Plasma Television
Service Manual

Chassis： MT5371

Product Type： PLX-4202B

PLX-5002B

Ver 1.0

June 2007

Contents

Service Manual

1. Precautions and notices

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

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

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

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

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

1.1 Warning

1.1.1

Critical components having special safety characteristics are identified with a ⚠ by the Ref. No. in the parts list. Use of substitute replacement parts, which do not have the same specified safety characteristics, may create shock, fire, or other hazards.
Under no circumstances should the original design be modified or altered without written permission from Element. Element assumes no liability, express or implied, arising out of any unauthorized modification of design. Serviceman assumes all liability.

DANGERCAUTION CAUTION

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

1.1.2.

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

Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.

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

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

1.1.3

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

1.1.4

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

1.1.5

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

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

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

1.1.6

(1) Do not touch Signal and Power Connector while this product operates. Do not touch EMI ground part and Heat Sink of Film Filter.

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

(3) Do not use this product in locations where the humidity is extremely high, where it may be splashed with water, or where flammable materials surround it. Do not install or use the product in a location that does no satisfy the specified environmental conditions. This may damage the product and may cause a fire.

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

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

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

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

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

(9) If the power cable is damaged, or if the connector is loose, do not use the product: otherwise, this can lead to fire or electric shock.

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

(11) PDP Module uses a high voltage (Max.450V dc). Keep the cautions concerning electric shock and do not touch the Device circuitry when handling the PDP Unit. And because the capacitor of the Device circuitry may remain charged at the moment of Power OFF, standing by for 1 minute is required in order to touch the Device circuitry.

(12)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 Plasma Display 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 supply board and the SUS board in which high voltages are applied, 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. The high voltage power supply block within the PDP module has a floating ground. If any connection other than the one specified is made between the measuring equipment and the high voltage power supply block, it can result in electric shock or activation of the leakage-detection circuit breaker.

• When installing the PDP module in, and removing it from the packing carton, be sure to have at least two persons perform the work while being careful to ensure that the flexible printed-circuit cable of the PDP module does not get caught by the packing carton.

• When the surface of the panel comes into contact with the cushioning materials, be sure to confirm that there is no foreign matter on top of the cushioning materials before the surface of the panel comes into contact with the cushioning materials. Failure to observe this precaution may result in, the surface of the panel being scratched by foreign matter.

• When handling the circuit board, be sure to remove static electricity from your body before handling the circuit board.

• Be sure to handle the circuit board by holding the large parts as the heat sink or

transformer. Failure to observe this precaution may result in the occurrence of an abnormality in the soldered areas.

• Do not stack the circuit boards. Failure to observe this precaution may result in problems resulting from scratches on the parts, the deformation of parts, and short-circuits due to residual electric charge.

• Routing of the wires and fixing them in position must be done in accordance with the original routing and fixing configuration when servicing is completed. All the wires are routed far away from the areas that become hot (such as the heat sink). These wires are fixed in position with the wire clamps so that the wires do not move, thereby ensuring that they are not damaged and their materials do not deteriorate over long periods of time. Therefore, route the cables and fix the cables to the original position and states using the wire clamps.

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

• A glass plate is positioned before the plasma display. This glass plate can be cleaned with a slightly humid cloth. If due to circumstances there is some dirt between the glass plate and the plasma display panel it is recommended to do some maintenance by a qualified service employee only.

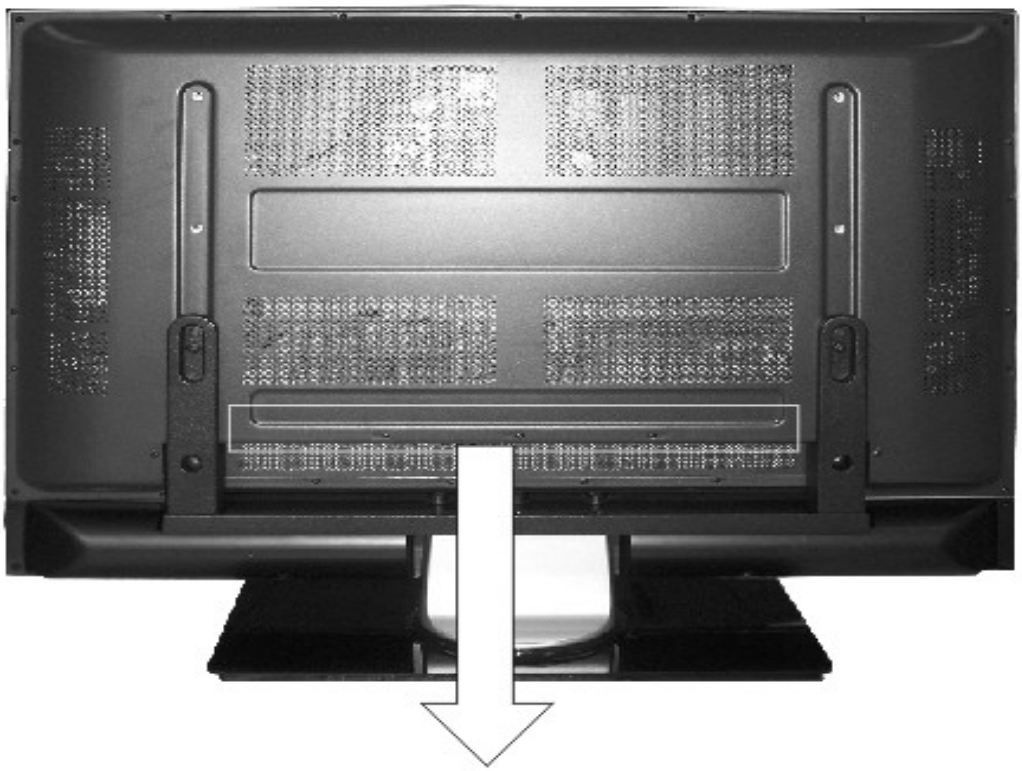
The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

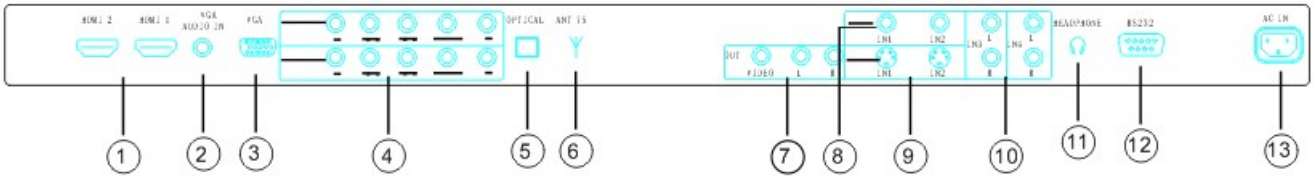
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Product Function Specifications

2.1 Product Function

① Power indicator
② Remote sensor
③ Menu button
④ Input source button
⑤ Volume up
⑥ Volume down
⑦ Channel up
⑧ Channel down
⑨ Power(standby)





① HDMI INPUT
② PC AUDIO INPUT
③ VGA INPUT
④ COMPONENT INPUT
⑤ DIGITAL AUDIO OUTPUT
⑥ ANTENNA INPUT
⑦ VIDEO/AUDIO OUTPUT
⑧ VIDEO INPUT
⑨ S-VIDEO INPUT
⑩ VIDEO/S-VIDEO AUDIO INPUT
⑪ HEADPHONE OUTPUT
⑫ RS232 INPUT
⑬ AC INPUT

2.2 Specifications

Model	PLX-4202B	PLX-5002B
Diagonal display size	42 inches	50 inches
Television system	American TV standard ATSC/NTSC system	
Audio multiplex	BTSC system	
Channel coverage	VHF: 2~13 UHF: 14~69 CATV:1~125 Digital Terrestrial Broadcast (8VSB): 2~69 Digital cable (64/256 QAM): 1~135	
PC mode	640×480/60Hz,800 ×600/60Hz,1024 ×768/60Hz	
YPbPr/YCbCr mode	480I/60Hz,480P/60Hz,720P/60Hz,1080I/60Hz	
Resolution	1024×768	1366×768
Power source	AC 120 V , 60 Hz	
Power consumption	350W	500W
Audio power	10W+10W	
Conection Interface	RF input: Cable/ Antenna ×1 VIDEO input: VIDEO ×2 S-VIDEO ×2 COMPONENT ×2 HDMI ×2 VIDEO output: VIDEO×1 GRAPHIC input: Analog RGB 15pin× 1 AUDIOinput: AV Audio× 2 Component Audio ×2 PC Audio Input ×1 AUDIO output: AV Audio× 1 Digital audio output ×1	
Dimensions	Length: 41.4 inches Width: 14.2 inches Height: 30.2inches	Length: 49 inches Width: 14.2 inches Height: 36.3inches
Weight	80.3 lbs	109.5 lbs
Supplied accessories	Remote control, AC cord, Batteries, User Manual , Warranty Card Stand Assemble Guide, QSG, Remote Control Guide	

NOTE: Specifications and design are subject to possible modifications without notice due to improvements。

3. PDP panel module

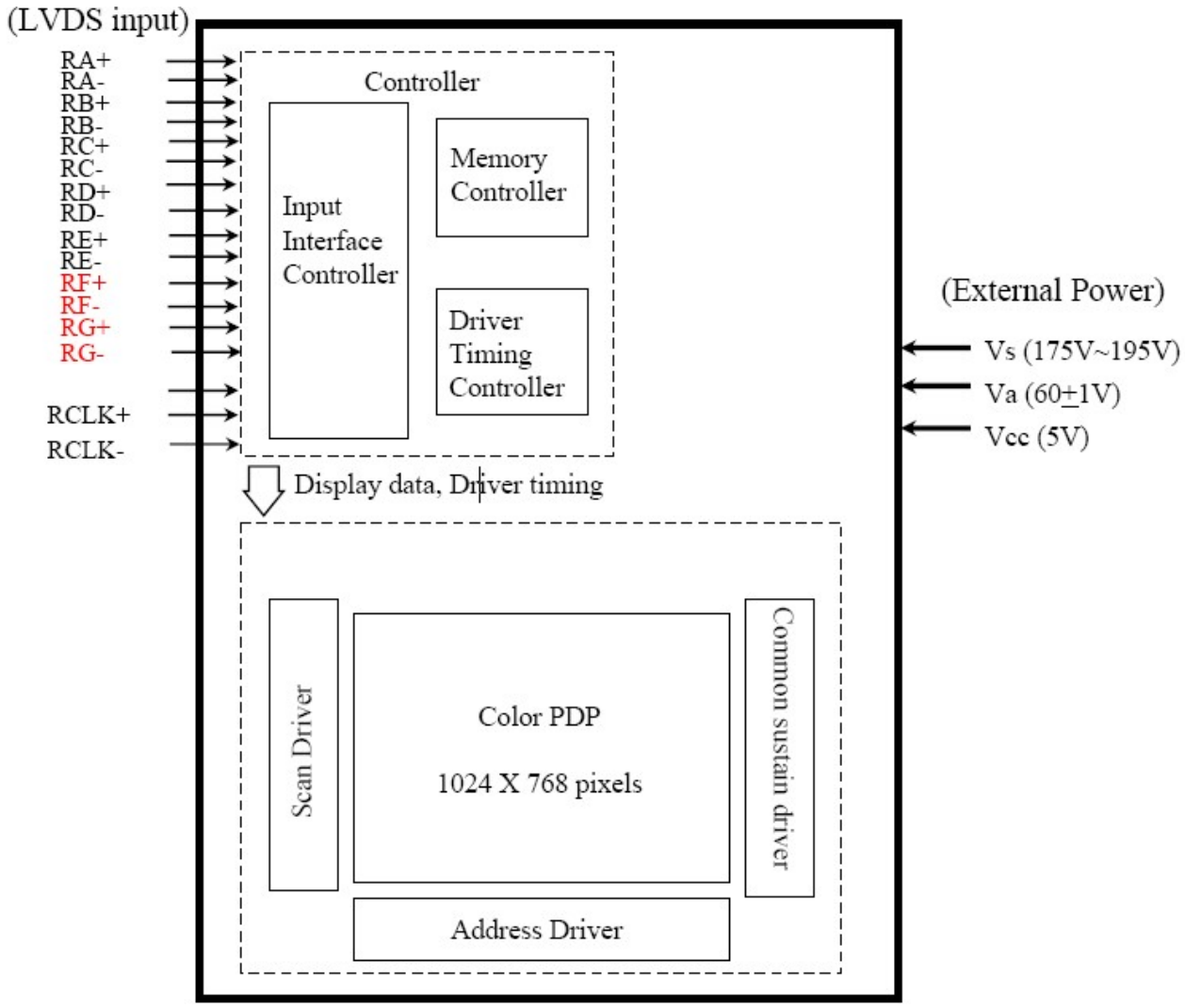
3.1 General Specifications

Model Name	PDP42X4#### (42X4 Model)	PDP50X4#### (50X4 Model)	Comments
Number of Pixels	1024(H) × 768(V)	1366(H) × 768(V)	1 pixel=3 RGB cells
Pixel Pitch	900㎛ (H) × 676㎛ (V)	810㎛ (H) × 810㎛ (V)	
Cell Pitch	300㎛ (H) × 676㎛ (V)	270㎛ (H) × 810㎛ (V)	Green Cell basis
Display Area	921.5(H) × 519.0(V) ± 0.5mm	1106.5(H) × 622.1(V) ± 0.5mm	
Outline Dimension	1005(H) × 597(V) × 60.7(D)±1mm	1190(H) × 700(V) × 58(D) ± 1mm	
Pixel Type	RGB Closed type	RGB Closed(Well) type	
Number of Gradations	(R)1024 × (G)1024 × (B)1024	(R)1,024 × (G)1,024 × (B)1,024 colors	
Aspect Ratio	16:9	16:9	
Peak Brightness	Typical 1,500cd/㎡	Typical 1500cd/㎡	1/100 White Window pattern at center)
Contrast Ratio	Typical 180:1	Average130:1	(In a bright room with 100Lux at center)
	Typical 10,000:1	Maximum 10,000:1	In a dark room 1/100 White Window pattern at center)
Weight	14.2 Kg ± 0.5 Kg	20.4±0.5 Kg	Net 1EA
Power Consumption	Max.330W	Max. 400 W	Full White
Expected Life-time	60,000 Hours	60,000 Hours	

Income inspections please refer to panel specification of LGE 42X4and 50X4.

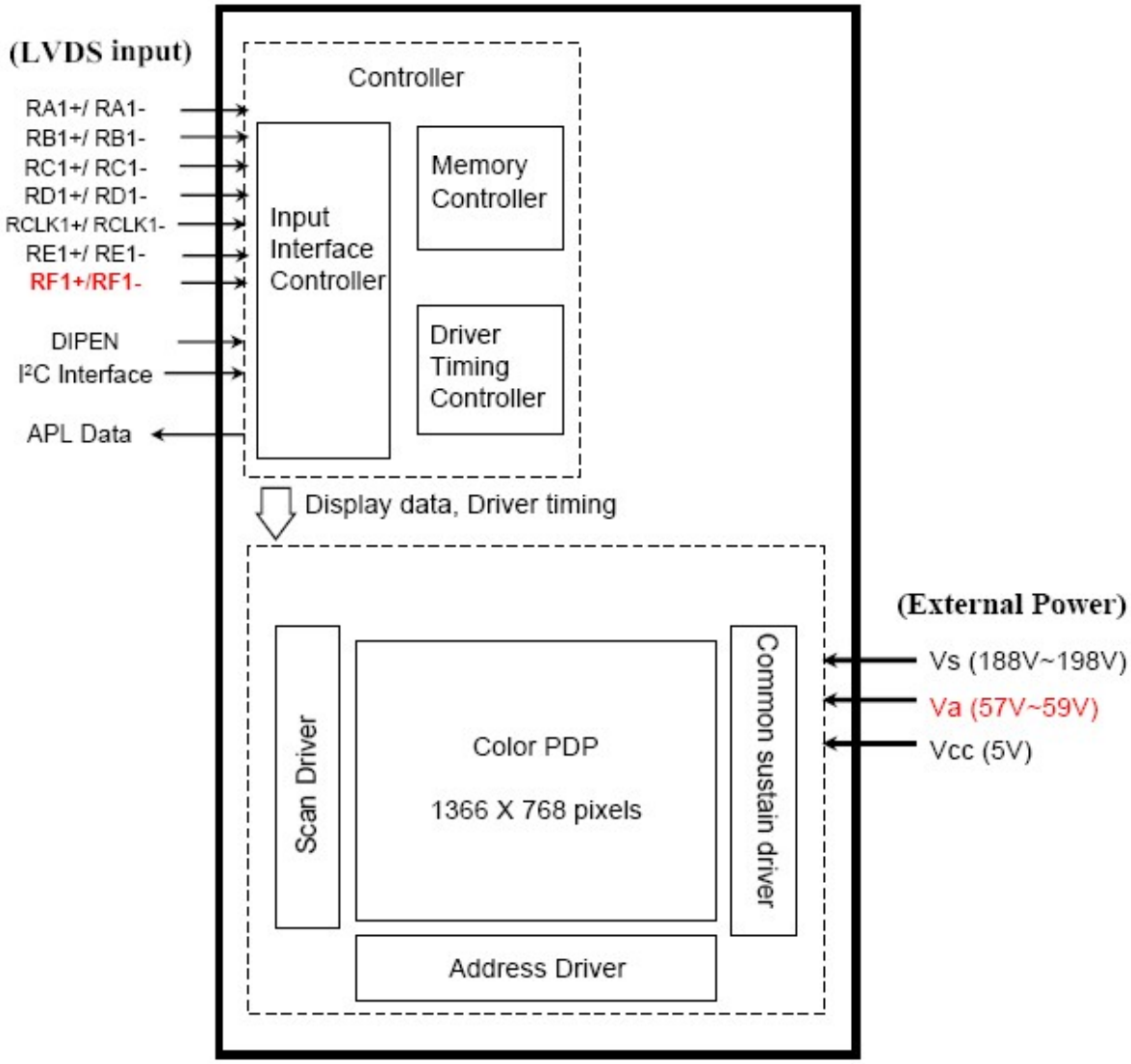
3.2 BLOCK DIAGRAM

3.2.1 **PLX-4202B**



Note: Applied Voltage level is specified at the time when Full-White pattern is displayed on the panel.

