

# VERSION HISTORY

Revision Description Date Drawn Checked Approved

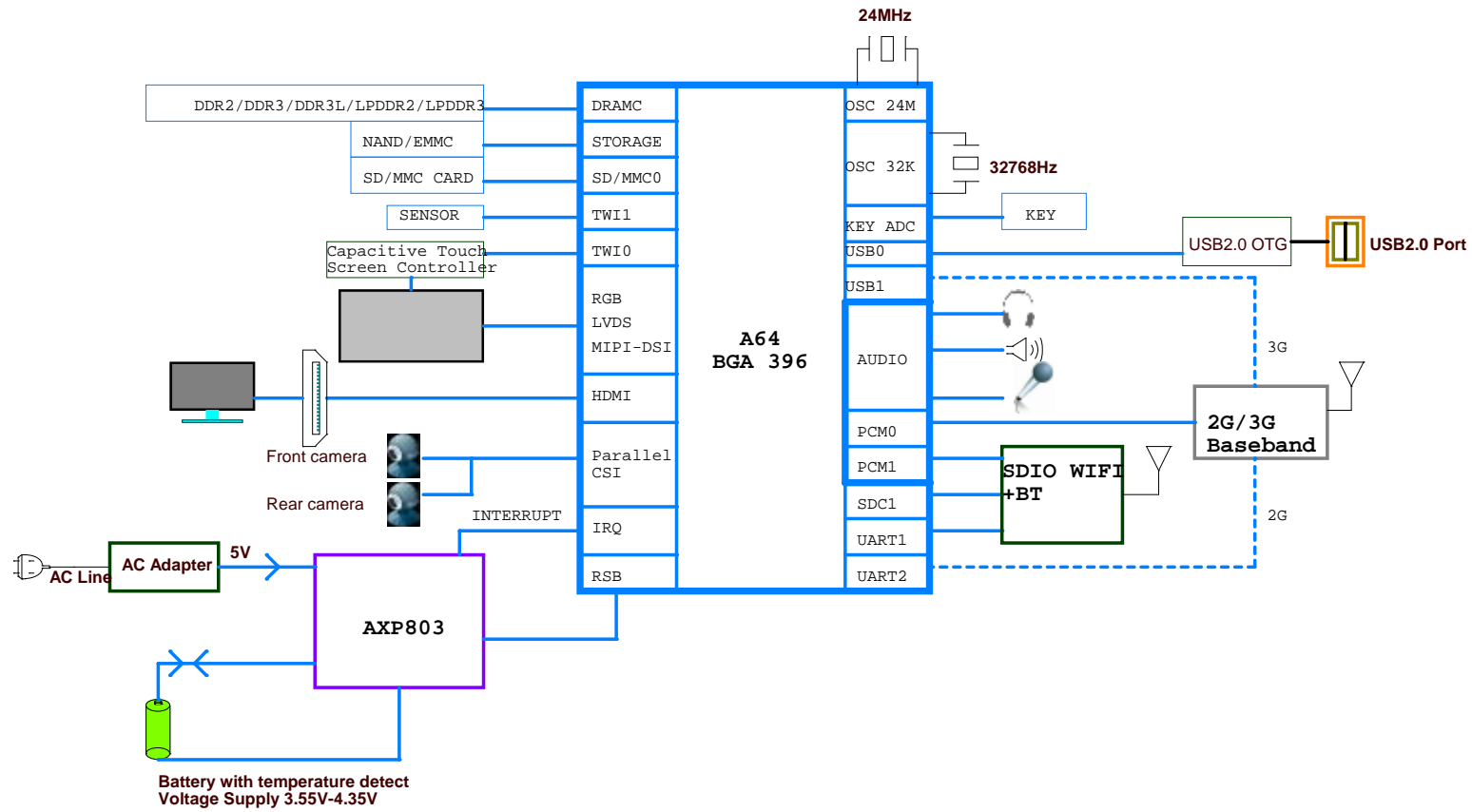
## Index:

- 01 VERSION HISTORY
- 02 BLOCK DIAGRAM
- 03 POWER TREE
- 04 DDR3 16X2
- 05 CPU
- 06 PMIC
- 07 FLASH
- 08 AUDIO
- 09 USB/T-CARD
- 10 CAMREA
- 11 LCM/CTP
- 12 SENSORS/MT/KEY
- 13 HDMI
- 14 WIFI-BT
- 15 MODEM-2G

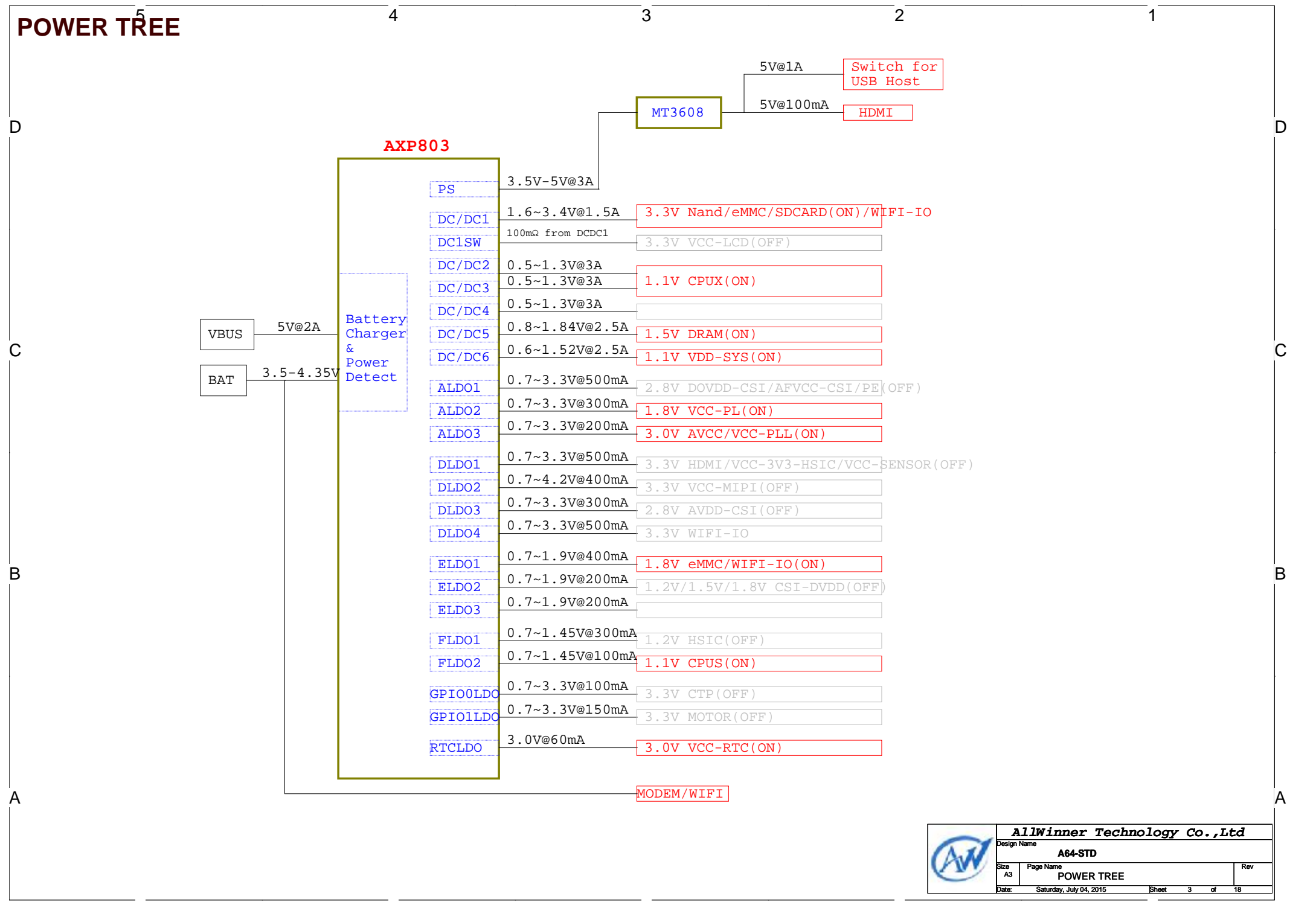
- option
- 16 LPDDR3 FBGA178
  - 17 LPDDR2/LPDDR3
  - 18 MODEM-3G

Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Releas version	2015-04-22			

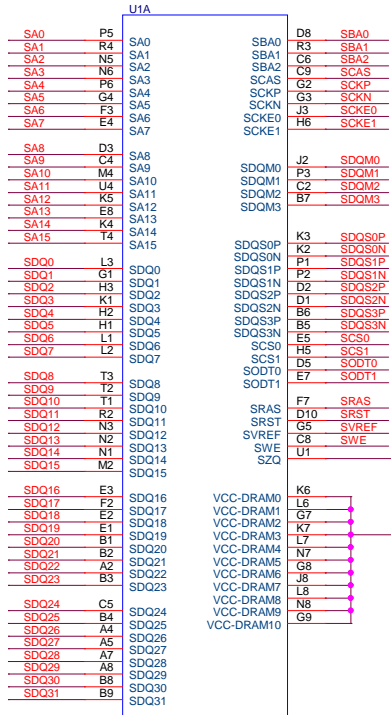
# BLOCK DIAGRAM



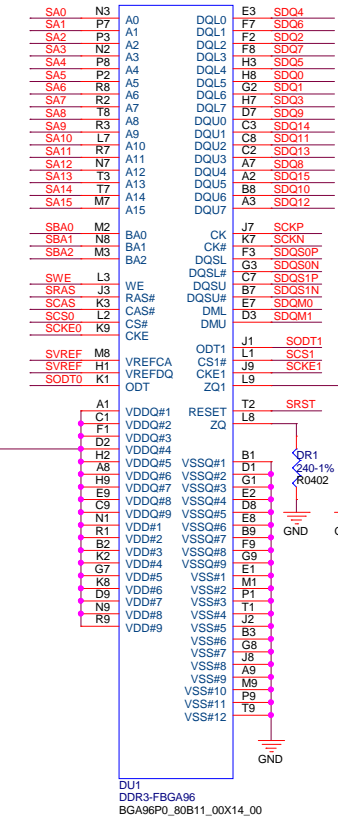
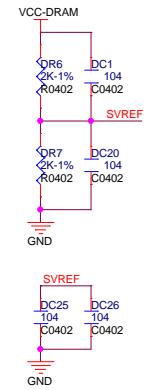
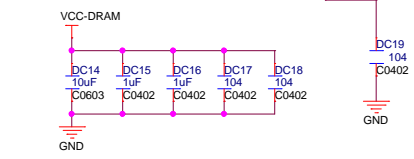
# POWER TREE



