

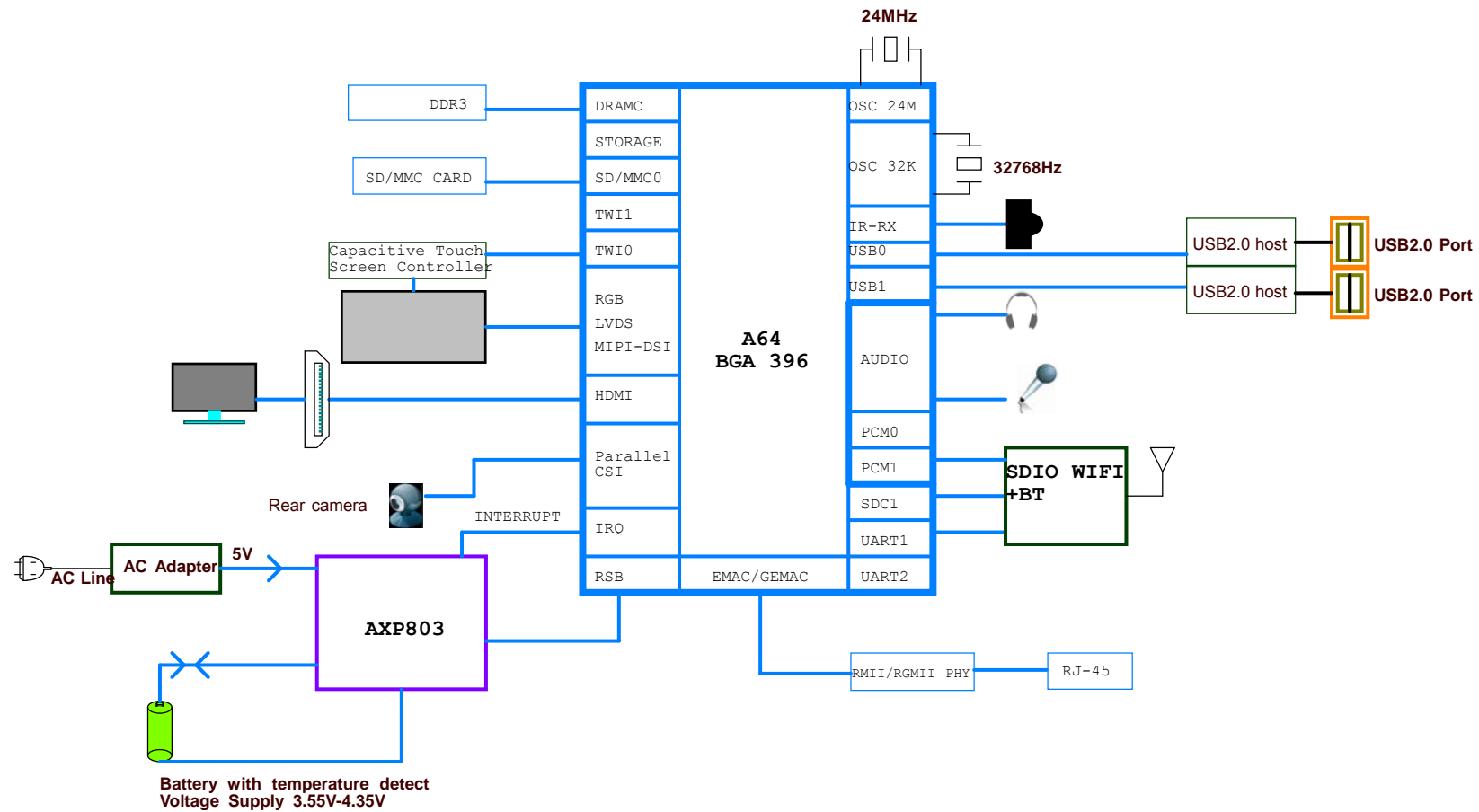
VERSION HISTORY

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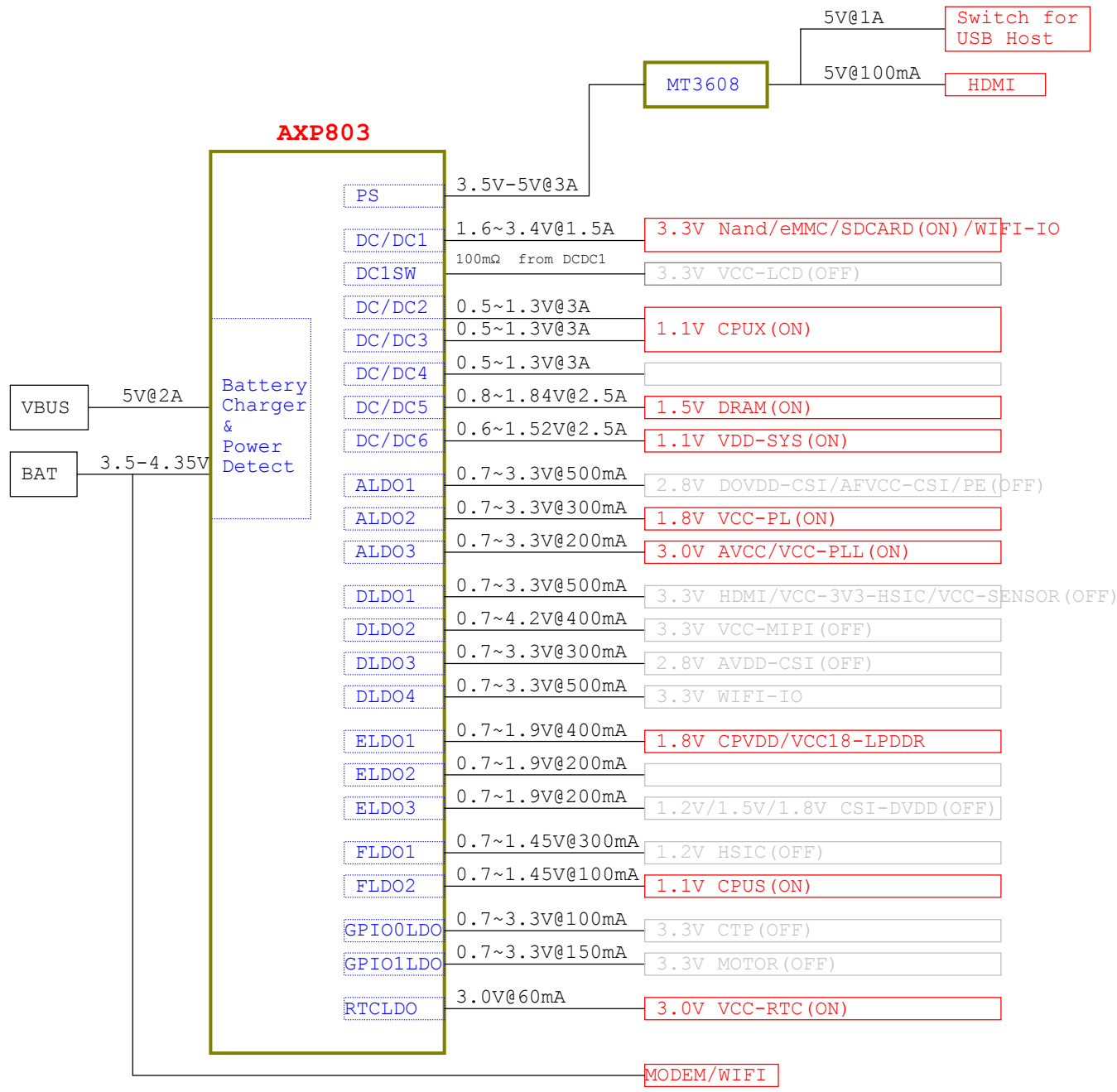
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Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Release version	2015-04-22			
Ver 1.2	Added EXP Connector and rearrange Wifi/BT module pintout	2015-12-24			
	Added power LED light				