3.2.2 **PLX-5002B**

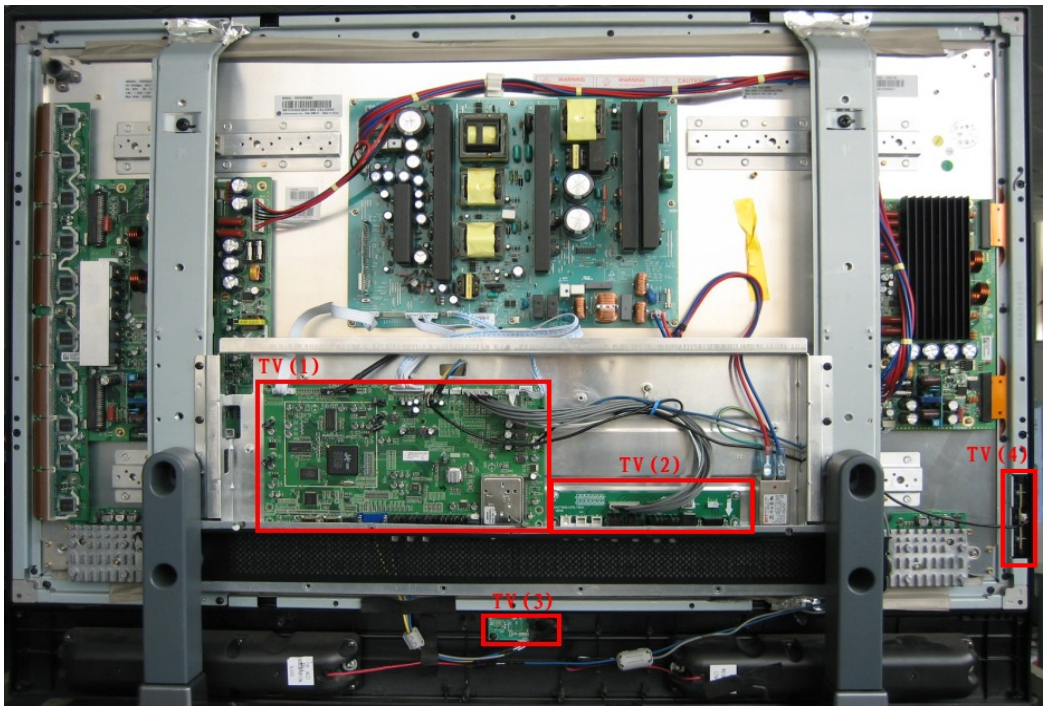


Note: Applied Voltage level is specified at the time when Full-White pattern is displayed on the panel.

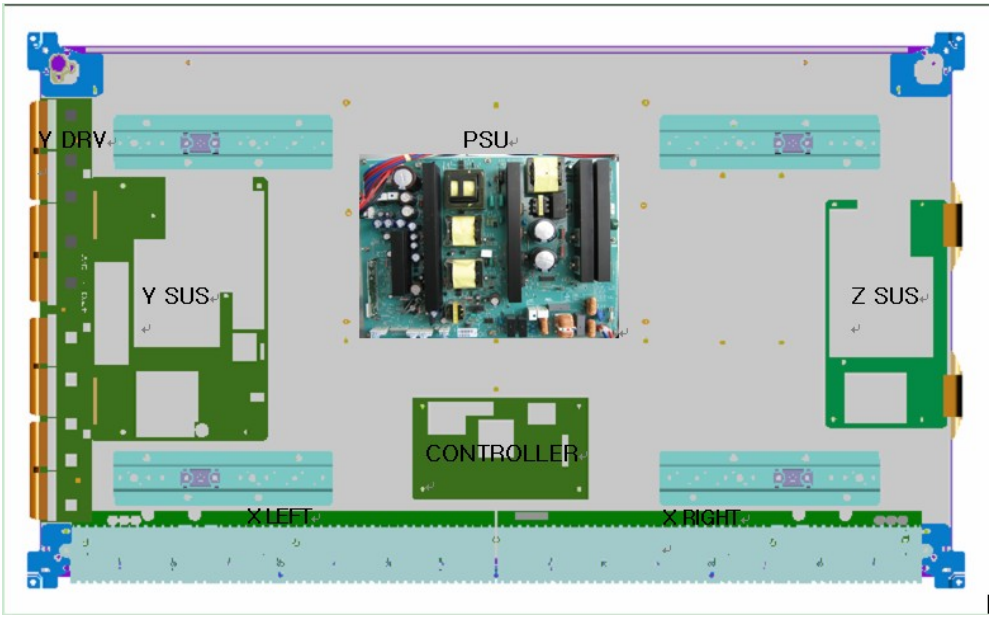
4. Chassis Layout and Overall Wiring Diagrams

4.1 Boards and Chassis Layout

PLX-4202B

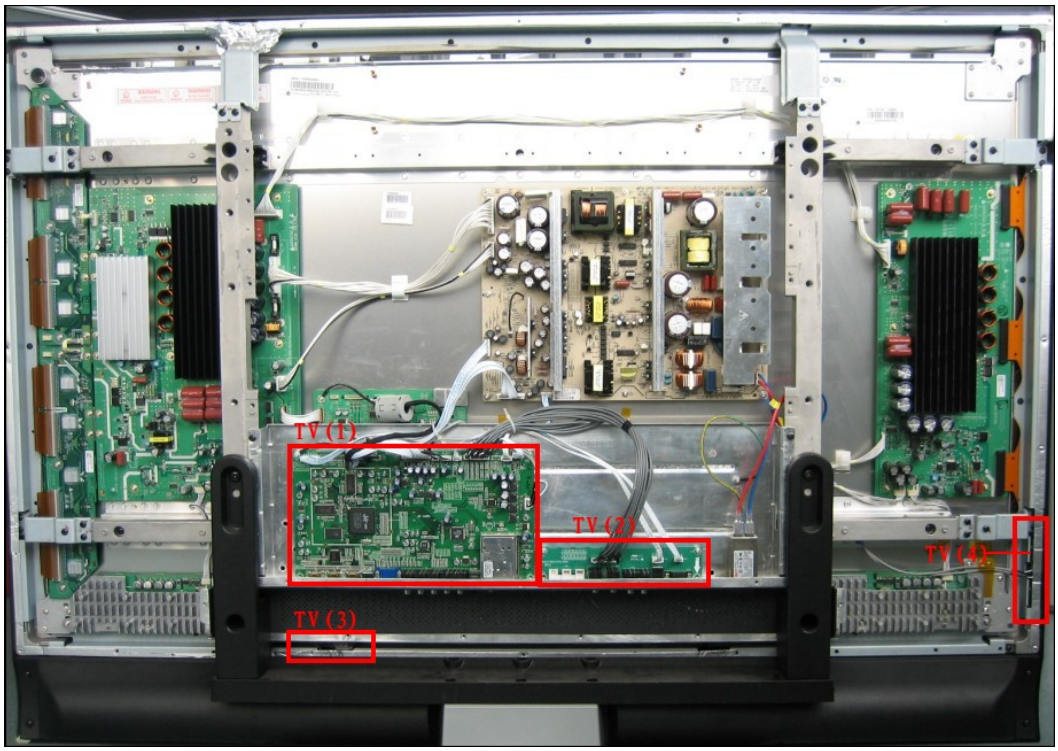


PLX-4202B System

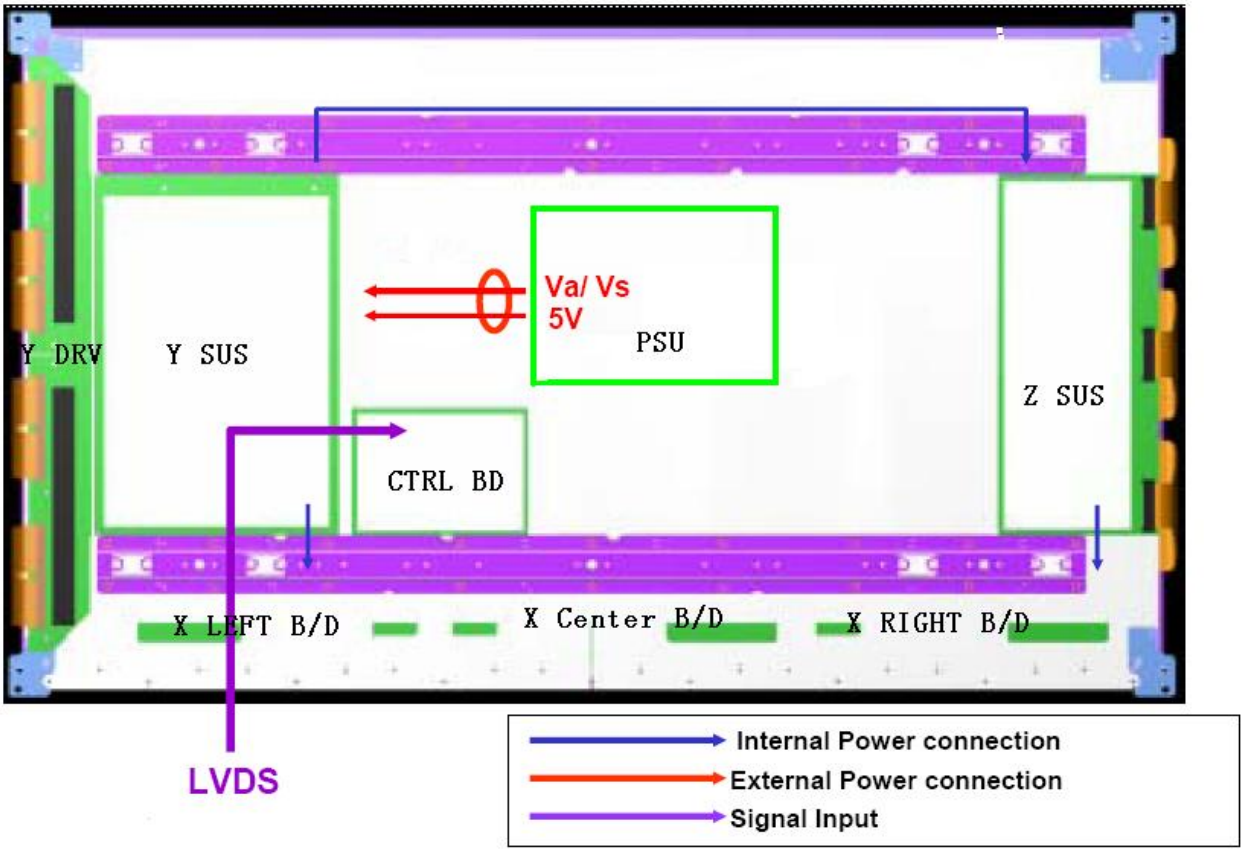


PLX-4202B Panel

PLX-5002B



PLX-5002B System

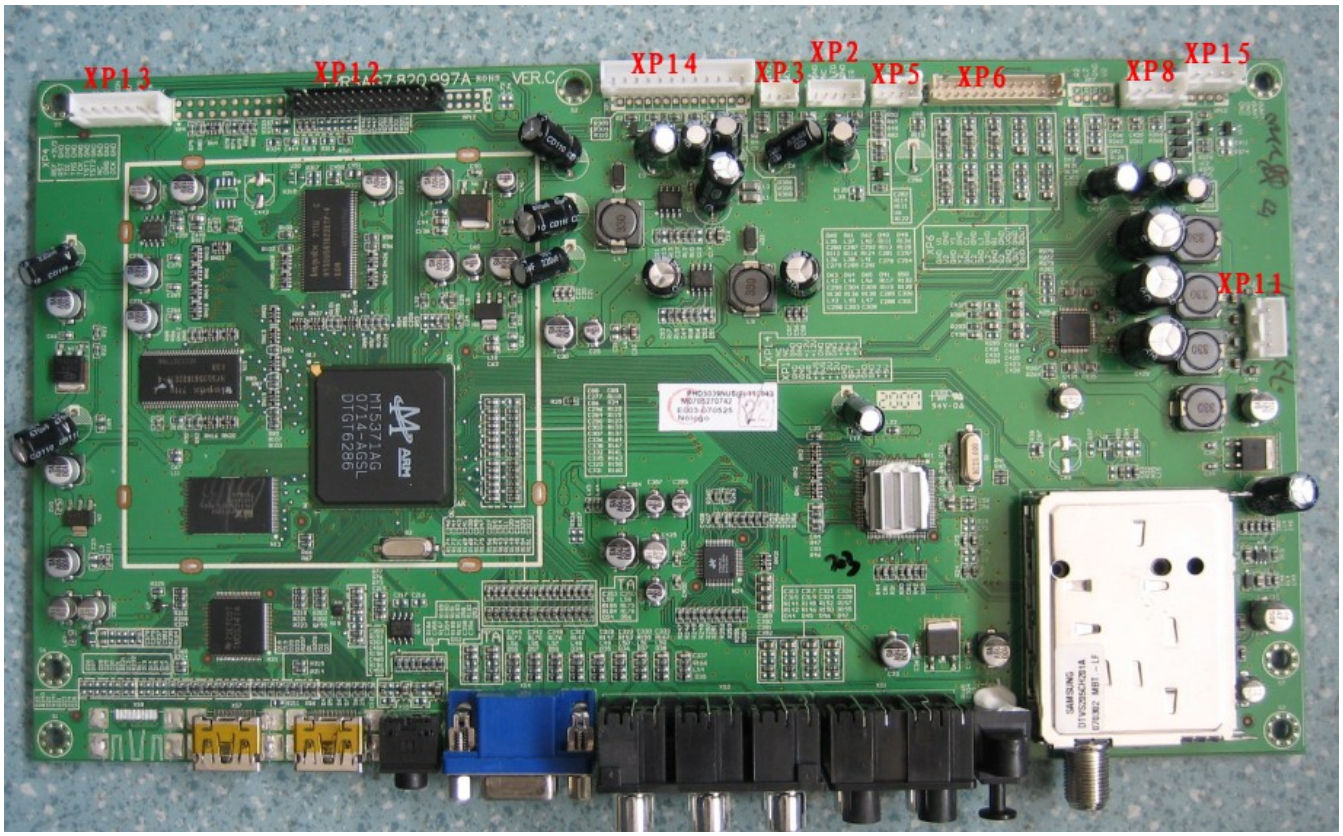


PLX-5002B Panel

No	Description	Part No	Type/Model
TV(1)	Main BD	113043	RSAG2.908.1072\ROH
TV(2)	In/Out connector board	113178	RSAG2.908.1080\ROH
TV(3)	LED / IR Board	113179	RSAG2.908.1081\924\ROH
TV(4)	Key Board		

4.2 Connectors

Main Board

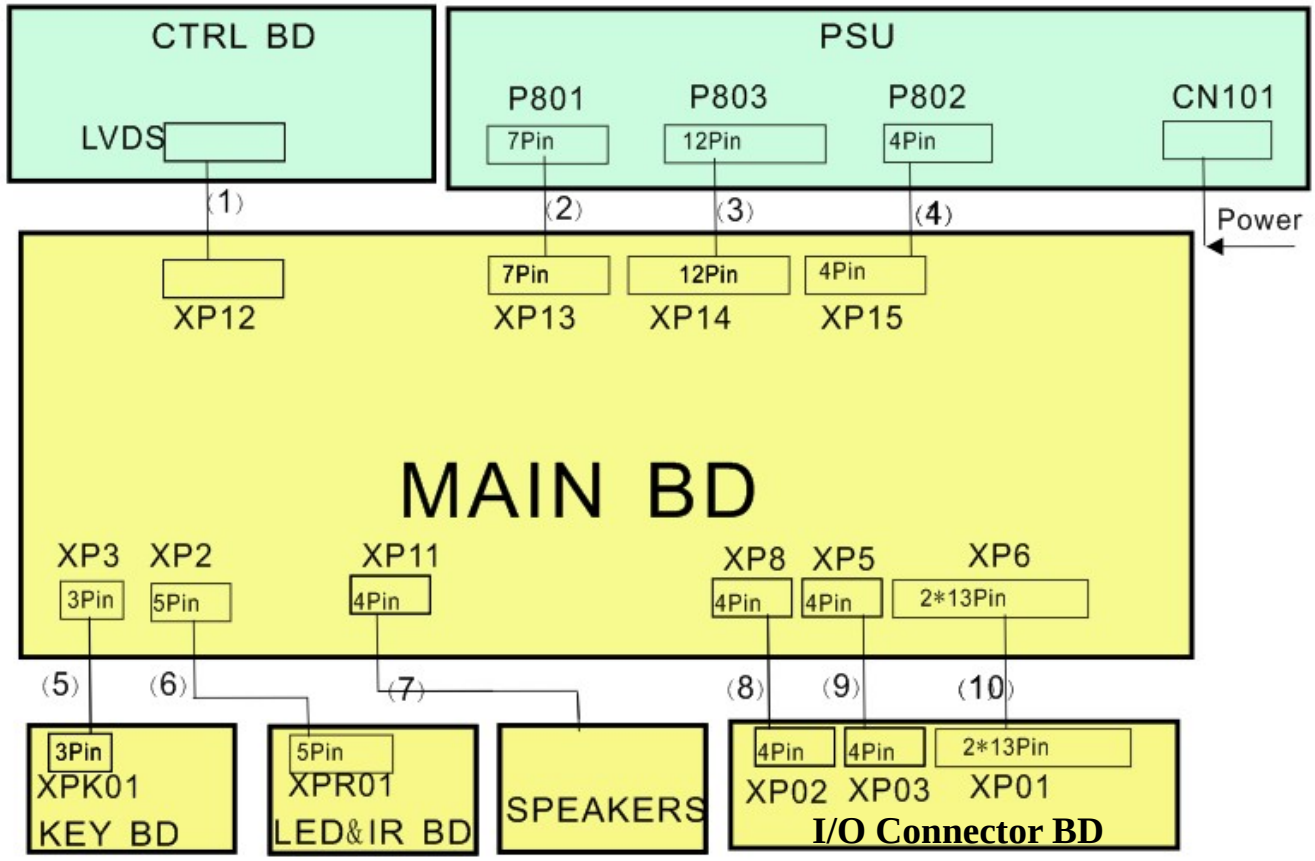


Location No.	Specification	Description
XP13	TJC3-7A\ROH	Power from PSU BD P801
XP12	FF-HX19-10\ROH	LVDS signal between MB and panel
XP14	TJC3-12A\ROH	Power from PSU BD P803
XP3	TJC10-3A\ROH	Buttons (connect key BD and main BD)
XP2	TJC10-5A\ROH	IR, LED
XP5	TJC10-4A\ROH	Serial Port connector
XP6	A2006WSO-2×13P\ROH	Video/Audio signal
XP8	TJC3-4A\ROH	Headphone Audio Signal

XP15	TJC3-4A\ROH	Power for AMP, from PSU BD P802
XP11	TJC3-4A\ROH	Audio signal to speakers

