

# LCD Television

## Service Manual

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**Chassis: MTK5653**

**Product:**

**LTDN42K680XWSEU3D、LTDN50K680XWSEU3D**

**Main board: 5870**

Model	Main board、Power board	LVDS cable(Main-panel)	Panel Model	Panel Interface
LTDN42K680XWSEU3D	5870、4903	FFC-51-455\ROH	V420DK1-KS1(CMI)	VB1
LTDN50K680XWSEU3D	5870、4903	FFC-51-607\ROH	V500DK1-KS2(CMI)	VB1

**Ver 1.0**

**March, 2014**

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# **Service Manual**

## **1. Precautions and notices**

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

USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.

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

Proper service and repair is important to the safe, reliable operation of all 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

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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.

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## **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**

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- (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

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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

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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

<b>Model Name</b>		<b>LTDN42K680XWSEU3D</b>
<b>Dimension</b>	<b>Without Stand</b>	Width: 37.2 inches (945 mm) Height: 21.5 inches (547 mm) Depth: 2.0 inches (50 mm)
	<b>With Stand</b>	Width: 37.2 inches (945 mm) Height: 23.5 inches (598 mm) Depth: 8.3 inches (210 mm)
<b>Weight</b>	<b>Without Stand</b>	28.2 lbs (12.8 kg)
	<b>With Stand</b>	35.3 lbs (16 kg)
<b>LED Panel Minimum size (diagonal)</b>		42 inches
<b>Screen resolution</b>		3840×2160
<b>Audio power</b>		8W +8W
<b>Power consumption</b>		Please refer to the rating label.
<b>Power supply</b>		220-240 V ~ 50Hz
<b>Receiving systems</b>	<b>Analog</b>	PAL-D/K, B/G, I SECAM-D/K, B/G, L/L'
	<b>Digital</b>	DVB-T, DVB-C, DVB-S/S2
<b>Environmental conditions</b>		Temperature: 41°F - 95°F (5°C - 35°C) Humidity: 20% - 80% RH Atmospheric pressure: 86 kPa - 106 kPa
<b>Component Input</b>		480 I / 60 Hz, 480 P / 60 Hz, 576 I / 50 Hz, 576 P / 50 Hz, 720 P / 50 Hz, 720 P / 60 Hz, 1080 I / 50 Hz, 1080 I / 60 Hz, 1080 P / 50 Hz, 1080 P / 60 Hz
<b>VGA Input</b>		VGA (640×480 / 60 Hz), SVGA (800×600 / 60 Hz), XGA (1024×768 / 60 Hz)
<b>HDMI Input</b>		RGB / 60 Hz (640×480, 800×600, 1024×768) YUV / 60 Hz (480 I, 480 P, 720 P, 1080 I, 1080 P) YUV / 50 Hz (576 I, 576 P, 720 P, 1080 I, 1080 P) 3840x2160/24Hz, 3840x2160/25Hz, 3840x2160/30Hz

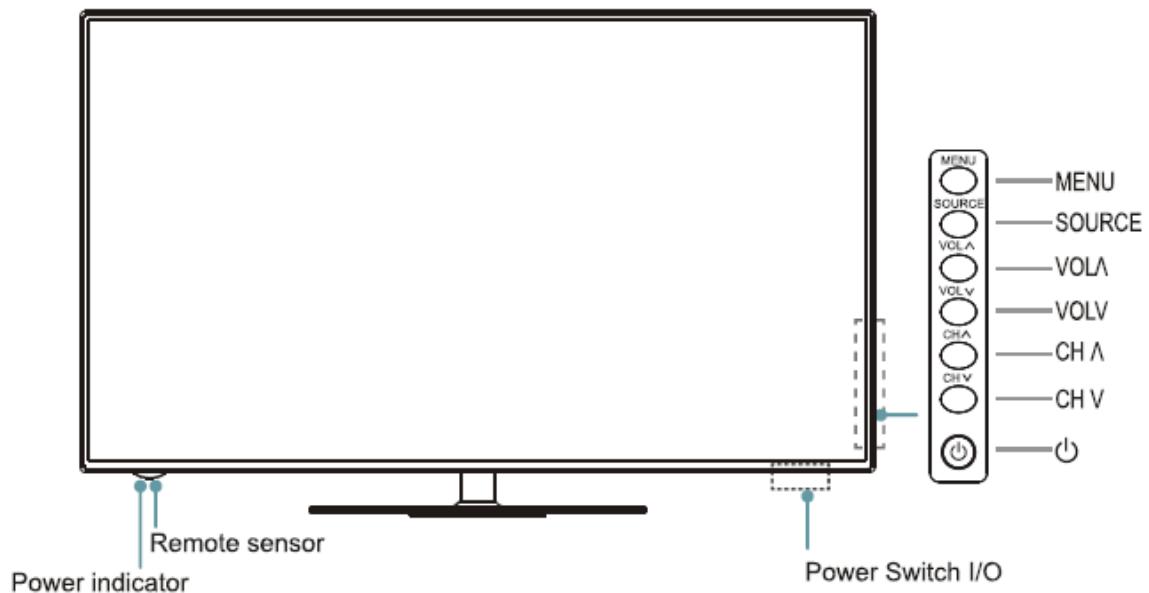
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## 2.1 Layout

K680 mould

### **TV Front**

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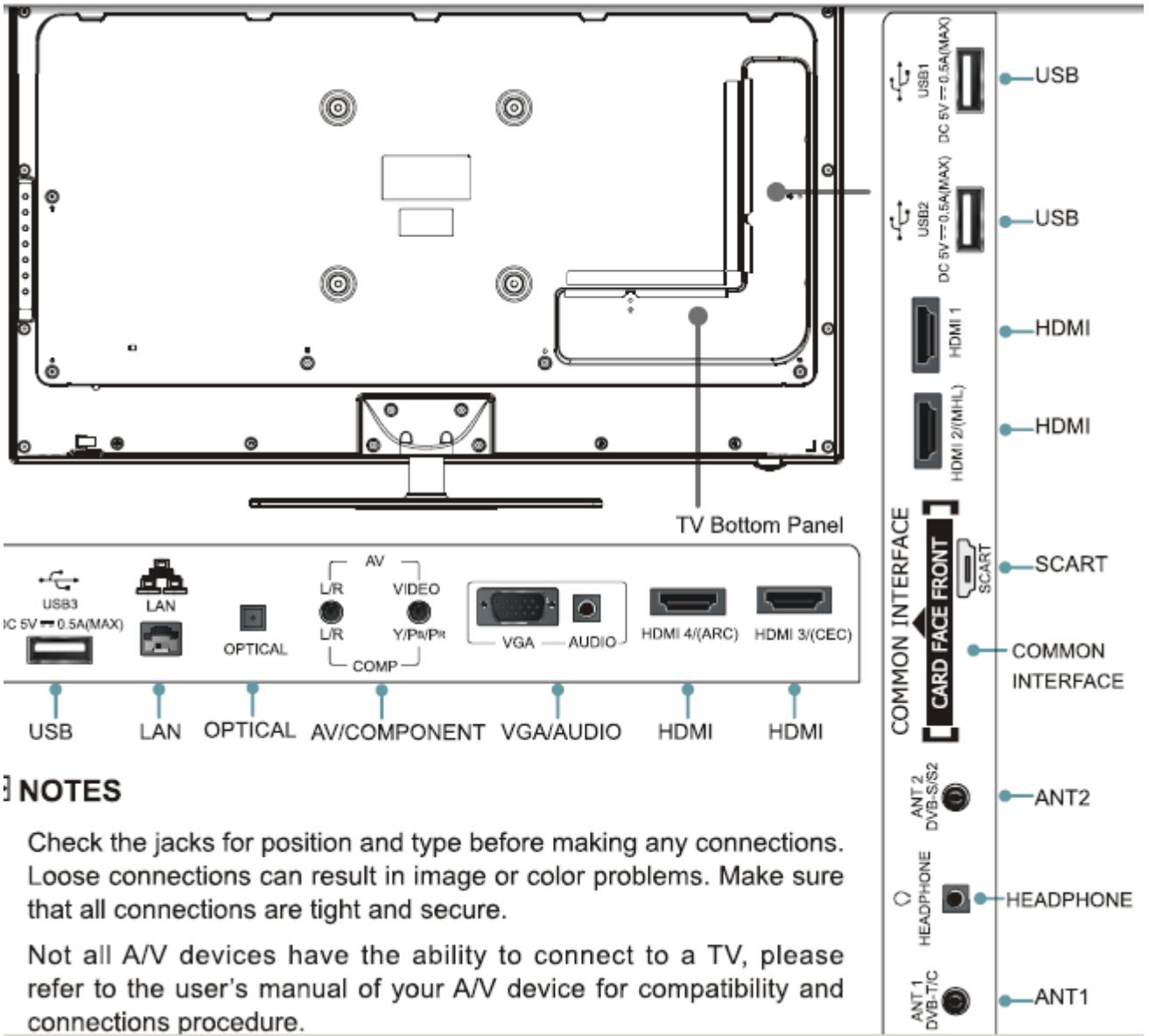
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Item	Description
<b>Power Switch I/O</b>	Switch the I/O power ON or OFF.
<b>Power Indicator</b>	Lights up in standby mode.
<b>Remote Sensor</b>	Receives remote signals from the remote control. Caution: Do not put anything near the sensor, as its function may be affected.
<b>MENU</b>	Display an on-screen menu to setup your TV's features.
<b>SOURCE</b>	Select among the different input signal sources.
<b>VOL ▲ / V</b>	Adjust the volume.
<b>CH ▲ / V</b>	Switch between channels.
<b>Power Button ⏹</b>	Turn on the TV from the standby mode or switch the TV back to standby mode. Caution: The TV consumes the power even in standby mode. Please turn the power off or unplug the power cord to save the power.

#### ▣ NOTES

- The Picture is Only for Reference.
- Powering on the TV requires several seconds to load program. Do not rapidly turn the TV off as it may cause the TV to work abnormally.

## TV Rear



## NOTES

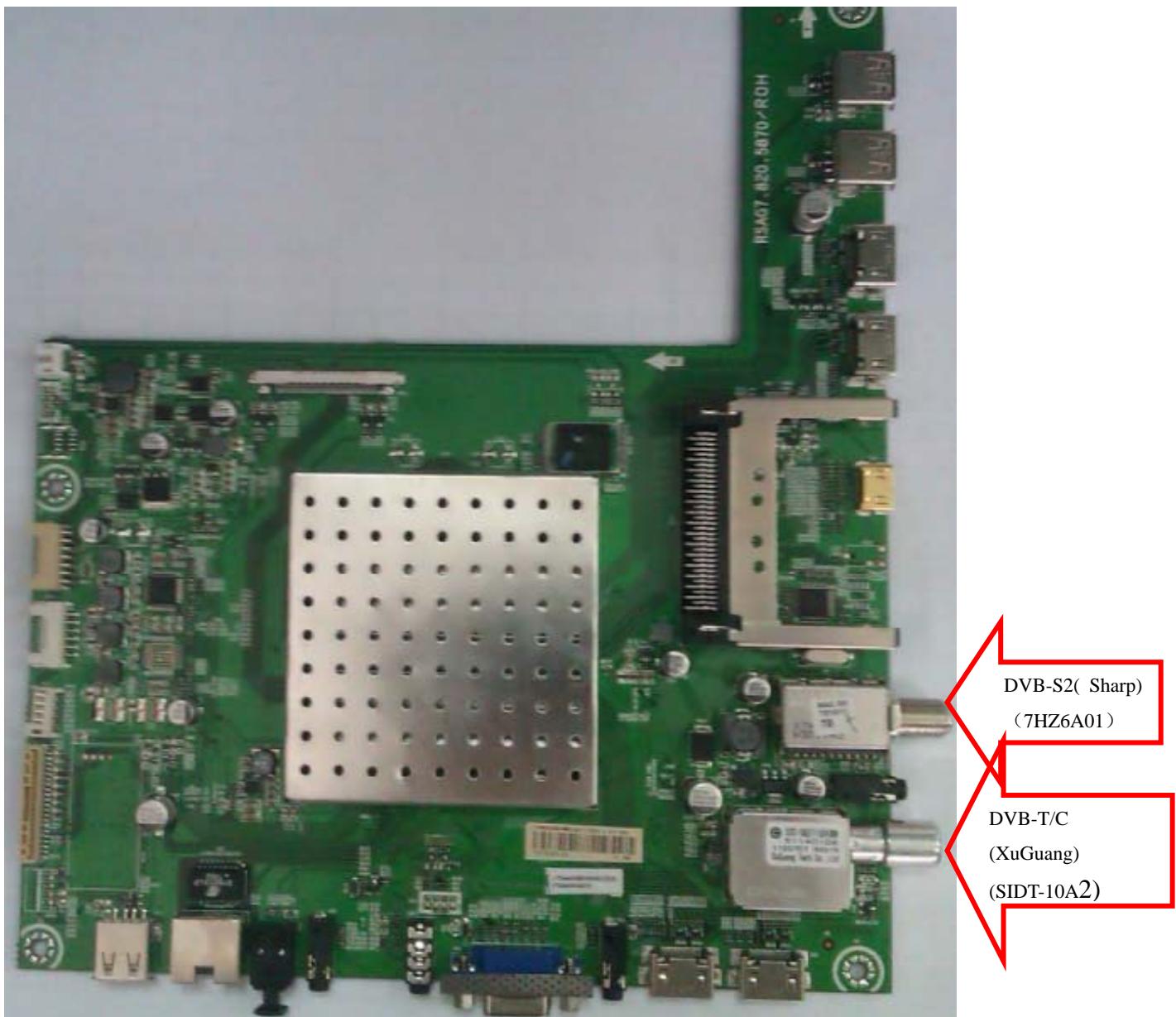
Check the jacks for position and type before making any connections. Loose connections can result in image or color problems. Make sure that all connections are tight and secure.

Not all A/V devices have the ability to connect to a TV, please refer to the user's manual of your A/V device for compatibility and connections procedure.

Main board :5870

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## The TOP



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### **3. Factory/Service OSD Menu and Adjustment**

#### **3.1 How to enter the Factory OSD Menu**

Remote control picture as below

Note:The picture is only for reference ,detail see the User Manual , Please.



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## . With user's RC

1. Power TV On



2. Press button and call up Setting Menu.

3. Setting -> More setting,,then press “Ok” button on RC.

4. Select Sound-> Speaker setting -> Balance

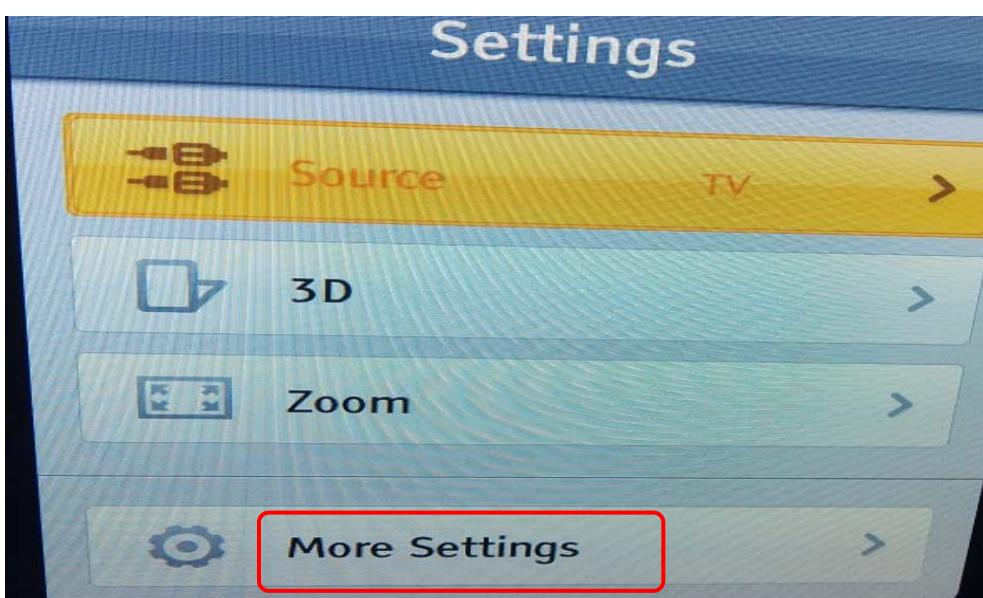
5. when Balance is “0” ,Enter 1->9->6->9 in sequence.

Note: If necessary, re-enter number keys.

6. Factory OSD appears.

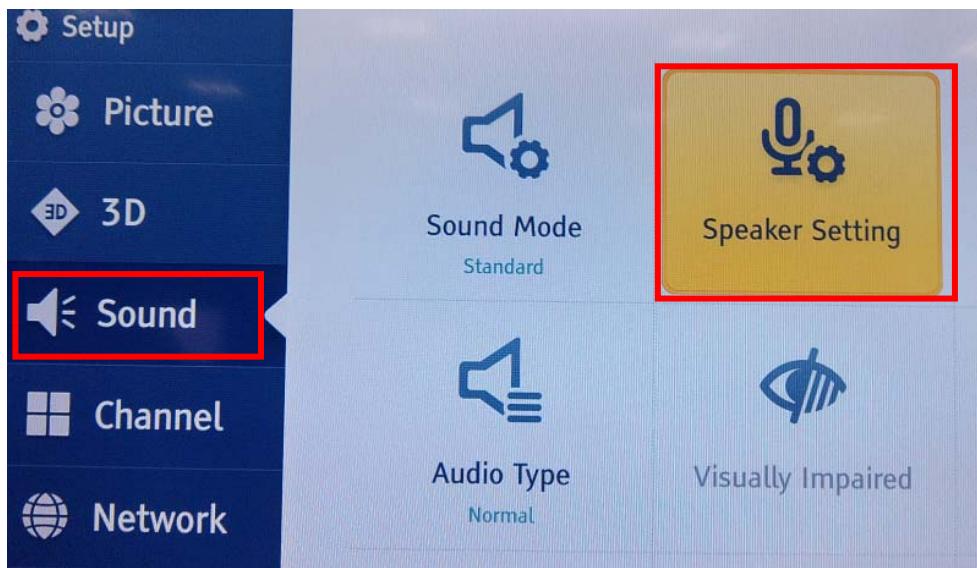
7. DC turn off and turn on the TV, which can exit the factory OSD.

## Figures as following:

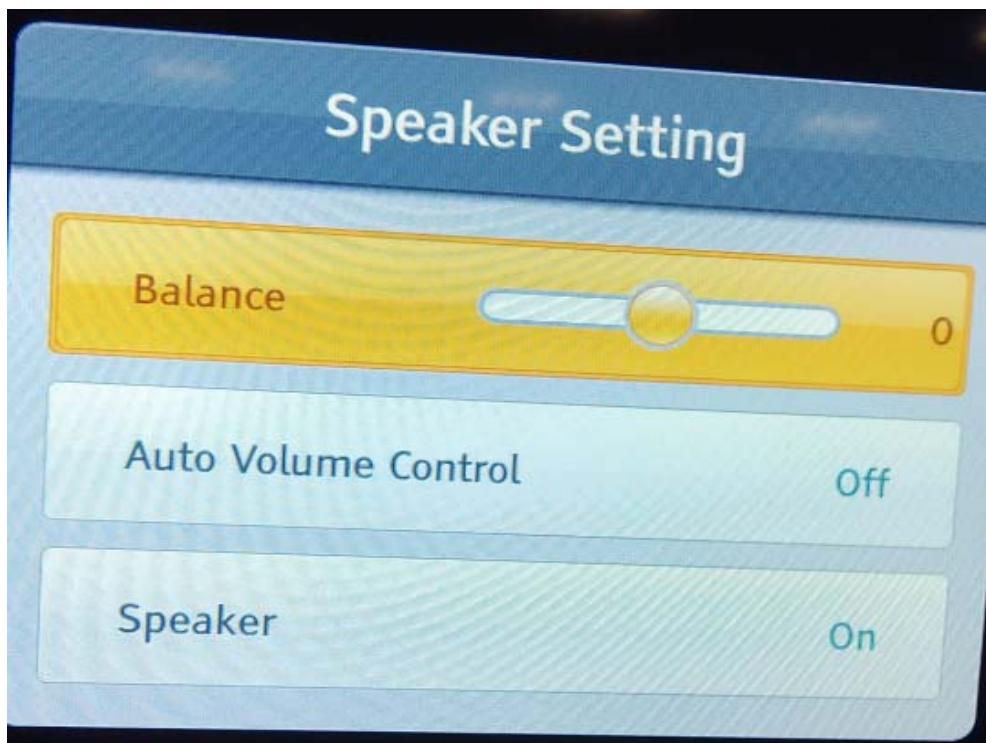


Next

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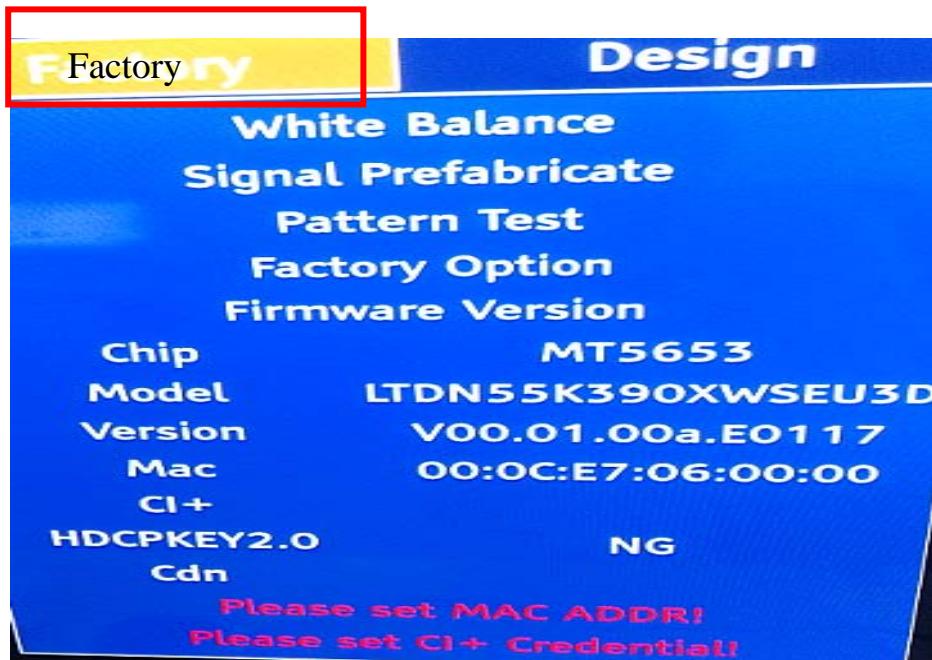


when Balance is “0” ,Enter 1->9->6->9 in sequence.



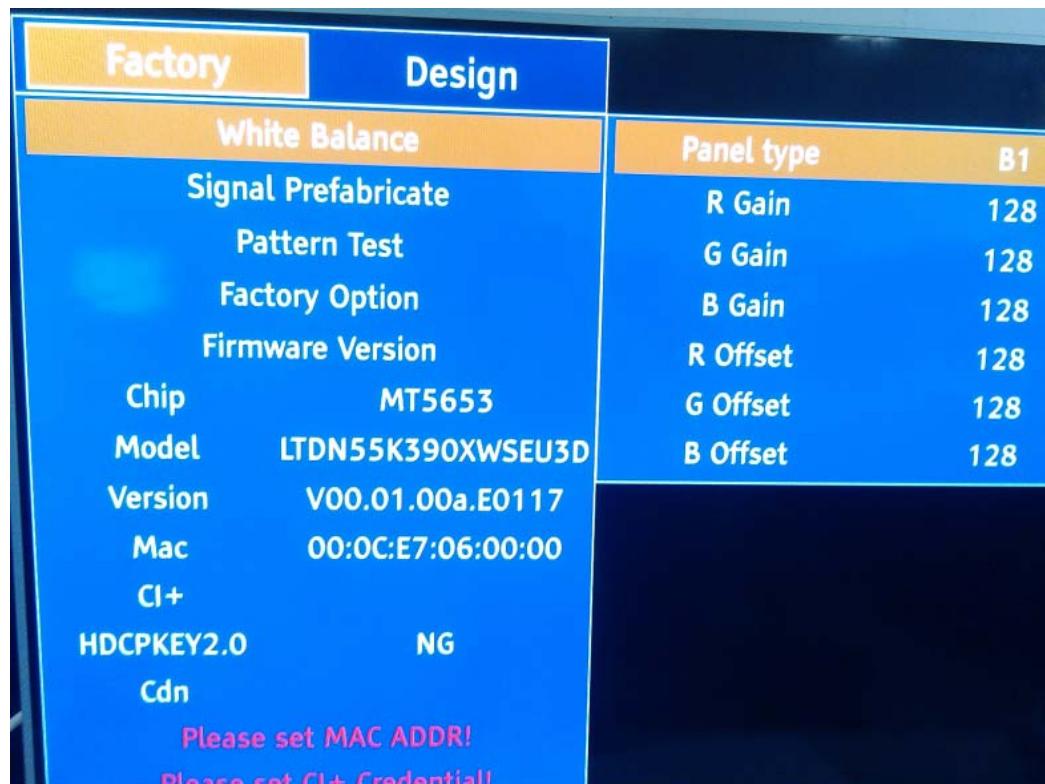
## 3.2 Factory OSD Menu

(Take LTDN55K390XWSEU3D for example)



### 3.2.1 White Balance

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



### 3.2.1 Signal prefabricate

White Balance	
<b>Signal Prefabricate</b>	
Pattern Test	
Factory Option	
Firmware Version	
Chip	MT5653
Model	LTDN55K390XWSEU3D
Version	V00.01.00a.E0117
Mac	00:0C:E7:06:00:00
CI+	
HDCPKEY2.0	NG
Cdn	
Please set MAC ADDR!	
Please set CI+ Credential!	
Huang Dao (old)	
Huang Dao (new)	
Qing Dao	
Gui Yang	
Jiang Men	
Egypt	
South Africa	
Algeria	
Syria	
Malaysia	
Iran	
Indonesia	
Russia	
Poland	

### 3.2.3 Factory Option

Factory	Design
White Balance	
Signal Prefabricate	
Pattern Test	
Factory Option	
Firmware Version	
Chip	MT5653
Model	LTDN55K390XWSEU3D
Version	V00.01.00a.E0117
Mac	00:0C:E7:06:00:00
CI+	
HDCPKEY2.0	NG
Cdn	
Please set MAC ADDR!	
Please set CI+ Credential!	
TO FAC	
M	
Blue Mute	
Off	
HbbTV Support	
On	
Clone	
LVDS Spread	
0	
OSD Language	
English	
Country	
Austria	
Update CI+ Credential	
Query CI + Credential	
Clean Protected	
Clean All	

	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.