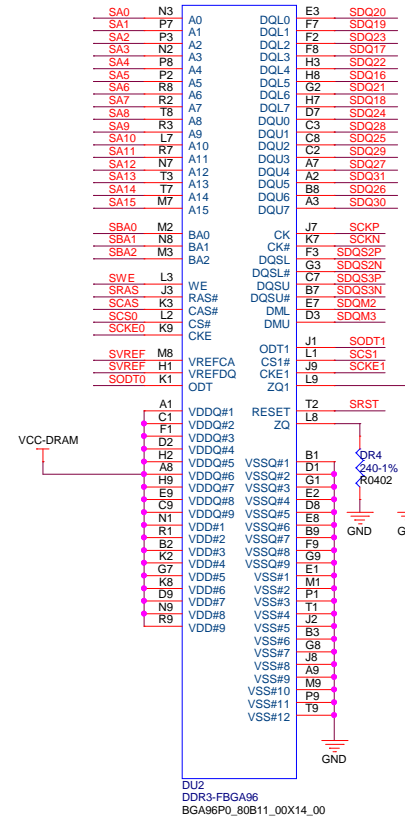
# DDR3 16x2



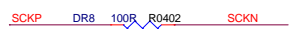
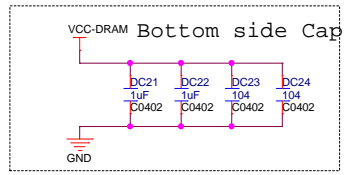
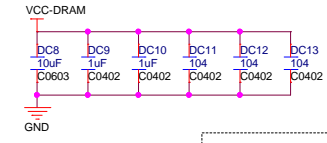
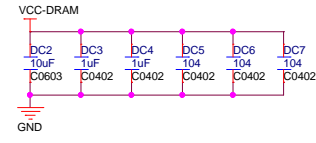
A64



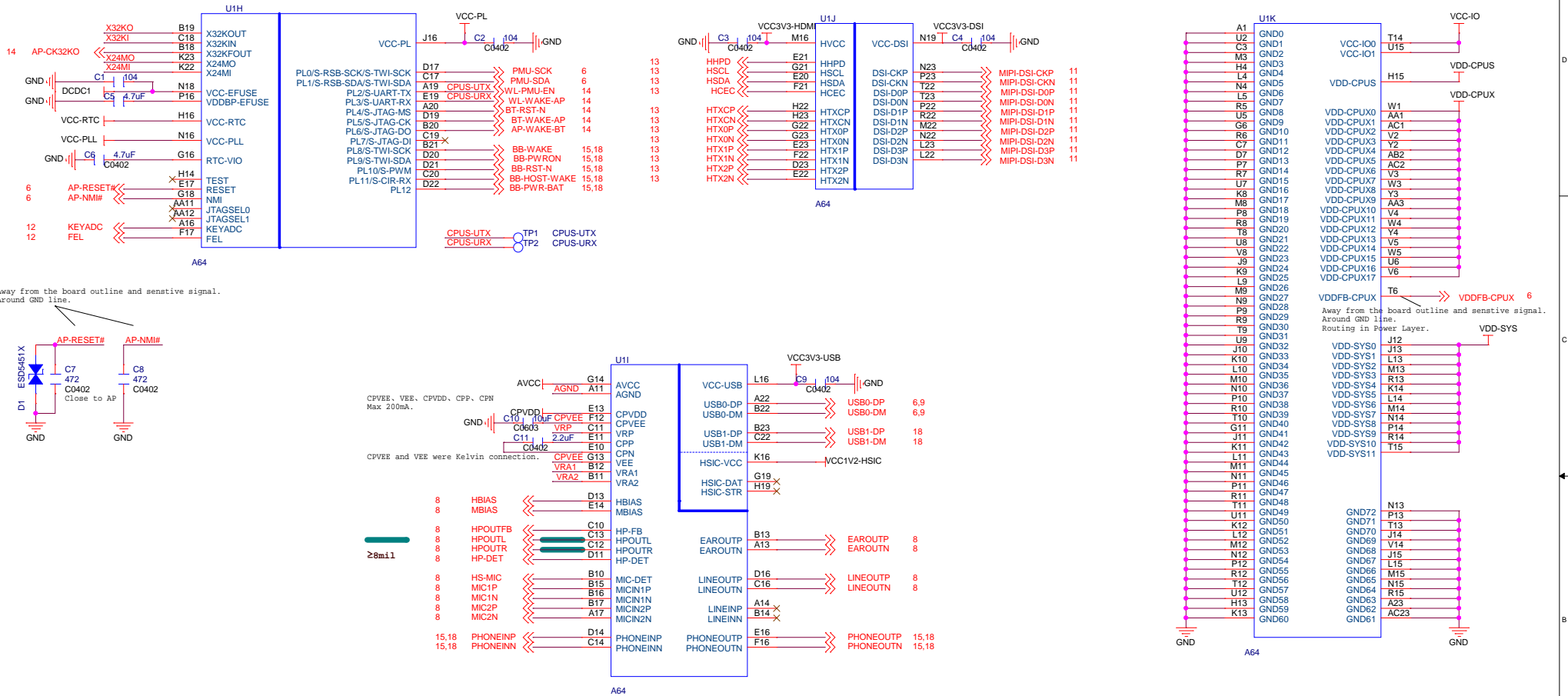
DU1  
 DDR3-FBGA96  
 BGA96P0\_80B11\_00X14\_00



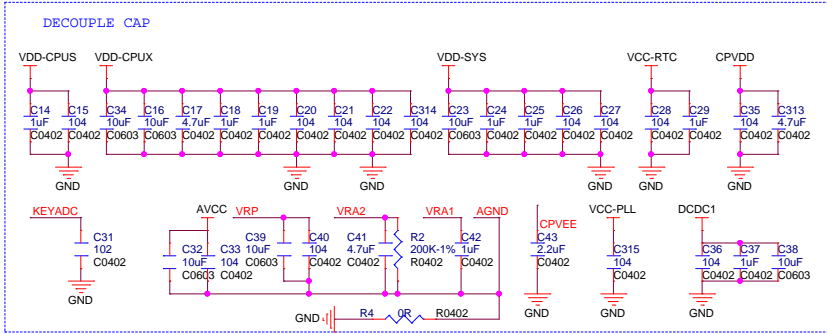
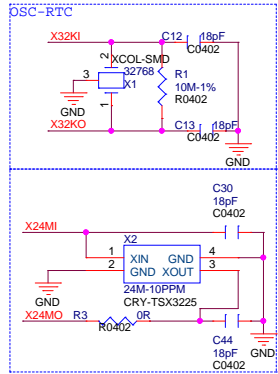
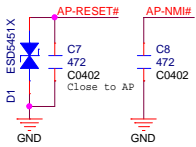
DU2  
 DDR3-FBGA96  
 BGA96P0\_80B11\_00X14\_00



# CPU

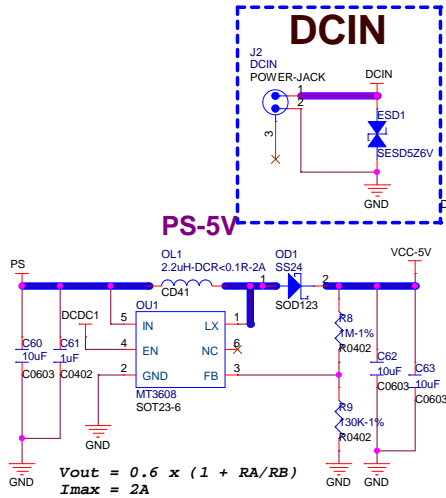
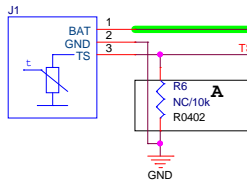


Away from the board outline and sensitive signal.  
Around GND line.