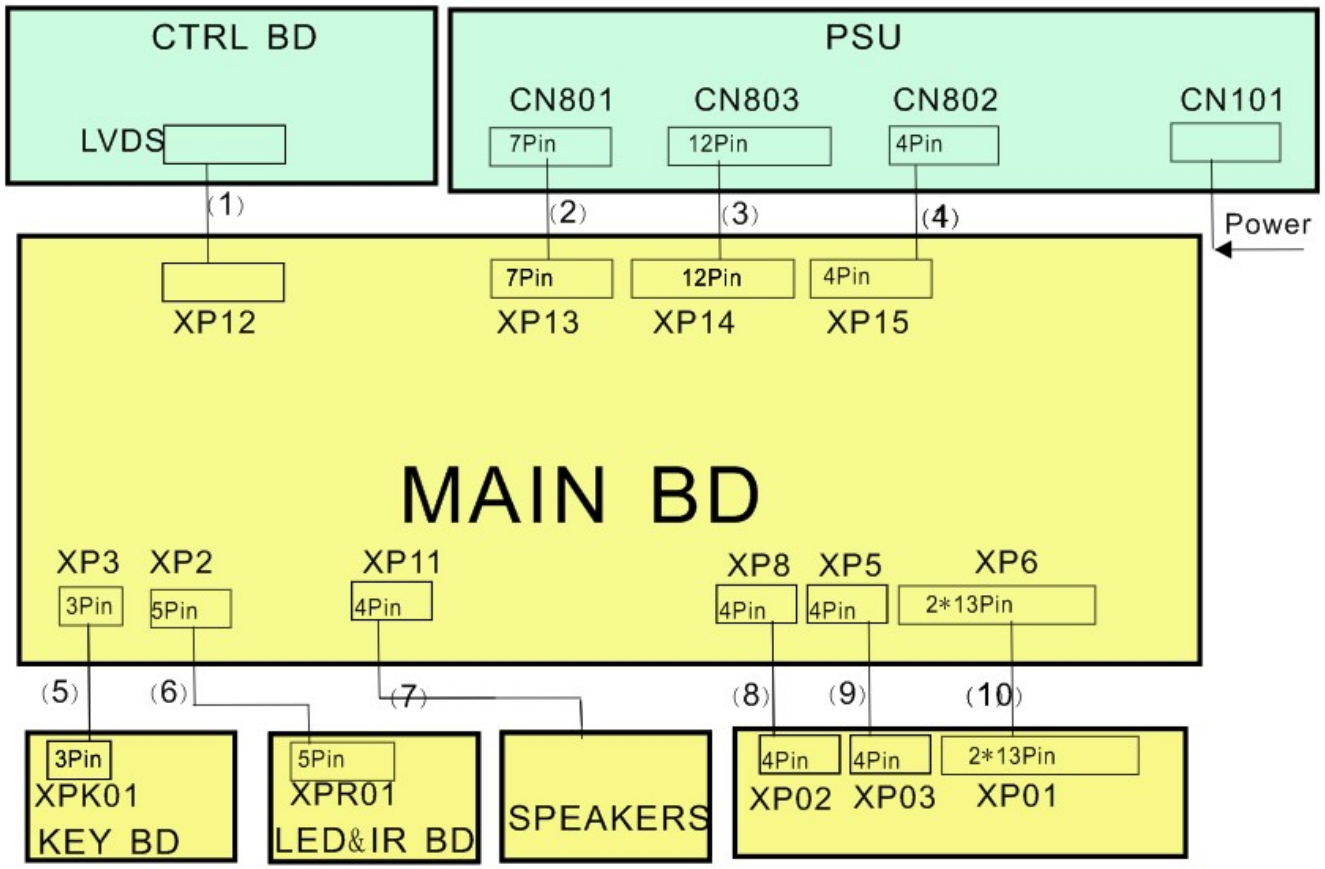
4.3 Wires and Cables Overall Wiring Diagram(s)

PLX-4202B



No	DESCRIPTION	SPECIPICATION	NOTE
1	LVDS signal	FF-HX19-11	Main BD XP12<-->CRTL BD
2	5V standby, communication between Main BD and panel	TJC3-7Y-EI-300-ROH	Main BD XP13<-->PSU P801
3	+5V, +12V supply to Main BD	TJC3-12Y-EI-200\ROH	Main BD XP14<-->PSU P803
4	Power supply for amplifier	TJC3-4Y-EI-200\ROH	Main BD XP15<-->PSU P802
5	Buttons	TJC10T-3Y-850-P	Main BD XP3 <--> Key BD XPK01
6	LED & IR	TJC10T-5Y-950-P	Main BD XP2<-->IR &LED BD XPR01
7	Audio out put (R/L)	TJC3H-4Y-800-850-P\ROH	Main BD XP11<-->Speakers
8	Headphone Audio	TJC3T-4Y-300\ROH	Main BD XP8<-->I/O CON BD XP02
9	Serial data	TJC10T-4Y-300\ROH	Main BD XP5<-->I/O CON BD XP03
10	Video/Audio signal	HX-2026C250	Main BD XP6<-->I/O CON BD XP01

PLX-5002B



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3	+5V, +12V supply to Main BD	TJC3-12Y-EI-200\ROH	Main BD XP14<-->PSU CN803
4	Power supply for amplifier	TJC3-4Y-EI-200\ROH	Main BD XP15<-->PSU CN802
5	Buttons	TJC10T-3Y-700-P\ROH	Main BD XP3 <--> Key BD XPK01
6	LED & IR	TJC10T-5Y-950-P	Main BD XP2<-->IR &LED BD XPR01
7	Audio out put (R/L)	TJC3H-4Y-800-850-P\ROH	Main BD XP11<-->Speakers
8	Headphone Audio	TJC3T-4Y-300\ROH	Main BD XP8<-->I/O CON BD XP02
9	Serial data	TJC10T-4Y-300\ROH	Main BD XP5<-->I/O CON BD XP03
10	Video/Audio signal	HX-2026C250	Main BD XP6<-->I/O CON BD XP01

5. Factory/Service OSD Menu and Adjustment

5.1 To enter the Factory OSD Menu

a. With factory RC (remote control)

1. Press “M” button and enter factory mode.
2. Press “Menu” button and enter factory OSD menu.
3. Press “CH+”/“CH-” button select the function menu, press “VOL+”/“VOL-” enter the selected function menu. Press “VOL+”/“VOL-” button adjust values in the menu.

b. With user’s RC

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

5.2 Factory OSD Menu

5.2.1 White Balance

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

Auto Color

	Item	Default	Options	Notes
1	**ADC VGA**			**For VGA source**
2	**ADC HDTV**			**For Component Video**

5.2.2 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.

5.2.3 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.

5.2.4 Clear the EEPROM

Item	Meaning	Note
1	**Clear partly**	WB data、Auto Color data
2	**Clear completely**	

Note: The factory menu date varies according to different sources. Incase changing the factory data by error, you can choose to "clear the EEPROM", by which you can resume the default value.

To clear the EEPROM:

a. Select the button "Clear All".
b. Press VOL+ button to clear the EEPROM data.
c. Wait for 5 seconds, close the OSD menu.
d. Restart the TV.

5.3 Designer Menu

5.3.1 Video Mode

Standard:

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	**0**	**0**	**0**	**1**	**0**	**0**
G Gain	**0**	**0**	**0**	**2**	**-1**	**2**
B Gain	**-7**	**-7**	**-7**	**-4**	**-7**	**-8**

Note: Fore PHD5039NUS, HDMI date of Standard mode is: 0 0 -8

Offset:

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	**-2**	**-2**	**-2**	**-1**	**-2**	**-1**
G Gain	**-2**	**-2**	**-2**	**1**	**-1**	**-3**
B Gain	**6**	**6**	**6**	**7**	**7**	**9**

Note: For PHD5039NUS, HDMI Offset date is : -1 -1 9

Cool：

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	-3	-3	-3	-4	-2	-3
G Gain	0	0	0	0	-2	0
B Gain	0	0	0	0	-1	-1

Warm：

	TV	AV	S-Video	Component	VGA	HDMI
R Gain	14	14	14	11	9	14
G Gain	12	12	12	7	6	9
B Gain	-12	-12	-12	-17	-19	-17

5.3.2 Video Curve:

	TV	AV	S-Video	Component	VGA	HDMI
Bright Max	620	620	620	700	660	670
Bright Min	0	0	0	0	0	0
Bright Mid	480	480	480	540	530	540
Contrast Max	600	600	600	570	570	570
Contrast Min	0	0	0	0	0	0
Contrast Mid	500	500	500	470	470	470
Saturation Max	600	600	600	600	600	600
Saturation Min	0	0	0	0	0	0
Saturation Mid	500	500	500	500	500	500
Hue Max	1000	1000	1000	1000	1000	1000
Hue Min	0	0	0	0	0	0
Hue Mid	474	474	474	474	474	474

5.3.3 Picture Mode

	TV	AV	S-Video	Component	VGA	HDMI
Vivid Bright	65	65	65	65	60	65
Vivid Contrast	65	65	65	65	60	65
Vivid Saturation	65	65	65	65	60	65
Std Bright	50	50	50	50	50	50
Std Contrast	50	50	50	50	50	50
Std Saturation	50	50	50	50	50	50

Movie Bright	**40**	**40**	**40**	**40**	**40**	**40**
Movie Contrast	**40**	**40**	**40**	**40**	**40**	**40**
Movie Saturation	**40**	**40**	**40**	**40**	**40**	**40**

5.3.4 Volume Curve：

	Min	**20**	**Mid**	**80**	**Max**
Data	**0**	**18**	**24**	**34**	**46**

Note：Set Downmix to “Lt/Rt”.

6. Software Upgrading

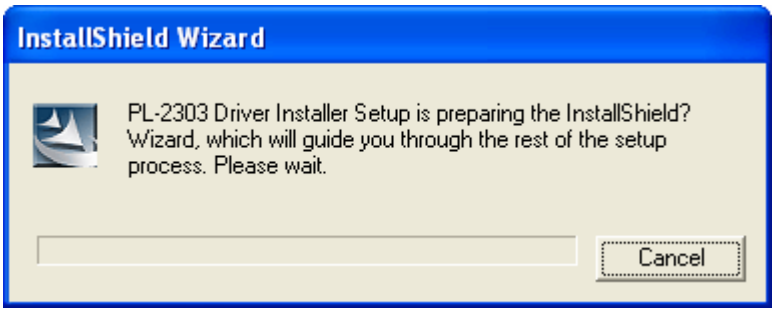
The software is upgraded by a burning toll-MtkTool, which can burn the program file *.bin to the main board of the unit.

6.1 Get ready for upgrading

6.1.1 Install the driver

Double click the icon 

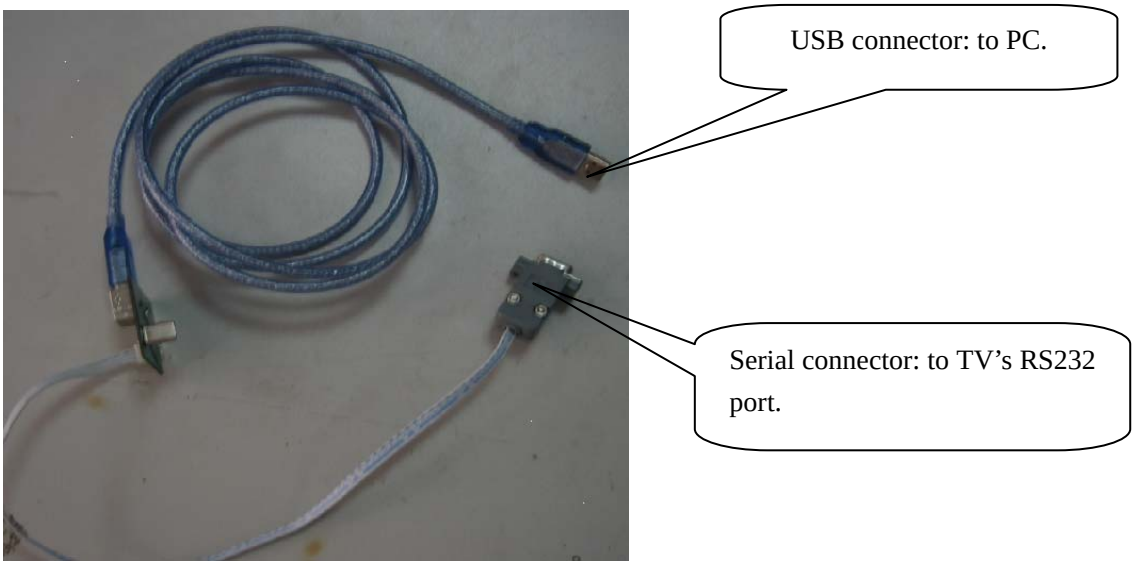
, install the driver.



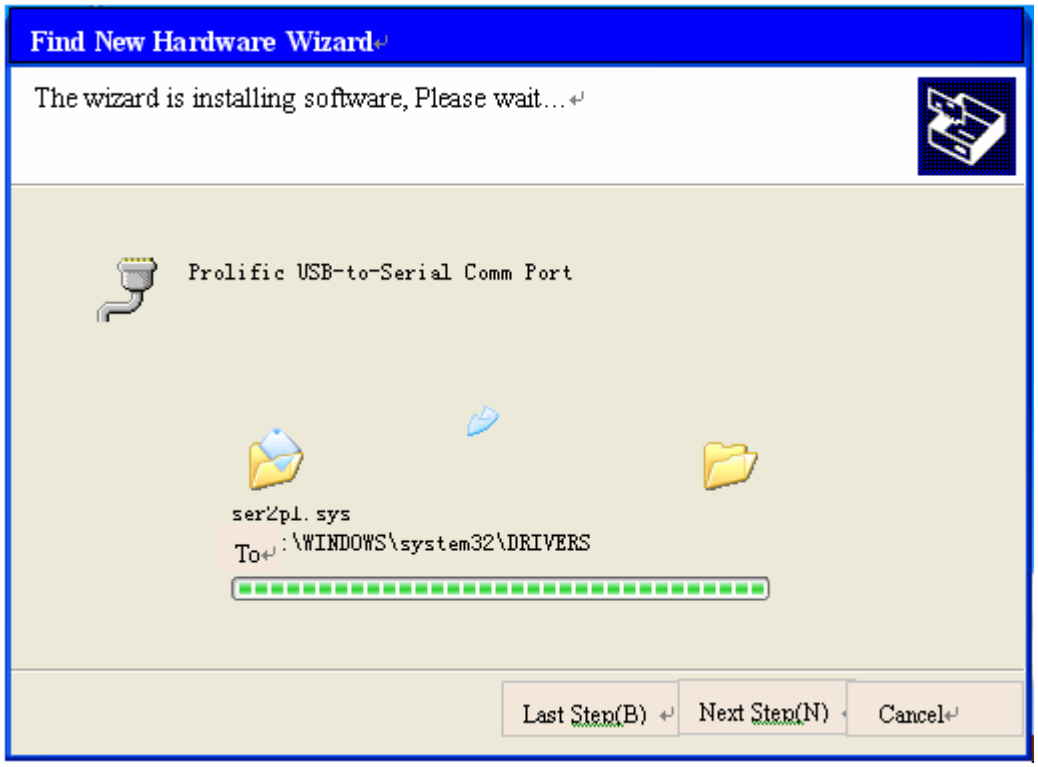
Select the default value, the driver will be installed step by step.

6.1.2 Hardware connecting

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



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



6.2 Upgrading with the MtkTool

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

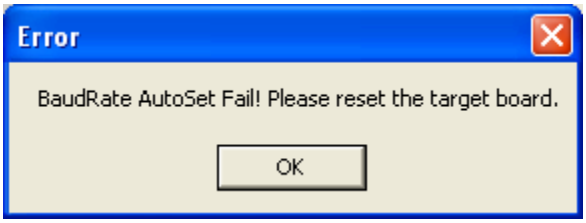
. There are five folders/files in this folder altogether.

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

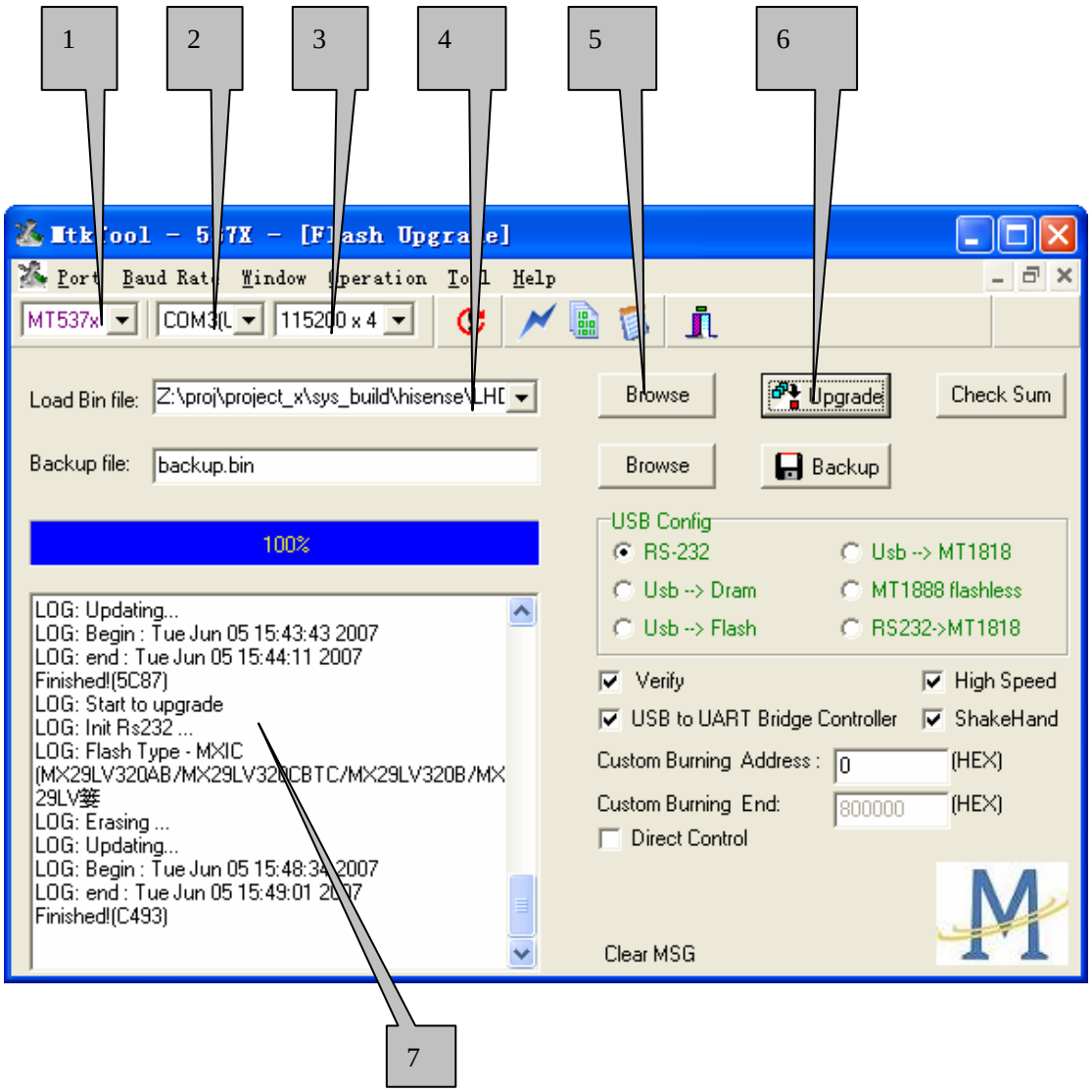
After connecting the TV with your PC, double click 

icon, open the MtkTool.