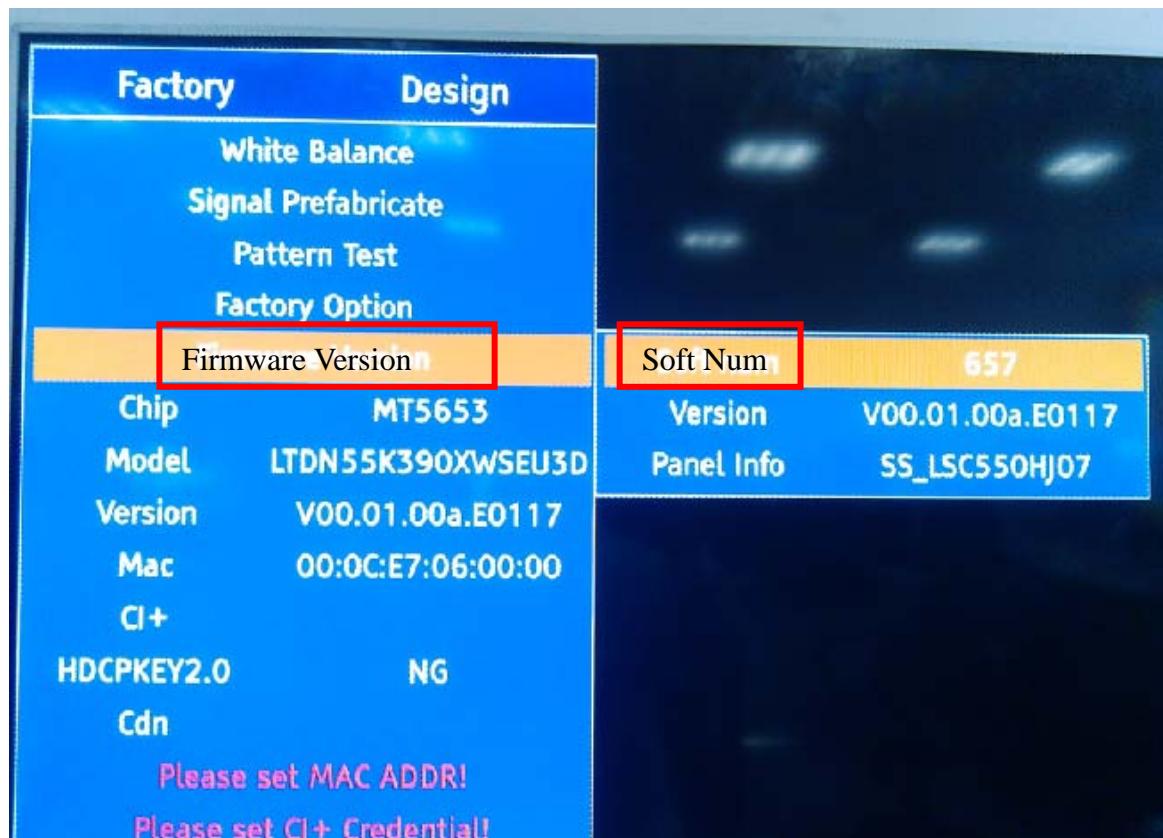
### Clear the EEPROM

Item	Meaning	Note
Clean Protected	Clear partly	
Clean All	Clear completely	Clean all data

Update CI+Credential

Query CI+Credential

#### 3.2.4 Firmware Version



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

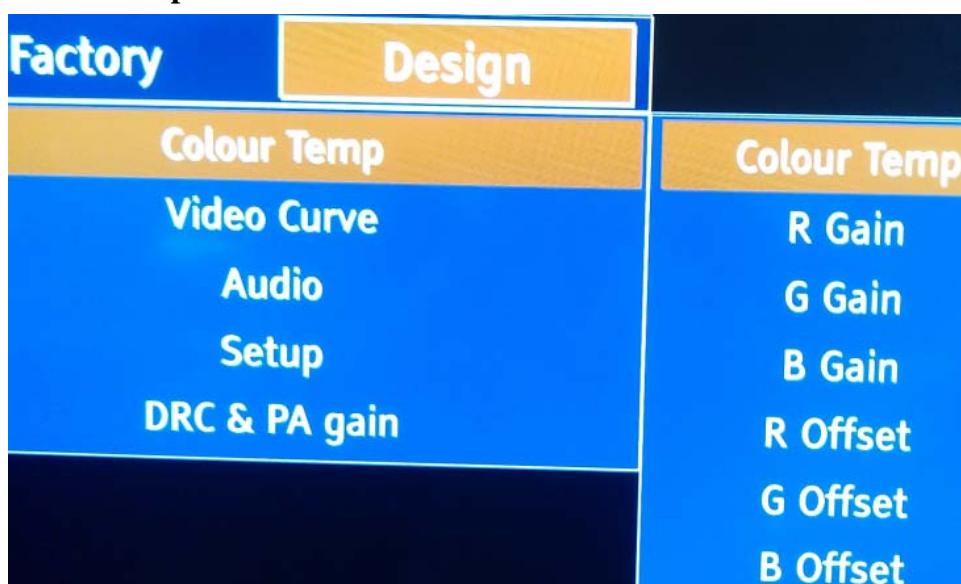
**To clear the EEPROM:**

- 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

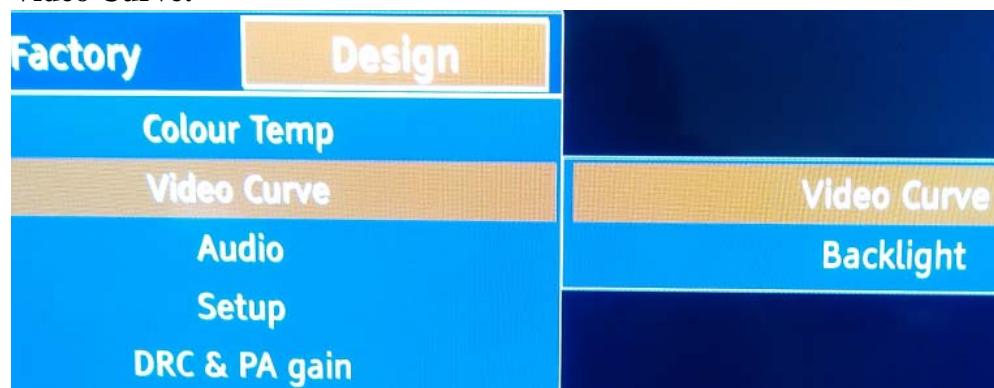


**Colour Temp:**



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### Video Curve:



### Audio:

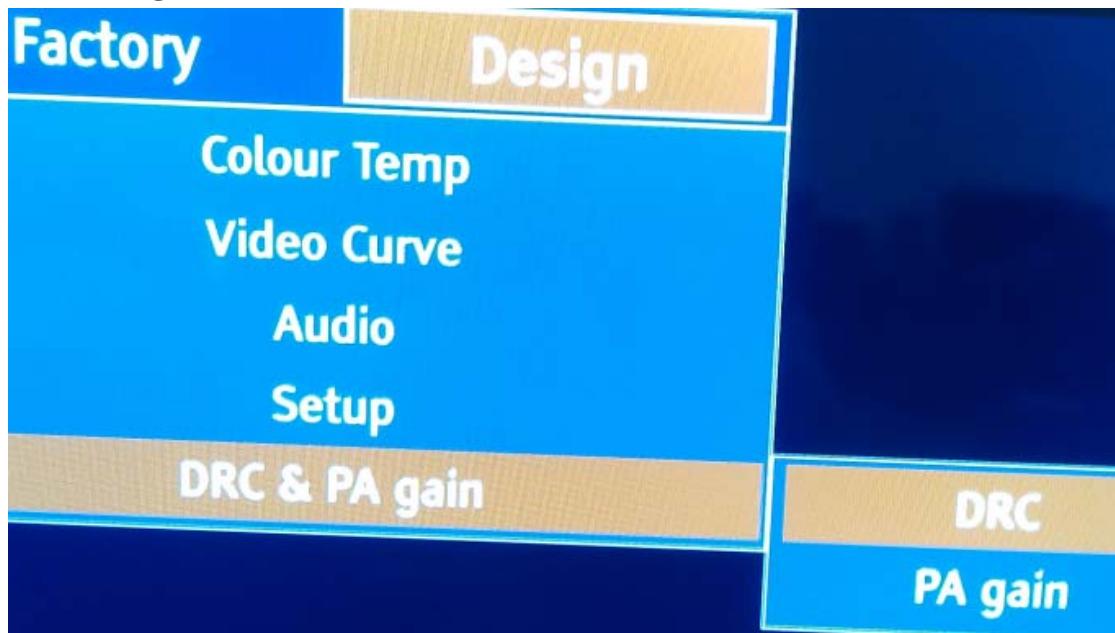


### Set up:



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## DRC&PA gain



### Note:

Above “Factory/Service OSD Menu” is reference for chassis MTK5653 , 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 .
- Insert USB Disk to USB port, and then turn on the TV.
- The TV will identify the software and upgrade automatically.

## 4.2 USB upgrade defeat

If USB upgrading defeat, then need burning the emmc flash program file“ \*.bin ”to the flash IC.

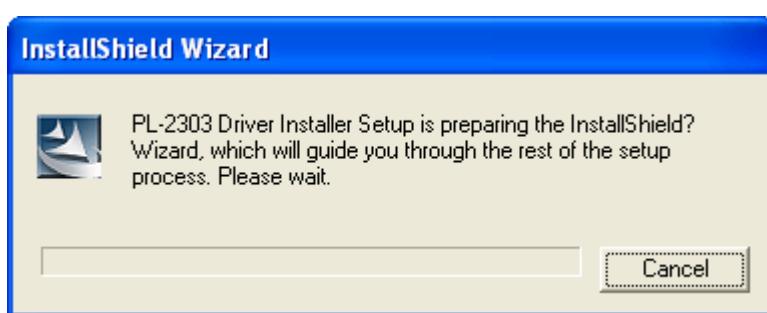
### Hardware connecting

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

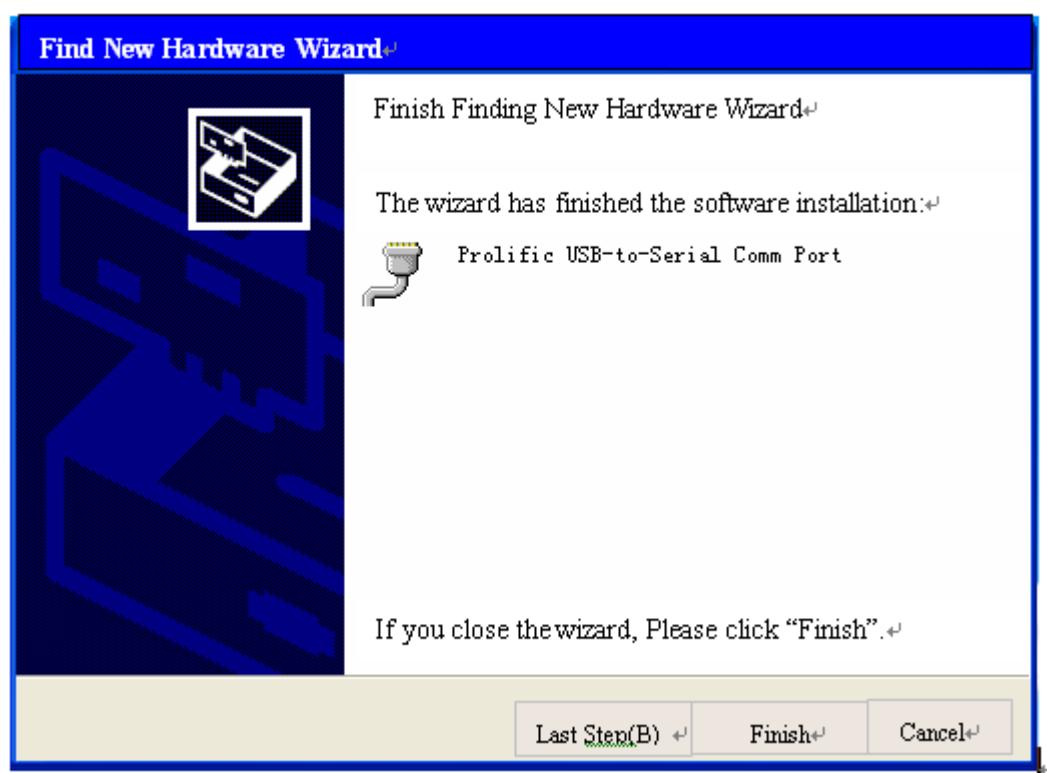
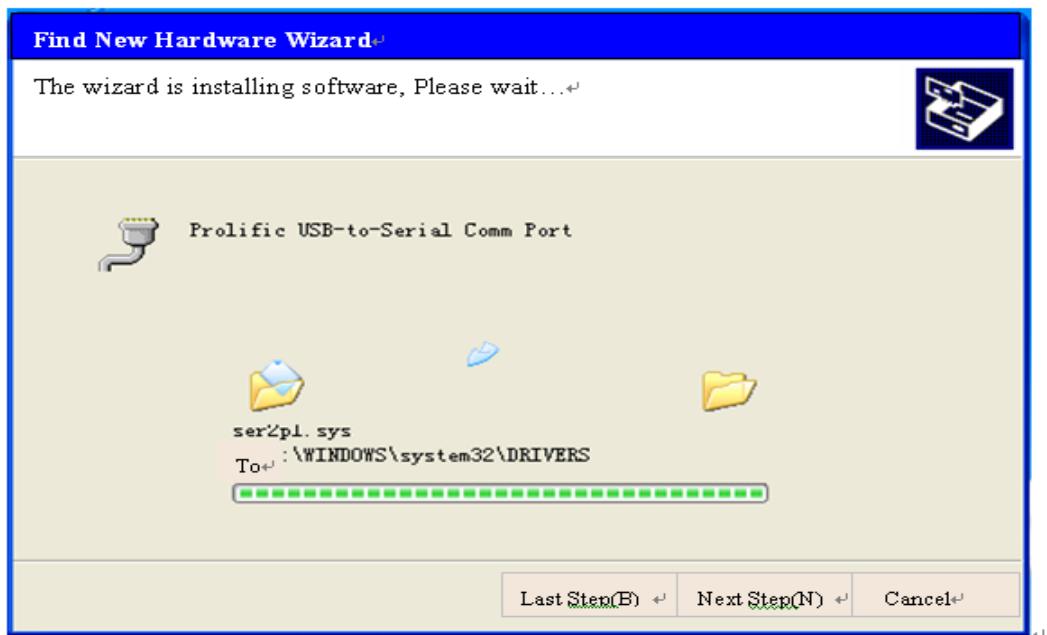


### 4.2.1 Install the driver

Double click the icon  , install the driver.

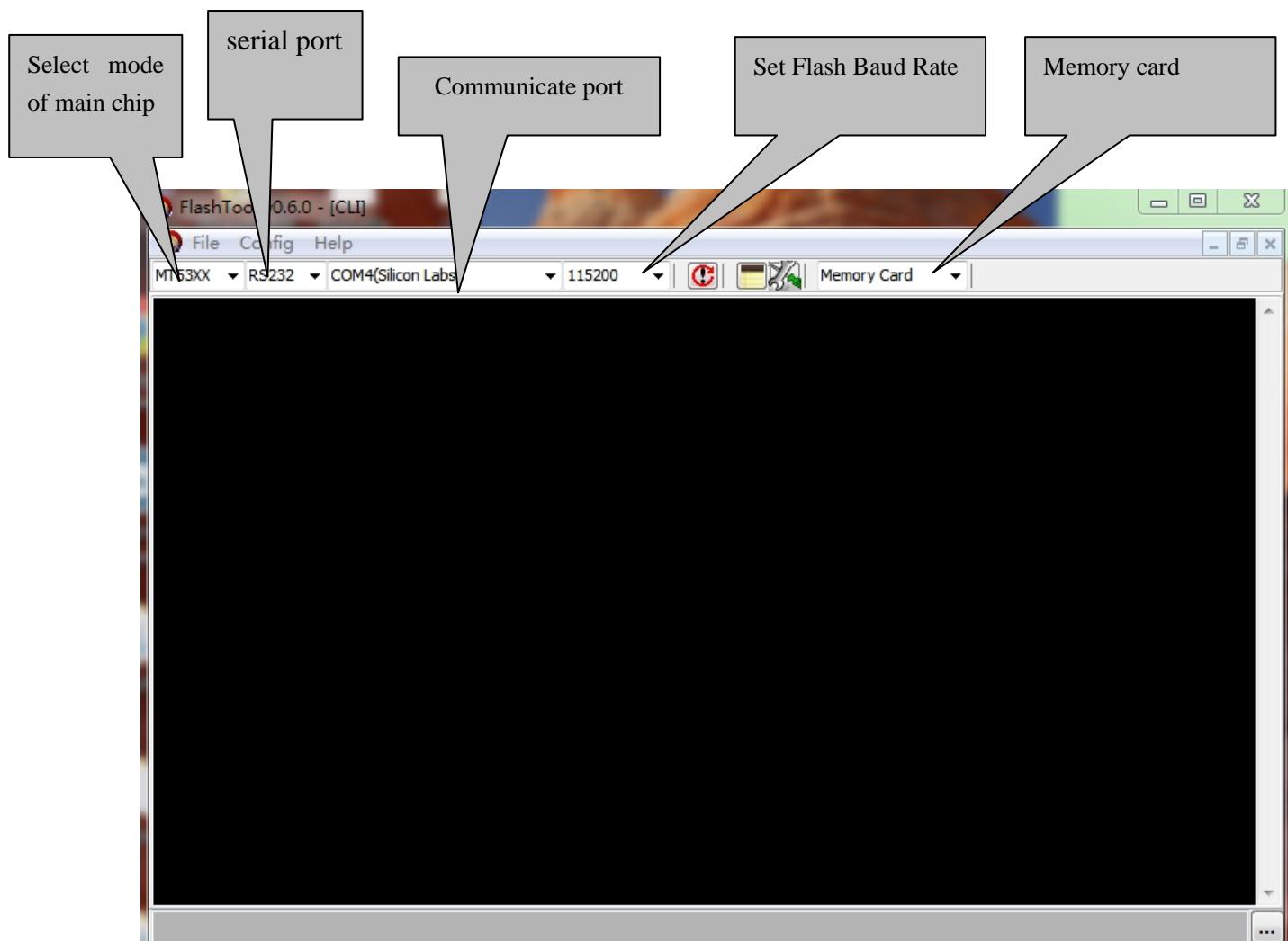


Select the default value, the driver will be installed step by step.



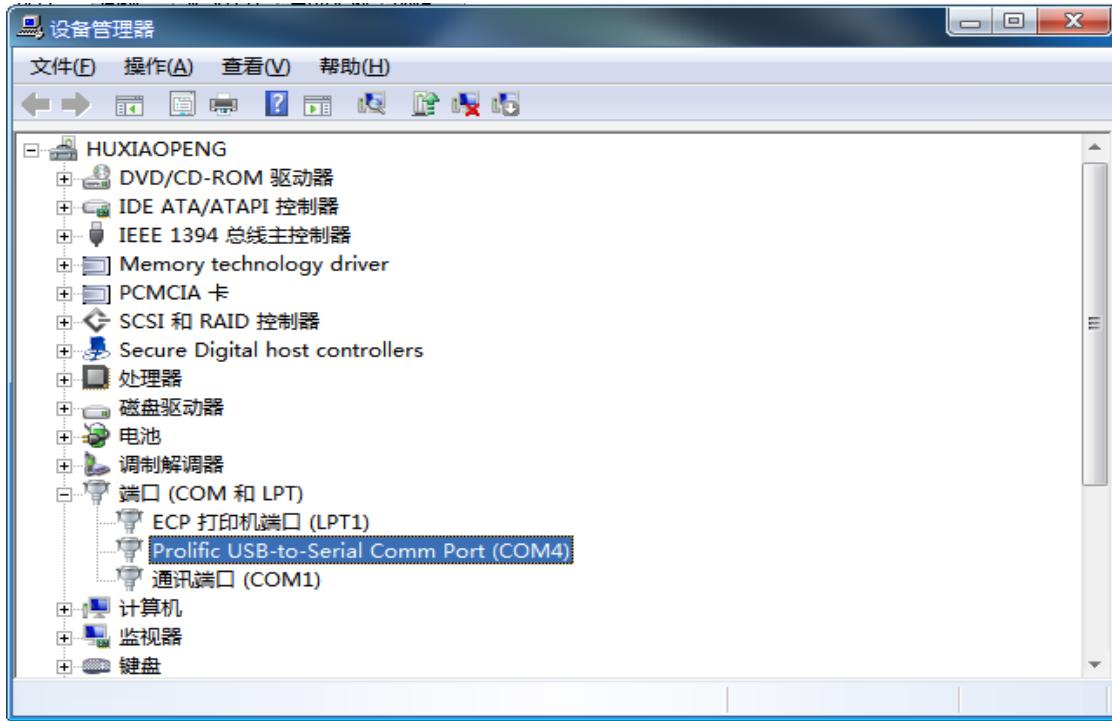
## 4.3 Upgrading with the FlashTool V0.6.0.exe

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.



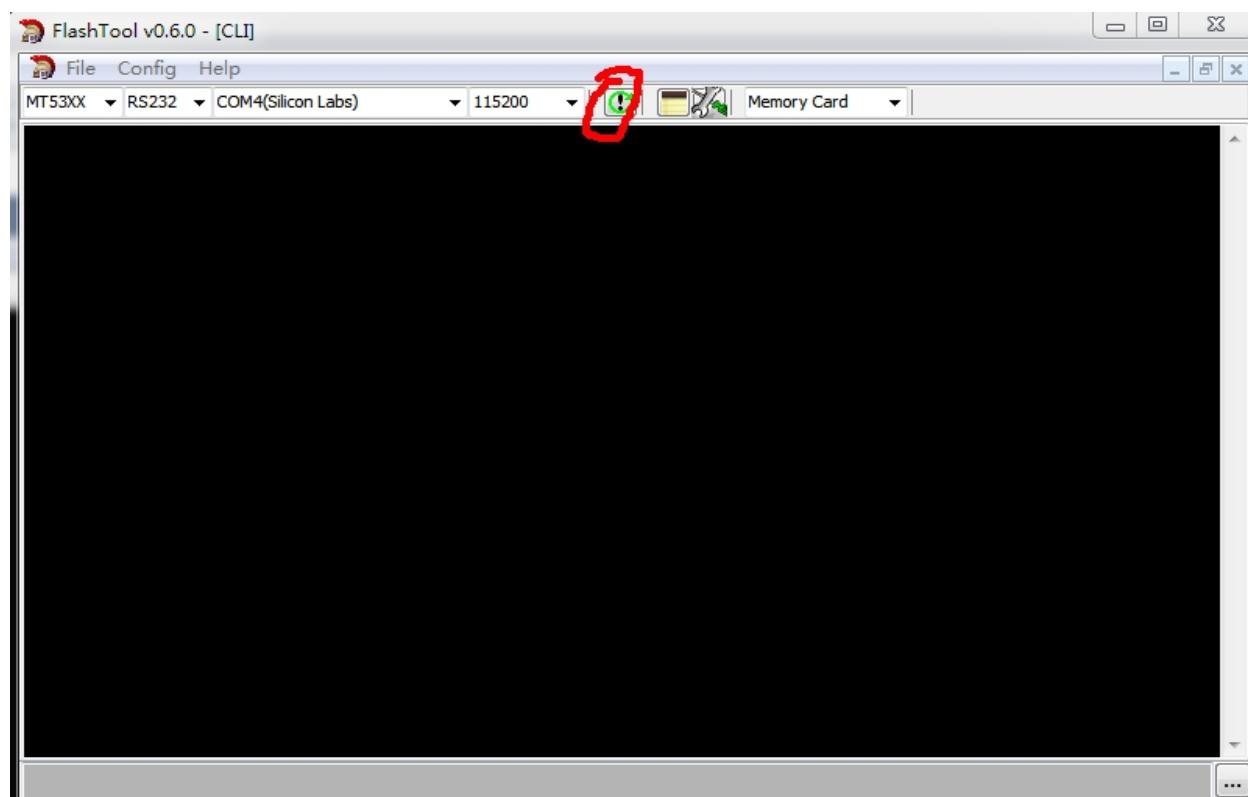
How to choose Communicate port and flash baud rate? See the following instruction..

