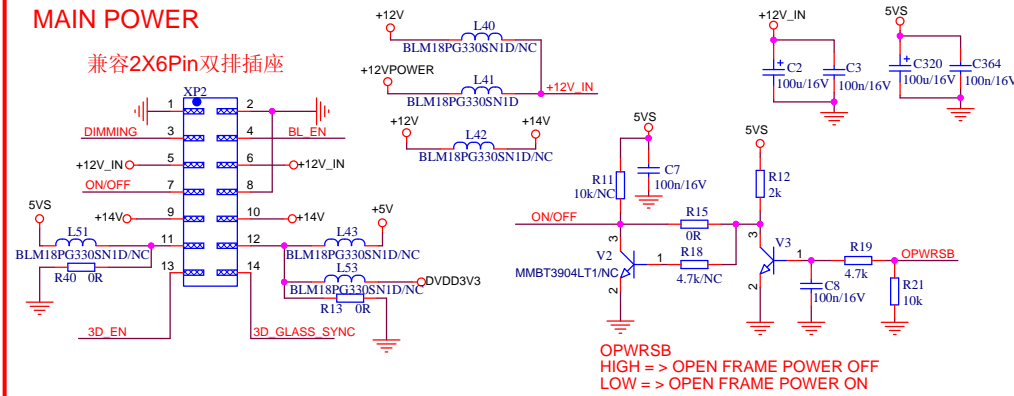
电容靠近6M40放置
V-BY ONE信号走等长线



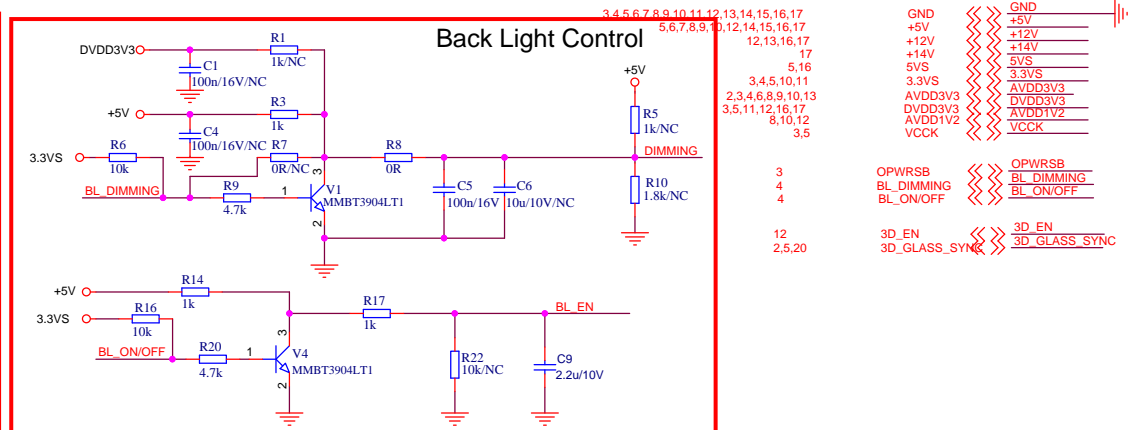
3D IR & RF

MAIN POWER

兼容2X6Pin双排插座

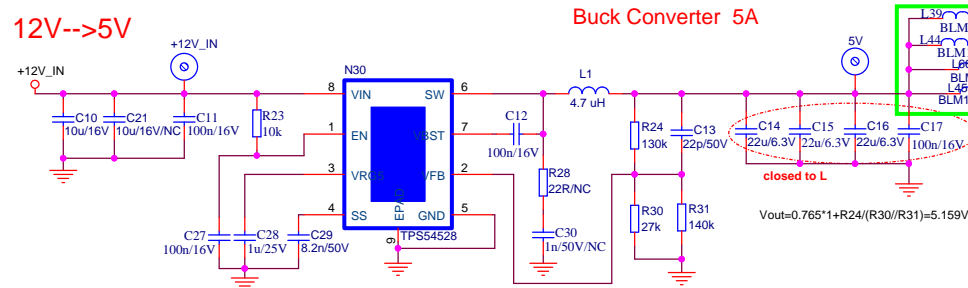


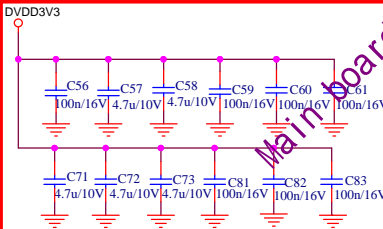
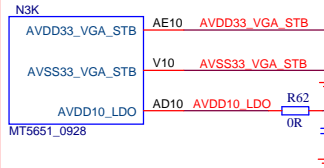
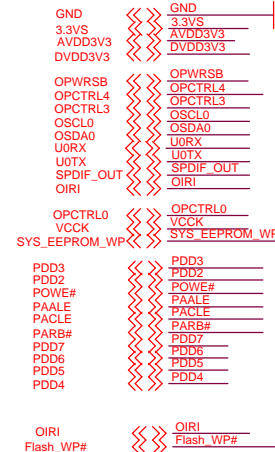
Back Light Control



12V-->5V

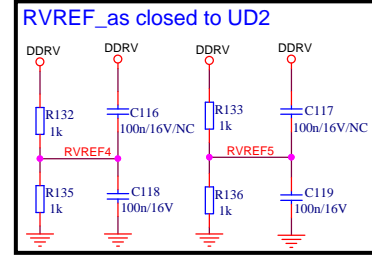
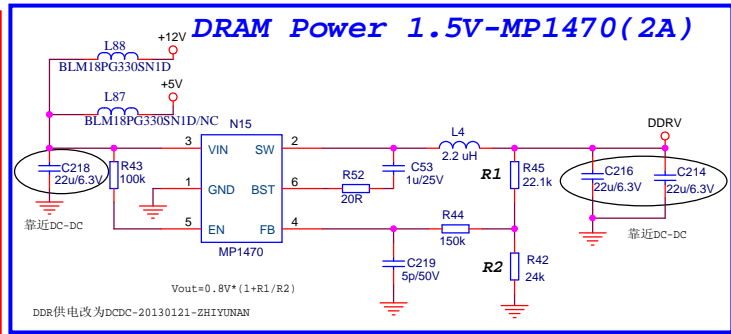
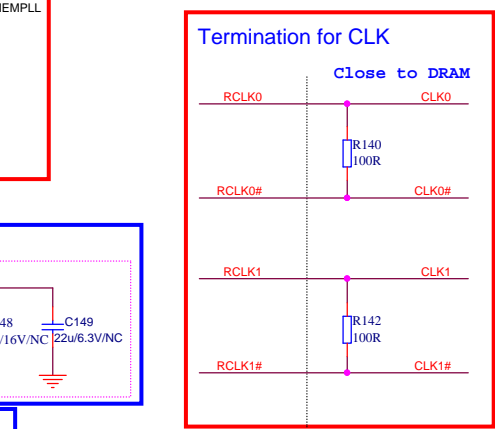
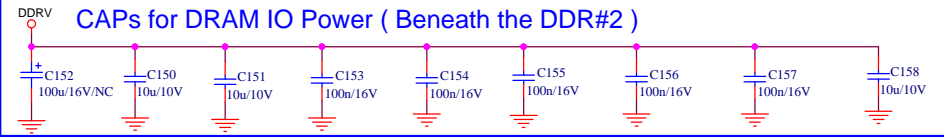
Buck Converter 5A