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



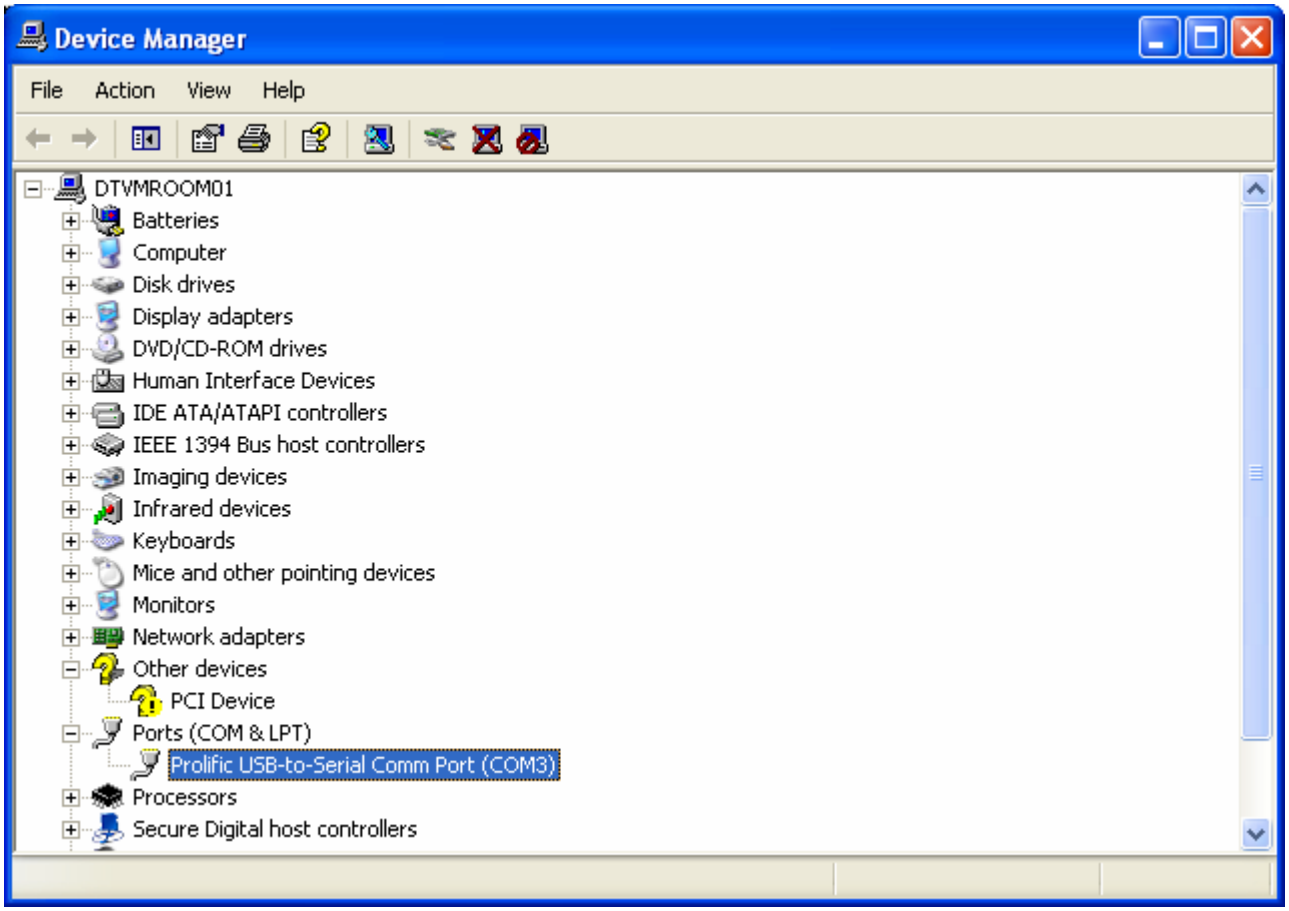
Ignore these errors, click “Confirm” and enter the MtkTool main interface, see the following picture.

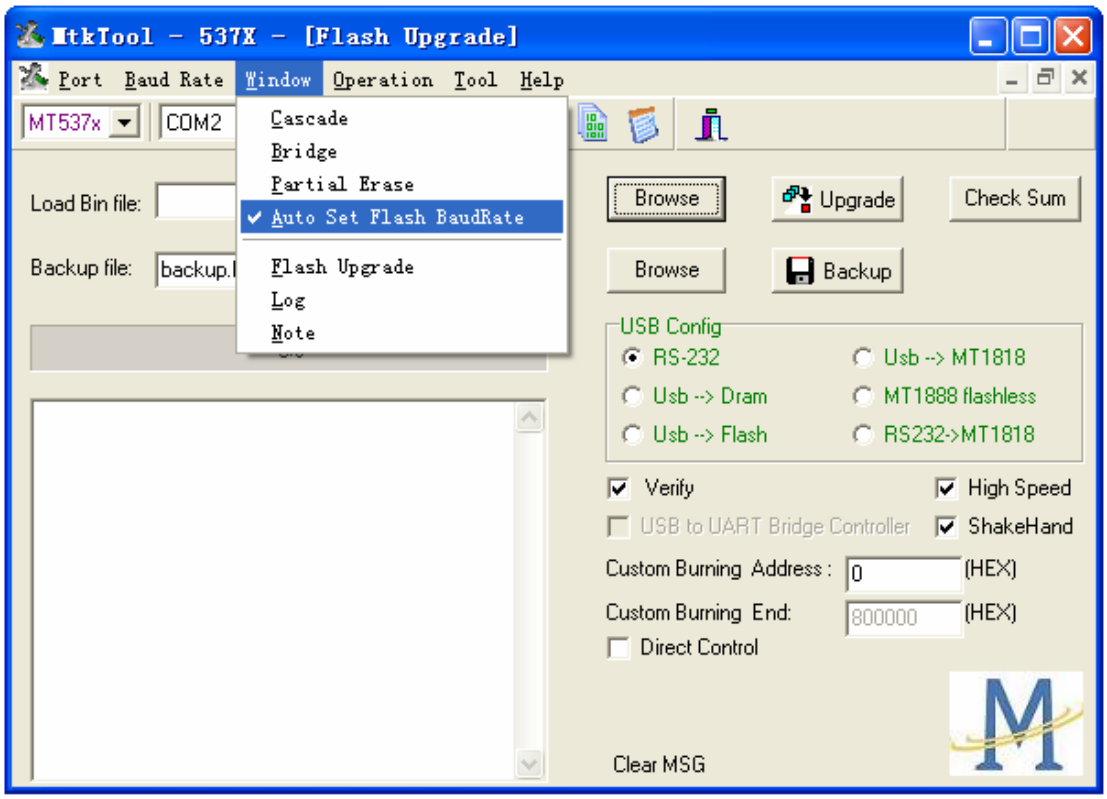


1—Flash chip model (for PLX-4202B and PLX-5002B, it will be MT537X).
2—The port through which the PC communicate with the chip.
3—The communicating baud rate
4—The new program file (*.bin) for upgrading.
5—Click this button can select the *.bin file to be used for upgrading.
6—Click to start upgrading.
7—Information displaying window.

Setting the communication port:

Open “Device Manager” and find which port is connected with the TV. In above picture, COM2 is connected to the TV; so, select “COM2” in the MtkTool main interface. Select the right baud rate according to chip model. For this unit (chip model is MT5371), select 115200×2.



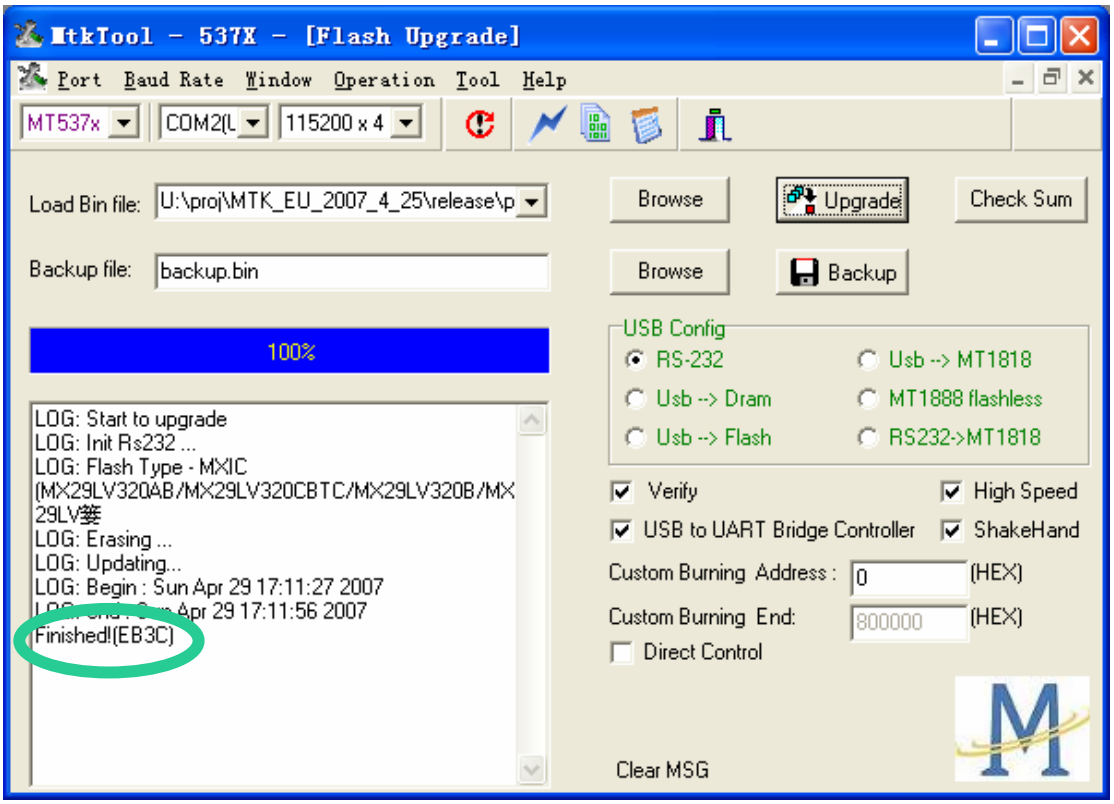


Note: Where or not click the “Auto Set Flash Baud Rate” in the “window” menu depends on the

chip type. If the flash chip does not support high speed transport, do not select this option; otherwise, reserve the selected mood. For these two units here, click off "Auto Set Flash Baud Rate".

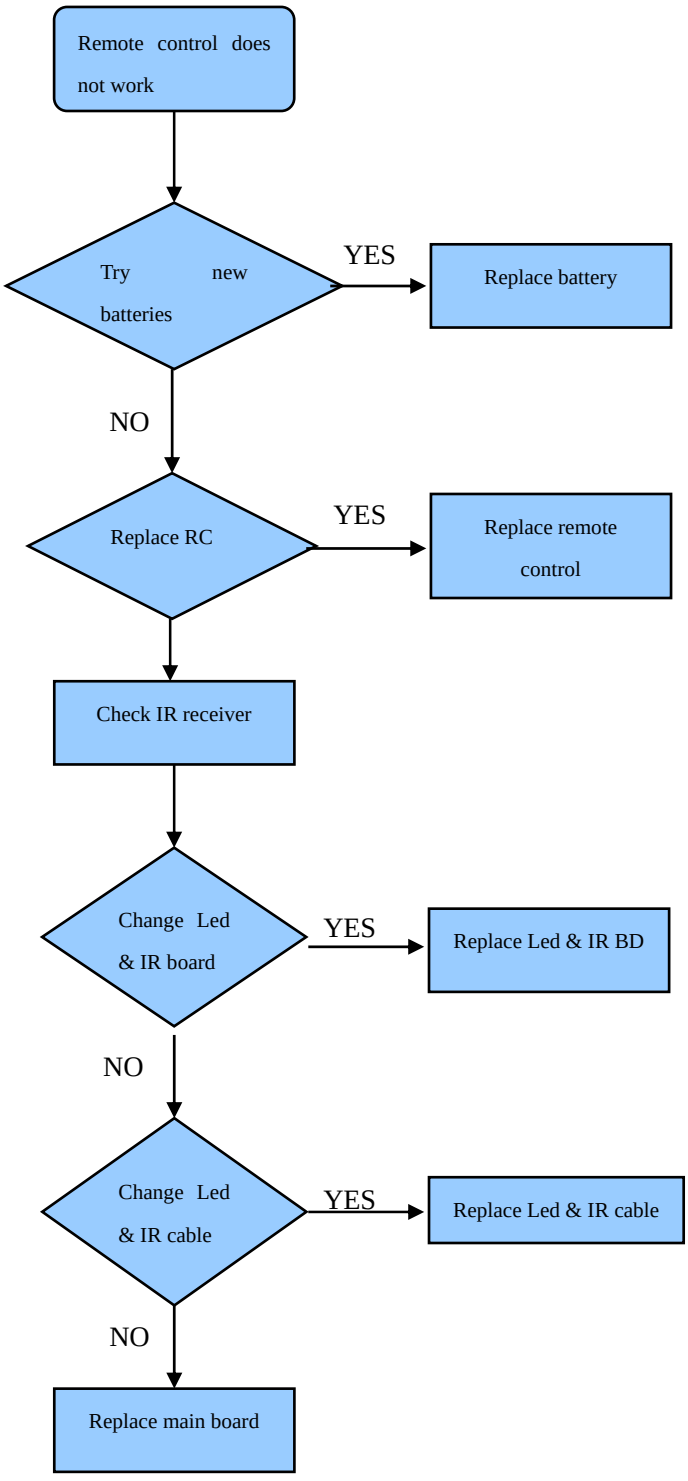
Click "Browse" button (5), find the upgrading program file, and select it. Press "Upgrade" button and start upgrading.

The following interface appears on the screen- the word "Finished" shows in the information displaying window, indicating upgrading successfully.