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



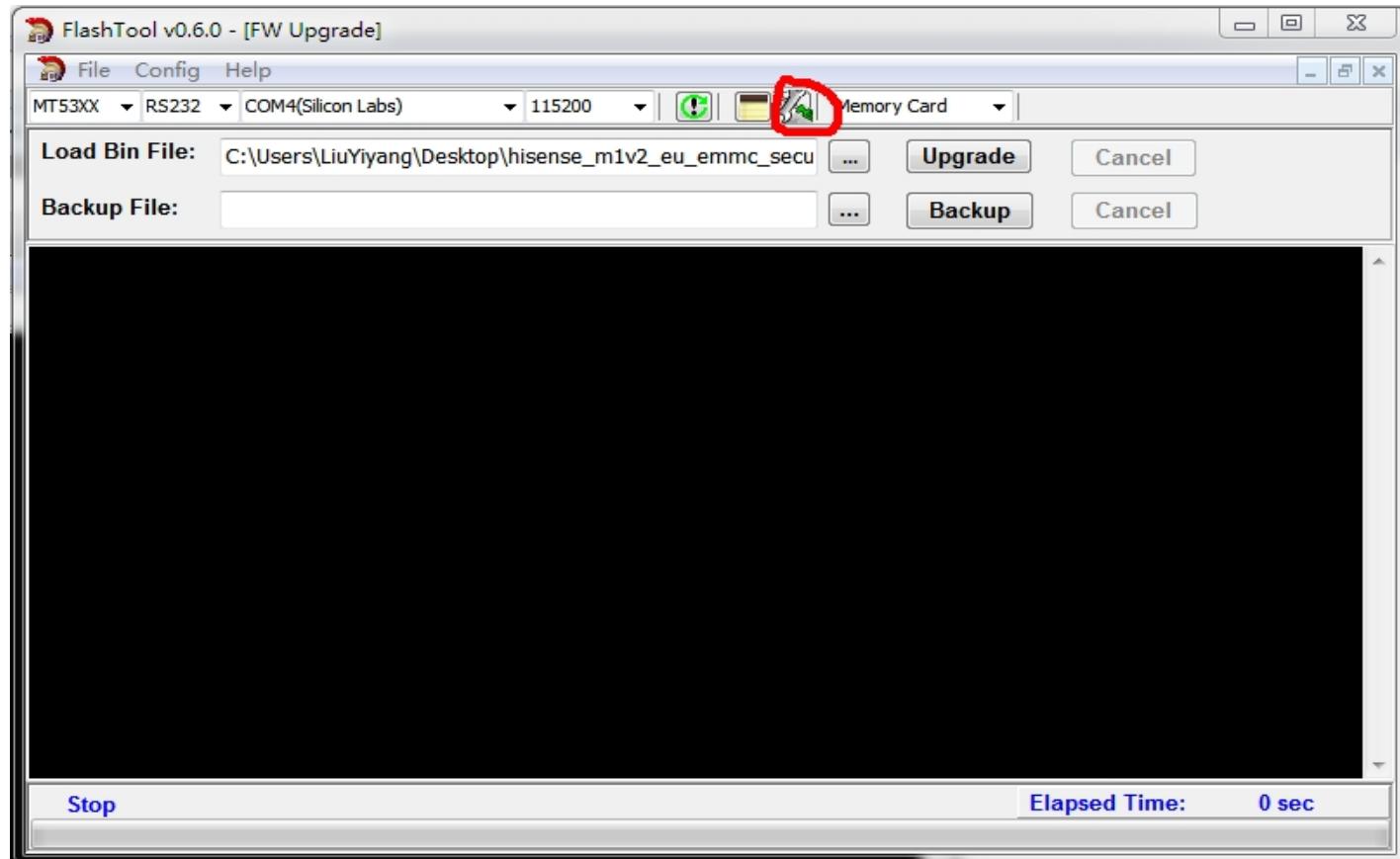
Open “Device Manager” and find which port is connected with the TV. In above picture, COM4 is connected to the TV, so, select “COM4” and if COM6 is connected to the TV, so select “COM6”. Select the right baud rate according to chip model. For this unit( chip model is MT5651), select 115200.

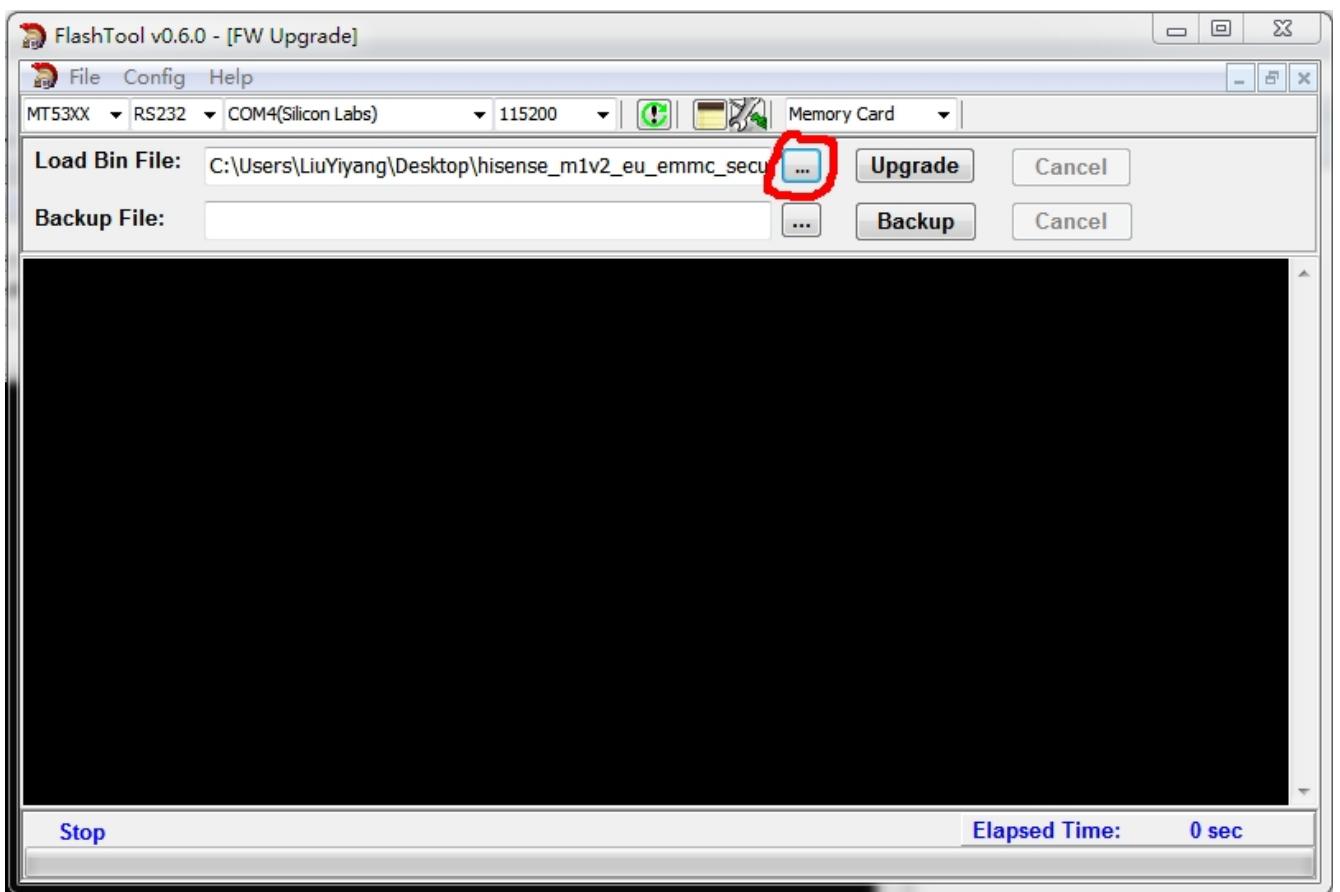
2、 Click to connect, if connect successfully then button from red turn green .



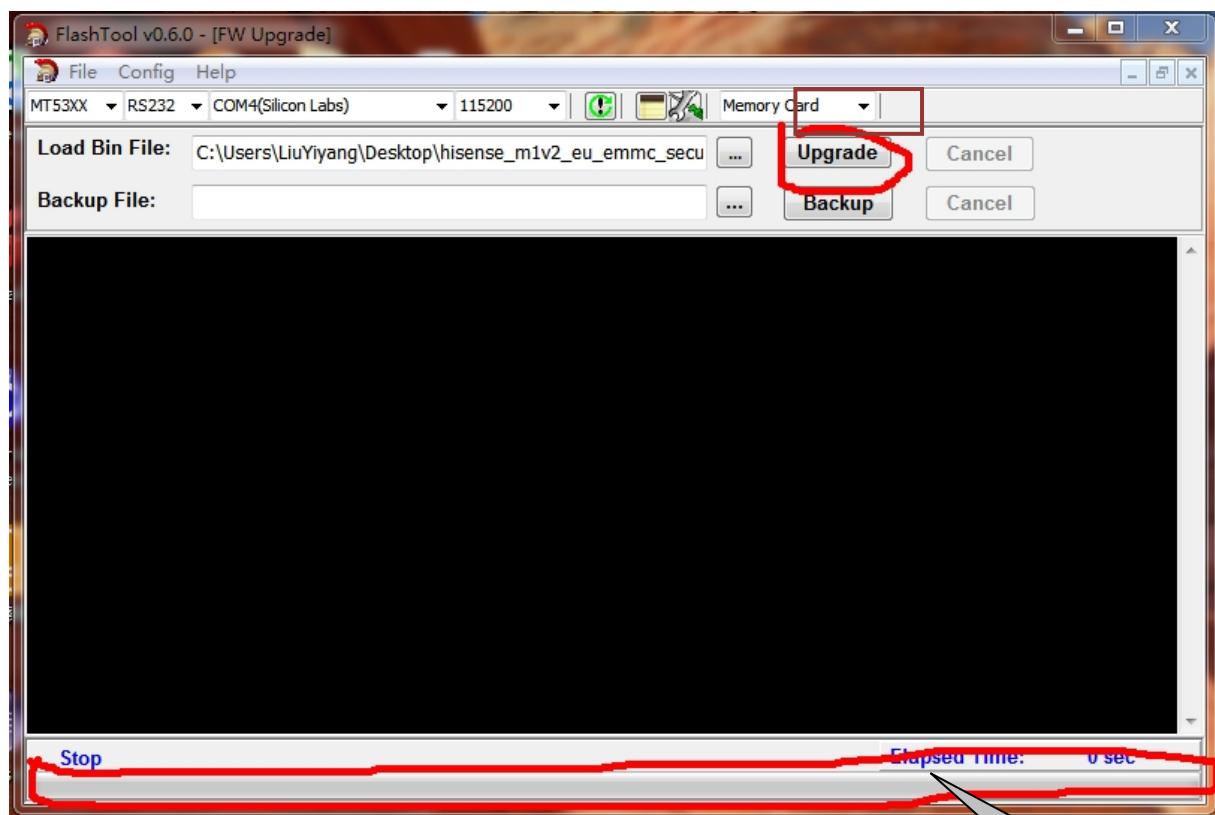
Click , bounce the following dialog box. Load Bin File: find the upgrading program file, and select it. for example:hisense\_m1v2\_EU\_emmc\_secure\_emmcboot.bin.

Press “Upgrade” button and start upgrading., if update defeat, try again.





Last .click upgrade button to start upgrade.



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## 4.4 Software update

Software update comprises three ways

USB、Internet and Auto Upgrade

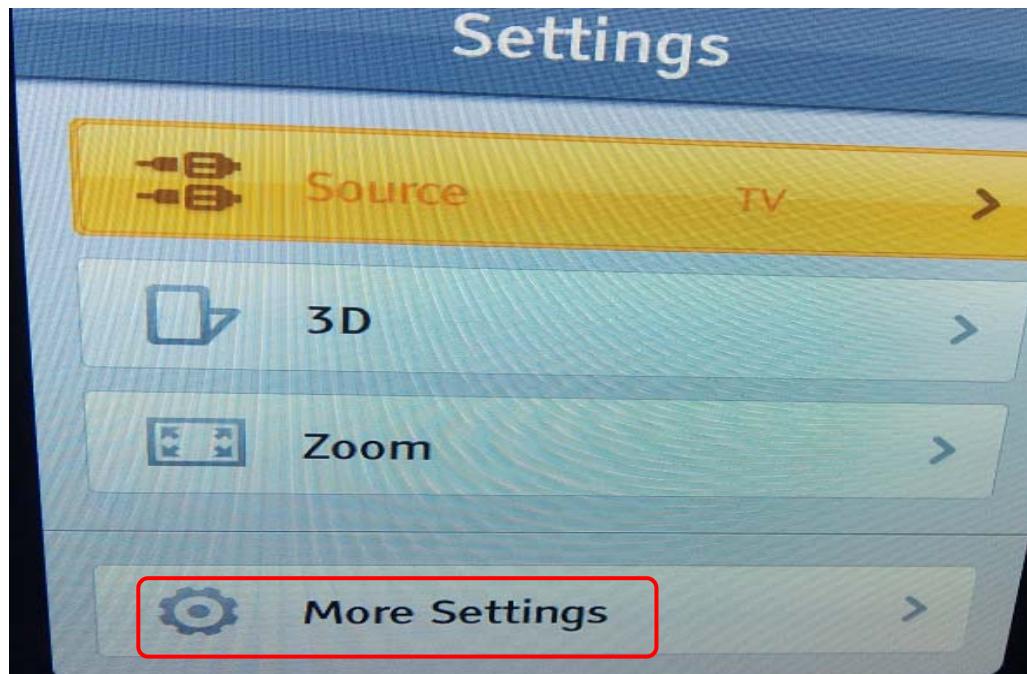
### 1、USB update

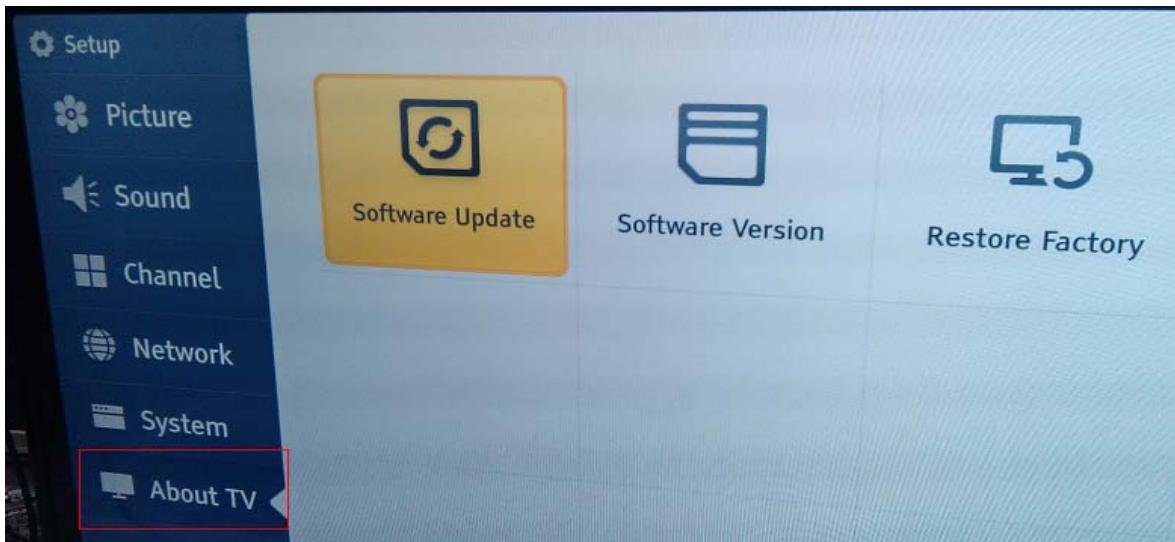
- First, copy the upgrade\_loader.pkg file to USB Disk;;
- Second, make sure there is no other .pkg file in the root directory of USB Disk .
- Insert USB Disk to USB port, About TV->**Software Update** select **USB**.
- The TV will identify the software and upgrade automatically.

### 2、Internet update

First, TV connects with internet.

Diagram figures as following:

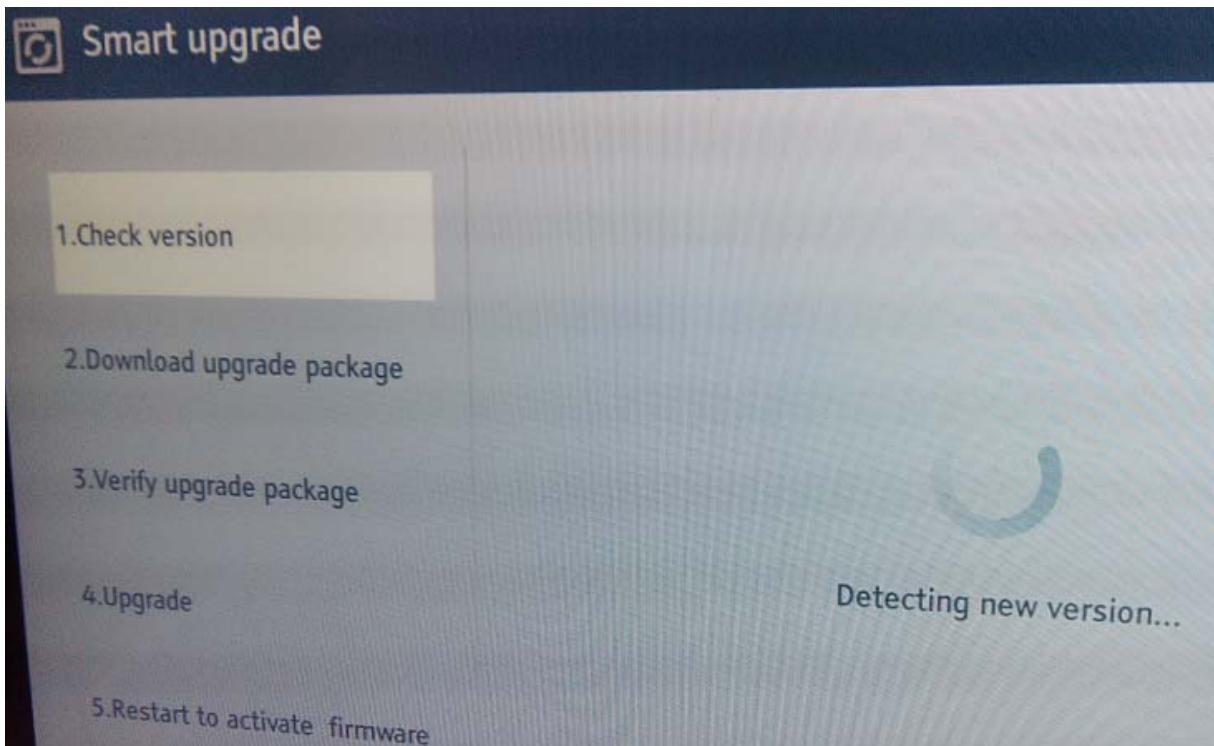




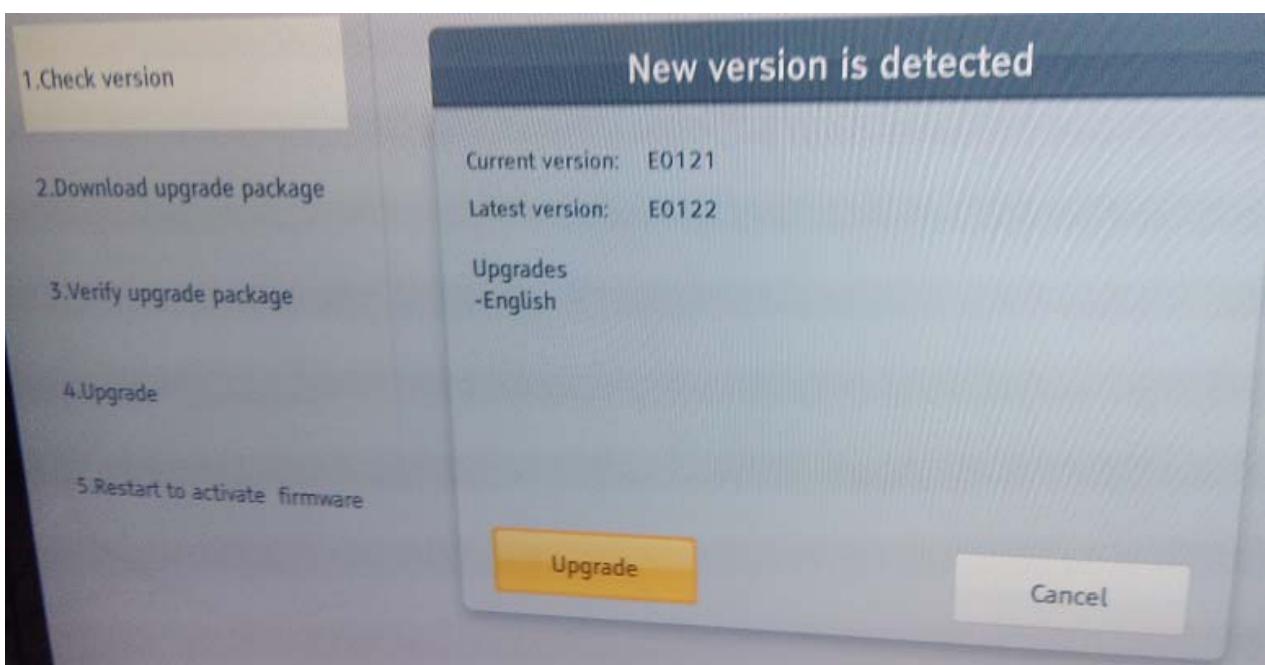
Press **ok** button, then appear “Smart upgrade” interface. Comprise five parts.

It can process step by step. See next processing figures. Please.

- 1、 Check Version
  - 2、 Download upgrade package
  - 3、 Verify upgrade package
  - 4、 Upgrade
  - 5、 Restart active firmware
-

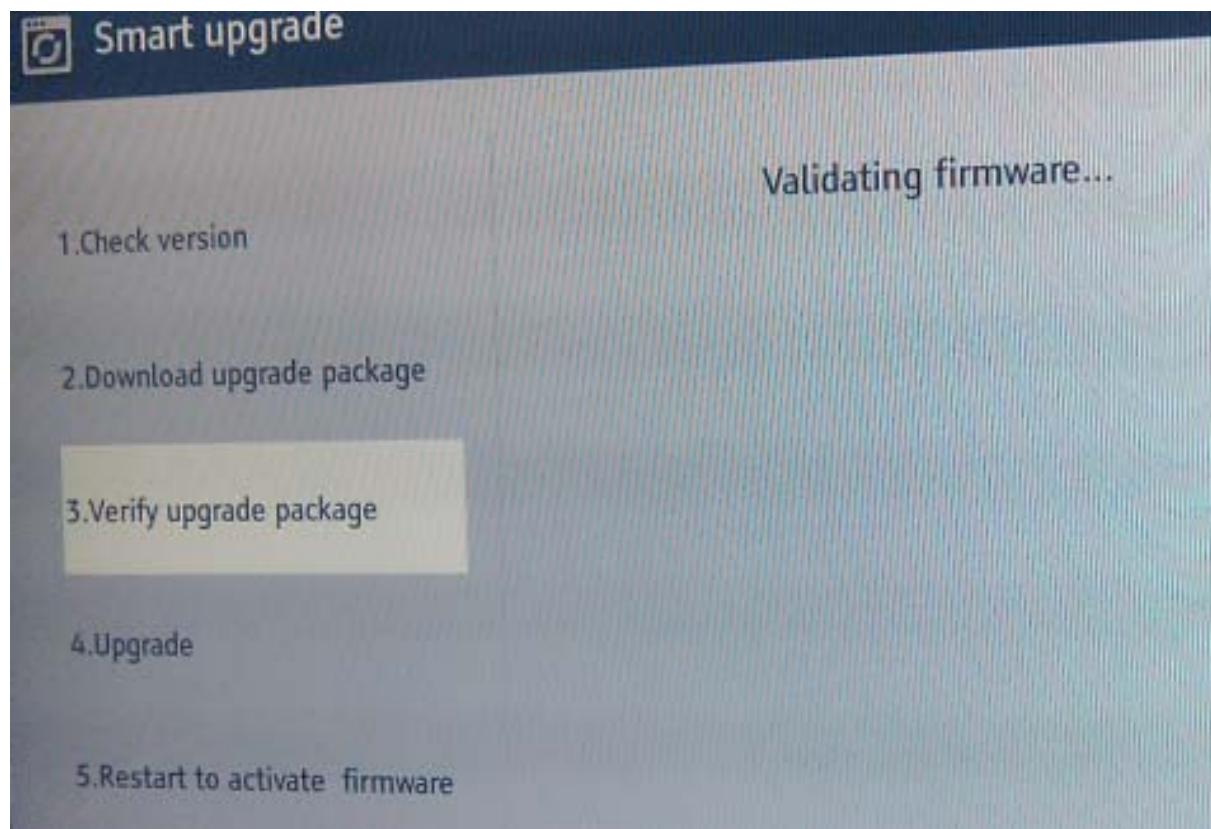
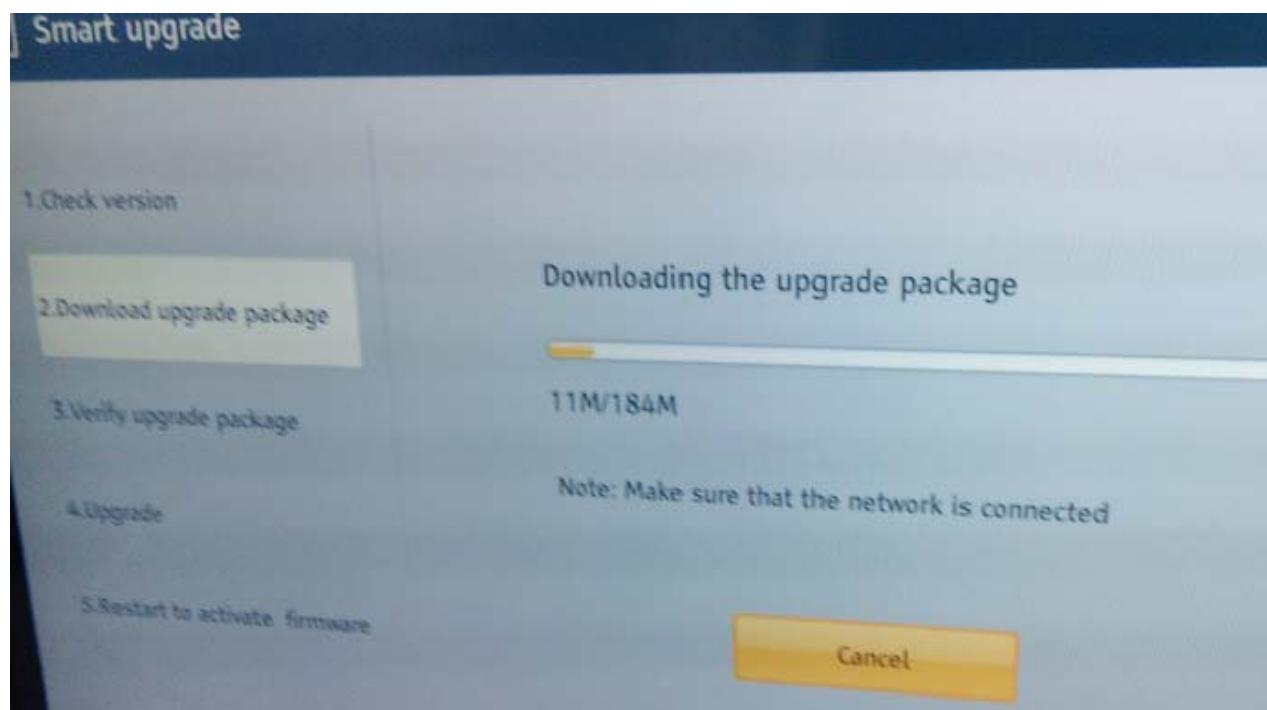


next



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next



## Smart upgrade

1.Check version

Are you sure to update the firmware ?

