

LCD Television

Service Manual

Chassis: MT5651HROI+MST6M40

Product Type:

LTDN55XT880XWAU3D\LTDN58XT880XWAU3D\LTDN65XT880XWAU3D

UHD: (4K*2K) ; 3D type : SG

Ver 1.0

June, 2013

REVISION HISTROY				
Version	Page	Section	Description	Date
ver1.0	ALL	ALL	First issued	2012-6-24

Contents

Contents	- 3 -
Service Manual	- 4 -
1. Precautions and notices.....	- 4 -
1.1 Warning.....	- 5 -
1.2 Notes.....	- 8 -
2. Product Function Specifications	- 10 -
3. Factory/Service OSD Menu and Adjustment.....	- 14 -
3.1 To enter the Factory OSD Menu	- 14 -
3.2 Factory OSD Menu.....	- 14 -
3.3 Designer Menu.....	- 16 -
4. Software Upgrading.....	- 17 -
Before upgrading, read the following	- 17 -
4.1 USB Software Upgrading directly	- 17 -
4.2 USB upgrading unsuccessfully	- 17 -
4.3 Upgrading with the FlashTool0.6.0.exe	- 20 -
4.4 Network online updating	- 23 -
5. Trouble shooting	- 28 -
5.1 Troubleshooting for Remote Control	- 29 -
5.2 Troubleshooting for Function Key.....	- 30 -
5.3 TV won't Power On.....	- 31 -
5.4 Troubleshooting for Audio.....	- 32 -
5.5 Troubleshooting for TV/VGA/HDMI input.....	- 33 -
5.6 Troubleshooting for YPbPr input.....	- 34 -
5.7 Troubleshooting for Video input.....	- 35 -
6. Signals Block Diagram and power assign:	- 35 -
7. Schematic circuit diagram	- 35 -
8. Explode View.....	- 35 -

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.

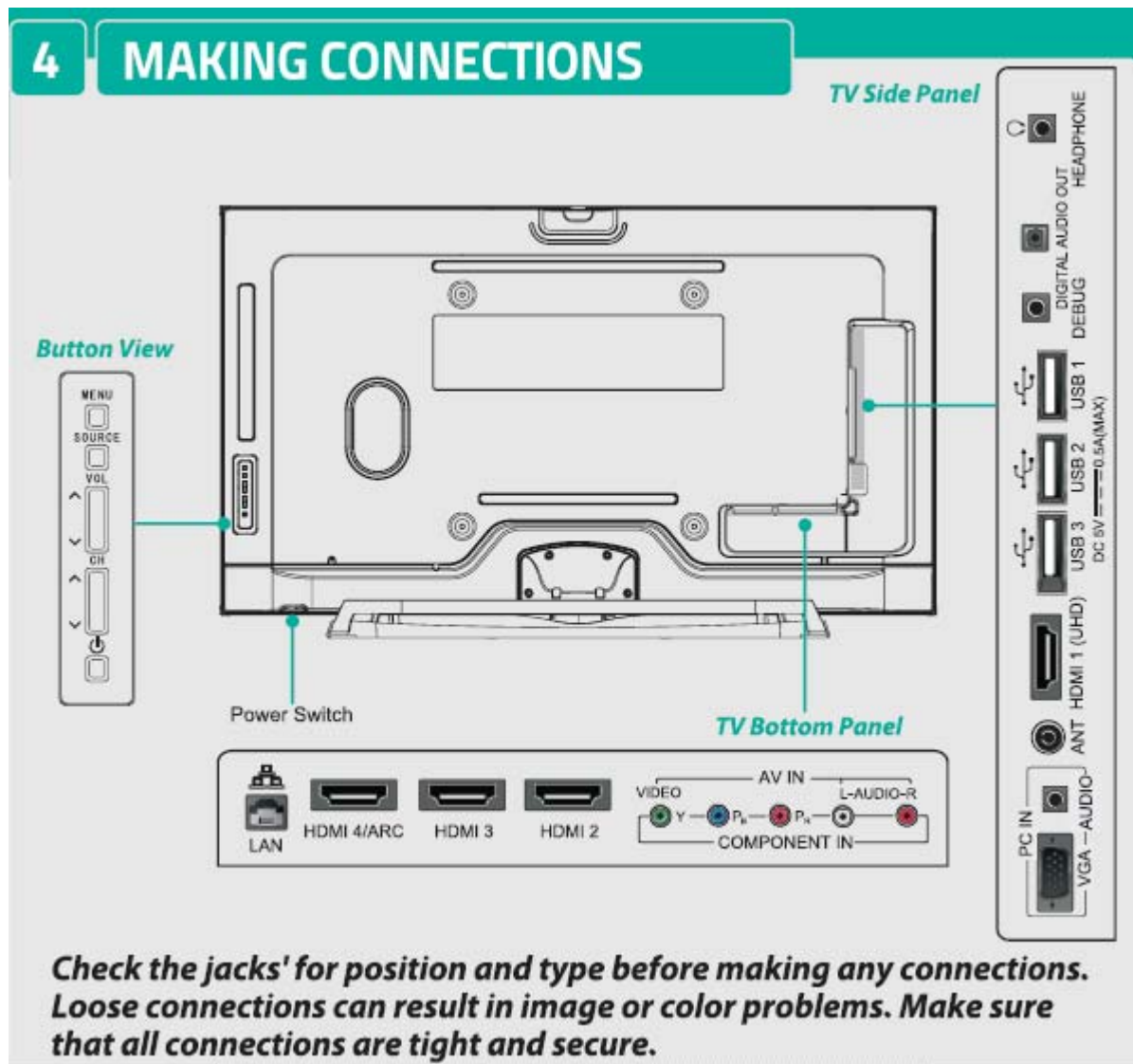


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Product Function Specifications

2.1 Layout

XT880 Series



Detail description look up the quick setup guide, please.

2.2 Spec.

XT880 Series

Colour System	PAL NTSC SECAM
Television System	PAL B SECAM D/K DVB-T
Environmental Conditions	Temperature: 5°C - 45°C Humidity: 20% - 80% RH Atmospheric pressure: 86 kPa - 106 kPa
Component Mode	480I/60Hz, 480P/60Hz, 576I/50Hz, 576P/50Hz, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz
VGA Mode	640×480, 800×600, 1024×768, 1280×1024, 60Hz
HDMI Mode	480I/60Hz, 480P/60Hz, 576I/50Hz, 576P/50Hz, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz 640×480, 800×600, 1024×768 3840×2160/24Hz, 3840×2160/25Hz, 3840×2160/30Hz only for UHD port

NOTE

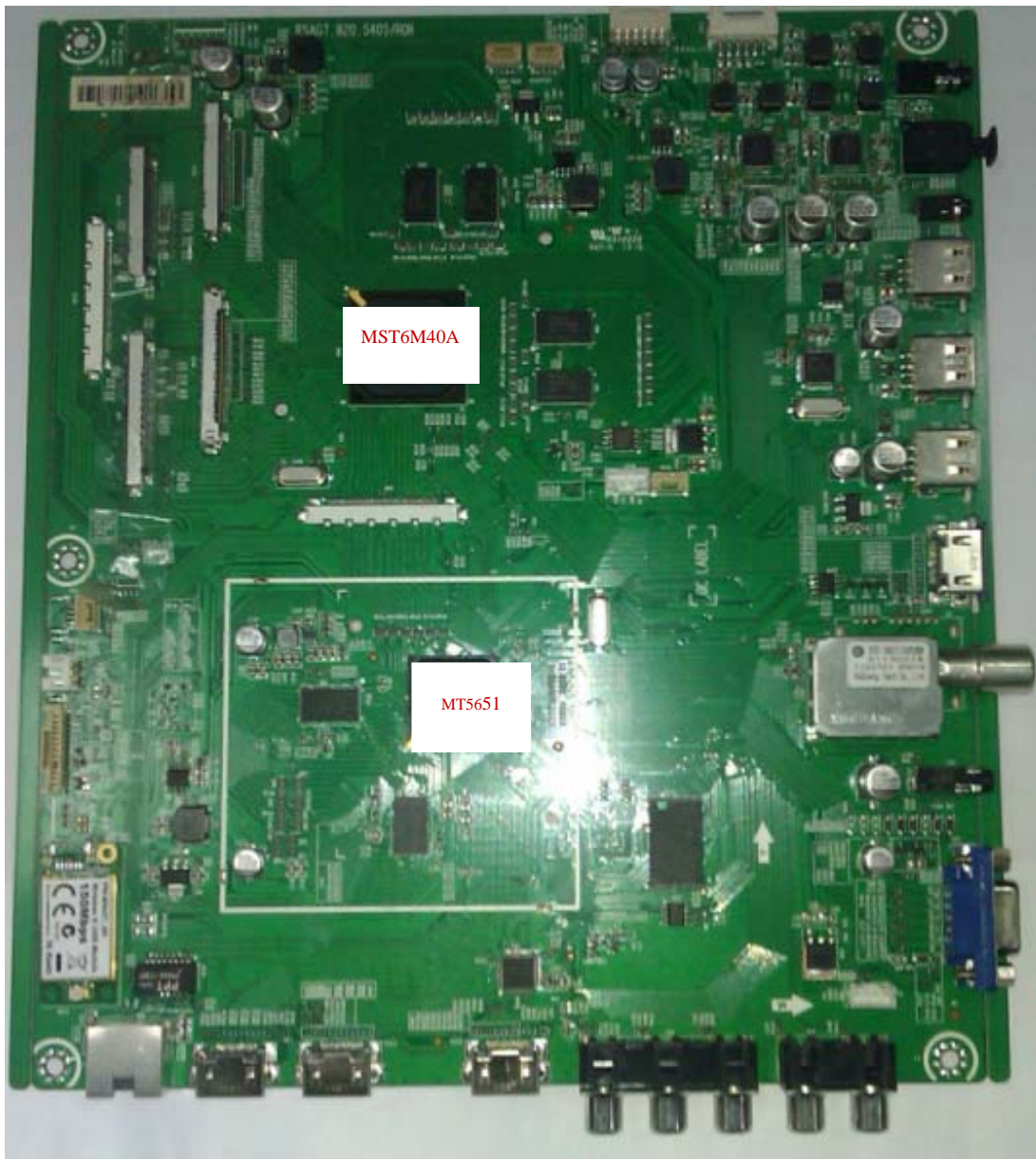
- * Please use HDMI 1.4 format HDMI cable to play UHD (4K*2K) content.
- * Sources of UHD (4K*2K) content must be connected to the HDMI-1 input. For the moment digital television channels do not deliver UHD content.
- * Features, appearance and specifications are subject to change without notice.

Playable format list

File Extension	Container	Video Decoder	Resolution	Frame/Sec	Audio Decoder
*.avi	AVI	Divx3.11 / 4.x / 5.1	1920x1080	30	MP3/AC3/MPEG4 AAC/ MPEG2 AAC
		MPEG2 MP MPEG4 SP/ASP	1920x1080	30	
		H.264 MP/BP/HP	1920x1080	30	
*.wmv *.asf	ASF	Divx 3.11	1920x1080	30	MP3/WMA
		MPEG4 SP/ ASP	1920x1080	30	
*.mp4 *.mov	MP4	MPEG4 SP/ ASP	1920x1080	30	MP3/MPEG2 ACC/MPEG4 AAC
		H.263	1408x1152	30	
		H.264 MP/BP/HP	1920x1080	30	
*.mkv	MKV	H.264 MP/BP/HP	1920x1080	30	MP3/MPEG2 AAC/MPEG4 AAC/AC3
		MPEG4 SP/ ASP	1920x1080	30	
		Divx3.11 / 4.x / 5.1	1920x1080	30	
*.mpg *.mpeg	PS	MPEG1	768x576	30	MP3/AC3
		MPEG2 MP	1920x1080	30	
.ts	TS	H.264 MP/BP/HP	1920x1080	30	MPEG Layer1/MPEG2 AAC/ MPEG4 AAC
		MPEG2 MP	1920x1080	30	
*.FLV	FLV	H.264 MP/BP/HP	1920x1080	30	MP3/MPEG2 AAC/MPEG4 AAC
*.vob	PS	MPEG1	1920x1080	30	MP3/AC3
		MPEG2 MP	1920x1080	31	
*.rm	RM	RV8/RV9 RV10	1920x1080	30	AC3/MPEG4 AAC

Model	LEDN58XT880X3DS	LEDN65XT880X3DS
Size with base (mm)	1300×795×345	1460×876×345
Size without base (mm)	1300×754×59	1460×852×65
Weight with base (kg)	36	44
Weight without base (kg)	29	37
Screen Diagonal Size	58 inches	65 inches
Screen Resolution	3840 × 2160	3840 × 2160
Sound Output (RMS)	10 W + 10 W	10 W + 10 W
Power Consumption	Refer to the rating label	
Power Supply	Refer to the rating label	
Colour System	PAL NTSC	
Television System	PAL B DVB-T	
Environmental Conditions	Temperature: 5°C - 45°C Humidity: 20% - 80% RH Atmospheric pressure: 86 kPa - 106 kPa	
Component mode	480I/60Hz, 480P/60Hz, 576I/50Hz, 576P/50Hz, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz	
VGA mode	640×480, 800×600, 1024×768, 1280×1024 60Hz	
HDMI mode	480I/60Hz, 480P/60Hz, 576I/50Hz, 576P/50Hz, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz 640×480, 800×600, 1024×768 3840x2160/24Hz, 3840x2160/25Hz, 3840x2160/30Hz only for UHD port	

2.3 Main board: 5405



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, 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

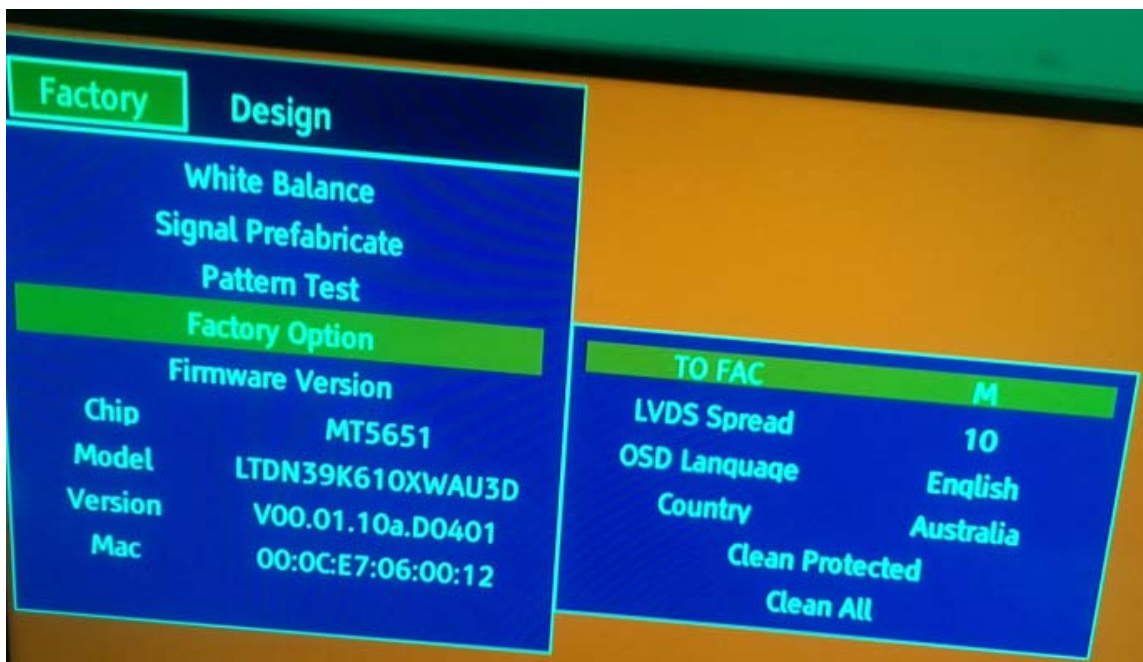




3.2.1 White Balance

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

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



Note:

Above “Factory/Service OSD Menu” is reference for chassis MTK5651 , please refer to the actual units to determine the appearances.

4. Software Upgrading

Before upgrading, read the following.

First: Upgrade the software.

Second: 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.

Last: After the operation above all, necessarily, Re-search the channels for the users

4.1 USB Software Upgrading directly

The software can be upgraded by USB Disk.

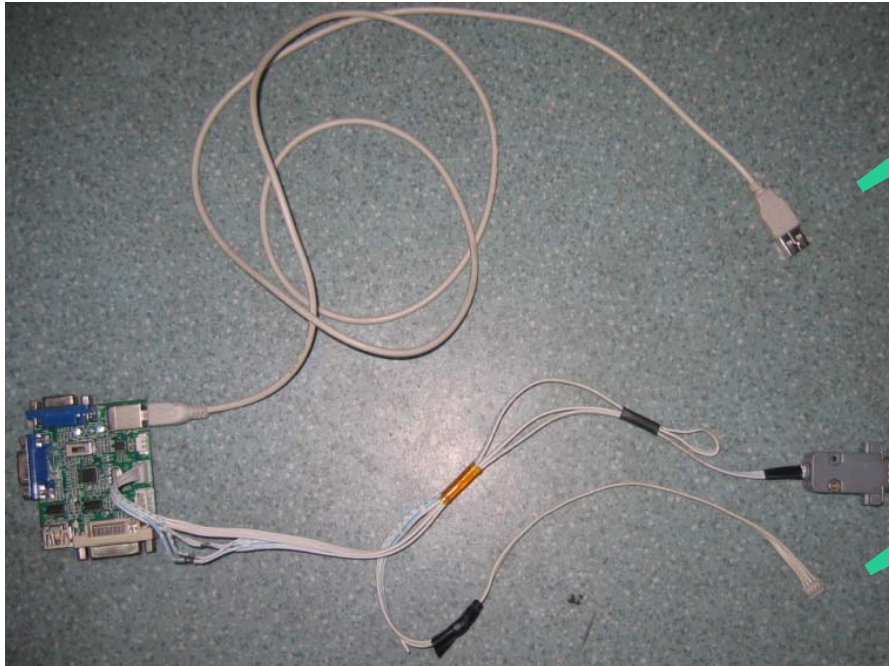
- First, copy the upgrade_loader.pkg file to USB Disk;.
- Second, make sure there is no other .pkg file in the root directory of USB Disk such as upgrade.pkg or upgrade_loader LTDN55XT710XWAU3D.pkg.
- Insert USB Disk to USB port, and then turn on the TV.
- The TV will identify the software and upgrade 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

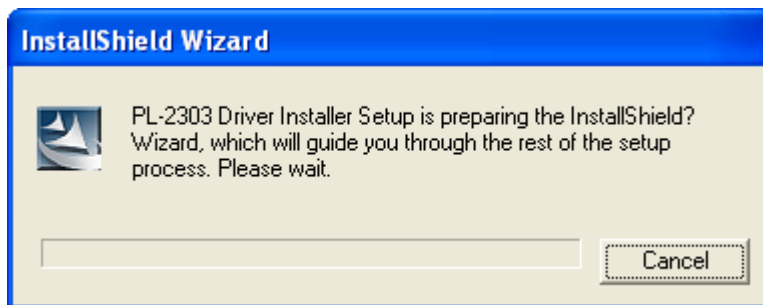


USB Connect to the PC

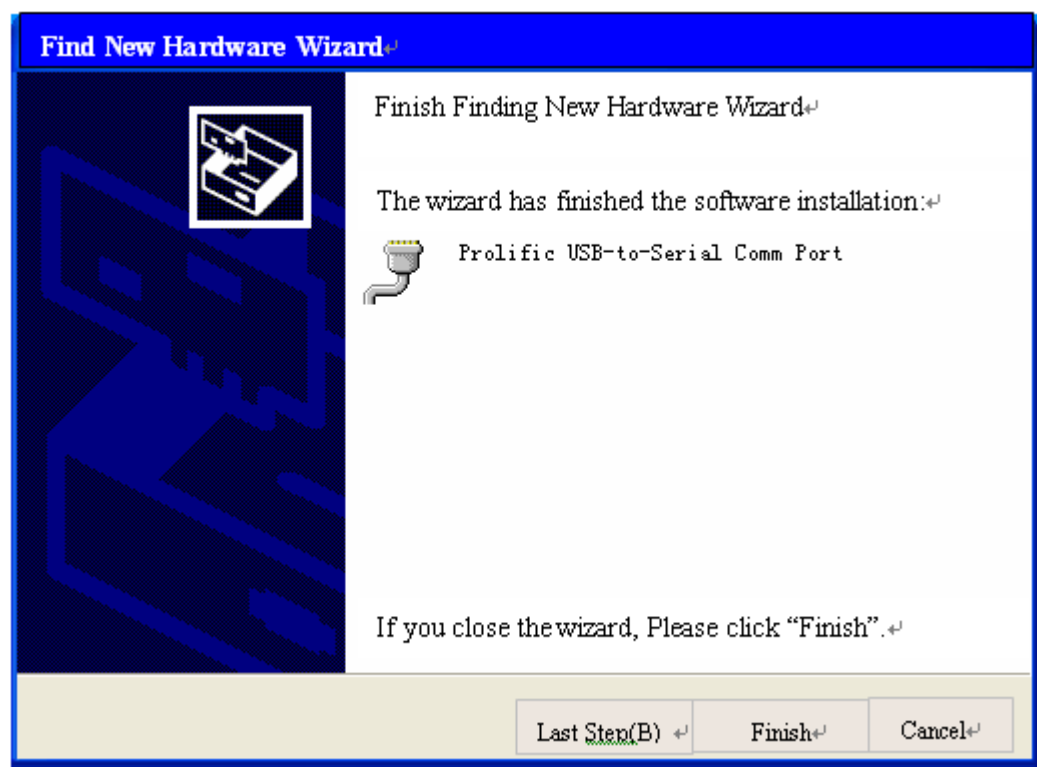
Connect to the TV RS232 port

4.2.1 Install the driver

Double click the icon , install the driver.