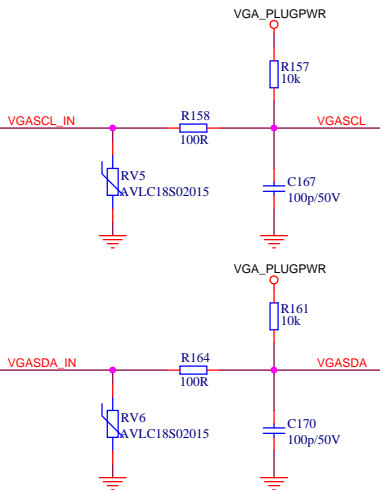
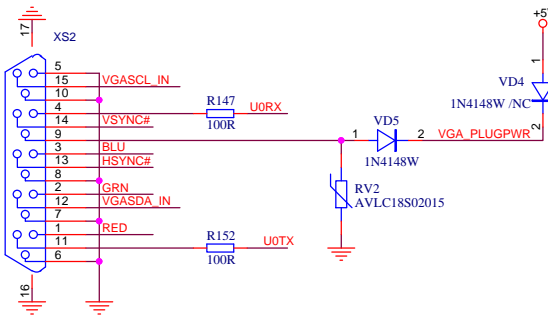


ES IC STRAPPING

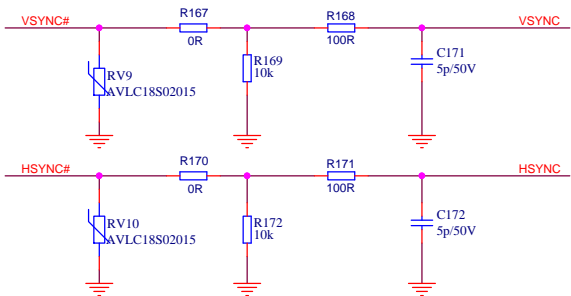
BGA Strapping	OPCTRL0	OPCTRL3	OPCTRL4	PAOLE
ICE mode + 27M + serial boot	0	1	0	0
ICE mode + 27M + ROM to NAND	0	1	0	1
ICE mode + 27M + ROM to EMMC	0	1	1	0



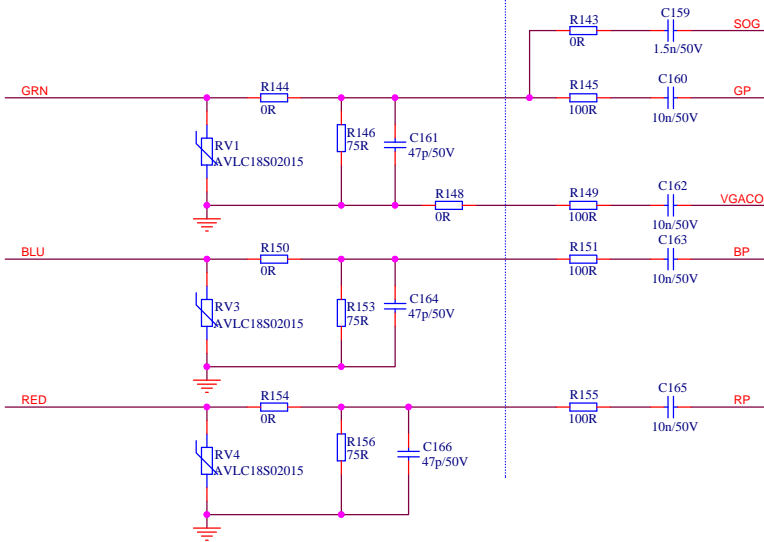
VGA INPUT



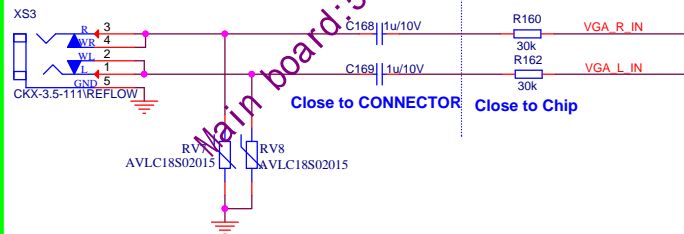
VGA SYNC SLICER



Close to VGA CONN.

