harman/kardon **Service Manual**

HK AURA STUDIO 4

BLUETOOTH SPEAKER

SKU: HKAURAS4BLKAS, HKAURAS4BLKBR, HKAURAS4BLKCN, HKAURAS4BLKEP
HKAURAS4BLKIN, HKAURAS4BLKJN, HKAURAS4BLKUK, HKAURAS4BLKAM

CONTENTS

Released by Global Quality

harman/kardon, Inc.
8500 Balboa Blvd.
Northridge, CA 91329

Ver. 1.0 Mar. 2023

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings.Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
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.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The mains plug of the power supply cord shall remain readily operable.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN.

THE LIGHTNING FLASH WITH AN ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.

THE EXCLAMA TION 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 PRODUCT.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

For Products That Transmit and Receive RF Energy:

FCC Regulations (USA Only)

FCC Information For Users

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and then on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment to a different outlet so that the equipment and receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: Changes or modifications not expressly approved by Harman could void the user's authority to operate the equipment.

IC Statement and Warning (Canada Only)

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For Canadian Model

This Class B digital apparatus complies with Canadian ICES-003.

Modèle pour les Canadien

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For Products with Radio Receivers That Can Use an External Antenna:

CATV or Antenna Grounding

If an outside antenna or cable system is connected to this product, be certain that it is grounded so as to provide some protection against voltage surges and static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements of the grounding electrode.

Note to CATV System Installer:

This reminder is provided to call the CATV (cable TV) system installer's attention to article 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.

For CD/DVD/Blu-ray Disc™ Players:

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

Caution:

This product uses a laser system. To prevent direct exposure to the laser beam, do not open the cabinet enclosure or defeat any of the safety mechanisms provided for your protection. DO NOT STARE INTO THE LASER BEAM. To ensure proper use of this product, please read the owner's manual carefully and retain it for future use. Should the unit require maintenance or repair, please contact your local Harman Kardon service center. Refer servicing to qualified personnel only.

For Products That Include Batteries:

Instructions for Users on Removal and Disposal of Used Batteries.

CAUTION

Risk of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

Alkaline batteries are considered nonhazardous. Rechargeable batteries (i.e., nickel cadmium, nickel metal-hydride, lithium and lithium-ion) are considered hazardous household materials and may pose an unnecessary health and safety risk.

In the European Union and other locations, it is illegal to dispose of any battery with household trash. All batteries must be disposed of in an environmentally sound manner. Contact your local waste management officials for information regarding the environmentally sound collection, recycling and disposal of used batteries.

To remove the batteries from your equipment or remote control, reverse the procedure described for inserting batteries in the owner's manual.

For products with a built-in battery that lasts for the lifetime of the product, removal may not be possible for the user. In this case, recycling or recovery centers handle the dismantling of the product and the removal of the battery. If, for any reason, it becomes necessary to replace such a battery, this procedure must be performed by authorized service centers.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge build-up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical change sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together or your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES devices.

POODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing.

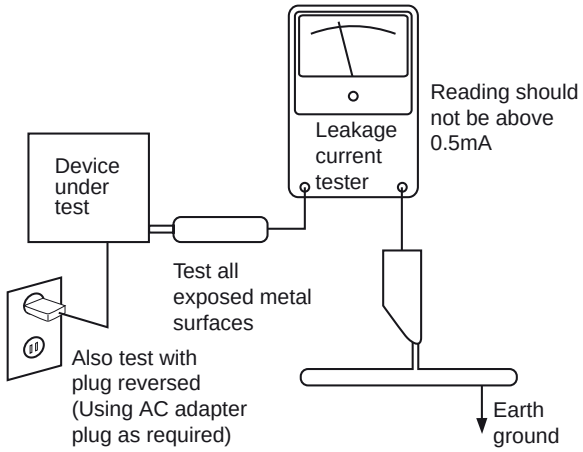
Components identified with the IEC symbol ⚠ in the parts list are special significance to safety. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before retuming the product to the customer.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed o.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

HK AURA Studio 4

HK AURA STUDIO 4 STEREO BLUETOOTH SPEAKER

What's in the box:

- HK AURA Studio 4 unit
- Power cable(Power cord quantity and plug type vary by regions.)
- Quick start guide
- Warranty card
- Safety sheet

Features and Benefits:

- EXCEPTIONAL 360-DEGREE SOUND
- WIRELESS BLUETOOTH STREAMING
- PARAMETRIC DIAMOND EFFECT AMBIENT LIGHT
- LIGHT SYNCED TO YOUR MUSIC

Technical Specification:

- Bluetooth version: 4.2
- Support: A2DP 1.3, AVRCP 1.6
- Transducers: 40mm x 6pcs(Mid;high range);130mm x 1pcs(Subwoofer)
- Rated power: 2 x 15 W RMS + 1 x 100 W RMS
- Frequency response: 45 Hz – 20 kHz (-6 dB)
- Signal to noise ratio:80dB at 15W(Mid-high range);80dB at 100W (Subwoofer)
- Power supply: 100 – 240 V ~ 50/60 Hz
- Bluetooth transmitter power: 0 – 9 dBm
- Bluetooth transmitter frequency range: 2.402 – 2.480 GHz
- Bluetooth transmitter modulation: GFSK, π/4 DQPSK, 8DPSK
- Dimension (H x W x D): 284 x 233 x 233 mm / 11.2" x 9.2" x 9.2"
- Weight: 3.6 kg (7.9 lb)

HARMAN International Industries, Incorporated
8500 Balboa Boulevard, Northridge, CA 91329 USA
www.jbl.com

Software Upgrade Instruction & Reset Procedure

Factory Reset：

AURA4 was on, press and holding "**VOL+**" & "**BT**", about 10 seconds later, AURA4 will shut down. Now Aura4 has reset, and you can press "Power" key to start up.

After factory reset, follow parameters will be reset:

Volume	17 or "Default in Hotel mode"
Brightness	Mid
Pattern	AURORA
BT paring list	NULL
BT pairing lighting show	5s
Bass/Treble	Mid
Log	OFF

Note: When enter/Exit Hotel mode, AURA4 will execute factory-reset, but no shutting down.

Check Version:

AURA4 was on, press and holding "**VOL-"** & "**LIGHTING**", about 10 seconds later, AURA4 will play version code which contains 6 numbers:

The first two numbers	MCU version
The second two numbers	LED version
The third two numbers	BT version

If the version is correct, the LED will display normally, otherwise the LED will flash until the DUT is powered off. The version error corresponding to the flashing frequency is as follows:

200ms ON, 200ms OFF	LED version error (or LED& BT both error)
1000ms ON, 1000ms OFF	BT version error

MCU Firmware Burn Guide

1. Tool preparation

Hardware:

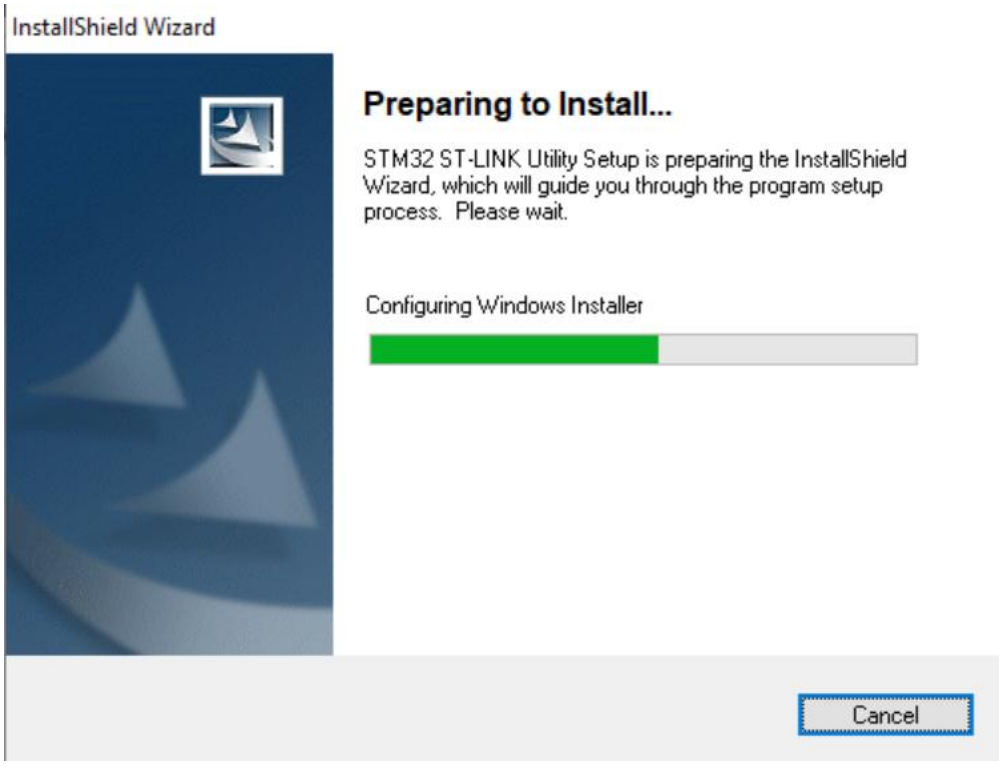
- Windows PC
- simulator
- Tool
- Aura4

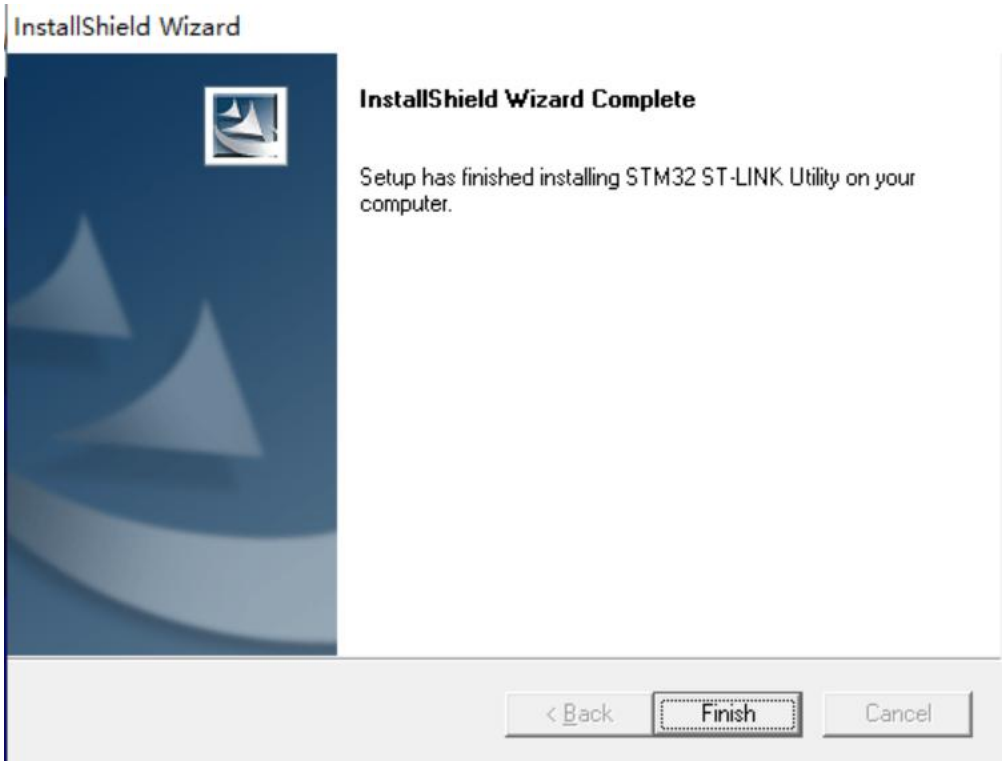
Software:

- JLink_Windows_V688a.exe
- Aura4_MCU_xxx.hex

2. Install the tool as follows

- Double-click the file "STM32 ST-Link Utility v3.8.0.exe" and wait for complete



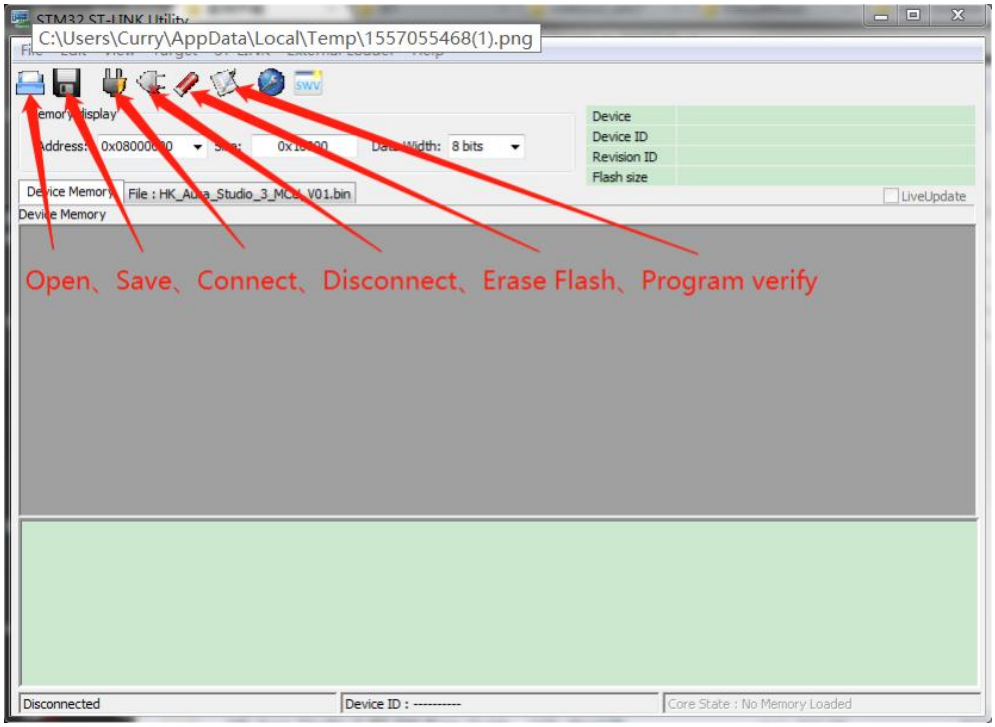


- If the computer applies for authorization to install the driver, Please click "Next", "Accept", "Confirm" to install.

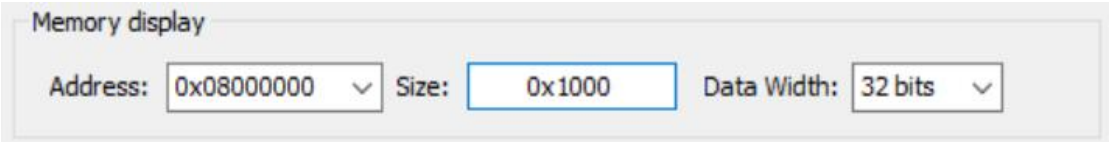
3. Connecting DUT/Tool/PC

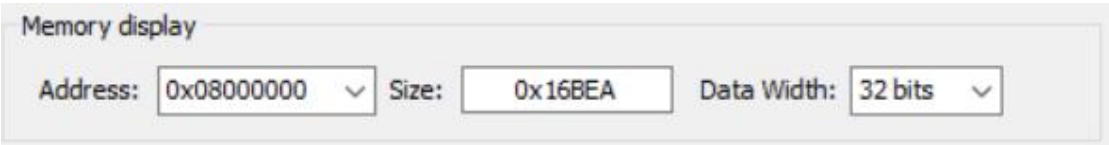
4. Upgrade MCU with STLink

- Double-click the software "STM32 ST-Link Utility", commonly used buttons are shown in the figure below



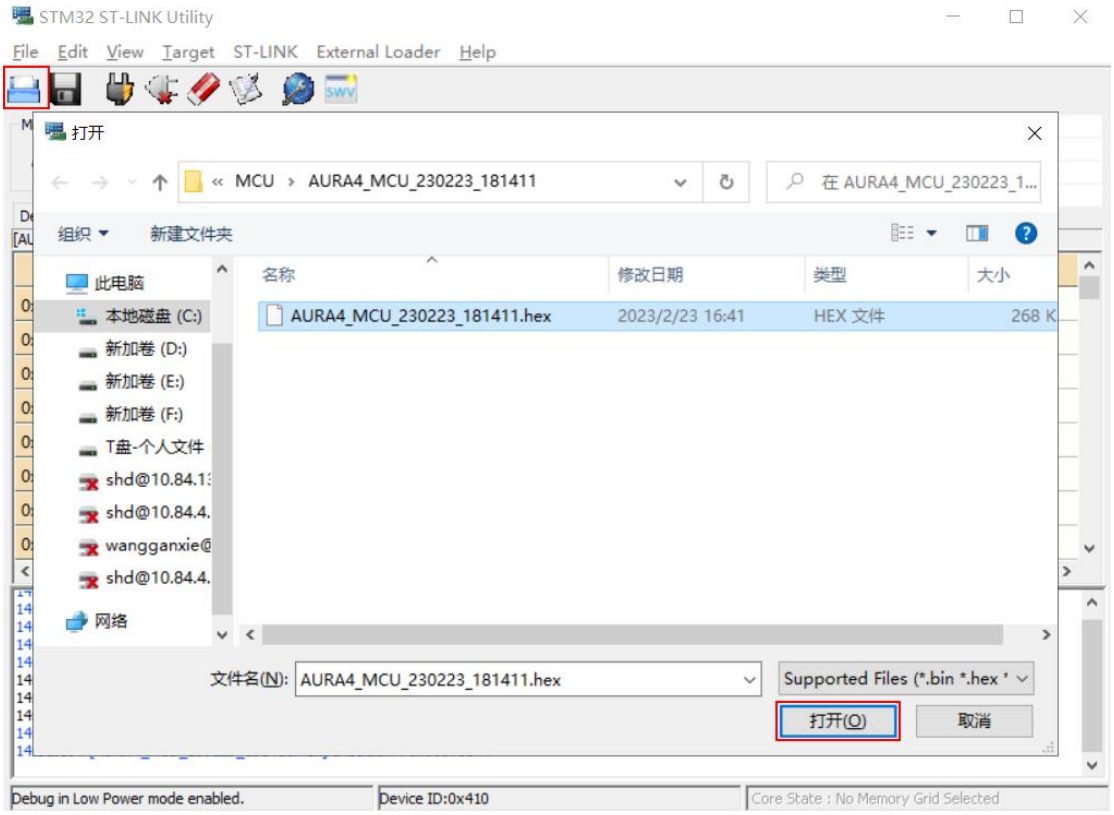
- Set the parameters as follows



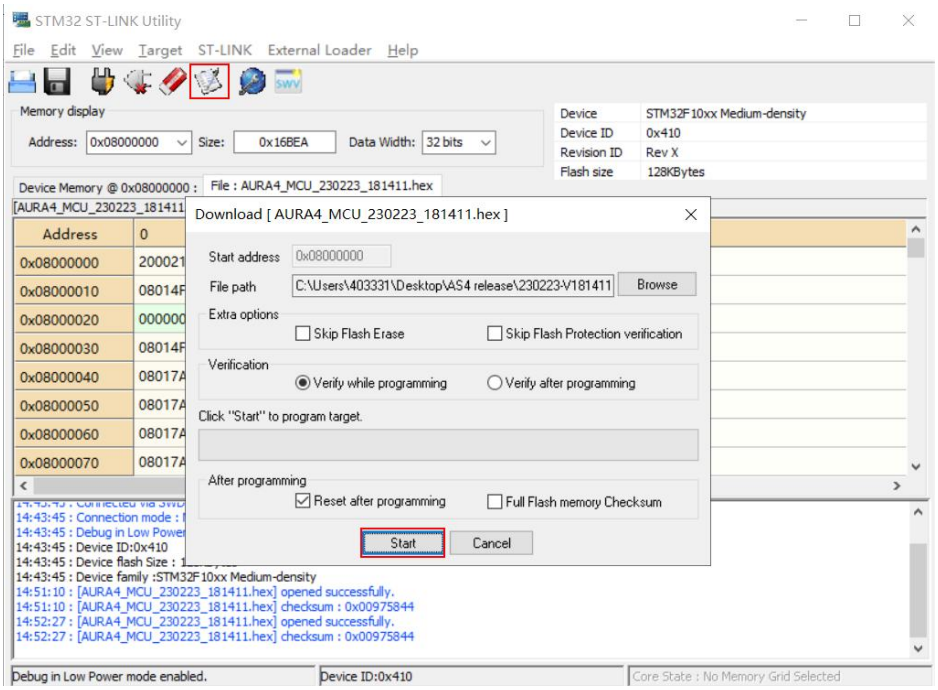


- Click the "Connect" button to connect to the HK AURA STUDIO 3. If the connection fails, a prompt will pop up.