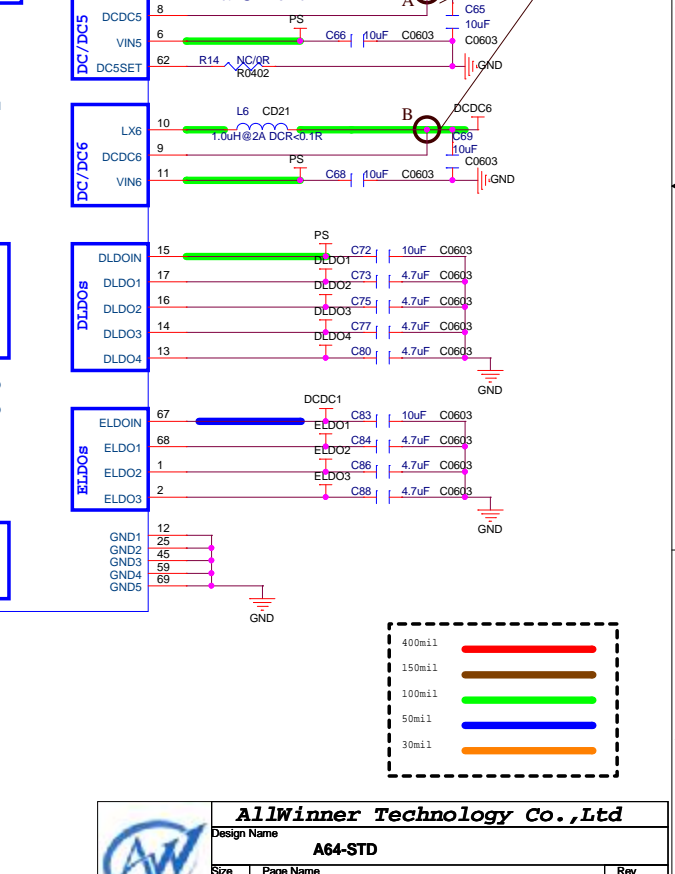
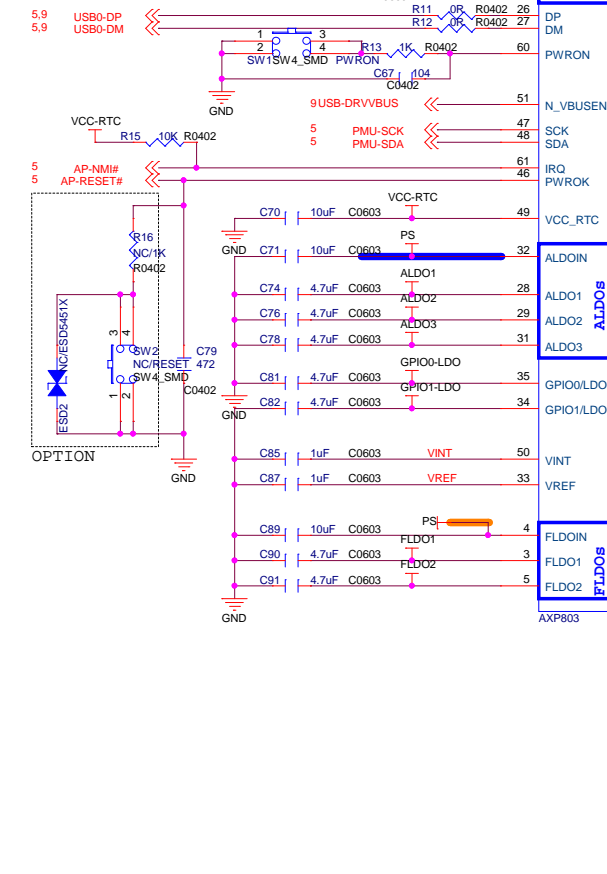
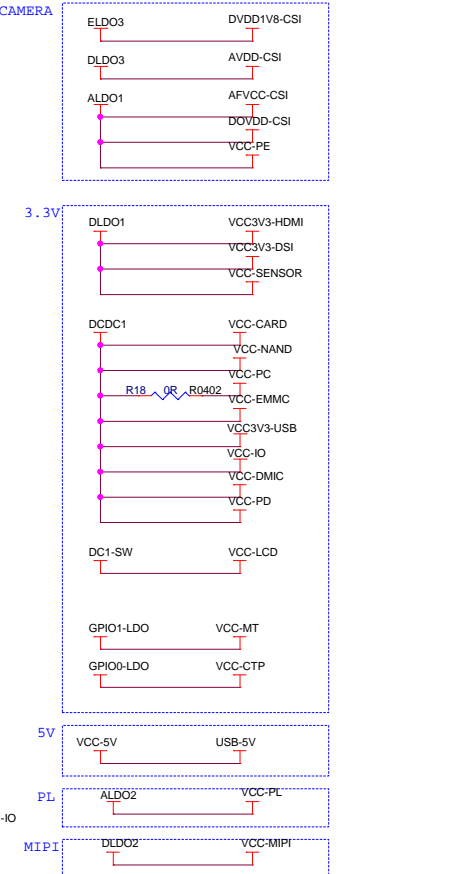
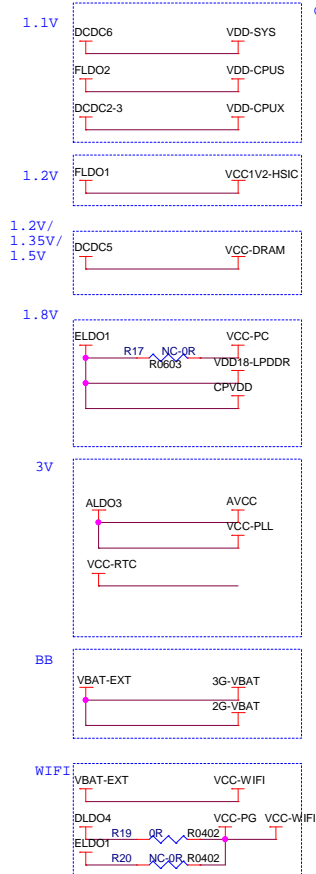
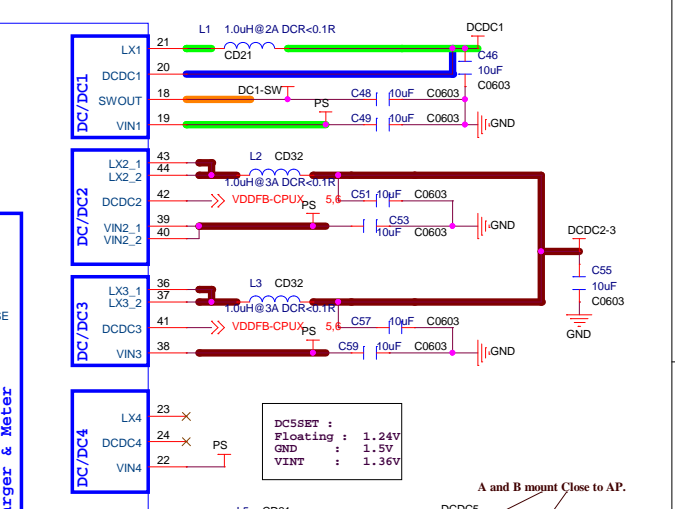
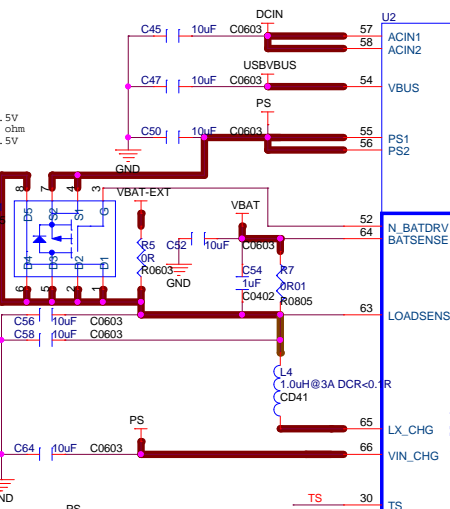


# Power BAT

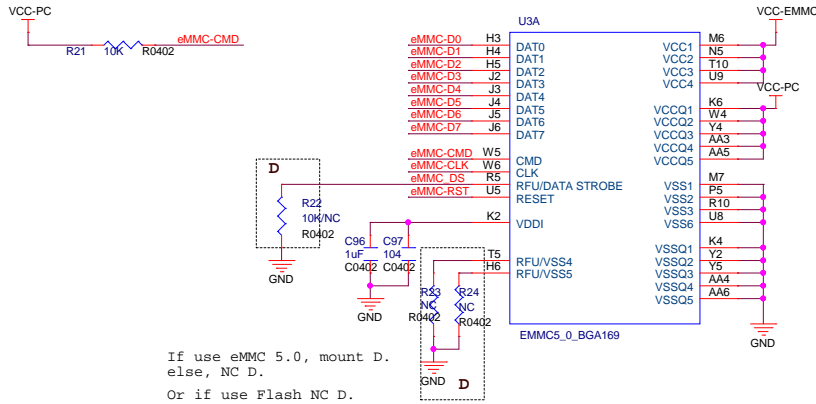
IF use the battery temperature sensor: A=NC  
otherwise: A=10k



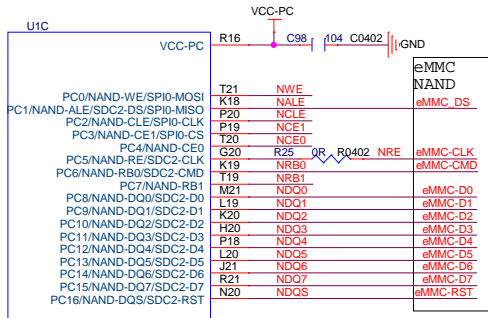
## PMIC



# NAND/eMMC

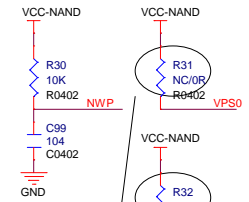
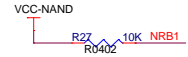


If use eMMC 5.0, mount D.  
else, NC D.  
Or if use Flash NC D.