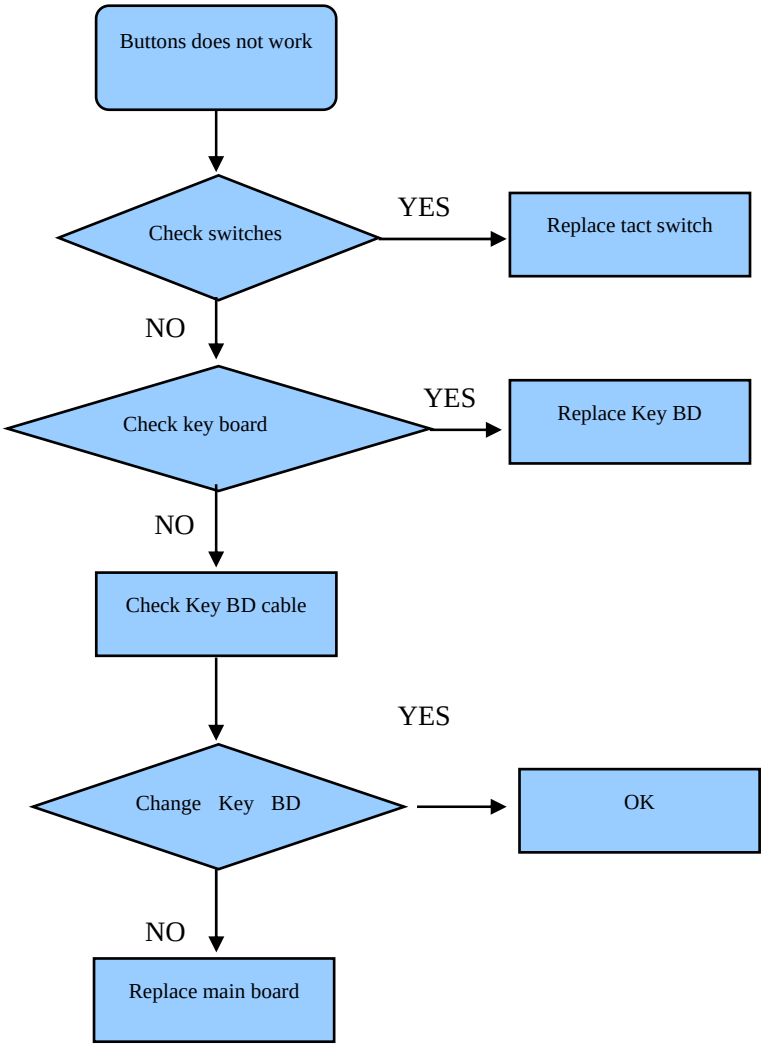


7. Troubleshooting

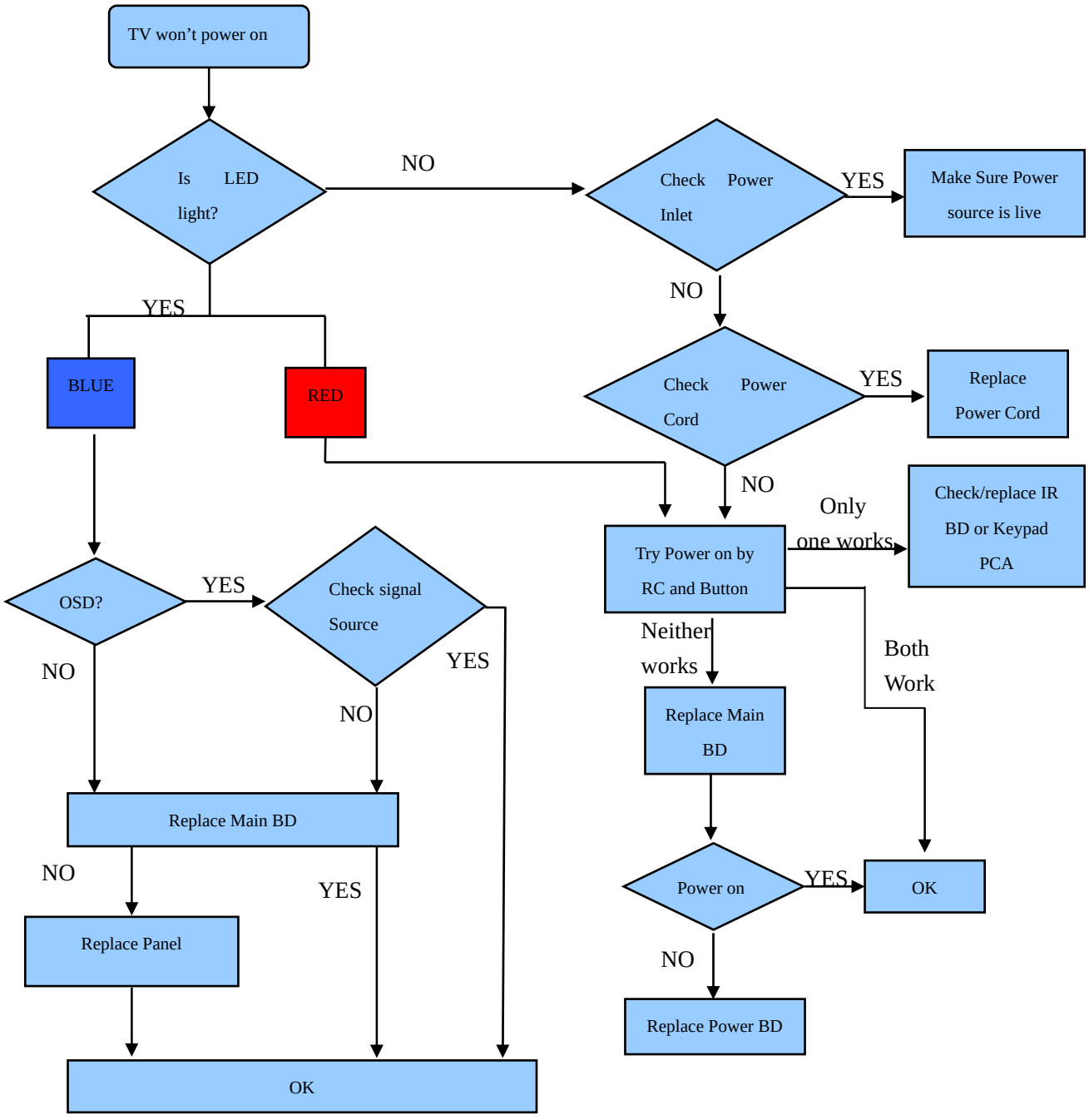
7.1 Troubleshooting for Remote Control



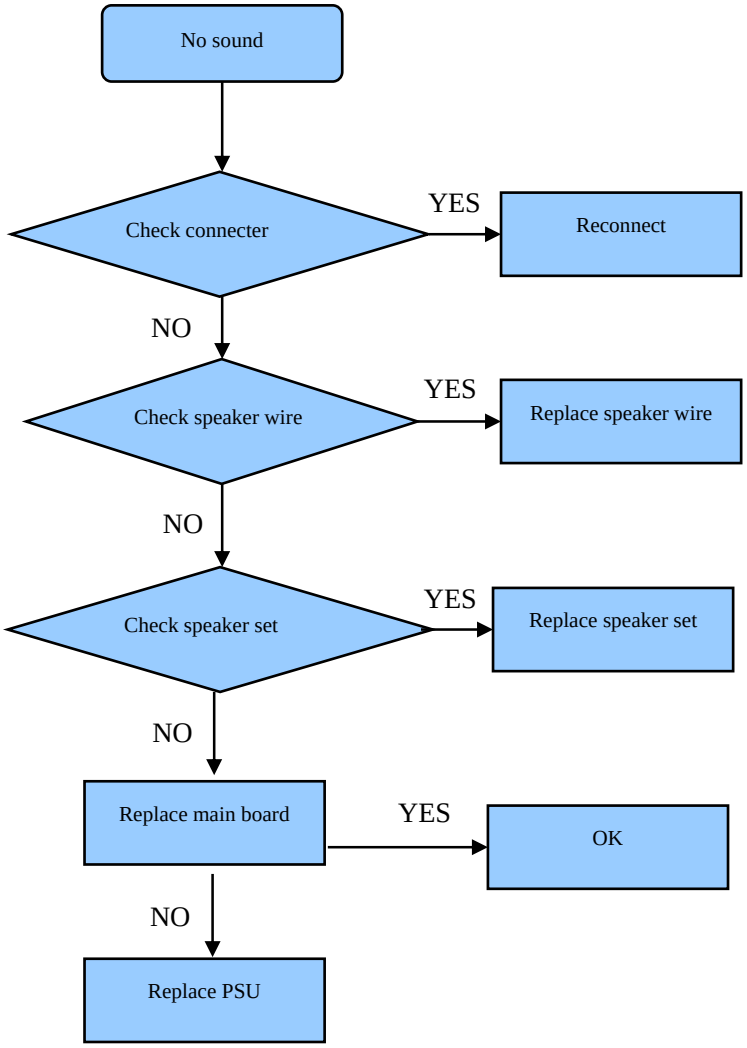
7.2 Troubleshooting for Function Key



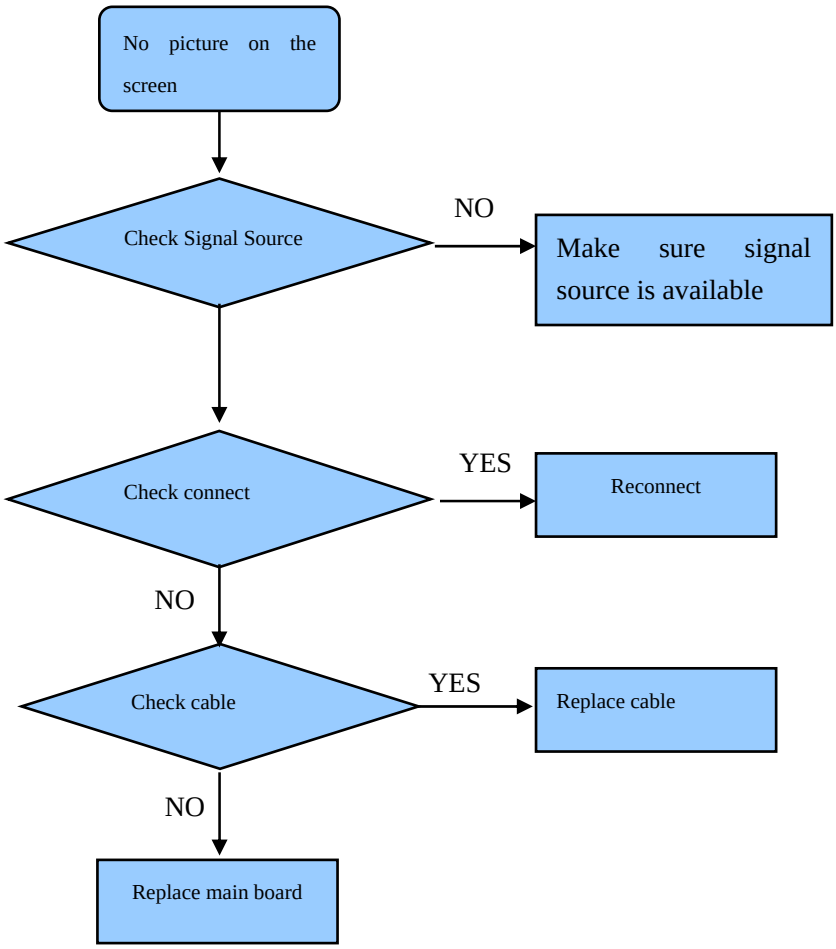
7.3 TV won’t Power On



7.4 Troubleshooting for Audio

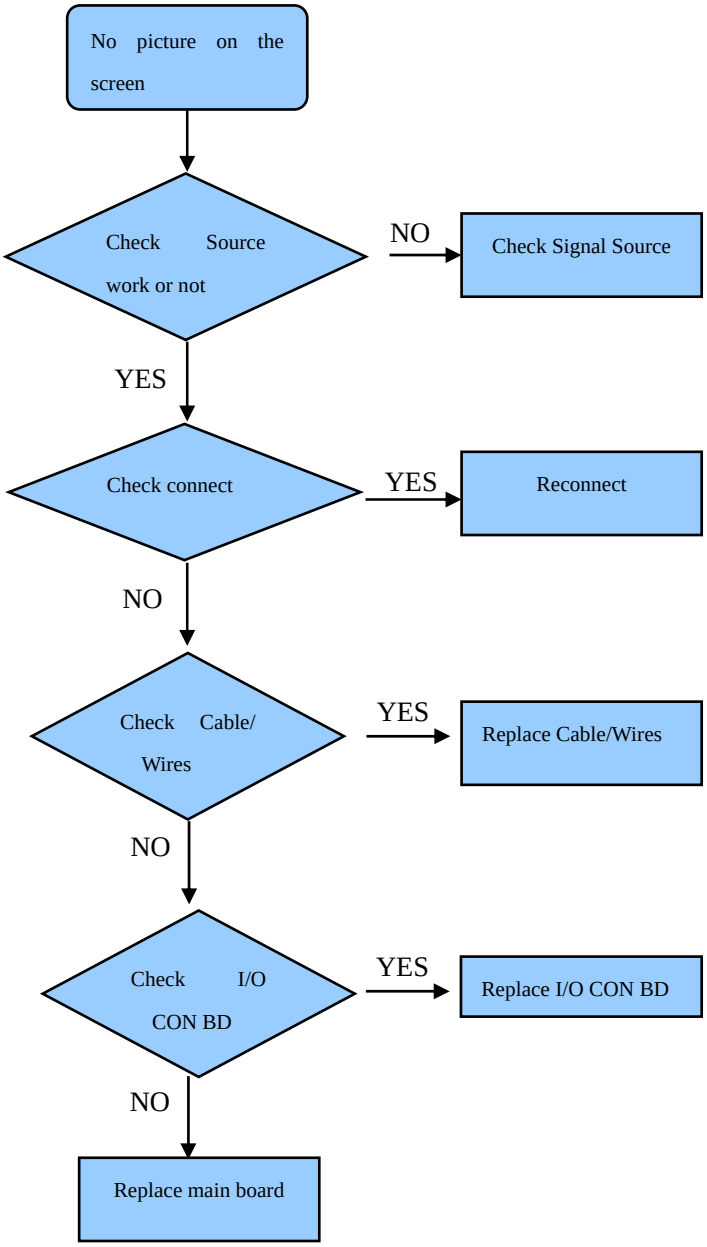


7.5 Troubleshooting for TV/VGA/HDMI/YPbPr input



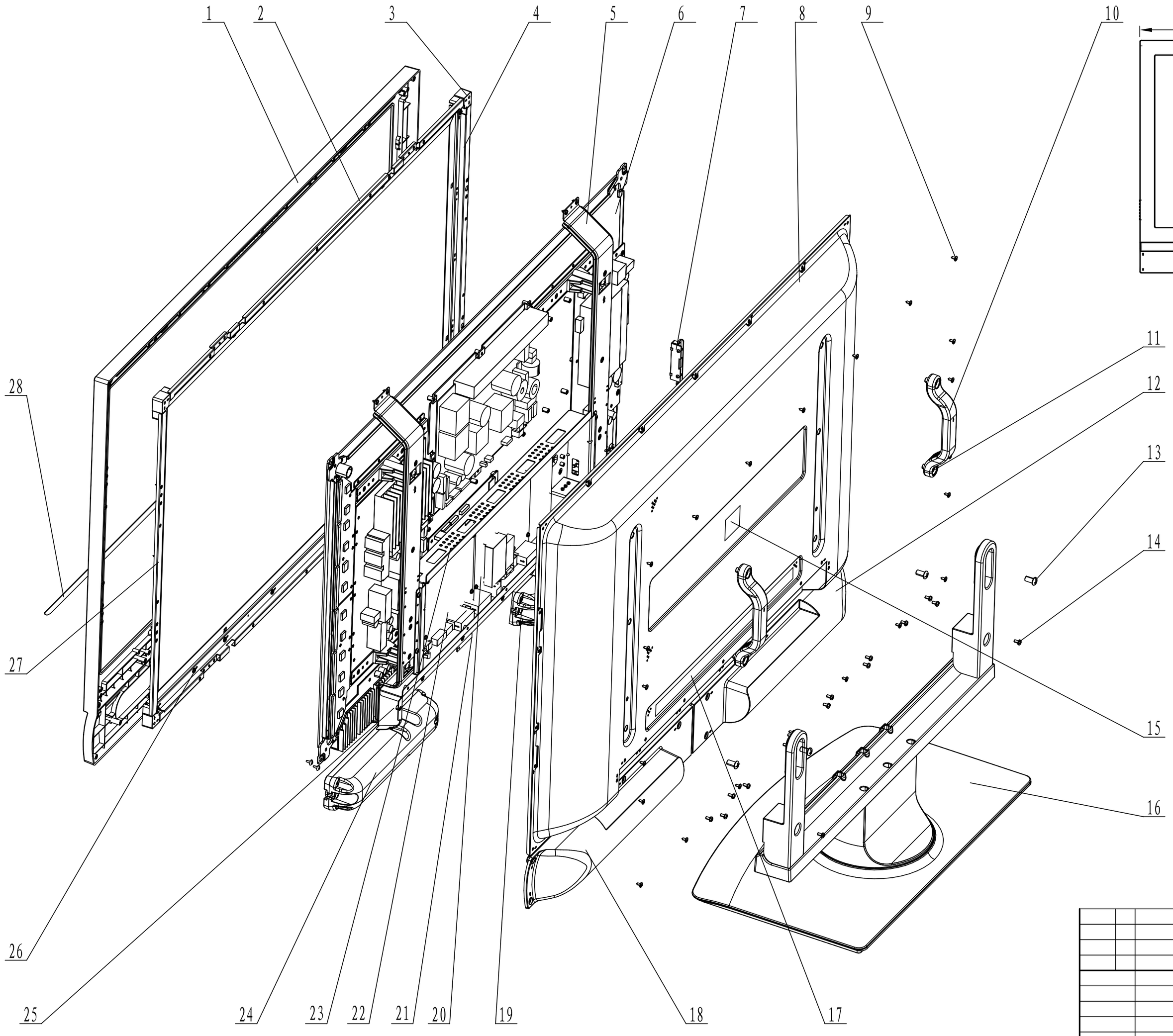
Note: If present signal source is VGA (1024×768) and the main power is turn off (such as by accident), there is a possibility that the TV will not turn on. In this case, please disconnect the VGA source from the TV unit, then power on again. Connect the VGA source after the TV works normally,

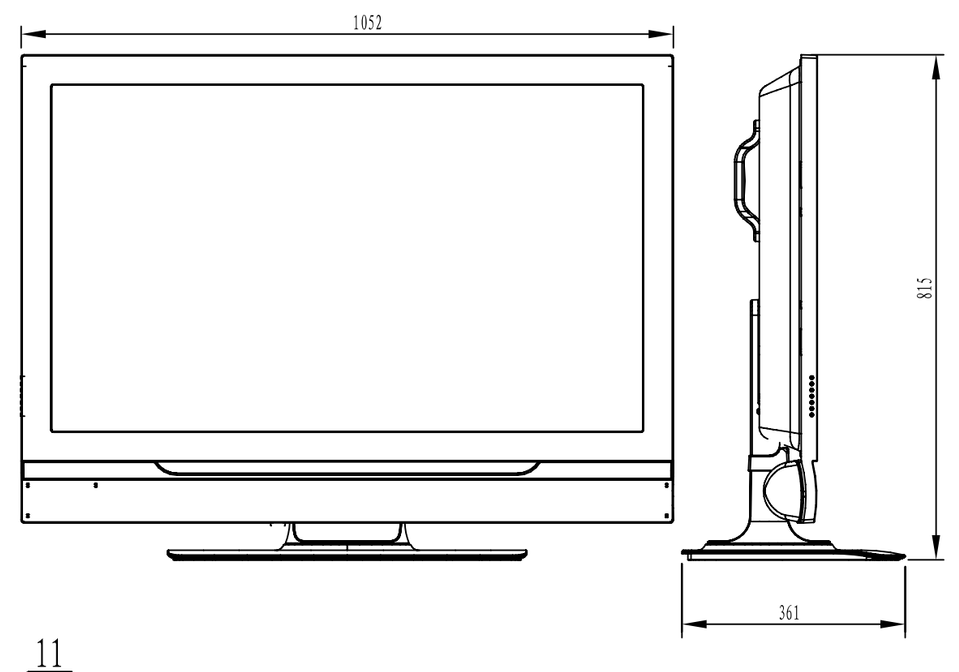
7.6 Troubleshooting for Video/S-Video input



8. Explode View and BOM

RSAG2.025.691





PC NO	代　号	PART NAME	QTY	DECRIPTIONS
28	RSAG8.647.218	DECORATE BRACKET	1	
27	RSAG8.048.064	FRONT CABINET FRAME	1	
26	SJ2825-87 ST3X10C	SCREW	26	
25	RSAG6.150.293	AV BRACKET	1	
24	WG5.834.002	SOUND BOX ASM	2	
23	RSAG6.150.292	SINGNAL BRACKET	1	
22	RSAG2.908.1080	PORT BOARD GROUPWARE	1	
21	RSAG2.908.1081\924	REMOVE and KEY CONTROL GROUPWARE	1	
20	RSAG2.908.1072	MAIN BOARD	1	
19	SJ2838-87 ST4X16C.II	SCREW	4	
18	RSAG7.013.089	SPEAKER_REAR CABINET	1	
17	RSAG8.804.3019	SCUTCHEON	1	
16	RSAG6.121.050	BASE	1	
15	RSAG8.807.3126	NAMEPLATE	1	
14	GB818/T-2000 M5X12	SCREW	2	
13	SJ2828-87 M8X15	SCREW	2	
12	RSAG7.013.088	SPEAKER_REAR CABINET	1	
11	SJ2828-87 M8X15	SCREW	4	
10	RSAG8.671.004	HANDLE	2	
09	SJ2824-87 ST4X12F	SCREW	22	
08	RSAG8.074.352	REAR CABINET	1	
07	RSAG8.078.407	BRACKET	1	
06	PDP42X4	PANNEL	1	
05	RSAG6.150.179	BRACKET	2	
04	RSAG8.048.065	FRONT CABINET FRAME	1	
03	RSAG8.038.677	BRACKET(CORNER BRACKET)	4	
02	RSAG8.048.066	FRONT CABINET FRAME	2	
01	RSAG8.074.384	FRONT CABINET	1	