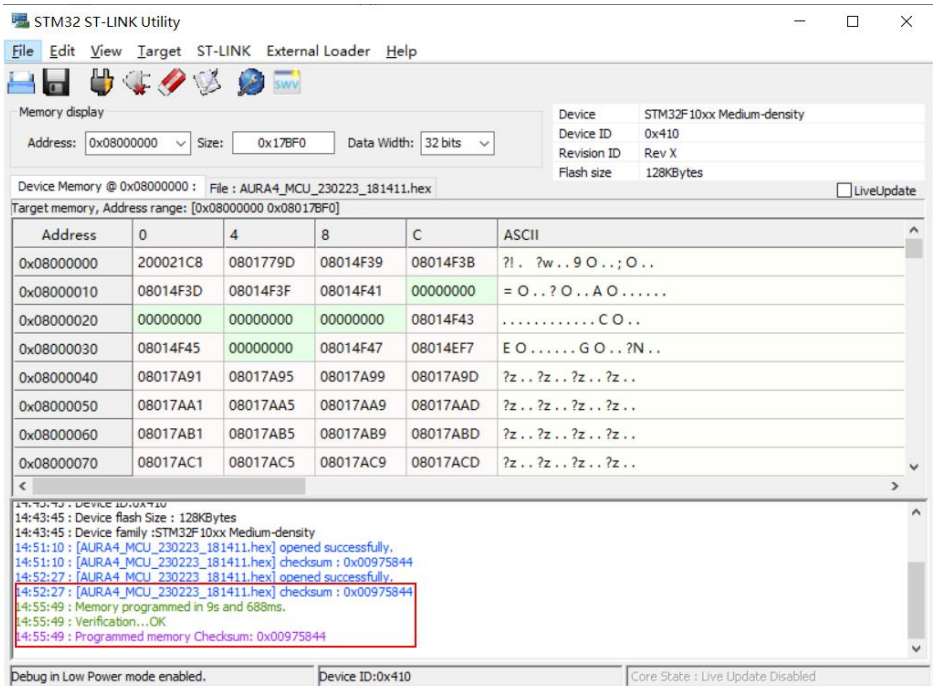
- Click the "Open File" button to open the BIN file



- Click the "Program verify" button, set the parameters, click "Start" to start the upgrade, wait for the upgrade to complete



- The upgrade is complete when prompted with "OK"



5. Electric discharge

The DUT cannot power on without discharging, so you have to wait for about 5~15min to do a discharging

- Unplug AC
- Enable discharge
- Wait for 5~15min

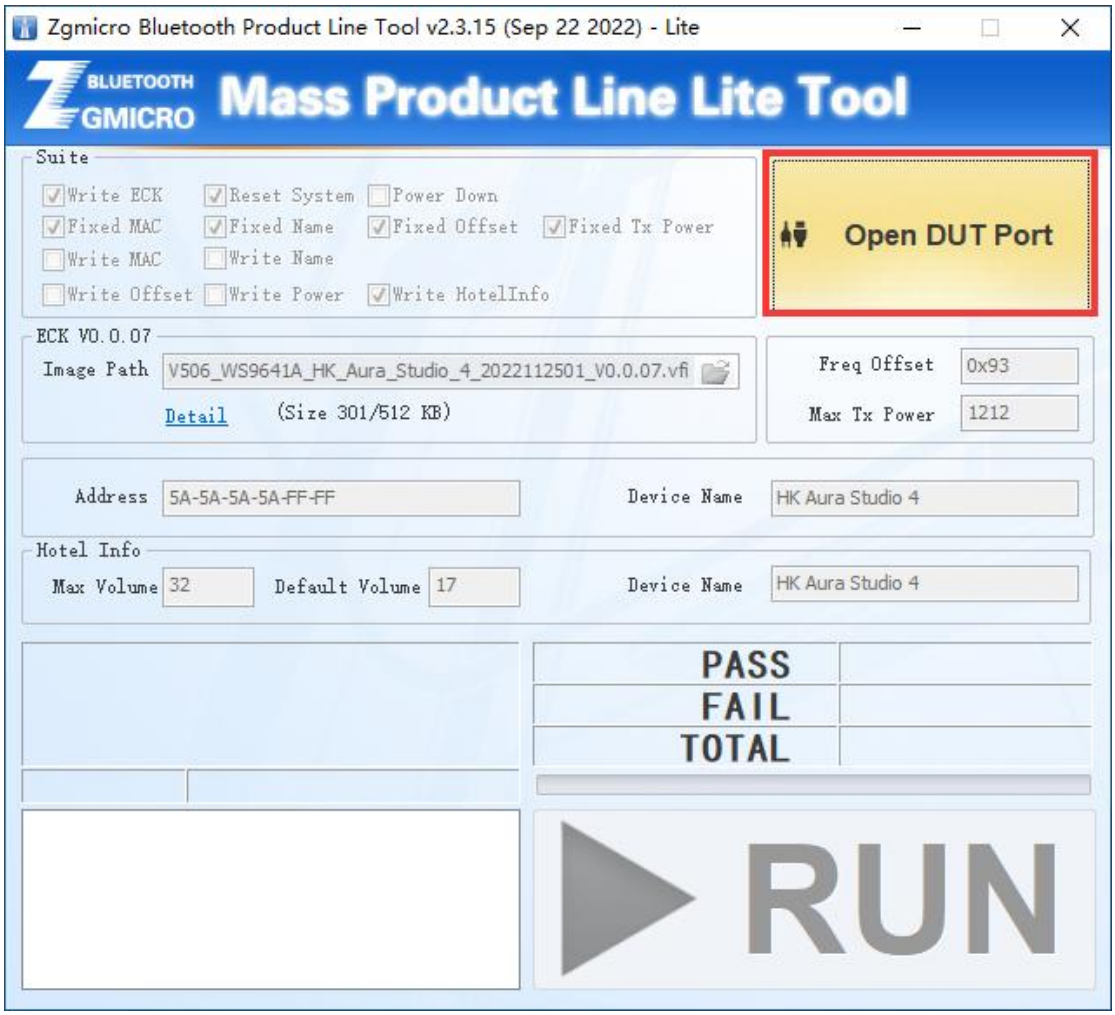
BT Firmware Burn Guide

1. Connect DUT and Tool

2. Open the PC application SPTestTool_Custom_XXX

SPTestTool_Custom_33Level_20220923.zip

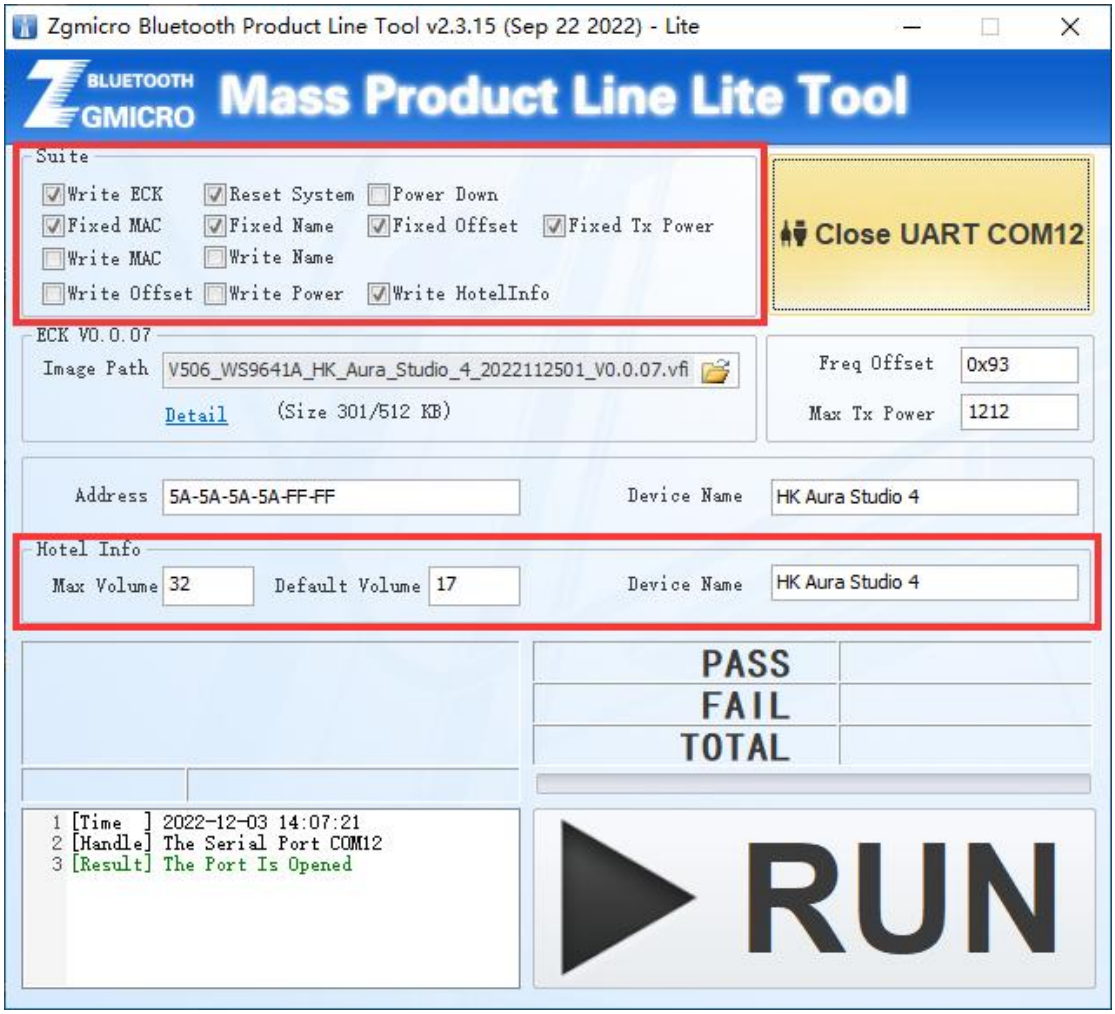
3. “Open DUT port” to select COM port



4. Load firmware in “Image Patch”

5. Config as bellow

Note: Must config as bellow, cannot change!!!



6. Enter BT flashing mode

Combination key: Brightness + Vol- + Vol+ (long press for 10s, till two indicator light up)

7. Flashing

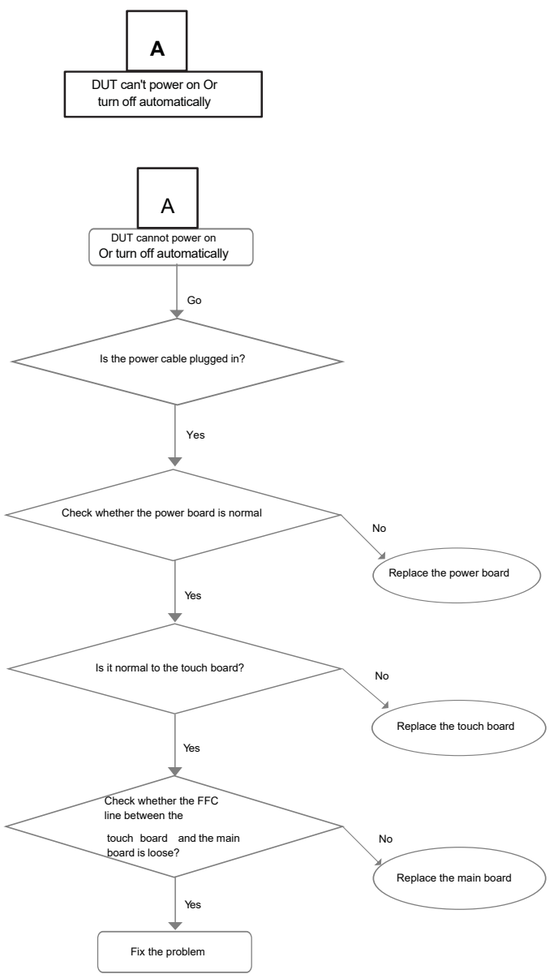
Click “RUN”, wait about 1min, it will show PASSED if flashing successfully, or will show FAILED

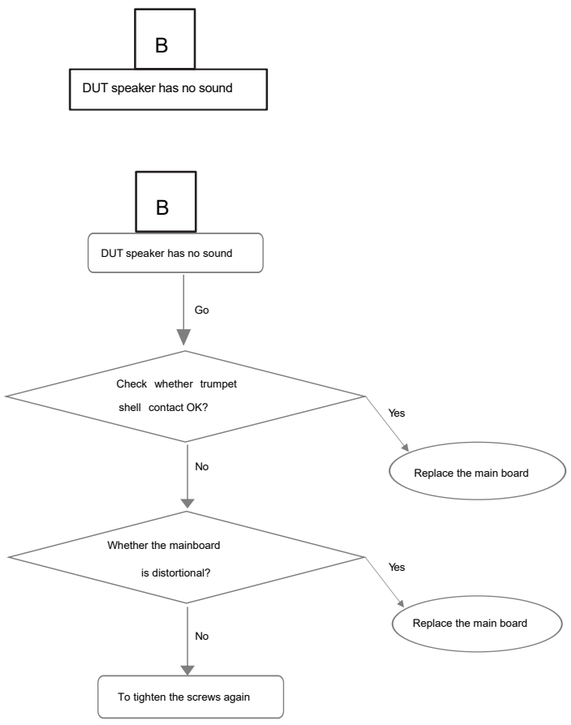
How to check if flashing faild

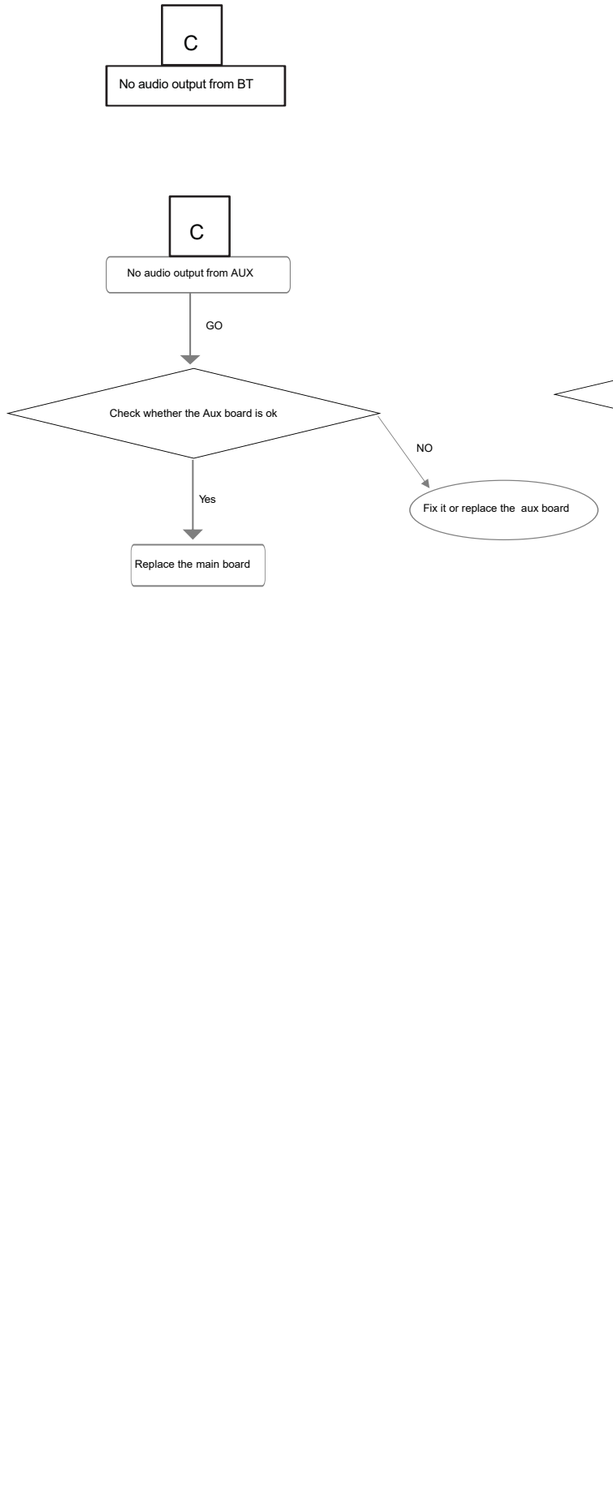
- Is the COM port right
- Does set the switch of adapter to the side of BT flashing
- Does enter flashing mode
- Maybe repower the DUT and try again