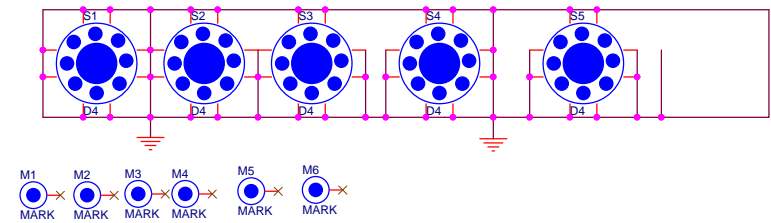
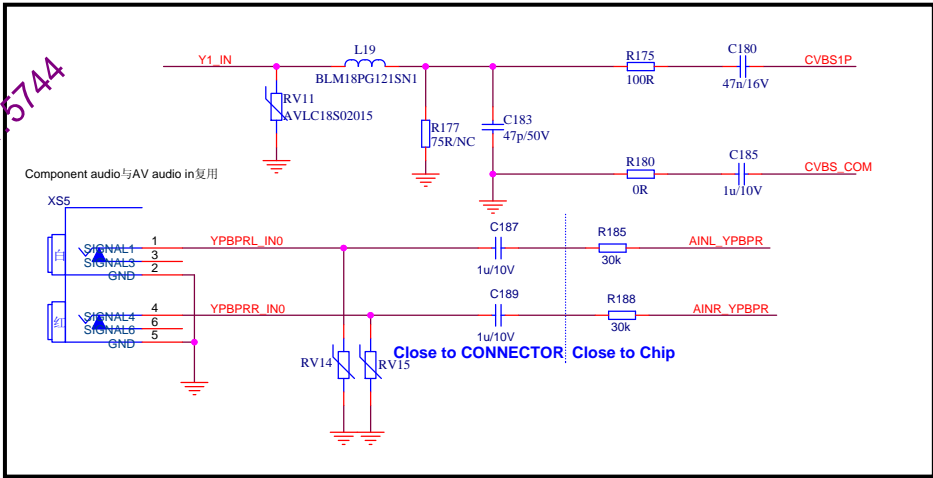
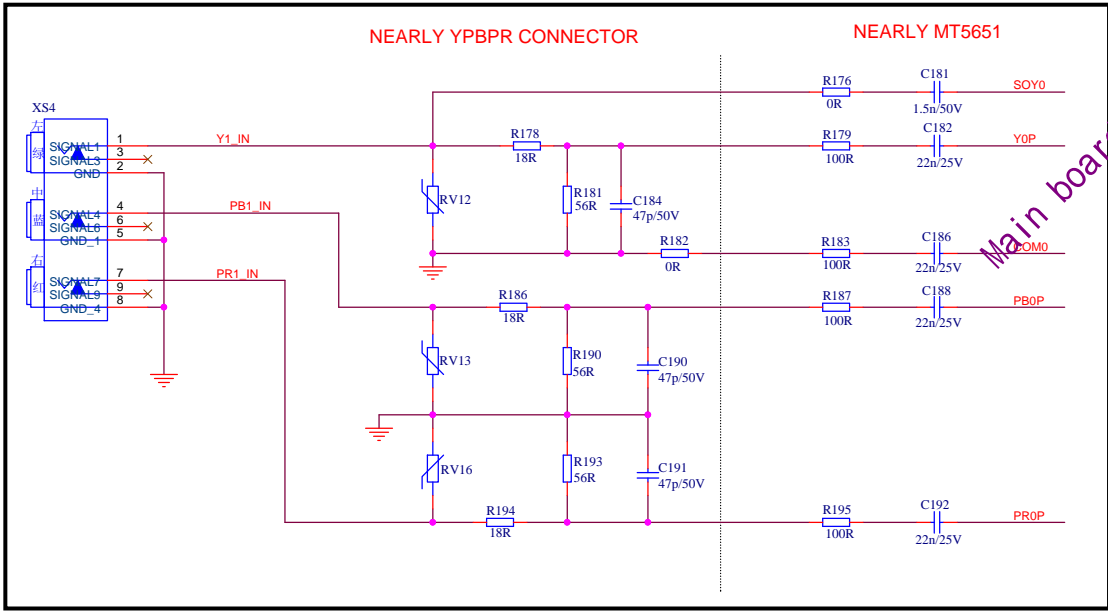
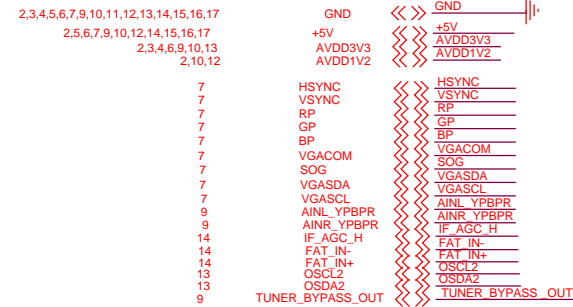
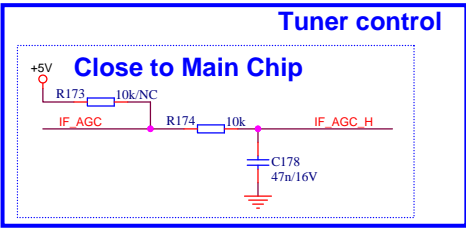
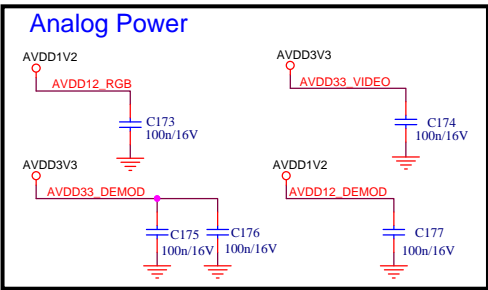
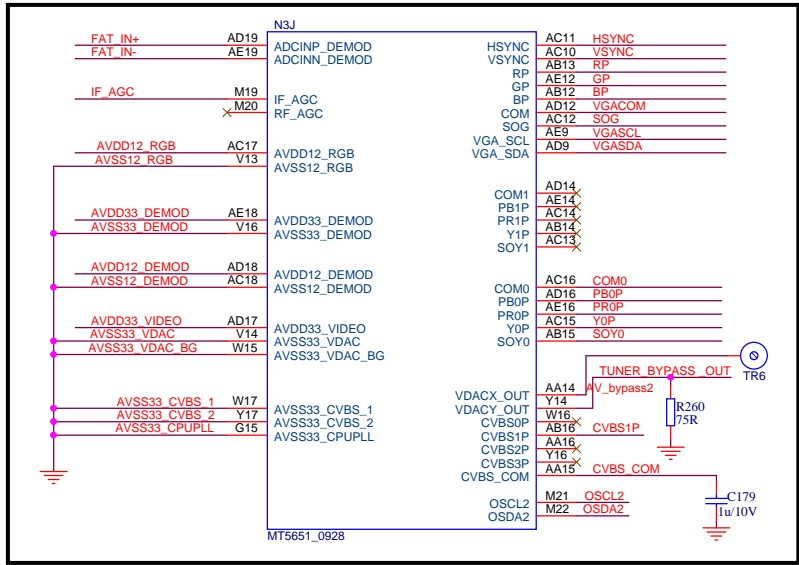