PLX-4202B

RSAG2.025.691

更改标记	数量	更改单号	签名	日期
设 计				
审 核				
工 艺				
标 准 化				
会 签				

制图：　　审图：

总装图
PLX-5002B

RSAG2.025.690

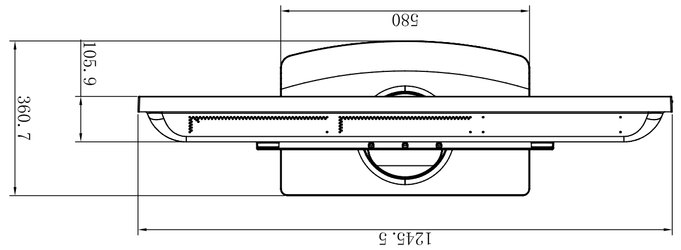
数量	重量	比例
		1：3

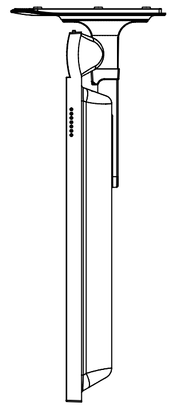
第	张	共	张

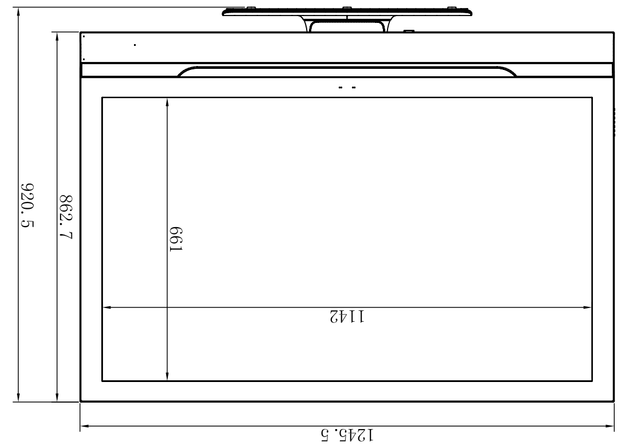
青岛海信电器股份有限公司

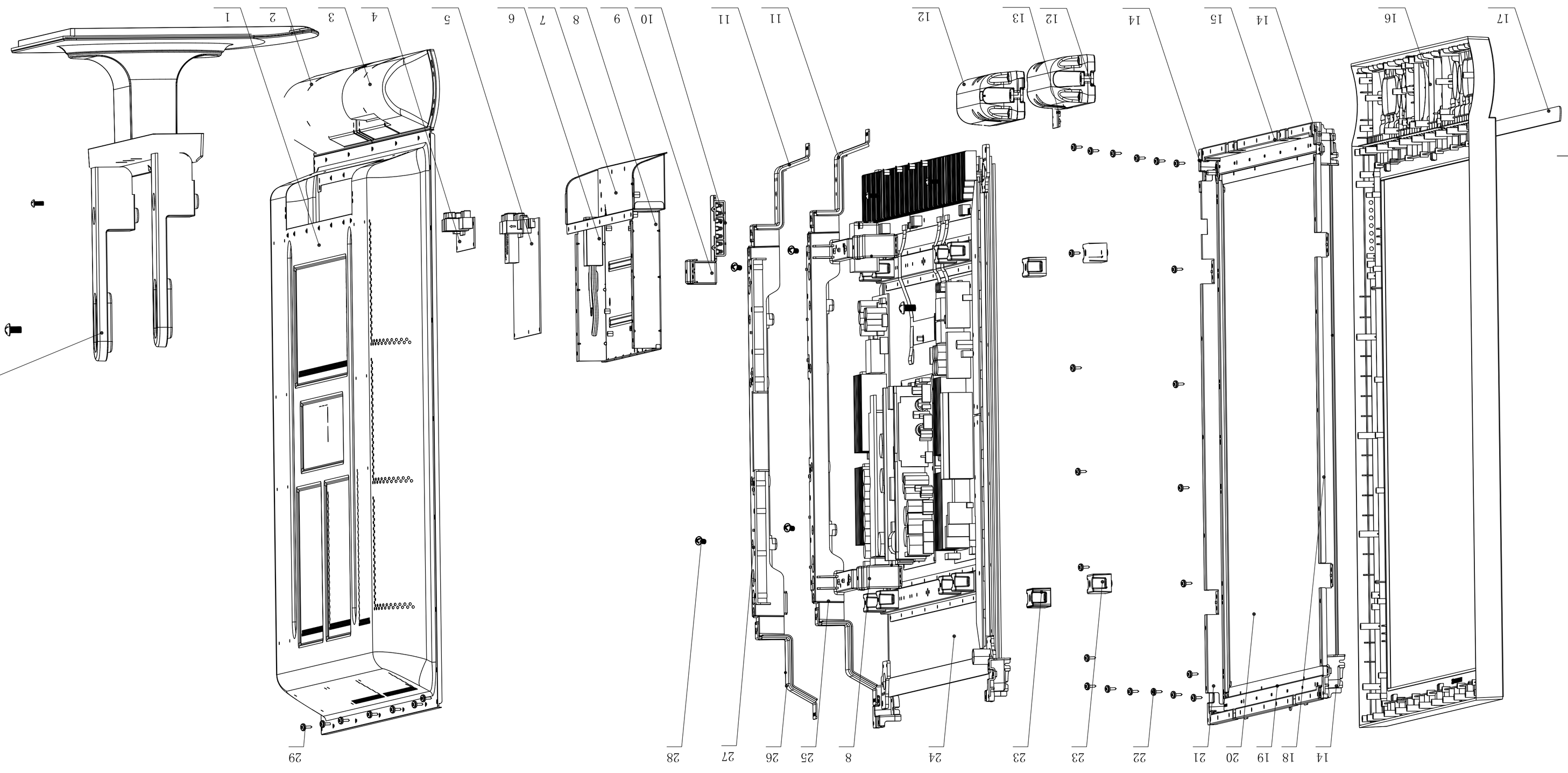
制图：　　审图：　　幅面：A1

PC NO	PART NAME	PART NUMBER	QTY	DECRIPTIONS
1	REAR CABINET	RSA5R.074.373	1	
2	SPEAKER_REAR CABINET (LEFT)	RSA57.013.090	1	
3	SPEAKER_REAR CABINET (RIGHT)	RSA57.013.091	1	
4	PORT BOARD GROUPWARE	RSAG2.908.1080	1	
5	MAIN BOARD	RSAG2.908.1072	1	
6	AC FILTER	LE PANNEL	1	
7	AV BRACKET	RSA6R.150.187	1	
8	SIGNAL BRACKET	RSA6R.150.186	1	
9	BRACKET (LEFT and RIGHT)	RSA5R.038.691	4	
10	BRACKET	RSA5R.078.407	1	
11	BRACKET (DOWN)	RSA6R.150.174	2	
12	SOUND BOX ASM	WG5.834.002	2	
13	POWER and KEY CONTROL GROUPWARE	WT2.908.1209-2	1	
14	BRACKET (CORNER BRACKET)	RSA5R.038.799	4	
15	FRONT CABINET FRAME_D	RSA5R.048.068	1	
16	FRONT CABINET	RSA5R.074.343	1	
17	DECORATE BRACKET	RSA5R.647.213	1	
18	FRONT CABINET FRAME_L	RSA5R.048.069	1	
19	FRONT CABINET FRAME_U	RSA5R.048.067	1	
20	FLITER GLASS	FG510NA-G5	1	
21	FRONT CABINET FRAME_R	RSA5R.048.070	1	
22	SCREW	SJ2825-87 ST3X10C	38	
23	BRACKET	RSA5R.078.408	4	
24	PANNEL	PDP50X4	1	
25	BRACKET	RSA5R.038.831	1	
26	BRACKET_U	RSA5R.038.879	2	
27	BRACKET	RSA5R.038.683	1	
28	SCREW	GB818/T-2000 M5X12	8	
29	SCREW	SJ2824-87 ST4X12F	56	
30	BASE	P7006	1	
31	SCREW	GB/T818-2000 M5X12	2	
32	SCREW	GB/T818-2000 M4X15	2	









RSAG2.025.690

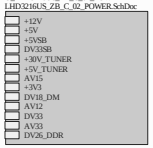
9. Schematic circuit diagram

MT5371(PBGA) REFERENCE DESIGN - 4 LAYERS

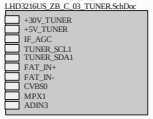
01. INDEX
02. POWER
03. TUNER
04. MT5112 ASIC
05. MT5372 ASIC
06. MT5372 BYPASS CAP.
07. MT5372 PERIPHERAL
08. DDR1 MEMORY
09. AV/SV & YPbPr Input
10. VGA INPUT
11. HDMI INPUT
12. AUDIO CODEC & Amplifer
13. LVDS&CRT OUTPUT&BACKLIGHT

NAME	TYPE	DEVICE
+12V	POWER +12V	POWER SUPPLY
+5V	POWER +5V	POWER SUPPLY
+5VSB	POWER +5V	POWER SUPPLY
DV33SB	POWER +3.3V	STANDBY POWER
+5V_TUENR	POWER +5V	TUNER POWER
DV33_DM	POWER +3.3V	MT5112 POWER AND ITS PERIPHERAL
DV18_DM	POWER +1.6V	MT5112 POWER
DV33	POWER +3.3V	MT5372 POWER AND ITS PERIPHERAL
AV33	POWER +3.3V	MT5372 ANALOG POWER
DV26_DDR	POWER +2.6V	MT5372 DDR POWER
AV15	POWER +1.5V	MT5372 VIDEO FRONT-END POWER
DV12	POWER +1.28V	MT5372 POWER
AV12	POWER +1.28V	MT5372 ANALOG POWER

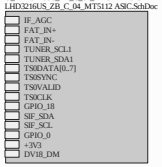
U_LHD3216US_ZB_C_02_POWER
LHD3216US_ZB_C_02_POWER.SchDoc



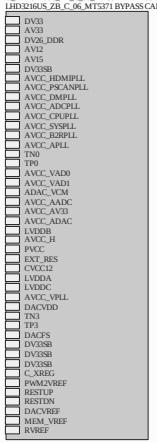
U_LHD3216US_ZB_C_03_TUNER
LHD3216US_ZB_C_03_TUNER.SchDoc



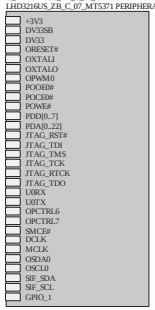
U_LHD3216US_ZB_C_04_MT5112 ASIC
LHD3216US_ZB_C_04_MT5112 ASIC.SchDoc



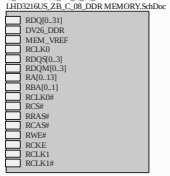
U_LHD3216US_ZB_C_06_MT5371 BYPASS CAP
LHD3216US_ZB_C_06_MT5371 BYPASS CAP..SchDoc



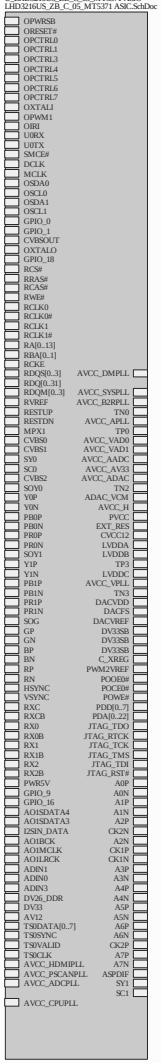
U_LHD3216US_ZB_C_07_MT5371 PERIPHERAL
LHD3216US_ZB_C_07_MT5371 PERIPHERAL.SchDoc



U_LHD3216US_ZB_C_08_DDR MEMORY
LHD3216US_ZB_C_08_DDR MEMORY.SchDoc



U_LHD3216US_ZB_C_05_MT5371 ASIC
LHD3216US_ZB_C_05_MT5371 ASIC.SchDoc



U_LHD3216US_ZB_C_09_AV-S_VIDEO-YPBPR
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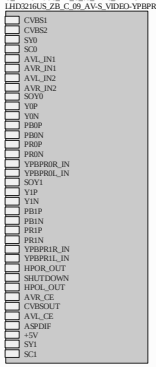
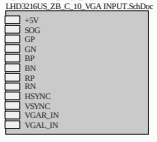
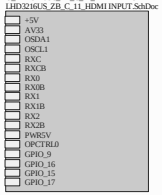


U_LHD3216US_ZB_C_10_VGA INPUT
LHD3216US_ZB_C_10_VGA INPUT.SchDoc



U_LHD3216US_ZB_C_11_HDMI1 INPUT
LHD3216US_ZB_C_11_HDMI1 INPUT.SchDoc



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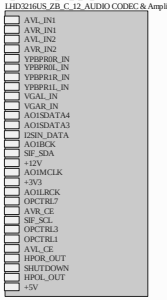
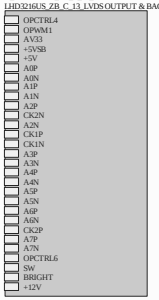
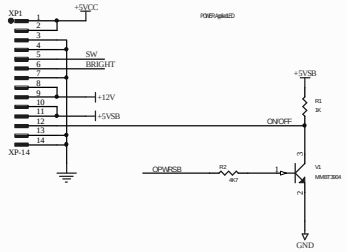
LHD3216US_ZB_C_12_AUDIO CODEC & Amplifer.SchDoc



U_LHD3216US_ZB_C_13_LVDS OUTPUT & BACKLIGHT
LHD3216US_ZB_C_13_LVDS OUTPUT & BACKLIGHT.SchDoc

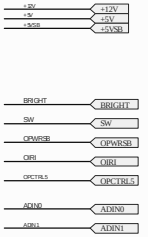


+12V for Audio OPA/AMP/MT5112& Tuner

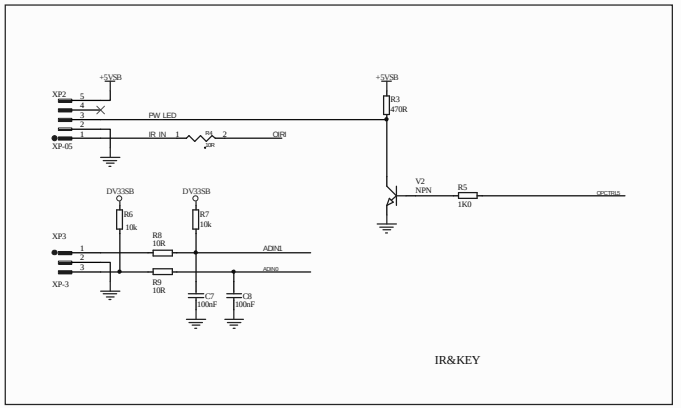


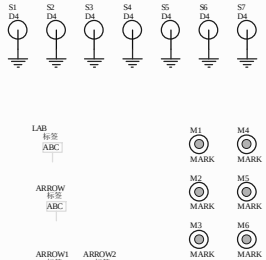
POWER INPUT

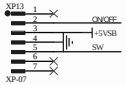
OPWRSB
HIGH = > OPEN FRAME POWER OFF
LOW = > OPEN FRAME POWER ON

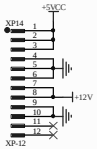


IR&KEY









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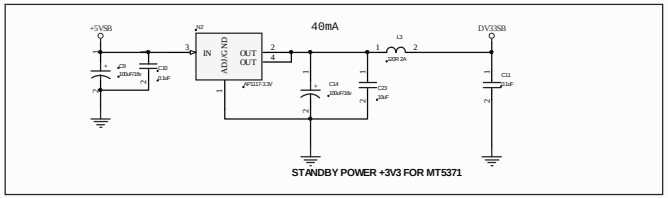
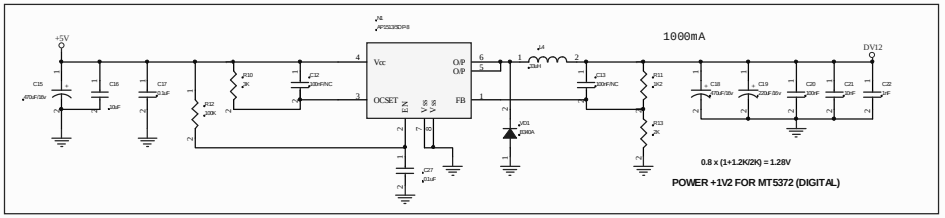
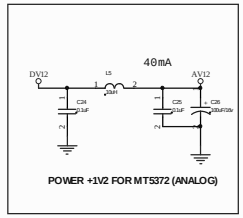
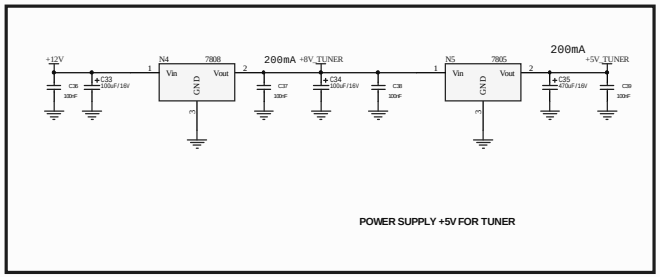
MediaTek Inc.
No.1-2, Innovation Rd 1, SBP, Hsin-Chu City 300
TEL:(03)567-0766 FAX:(03)579-7610

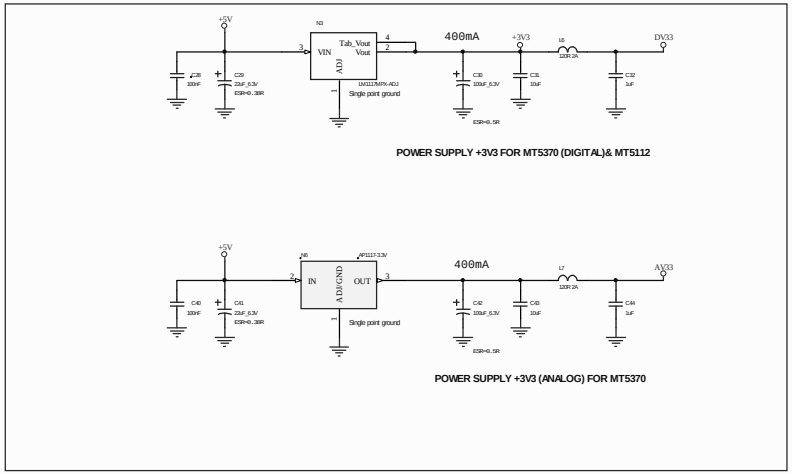
Title: INDEX
Size: A3
Document Number: MT5372_SZDEMO_V1_S
Drawn: Terry
Rev: V1.1
Date:
Sheet: of

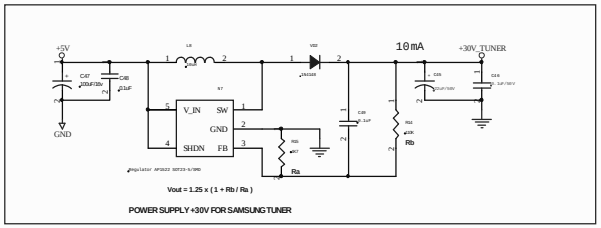


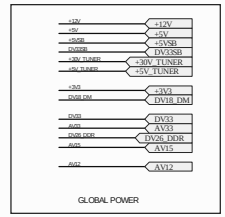


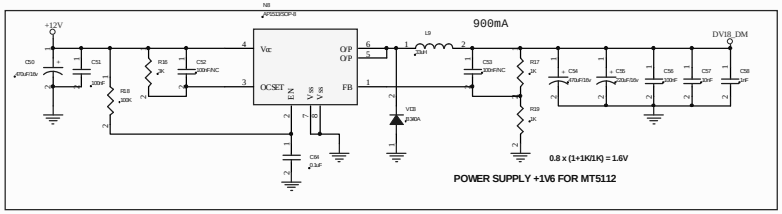


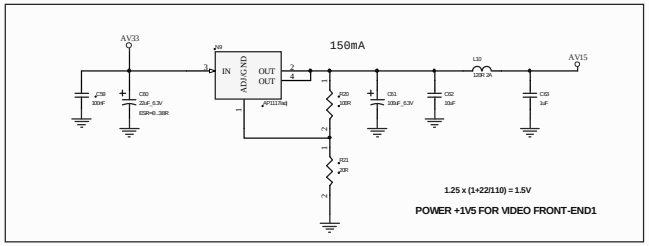


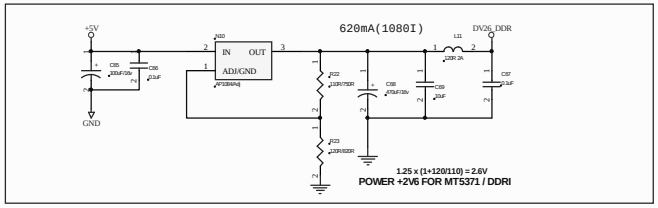












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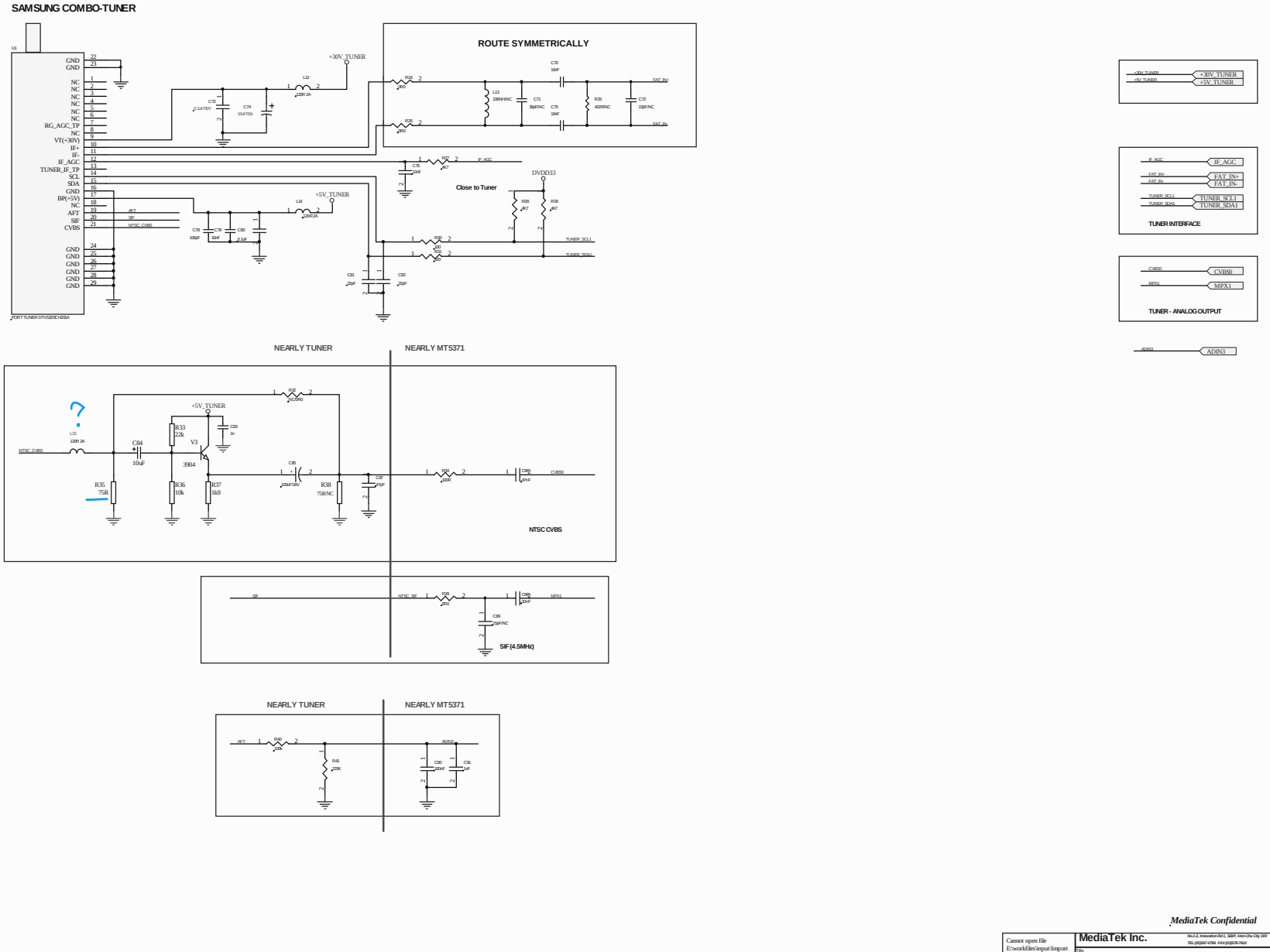