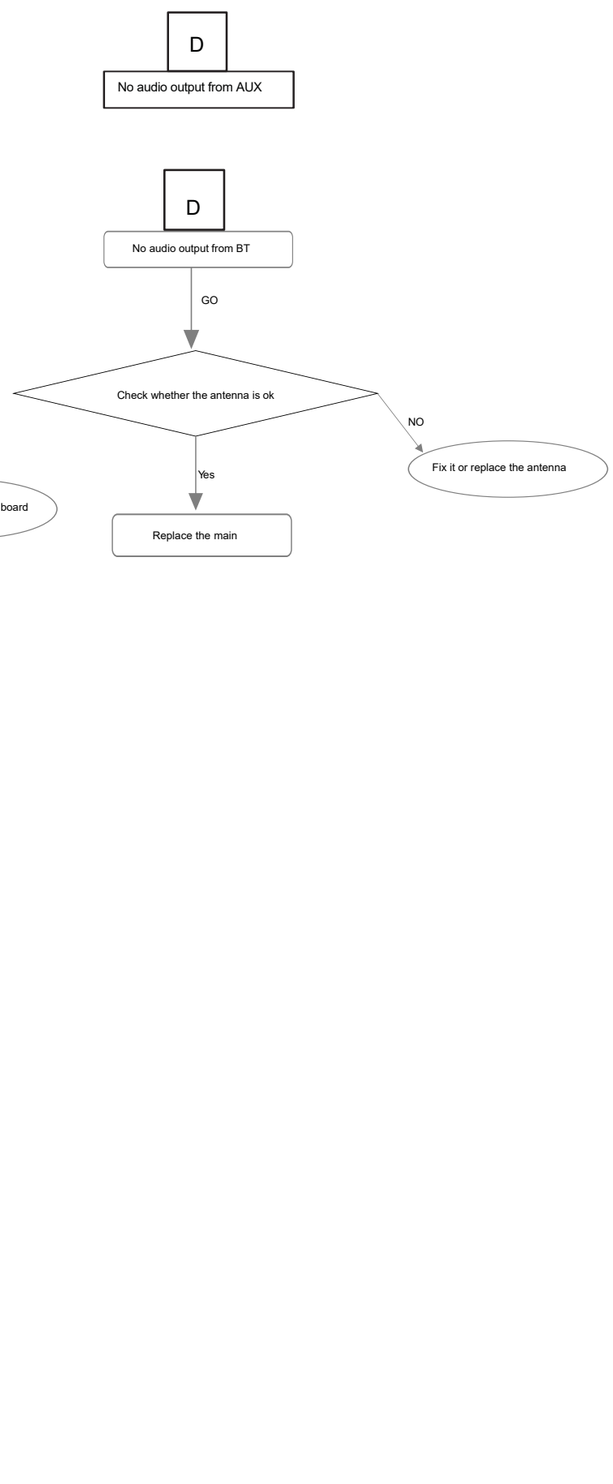
Trouble Shooting

Aura Studio 4 REPAIR CHART









DISASSEMBLY INSTRUCTIONS

Dismantling of the Grille ASSY

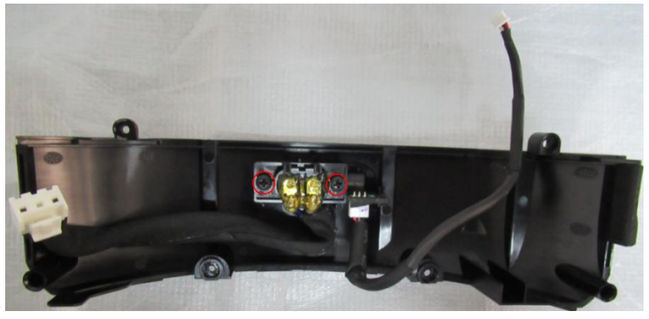
Remove 3 rubber feet, and 3 screws at grille ASSY.

Dismantling of Power Board Cover

Loosen 4 screws at the power boar cover.

Dismantling of the AUX PCBA&AC Socket

Loosen 2 screws on the AC Socket.



Dismantling of the POWER PCBA

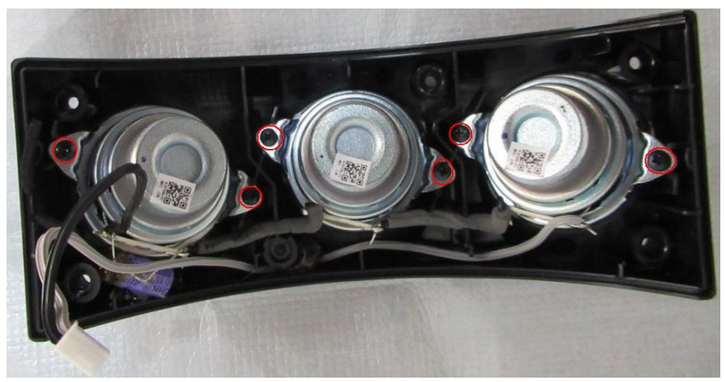
Loosen 3 screws on the top of power PCBA.

Dismantling of the Main ASSY

Loosen 5 screws at the main ASSY.

Dismantling of the Speaker Bracket&1.5inch Speaker

Loosen 6 screws at the speaker bracket, and then loose 6 screws at the 1.5inch speaker.

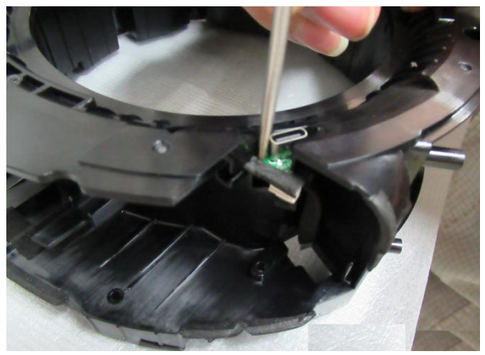


Dismantling of the Main PCBA

Loosen 2 screws on the top of the Main PCBA.

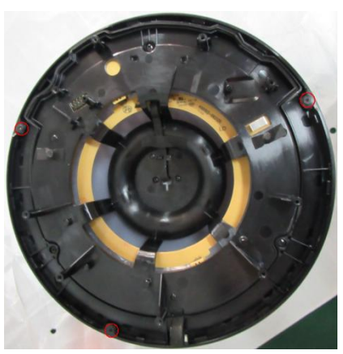
Dismantling of the 5.25inch Speaker&USB PCBA

Loosen 6 screws at the 5.25inch speaker, and then take off the USB PCBA.



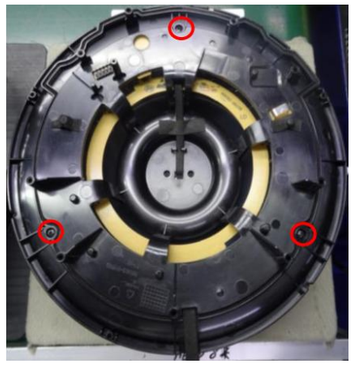
Dismantling of the Decorative Ring&Touch PCBA

Loosen 3 screws at the decorative ring.



Dismantling of the Middle Shell Bracket

Loosen 3 screws at the middle shell bracket.

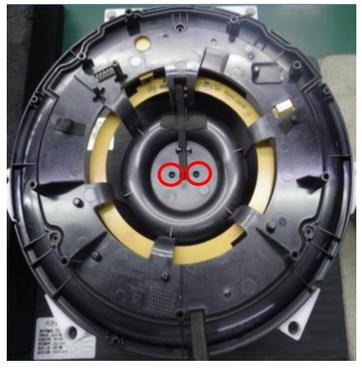


Dismantling of the LEF&LDR PCBA

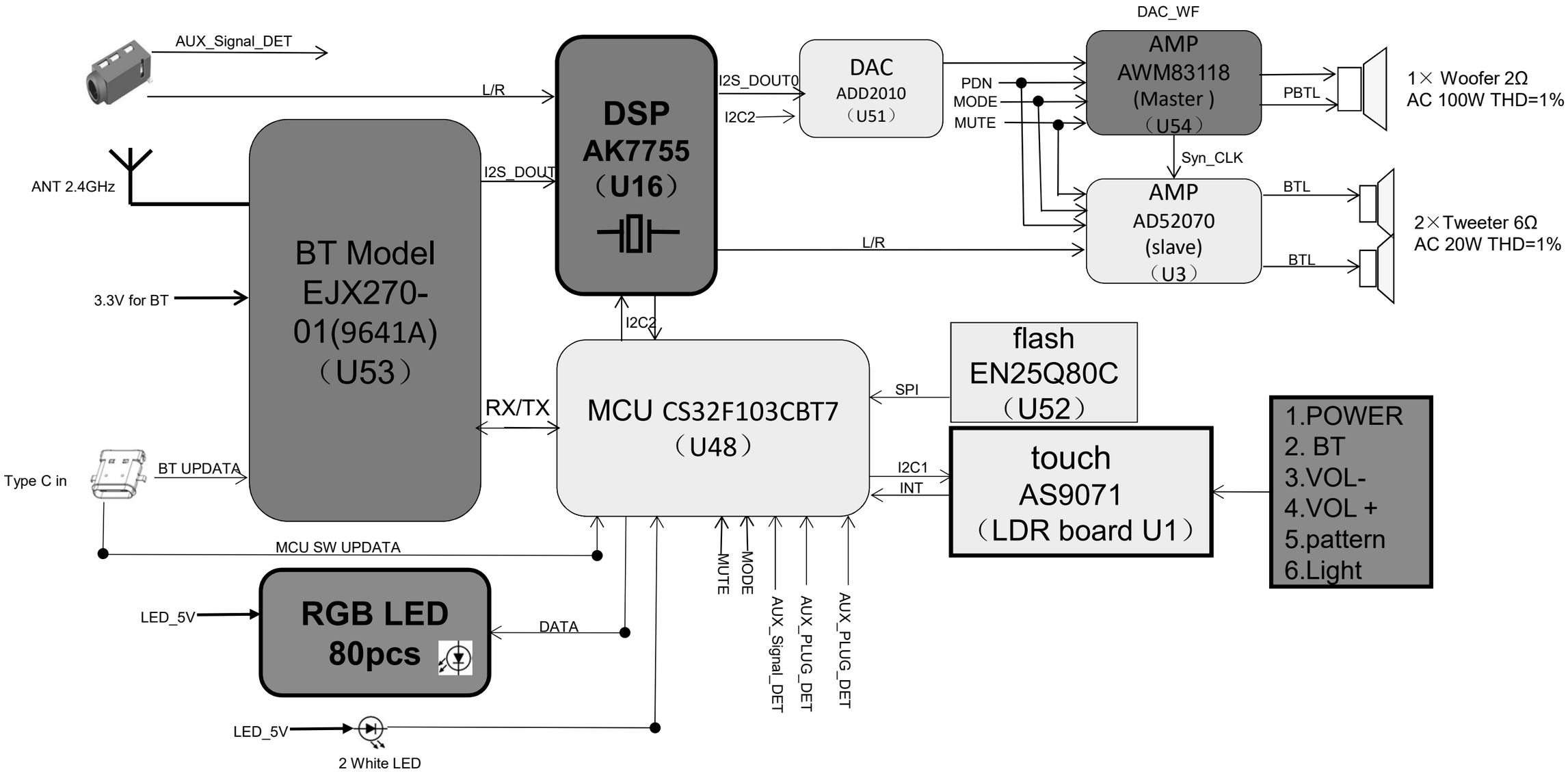
Loosen 4 screws on the top of the LEF PCBA, and 6 screws on the top of the LDR PCBA.

Dismantling of the Aluminum Cover&LED PCBA Light Guide&LED PCBA

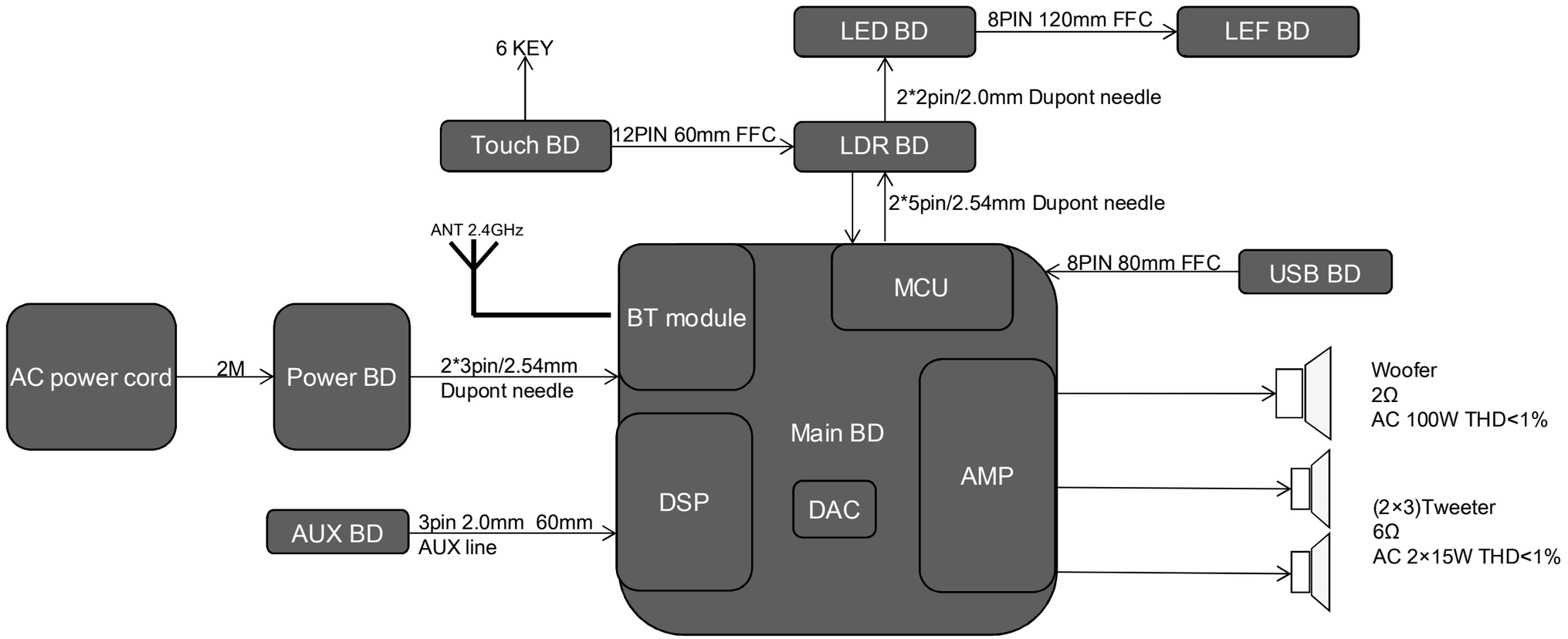
Loosen 2 screws at the aluminum cover, and then open the aluminum cover.