2.Download upgrade package

Kernel update to 1.0

3.Verify upgrade package

Root File System update to 1.0

4.Upgrade

3rd Party App. update to 1.0

5.Restart to activate firmware

3rd R-W area. update to 1.0

YES

NO

1.Check version

Updating Root File System...

2.Download upgrade package

Kernel update to 1.0

3.Verify upgrade package

Root File System update to 1.0

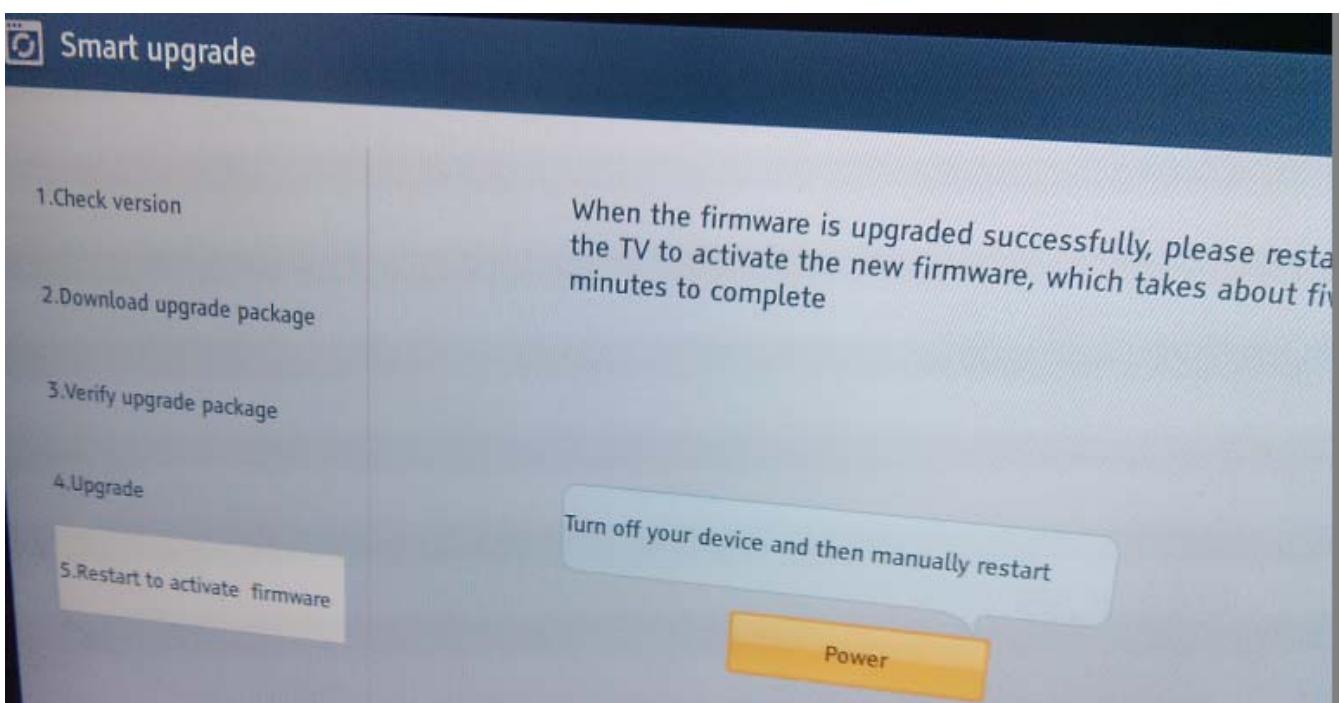
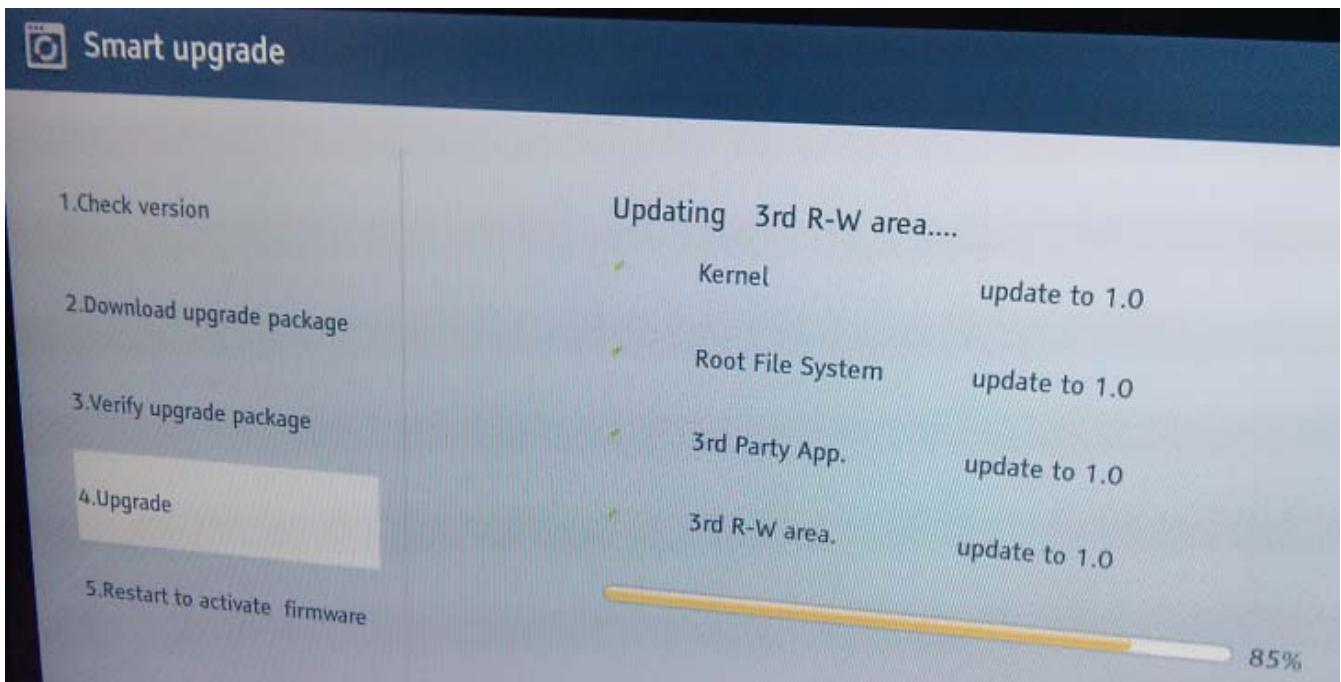
4.Upgrade

3rd Party App. update to 1.0

5.Restart to activate firmware

3rd R-W area. update to 1.0

0%



### 3、 Auto Upgrade

First, TV connects with internet.

Second, according the indication, TV can automatically upgrade.

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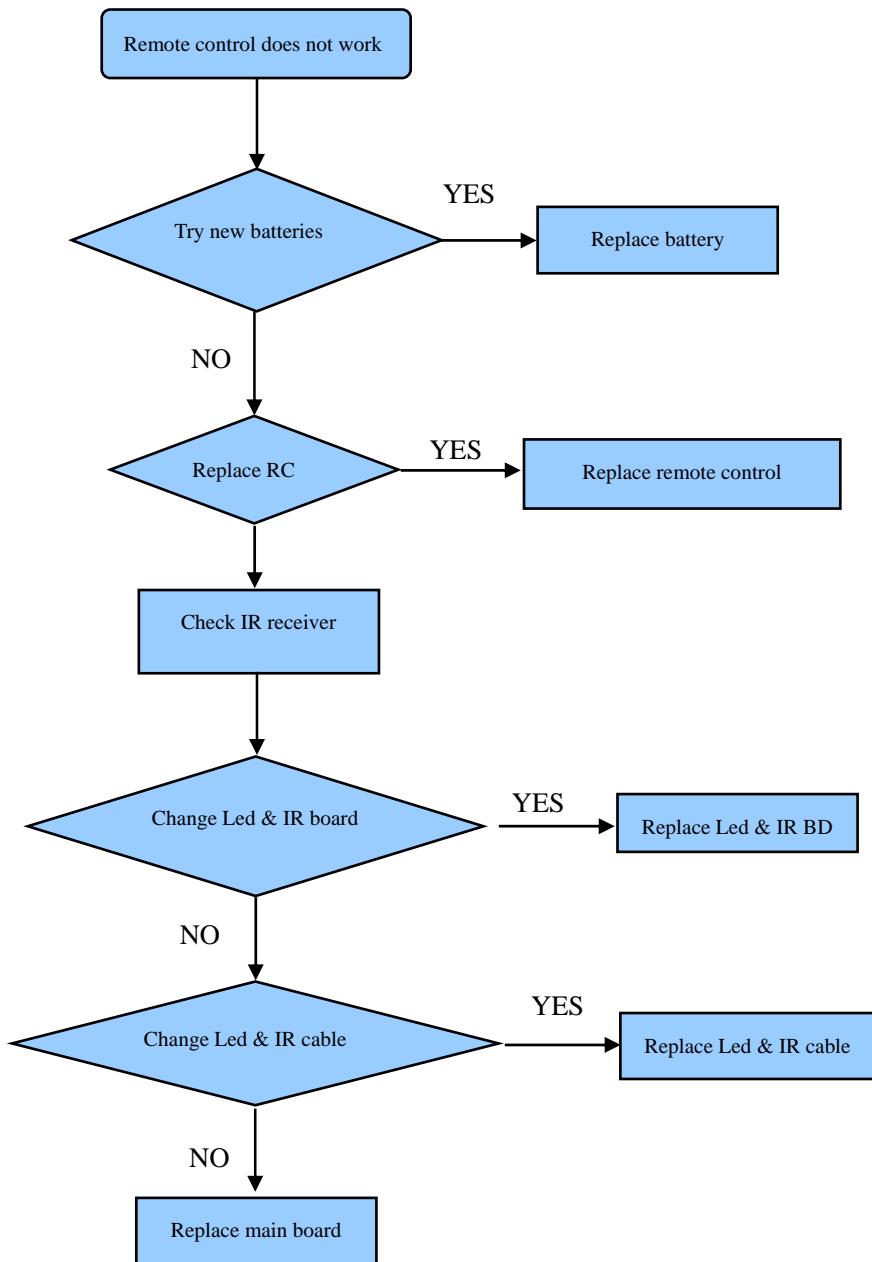
## 5. Trouble shooting

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 cann't be solved, please contact the profession technician.

No sound or picture	<ol style="list-style-type: none"><li>1. Check if the power line is in the outlet and if it has electricity.</li><li>2. Check if you have pressed Power button on the TV or Power button on the remote control</li><li>3. Check the setting of picture brightness and contrast.</li><li>4. Check the volume.</li></ol>
The picture is normal but there is no sound	<ol style="list-style-type: none"><li>1. Check the volume.</li><li>2. Check if Mute mode is set.</li></ol>
No picture and white or black picture	<ol style="list-style-type: none"><li>1. Adjust Picture Setting.</li><li>2. Check Color System.</li></ol>
The sound and picture are interfered	<ol style="list-style-type: none"><li>1. Try to find the appliance affecting TV set, and move it far away from the TV set.</li><li>2. Try to insert the power plug of the TV set into another outlet.</li></ol>
Unclear picture or picture with snow	<ol style="list-style-type: none"><li>1. Check the direction, position and connection of your antenna.</li><li>2. Adjust the direction of your antenna or reset or fine tune the channel</li></ol>
The remote control does not work	<ol style="list-style-type: none"><li>1. Change the batteries in the remote control.</li><li>2. Clean the upper side of the remote control (radiating window)</li><li>3. Check the contacting points of the batteries.</li><li>4. Check if there is obstruction between the remote control and the monitor.</li><li>5. Check if the batteries are correctly installed.</li></ol>
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.

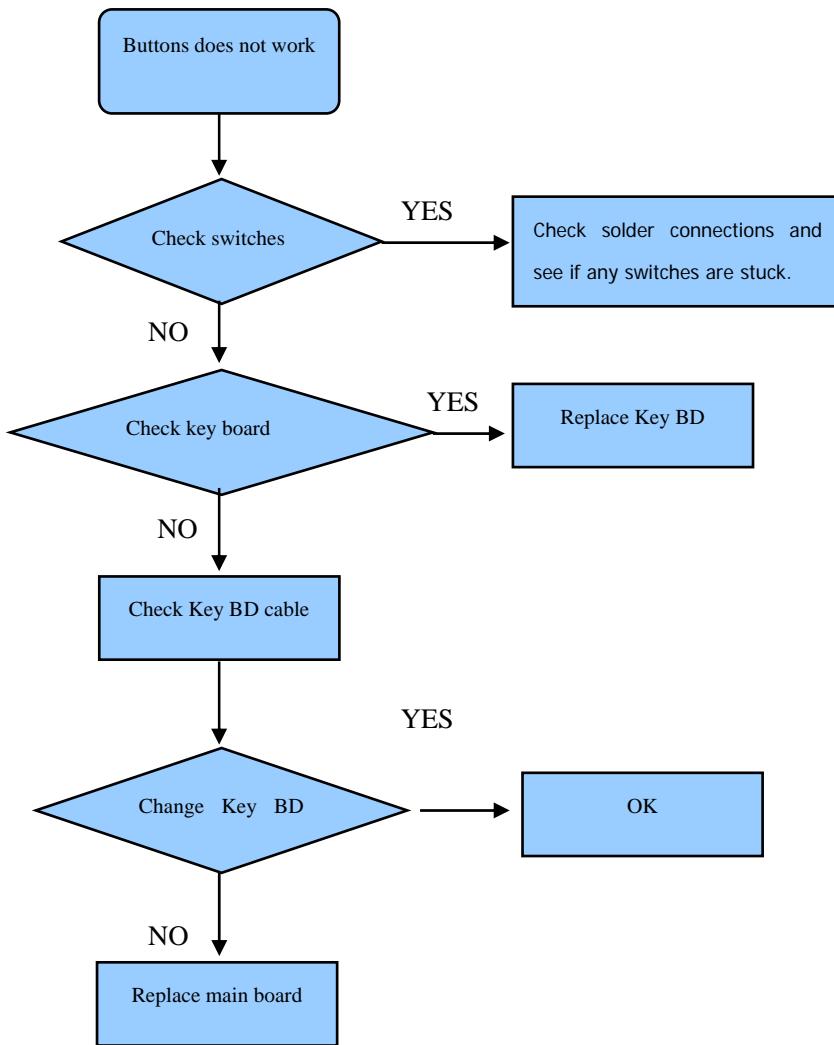
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## 5.1 Troubleshooting for Remote Control

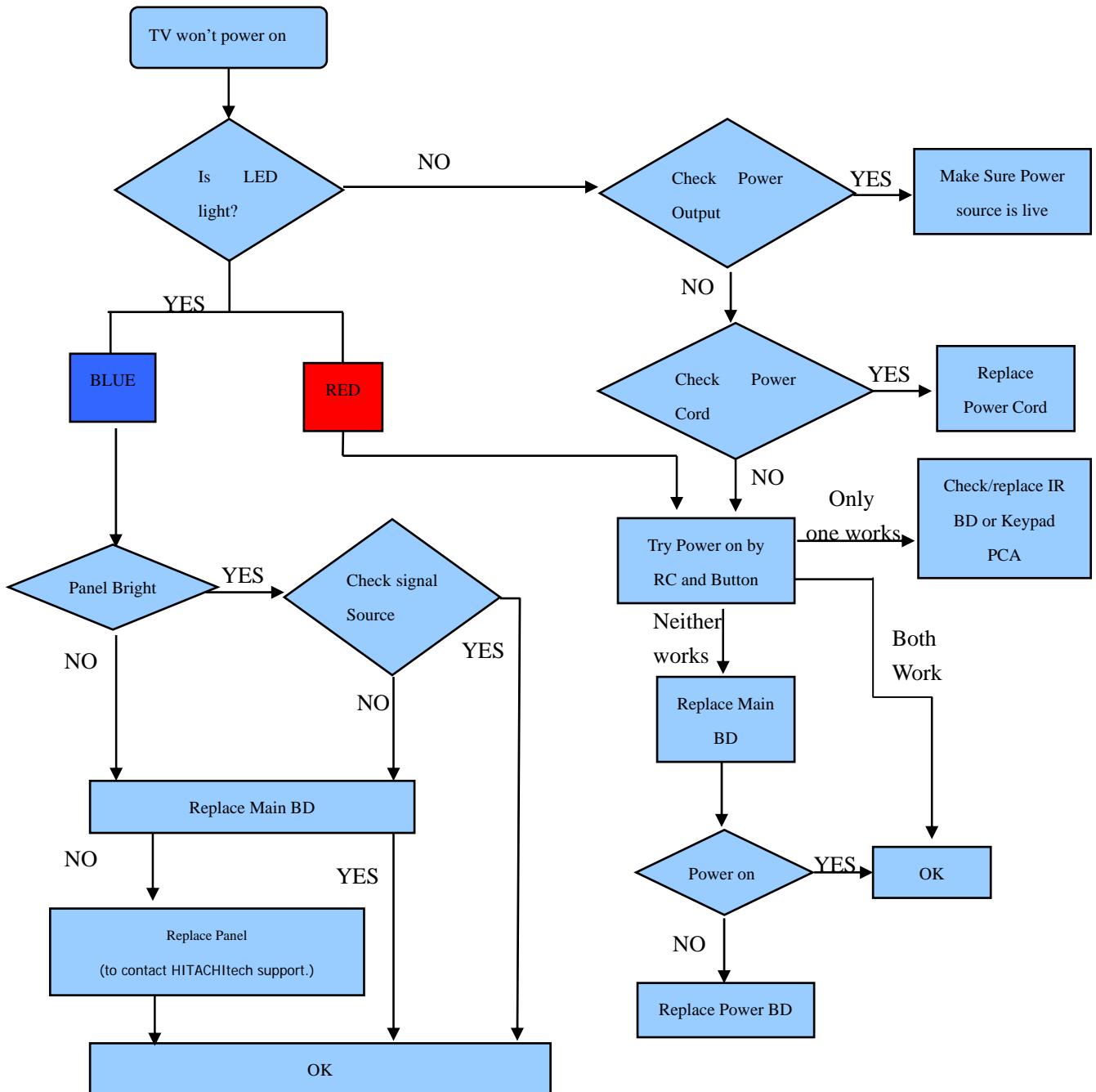


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## 5.2 Troubleshooting for Function Key

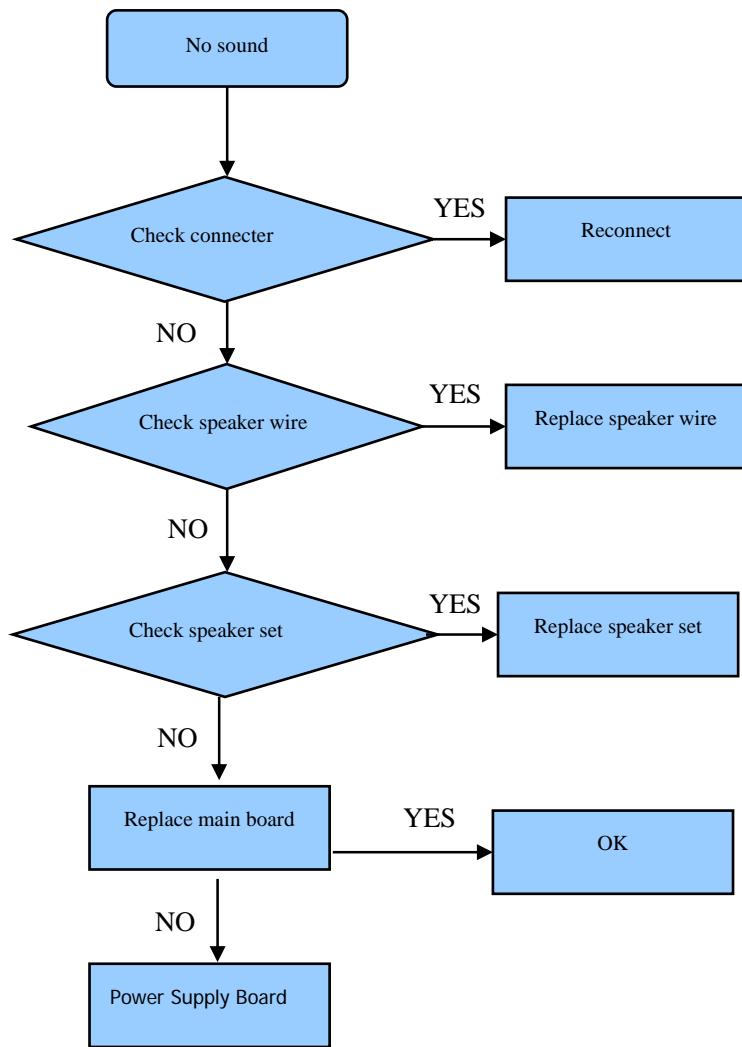


## 5.3 TV won't Power On



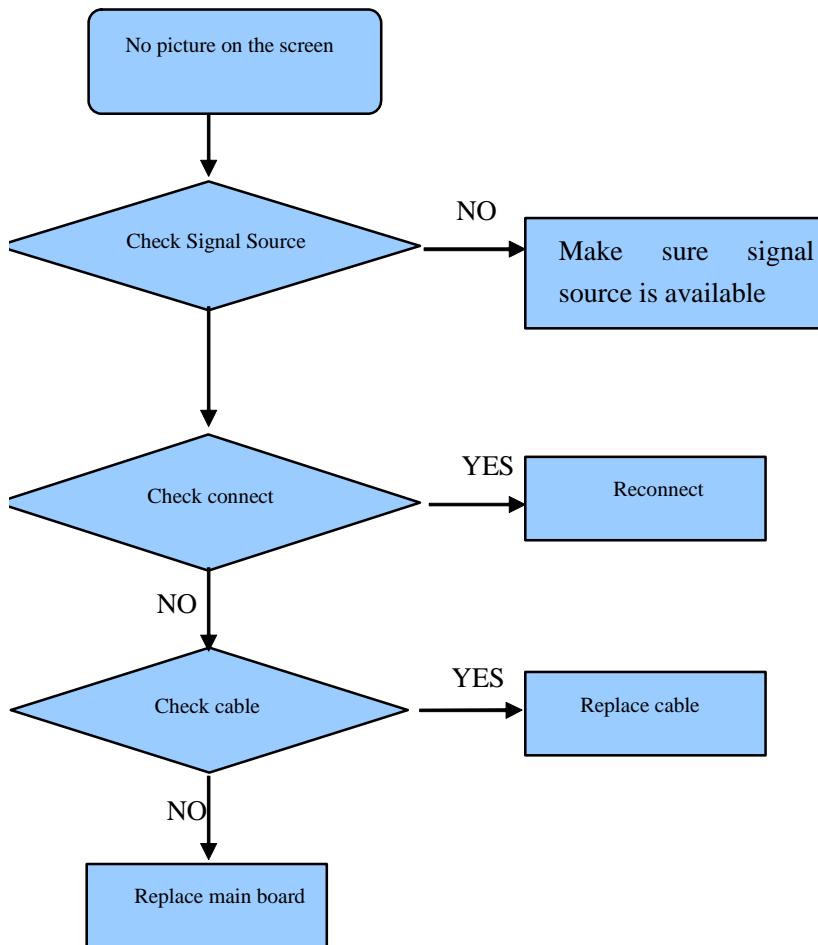
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## 5.4 Troubleshooting for Audio