VGA AUDIO INPUT

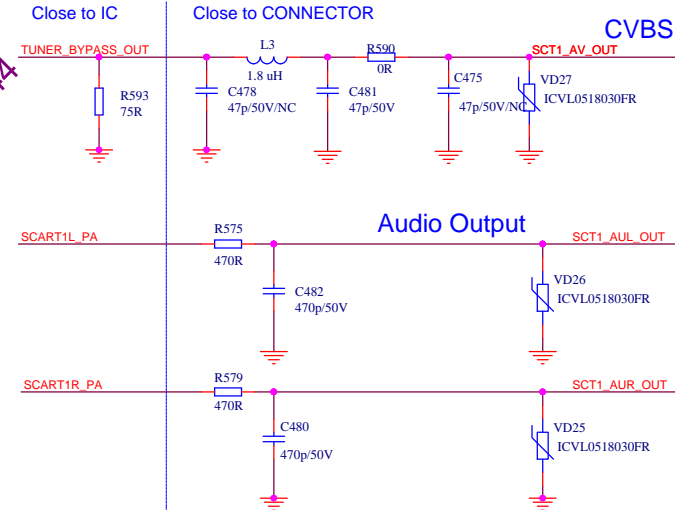
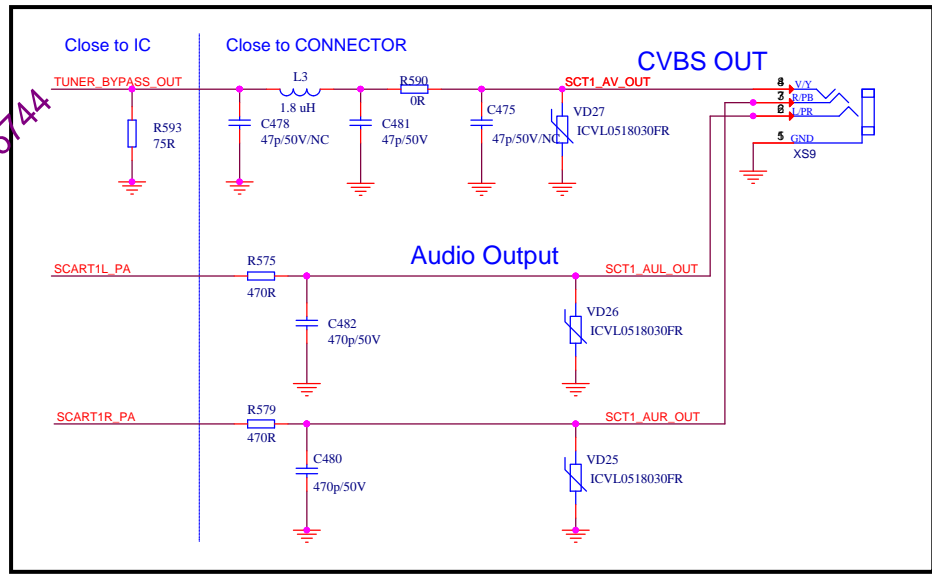
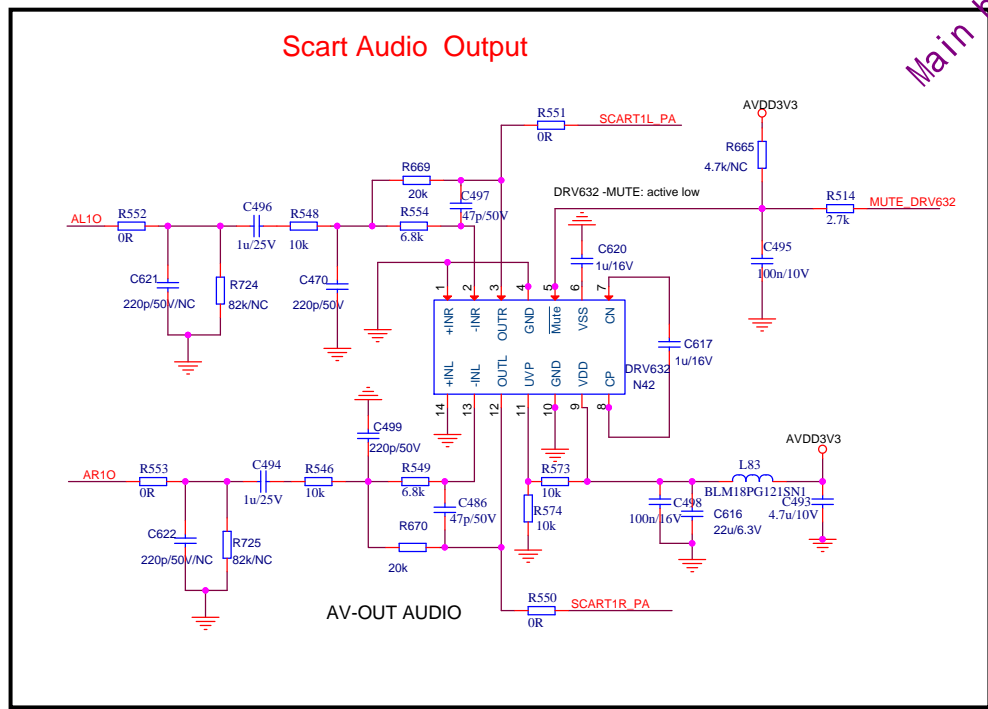
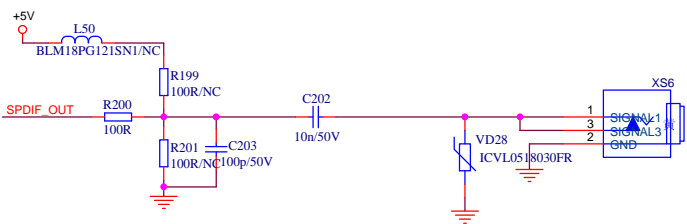
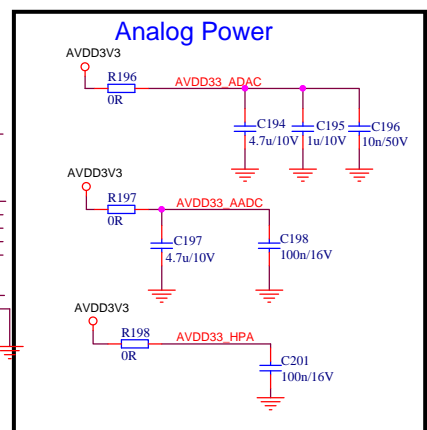
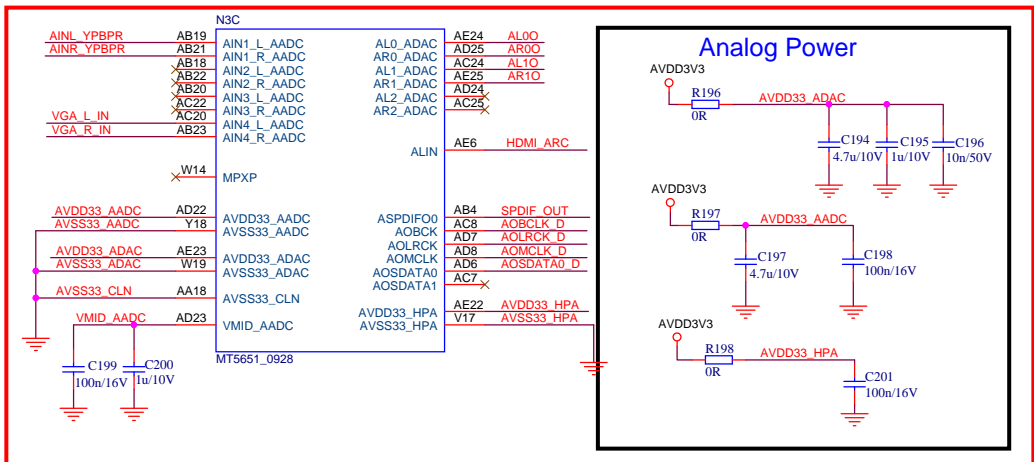


ZHIYUNAN-20130114 更改通孔回流封装耳机端子

GND	《《	GND	
+5V	《《	+5V	
HSYNC	《《	HSYNC	
VSYNC	《《	VSYNC	
RP	《《	RP	
GP	《《	GP	
BP	《《	BP	
VGACOM	《《	VGACOM	
SOG	《《	SOG	
VGASDA	《《	VGASDA	
VGASCL	《《	VGASCL	
VGA_L_IN	《《	VGA_L_IN	
VGA_R_IN	《《	VGA_R_IN	
U0RX	《《	U0RX	
U0TX	《《	U0TX	