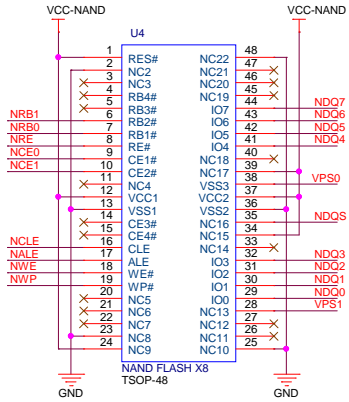
Both eMMC NAND and first TSOP NAND layout together

- (1) 1 NAND : [ 1 CE or 2 CE ]
- (2) 2 NAND : [ 1 CE ]

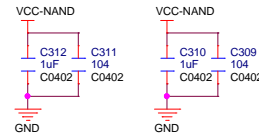
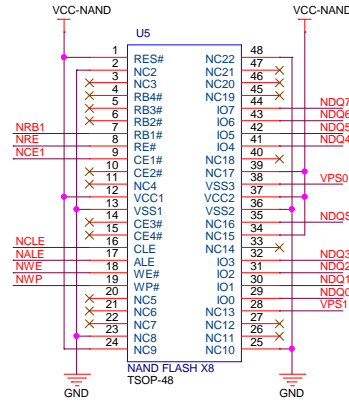


Please mount this two resistors if use Sandisk or Toshiba nand flash

The first NAND FLASH

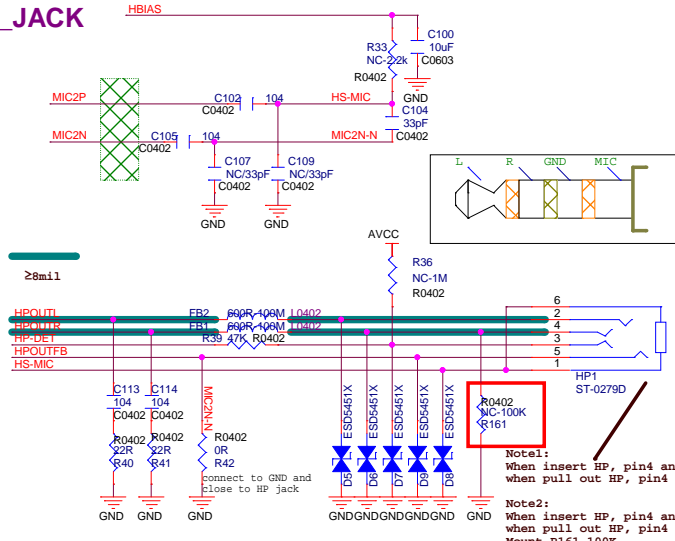


The second NAND FLASH

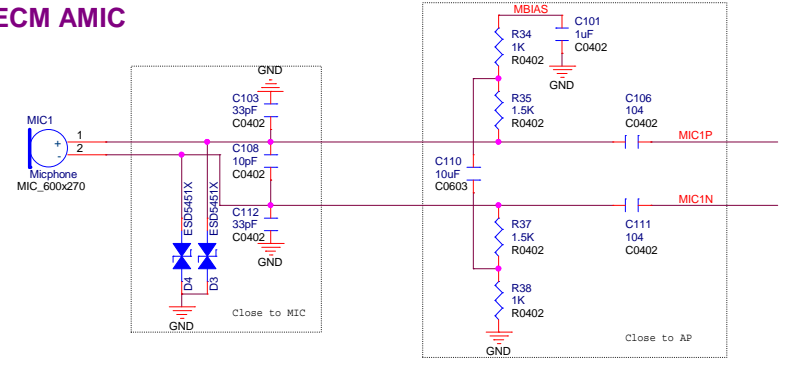


# AUDIO

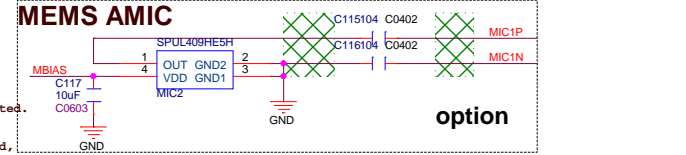
## HP\_JACK



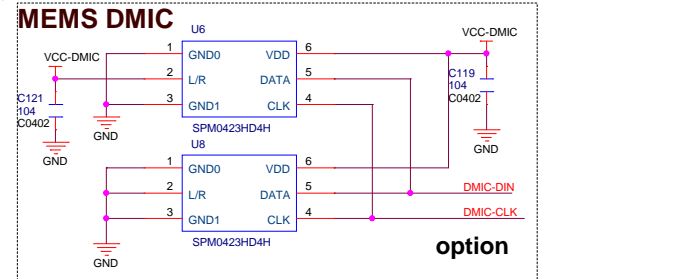
## ECM AMIC



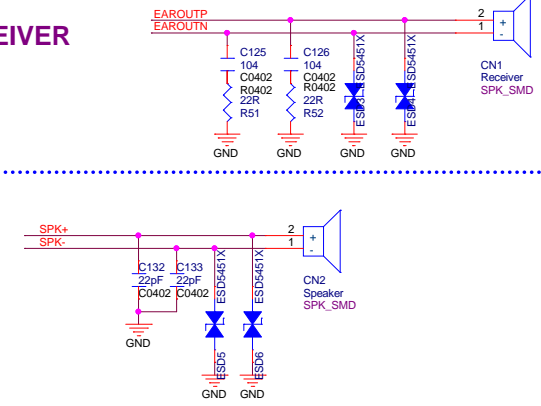
## MEMS AMIC



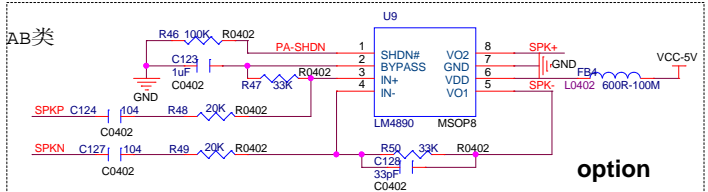
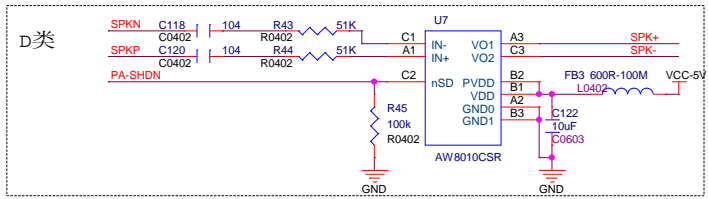
## MEMS DMIC



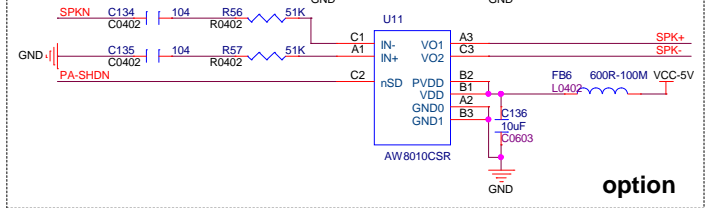
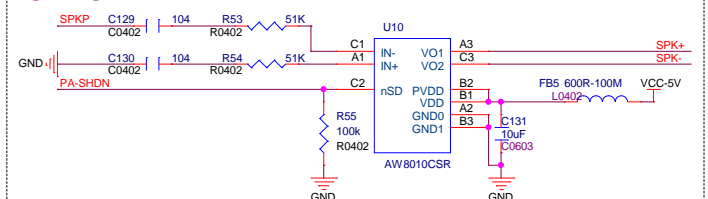
## RECEIVER



## SPEAKER



## DUAL SPEAKER



- 5 MBIAS
- 5 HBIAS
- 5 HP-DET
- 5 HP-OUTFB
- 5 HP-OUTL
- 5 HP-OUTR
- 5 MIC2N
- 5 MIC2P
- 5 MIC1N
- 5 MIC1P
- 5 HS-MIC
- 9 DMIC-CLK
- 9 DMIC-DIN
- 5 EAROUTP
- 5 EAROUTN
- 5 LINEOUTN
- 5 LINEOUTP
- 5 SPKN
- 5 SPKP
- 9 PA-SHDN



# T-CADD/USB

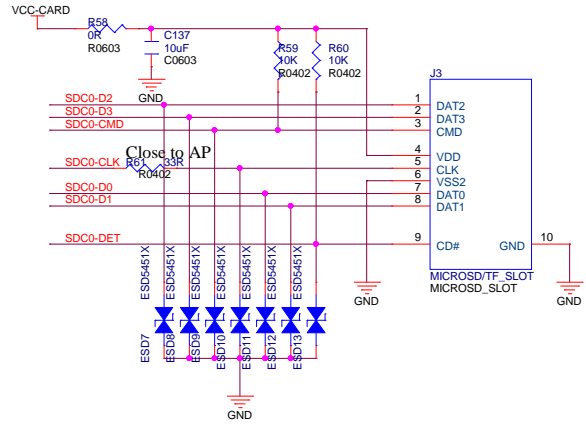
U1G

PF0/SDC0-D1/JTAG-MS1	AB10	SDC0-D1	
PF1/SDC0-D0/JTAG-DI1	W13	SDC0-D0	
PF2/SDC0-CLK/UART0-TX	AC8	SDC0-CLK	
PF3/SDC0-CMD/JTAG-DO1	W9	SDC0-CMD	
PF4/SDC0-D3/UART0-RX	AB6	SDC0-D3	
PF5/SDC0-D2/JTAG-CK1	AB9	SDC0-D2	
PF6	AB8	SDC0-DET	
PH0/TWI0-SCK	W11	TWI0-SCK	11
PH1/TWI0-SDA	AA10	TWI0-SDA	11
PH2/TWI1-SCK	AC4	TWI1-SCK	12
PH3/TWI1-SDA	AA9	TWI1-SDA	12
PH4/UART3-TX	AB5	CTP-INT	11
PH5/UART3-RX	AC7	LS-INT	12
PH6/UART3-RTS	AB4	GS-INT	12
PH7/UART3-CTS	AC5	PA-SHDN	8
PH8/SPDIF-OUT	Y10	CTP-RST	11
PH9	AA8	USB-ID	
PH10/MIC-CLK	Y8	DMIC-CLK	8
PH11/MIC-DATA	AA5	DMIC-DIN	8