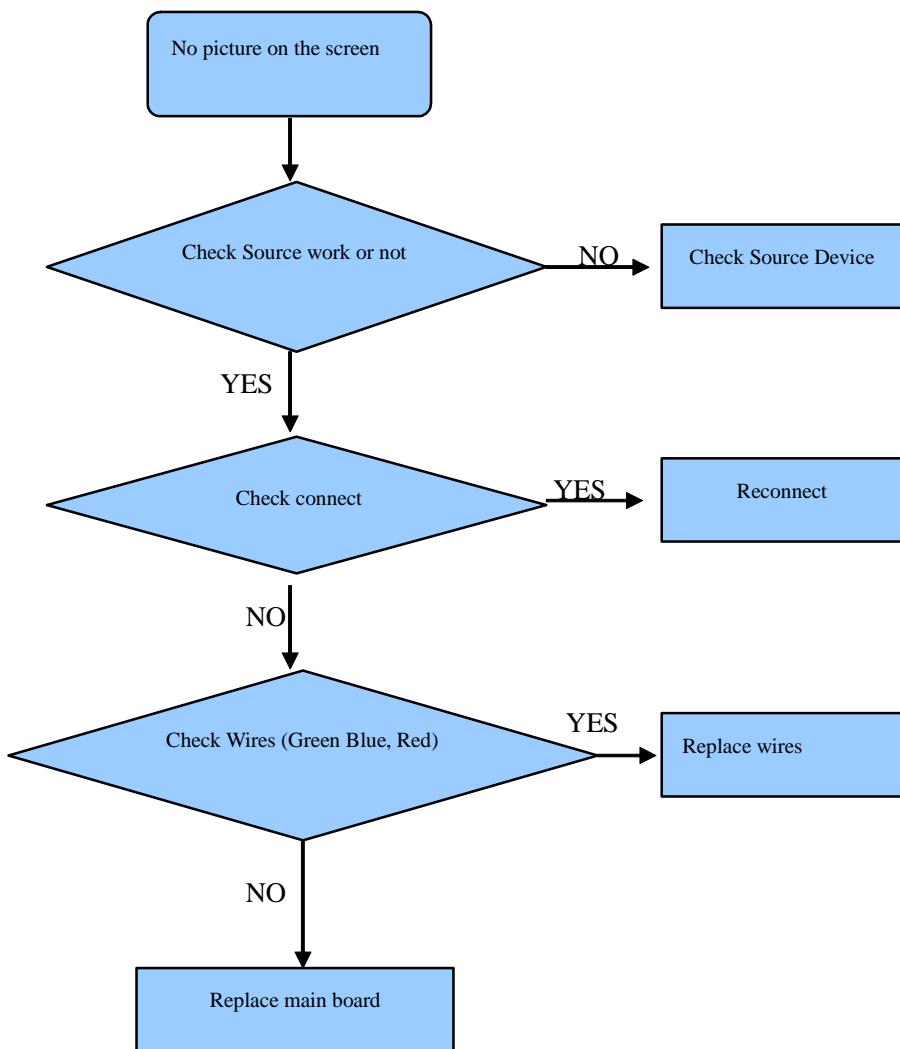
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## 5.5 Troubleshooting for TV/VGA/HDMI input



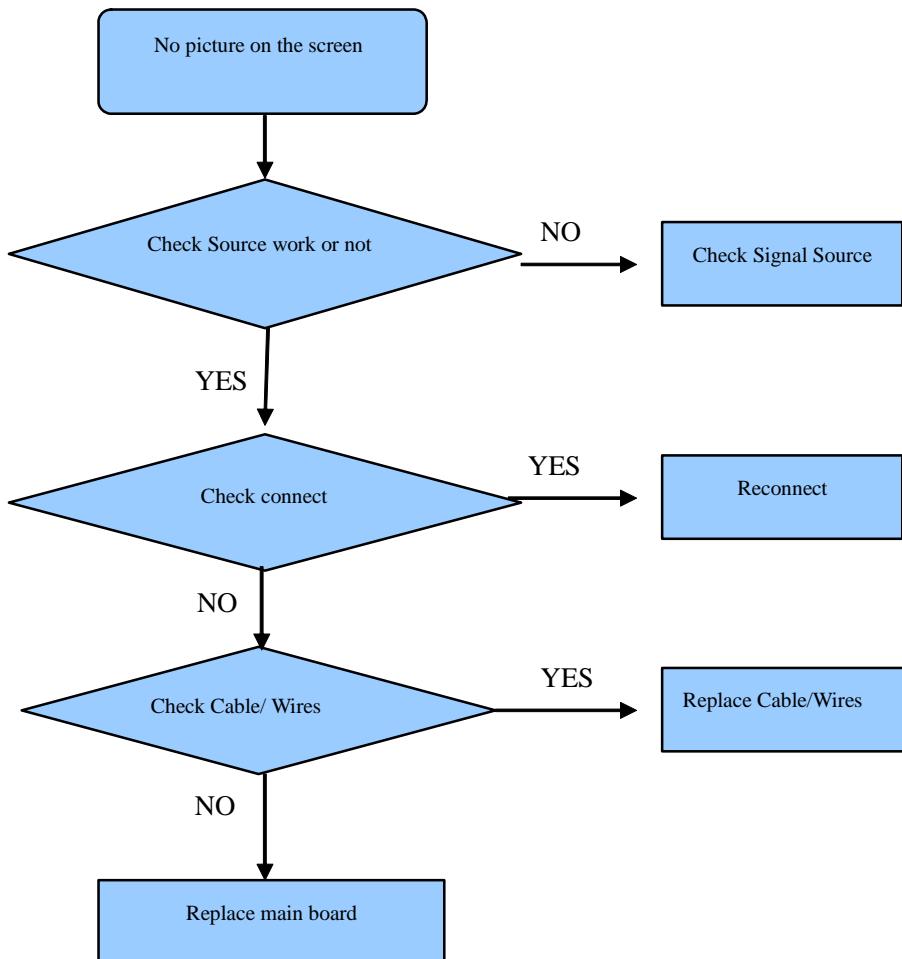
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## 5.6 Troubleshooting for YPbPr input



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## 5.7 Troubleshooting for Video input

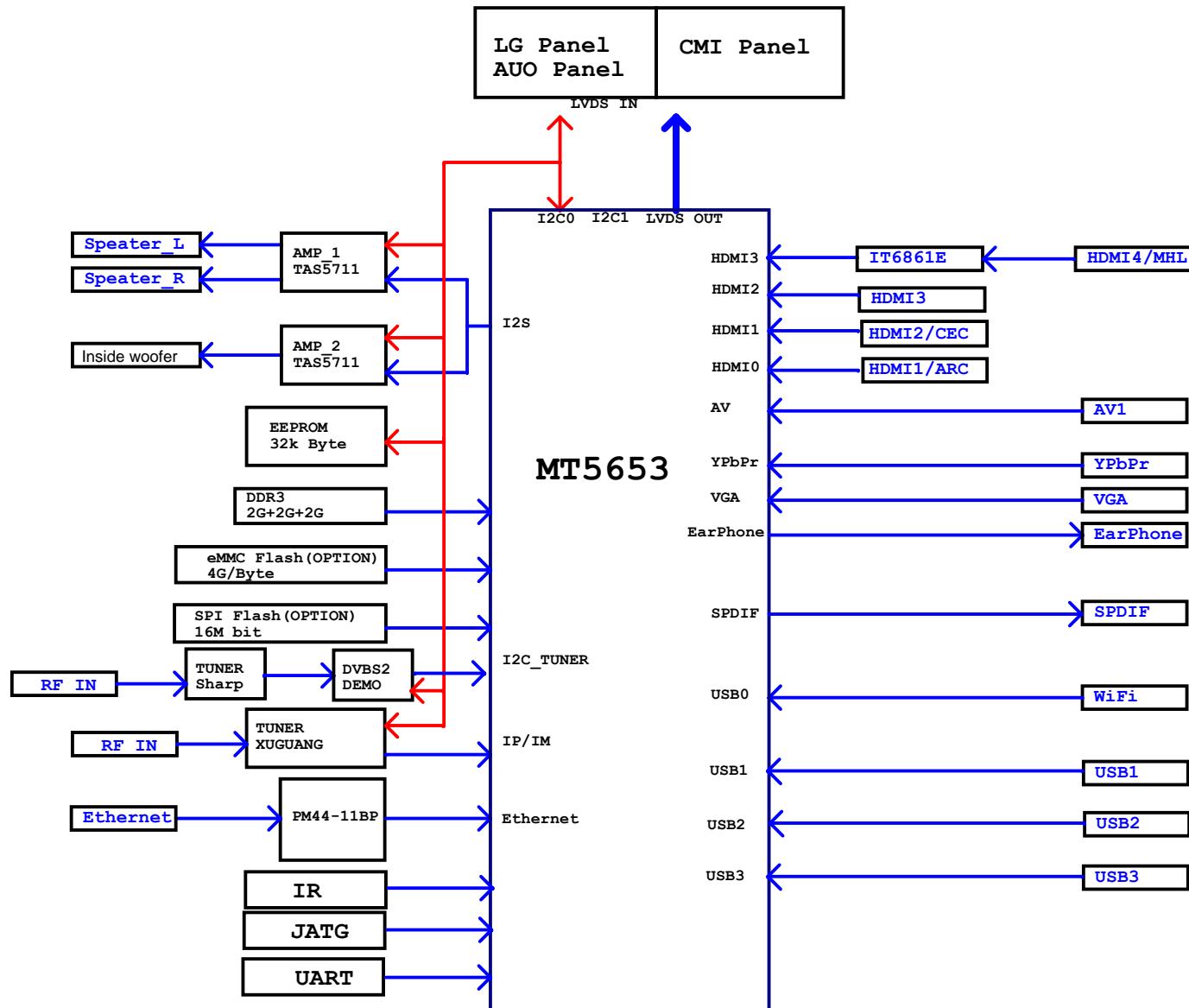


## 6. Signals Block Diagram and power assign:

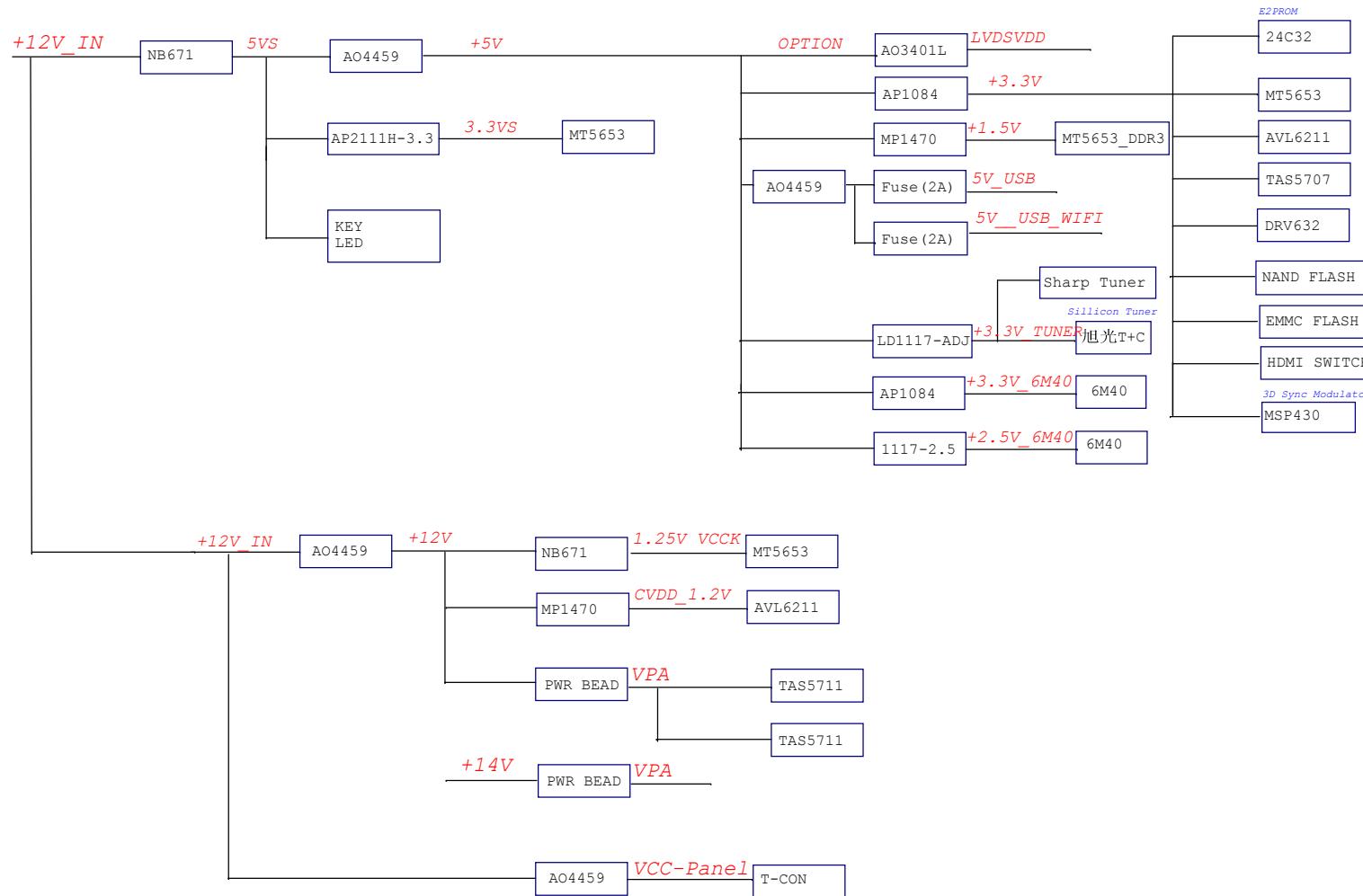
## 7. Schematic circuit diagram

## 8. Explode View

# Main board:5870 signal block diagram



# Main board:5870 power assign

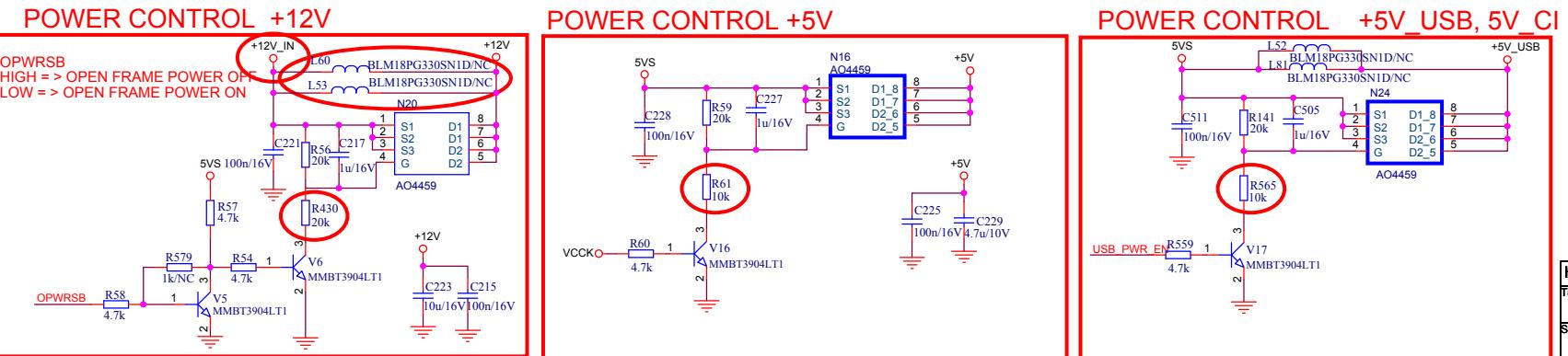
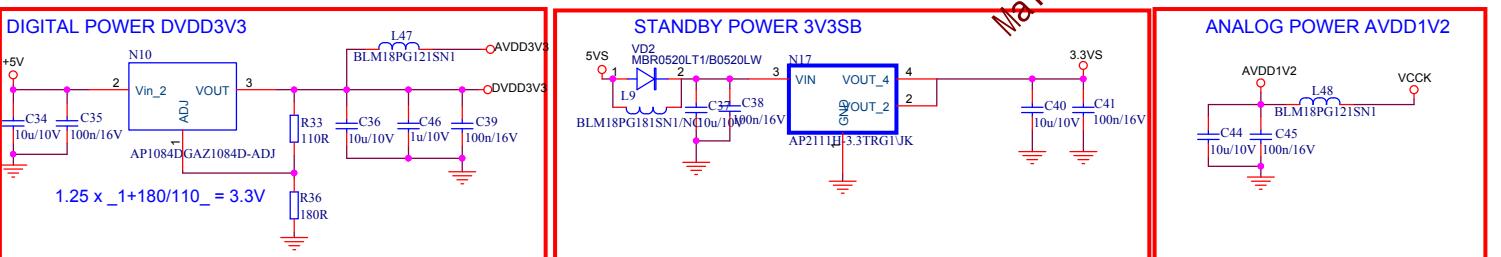
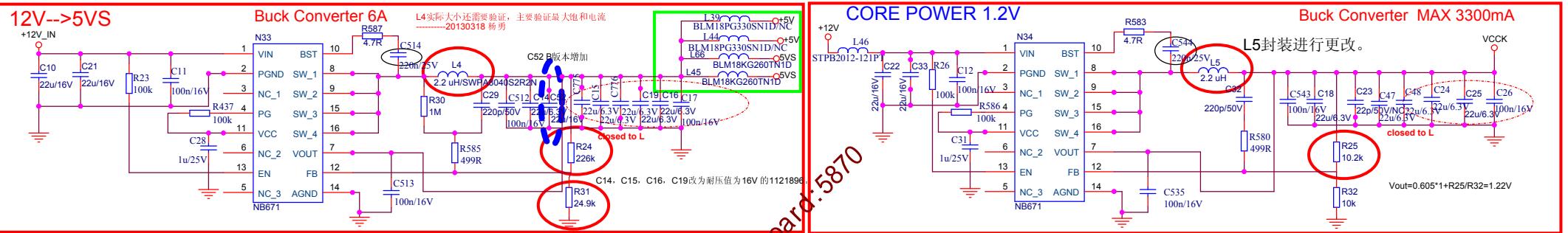
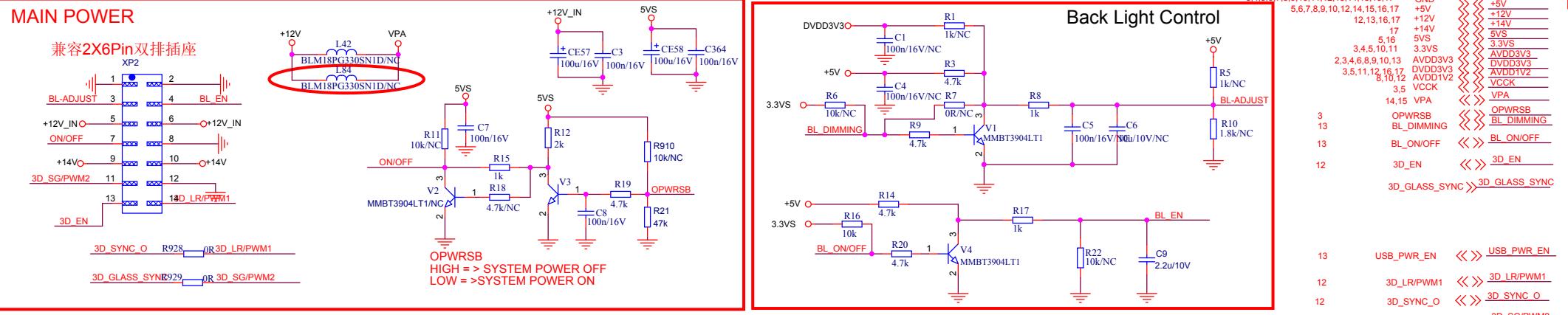


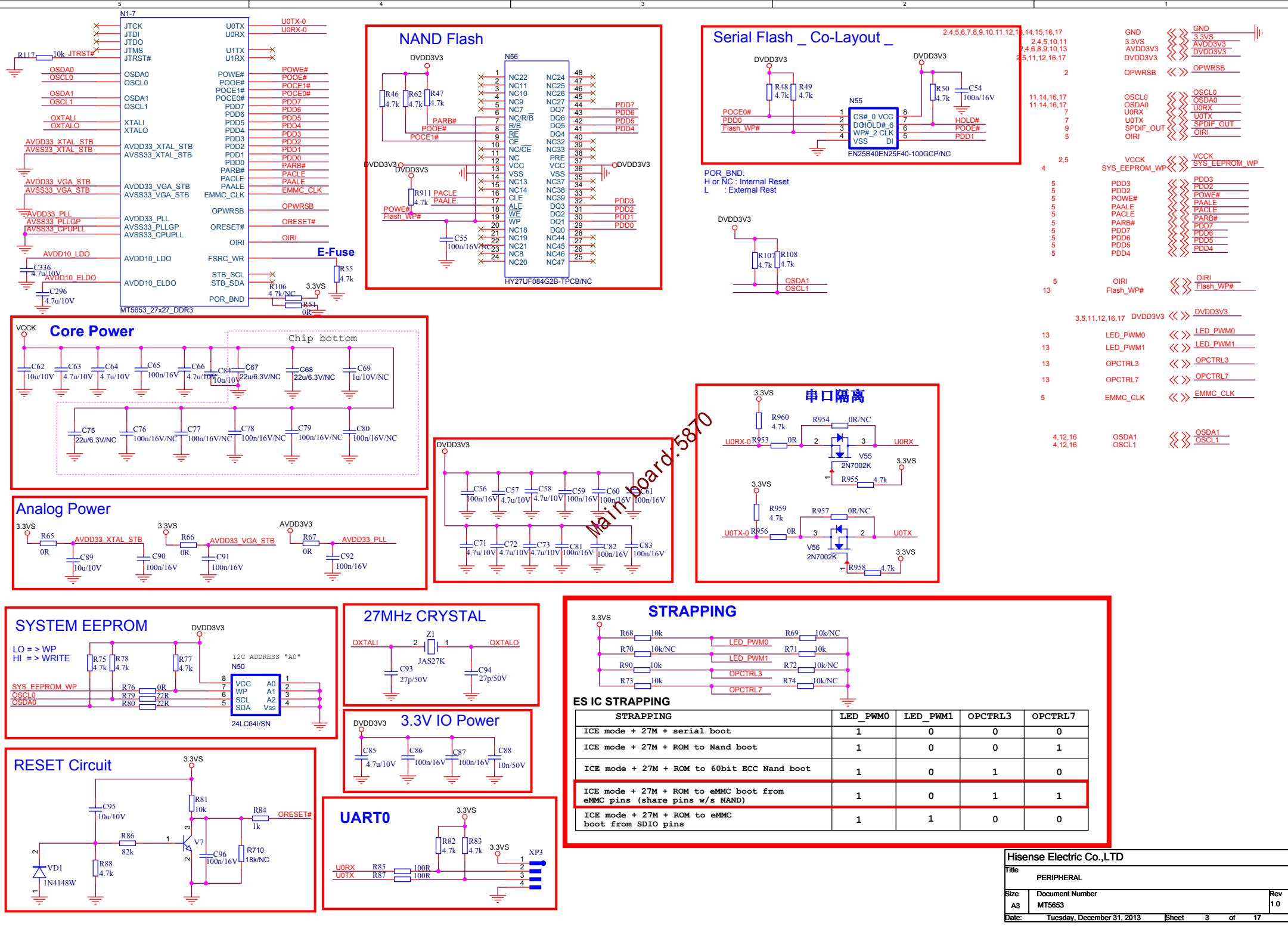
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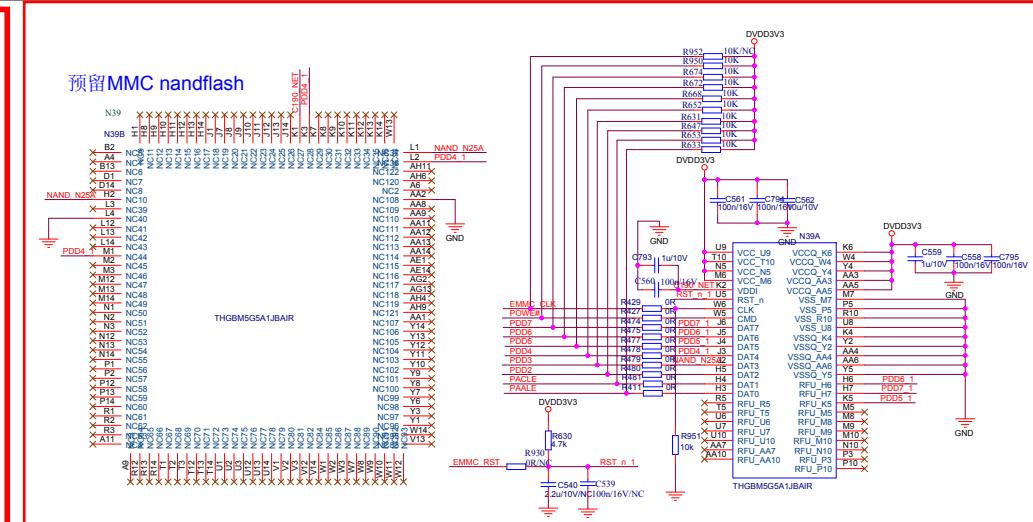
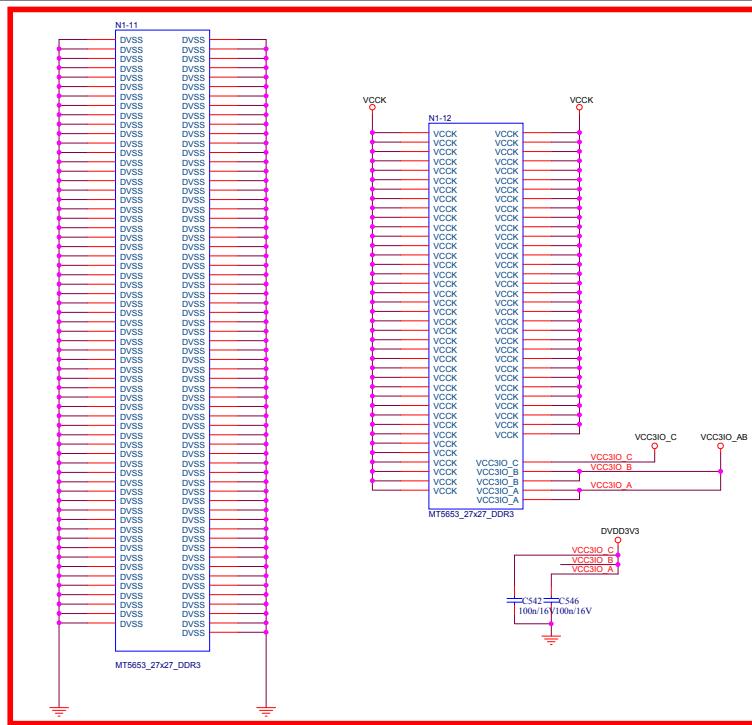
## GPIO LIST