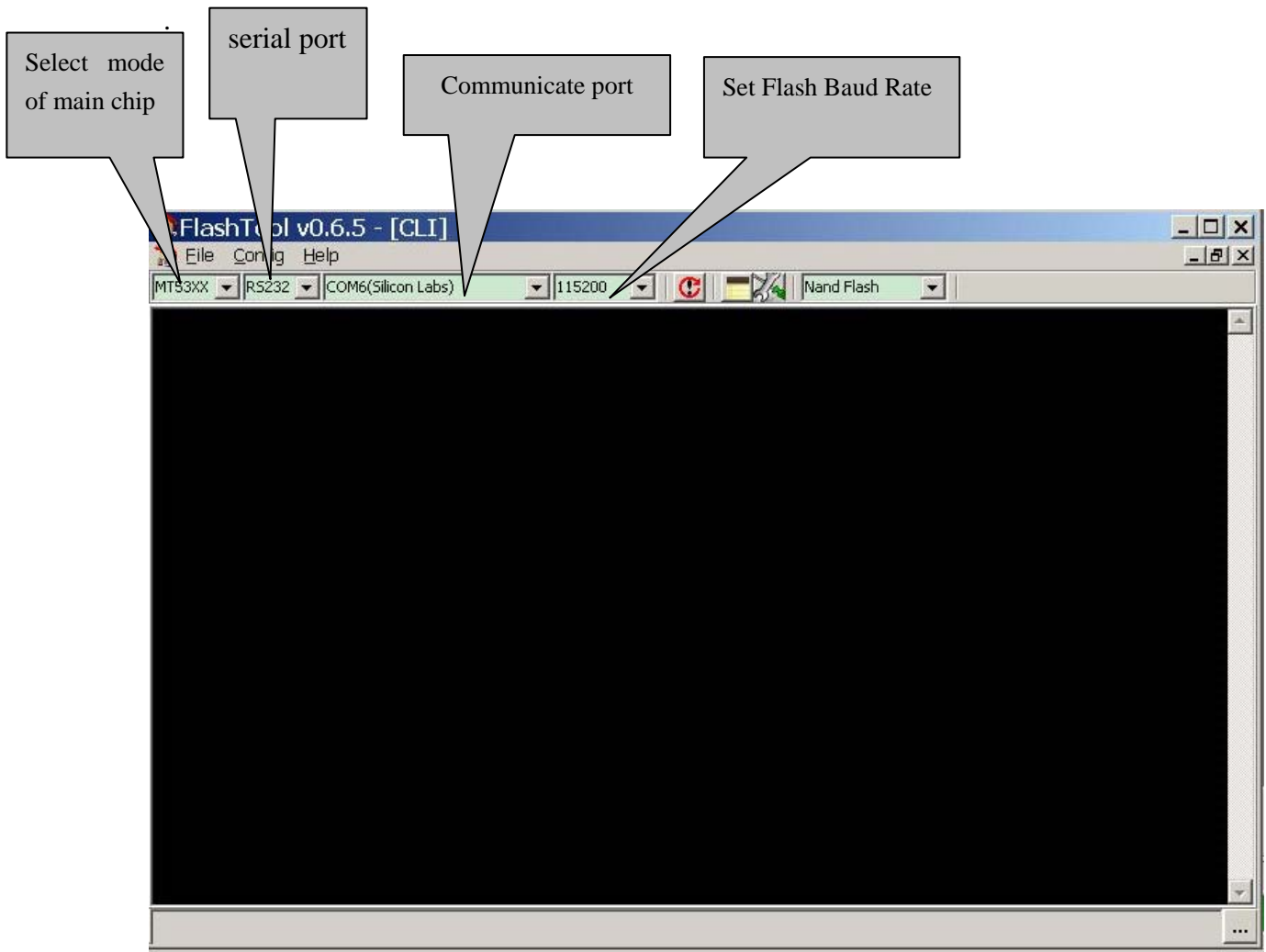


Select the default value, the driver will be installed step by step.

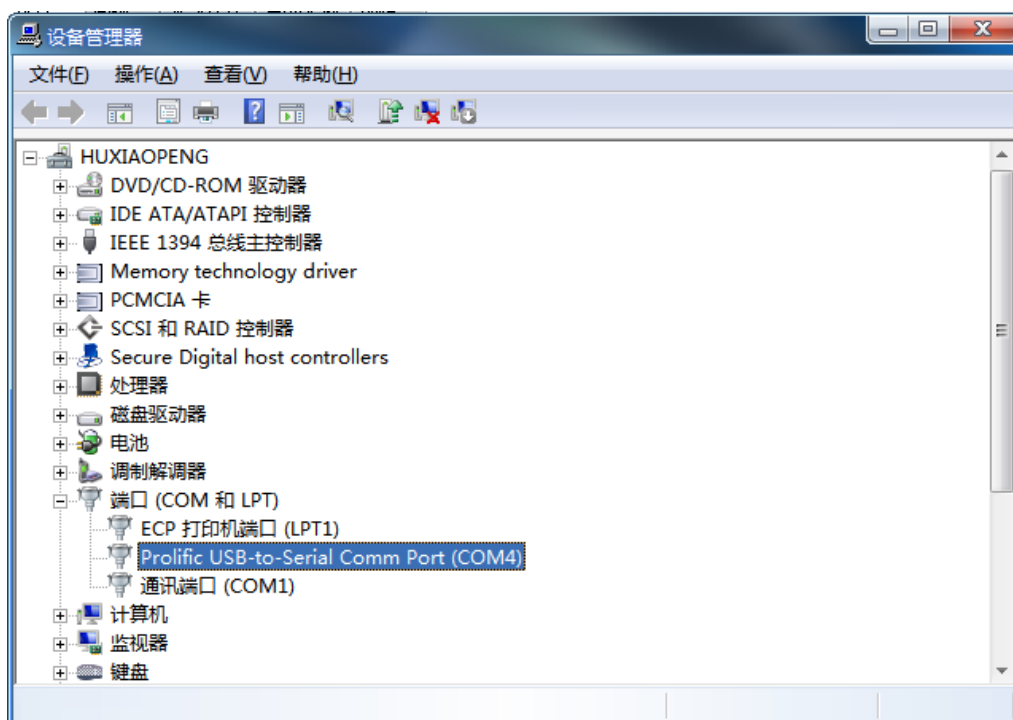


4.3 Upgrading with the FlashTool0.6.0.exe




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.

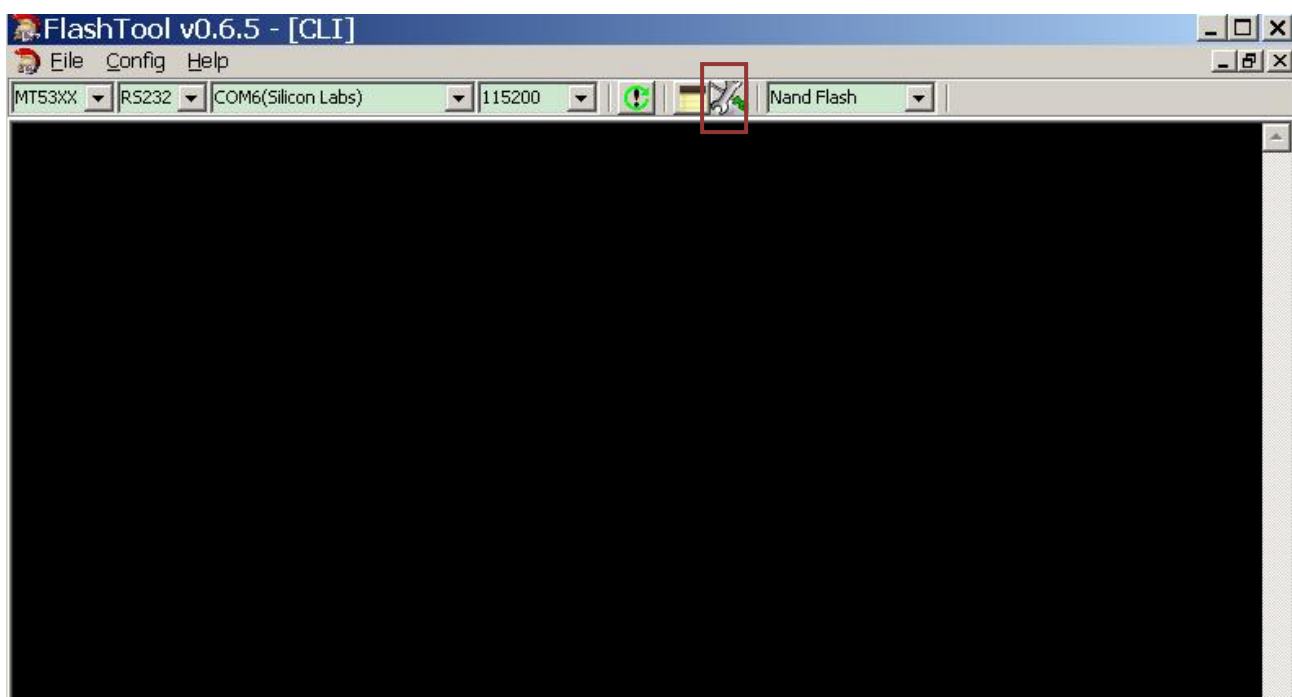



How to choose Communicate port and flash baud rate? See the following instruction..

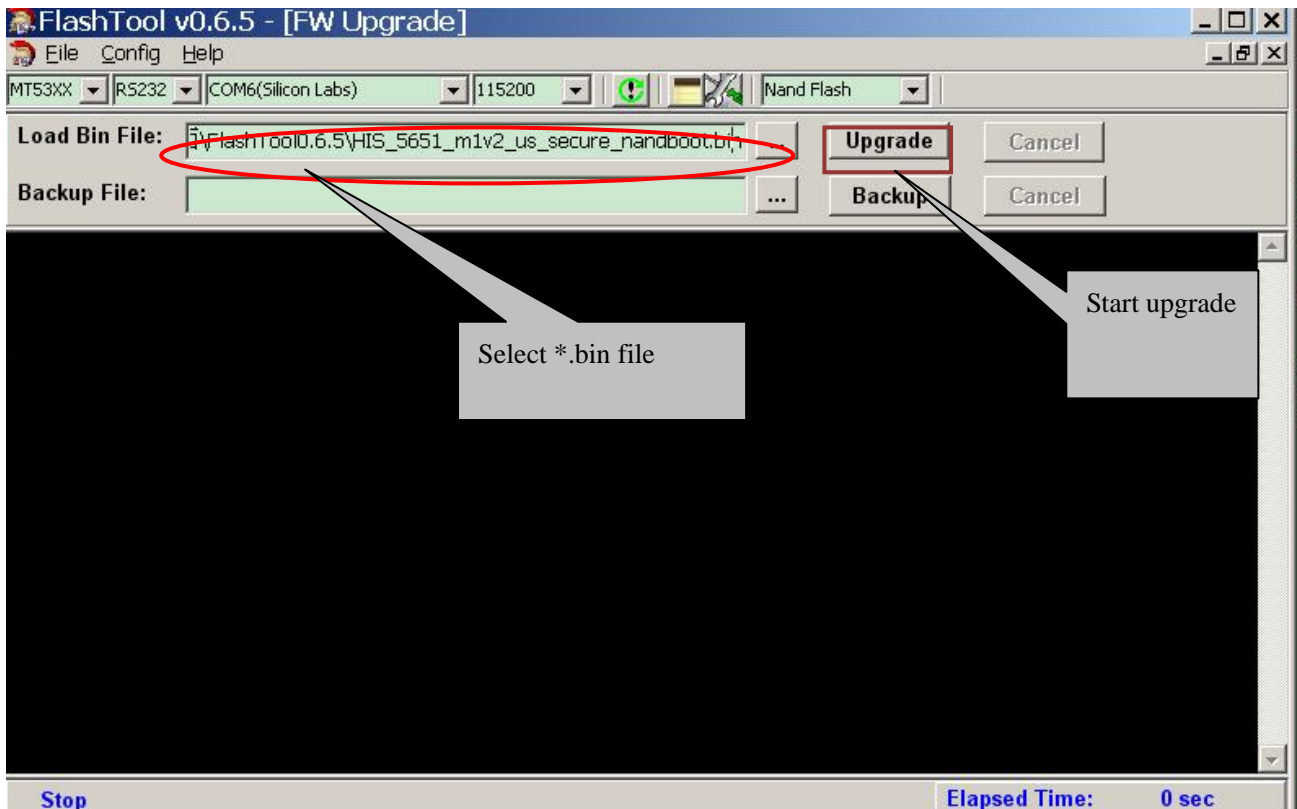


Open “Device Manager” and find which port is connected with the TV. In above picture, COM4 is connected to the TV, so, select “COM4” and if COM6 is connected to the TV, so select “COM6”. Select the right baud rate according to chip model. For this unit(chip model is MT5651), select 115200.

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.



4.4 Network online updating

Network online updating includes two ways. one is “Auto Upgrade ”the other is “Network Upgrade”. If Auto Upgrade is ON, then Network Upgrade is invalidated ; if Network Upgrade is on, then Auto Upgrade is invalidated.

Auto Upgrade---- When it is set to “on” , Turn on automatic check whether or not have any new updating file in servers when connects 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.

1、 Auto Upgrade

Power on

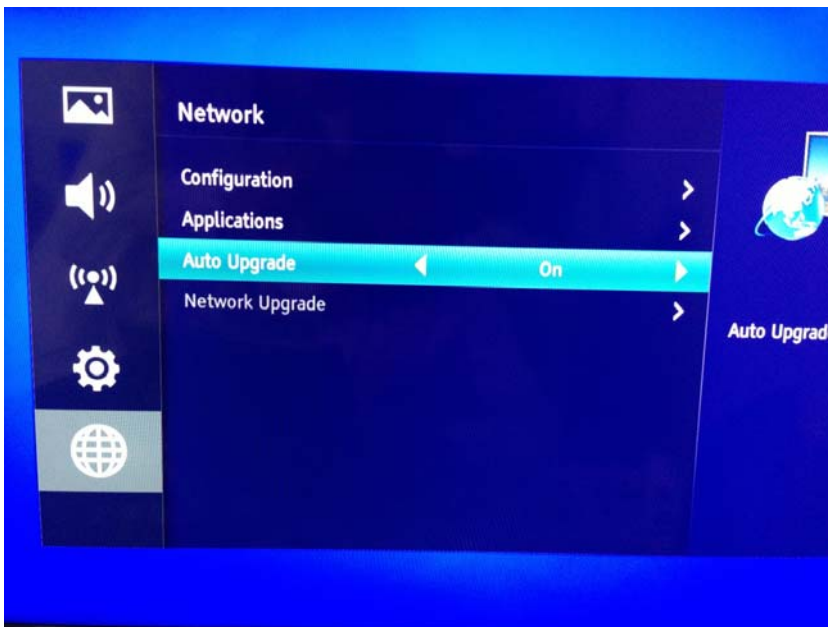


Figure-1

If have checked new version, then bounce the following .



Figure-2

Select update to download.....



Figure-3

When Finish downloading ,system automatic verify updating wizard.



Figure-4

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



Figure-5

Upgrade successfully. power off and restart TV can bounce following prompt message. otherwise upgrade is defeat.

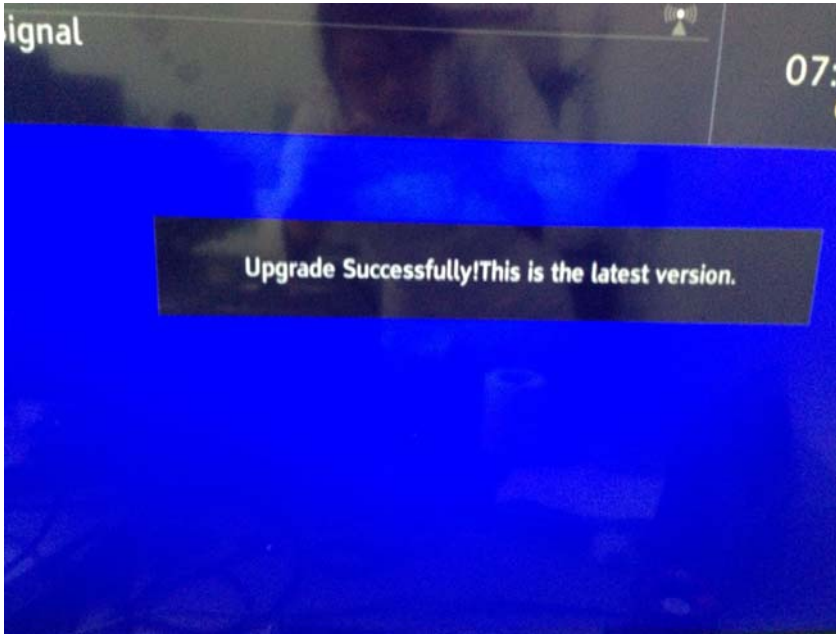


Figure-6

2、 Network Upgrade

Network upgrade and auto upgrade have little difference only in figure-2 as following
Updating can step by step according the prompt..