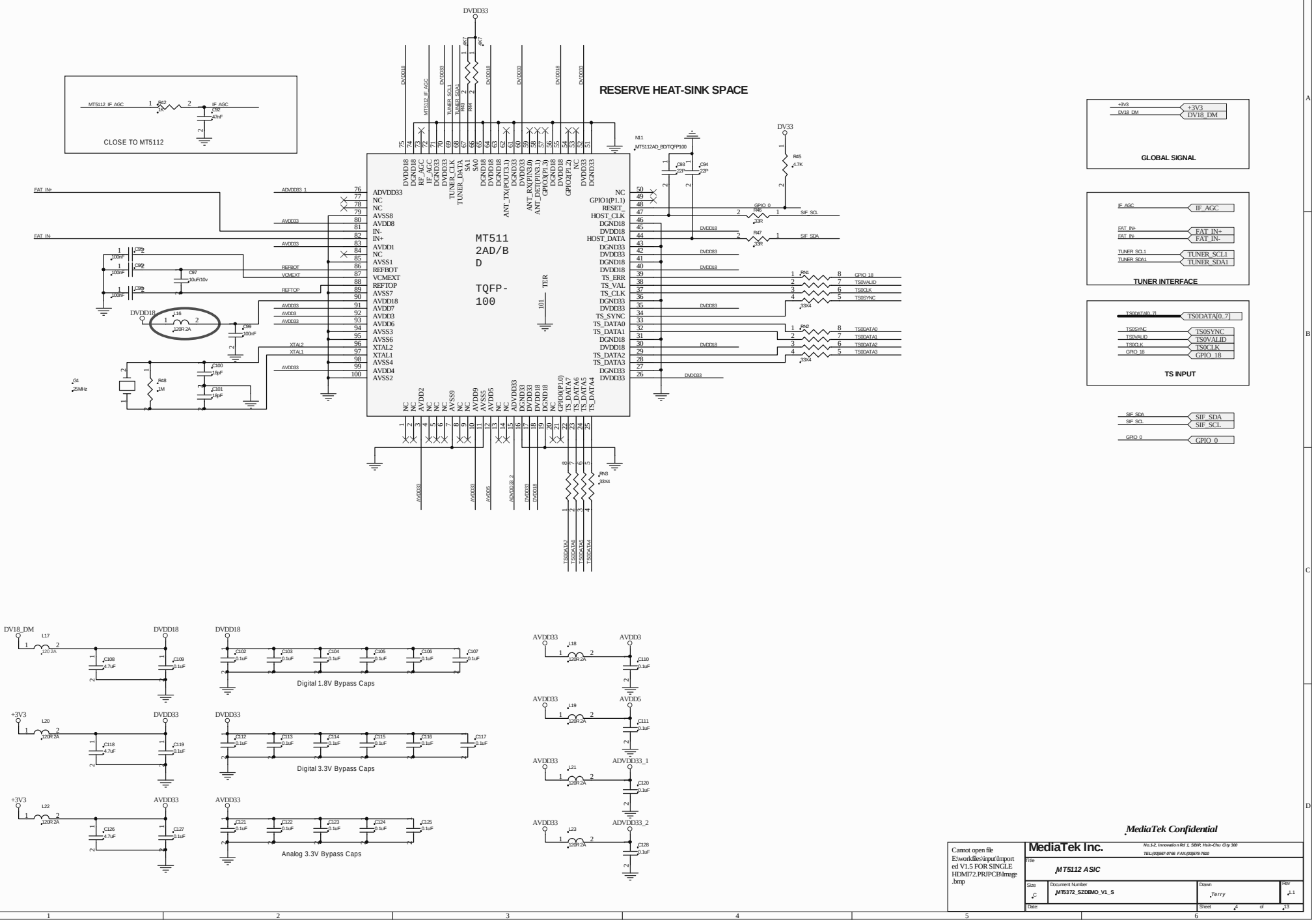

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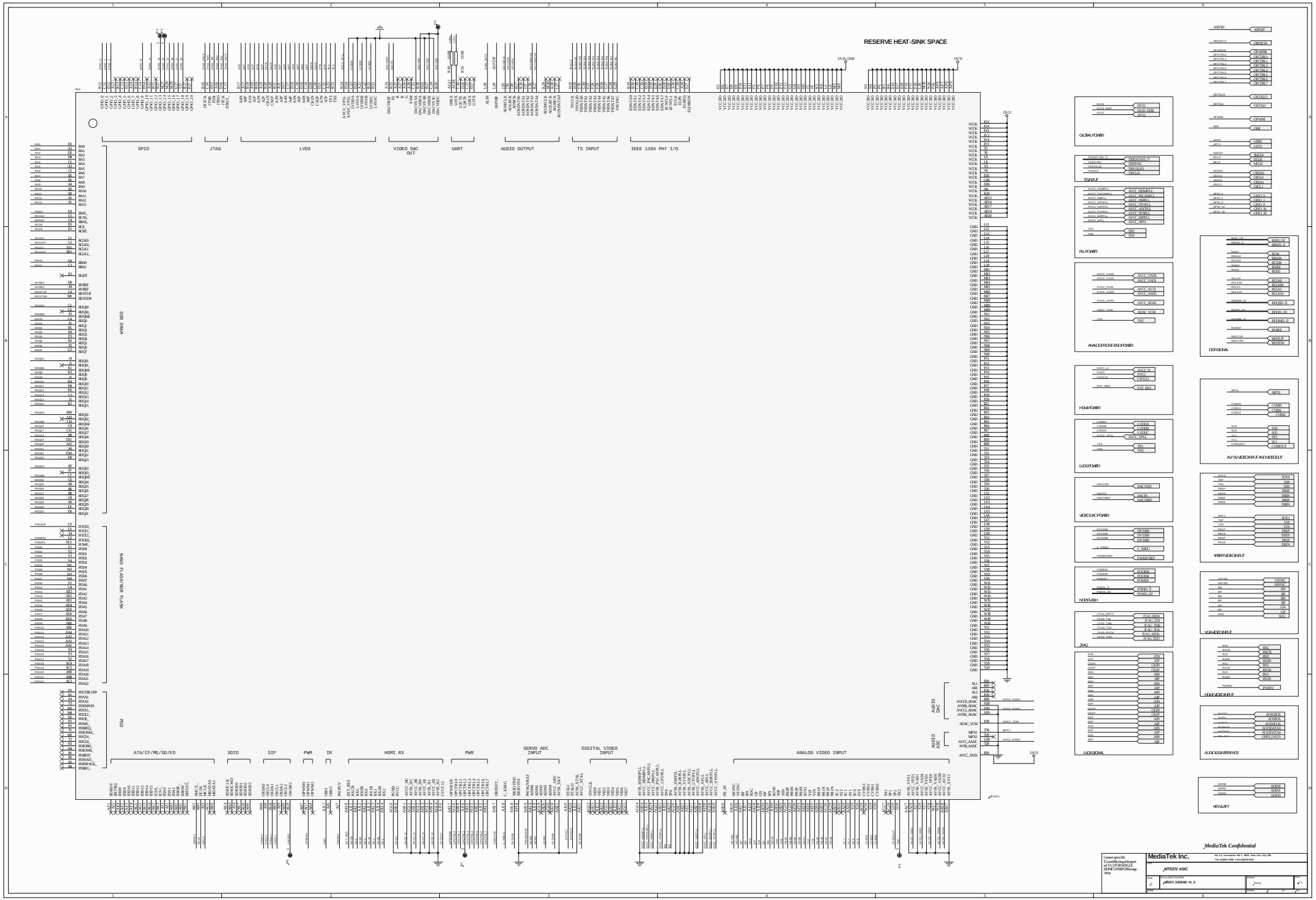

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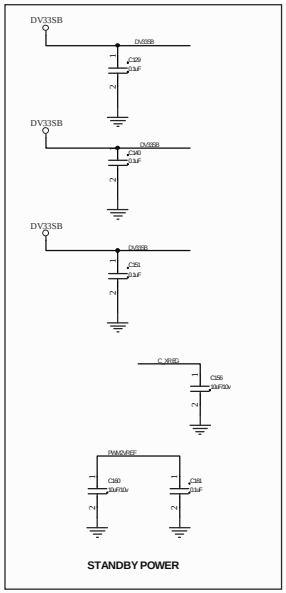

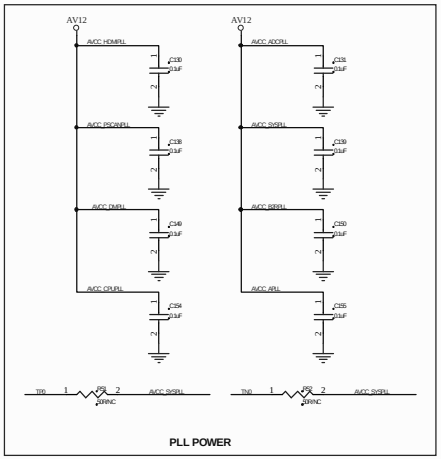

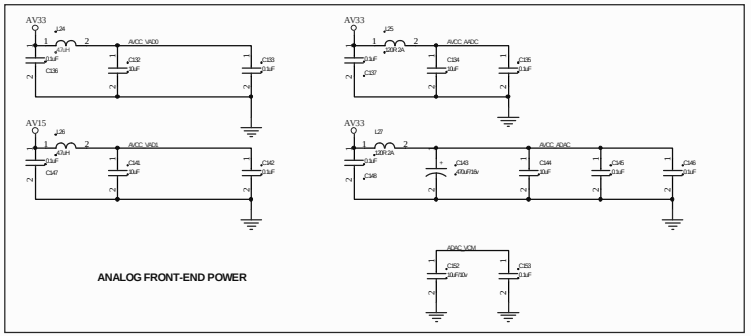

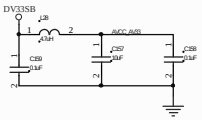

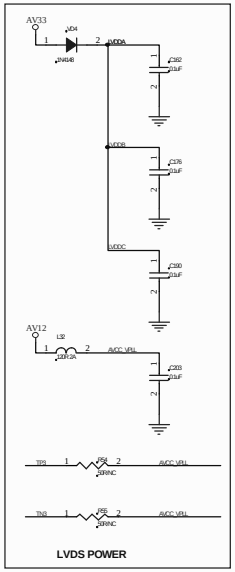

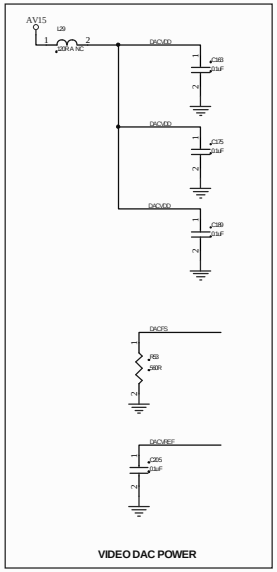

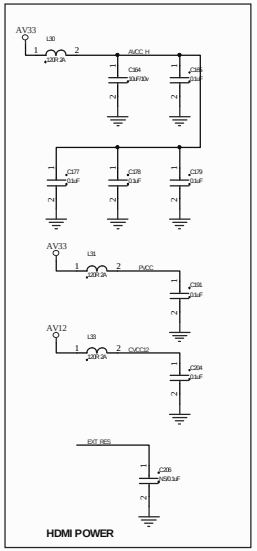

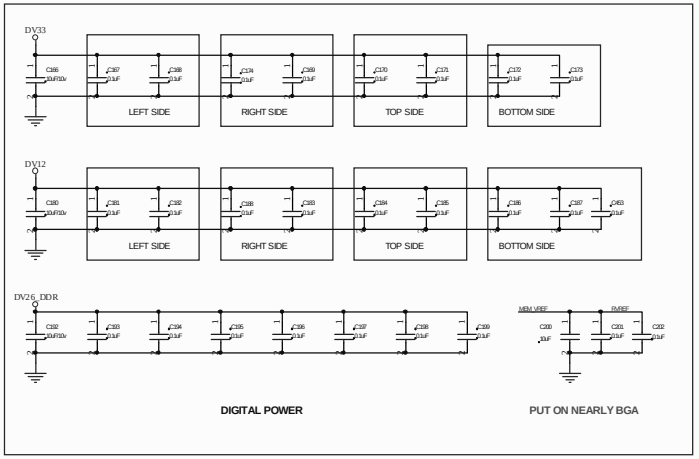

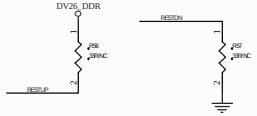

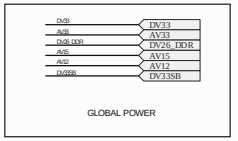

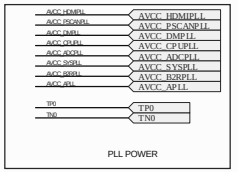

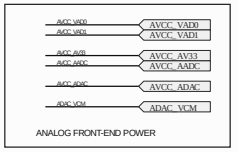

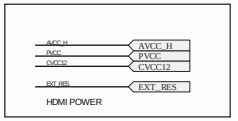

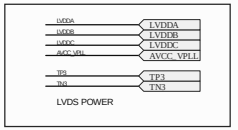

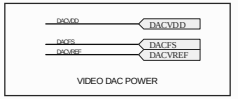

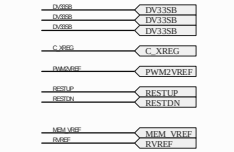

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Title: *MT5372 BYPASS CAP.*

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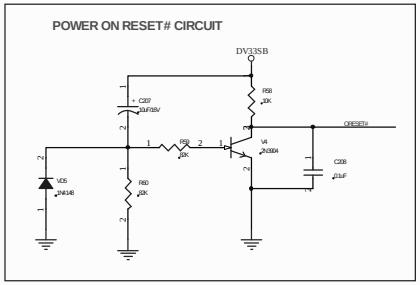