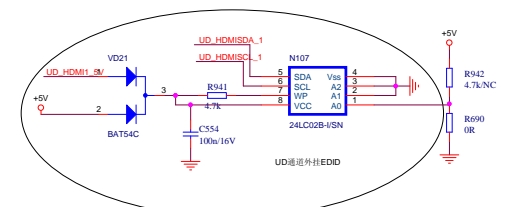
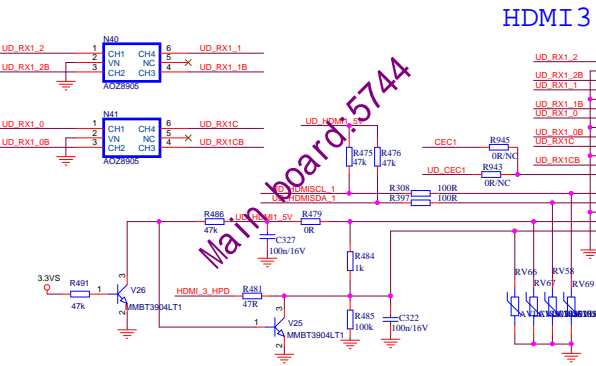
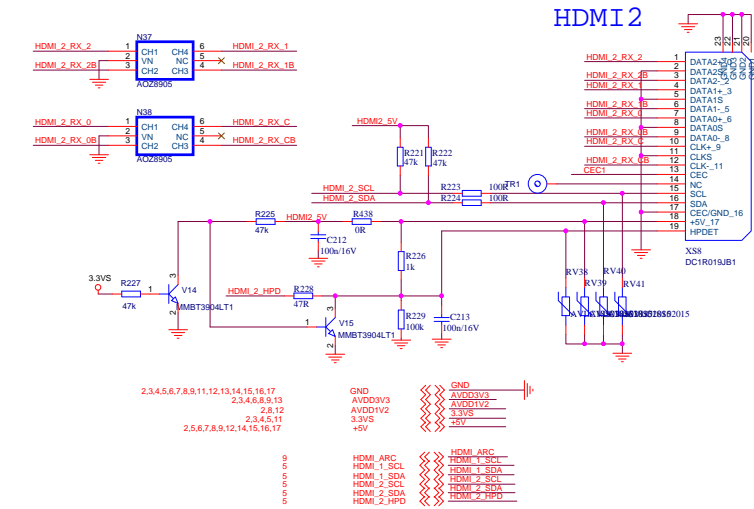
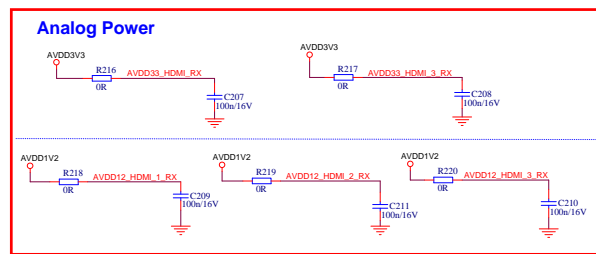
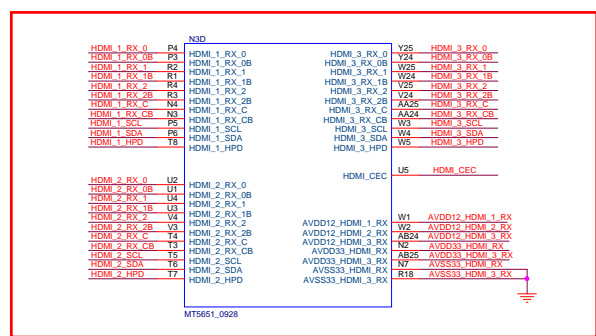
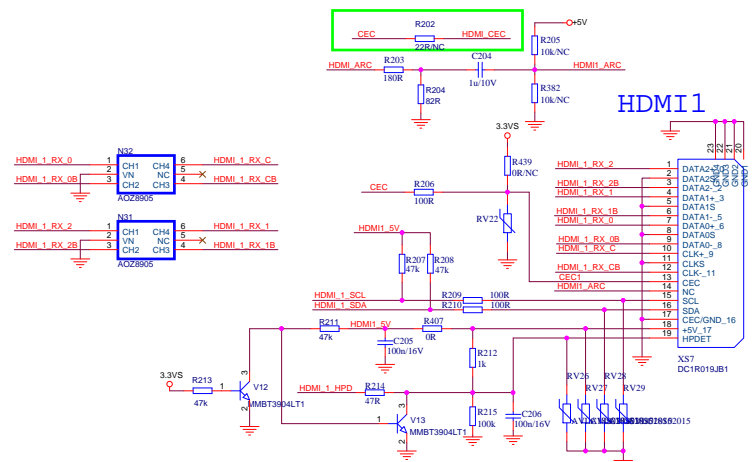


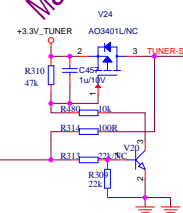
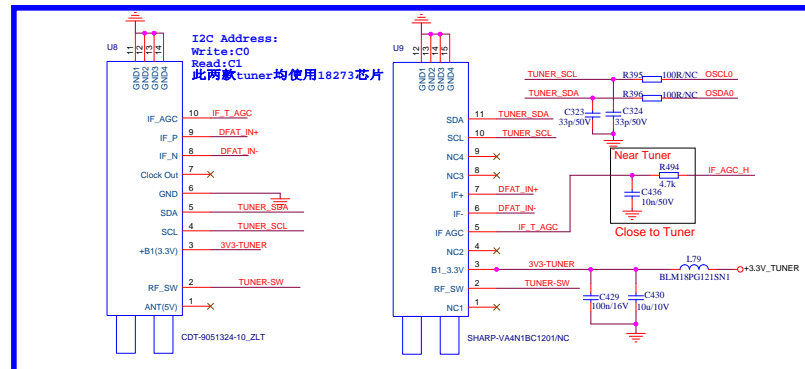
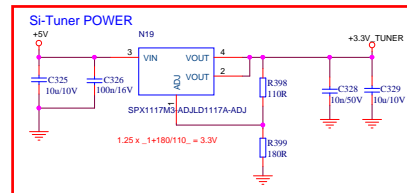
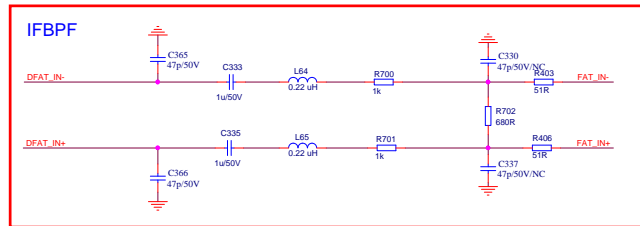
Hisense Electric Co.,LTD			
Title YPBPR/AV INPUT			
Size A3	Document Number MT5652	Rev 1.0	
Date: Monday, December 02, 2013	Sheet 8	of 17	