Auto Upgrade:

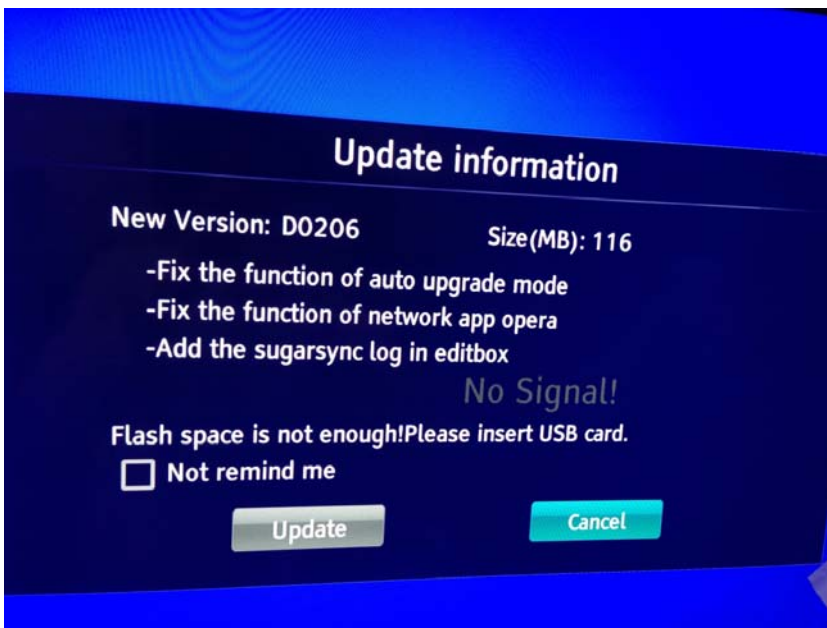


figure-1

Network upgrade:

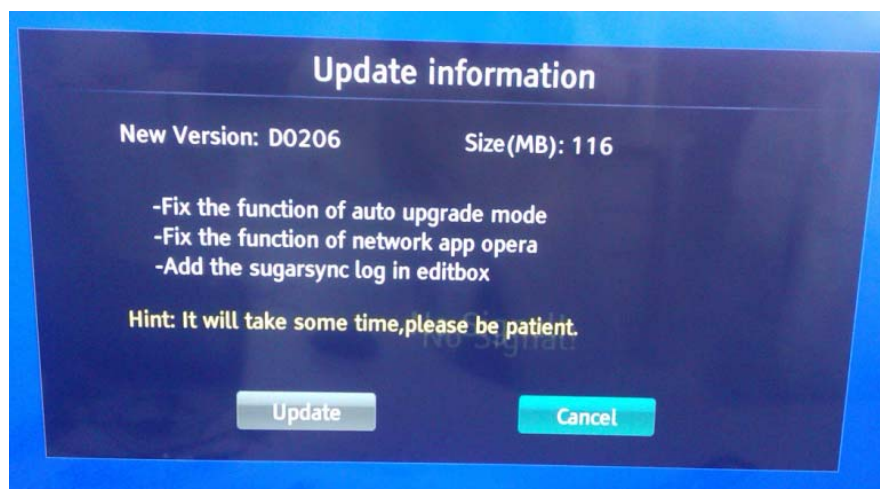


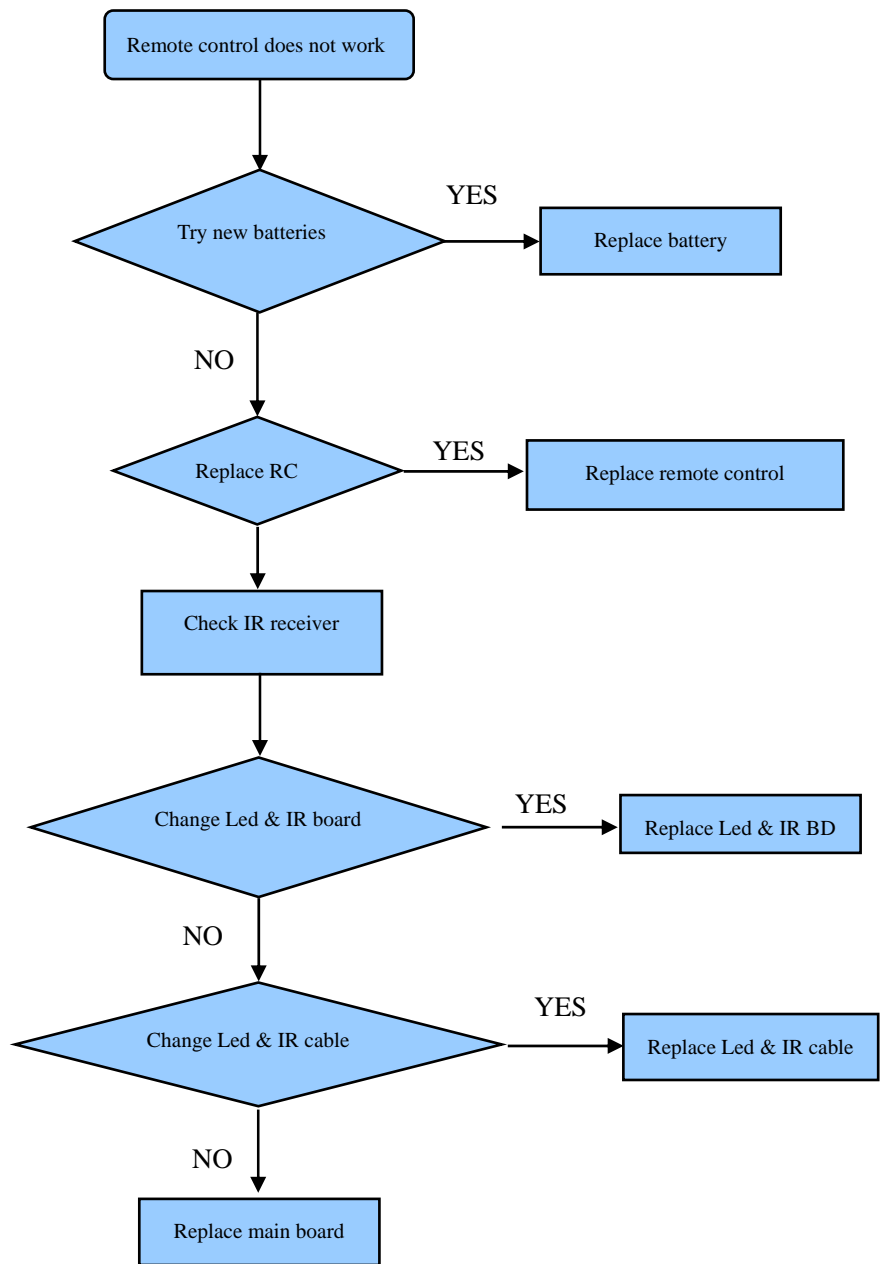
figure-2

5. Trouble shooting

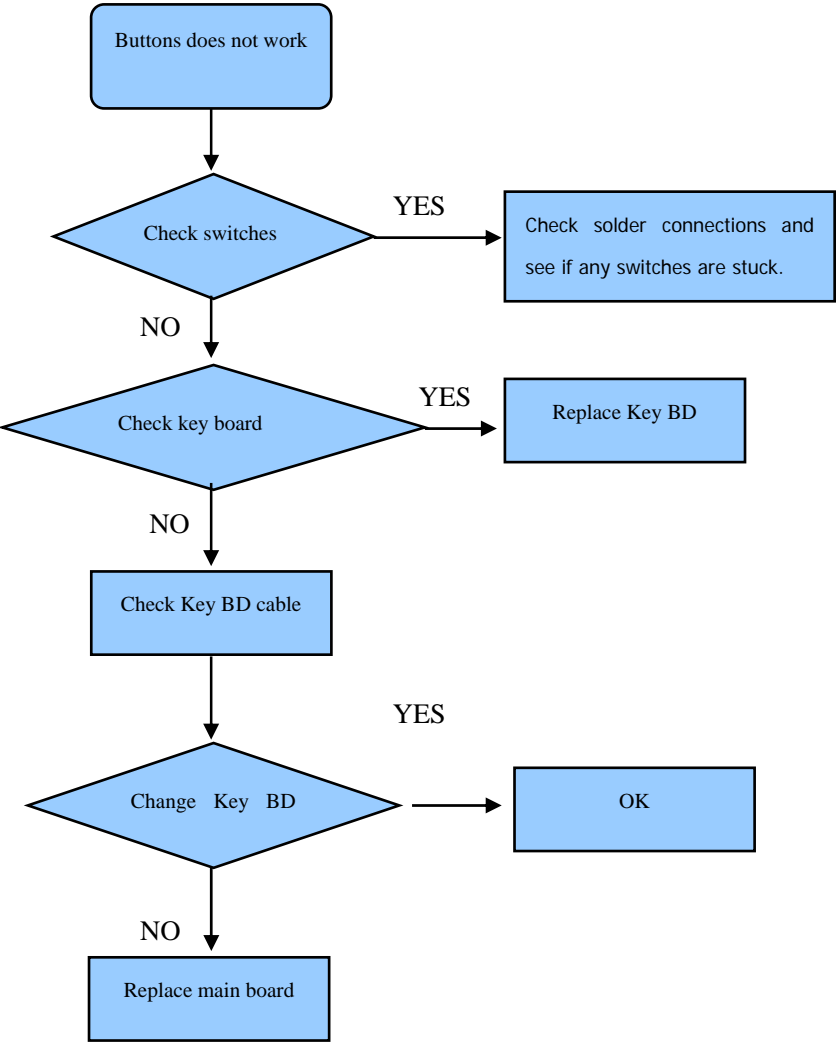
When there is something wrong with your TV, you can try turning off the TV and then restart it. You can also operate according to the follow chart. If the problems still can't be solved, please contact the profession technician.

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.