A64

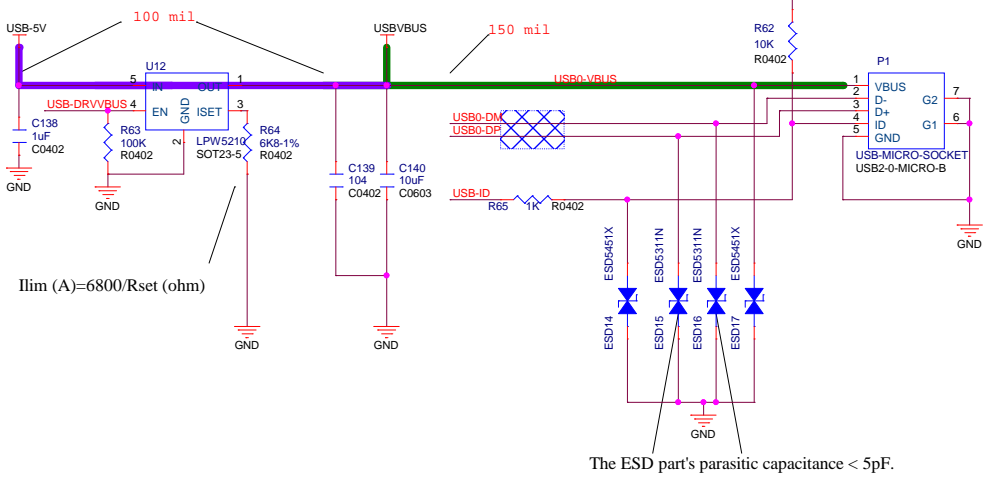
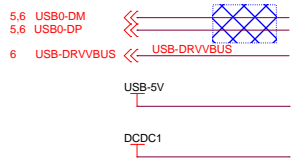
VCC-CARD

## T-CARD

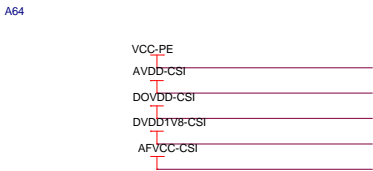
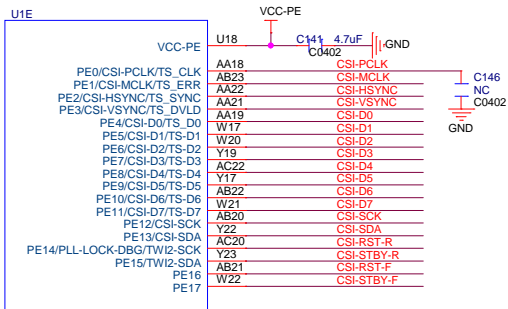


## USB

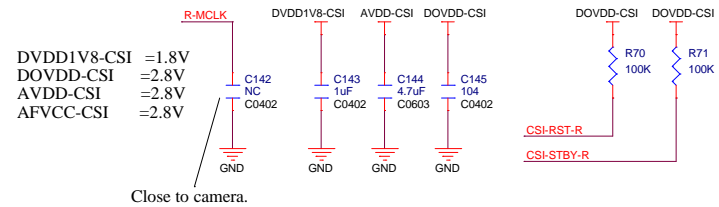
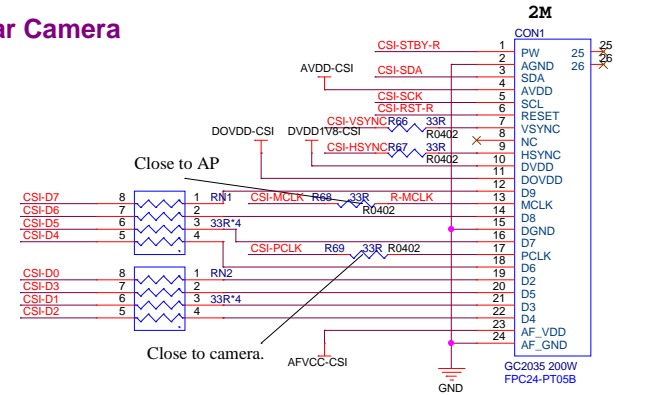
Differential pairs  
Z0= 90 ohm



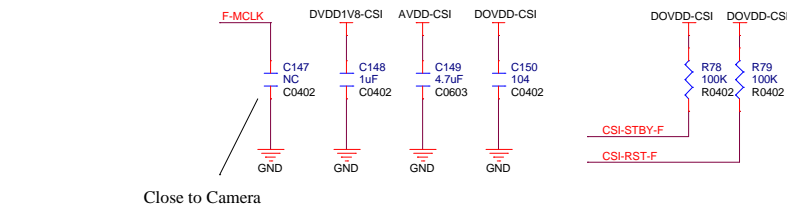
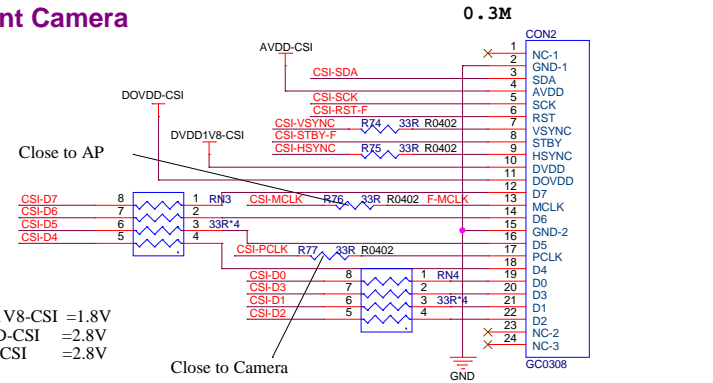
# CAMREA



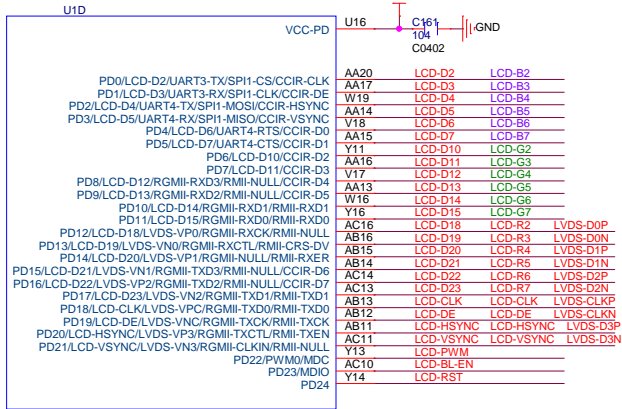
## Rear Camera



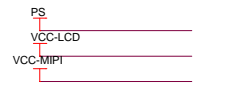
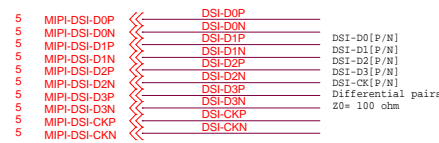
## Front Camera



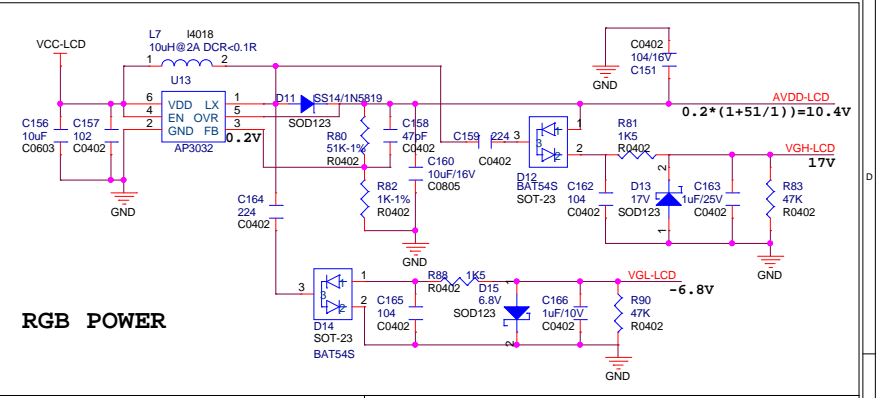
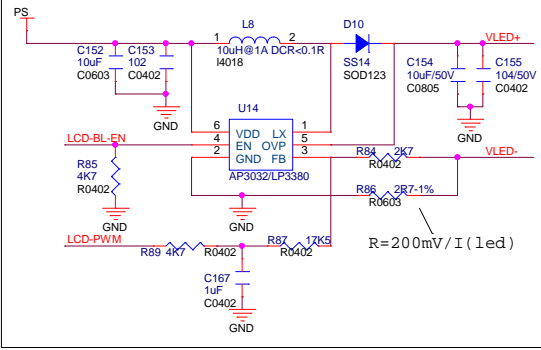
# LCM/CTP



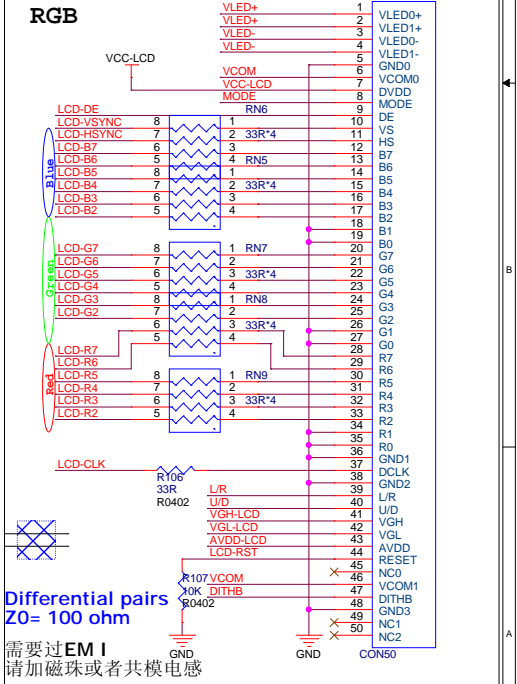
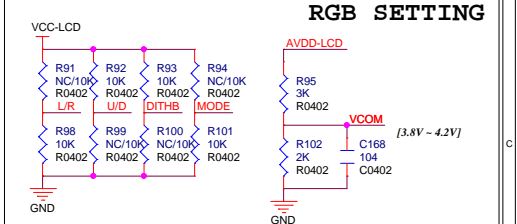
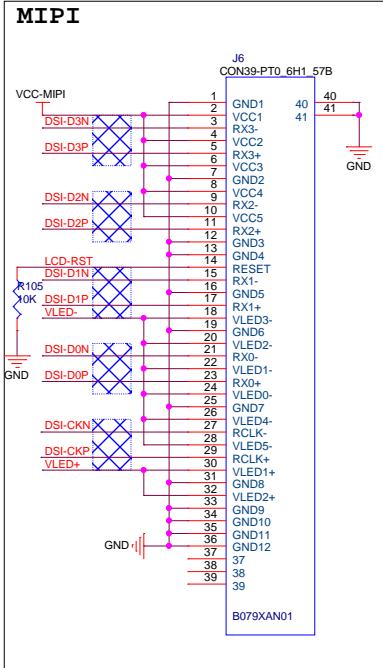
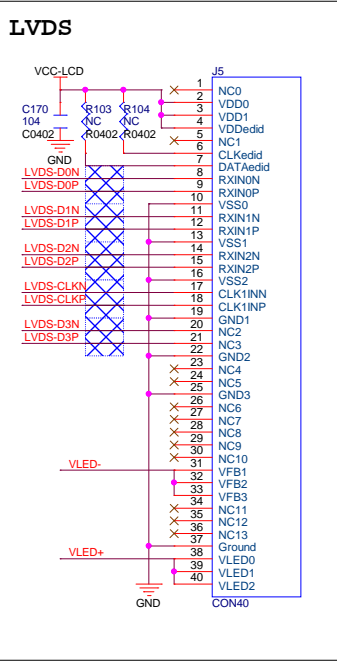
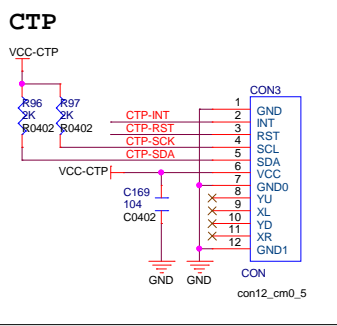
A64