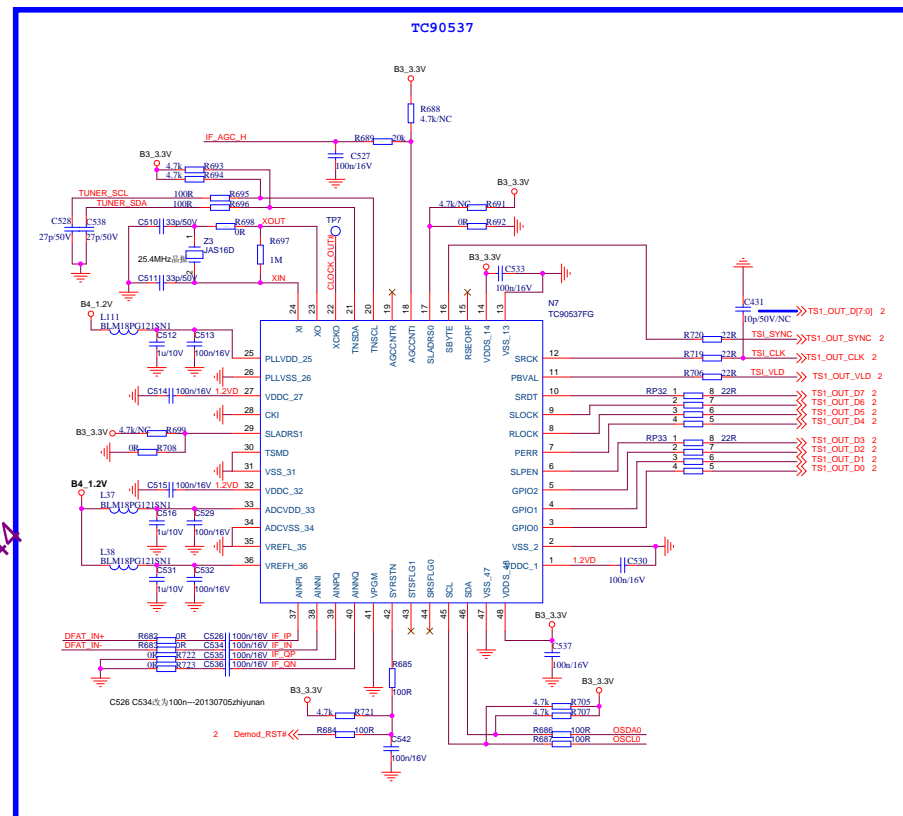
2,3,4,5,6,7,8,10,11,12,13,14,15,16,17	GND	<<< GND
2,5,6,7,8,10,12,14,15,16,17	+5V	<<< +5V
2,3,4,5,6,8,10,13	AVDD3V3	<<< AVDD3V3
2,3,4,5,10,11	3.3VS	<<< 3.3VS
8	AINL_YBPBR	<<< AINL_YBPBR
8	AINR_YBPBR	<<< AINR_YBPBR
7	VGA_L_IN	<<< VGA_L_IN
7	VGA_R_IN	<<< VGA_R_IN
16,17	AOMCLK_D	<<< AOMCLK_D
16,17	AOBCLK_D	<<< AOBCLK_D
16,17	AOLRCK_D	<<< AOLRCK_D
16,17	AOSDATA0_D	<<< AOSDATA0_D
16,17	SPDIF_OUT	<<< SPDIF_OUT
10	HDMI_ARC	<<< HDMI_ARC
17	AL00	<<< AL00
17	AR00	<<< AR00
3,7	U0RX	<<< U0RX
3,7	U0TX	<<< U0TX
3,5	OIRI	<<< OIRI
2,5,16	5VS	<<< 5VS
9	MUTE_DRV632	<<< MUTE_DRV632
8	TUNER_BYPASS_OUT	<<< TUNER_BYPASS_OUT

Hisense Electric Co.,LTD		
Title		
AUDIO IN/OUT/COAXIAL OUT		
Size	Document Number	Rev
A3	MT5652	1.0
Date:	Monday, December 02, 2013	Sheet 9 of 17