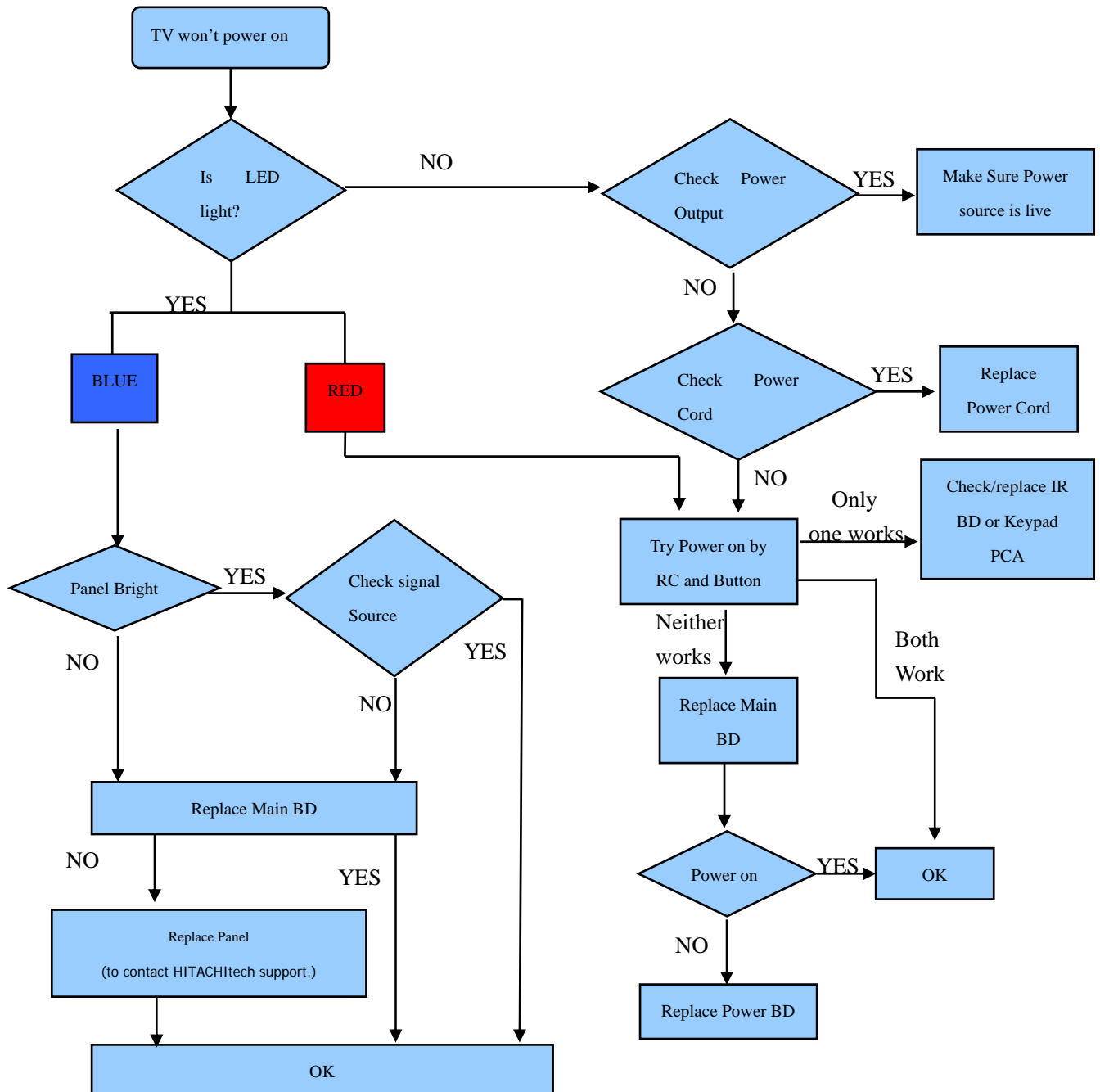
5.1 Troubleshooting for Remote Control



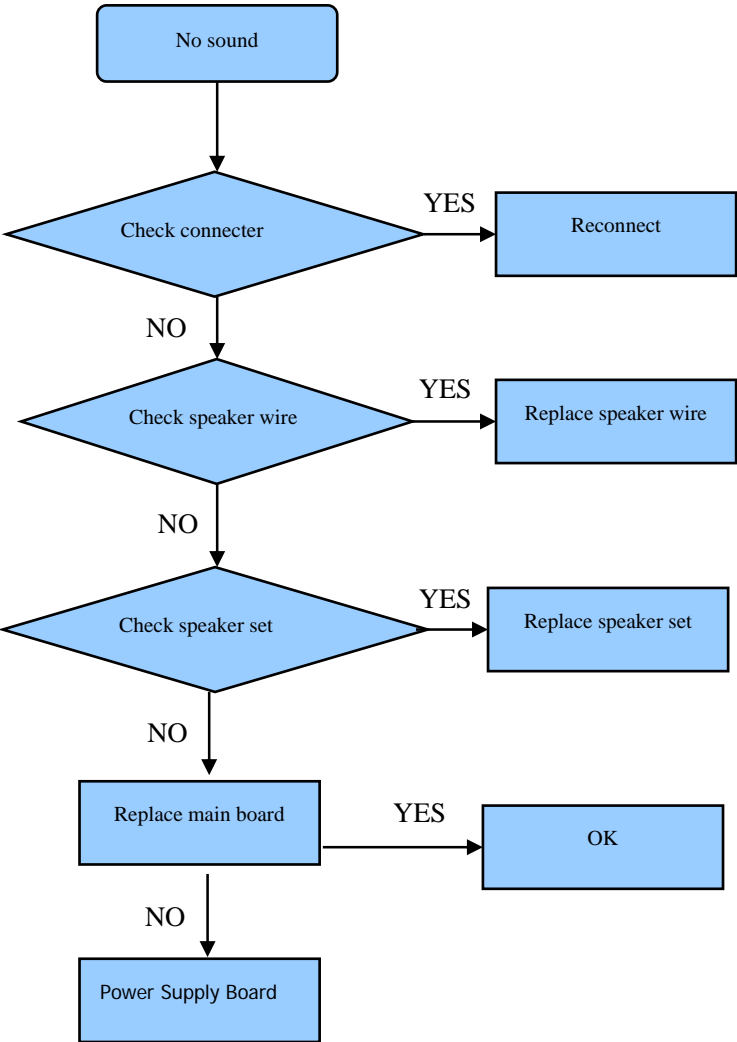
5.2 Troubleshooting for Function Key



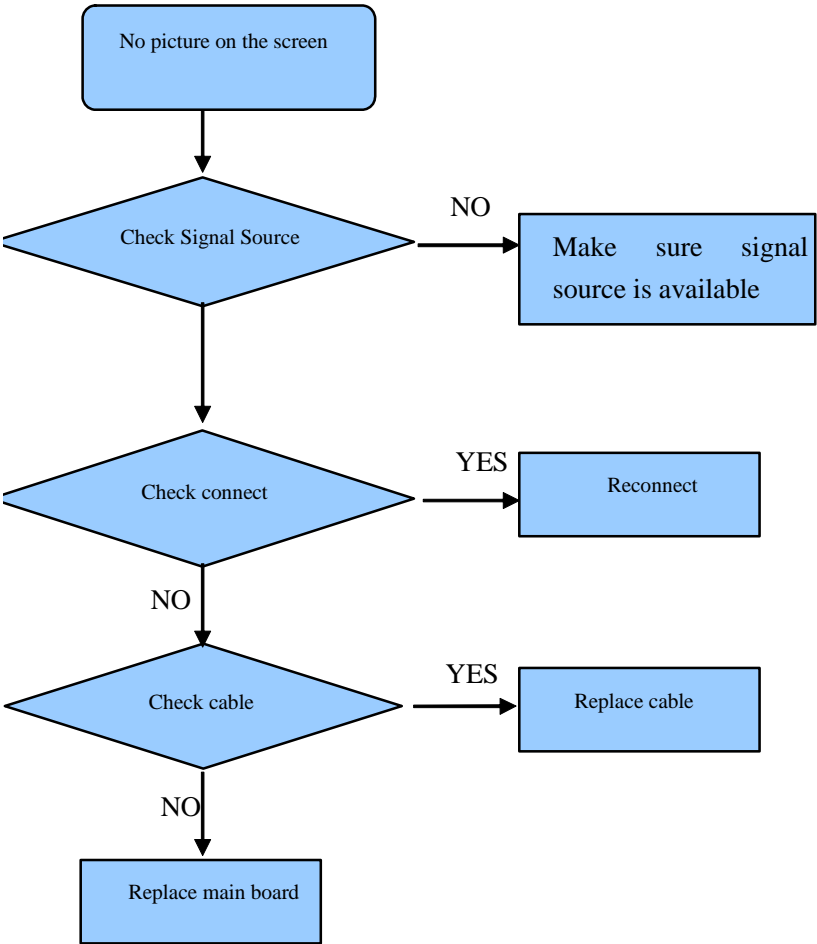
5.3 TV won't Power On



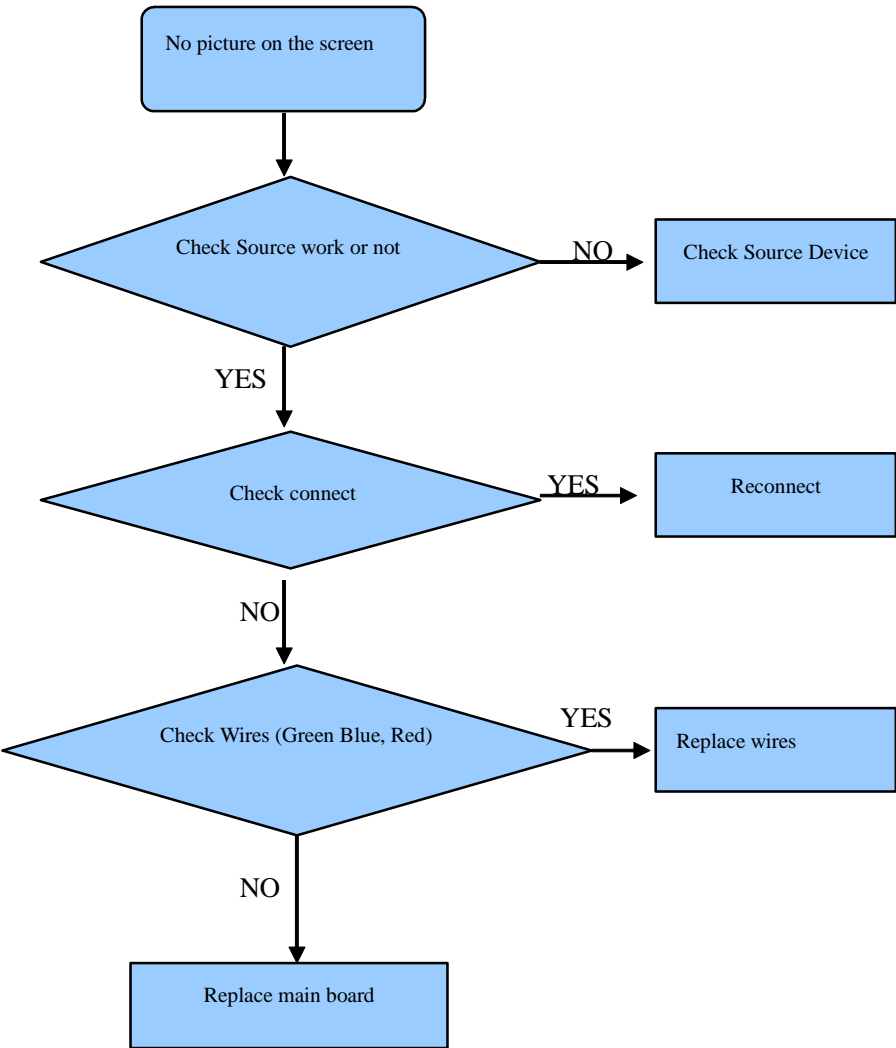
5.4 Troubleshooting for Audio



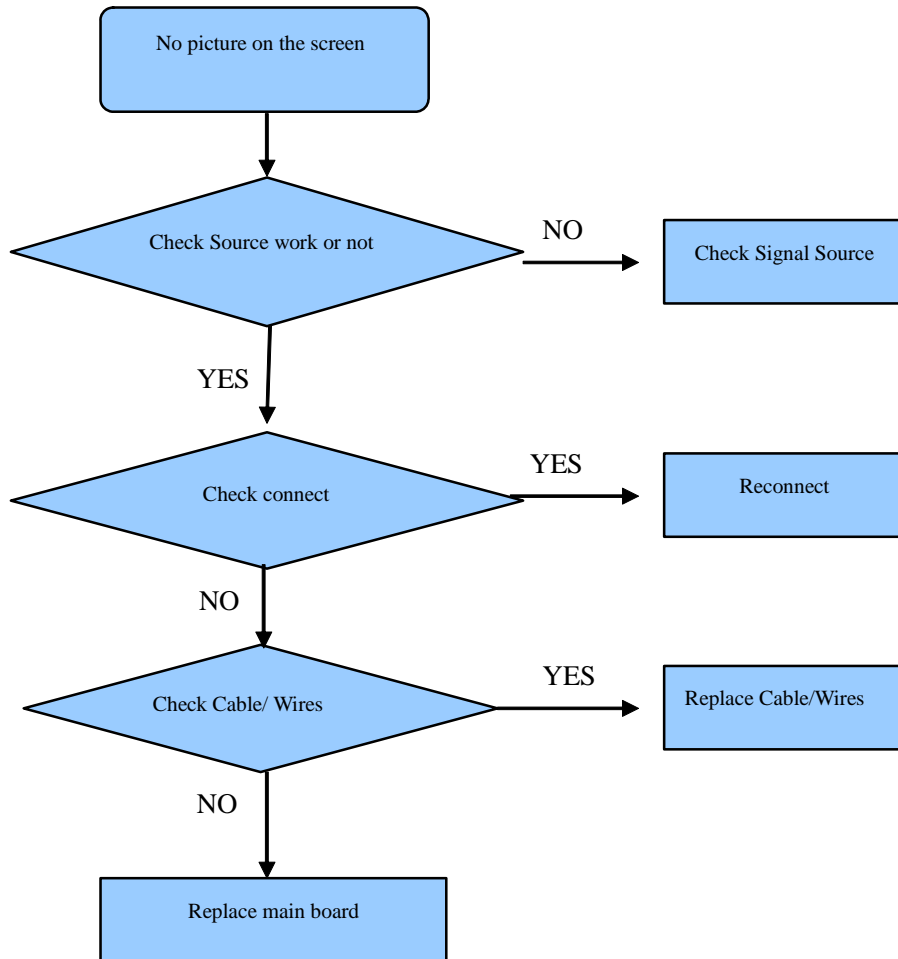
5.5 Troubleshooting for TV/VGA/HDMI input



5.6 Troubleshooting for YPbPr input



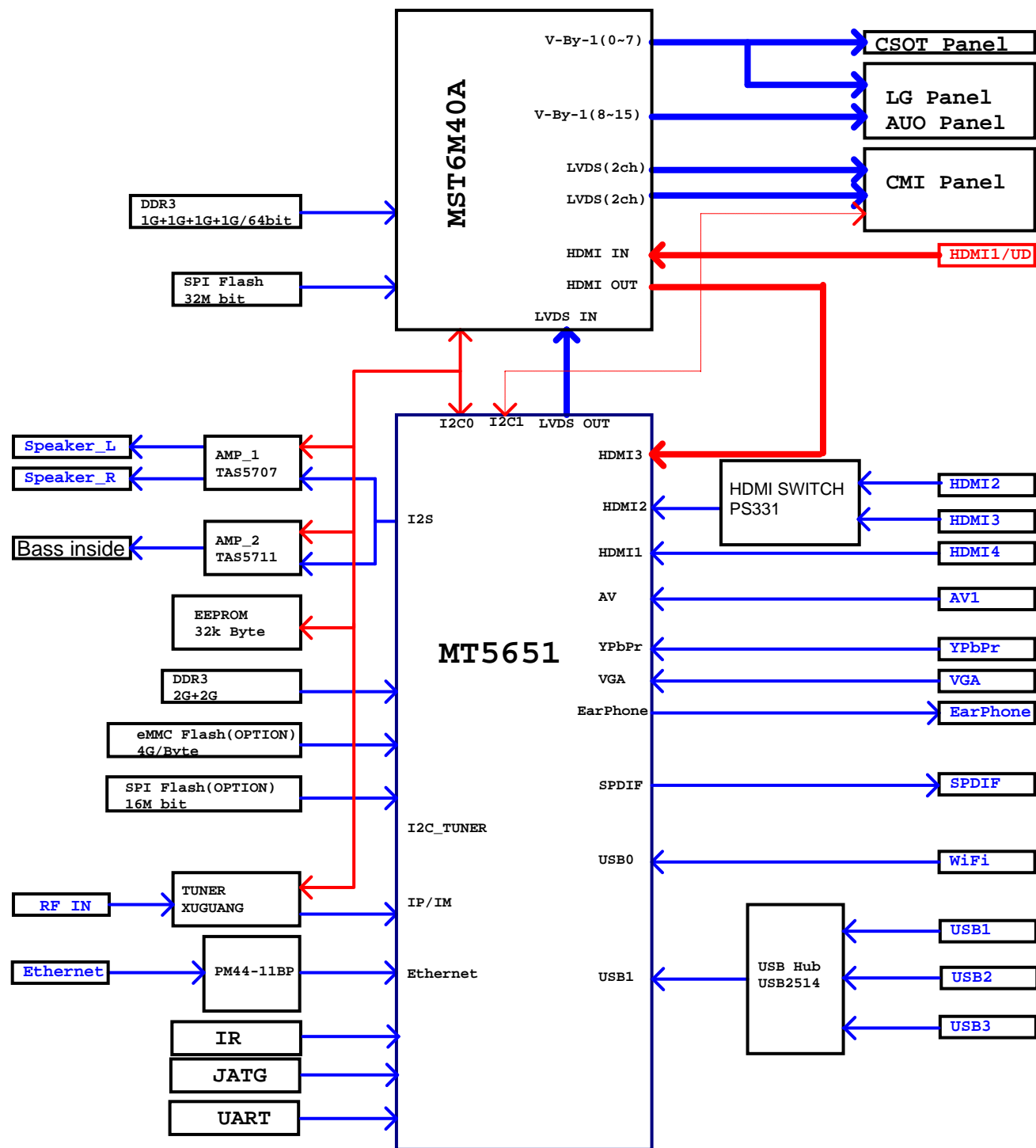
5.7 Troubleshooting for Video input

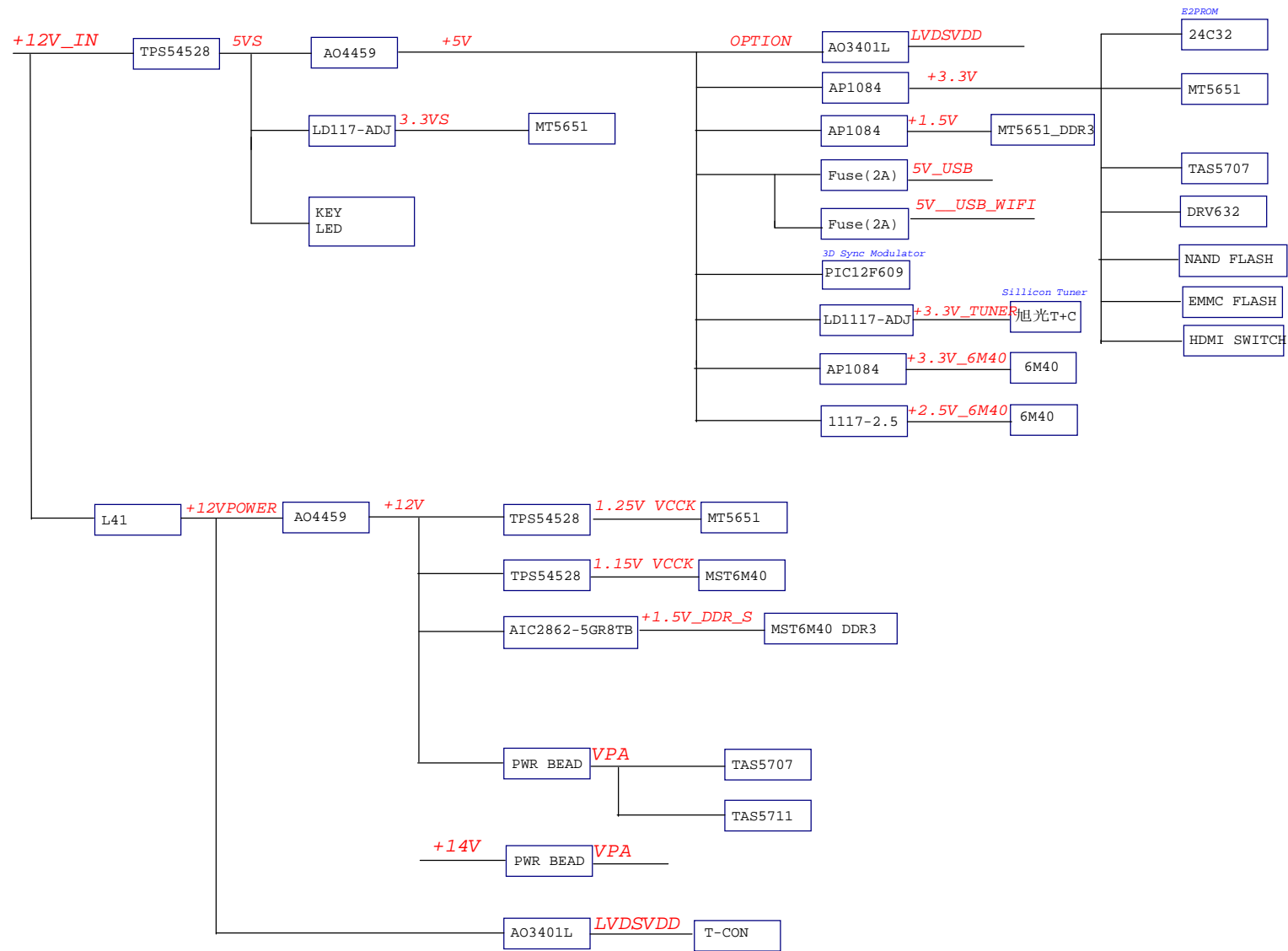


6. Signals Block Diagram and power assign:

7. Schematic circuit diagram

8. Explode View

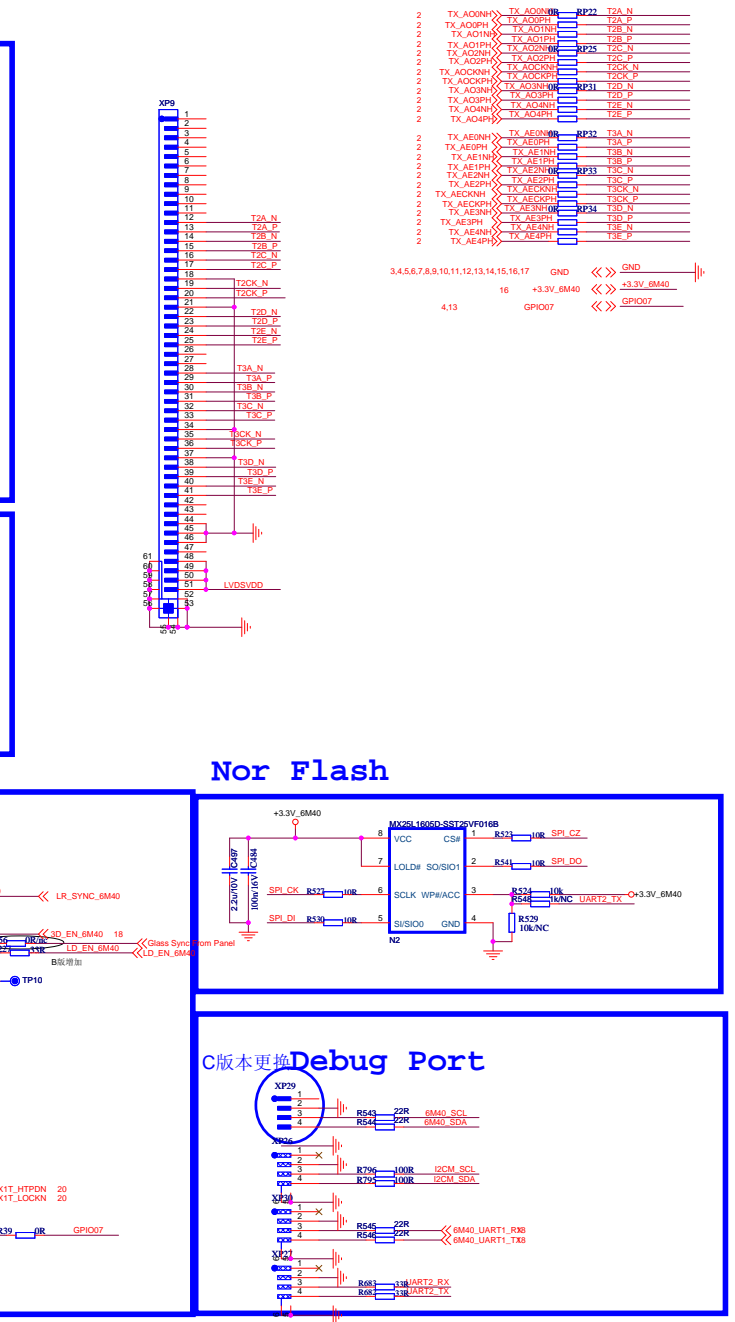
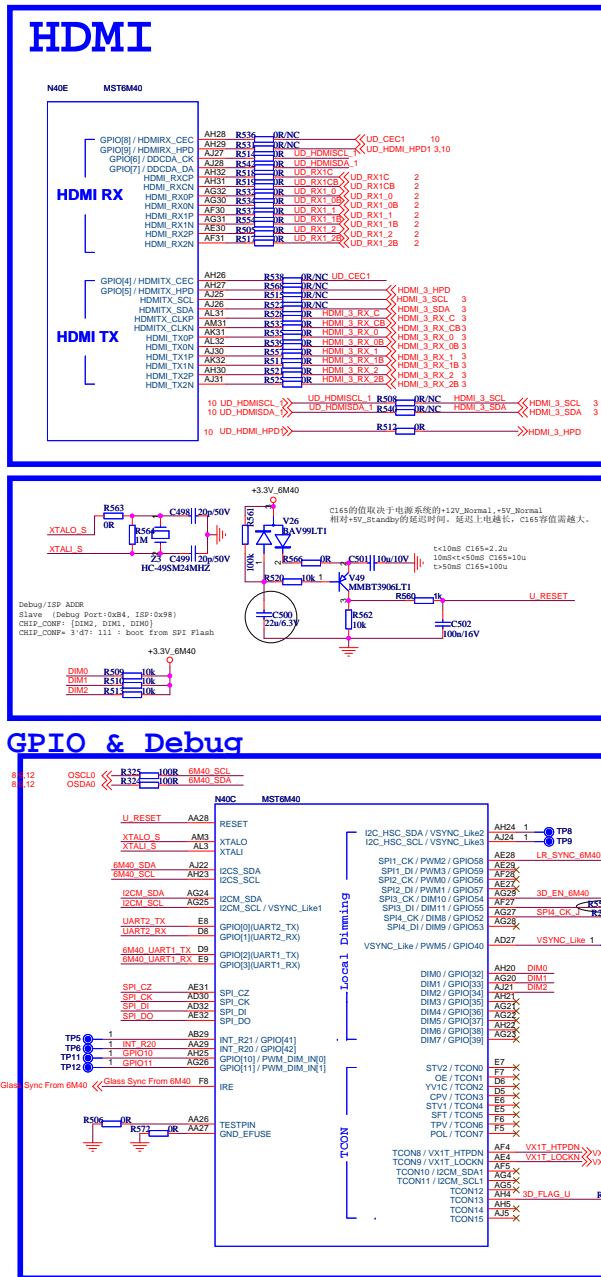