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]

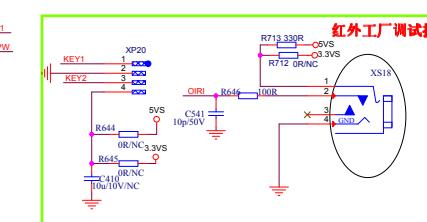
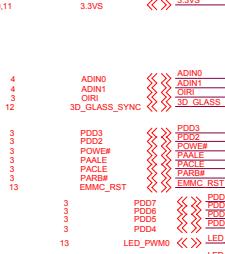
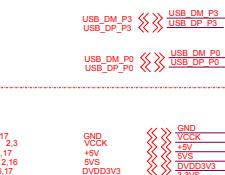
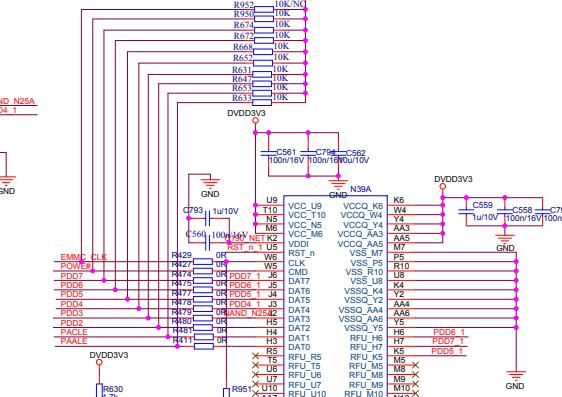
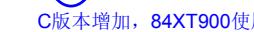
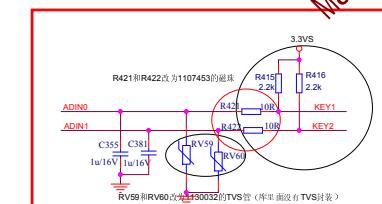
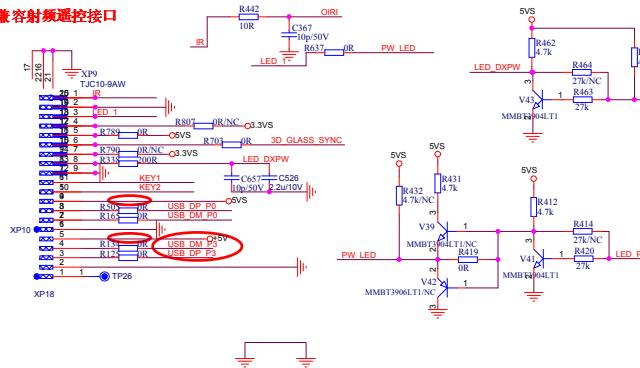
Main board:5870

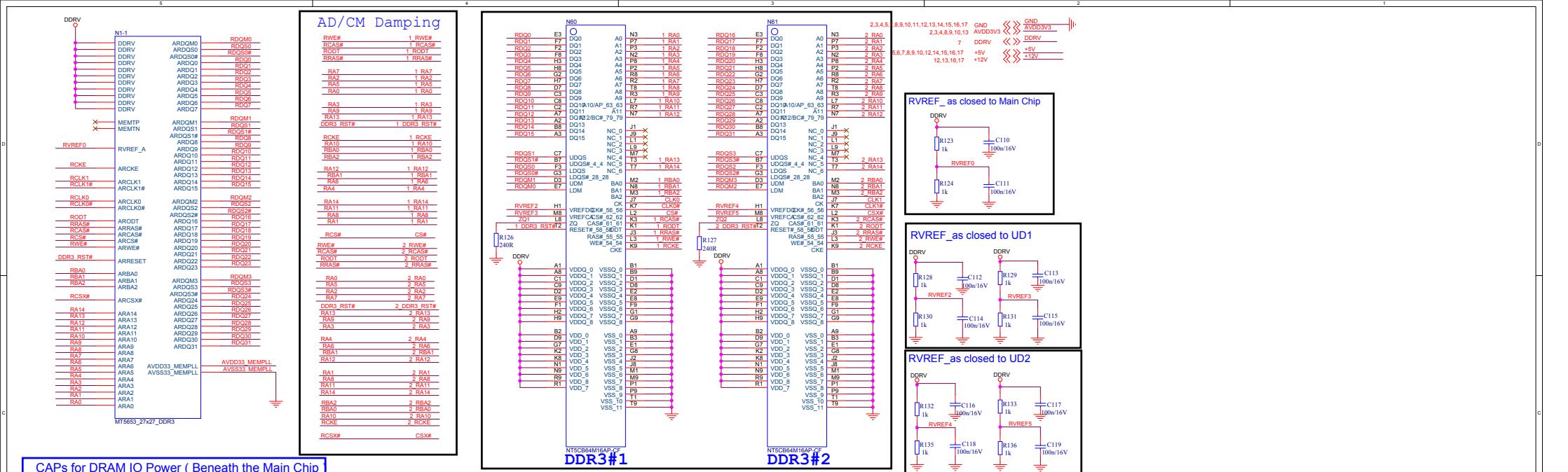




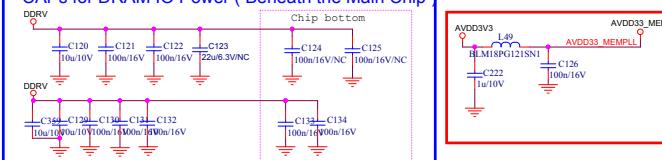


5.16  
5.17  
6.7,8,9,10,11,12,  
2.6,7,8,9,10

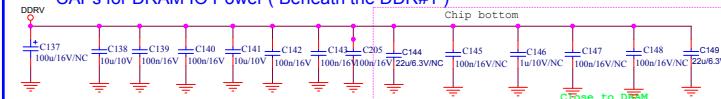




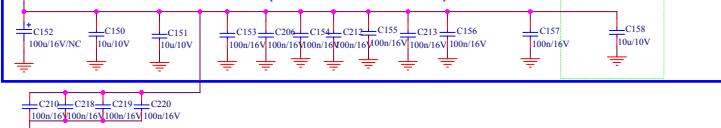
CAPs for DRAM IO Power ( Beneath the Main Chip)



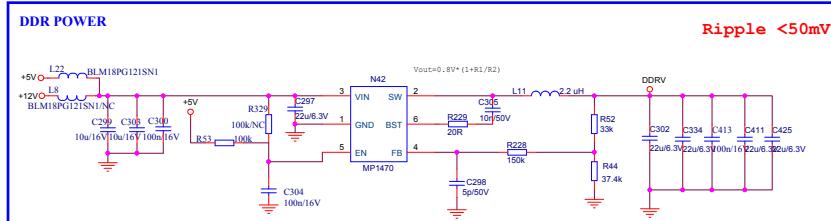
CAPs for DRAM IO Power ( Beneath the DDR#1



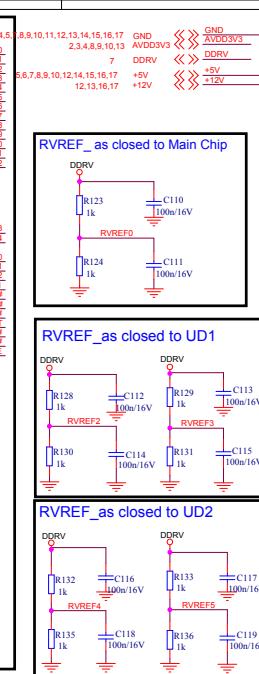
DDR4 CAPs for DRAM IO Power ( Beneath the DDR#2



DDP POWER



The diagram illustrates a memory system architecture. It features a central vertical red rectangle representing memory storage. To its left, a blue horizontal bar labeled "ROM" is positioned above a red horizontal bar labeled "K0". To the right of the central rectangle, a blue horizontal bar labeled "ROM" is positioned above a red horizontal bar labeled "K1". Below the central rectangle, a blue horizontal bar labeled "K2" is positioned above a red horizontal bar labeled "K3". A blue horizontal bar labeled "K4" is positioned at the bottom right of the central rectangle.



RVREF as closed to Main Chir

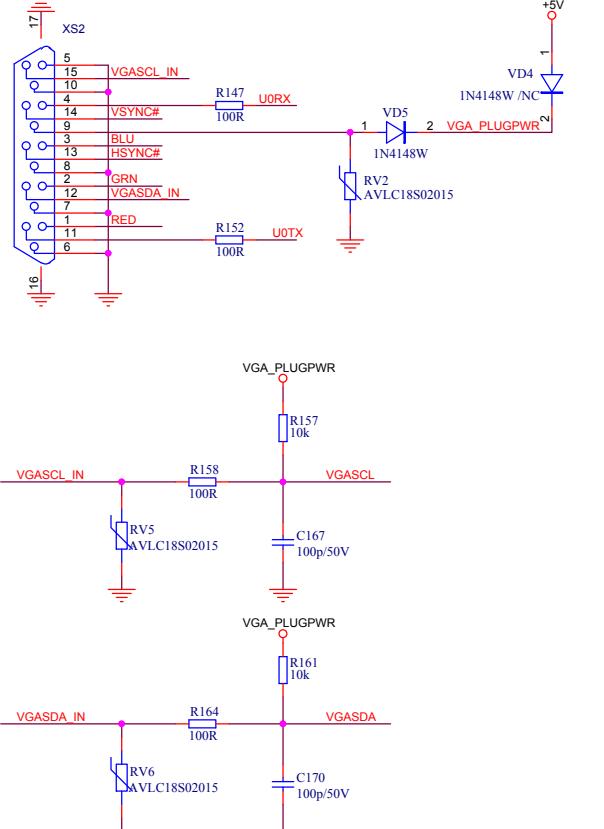
BVBEE as closed to UD1

RVBEE as closed to UD?

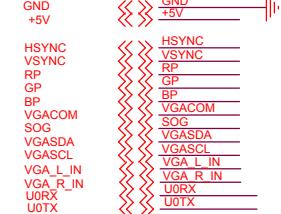
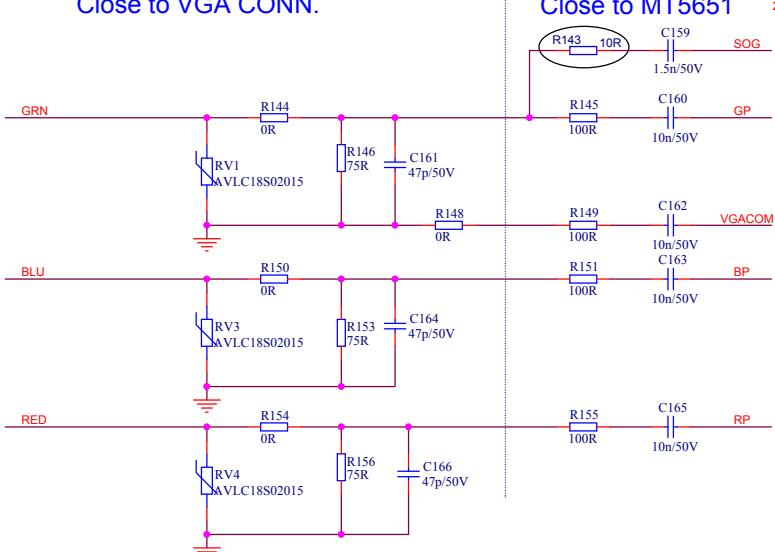
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Size	Document Number	Rev		
A2	MT5653	1.0		
Date	2010-01-01	Page	1	2

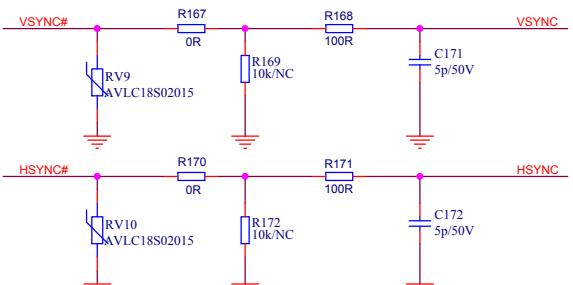
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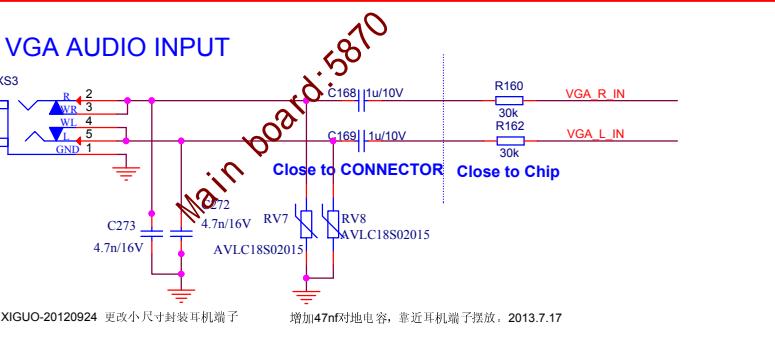
## Close to VGA CONN.



## VGA SYNC SLICER



## VGA AUDIO INPUT



Hisense Electric Co.,LTD

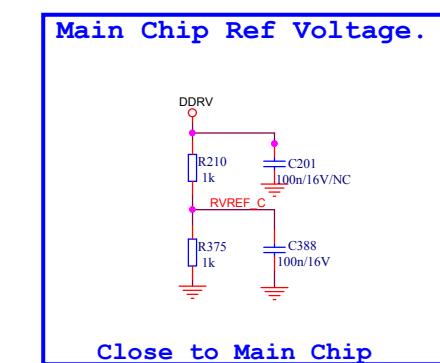
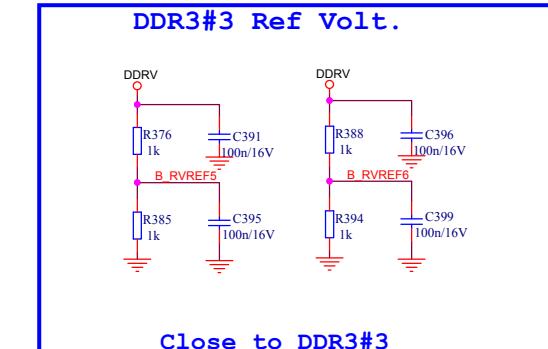
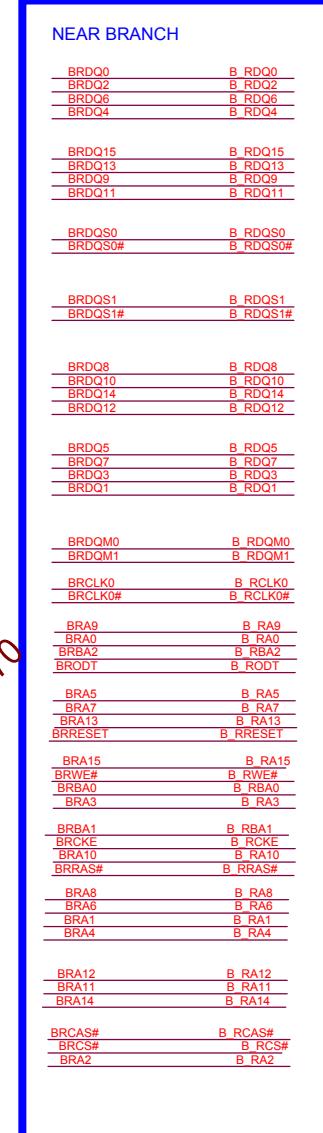
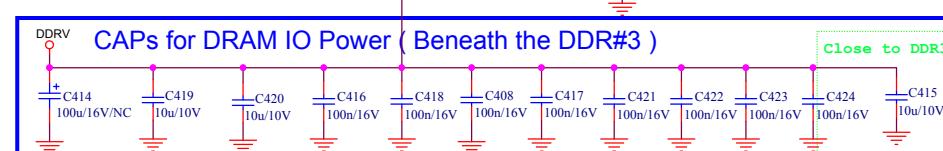
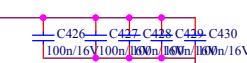
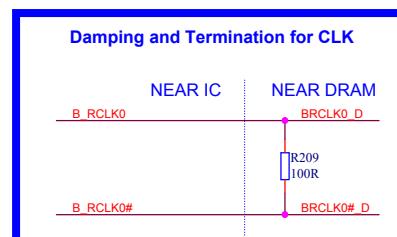
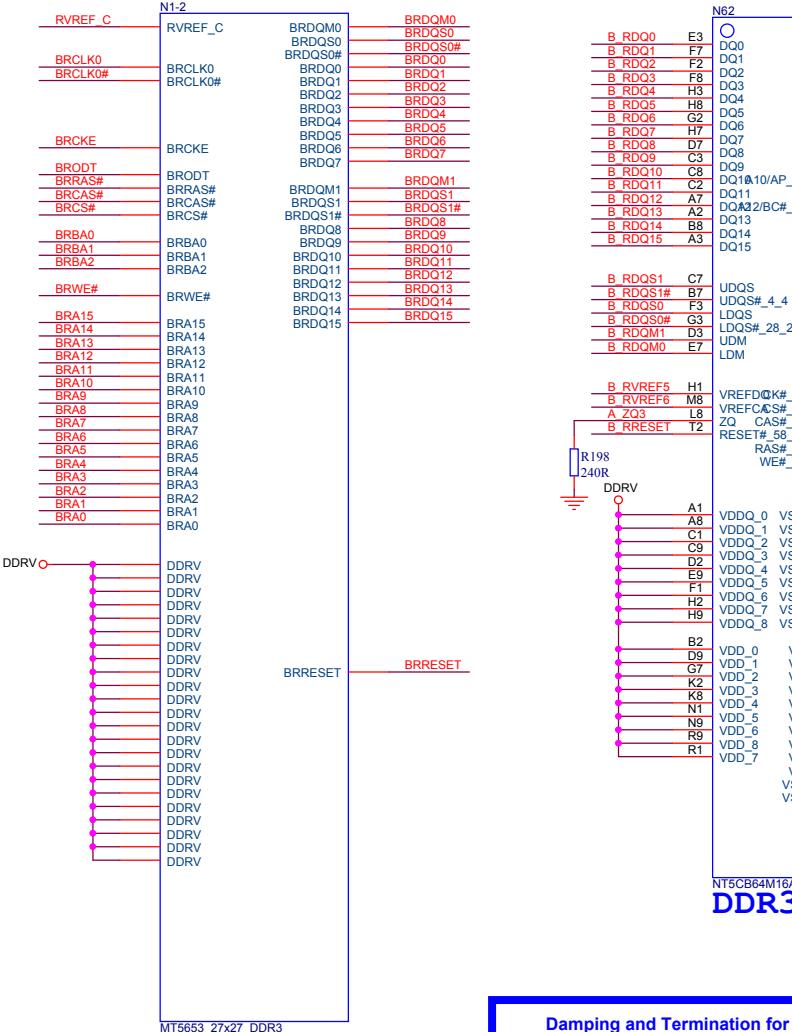
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Size A3 Document Number MT5653