Block Diagram

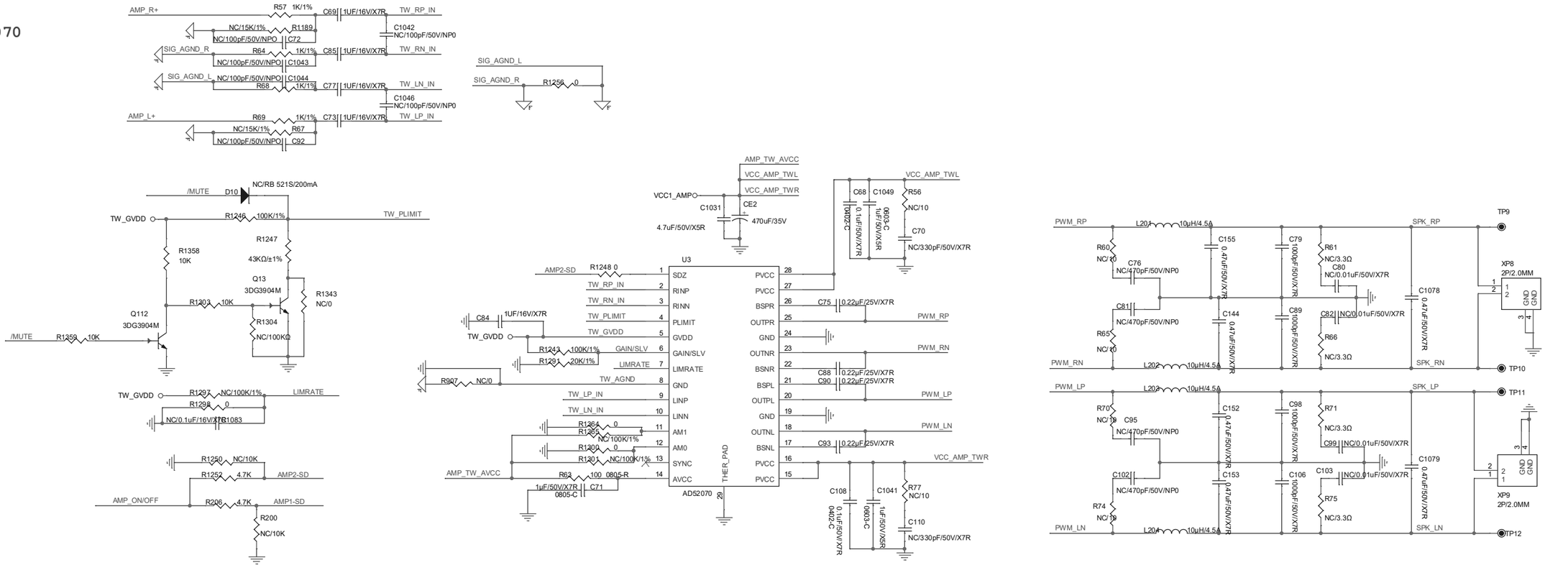


Wiring Diagram

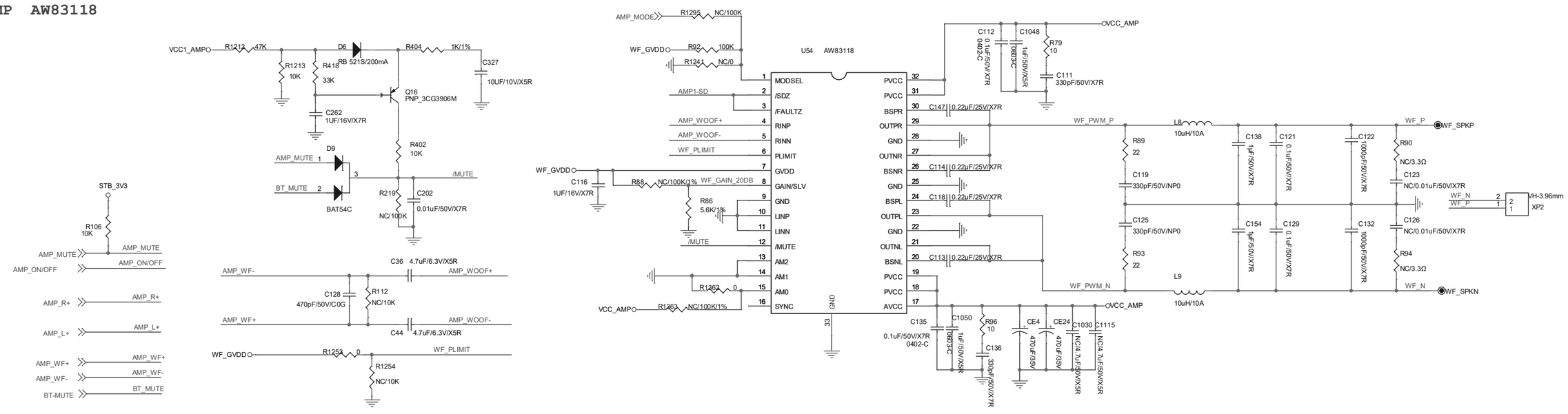


Circuit Diagram-Main&AUX&USB PCBA

AMP AD52070

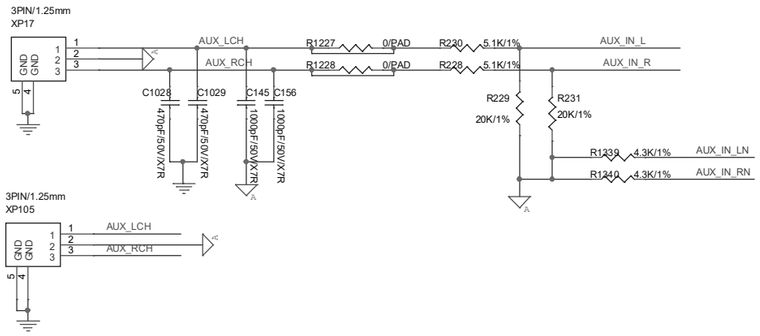


AMP AW83118

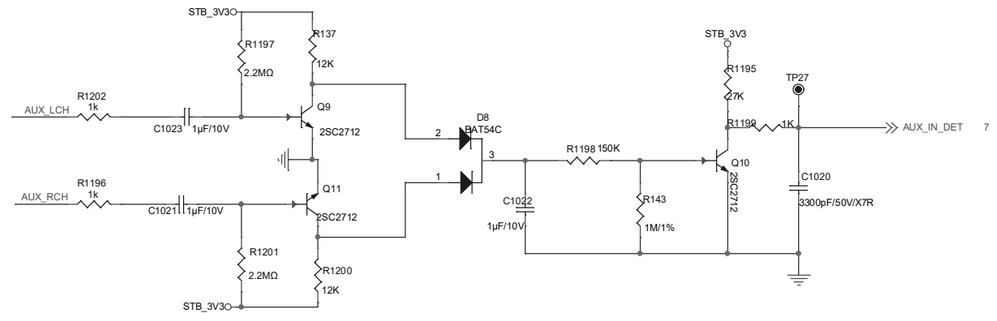


Circuit Diagram-Main&AUX&USB PCBA

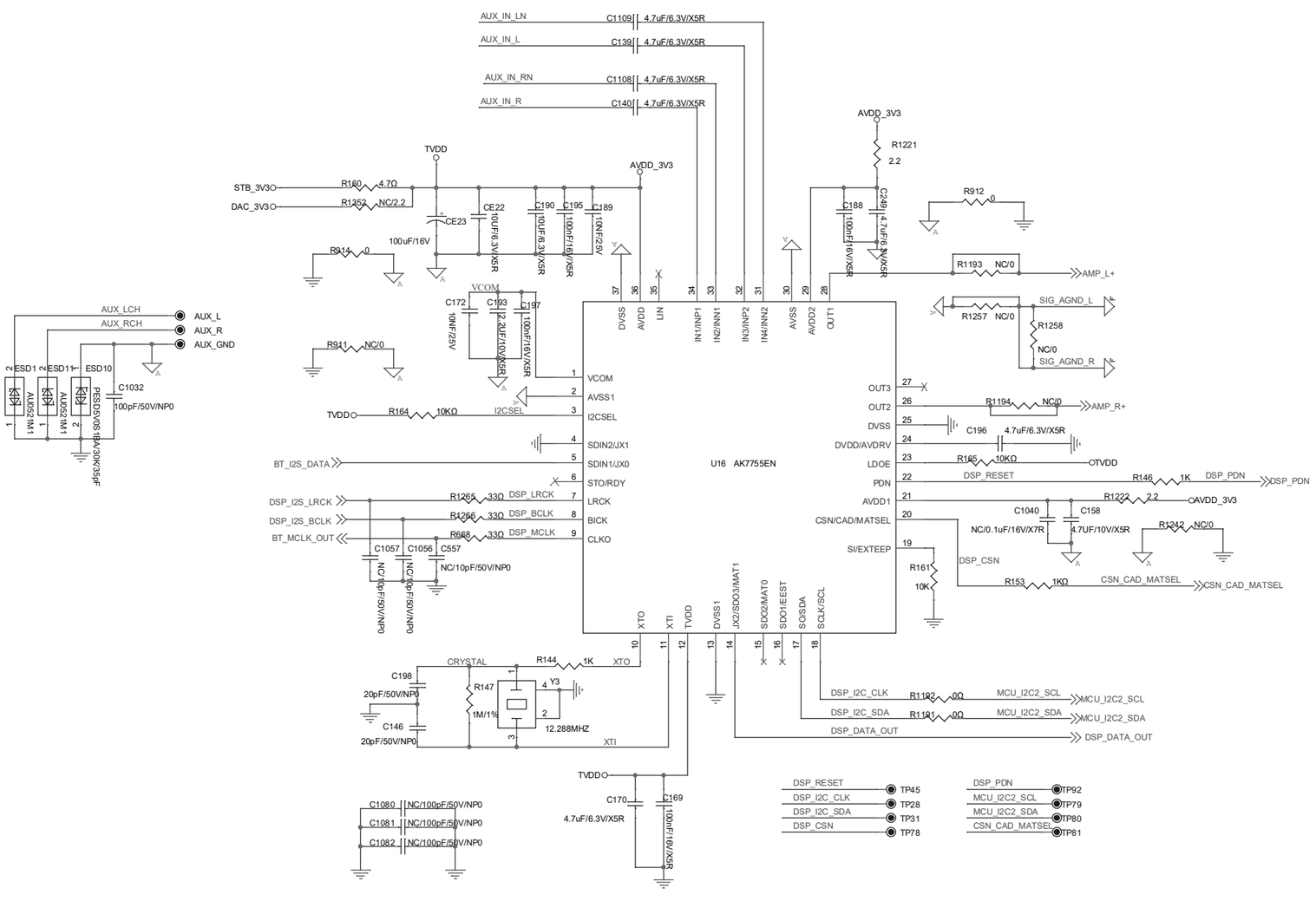
Audio IN Vlotage Divition Circuit



Audio In Detection

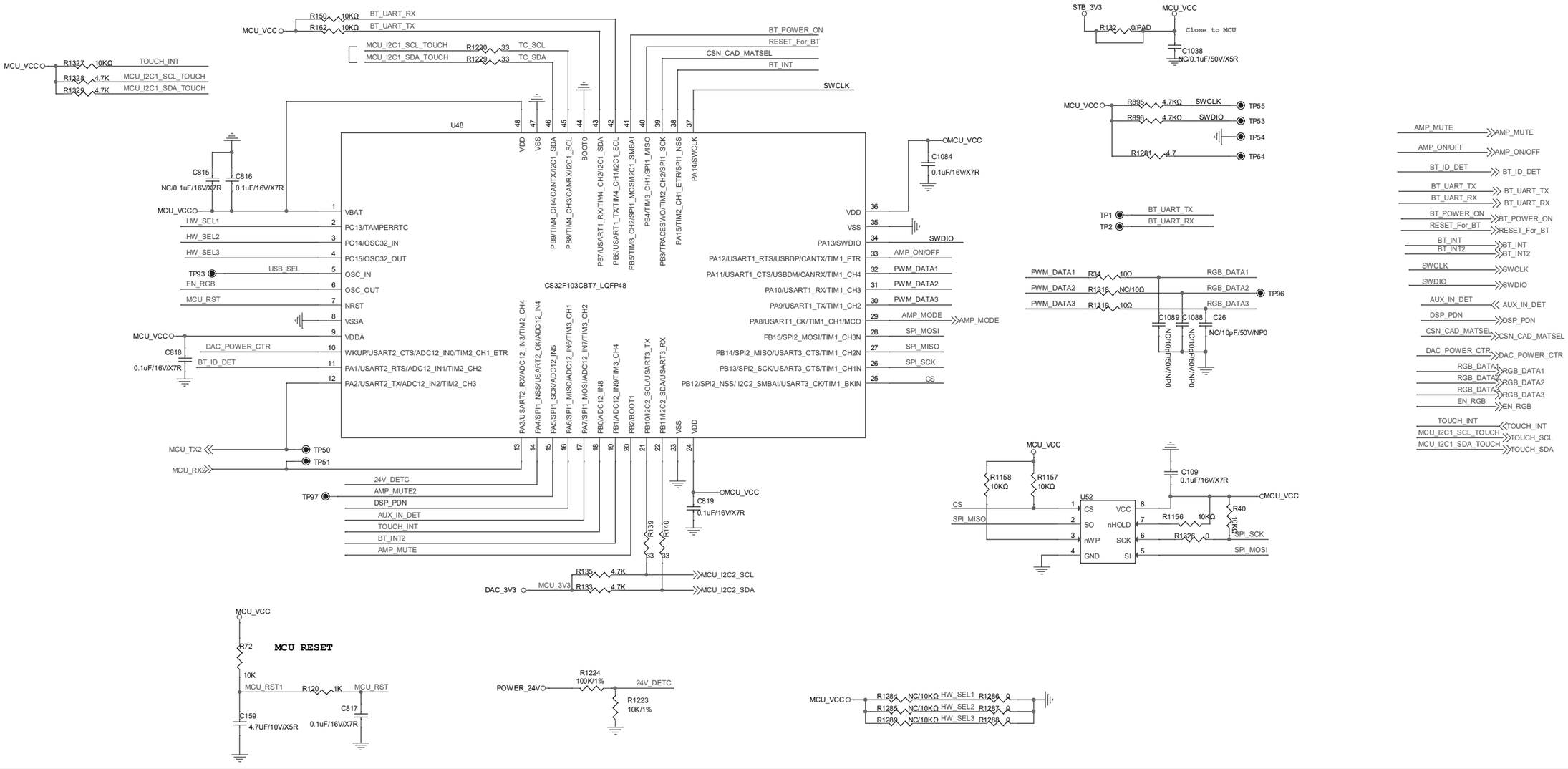


DSP AK7755



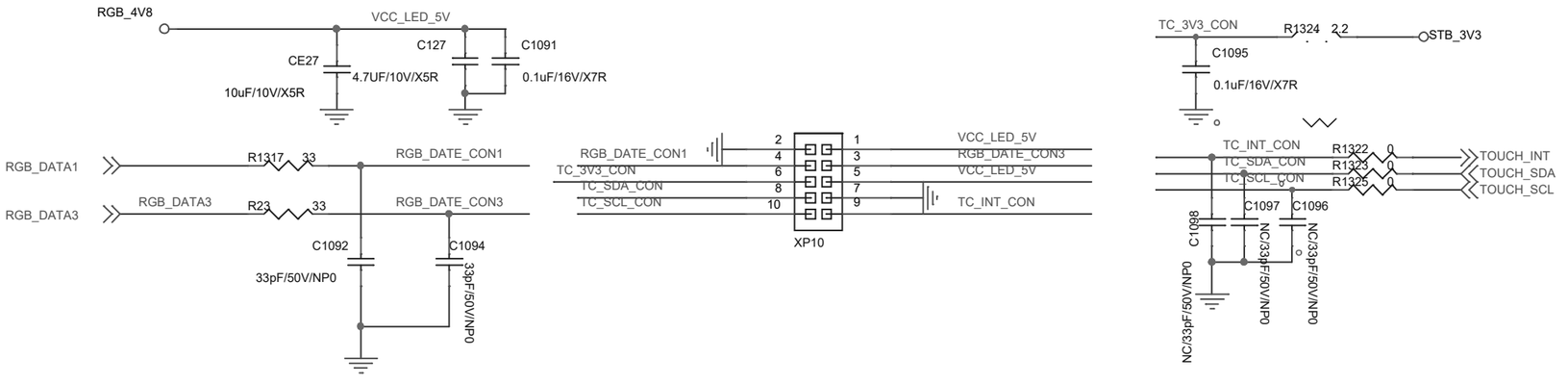