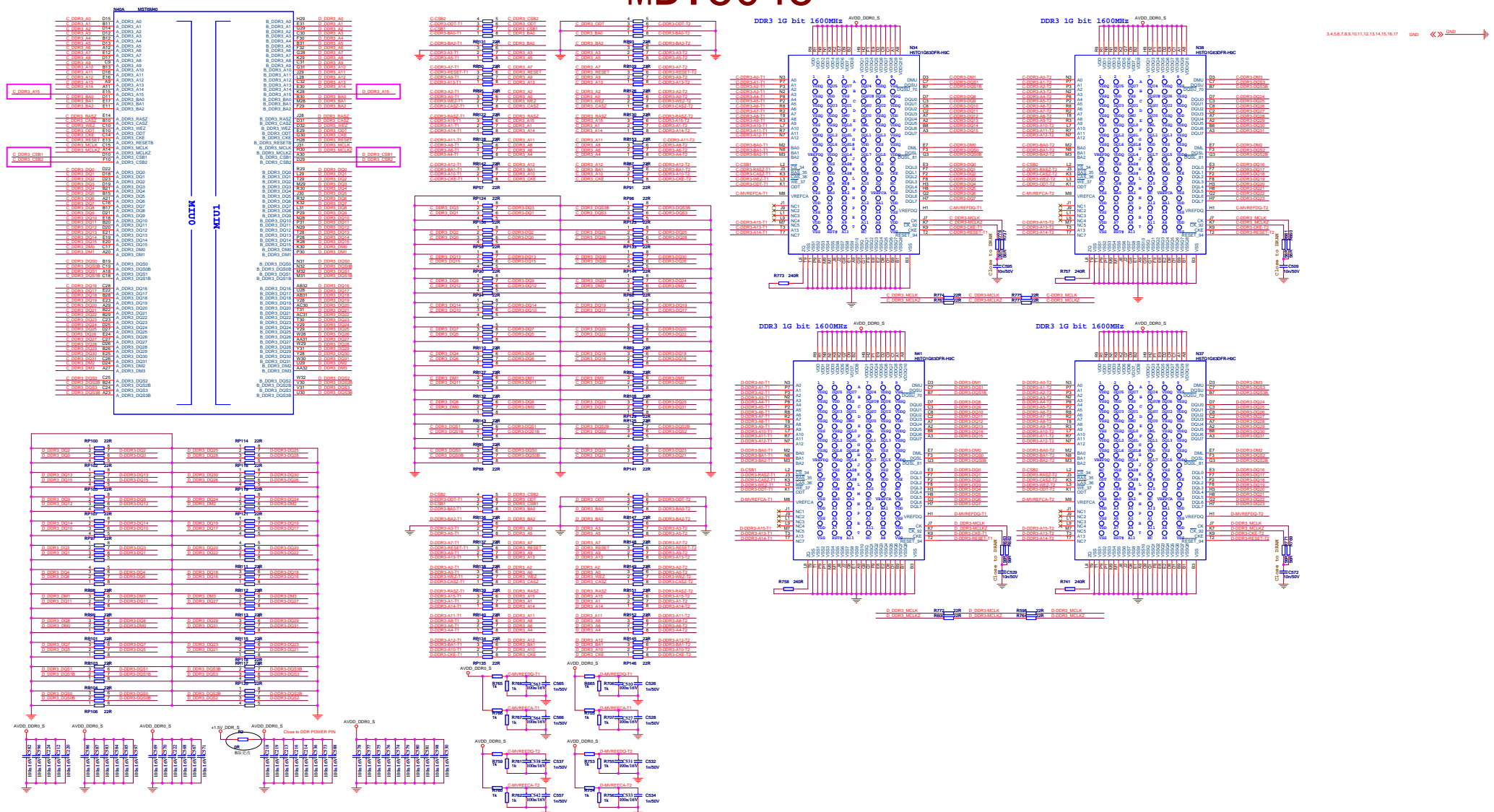
GPIO LIST

PIN NAME	GPIO Function	Function define
GPIO_0		LOCAL_DIM_EN
GPIO_1		PWR_FAULT#
GPIO_2		LVDS_PWR_EN
GPIO_3		EMMC_RST
GPIO_4		WIFI_EN
GPIO_5		1292_RESET#
GPIO_6		1292_INT
GPIO_7		1292_WAKEUP
GPIO_8		HPDET#
GPIO_9		SYS_EEPROM_WP
ADIN0		SCART_FS_SEL
ADIN1		
ADIN2		ADIN0
ADIN3		ADIN1
ADIN4		MUTE_HP
ADIN5		MEMC_ON/OFF
OPCTRL0		strap[1] AMP_MUTE
OPCTRL1		BL_ON/OFF
OPCTRL2		3D_EN
OPCTRL3		strap[2]
OPCTRL4		strap[3] RST_AMP
OPWM0		PWM2
OPWM1		POWER_LED
OPWM2		BL_DIMMING
OPWM3		LED_DX
OPWM4		
OPWM5		LED2/PHYAD2
OPWM6		LED3/PHYAD3
PACLE		strap[0]

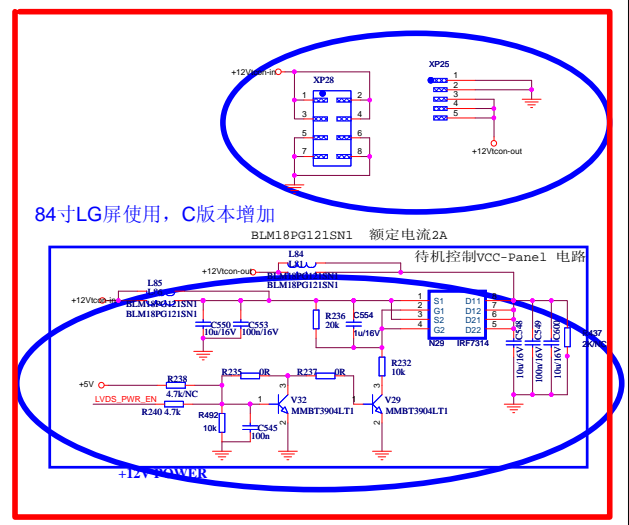
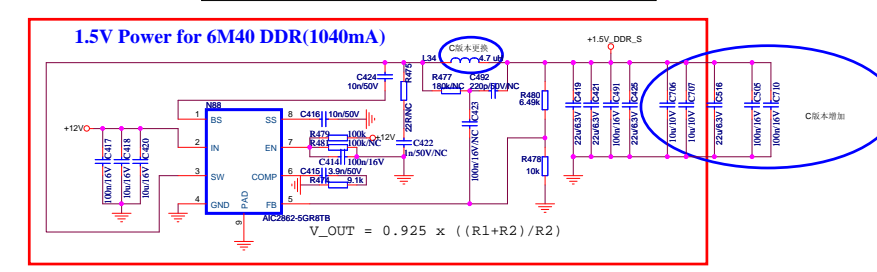
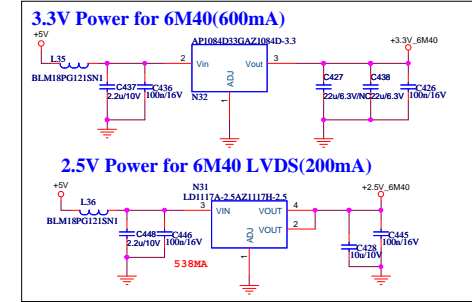
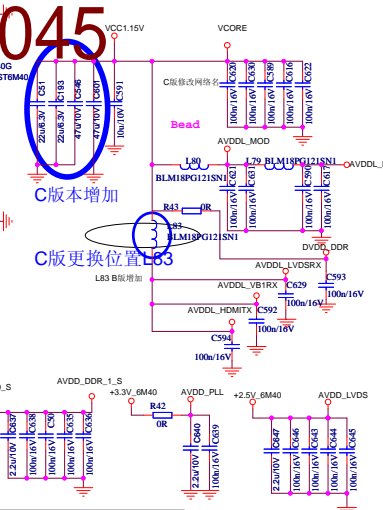
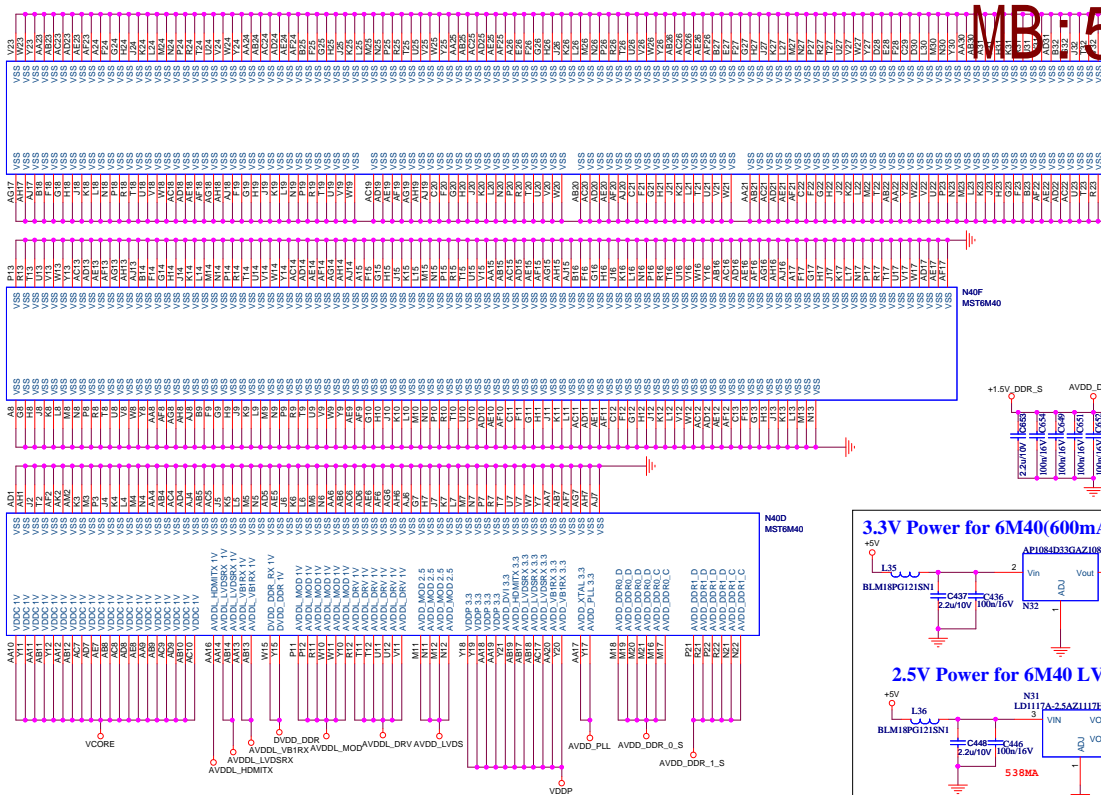
MB : 5045



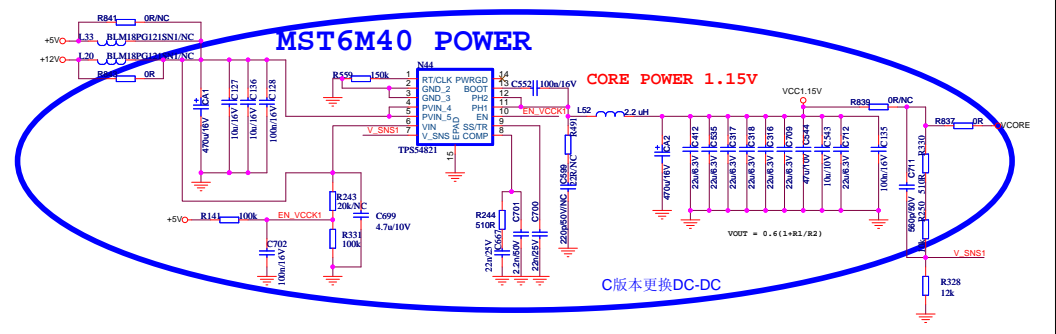
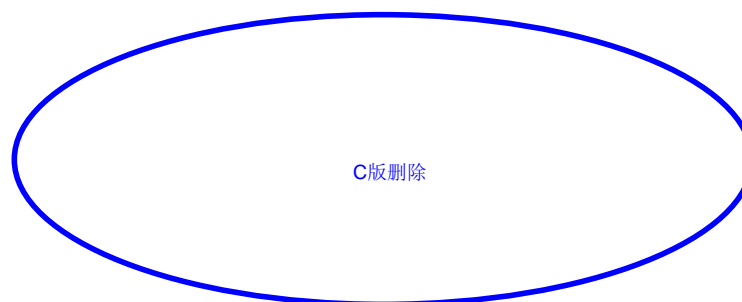
MB : 5045



MB: 5045



Core Power(至少需使用4A DC/DC)



VB1 for LG & AUO

MB-5045

VB1 for CSOT

LVDS for CMI

18	VB0N_TX	C226	100n/16V/NC	VB0N
18	VB0P_TX	C286	100n/16V/NC	VB0P
18	VB1N_TX	C290	100n/16V/NC	VB1N
18	VB1P_TX	C293	100n/16V/NC	VB1P
18	VB2N_TX	C284	100n/16V/NC	VB2N
18	VB2P_TX	C287	100n/16V/NC	VB2P
18	VB3N_TX	C289	100n/16V/NC	VB3N
18	VB3P_TX	C282	100n/16V/NC	VB3P
18	VB4N_TX	C285	100n/16V/NC	VB4N
18	VB4P_TX	C288	100n/16V/NC	VB4P
18	VB5N_TX	C291	100n/16V/NC	VB5N
18	VB5P_TX	C301	100n/16V/NC	VB5P
18	VB6N_TX	C331	100n/16V/NC	VB6N
18	VB6P_TX	C332	100n/16V/NC	VB6P
18	VB7N_TX	C332	100n/16V/NC	VB7N
18	VB7P_TX	C332	100n/16V/NC	VB7P

18	VB8N_TX	C375	100n/16V/NC	VB8N
18	VB8P_TX	C432	100n/16V/NC	VB8P
18	VB9N_TX	C449	100n/16V/NC	VB9N
18	VB9P_TX	C494	100n/16V/NC	VB9P
18	VB10N_TX	C377	100n/16V/NC	VB10N
18	VB10P_TX	C434	100n/16V/NC	VB10P
18	VB11N_TX	C439	100n/16V/NC	VB11N
18	VB11P_TX	C451	100n/16V/NC	VB11P
18	VB12N_TX	C376	100n/16V/NC	VB12N
18	VB12P_TX	C431	100n/16V/NC	VB12P
18	VB13N_TX	C435	100n/16V/NC	VB13N
18	VB13P_TX	C450	100n/16V/NC	VB13P
18	VB14N_TX	C495	100n/16V/NC	VB14N
18	VB14P_TX	C429	100n/16V/NC	VB14P
18	VB15N_TX	C433	100n/16V/NC	VB15N
18	VB15P_TX	C433	100n/16V/NC	VB15P

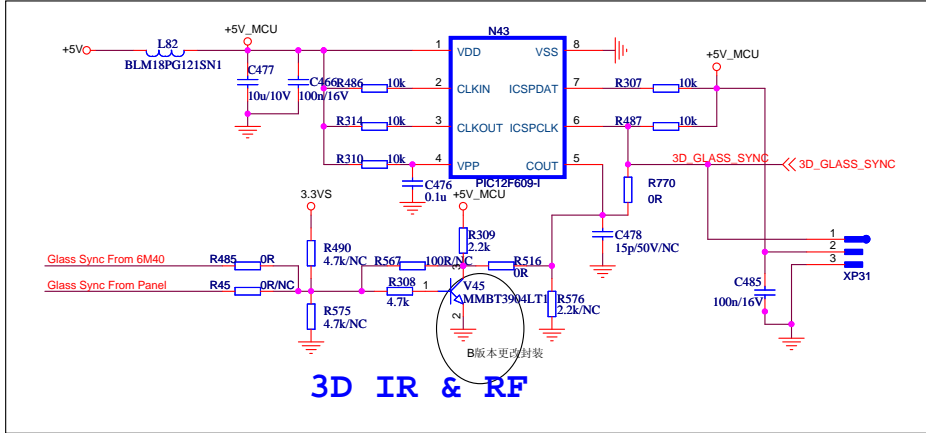
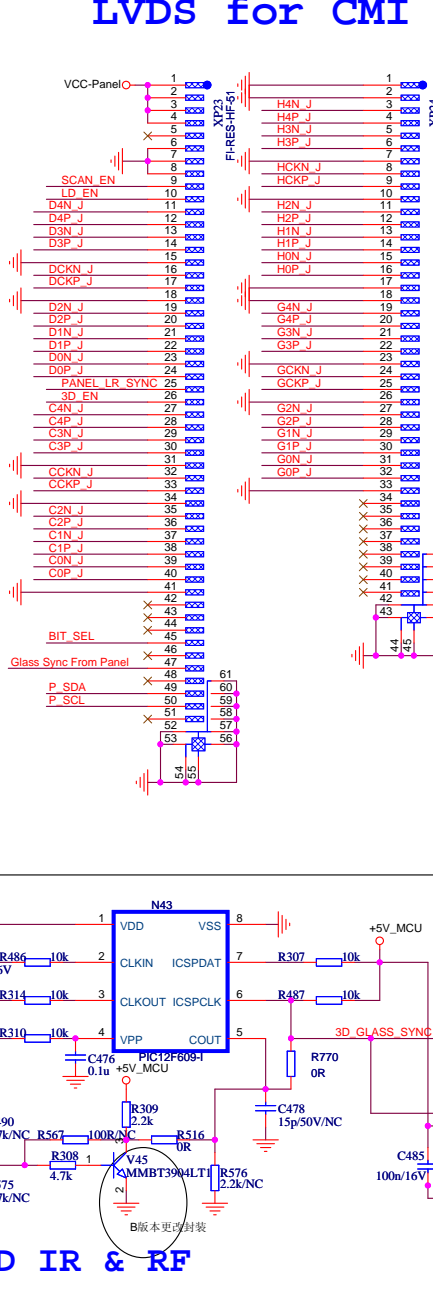
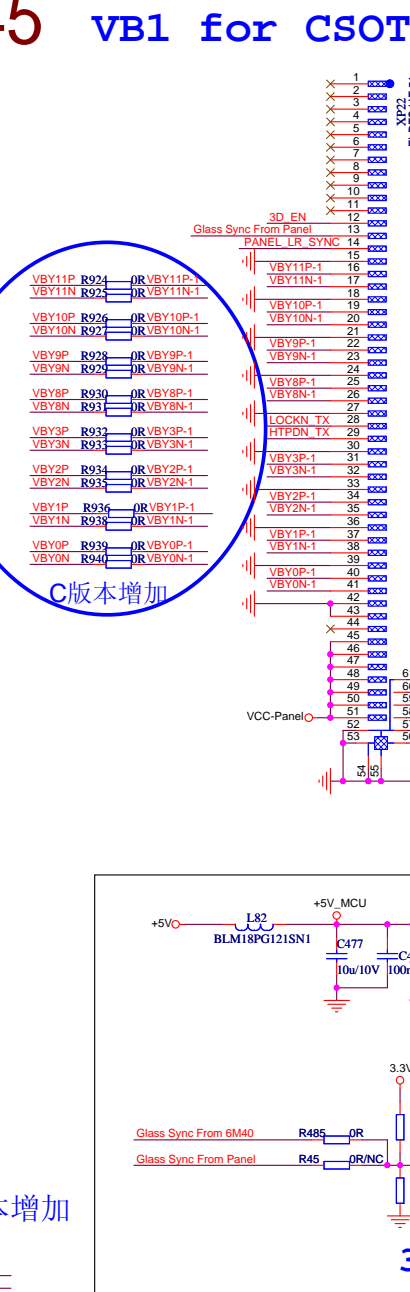
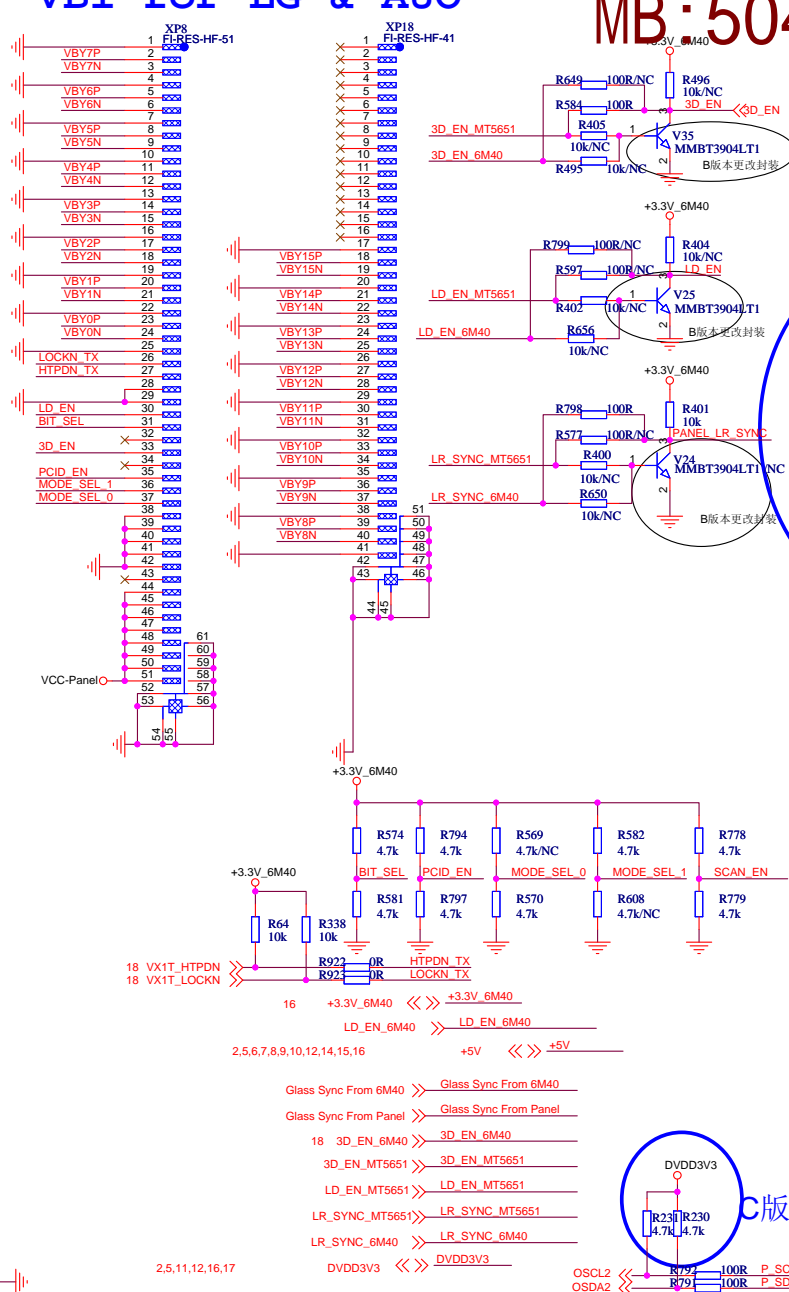
18	LVDS_C0P	R224	0R	C0P_J
18	LVDS_C0M	R225	0R	C0M_J
18	LVDS_C1P	R227	0R	C1P_J
18	LVDS_C1M	R227	0R	C1M_J
18	LVDS_C2P	R189	0R	C2P_J
18	LVDS_C2M	R190	0R	C2N_J
18	LVDS_C0KP	R190	0R	C0KP_J
18	LVDS_C0KM	R783	0R	C0KN_J
18	LVDS_C3P	R813	0R	C3N_J
18	LVDS_C3M	R814	0R	C4P_J
18	LVDS_C4P	R815	0R	C4N_J
18	LVDS_C4M	R815	0R	C4N_J