Rev 1.0

Date: Tuesday, December 31, 2013 Sheet 7 of 17

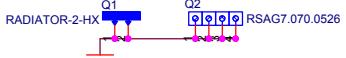
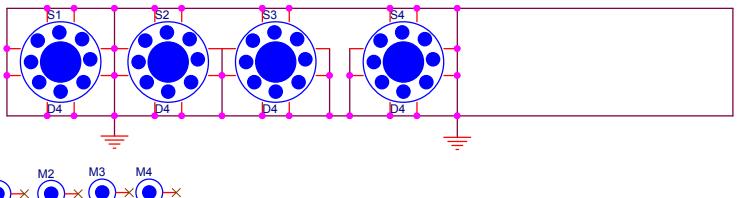
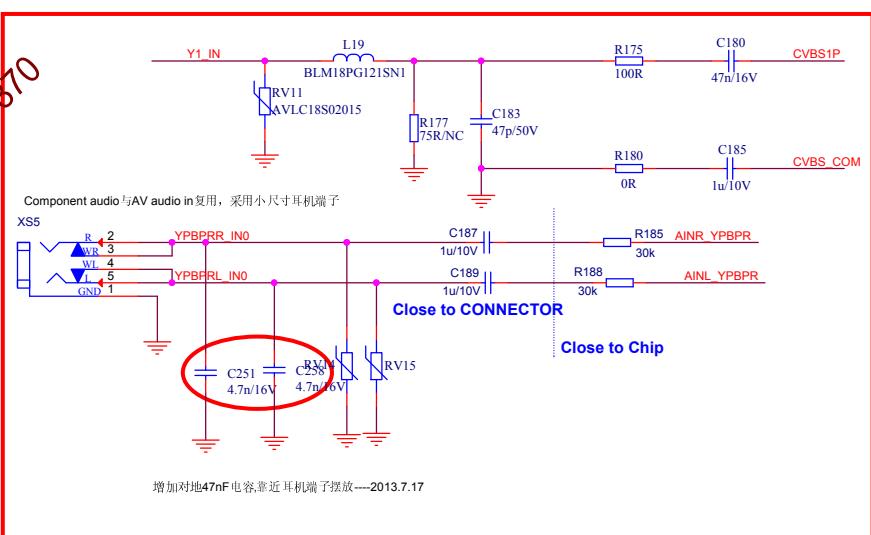
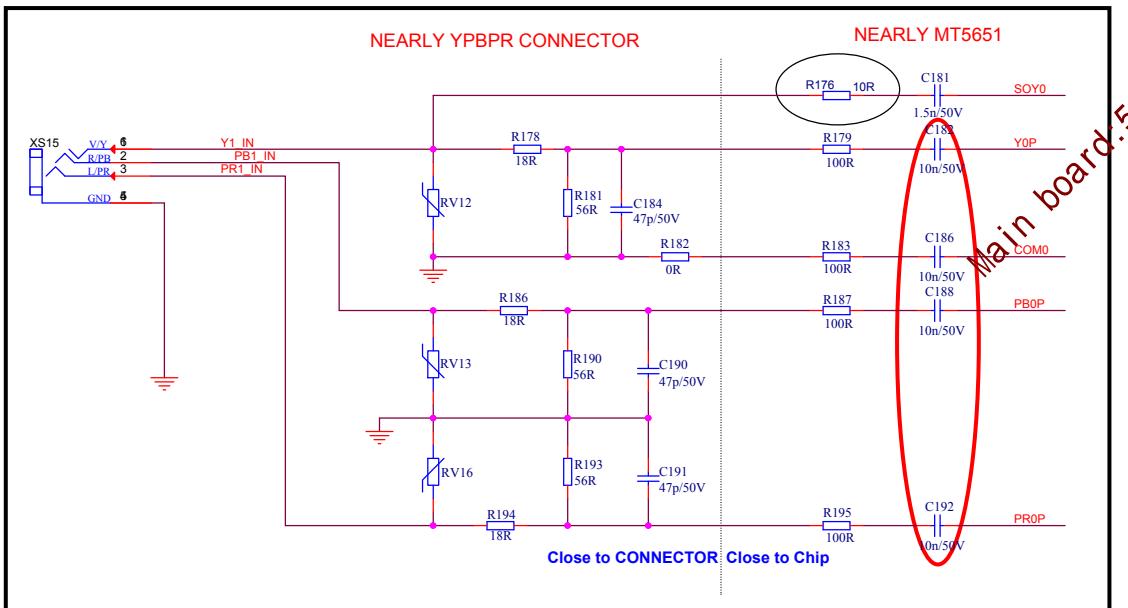
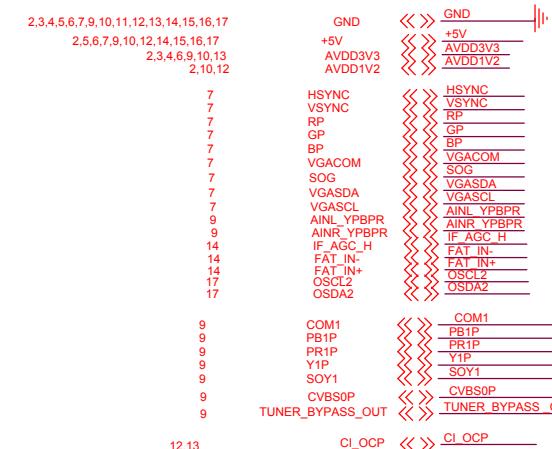
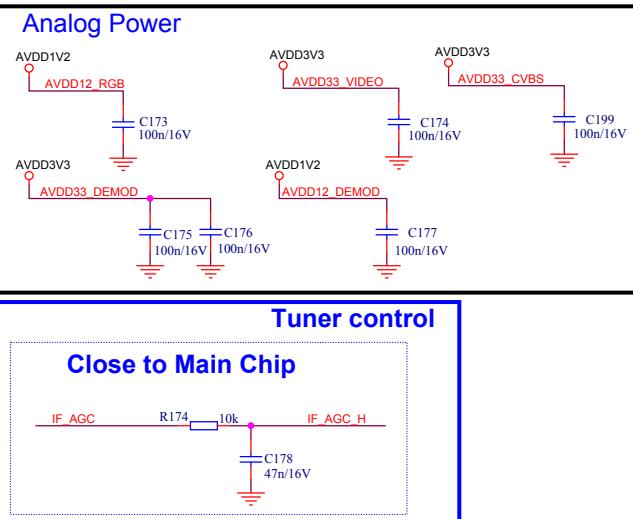
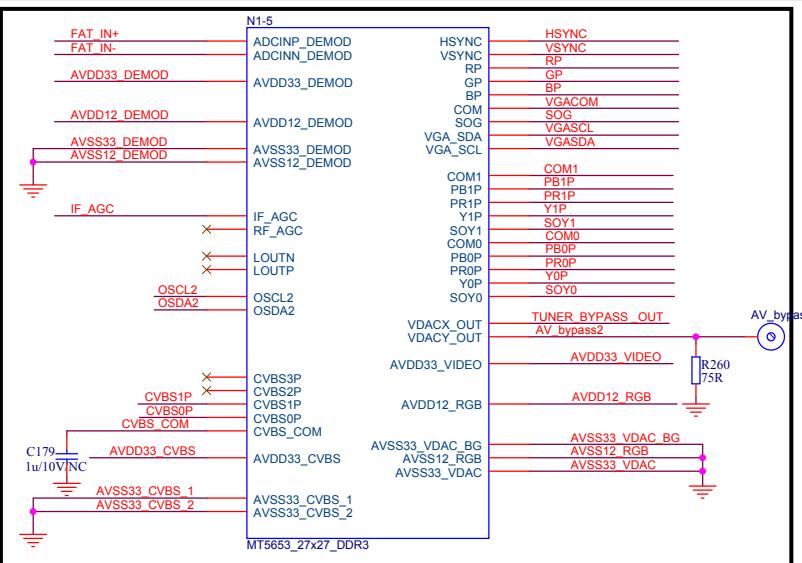
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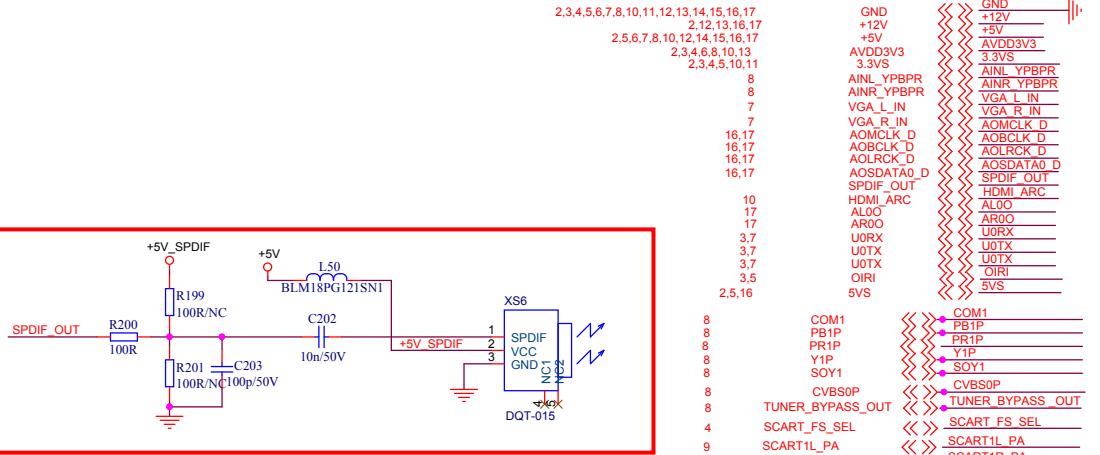
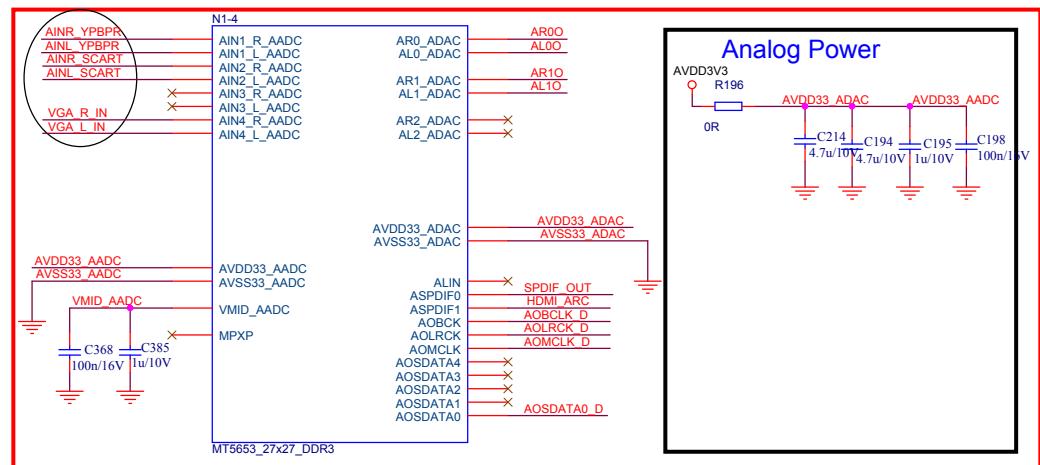


Pinout diagram for the 17-pin DIN connector:

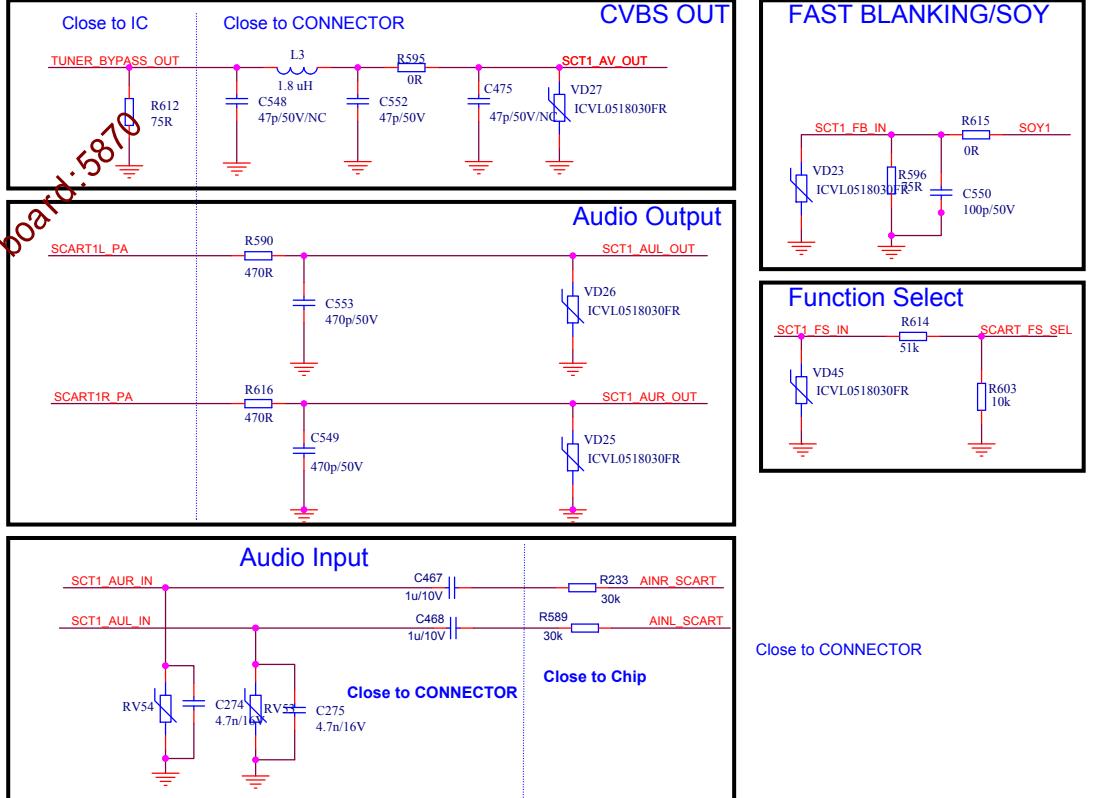
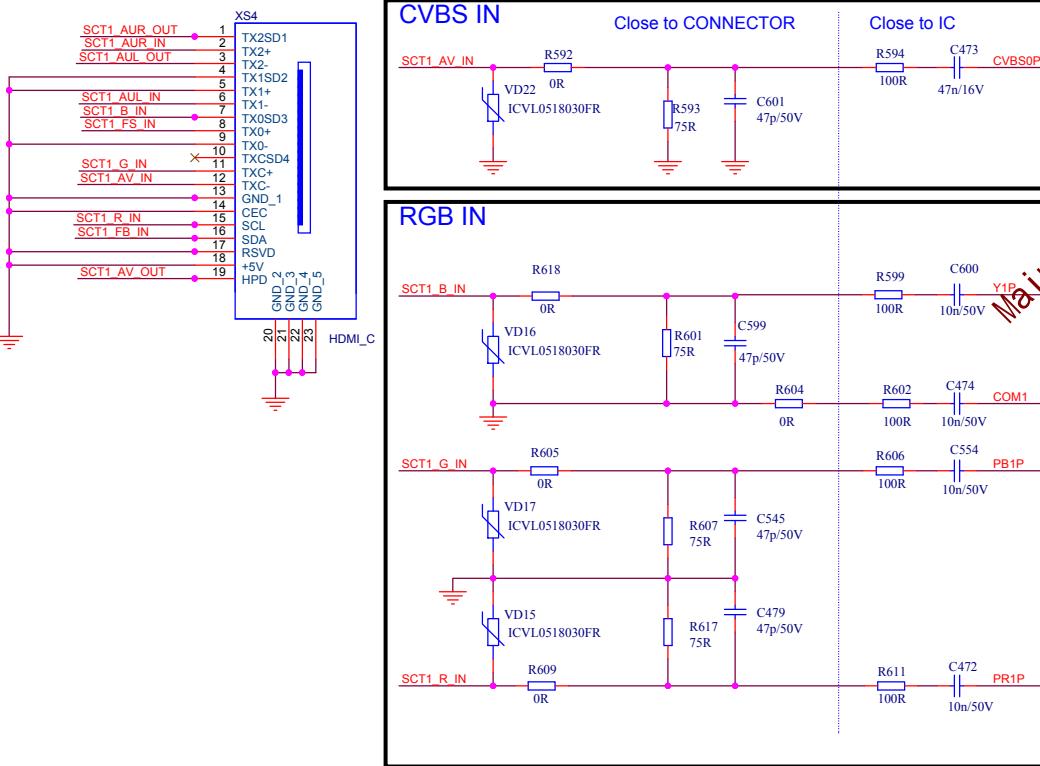
- Pins 2, 3, 12, 13, 14, 15, 16, 17: GND
- Pin 6: DDRV
- Pins 12, 13, 14, 15, 16, 17: +5V
- Pins 18, 19, 20: +12V

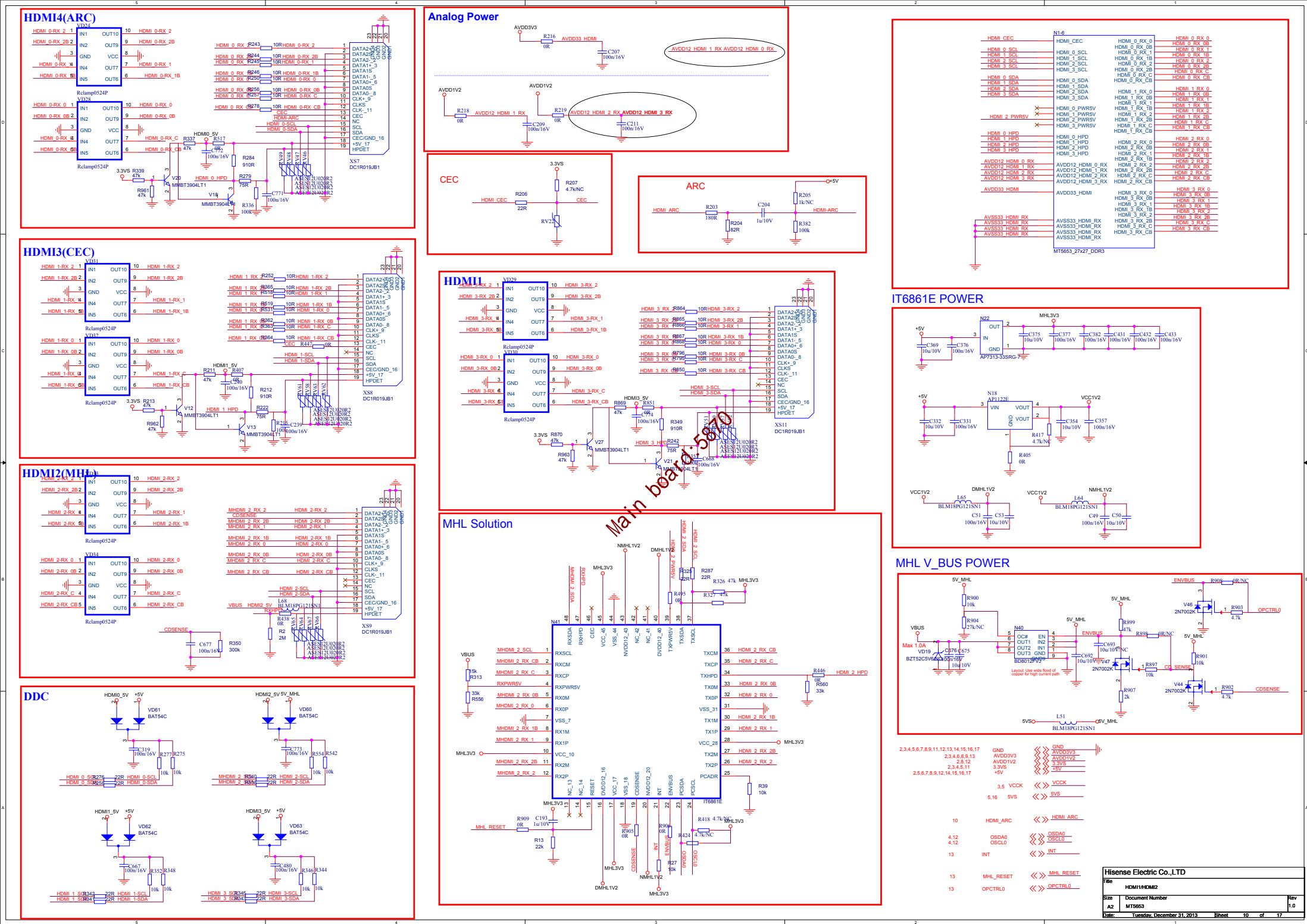
Hisense Electric Co.,LTD		
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Size	Document Number	Rev
A3	MT5653	1.0
Date:	Tuesday, December 31, 2013	Sheet 7 of 17

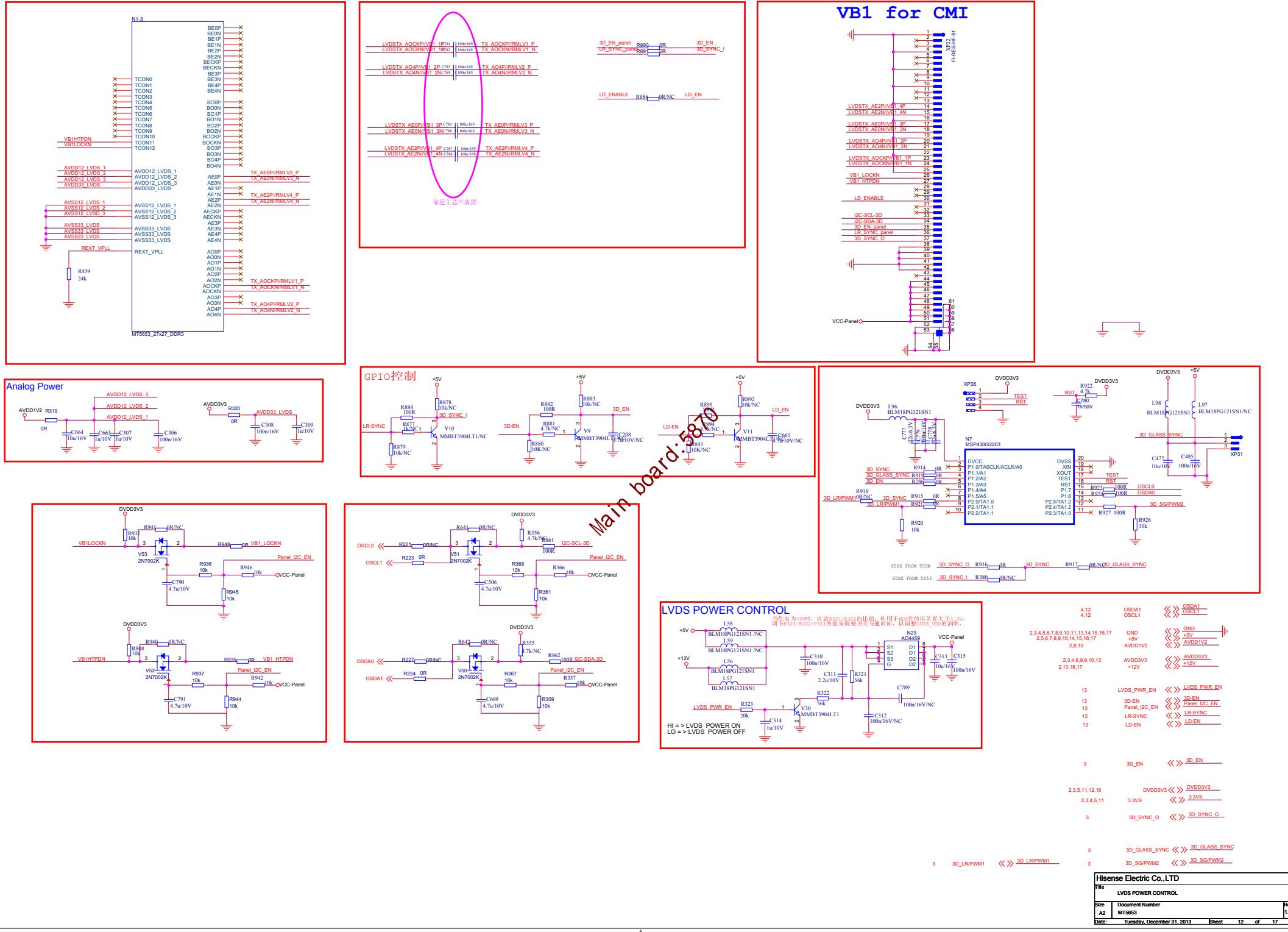


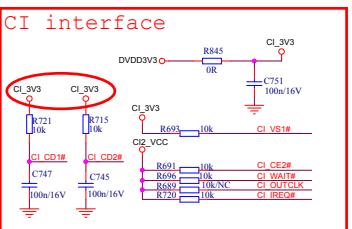
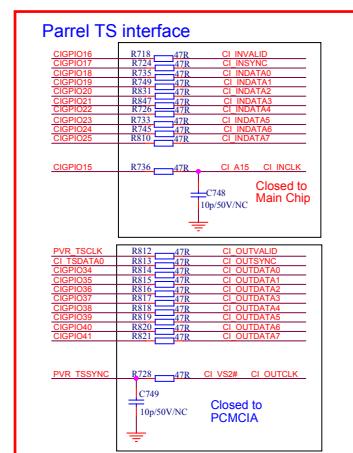
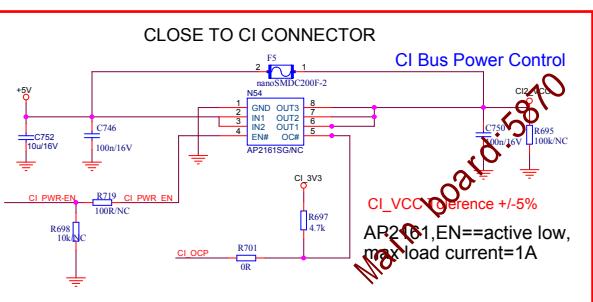
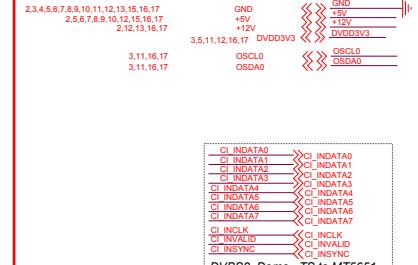
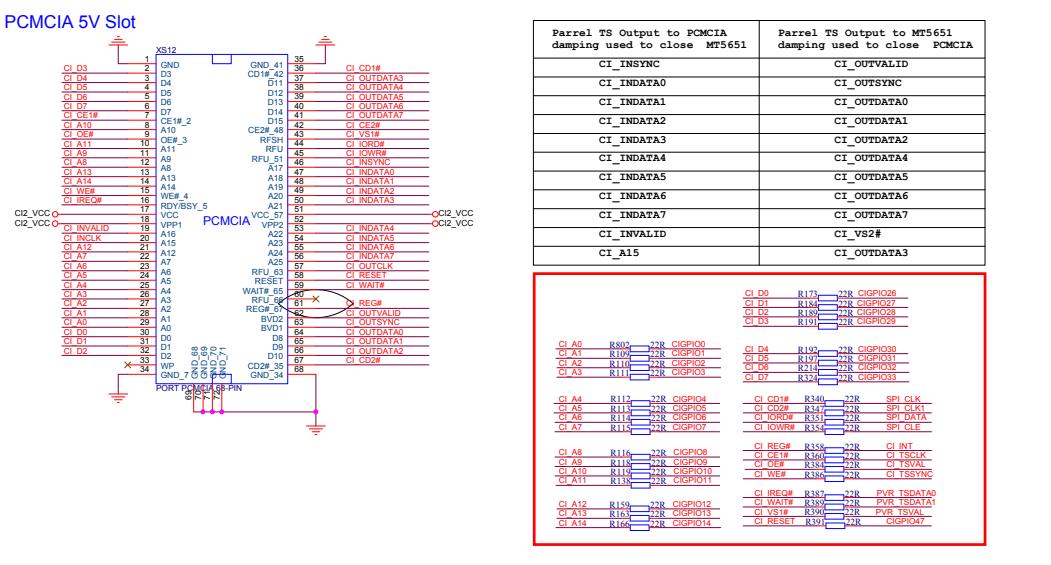
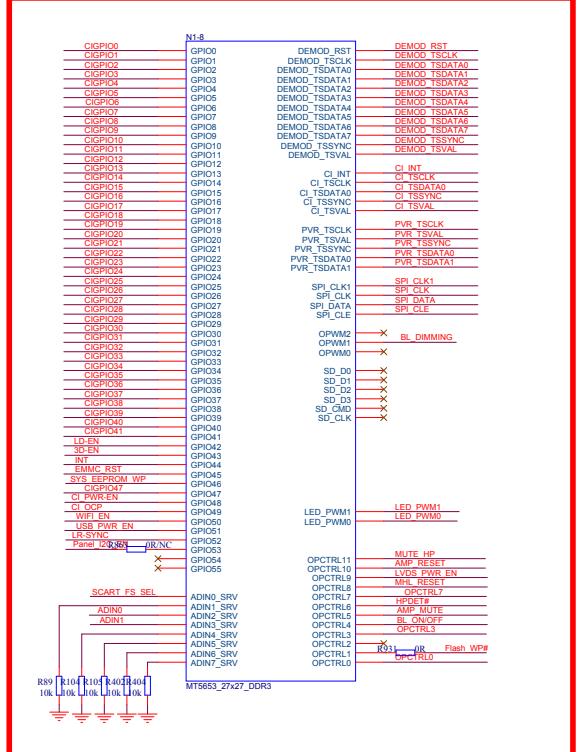