Circuit Diagram-Main&AUX&USB PCBA

MCU CS32F103CBT7

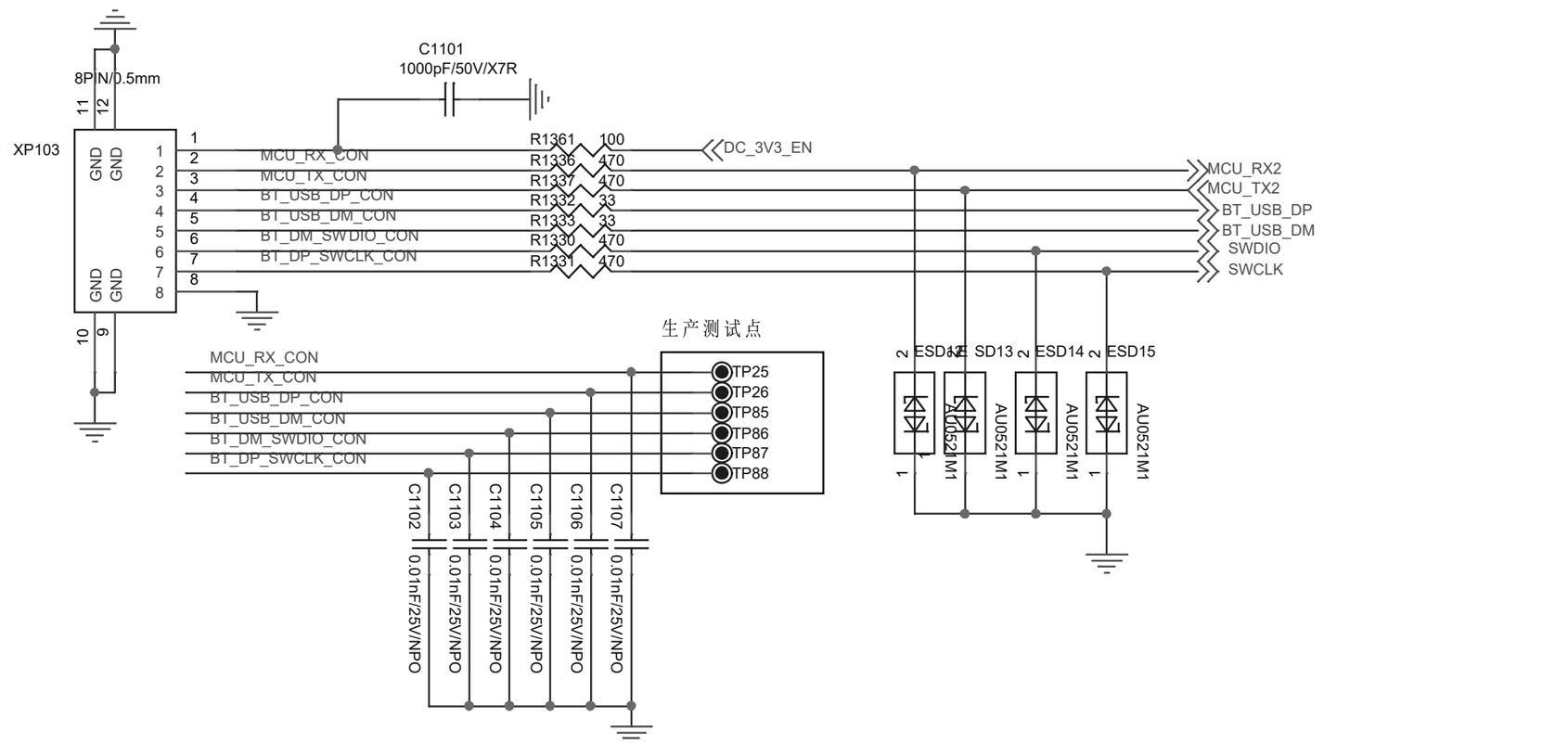


Circuit Diagram-Main&AUX&USB PCBA

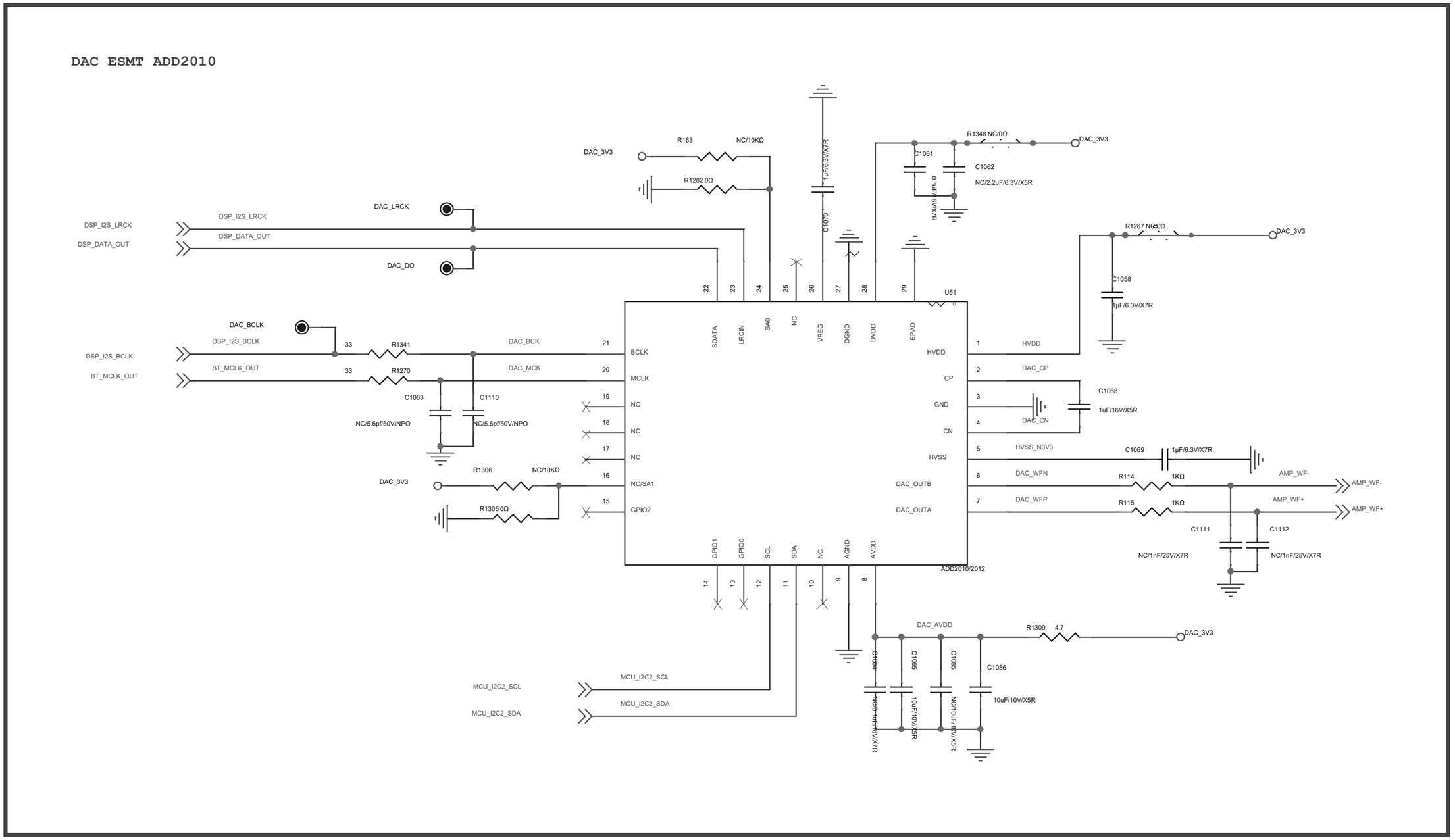
TO RGB LDR BD



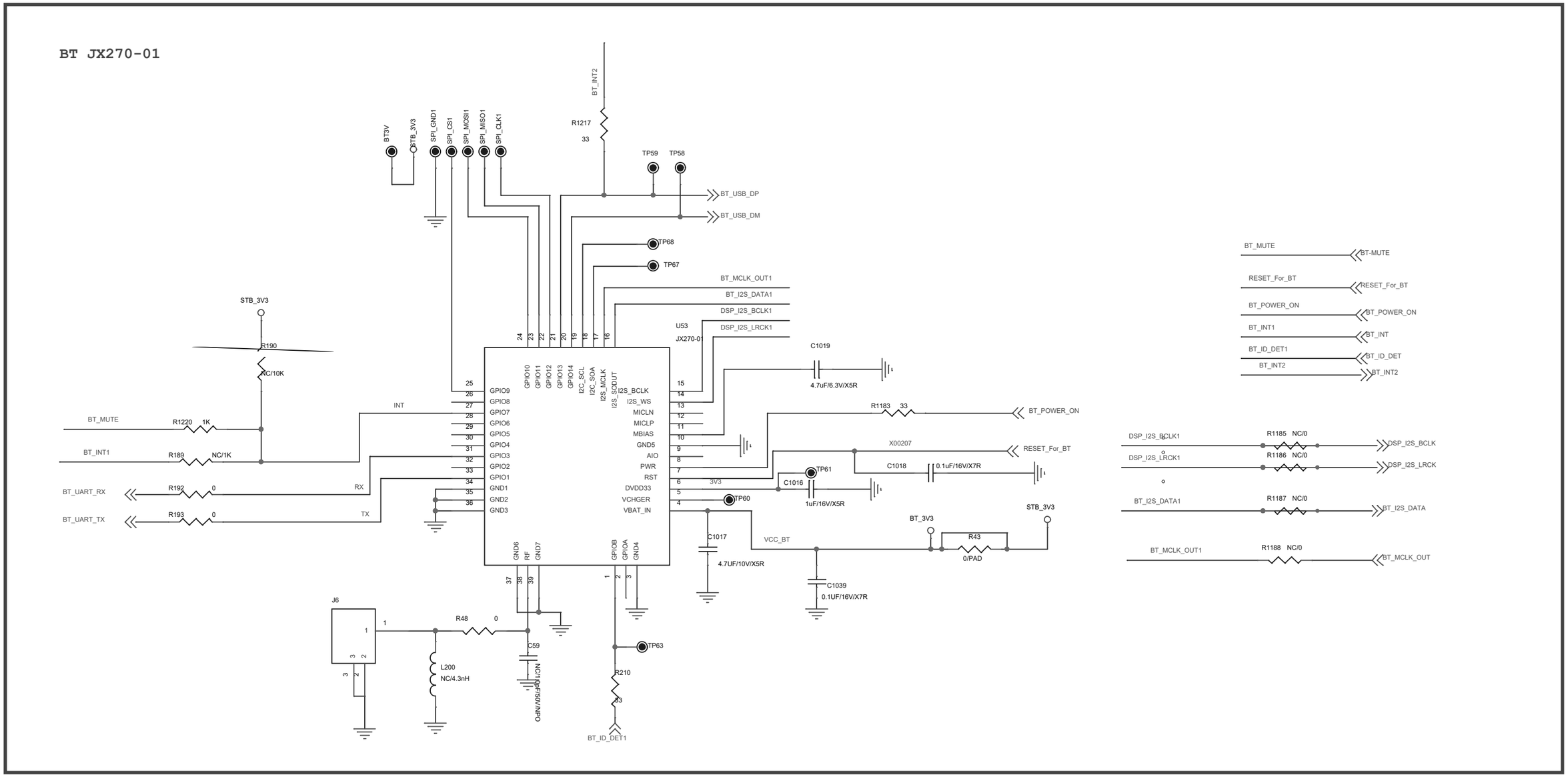
TO Type_C BD



Circuit Diagram-Main&AUX&USB PCBA



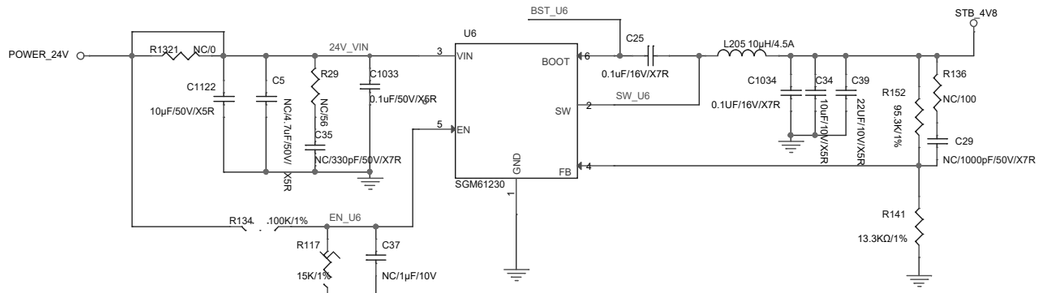
Circuit Diagram-Main&AUX&USB PCBA



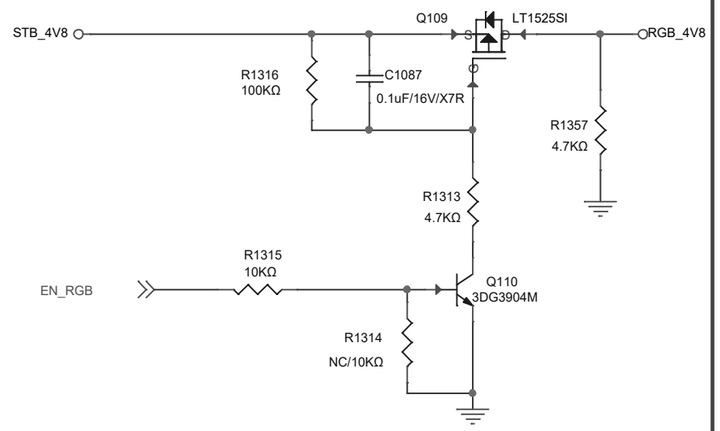
Circuit Diagram-Main&AUX&USB PCBA

24V input

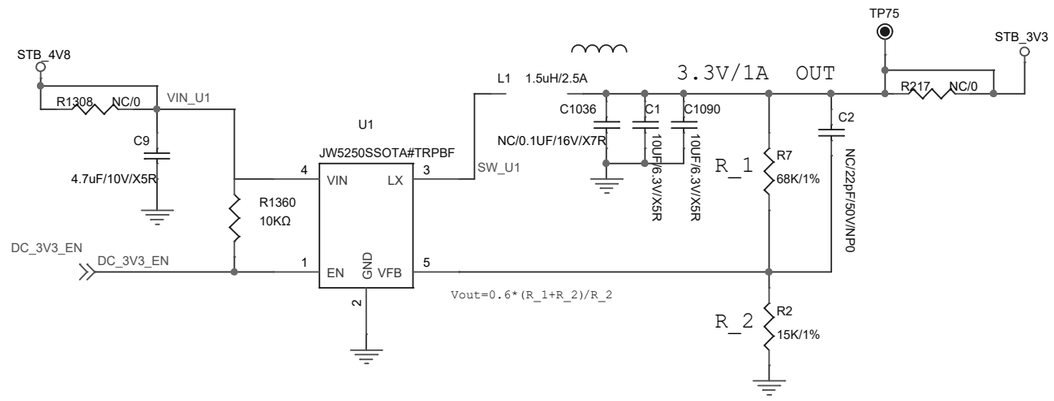
STB 4.8V