18	LVDS_D0P	R417	0R	D0P_J
18	LVDS_D0M	R418	0R	D0N_J
18	LVDS_D1P	R326	0R	D1P_J
18	LVDS_D1M	R327	0R	D1N_J
18	LVDS_D2P	R423	0R	D2N_J
18	LVDS_D2M	R444	0R	DCKP_J
18	LVDS_DCKP	R784	0R	DCKN_J
18	LVDS_D3P	R785	0R	D3P_J
18	LVDS_D3M	R819	0R	D3N_J
18	LVDS_D4P	R820	0R	D4P_J
18	LVDS_D4M	R821	0R	D4N_J

18	LVDS_G0P	R571	0R	G0P_J
18	LVDS_G0M	R572	0R	G0N_J
18	LVDS_G1P	R438	0R	G1P_J
18	LVDS_G1M	R526	0R	G1N_J
18	LVDS_G2P	R708	0R	G2P_J
18	LVDS_G2M	R786	0R	GCKP_J
18	LVDS_GCKP	R789	0R	GCKN_J
18	LVDS_G3P	R790	0R	G3P_J
18	LVDS_G3M	R819	0R	G3N_J
18	LVDS_G4P	R820	0R	G4P_J
18	LVDS_G4M	R821	0R	G4N_J

18	LVDS_H0P	R822	0R	H0P_J
18	LVDS_H0M	R823	0R	H0N_J
18	LVDS_H1P	R807	0R	H1P_J
18	LVDS_H1M	R809	0R	H1N_J
18	LVDS_H2P	R825	0R	H2P_J
18	LVDS_H2M	R826	0R	H2N_J
18	LVDS_HCKP	R827	0R	HCKP_J
18	LVDS_HCKM	R828	0R	HCKN_J
18	LVDS_H3P	R829	0R	H3P_J
18	LVDS_H3M	R829	0R	H3N_J
18	LVDS_H4P	R833	0R	H4P_J
18	LVDS_H4M	R833	0R	H4N_J

3,4,5,10,11 3.3VS <<> 3.3VS
3,4,5,6,7,8,9,10,11,12,13,14,15,16,17 GND <<> GND



MAIN POWER

兼容2X6Pin双排插座

XP2

DIMMING

12V_IN

ON/OFF

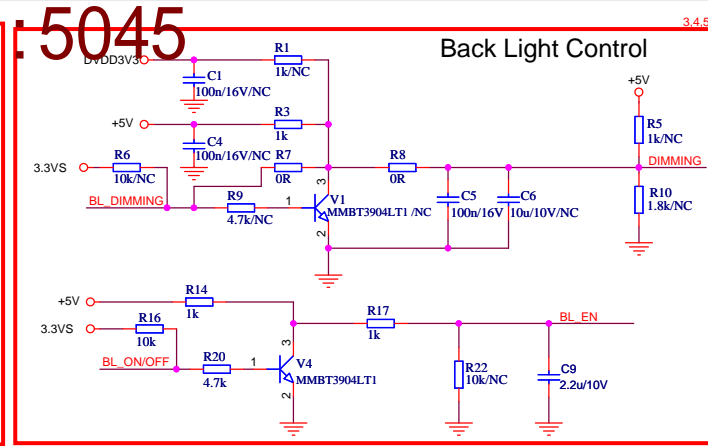
5VS

14V

3D_EN

3D_GLASS_SYNC

OPWRSB
HIGH => OPEN FRAME POWER OFF
LOW => OPEN FRAME POWER ON



Pin	Signal
1	GND
2	+5V
3	+12V
4	+14V
5	5VS
6	3.3VS
7	AVDD3V3
8	DVDD3V3
9	DVDD1V2
10	VCC
11	OPWRB
12	BL_DIMMING
13	BL_ON/OFF
14	OPWRB
15	BL_DIMMING
16	BL_ON/OFF
17	3D_EN
18	3D_GLASS_SYNC
19	GND

CORE POWER 1.1V

12V

STPB2012-12VPT

L46

C18 10u/16V

C19 10u/16V

C20 100n/16V

R25 10k

N33

VIN

SW

EN

FB

SS

GND

C31 1u/25V

C32 3.3n/50V

C22 100n/16V

R29 22R/NC

L2 2.2 uH

R26 0R/NC

R27 7.87k

C23 22p/50V/NC

C47 22u/6.3V

C48 22u/6.3V

C24 22u/6.3V

C25 22u/6.3V

C26 100n/16V

VCCCK

R32 12.4k

C33 1u/50V/NC

Buck Converter 3A

closed to L

$V_{out} = 0.765V * (1 + R27/R32) = 1.25V$

DIGITAL POWER DVDD3V3

The diagram shows a digital power regulation circuit. A 5V input is connected to the Vin_2 pin of an N10 API084DGAZ1084D-ADJ regulator. The regulator's output (VOUT) is connected to a 3V3 output pin, which is also connected to a 110R resistor (R33) and a 180R resistor (R36) to ground. The output is filtered by a 10uF/10V capacitor (C36) and a 1uF/10V capacitor (C46). A 100nF/16V capacitor (C39) is connected to the output. The output is also connected to a 3V3 output pin, which is connected to a 110R resistor (R33) and a 180R resistor (R36) to ground. The output is filtered by a 10uF/10V capacitor (C36) and a 1uF/10V capacitor (C46). A 100nF/16V capacitor (C39) is connected to the output. The output is also connected to a 3V3 output pin, which is connected to a 110R resistor (R33) and a 180R resistor (R36) to ground. The output is filtered by a 10uF/10V capacitor (C36) and a 1uF/10V capacitor (C46). A 100nF/16V capacitor (C39) is connected to the output.

1.25 x $\frac{1+180}{110} = 3.3V$

STANDBY POWER 3V3SB

5VS

N17

VIN VOUT

ADJ...3

SPX1117M3-ADJL

117A-ADJ

3.3VS

3.3VS

C37 10n/10V

C38 100n/16V

C40 10n/10V

C41 100n/16V

R34 110R

R37 180R

$1.25 \times \frac{1}{180} + 1.80 = 3.3V$

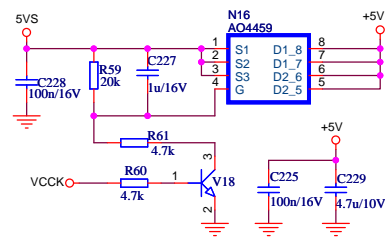
ANALOG POWER AVDD1V2

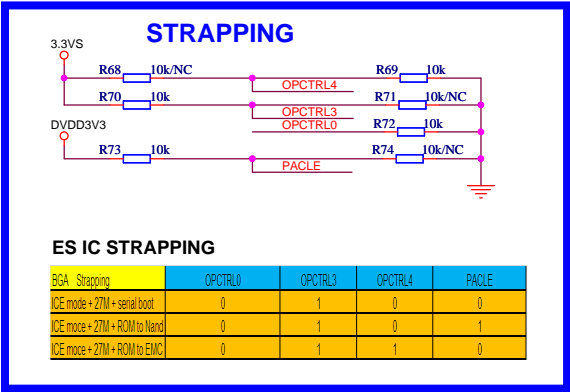
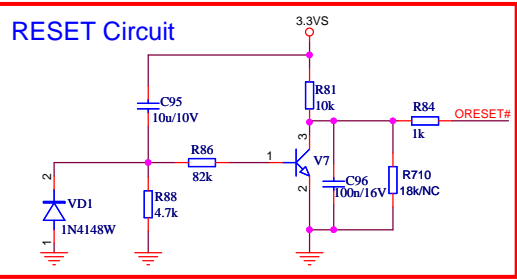
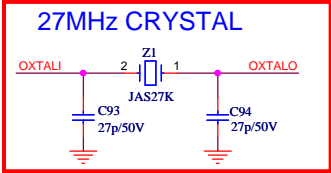
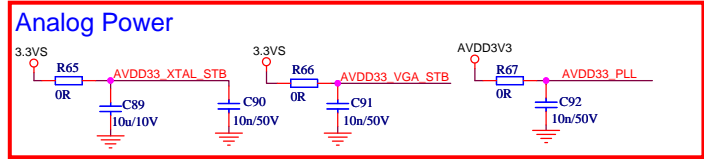
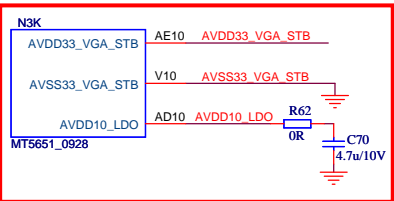
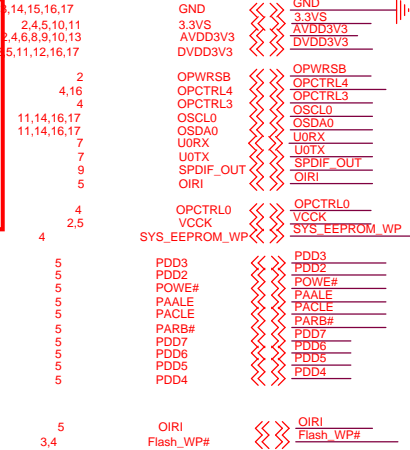
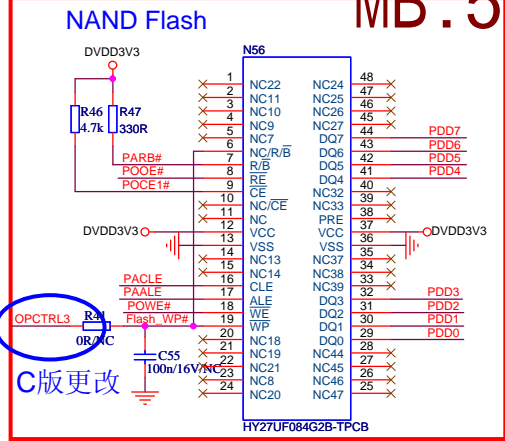
The schematic shows the power and signal conditioning for the Analog Power AVDD1V2. Key components include:

- Power Sources:** DVDD3V3 and AVDD1V2.
- Op-Amp:** N11 ADI OUT_3.
- Feedback Network:** R35 (100R/NC) and R38 (10R/NC).
- Decoupling Capacitors:** C42 (10u/10V/NC), C43 (100n/16V/NC), C44 (10u/10V), and C45 (100n/16V).
- Inductor:** L48 BLM18PG121SN1.
- Output:** VCCCK.

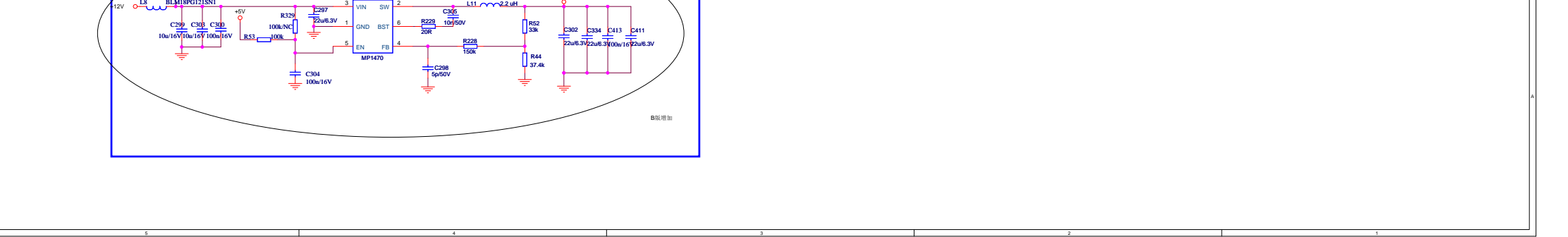
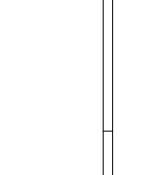
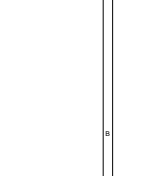
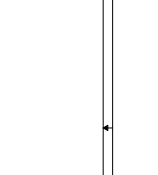
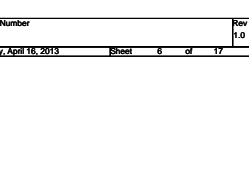
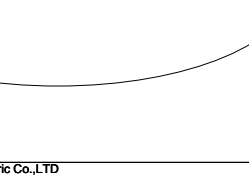
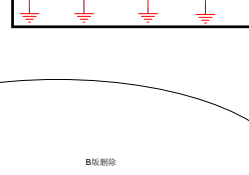
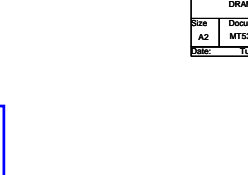
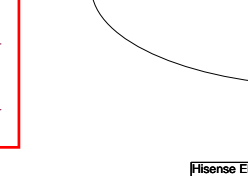
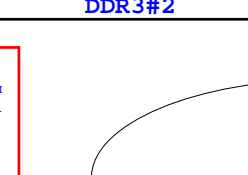
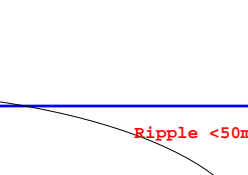
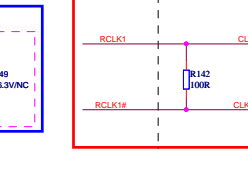
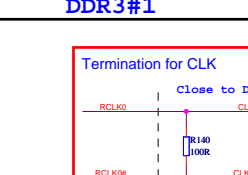
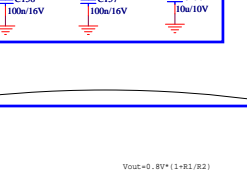
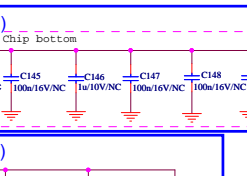
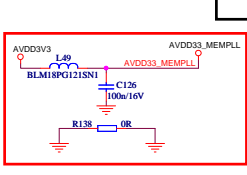
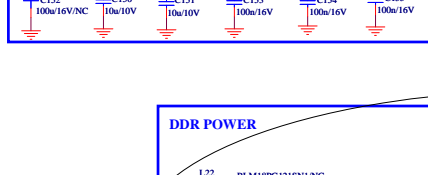
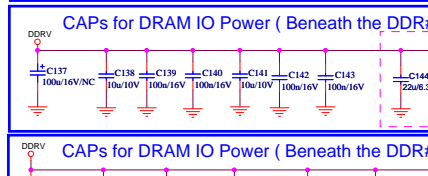
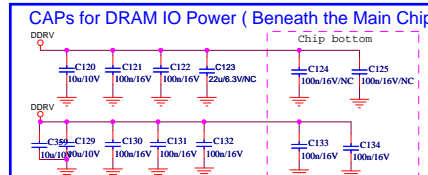
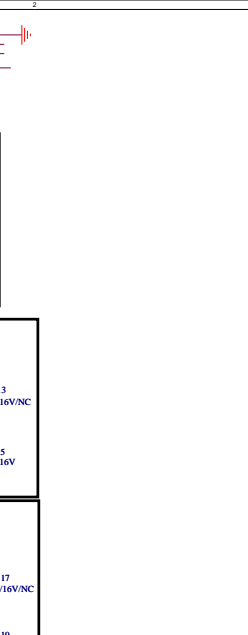
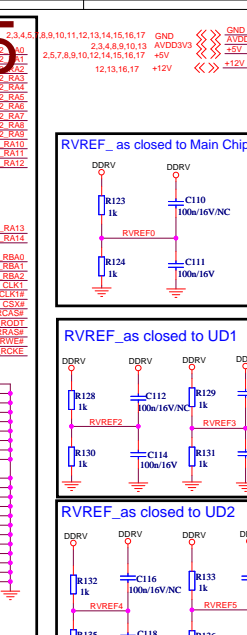
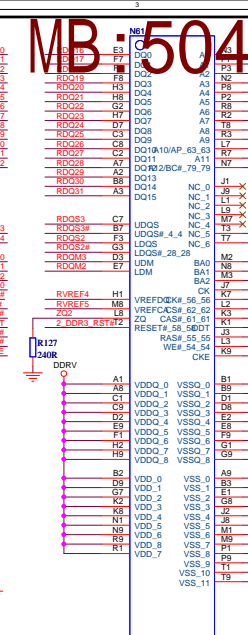
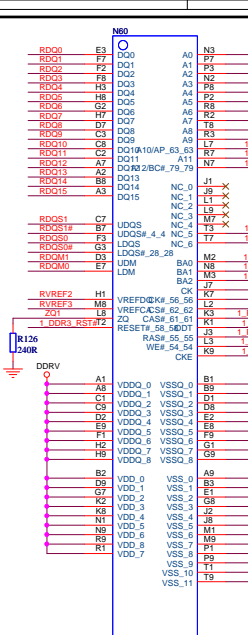
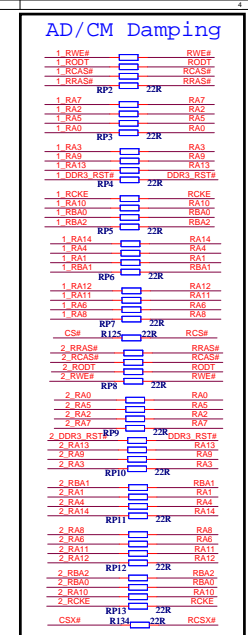
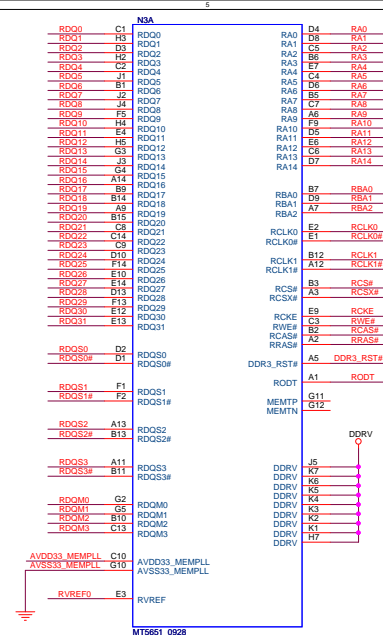
[illegible]