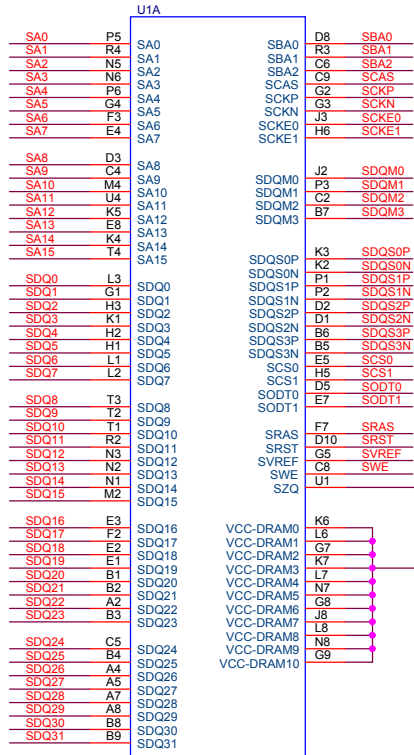
BLOCK DIAGRAM



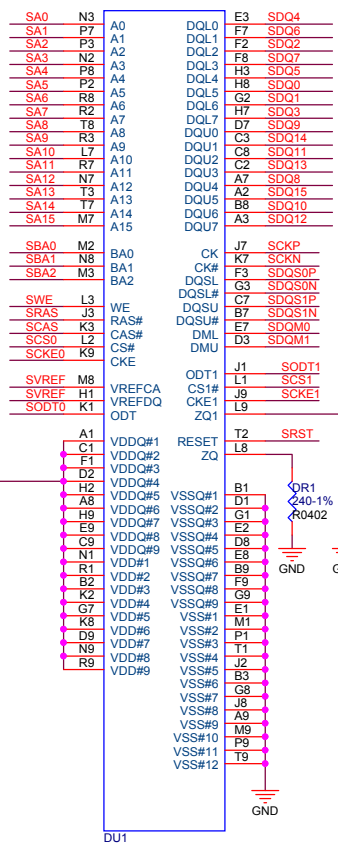
POWER TREE



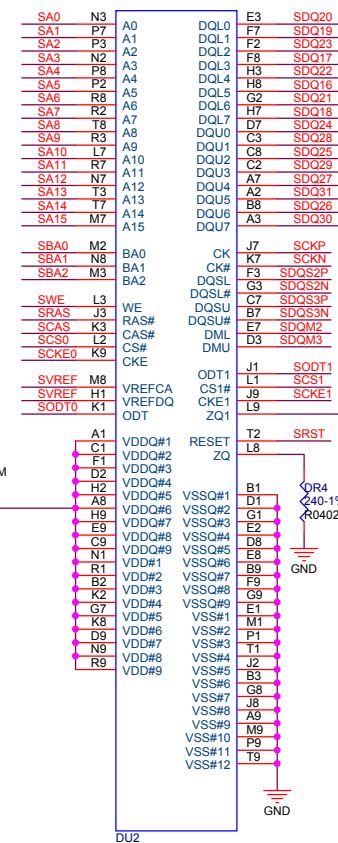
DDR3 16x2



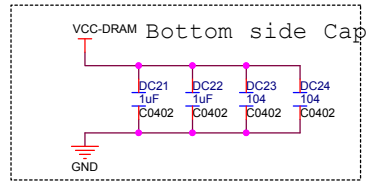
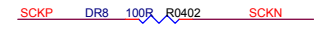
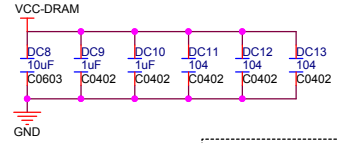
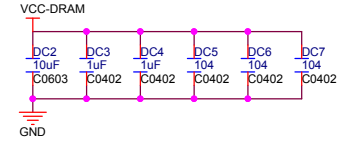
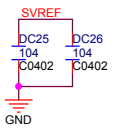
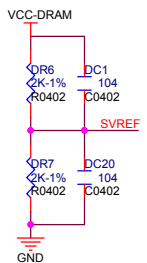
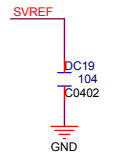
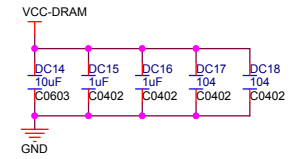
A64