## Backlight



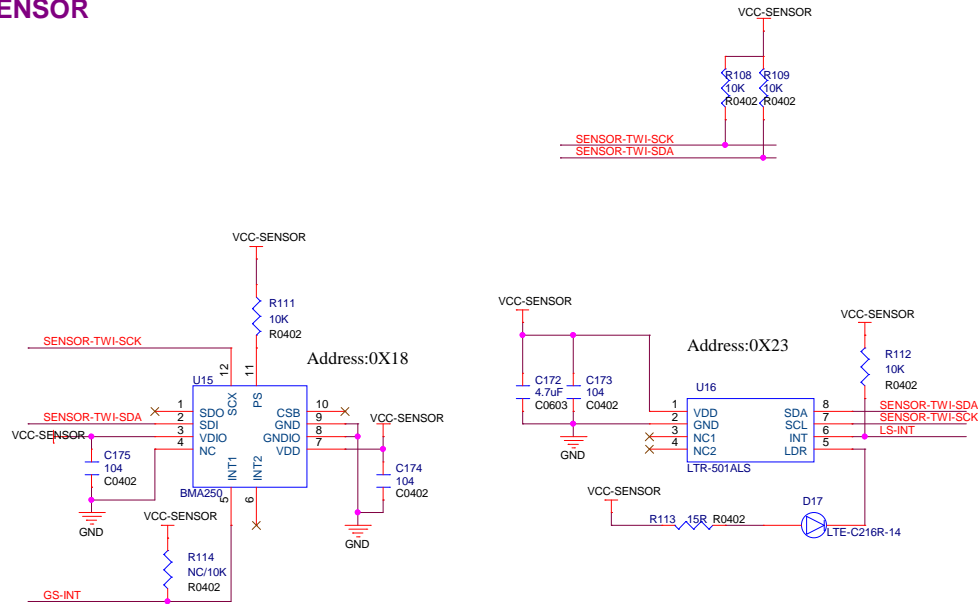
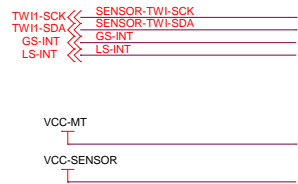
## RGB POWER



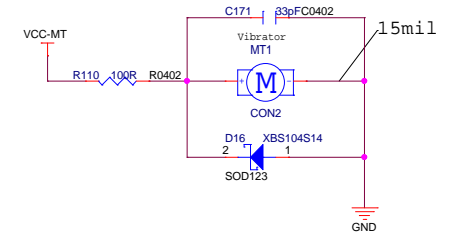
# SENSORs/MT/KEY

## SENSOR

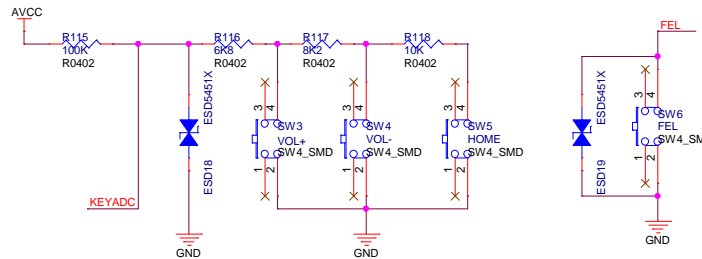
## Motor



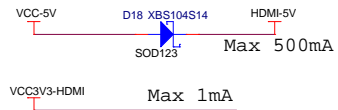
place PIN1 in the top right, parallel to the screen, and put on the top left of the screen



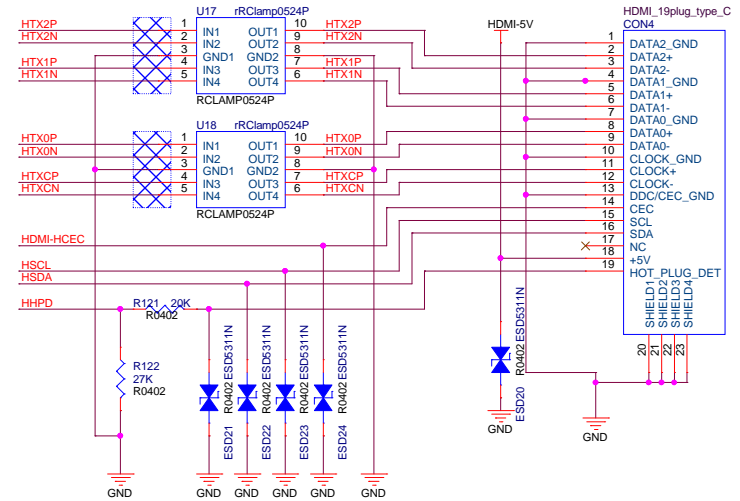
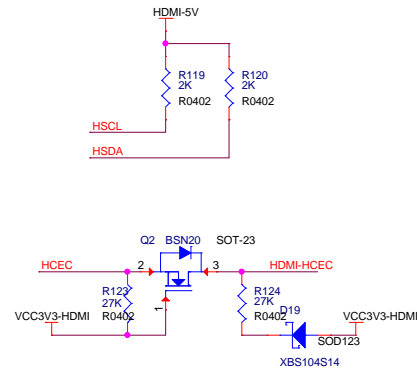
## KEY



# HDMI

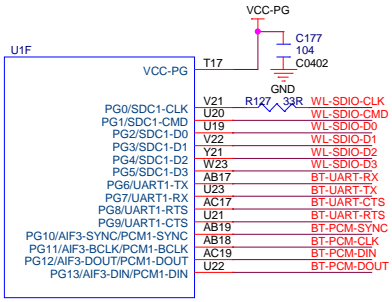


Differential pairs  
Z0= 100 ohm

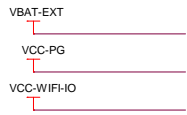
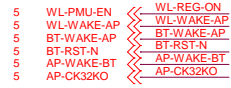


# WIFI+BT

A

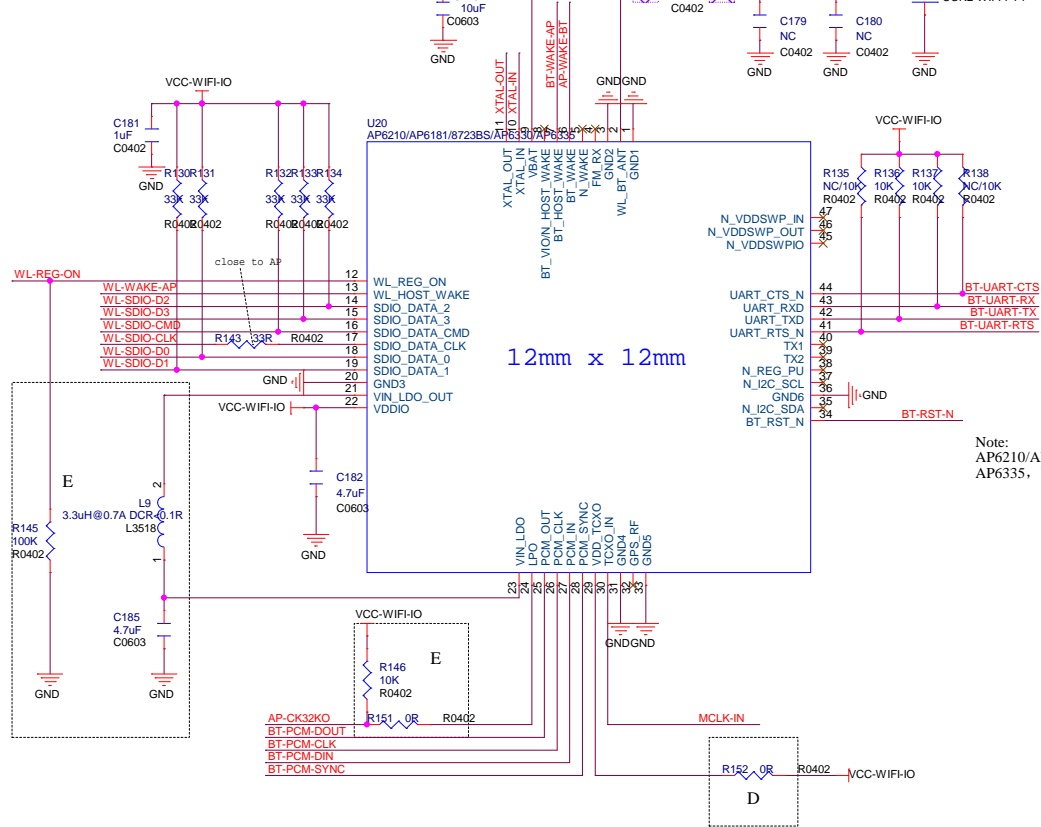


A64



B

Note:  
 AP6210, Mount A+C+D+E, NC B+F  
 AP6181, Mount B+E, NC A+C+D+F  
 8723BS, Mount F, NC A+B+C+D+E  
 AP6330/6335, Mount B+C+E, NC A+D+F