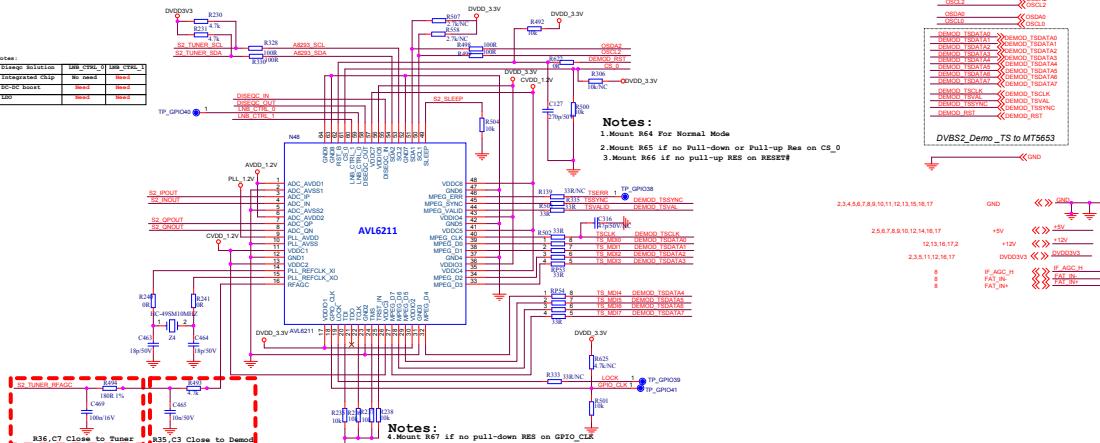
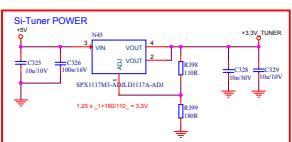
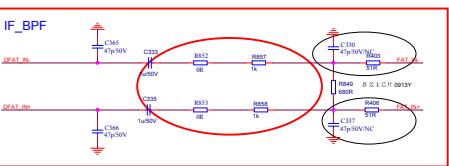
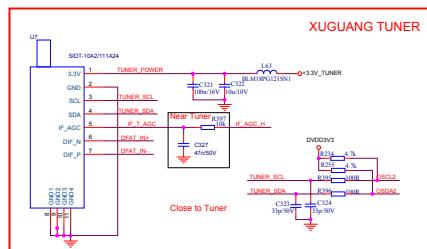
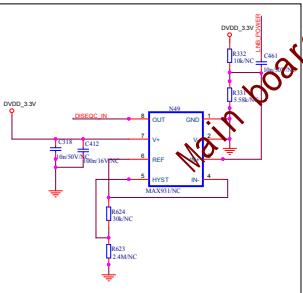
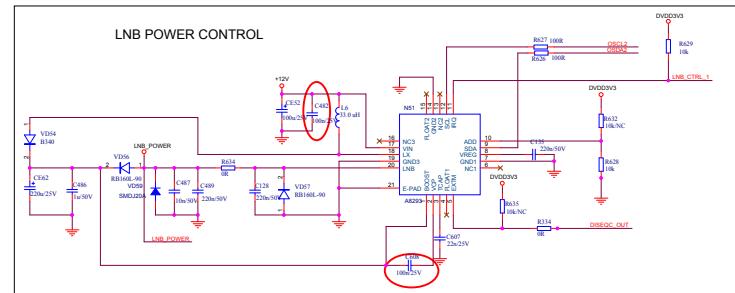
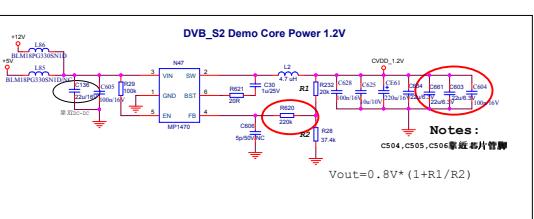
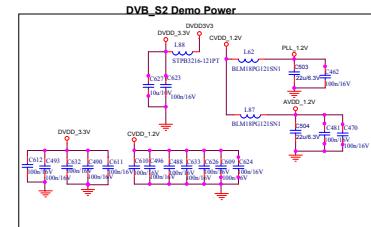
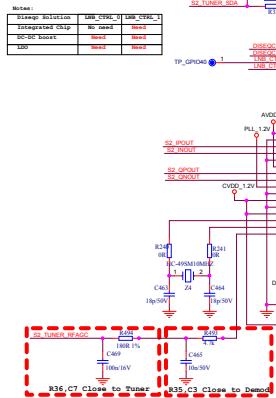
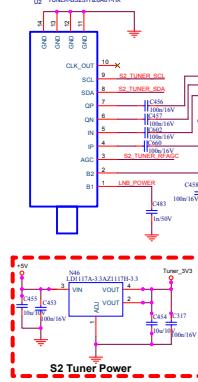
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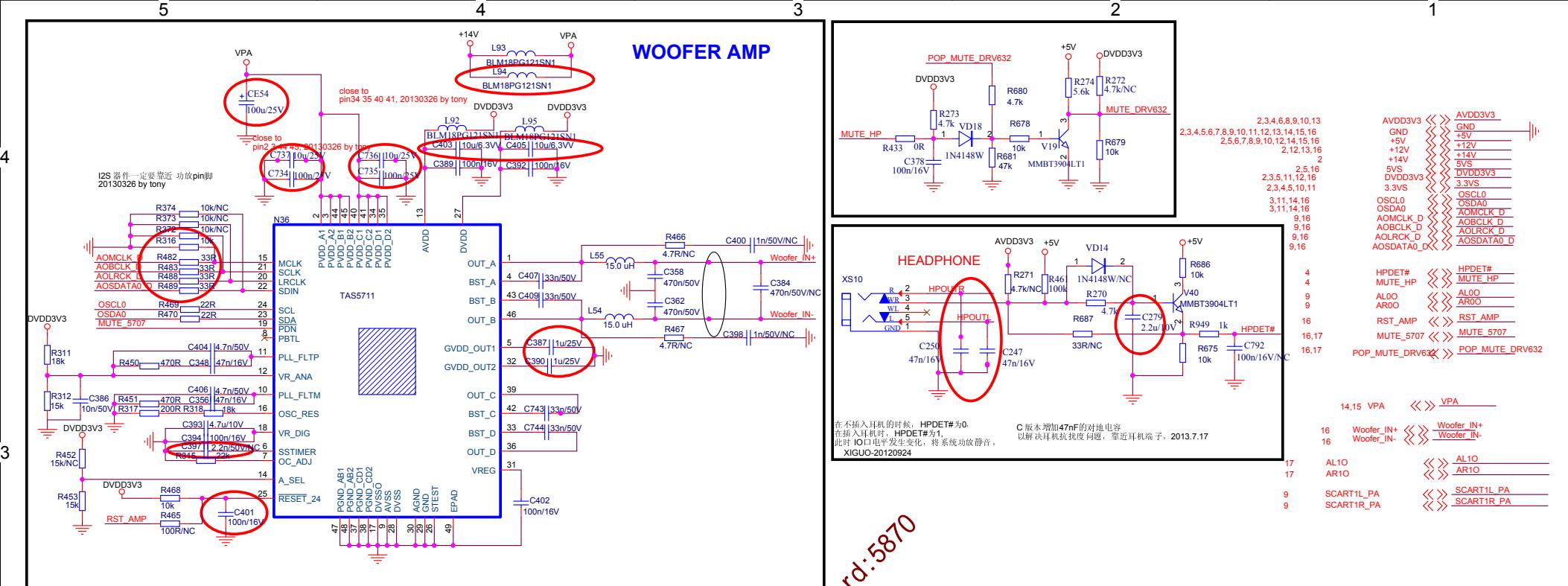




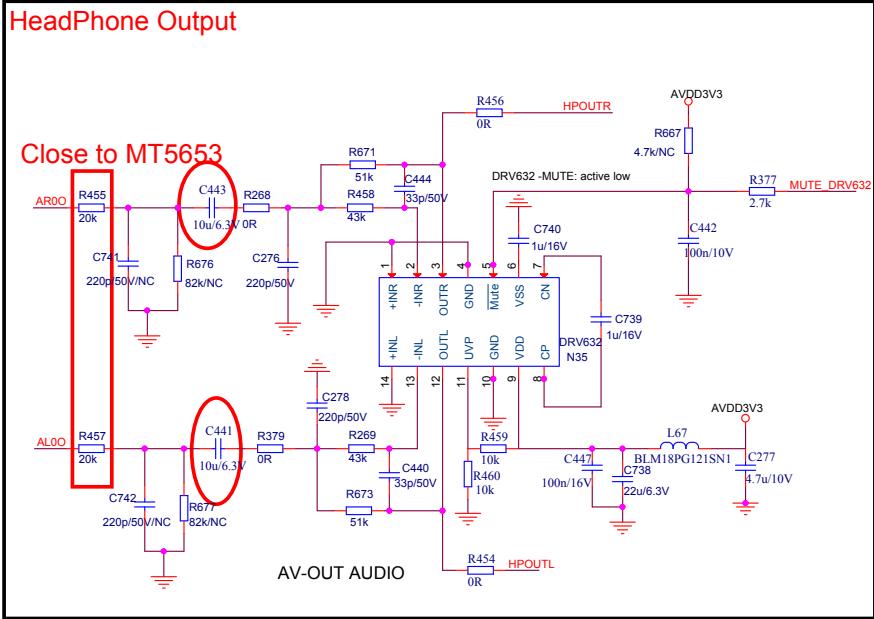




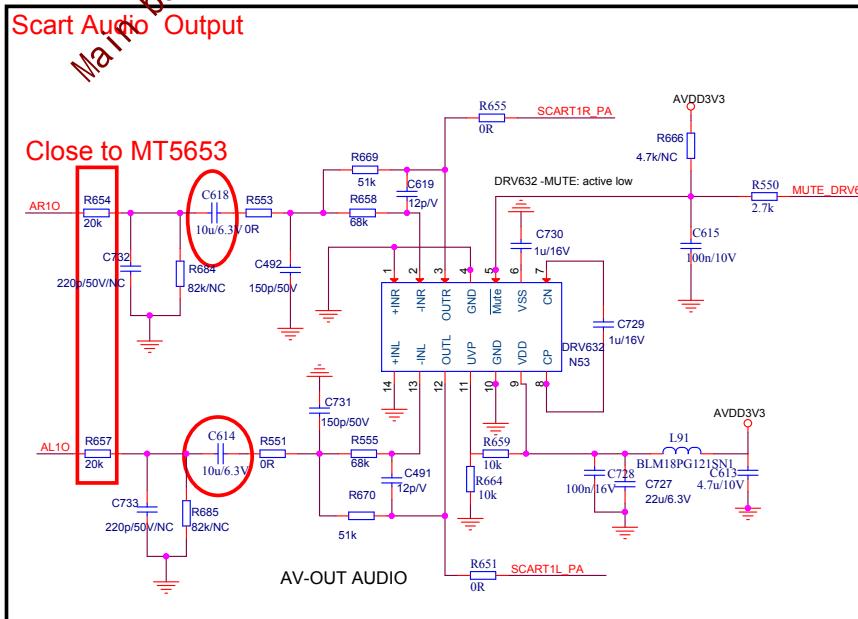


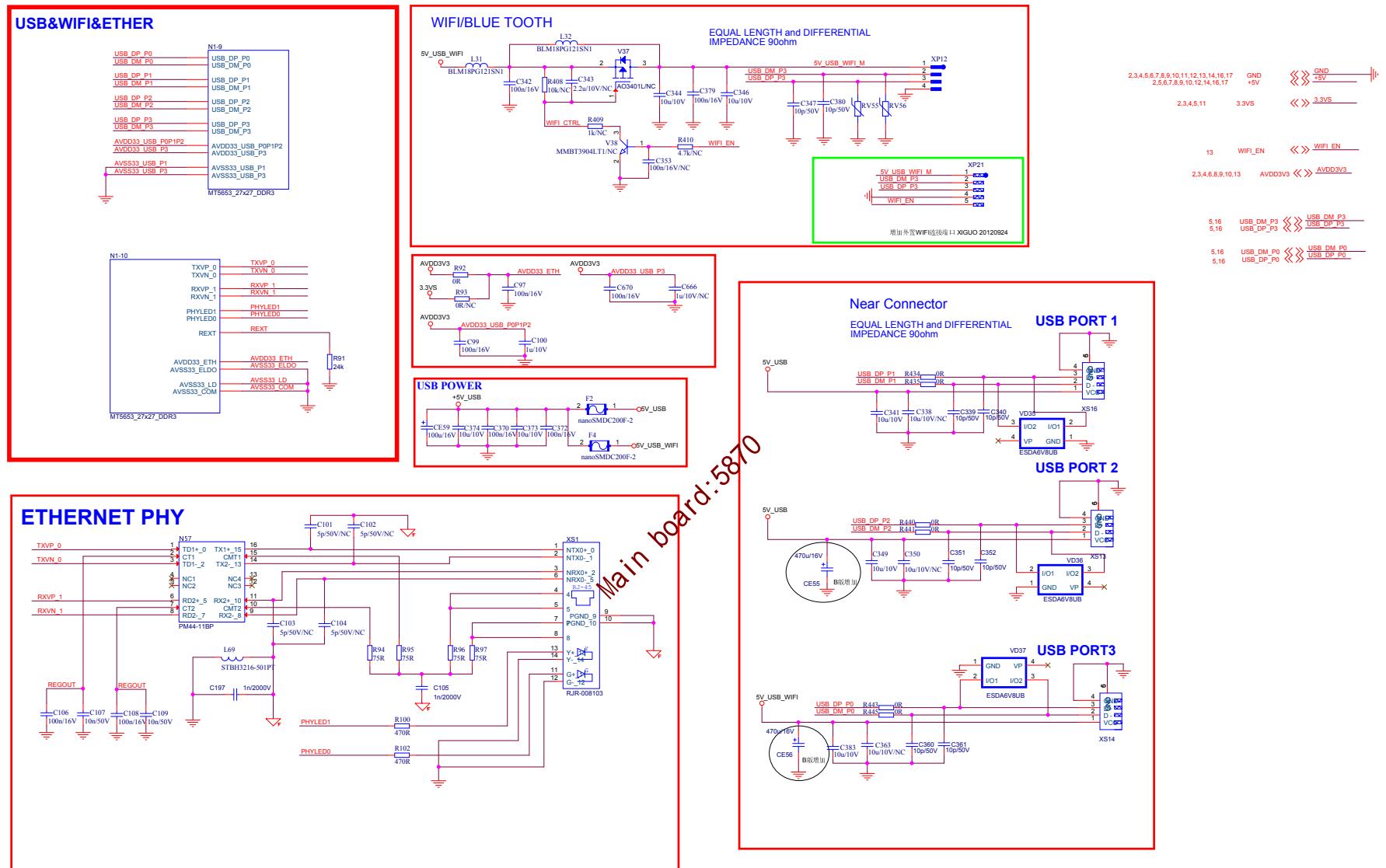


## HeadPhone Output



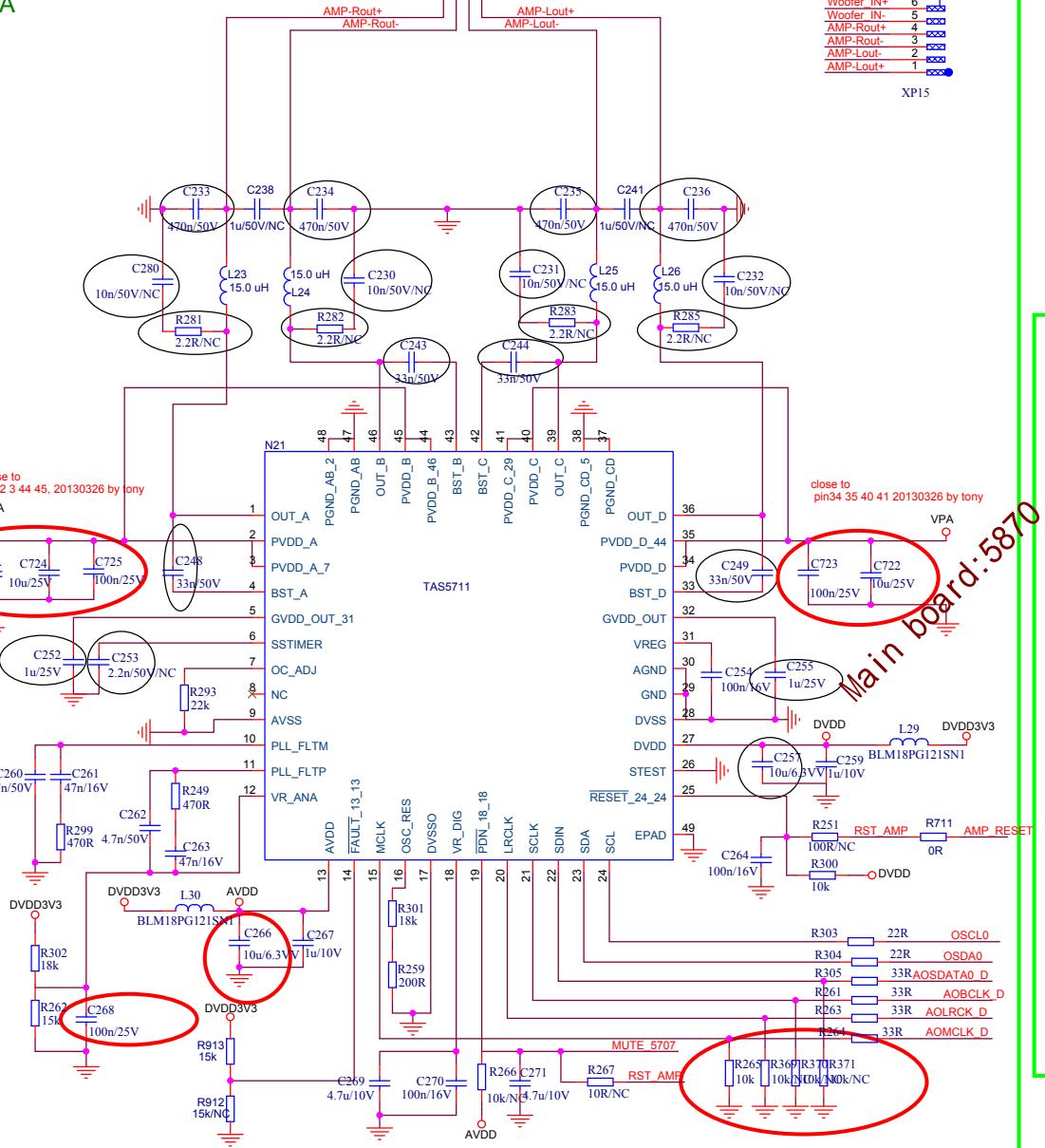
## ~~Scart Audio Output~~





# SPEAKER Amplifier

I<sup>2</sup>C Address  
= 0x6A



I2S 器件一定要靠近 功放pin脚  
20130326 by tony

2,3,4,5,6,7,8,9,10,11,12,13,14,15,17  
2,5,6,7,8,9,10,12,13,14,15,17  
2,12,13,17  
2,17  
2,5  
2,3,5,11,12,17  
2,3,4,5,10,11  
3,11,14,17  
3,11,14,17  
9,17  
9,17  
9,17  
9,17  
9,17  
13  
15  
9,17  
9,17  
13  
16,17  
16,17

GND  
+5V  
+12V  
+14V  
5V  
DVDD3V3  
3.3V  
OSCL0  
OSDA0  
AOMCLK\_D  
AOBCLK\_D  
AOLRCK\_D  
AOSDATA0\_D  
AMP\_MUTE  
RST\_AMP  
AL00  
AR00  
AMP\_RESET  
MUTE\_5707  
POP\_MUTE\_DRV632

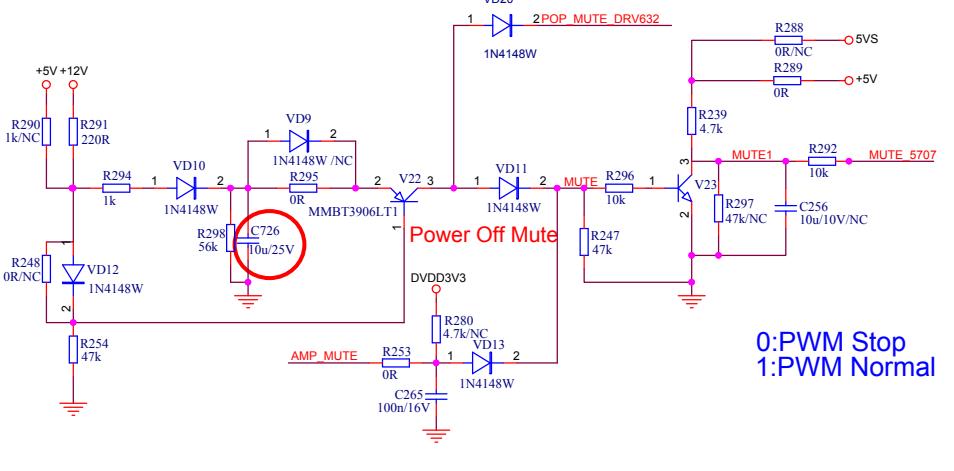
16  
16

14,15 VPA  
Woofer IN+  
Woofer IN-  
Woofer IN+  
Woofer IN-

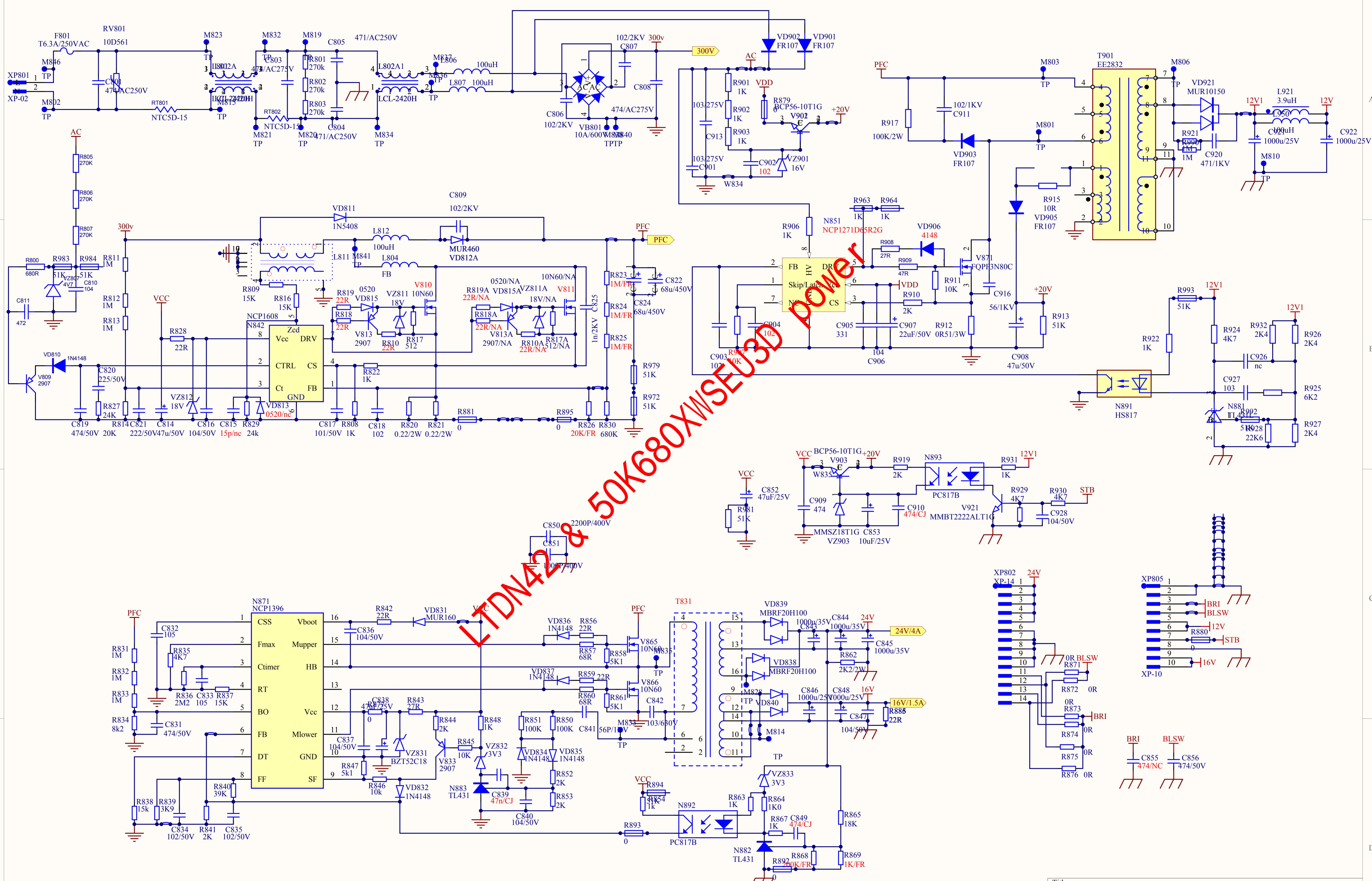
## MTUE CIRCUIT

## Power On Mute

0:PWM Stop  
1:PWM Normal



# Power board:4903



Title		
Size	Number	Revision
A3		
Date:	2012-2-27	Sheet of
File:	E:\...\LED42K560X3D_DY_4903.DWG	100