DU1
DDR3-FBGA96
BGA96P0_80B11_00X14_00

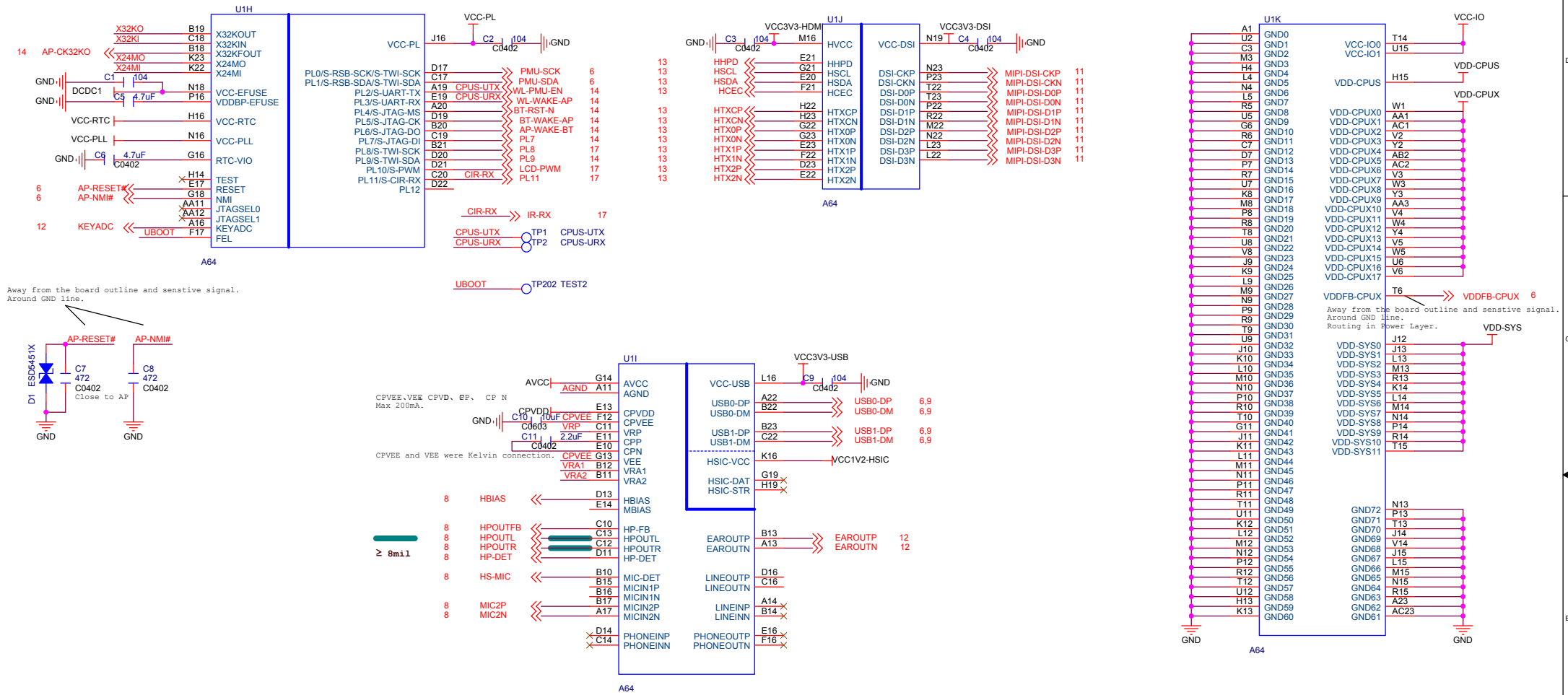


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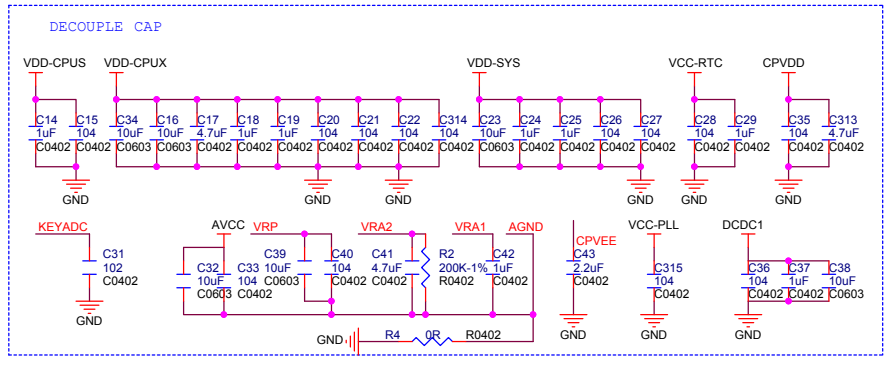
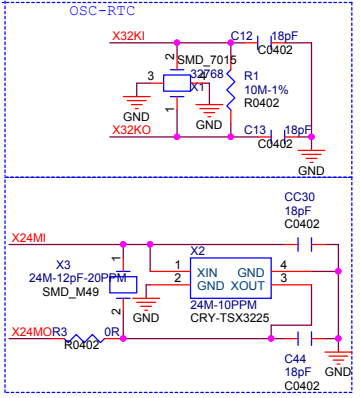
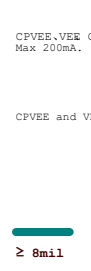
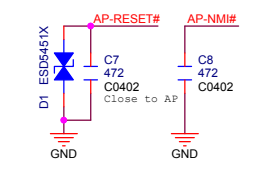
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CPU



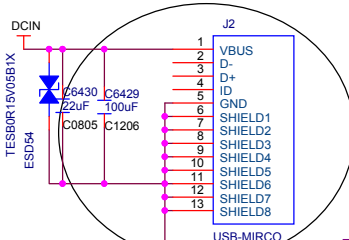
Away from the board outline and sensitive signal.
Around GND line.

Away from the board outline and sensitive signal.
Around GND line.
Routing in Power Layer.