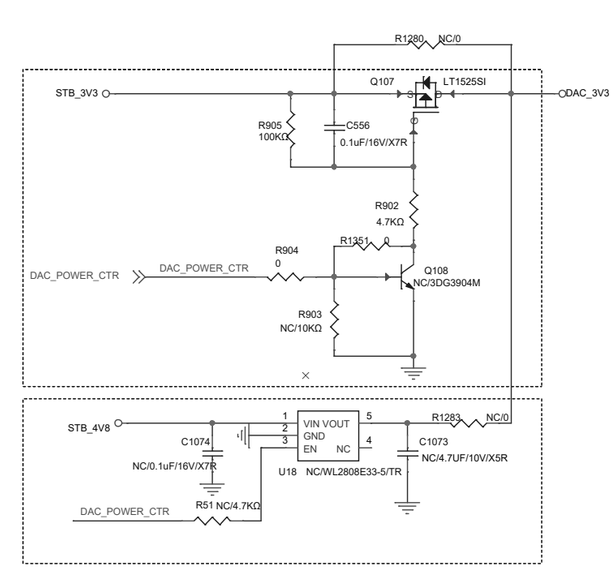
RGB LED POWER



STB 3.3V

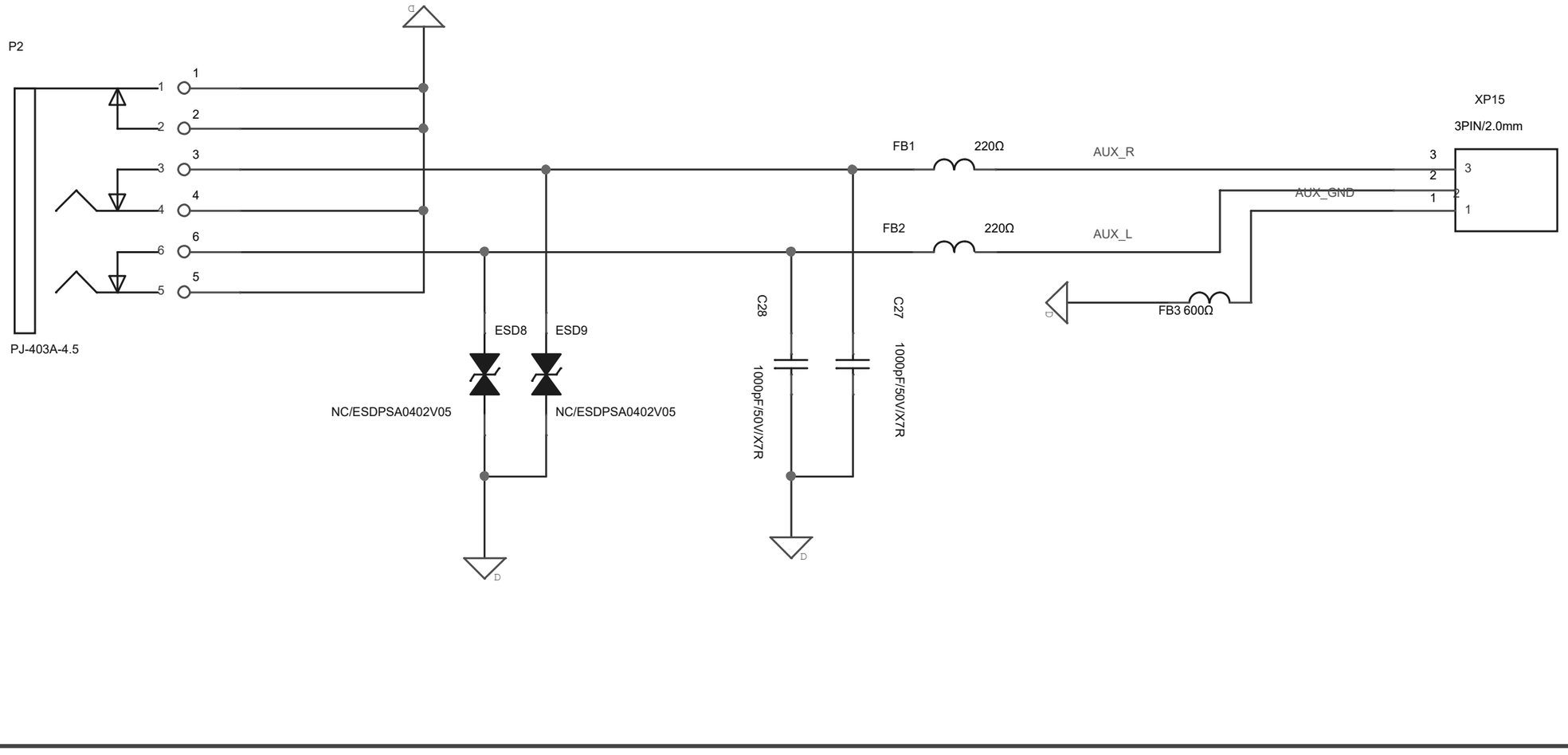


DAC AD2010 POWER

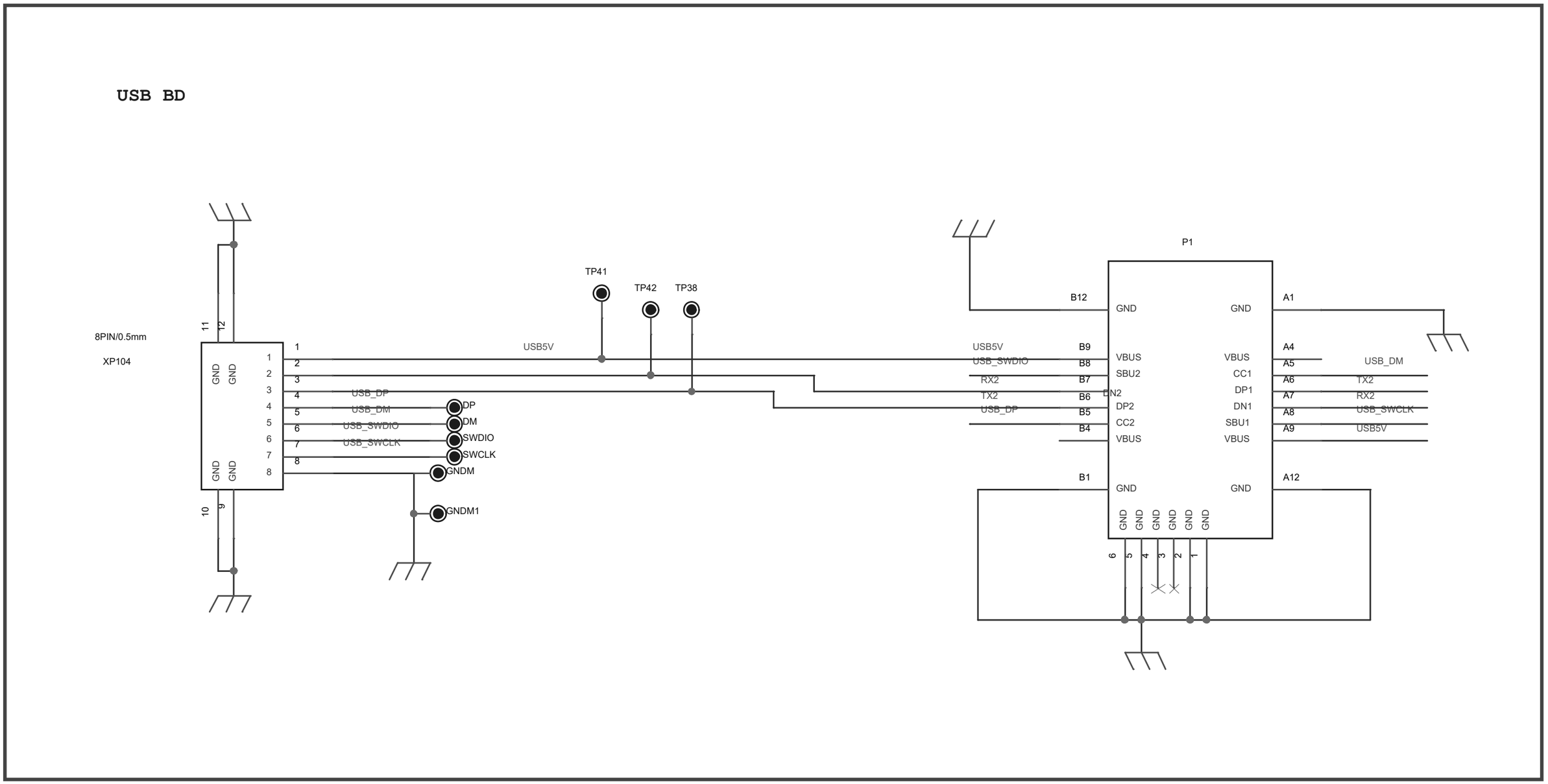


Circuit Diagram-Main&AUX&USB PCBA

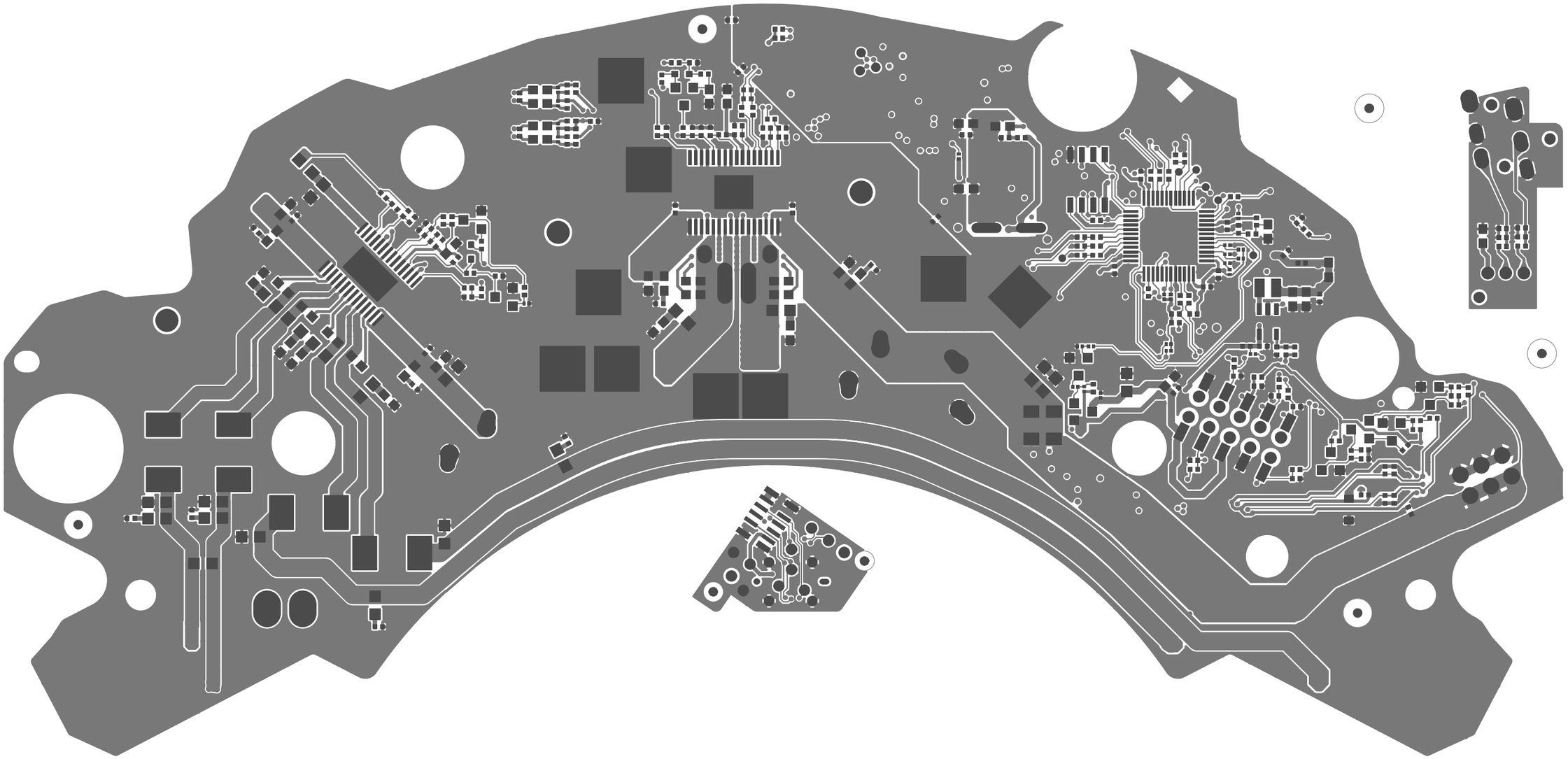
AUX IN



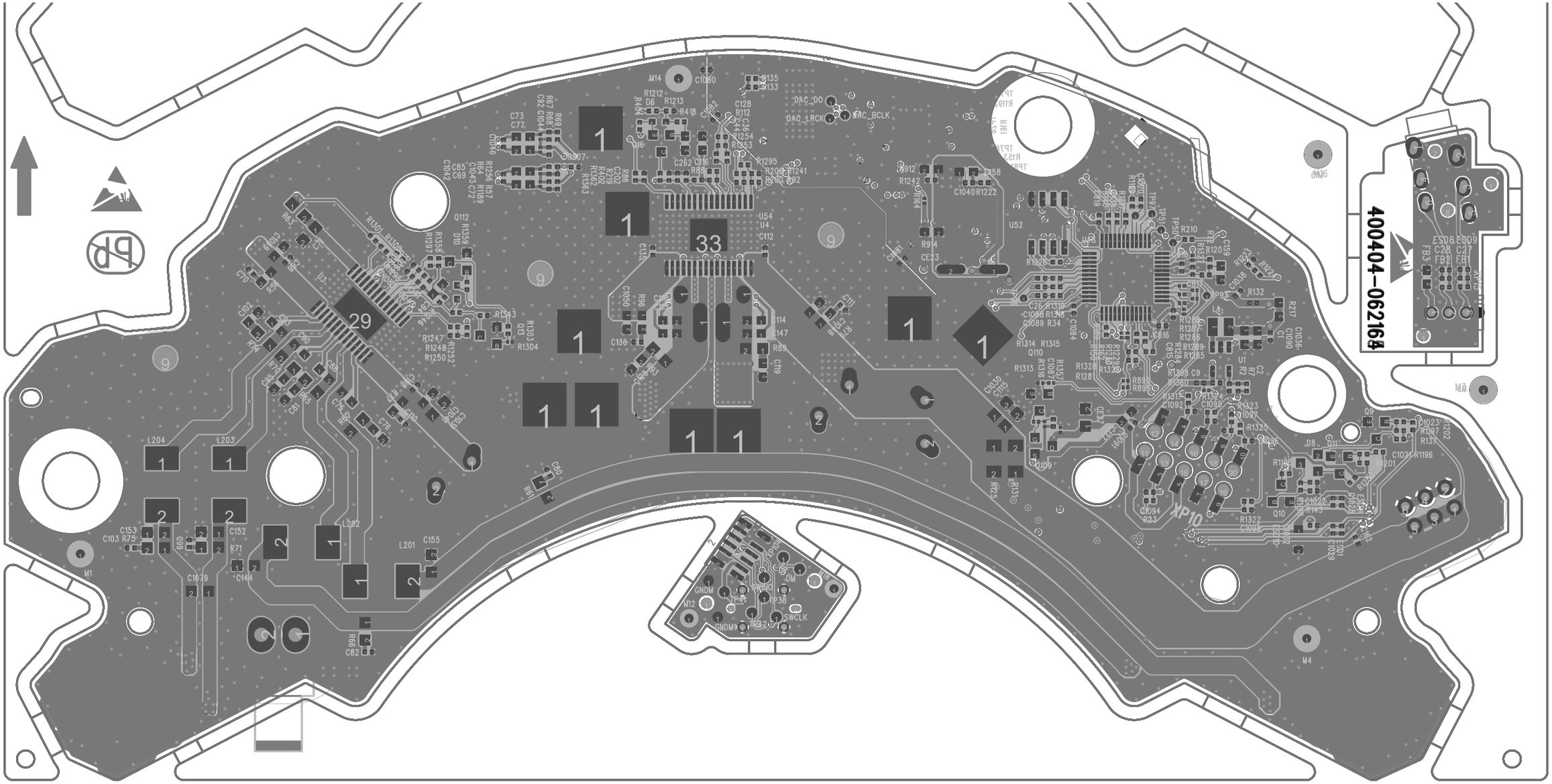
Circuit Diagram-Main&AUX&USB PCBA



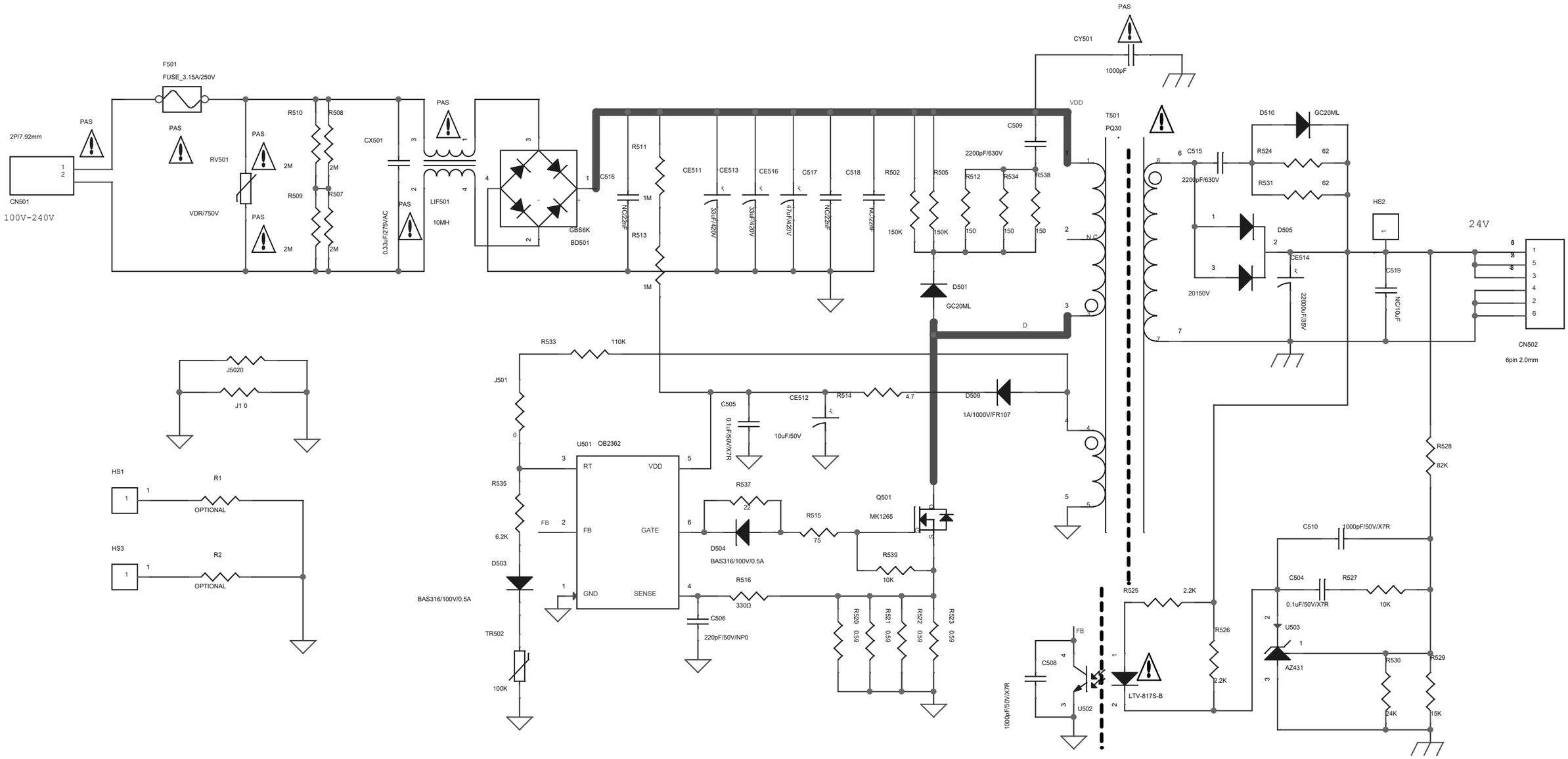
Layout Diagram Top View-Main&AUX&USB PCBA



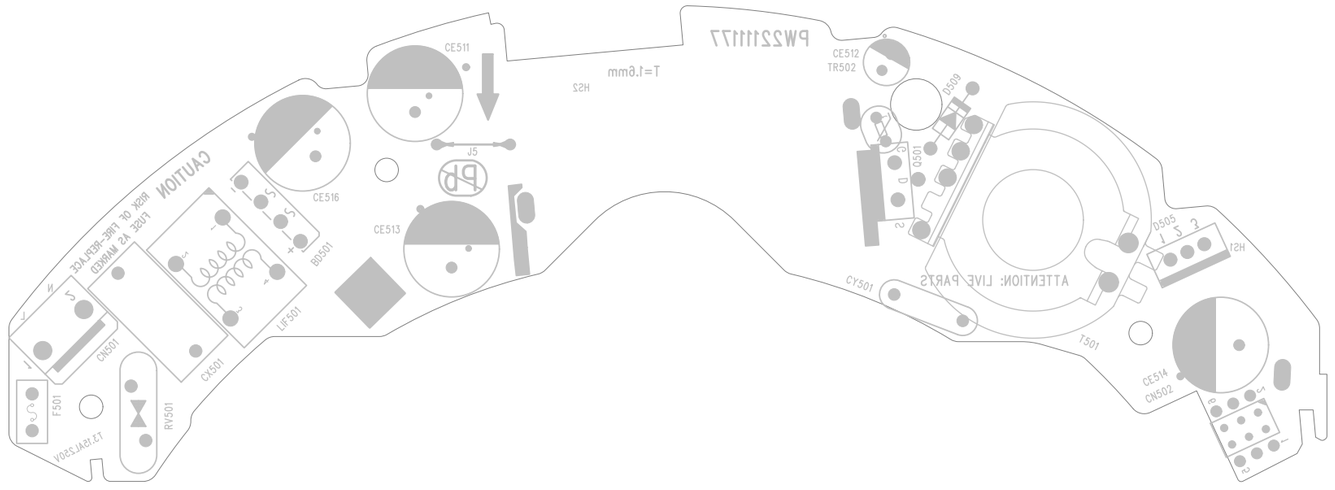
Layout Diagram Bottom View-Main&AUX&USB PCBA