OPWRSB
HIGH => OPEN FRAME POWER OFF
LOW => OPEN FRAME POWER ON

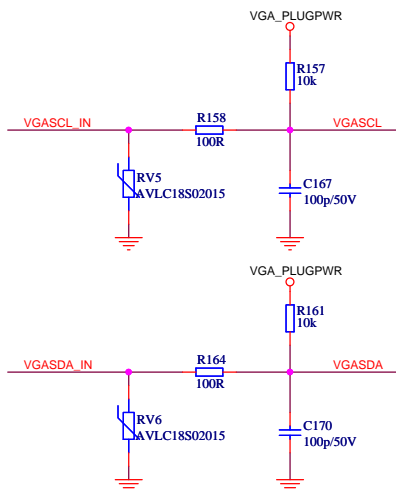
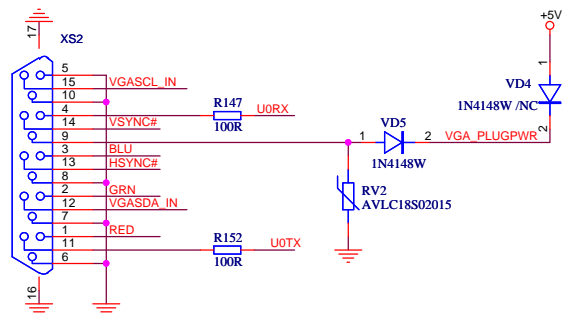




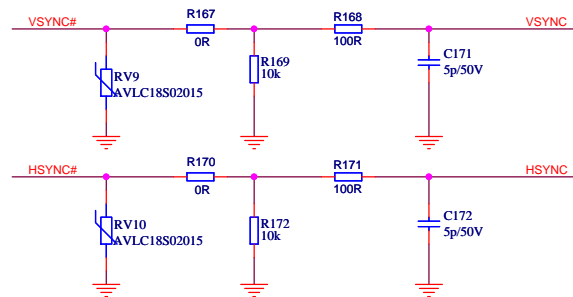
BGA Strapping	OPCTRL0	OPCTRL3	OPCTRL4	PAOLE
ICE mode = 27M + serial/boot	0	1	0	0
ICE mode = 27M + ROM to NAND	0	1	0	1
ICE mode = 27M + ROM to EMC	0	1	1	0



VGA INPUT



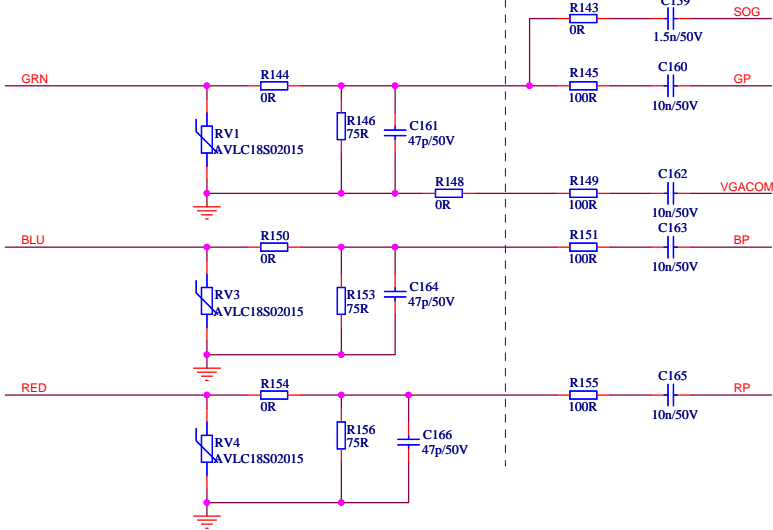
VGA SYNC SLICER



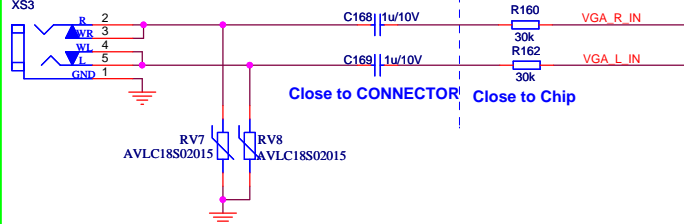
Close to VGA CONN

MB:5045

Close to MT5651

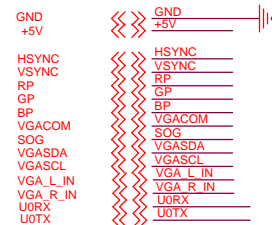


VGA AUDIO INPUT

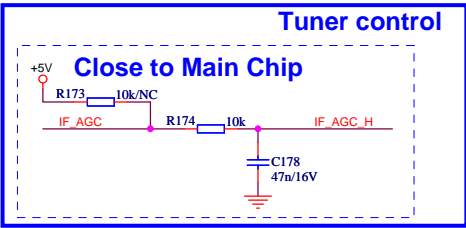
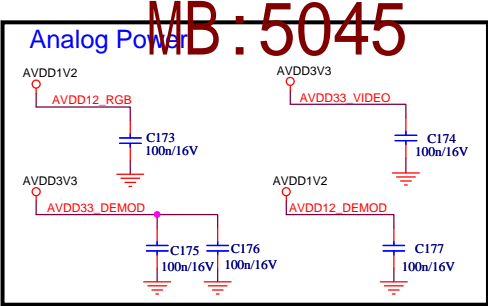
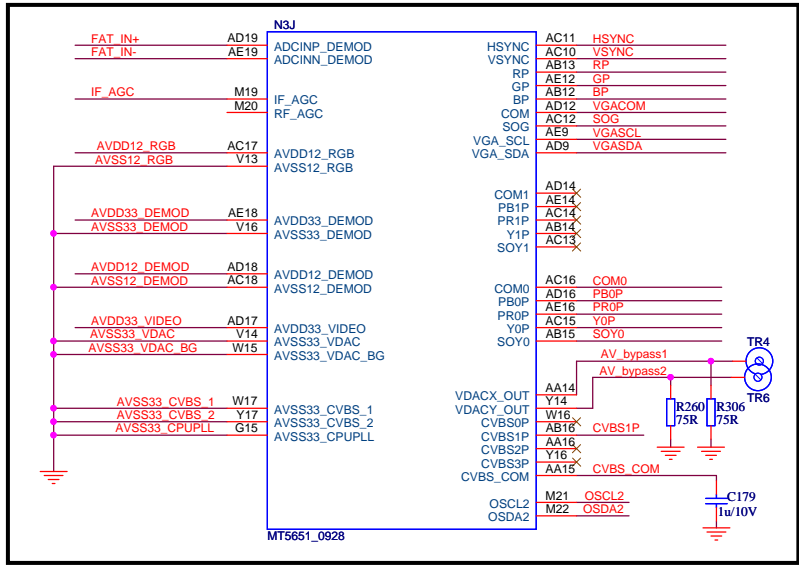


XIGUO-20120924 更改小尺寸封装耳机端子

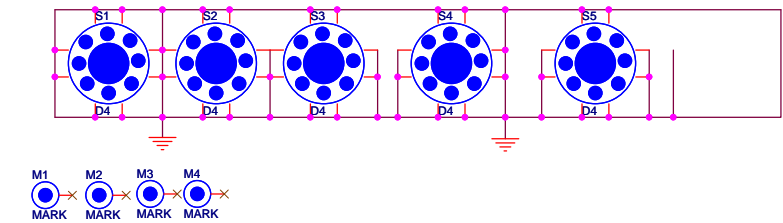
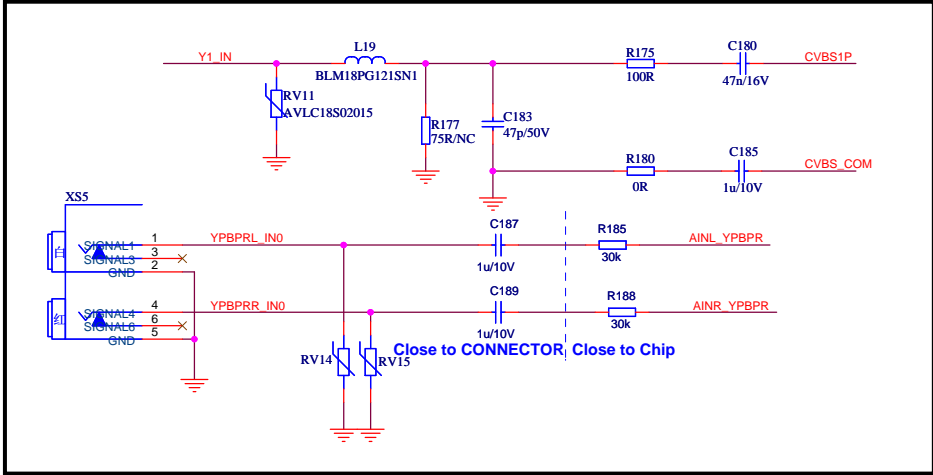
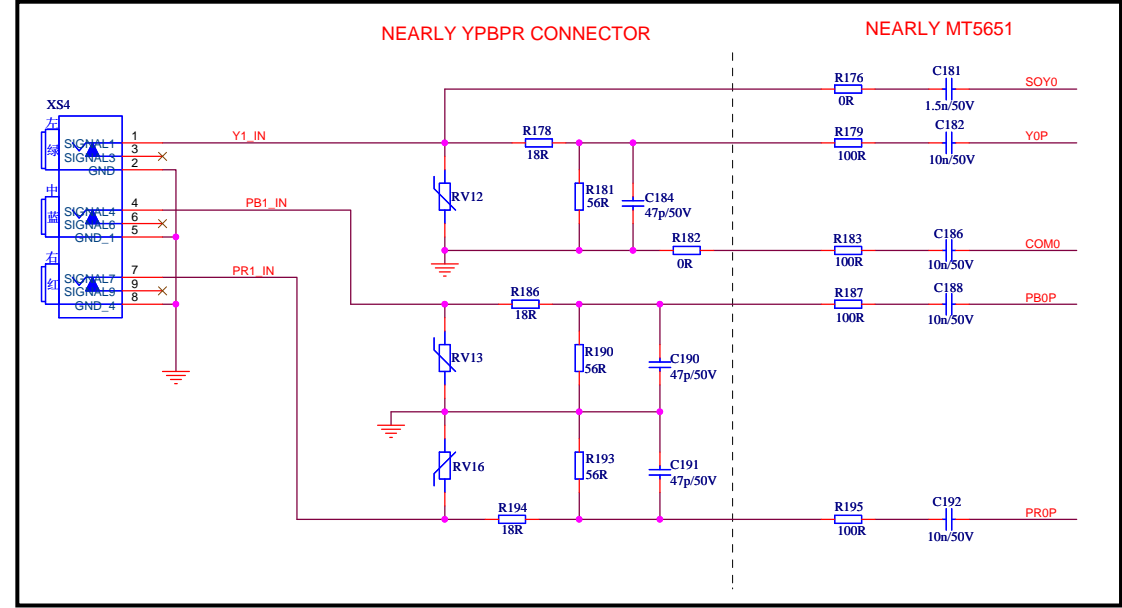
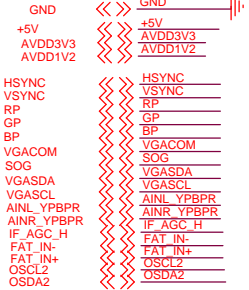
2,3,4,5,6,8,9,10,11,12,13,14,15,16,17
2,5,6,8,9,10,12,14,15,16,17



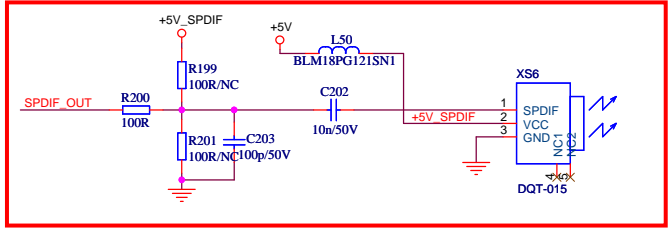
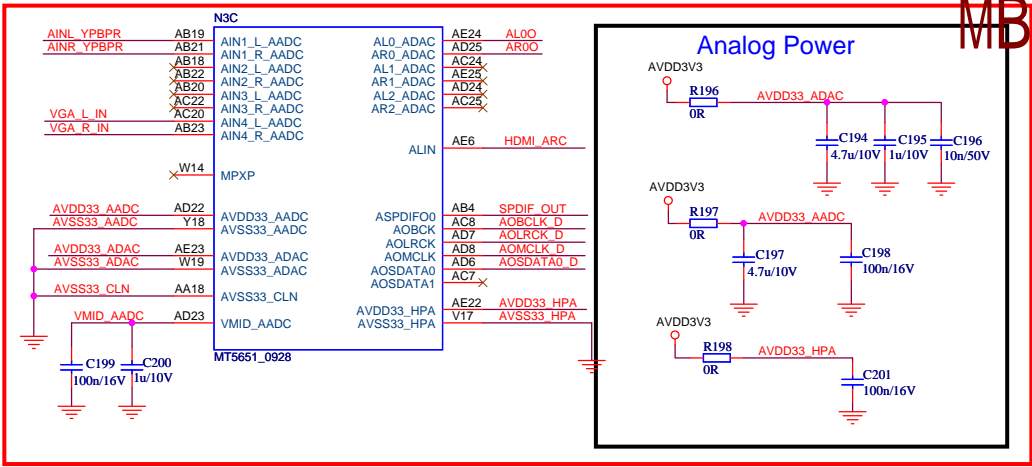
Hisense Electric Co.,LTD			
Title			
VGA INPUT			
Size	Document Number	Rev	
A3	MT5325	1.0	
Date:	Tuesday, April 16, 2013	Sheet	7 of 17



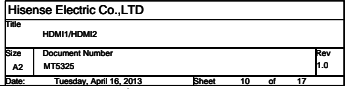
2,3,4,5,6,7,9,10,11,12,13,14,15,16,17
2,5,6,7,9,10,12,14,15,16,17
2,3,4,6,9,10,13,2,10,12

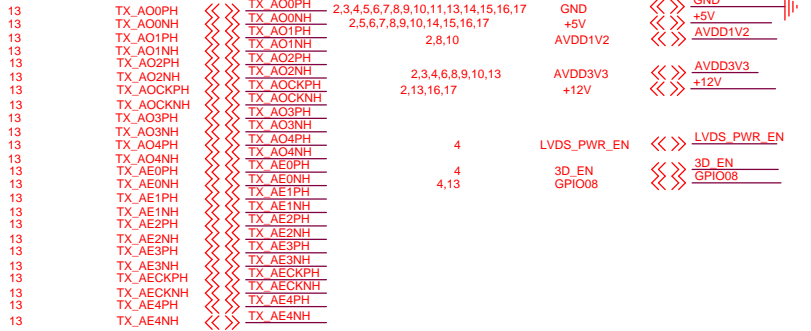
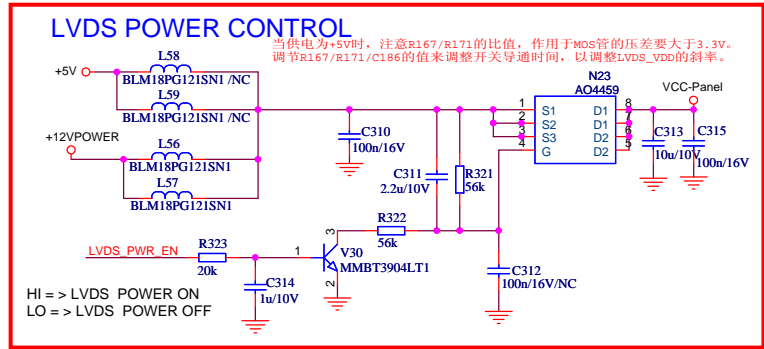
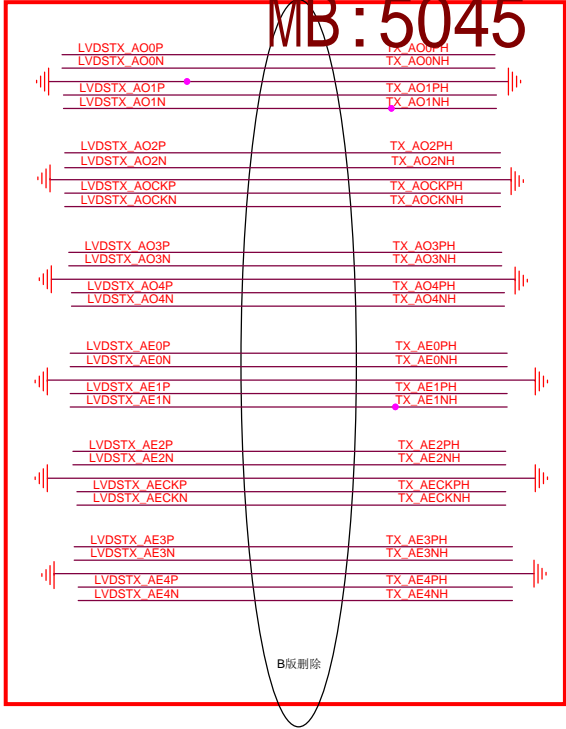
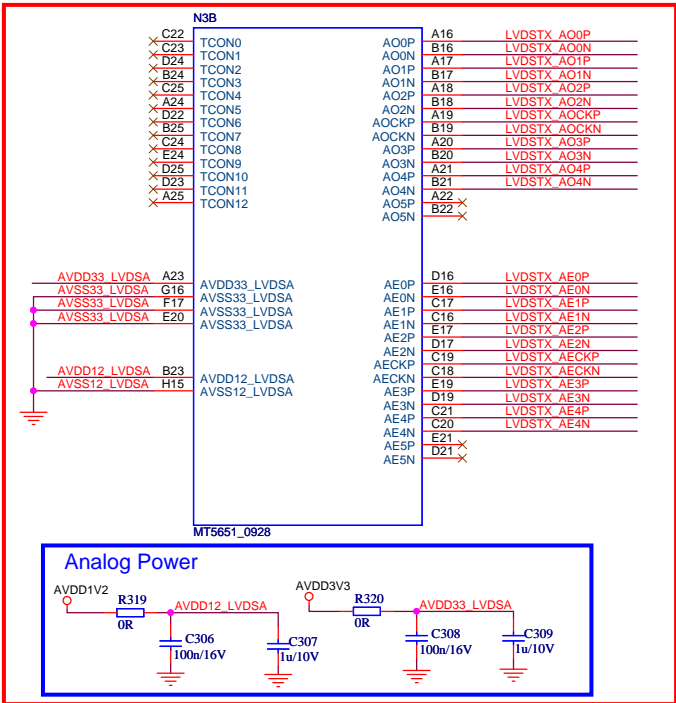