12mm x 12mm

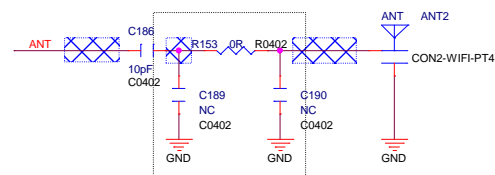
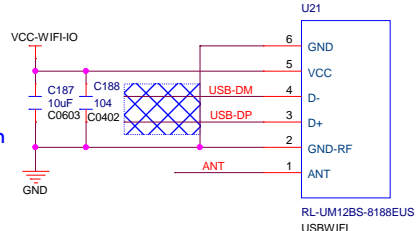
Note:  
 AP6210/AP6181/8723BS/AP6330, Y1=26M  
 AP6335, Y1=37.4M

## USB WIFI

Differential pairs  
 ZO= 90 ohm

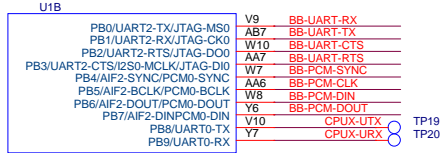


50 ohm

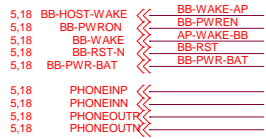


Allwinner Technology Co., Ltd		
Design Name: A64-STD		
Size: A3	Page Name: WIFI+BT	Rev:
Date: Saturday, July 04, 2015	Sheet: 14	of 18

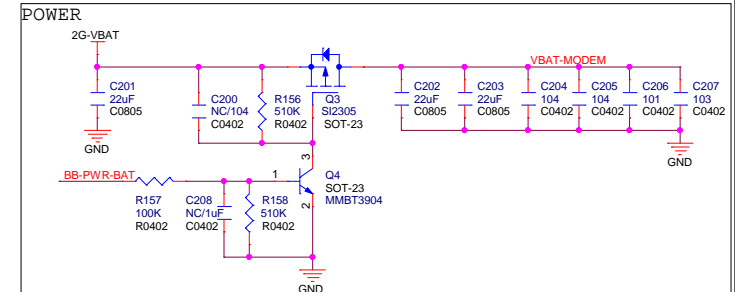
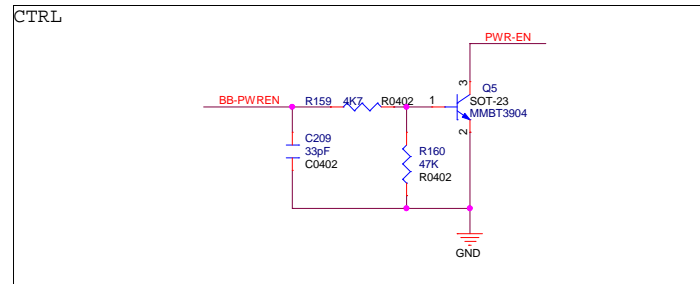
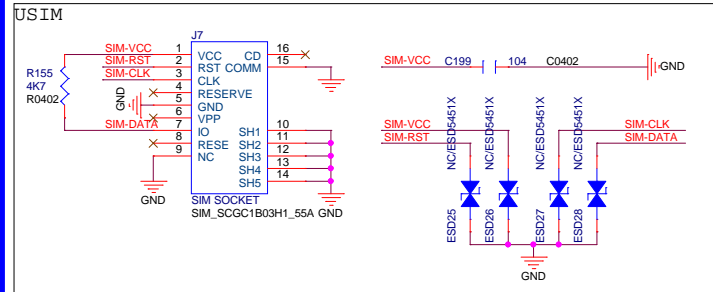
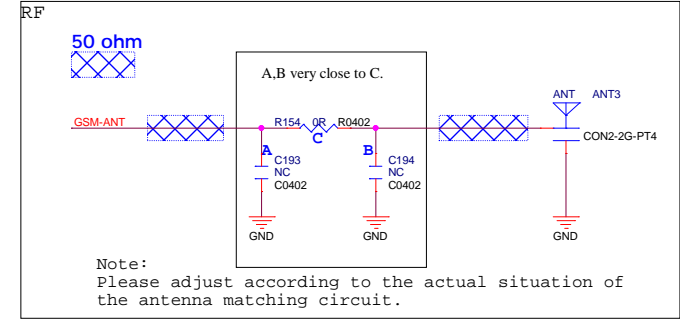
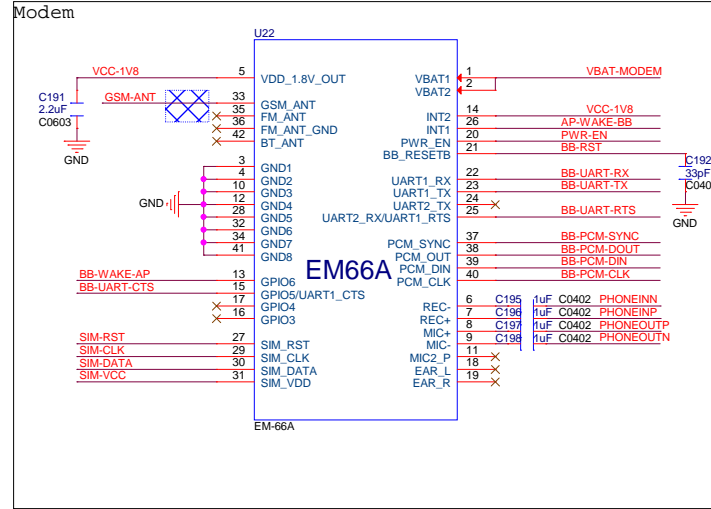
# MODEM-2G



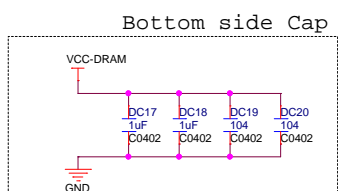
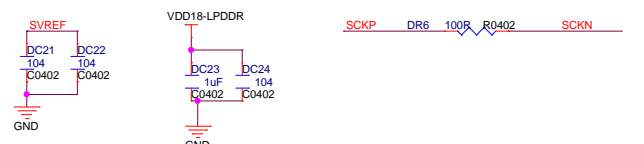
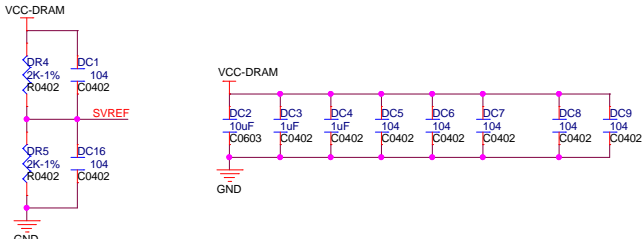
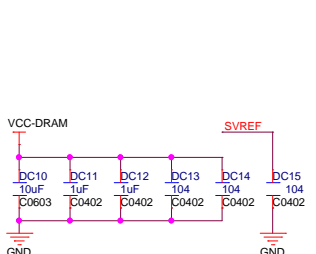
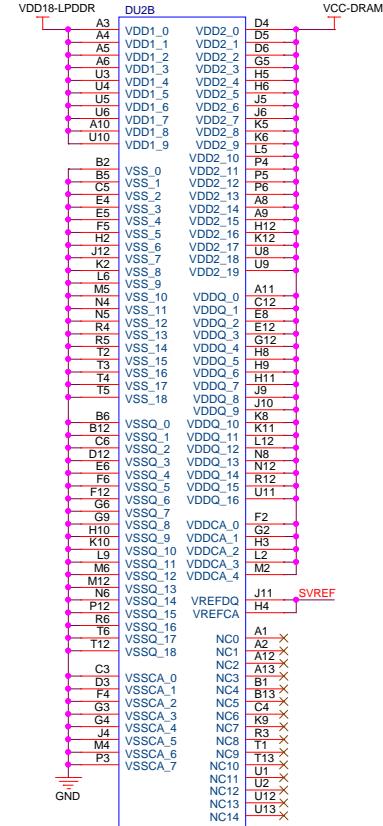
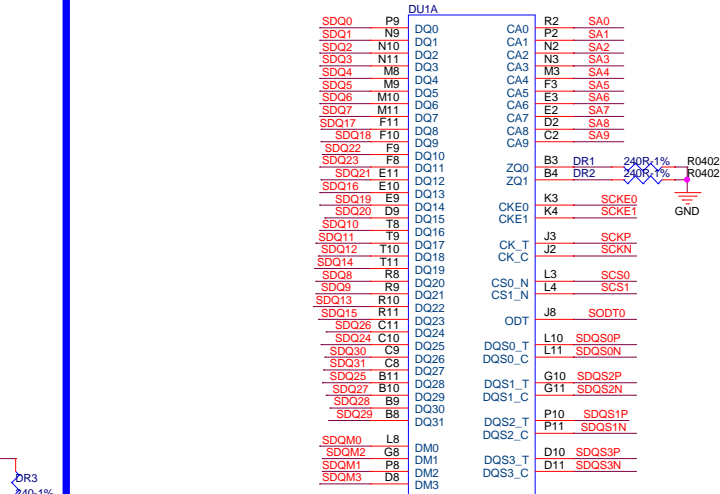
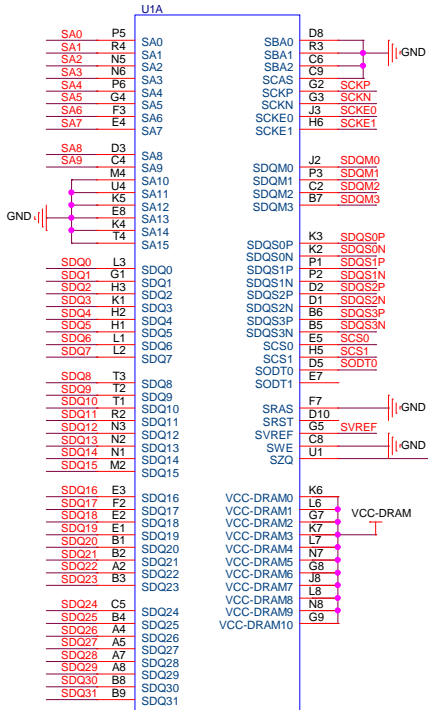
A64