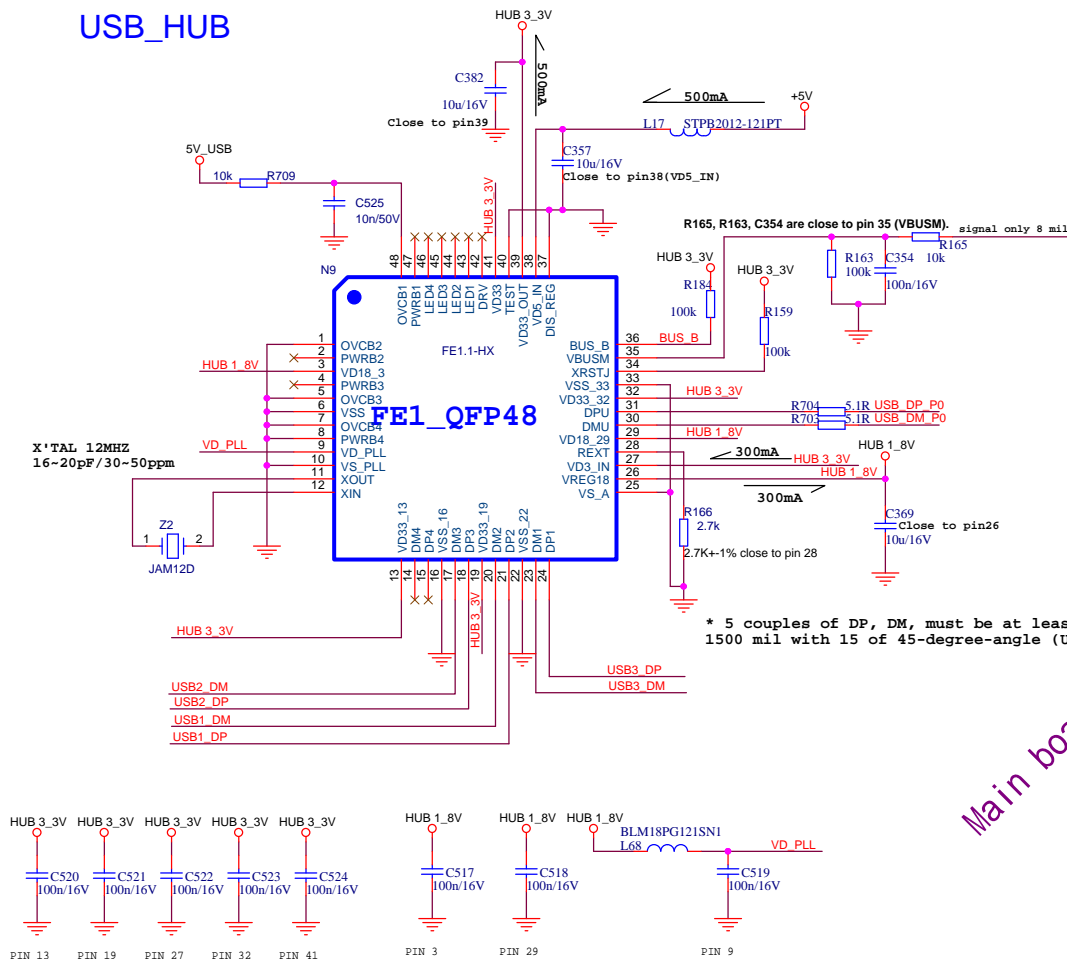


Main board:5744



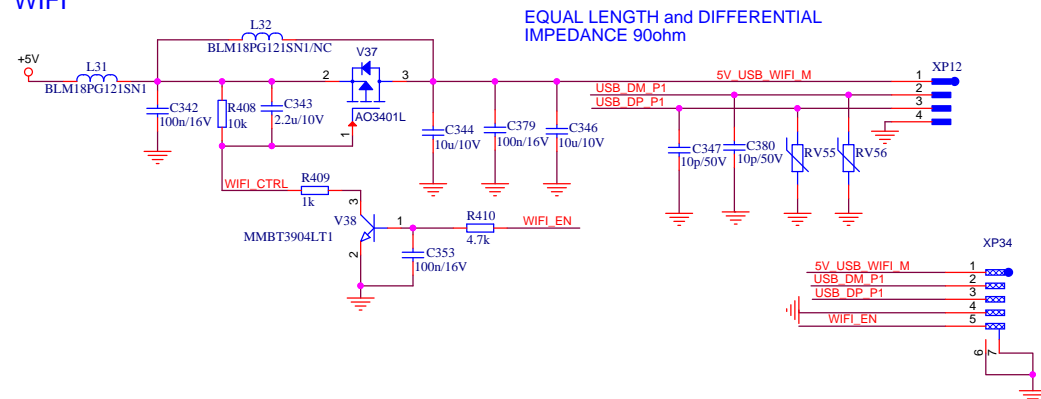
Hisense Electric Co.,LTD			
Title SILICON TUNER			
Size A2	Document Number MT5652		Rev 1.0
Date:	Monday, December 02, 2013	Sheet 13 of 17	

USB_HUB

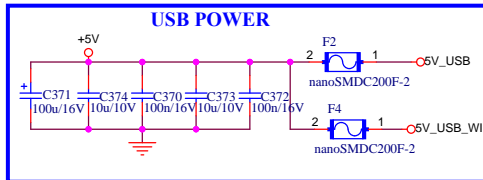


Bypass CAP , close to each indicated pin of FE1.1, and should not be removed.

WIFI




USB POWER



2,3,4,5,6,7,8,9,10,11,12,13,14,16,17
2,5,6,7,8,9,10,12,14,16,17
2,3,5,11,12,16,17