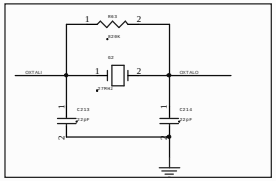

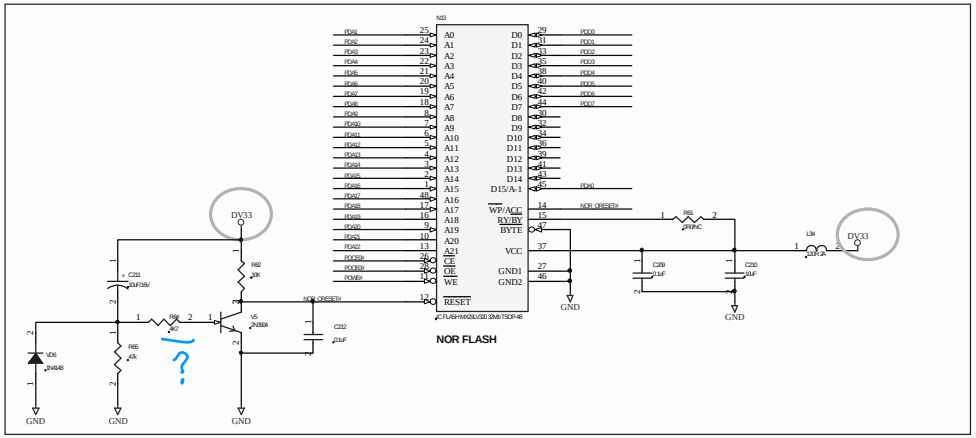

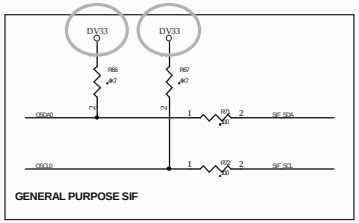

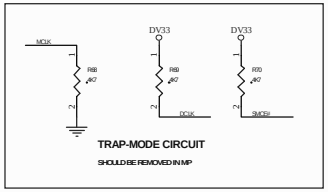

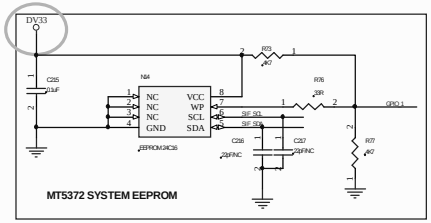

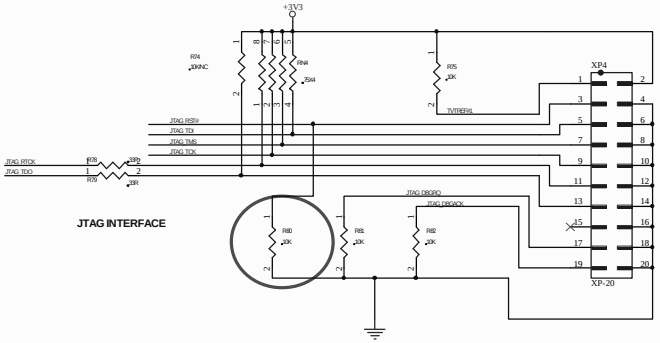

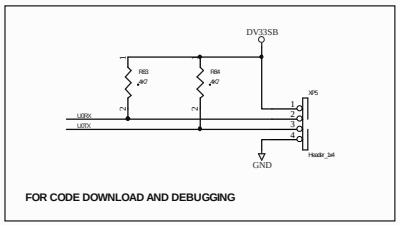

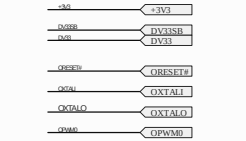

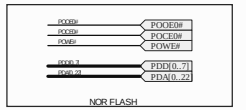

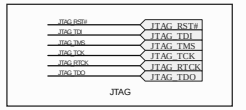

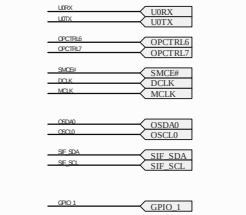

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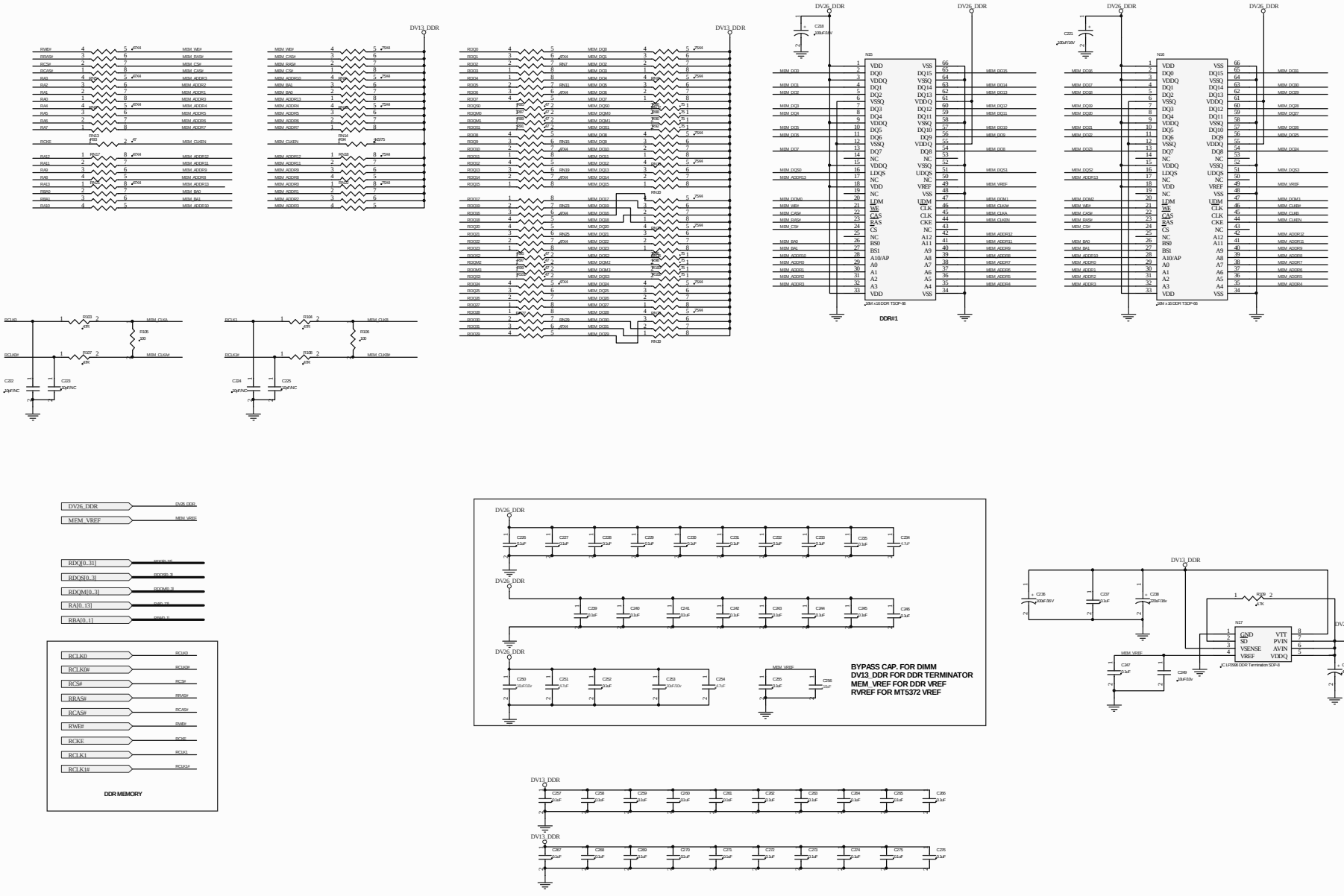

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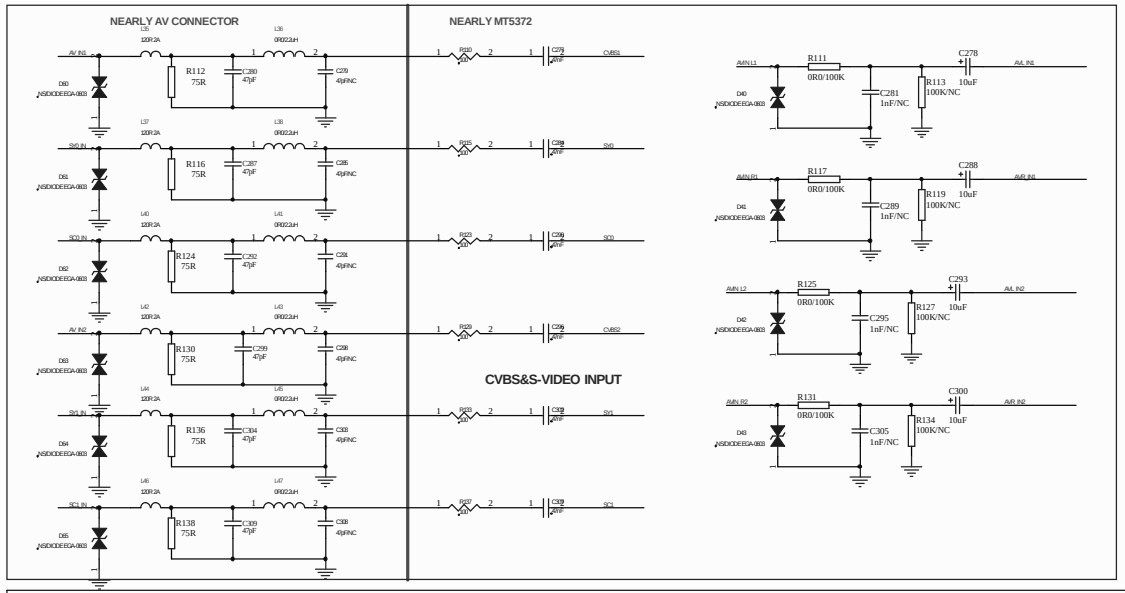

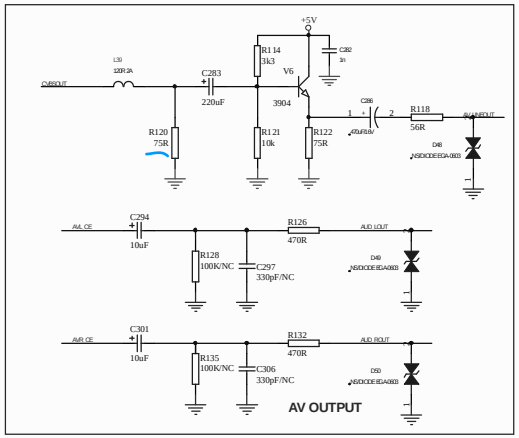

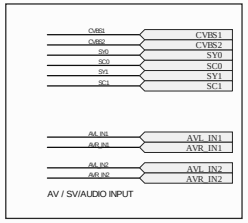

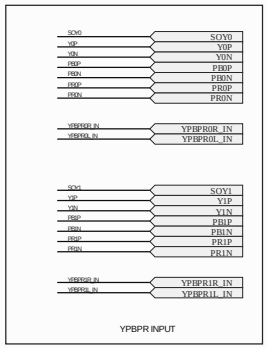

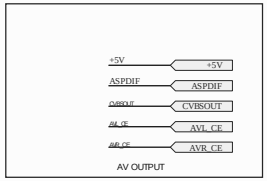

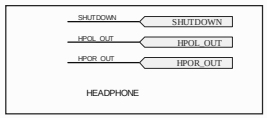

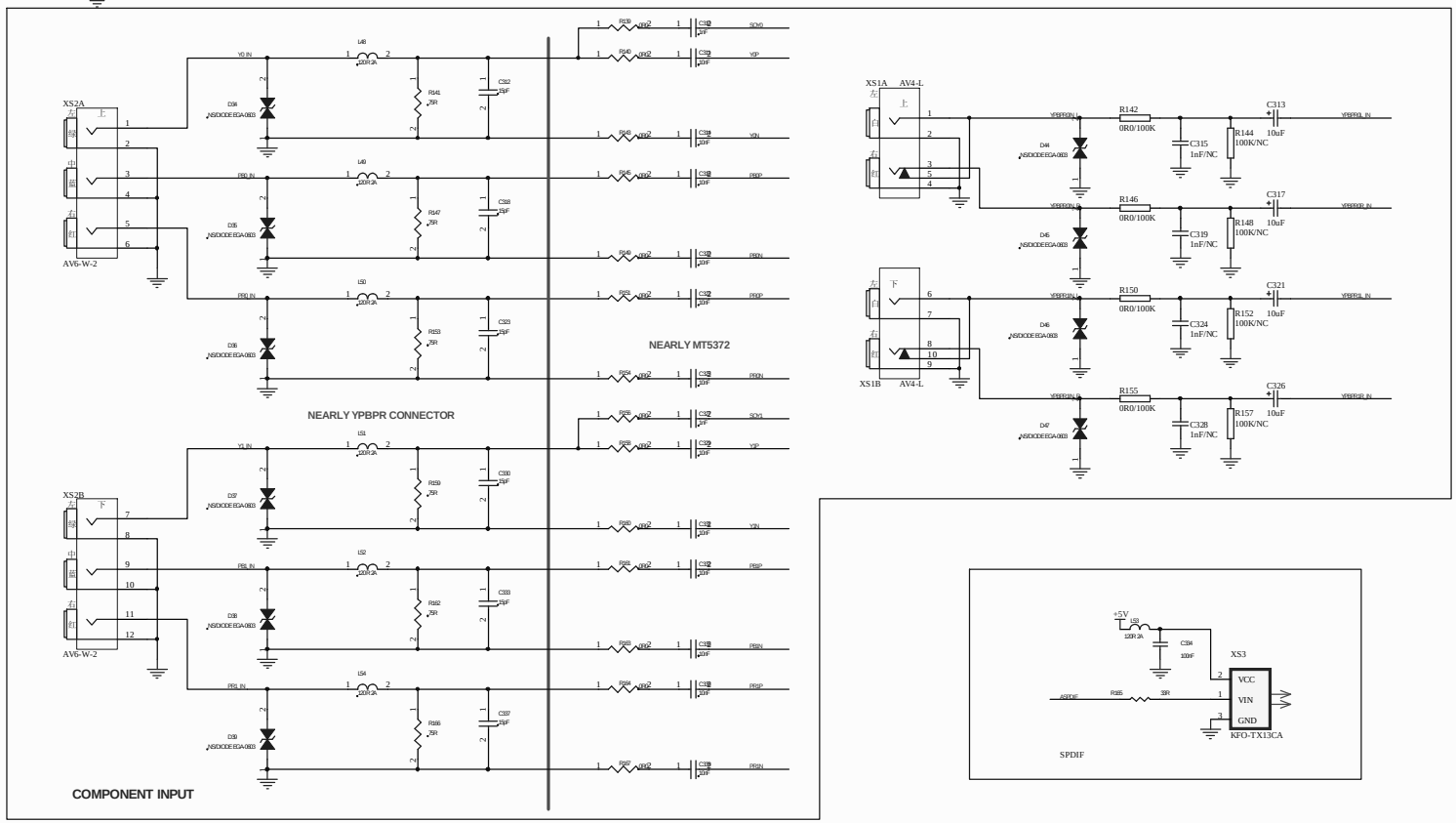

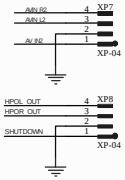

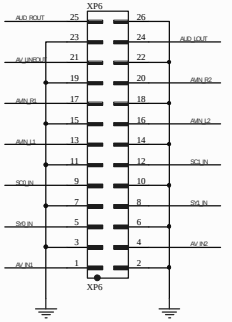

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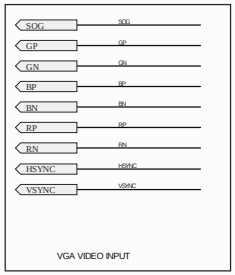

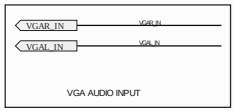

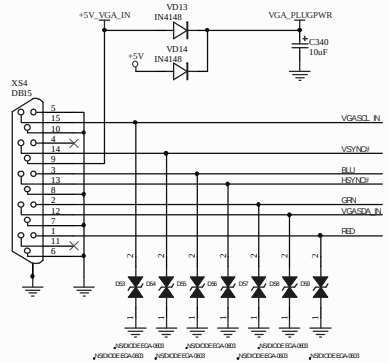

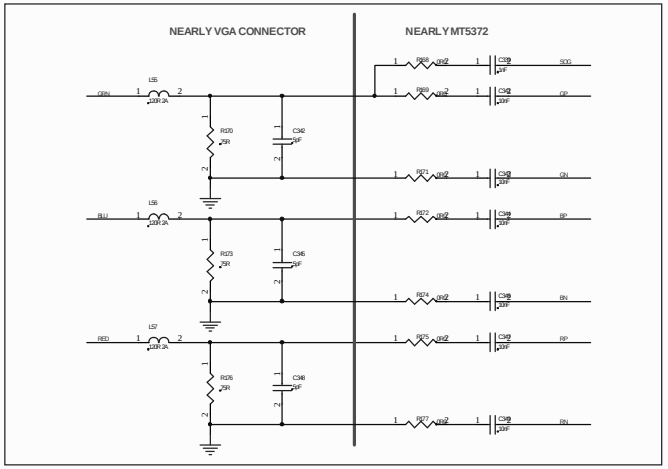

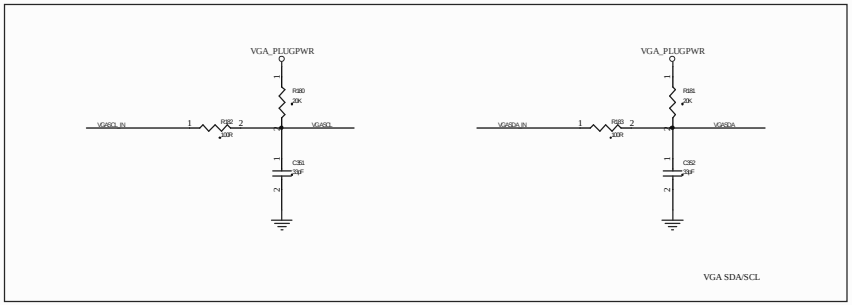

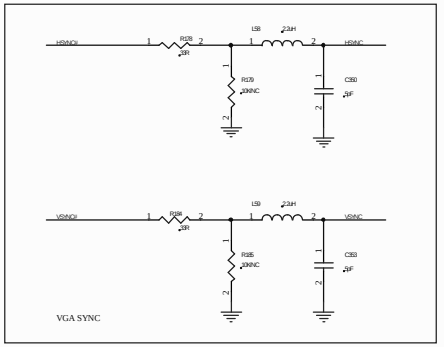

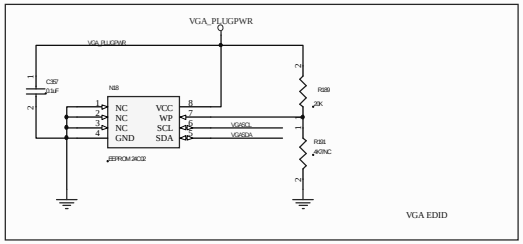

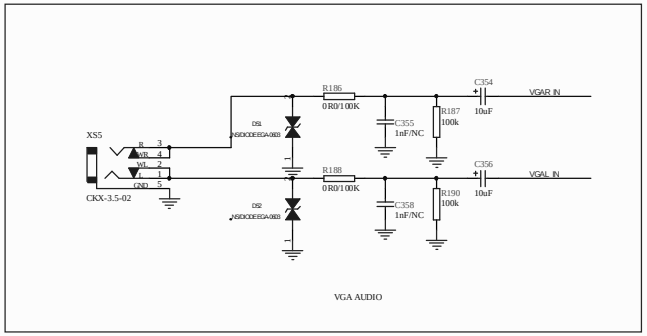

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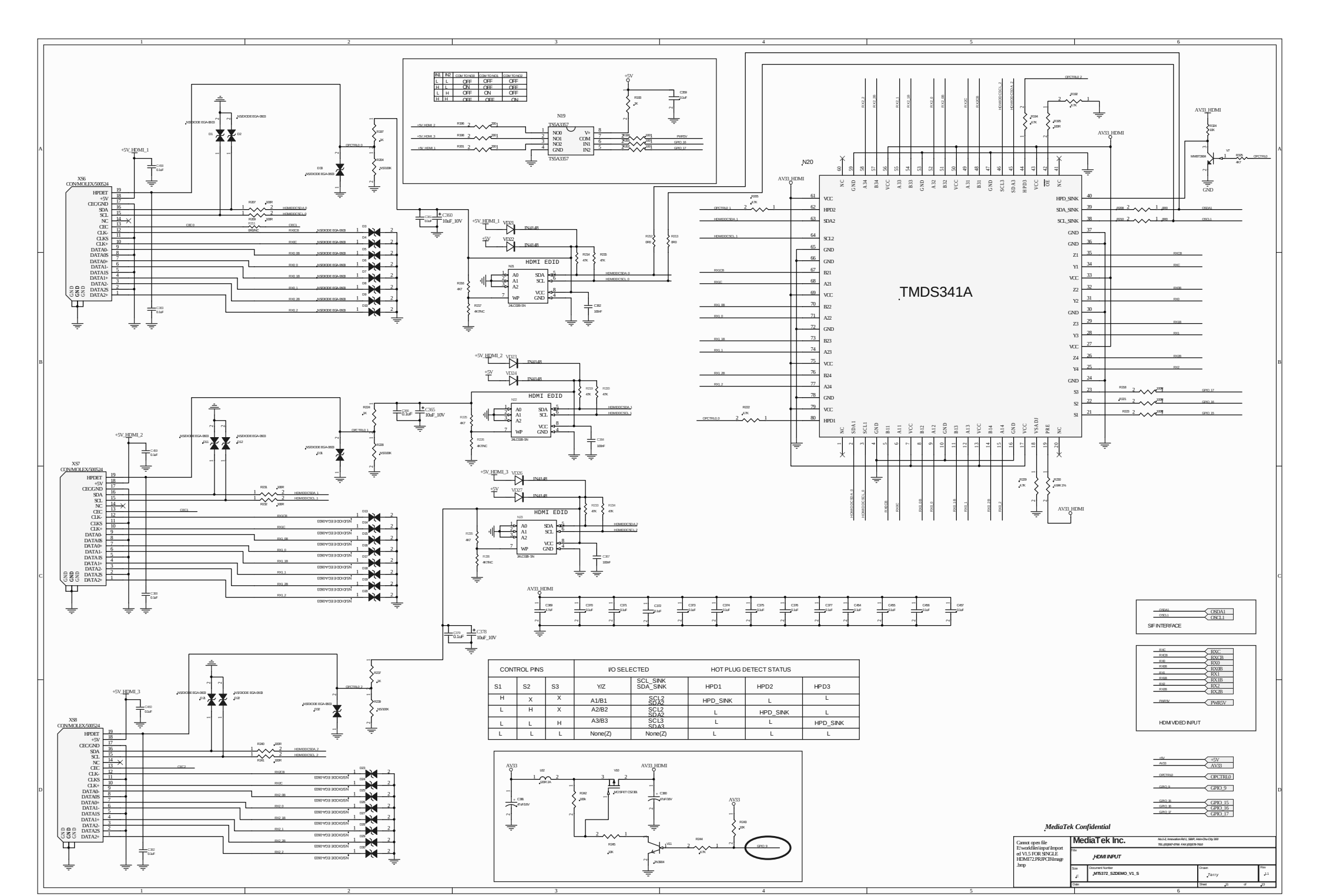
	Date: / Sheet 20 of 33	



CONTROL PINS			I/O SELECTED	HOT PLUG DETECT STATUS			
S1	S2	S3	Y/Z	SCL_SINK SDA_SINK	HPD1	HPD2	HPD3
H	X	X	A1/B1	SCL2 SDA2	HPD_SINK	L	L
L	H	X	A2/B2	SCL2 SDA2	L	HPD_SINK	L
L	L	H	A3/B3	SCL3 SDA3	L	L	HPD_SINK
L	L	L	None(Z)	None(Z)	L	L	L

Audio AMP