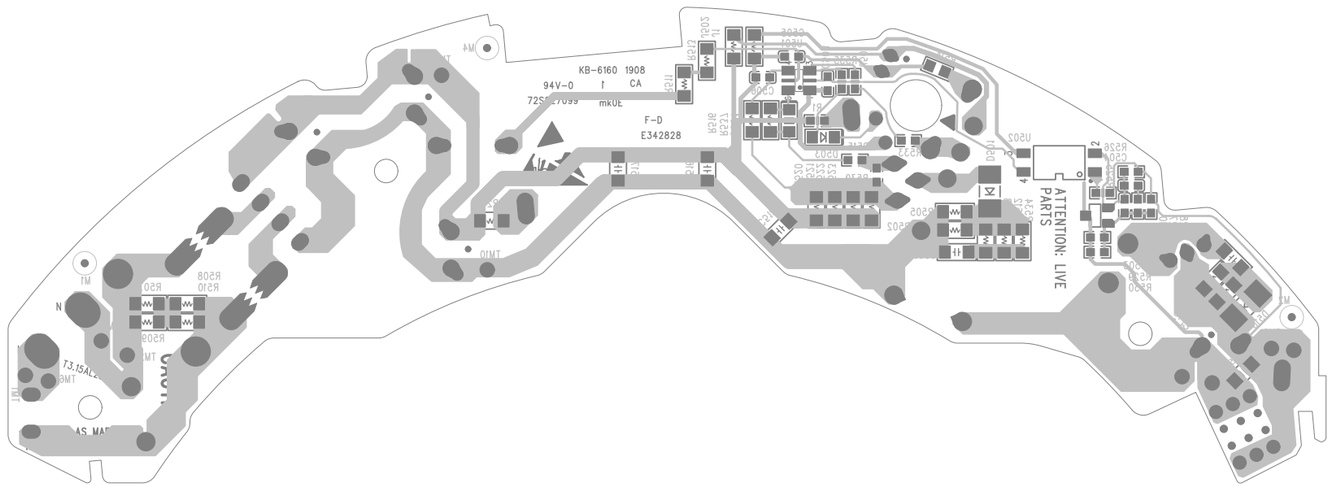
Circuit Diagram-POWER PCBA



Layout Diagram Top View-POWER PCBA

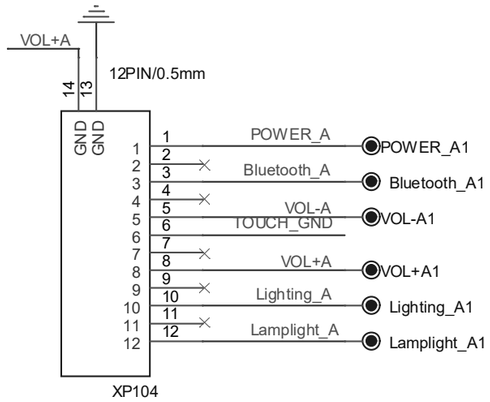


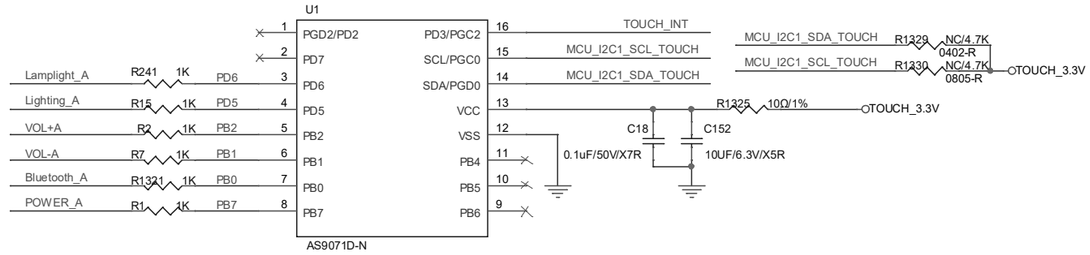
Layout Diagram Bottom View-POWER PCBA

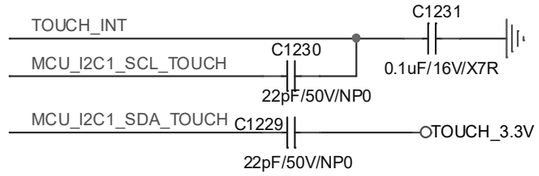


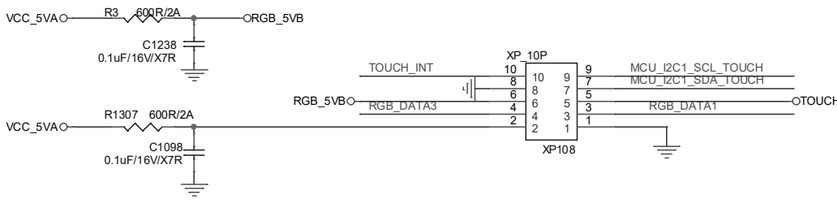
Circuit Diagram-LDR&LED&LEF PCBA

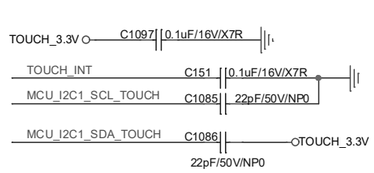
TOUCH IC AS9071

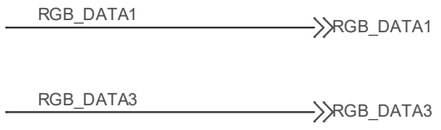


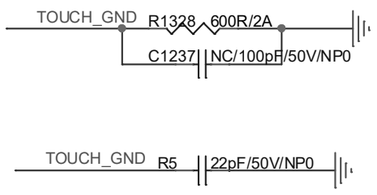


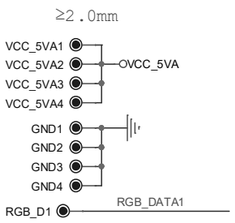


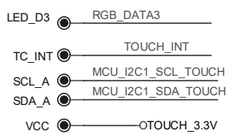






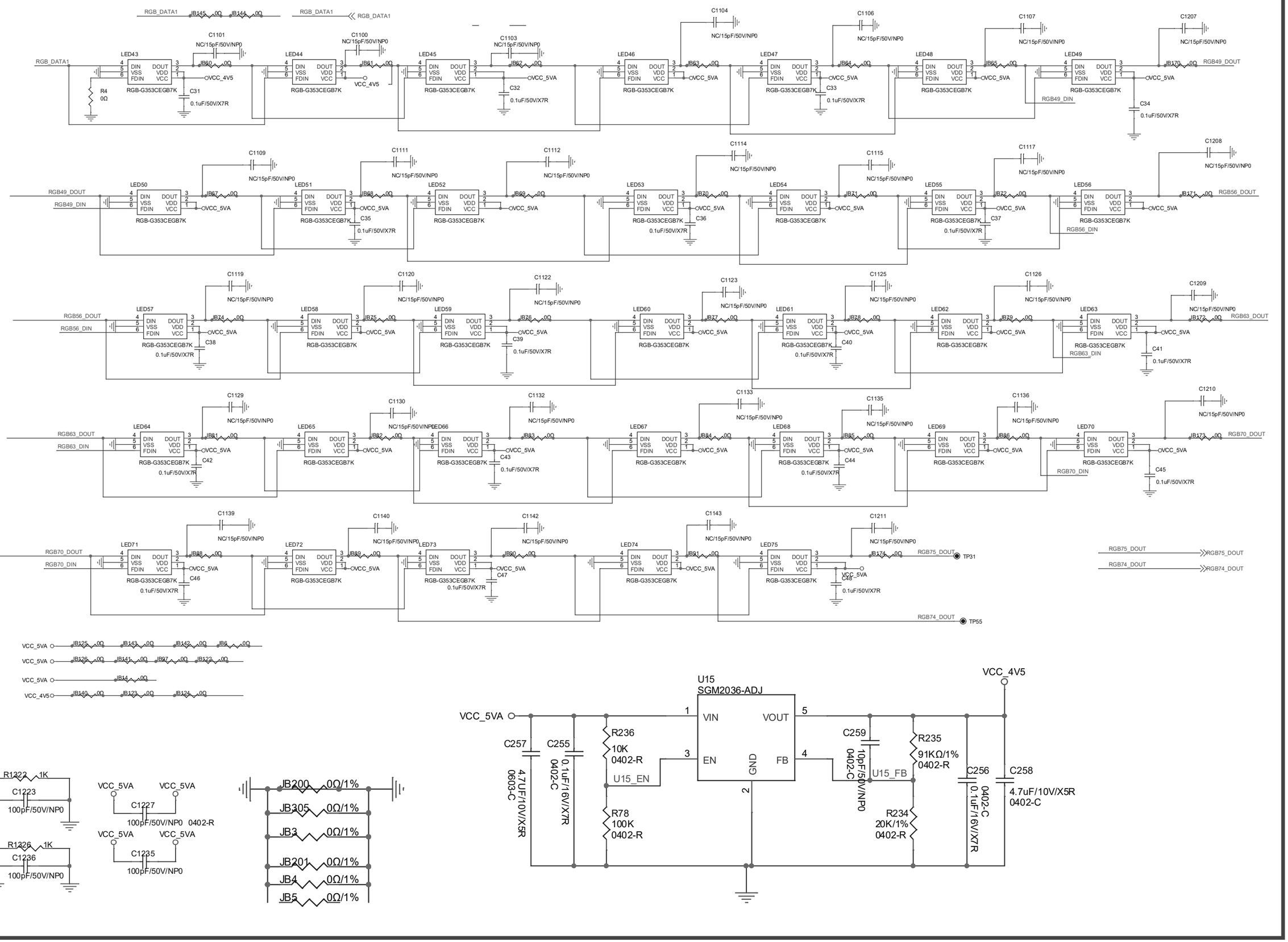






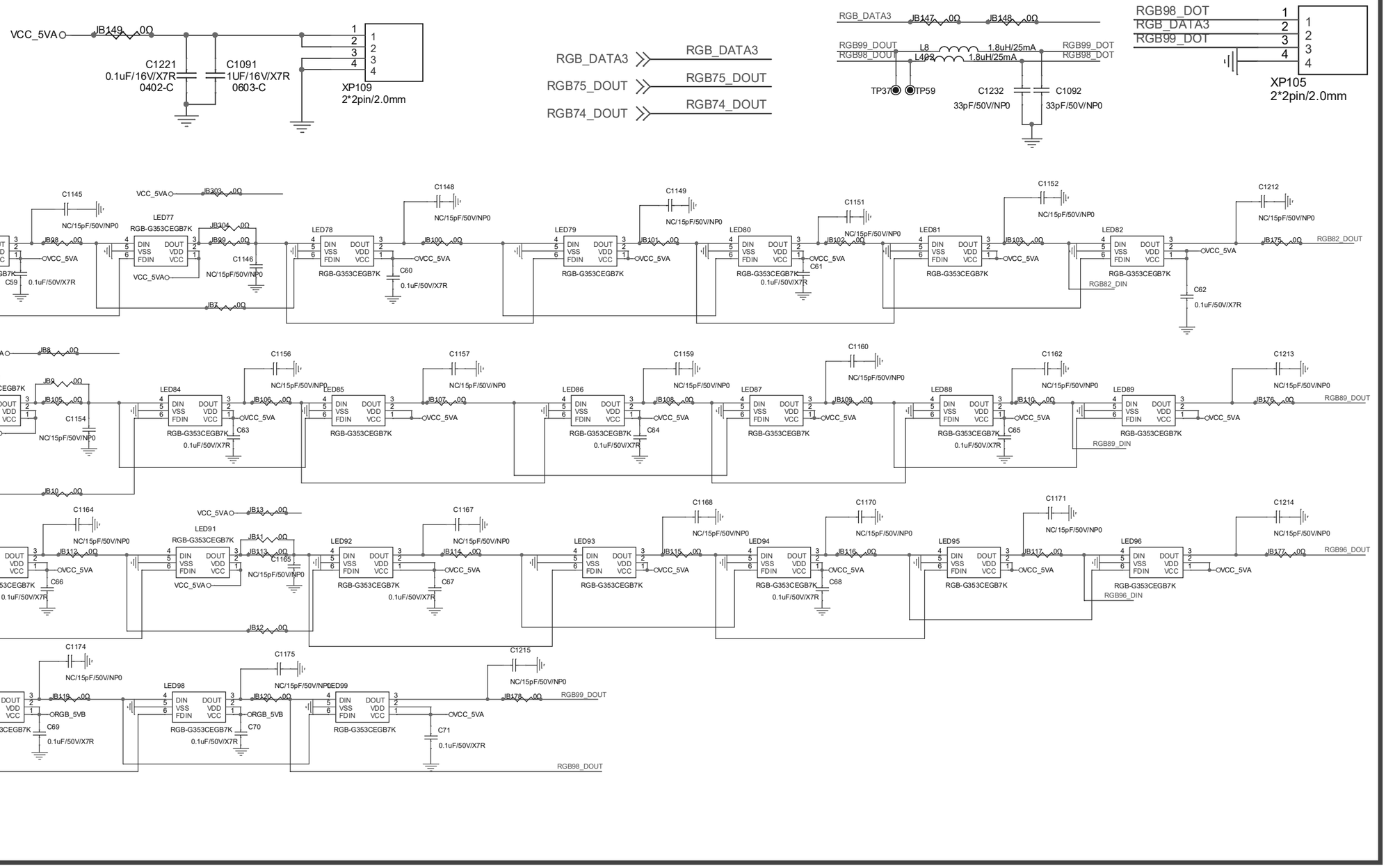
Circuit Diagram-LDR&LED&LEF PCBA

LDR BD*33



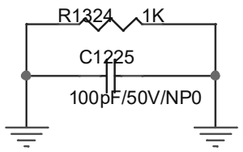
Circuit Diagram-LDR&LED&LEF PCBA

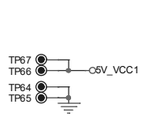
LDR BD*24

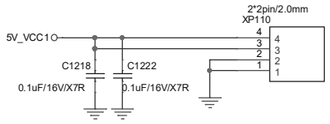


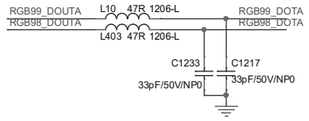
Circuit Diagram-LDR&LED&LEF PCBA

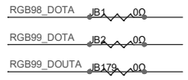
LED BD*15

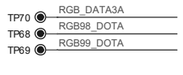


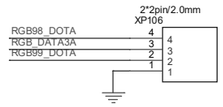


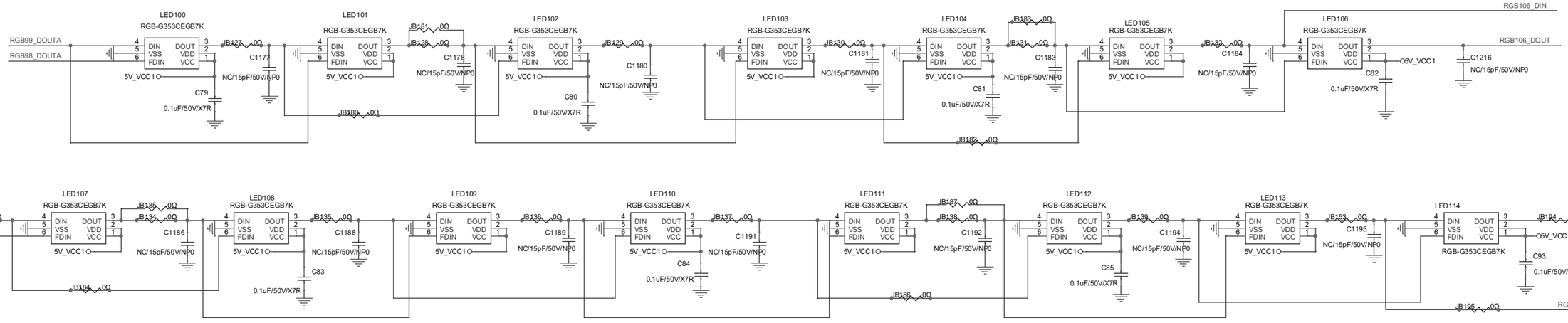


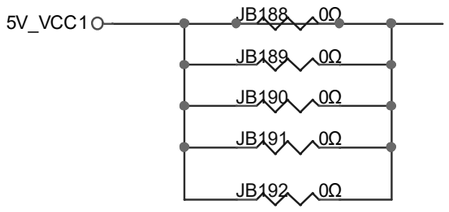


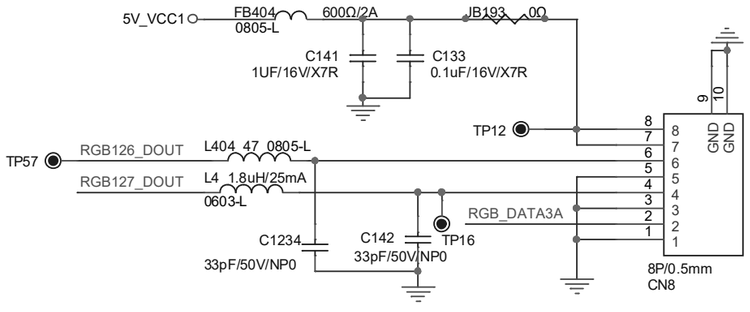






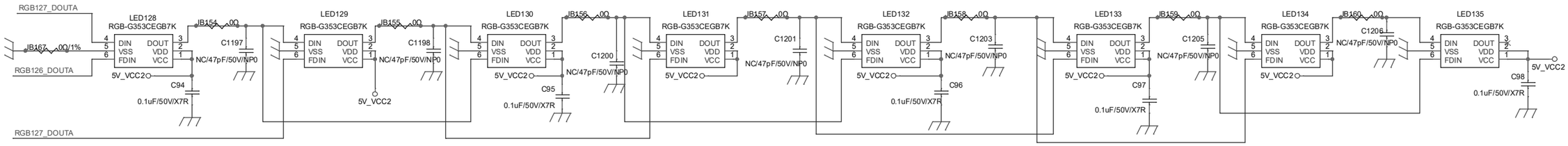


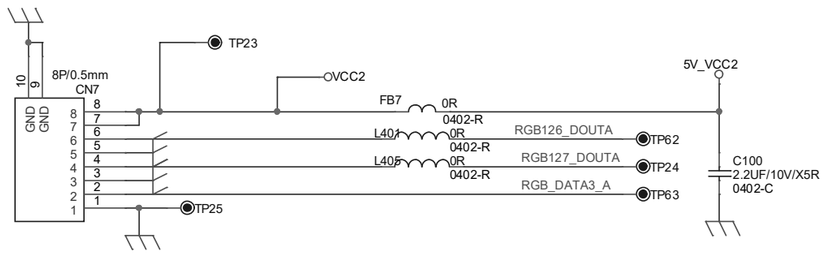


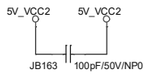


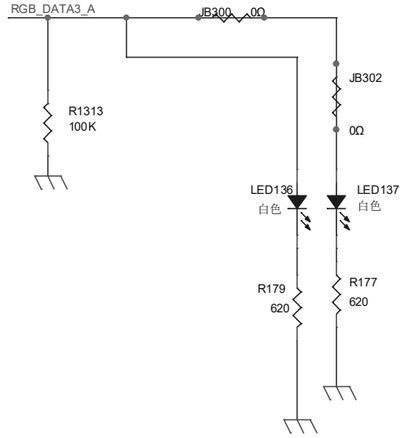
Circuit Diagram-LDR&LED&LEF PCBA

LEF BD*8

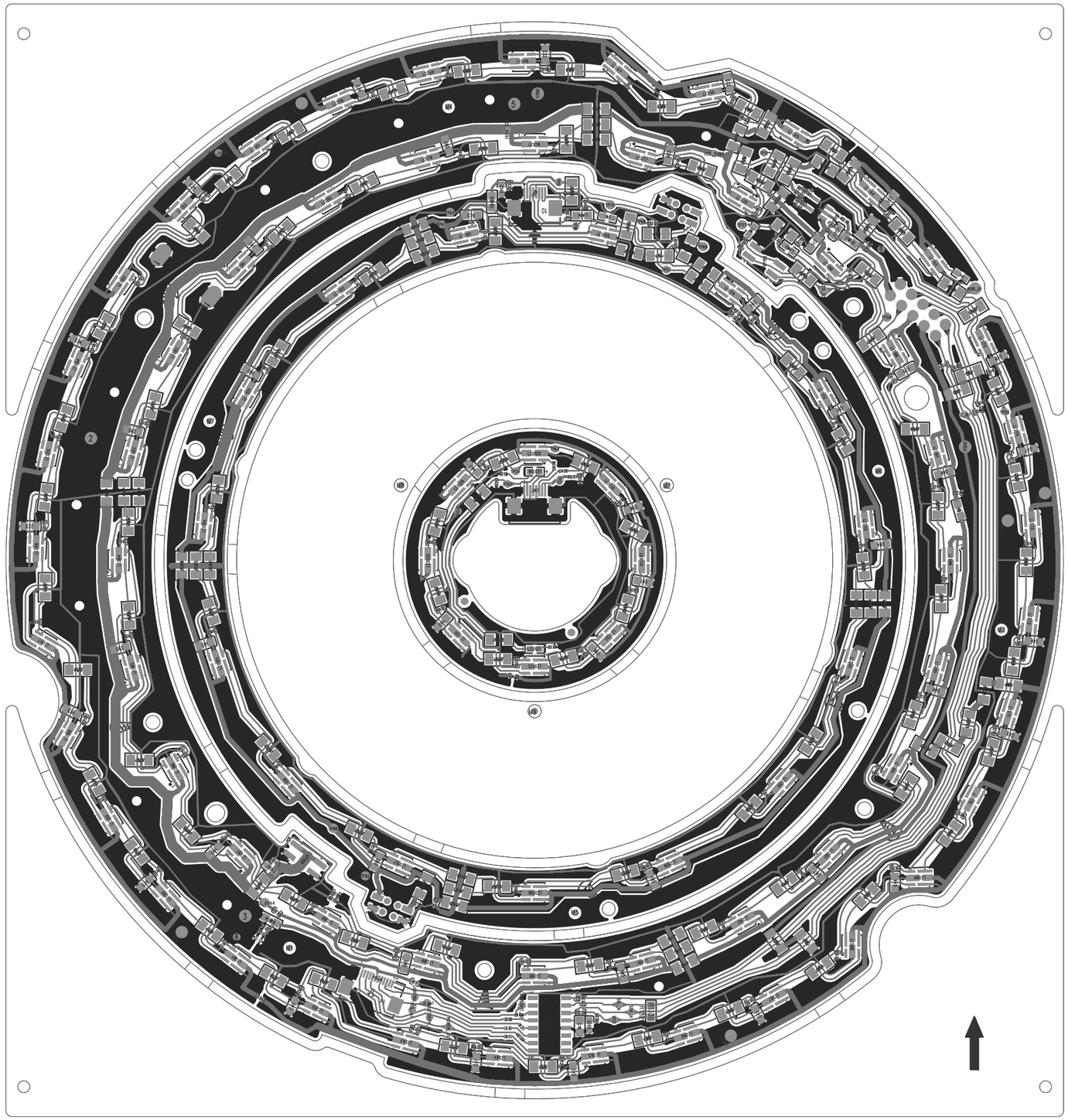




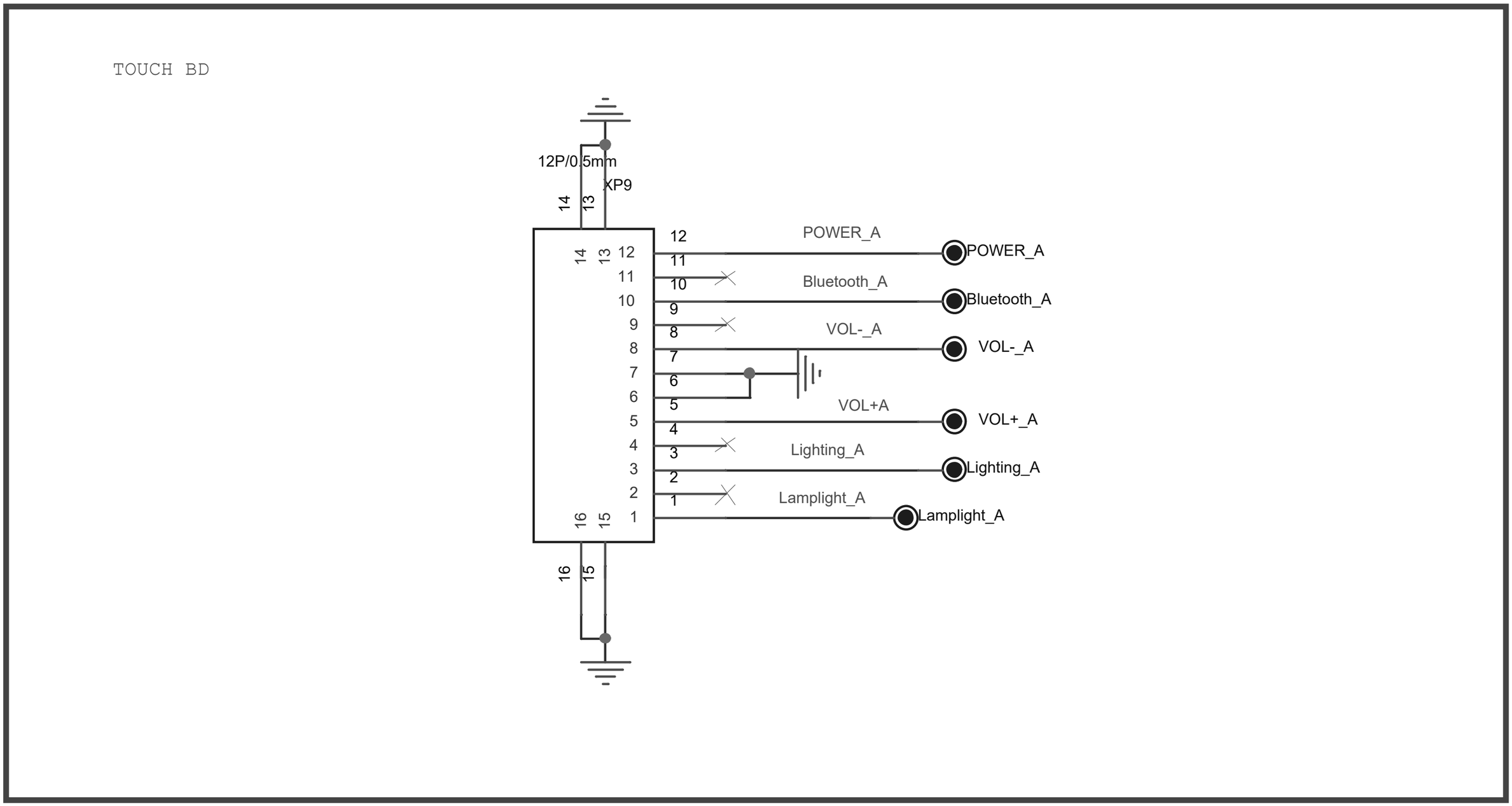




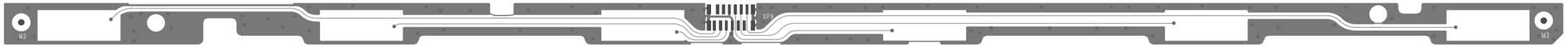
Layout Diagram-LDR&LED&LEF PCBA



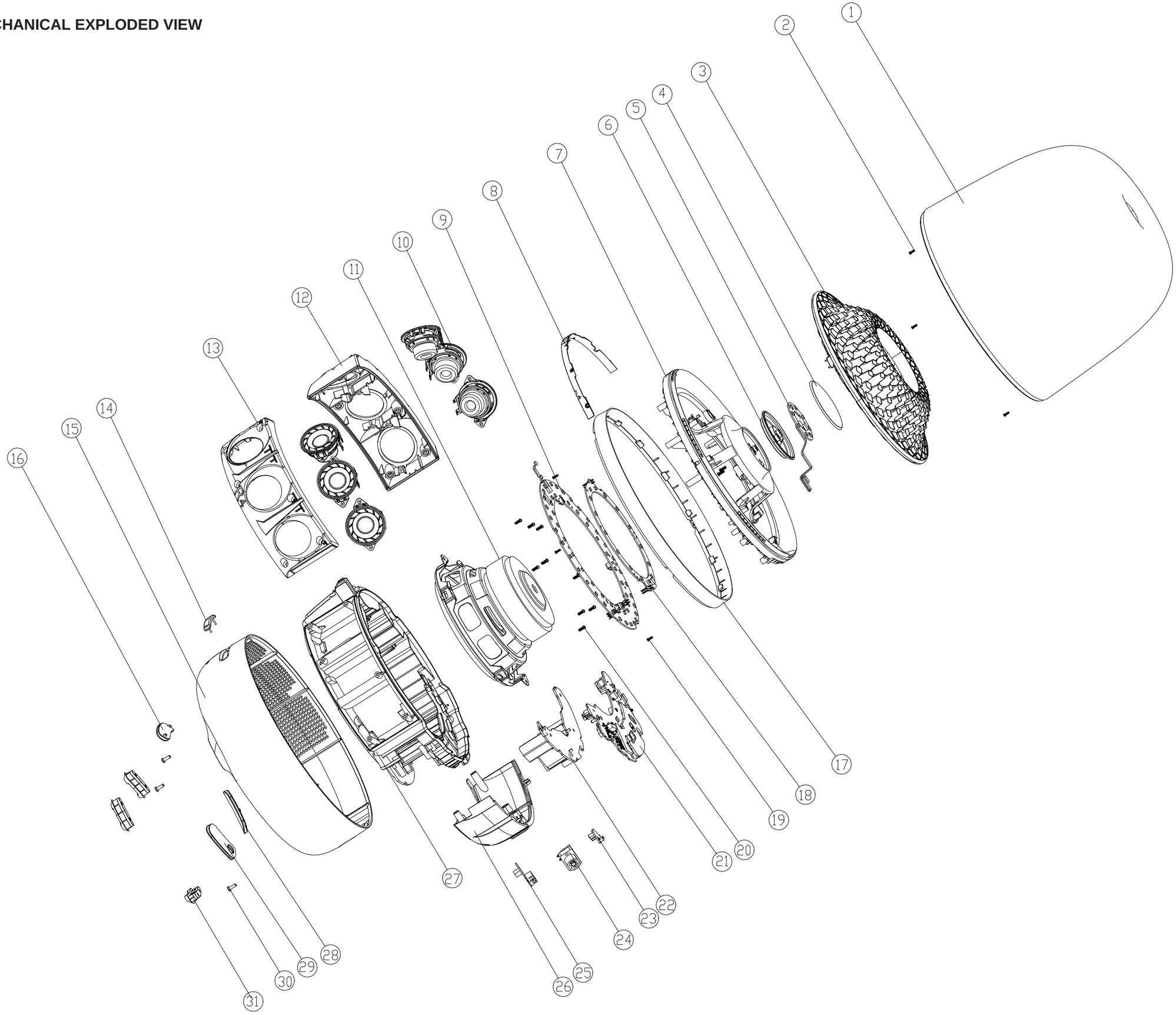
Circuit Diagram-Touch PCBA



Layout Diagram Bottom View-Touch PCBA



MECHANICAL EXPLODED VIEW



HK Aura Studio 4 Spare Parts List

Part Number	SAP Description	Usage	UoM	Pos. No.
020401-020086	TRANSPARENT COVER BLK AURASTUDIO4	1	EA	1
020404-000013	MIDDLE SHELL BRAKET BLK AURASTUDIO4	1	EA	3
670399-000005	ALUMINUM COVER BLK AURASTUDIO4	1	EA	4
940205-010043	LED BOARD 45MMASSYBLK AM/AS/EP/CN AURAS4	1	EA	5+6
940205-010042	LED BOARD 45MM ASSY BLK UK AURASTUDIO4	1	EA	5+6
940205-010041	LED BOARD 45MM ASSY BLK JN AURASTUDIO4	1	EA	5+6
940205-010040	LED BOARD 45MM ASSY BLK IN/BR AURAS4	1	EA	5+6
020402-020015	LED BOARD BRACKET BLK AURASTUDIO4	1	EA	7
940205-010026	TOUCH BOARD BLK AURASTUDIO4	1	EA	8
940205-010023	LED BOARD 175MM BLK AM/AS/EP/CN AURAS4	1	EA	9
940205-010034	LED BOARD 175MM BLK UK AURASTUDIO4	1	EA	9
940205-010030	LED BOARD 175MM BLK JN AURASTUDIO4	1	EA	9
940205-010035	LED BOARD 175MM BLK IN/BR AURASTUDIO4	1	EA	9
420100-000004	1.5 INCH SPEAKER AURASTUDIO4	6	EA	10
420100-000175	5.25 INCH SPEAKER AURASTUDIO4	1	EA	11
020402-020018	LEFT SPEAKER BRACKET BLK AURASTUDIO4	1	EA	12
020402-020017	RIGHT SPEAKER BRACKET BLK AURASTUDIO4	1	EA	13
080301-123215	GRILLE ASSY BLK AURASTUDIO4	1	EA	14+15
590103-050099	RUBBER FOOT 1 AURASTUDIO4	1	EA	16
550401-019889	DECORATIVE RING BLK AURASTUDIO4	1	EA	17
940205-010024	LED BOARD 125MM BLK AM/AS/EP/CN AURAS4	1	EA	18
940205-010036	LED BOARD 125MM BLK UK AURASTUDIO4	1	EA	18