GND
+5V
DVDD3V3

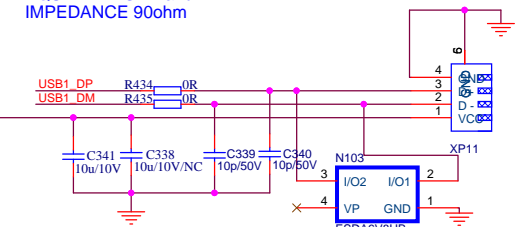

 GND
 +5V
 DVDD3V3

 USB_DP_P0
 USB_DM_P0
 USB_DP_P1
 USB_DM_P1
 WIFI_EN

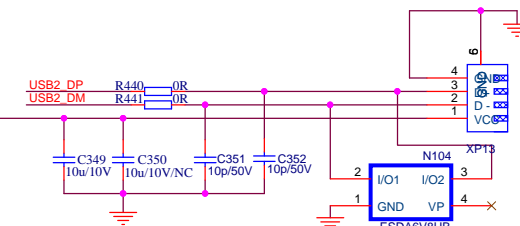
Near Connector

EQUAL LENGTH and DIFFERENTIAL IMPEDANCE 90ohm

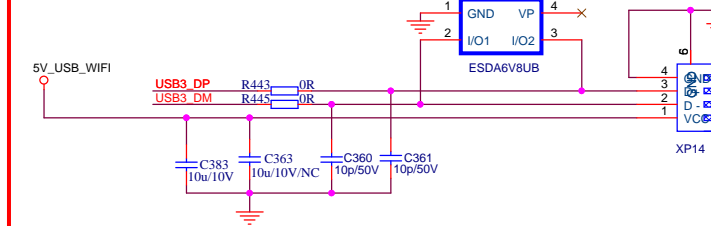
USB PORT 1



USB PORT 2



05 USB PORT3



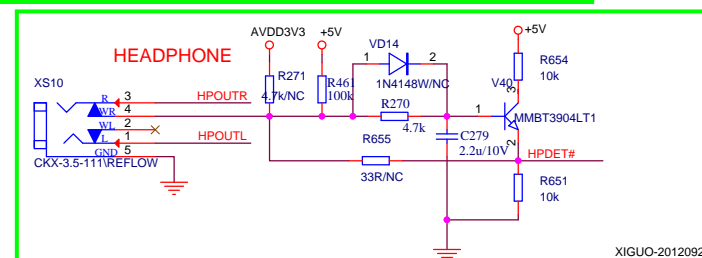
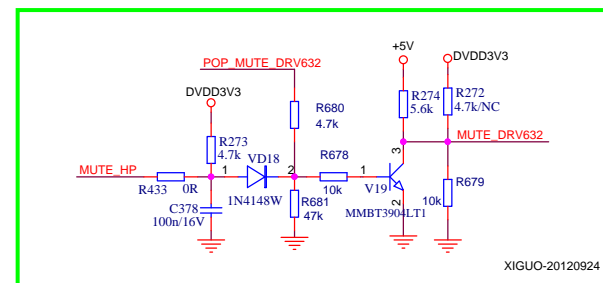
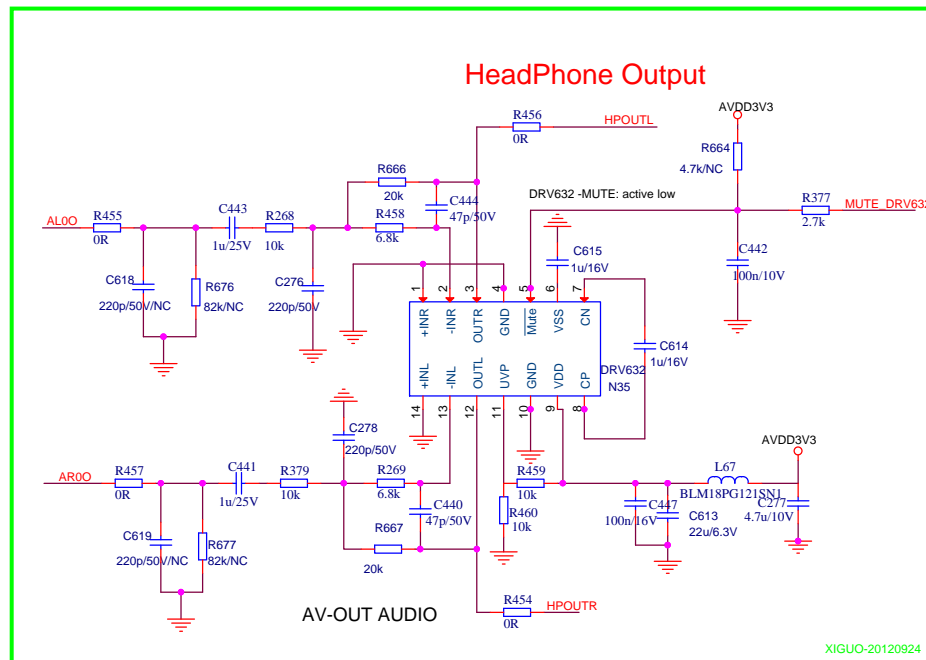
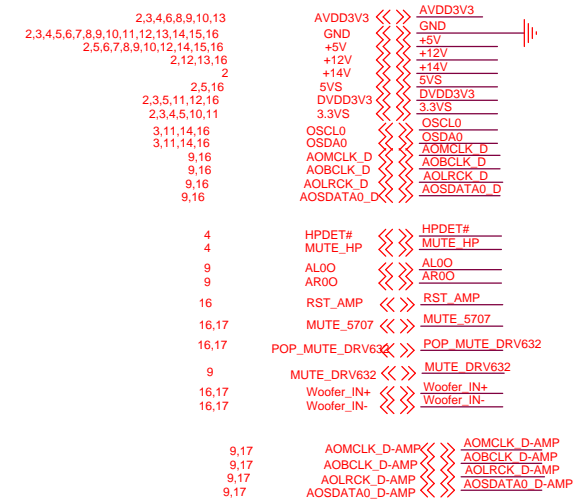
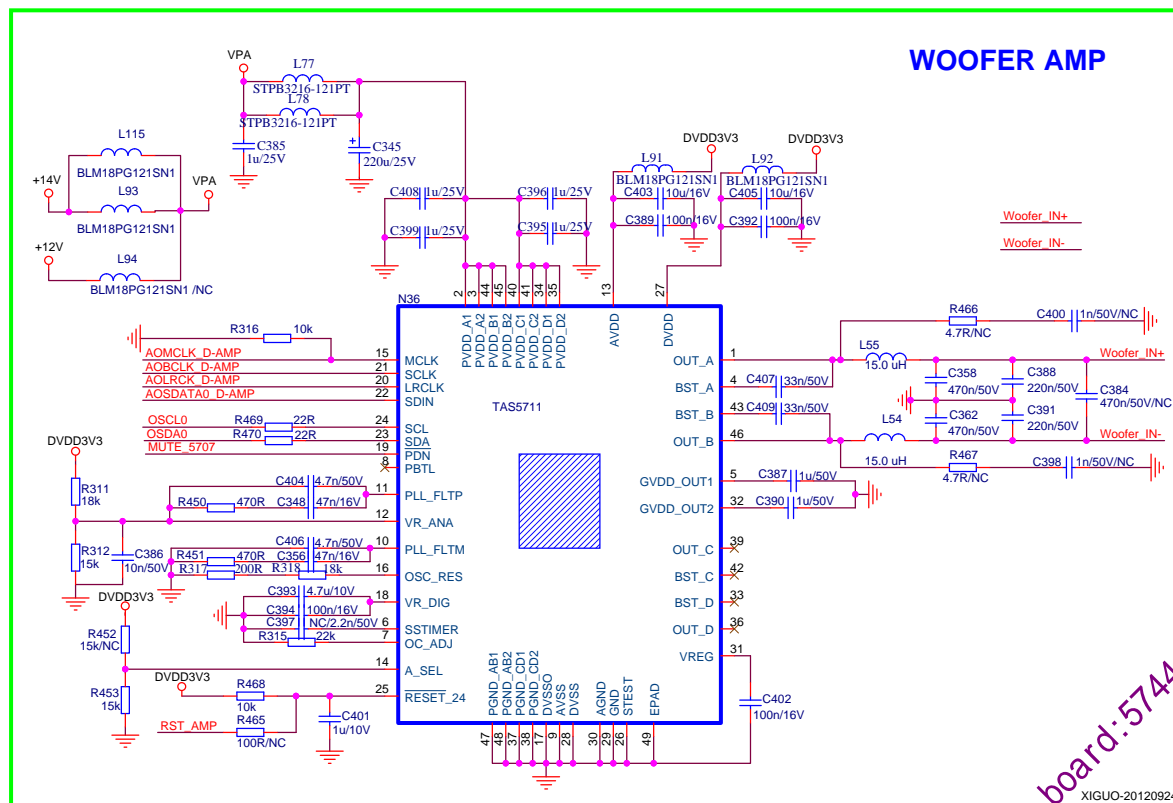
Hisense Electric Co.,LTD

Title			
USB			
Size	Document Number		Rev
A3	MT5652		1.0
Date:	Monday, December 02, 2013	Sheet	14 of 17

I2C Address
= 0x6A



Hisense Electric Co.,LTD			
Title			
SPEAKER/MUTE			
Size A3	Document Number MT5652		Rev 1.0
Date:	Monday, December 02, 2013	Sheet	15 of 17



更政日 期	更政人	更政内容	更政履历
			V15
			V14
			V13
			V12
			V11

A	1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27			
	161752023J3R																						更改履历		设计 W11	审核 W12	批准 W13	日期	材料 W14	比例 W15	制图 A
B																															
C																															
D																															
E																															
F																															
G																															
H																															
I																															
J																															
K																															
L																															
M																															
N																															
O																															
P																															
Q																															
R																															
S																															

图例	名称	数量	备注
1	LED Lens	1	RSAG8-6400409
2	Remote Board	1	RSAG2-9085624-02
3	3D Board	1	RSAG2-9084652
4	Speaker	2	V1170236-15W8Q-01
5	Wifi	1	T77H4790050GHZ
6	Base Bracket	1	RSAG80384382
7	Power Line	1	SP-12-2-187DR
8	Plastic Bracket	1	RSAG80782985
9	Power Switch	1	HF-606(TV)-P
10	Plastic Bracket	1	RSAG80782986
11	Key Board	1	RSAG29085088
12	Plastic Bracket	1	RSAG80783265
13	LD	1	V650DK1-L51\JK\RDH
14	Power Unit	1	RSAG29085013-01
15	Side Terminal	1	RSAG80411269
16	Main Board	1	RSAG29085744
17	Bottom Terminal	1	RSAG80411268
18	Front Cover	1	RSAG80742098
19	Rear Cover	1	RSAG80340243
20	Label	1	RSAG88045081
21	Label	1	RSAG88045080
22	Stand Unit	1	RSAG61210407
23	Decoration	1	RSAG64340111
24	Bracket	1	RSAG80384381
25	Bracket	1	RSAG80384380
26			
27			
28			

图例	名称	数量	备注
1	LED Lens	1	RSAG8-6400409
2	Remote Board	1	RSAG2-9085624-02
3	3D Board	1	RSAG2-9084652
4	Speaker	2	V1170236-15W8Q-01
5	Wifi	1	T77H4790050GHZ