2G-VBAT



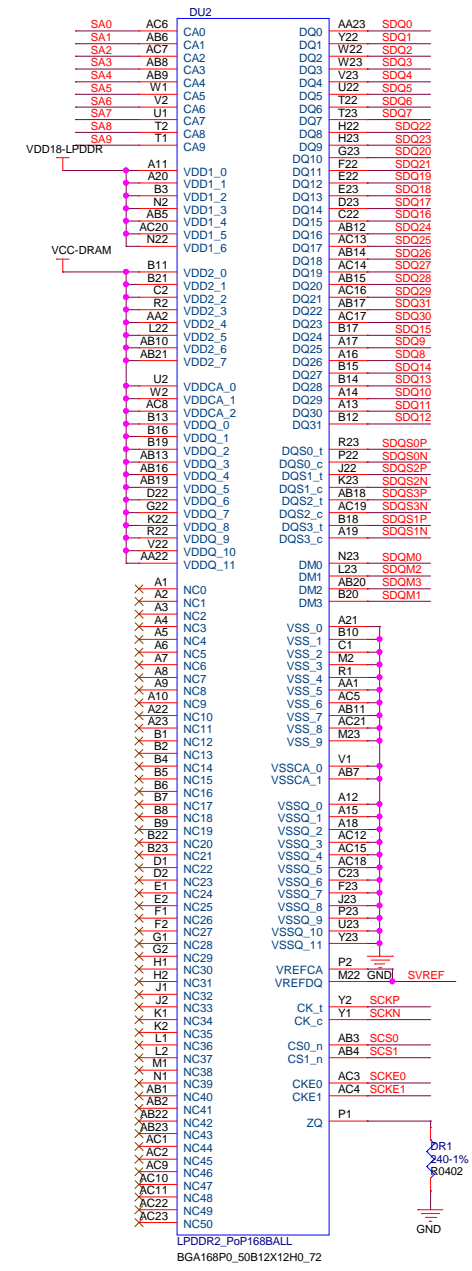
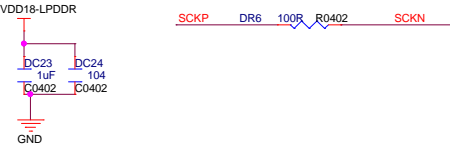
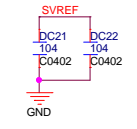
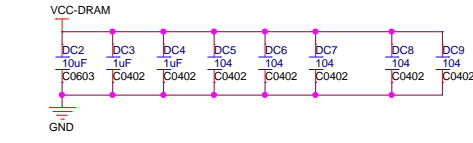
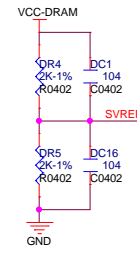
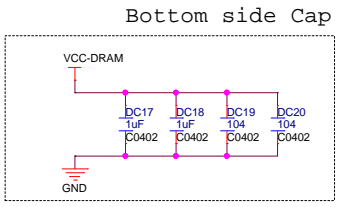
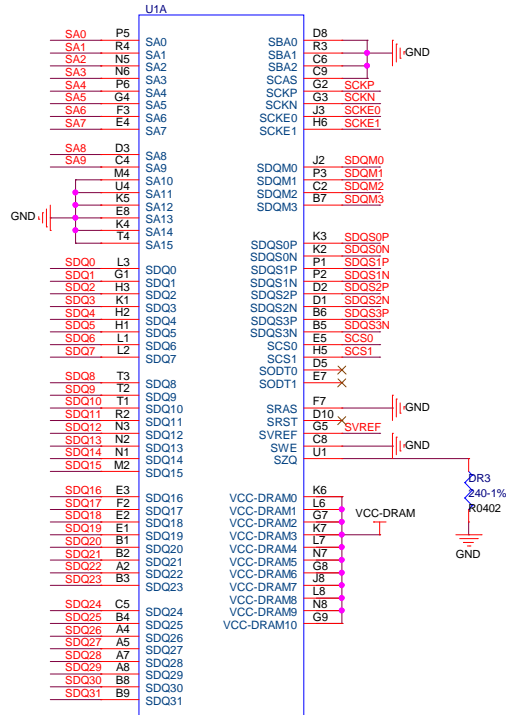
# LPDDR3



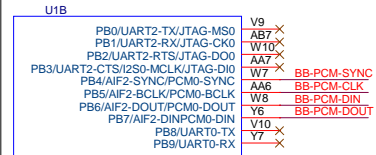
		<b>Allwinner Technology Co.,Ltd</b>	
Design Name <b>A64-STD</b>			
Size <b>A3</b>	Page Name <b>LPDDR3 FPGA178</b>		Rev
Date: <b>Saturday, July 04, 2015</b>		Sheet <b>16</b>	of <b>18</b>



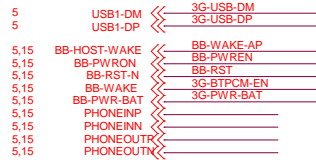
# LPDDR3/LPDDR2



# MODEM 3G



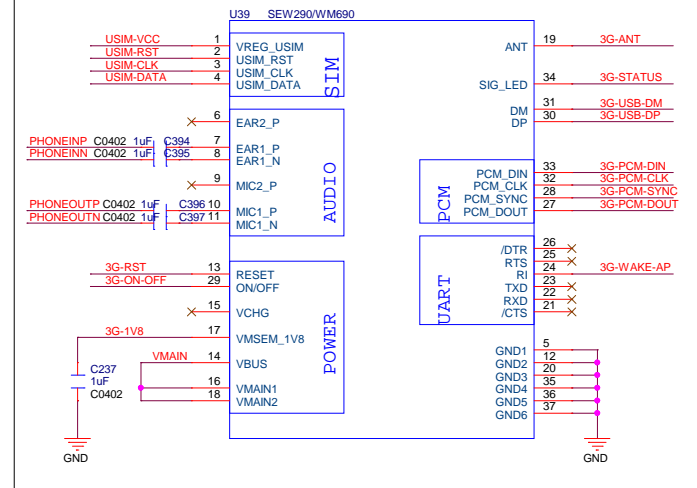
A64



3G-VBAT 3.4~4.2V

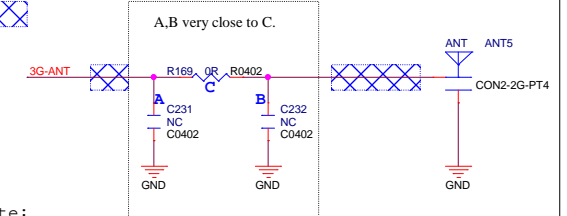
DCDC1

## Modem



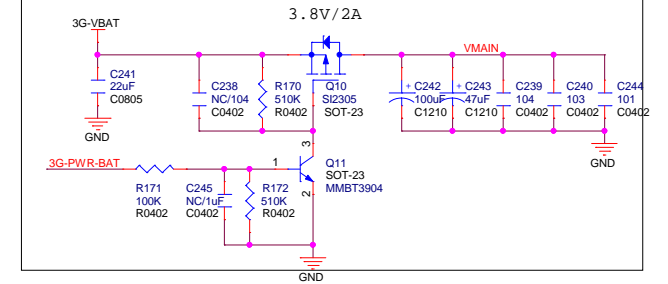
## RF

50 ohm

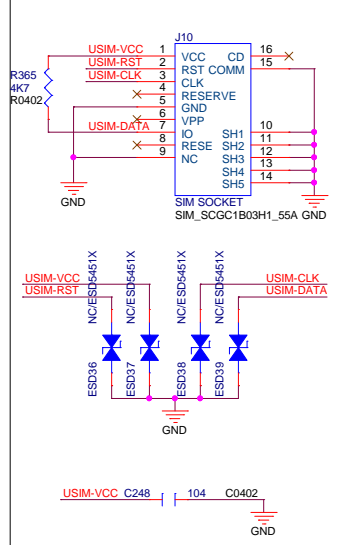


Note:  
Please adjust according to the actual situation of the antenna matching circuit.

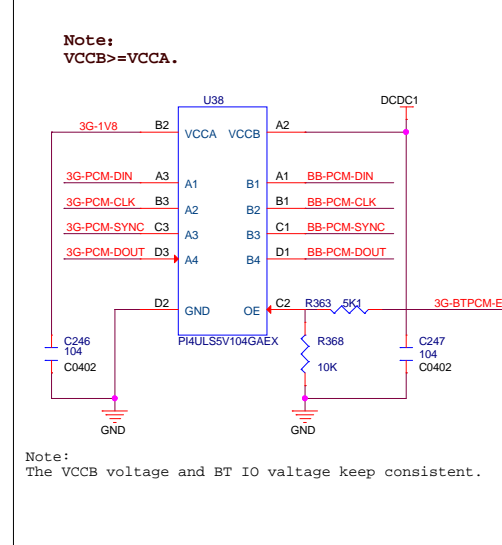
## POWER



## USIM



## LEVEL TRANSFORM



## CTRL