940205-010031	LED BOARD 125MM BLK JN AURASTUDIO4	1	EA	18
940205-010037	LED BOARD 125MM BLK IN/BR AURASTUDIO4	1	EA	18
940205-010029	MAIN BOARD BLK CN/AM/EP/BR/IN/AS AS4	1	EA	21
940205-010045	MAIN BOARD BLK UK/JN AURASTUDIO4	1	EA	21
940205-010028	POWER BOARD BLK AURASTUDIO4	1	EA	22
940205-010027	USB BOARD BLK AURASTUDIO4	1	EA	23
940205-010044	AC SOCKET WITH 3P CABLE AURASTUDIO4	1	EA	24
940205-010022	AUX BOARD BLK AURASTUDIO4	1	EA	25
020401-020085	POWER BOARD COVER BLK AURASTUDIO4	1	EA	26
020402-020016	MAIN ASSY BLK AURASTUDIO4	1	EA	27
590103-050097	RUBBER FOOT 2 AURASTUDIO4	1	EA	28
590103-050100	RUBBER FOOT 3 AURASTUDIO4	1	EA	29
590103-050098	RUBBER FOOT AURASTUDIO4	3	EA	31
250000-000201	CAPACITOR 47UF/50V AURASTUDIO4	2	EA	
410000-020031	SPEAKER CABLE 2P 80MM AURASTUDIO4	1	EA	
410000-020046	SPEAKER CABLE 2P 200/80MM AURASTUDIO4	2	EA	
410001-000697	SPEAKER CABLE 1P 60MM AURASTUDIO4	4	EA	
410002-019824	FFC CABLE 8P 120MM LED-LEF AURASTUDIO4	1	EA	
410002-019825	FFC CABLE 8P 80MM MAIN-USB AURASTUDIO4	1	EA	
410002-019826	FFC CABLE 12P 60MM LDT-TOUCH AURASTUDIO4	1	EA	
410001-000485	CABLE 3P 140MM POWER-AC SOCKET AURA4	1	EA	
949999-020038	EVA L300M W10MM T0.5MM BAR1300/AURA4			
760101-020949	GIFT BOX CN BLK AURASTUDIO4	1	EA	
760101-020948	GIFT BOX AM BLK AURASTUDIO4	1	EA	
760101-020900	GIFT BOX EP BLK AURASTUDIO4	1	EA	

760101-020896	GIFT BOX UK BLK AURASTUDIO4	1	EA	
760101-020899	GIFT BOX JN BLK AURASTUDIO4	1	EA	
760101-020901	GIFT BOX BR BLK AURASTUDIO4	1	EA	
760101-020897	GIFT BOX IN BLK AURASTUDIO4	1	EA	
760101-020898	GIFT BOX AS BLK AURASTUDIO4	1	EA	
510100-000040	POWER CORD CN BLK 2M AURASTUDIO4	1	EA	
510101-019457	POWER CORD AM BLK 2M AURASTUDIO4	1	EA	
510102-019462	POWER CORD EP BLK 2M AURASTUDIO4	1	EA	
510103-000058	POWER CORD UK BLK 2M AURASTUDIO4	1	EA	
510104-000031	POWER CORD JN BLK 2M AURASTUDIO4	1	EA	
510107-000032	POWER CORD BR BLK 2M AURASTUDIO4	1	EA	
510109-000023	POWER CORD IN BLK 2M AURASTUDIO4	1	EA	
510110-000033	POWER CORD AS-THA BLK 2M AURASTUDIO4	1	EA	
510102-019463	POWER CORD AS-EU/ID BLK 2M AURASTUDIO4	1	EA	
510105-000027	POWER CORD AS-KO BLK 2M AURASTUDIO4	1	EA	
510106-000107	POWER CORD AS-AU BLK 2M AURASTUDIO4	1	EA	
290000-019508	BT ANTENNA 115MM CABLE AURASTUDIO4	1	EA	

KEY COMBINATION BEHAVIOR

Button Pattern	Action	Indicator
Volume+ & BT	Long press(≥5s)	Factory reset Poweroff after reset
Volume- & Pattern	Long press(≥10s)	FW version White led blink 200ms/1000ms for flash/BT verion
Brightness & Volume+ & Volume-	Long press(≥10s)	BT FW upgrading or hotel configuration mode Exit by plug power cable until LED off
Pattern & Volume+ & Volume-	Long press(≥10s)	Lighting data upgrading mode Exit by plug power cable until LED off
Volume+ & Volume- & BT	Long press(≥10s)	Enable/ disable the auto standby
BT & Volume-	Long press(≥10s)	Toggle Hotel mode
BT & Pattern	Long press(≥10s)	Toggle Demo mode
Volume+ & Brightness	Release to trigger	Bass
Volume+ & Pattern	Release to trigger	Treble
Volume+ & Volume-	Release to trigger	Toggle mute/unmute

REVISION LIST

Version 1.0
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