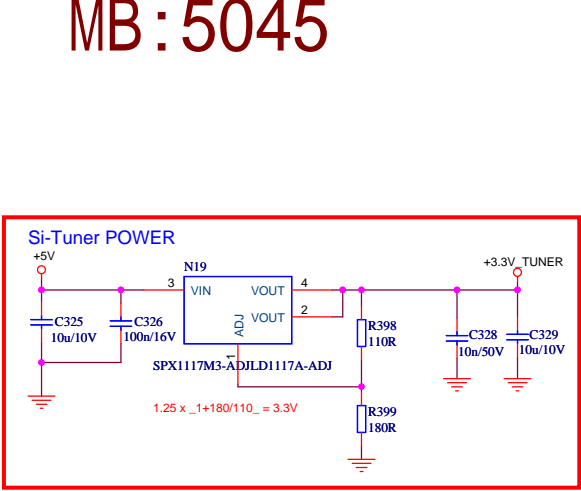
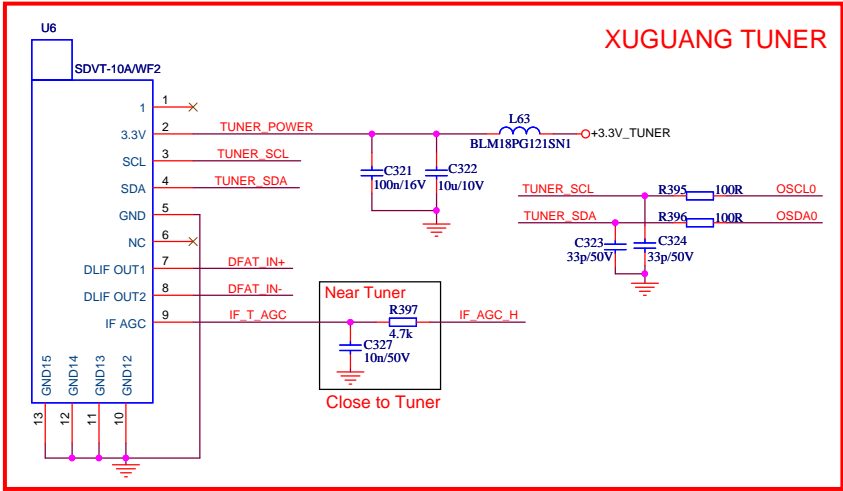
Hisense Electric Co.,LTD			
Title YPBPR/AV INPUT			
Size A3	Document Number MT5325	Rev 1.0	
Date: Tuesday, April 16, 2013	Sheet 8	of 17	



2,3,4,5,6,7,8,10,11,12,13,14,15,16,17	GND	<< GND
2,12,13,16,17	+12V	<< +12V
2,5,6,7,8,10,12,14,15,16,17	+5V	<< +5V
2,3,4,6,8,10,13	AVDD3V3	<< AVDD3V3
2,3,4,5,10,11	3.3VS	<< 3.3VS
8	AINL_YPBPR	<< AINL_YPBPR
8	AINR_YPBPR	<< AINR_YPBPR
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
3,7	OIRI	<< OIRI
3,5	5VS	<< 5VS
2,5,16		





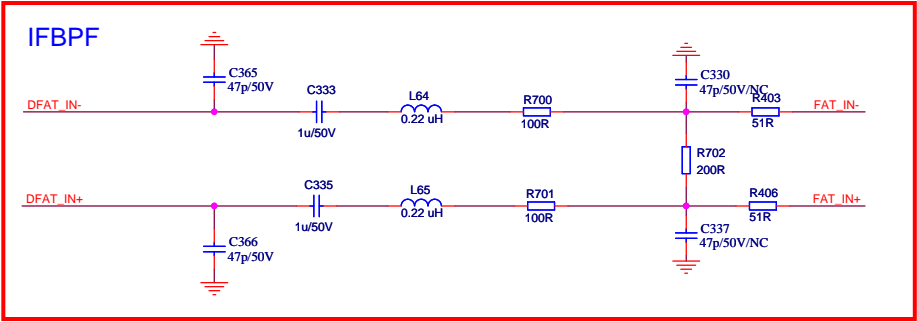
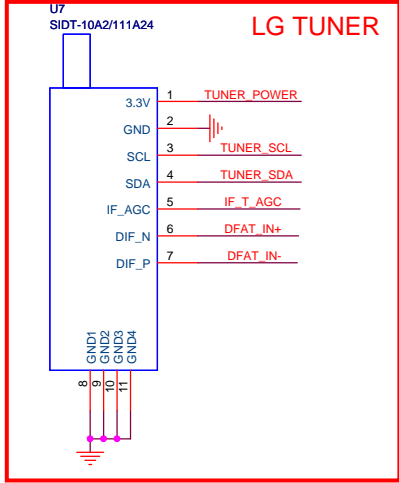


2,3,4,5,6,7,8,9,10,11,12,13,15,16,17
2,5,6,7,8,9,10,12,15,16,17
2,12,13,16,17

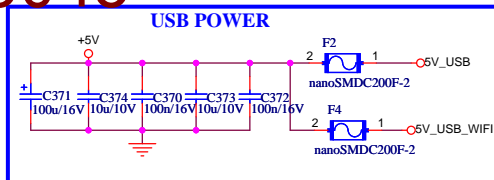
GND
+5V
+12V

3,11,16,17
3,11,16,17
8
8
8

OSCL0
OSDA0
IF_AGC_H
FAT_IN-
FAT_IN+



USB_HUB

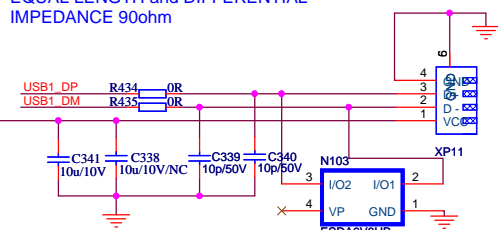


4	USB_DP_P0	USB_DP_P0
4	USB_DM_P0	USB_DM_P0
4	USB_DP_P1	USB_DP_P1
4	USB_DM_P1	USB_DM_P1
5	USB4_DP	USB4_DP
5	USB4_DM	USB4_DM
4	WIFI_EN	WIFI_EN

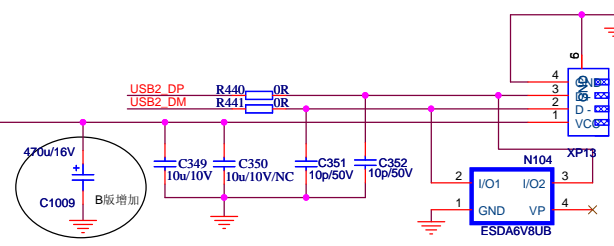
Near Connector

EQUAL LENGTH and DIFFERENTIAL IMPEDANCE 90ohm

USB PORT 1

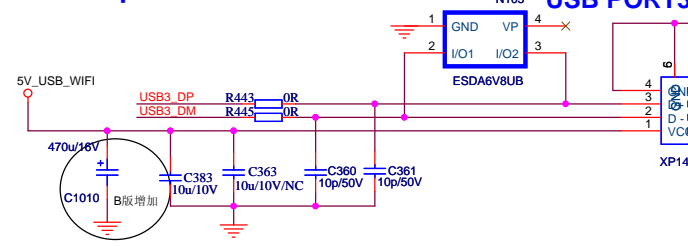


USB PORT 2



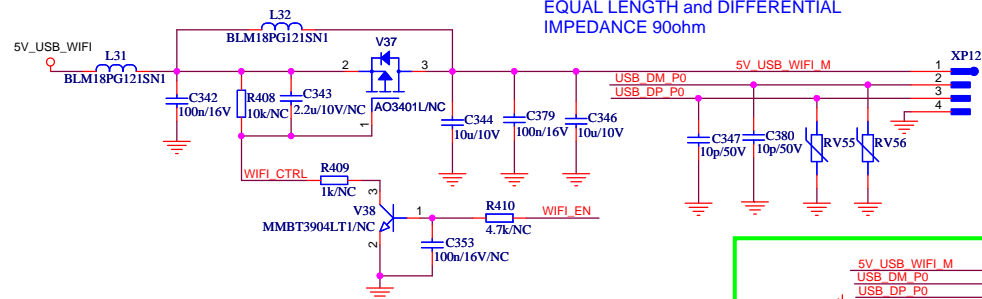
camera port

5 USB PORT3



WIFI/BLE TOOTH

EQUAL LENGTH and DIFFERENTIAL IMPEDANCE 90ohm



5V USB WIFI M	1	
USB DM P0	2	
USB DP P0	3	
	4	
WIFI_EN	5	

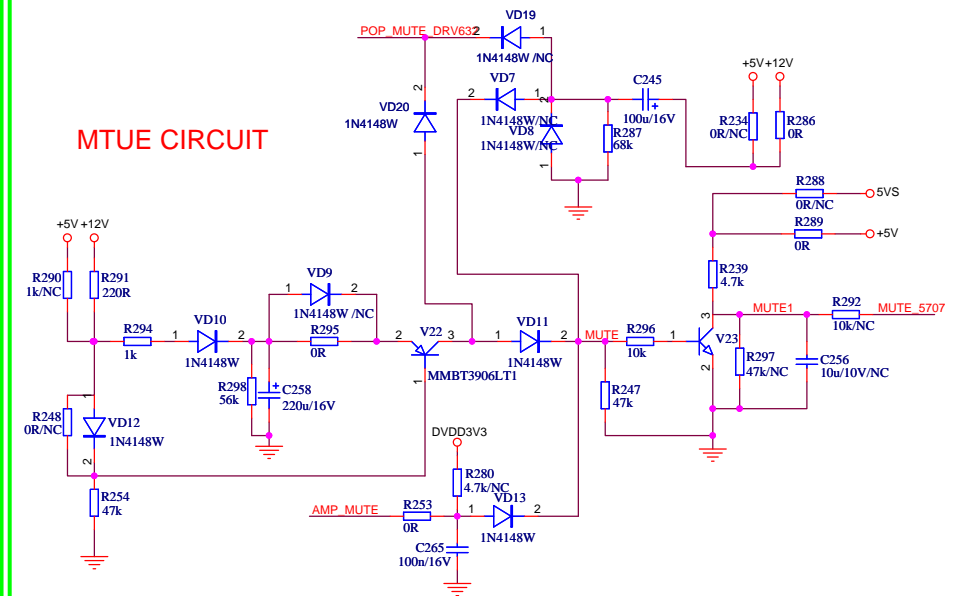
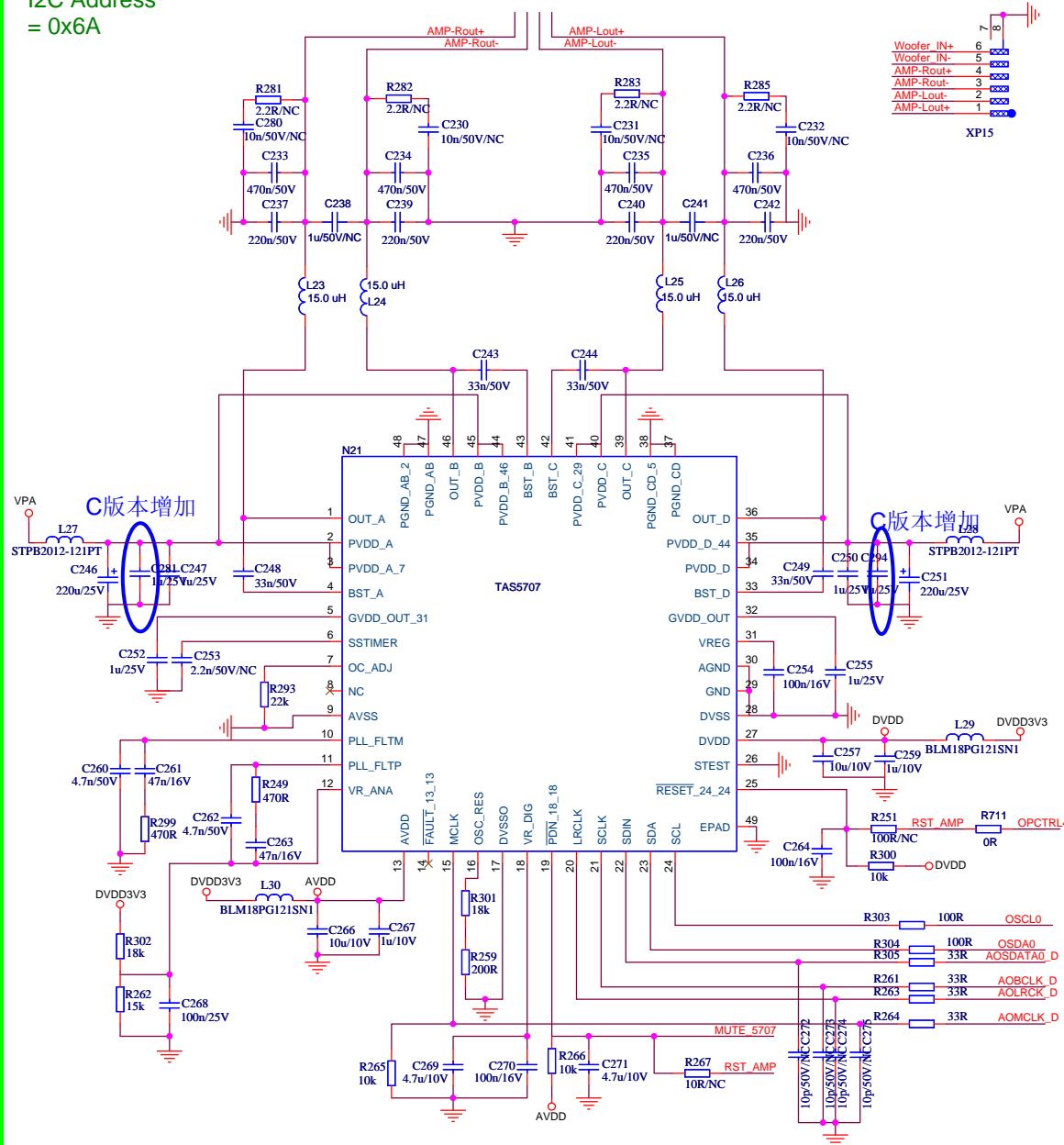
增加外置WIFI连接端口 XIGUO 20120924

Hisense Electric Co.,LTD

Title			
USB/WIFI			
Size	Document Number		Rev
A3	MT5325		1.0
Date:	Tuesday, April 16, 2013	Sheet	15 of 17

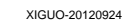
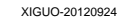
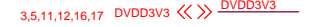
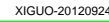
I2C Address
= 0x6A

MB: 5045



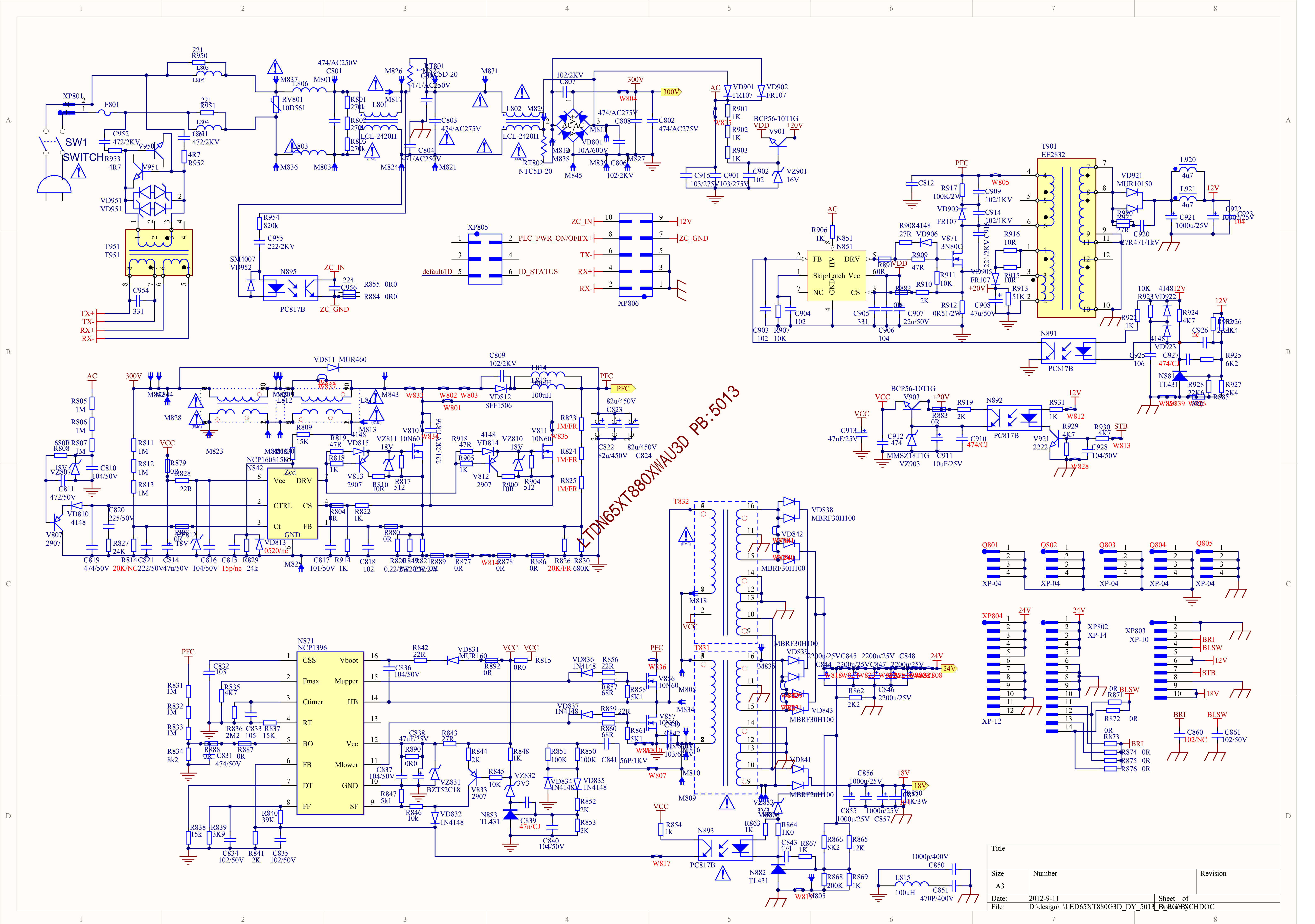
Hisense Electric Co.,LTD			
Title SPEAKER/MUTE			
Size A3	Document Number MT5311G		Rev 1.0
Date:	Tuesday, April 16, 2013	Sheet	16 of 17

WOOFER AMP



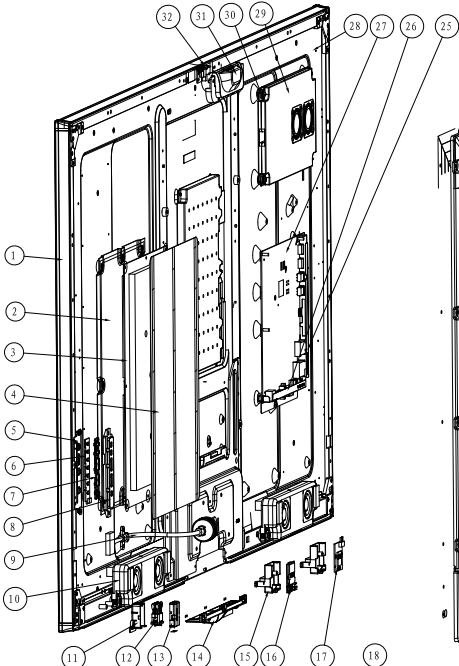
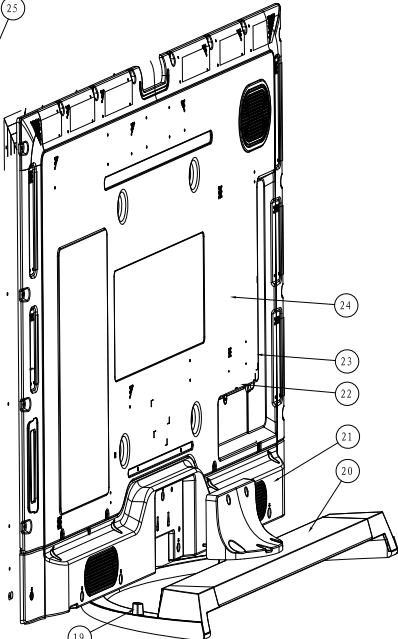


Title			
Size A2	Number		Revision
Date:	2013-2-25		Sheet of
File:	E:_ALED58XT880G3D DY 5436		ASWDDC



Title		
Size	Number	Revision
A3		
Date:	2012-9-11	Sheet of
File:	D:\design\...\LEAD65XT880X3D_DY_5013.DWG	Drawn by CHDOC

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A	RSAG2.025.3821																	
B																		
C																		
D																		
E																		
F																		
G																		
H																		
I																		
J																		
K																		

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	

图例名称	
图例符号	
备注	