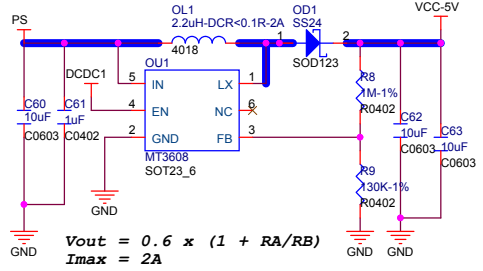


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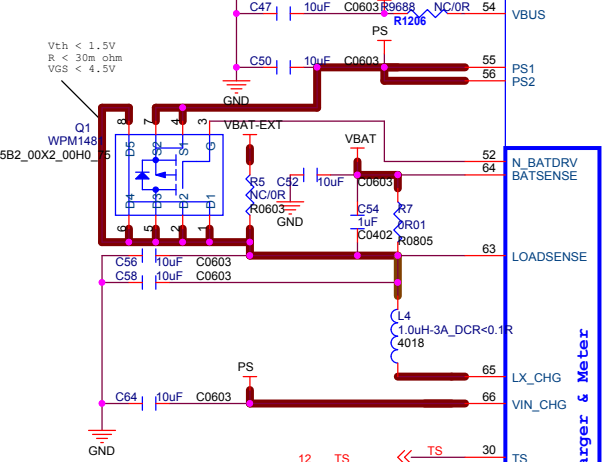
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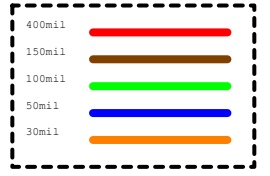
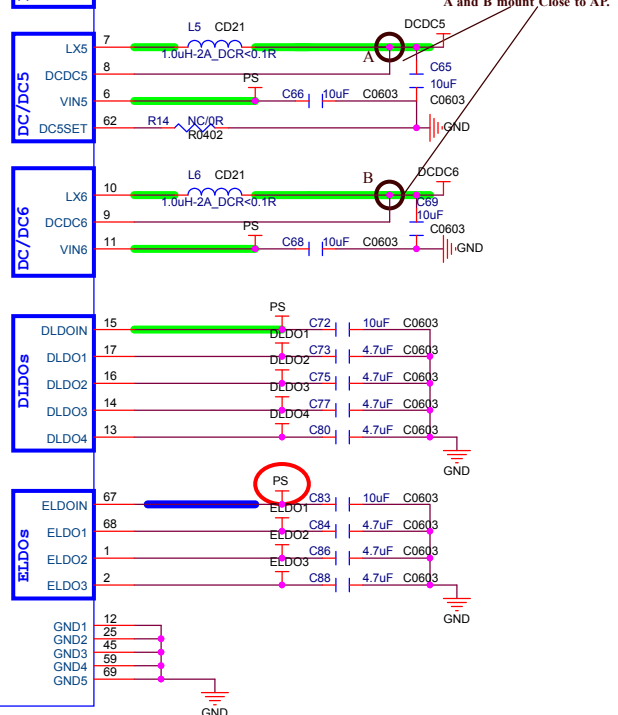
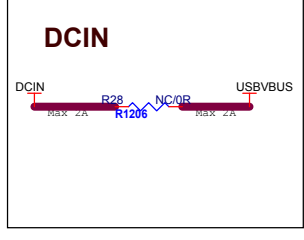
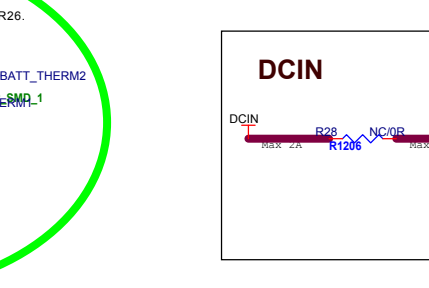
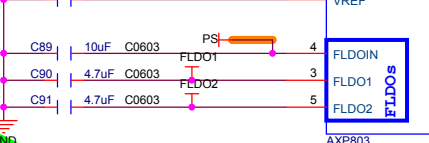
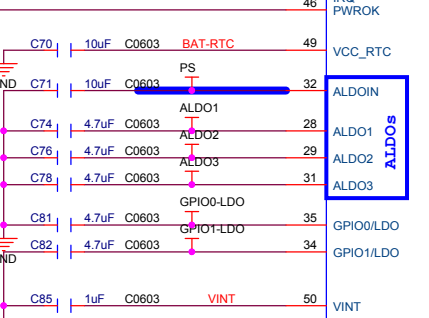
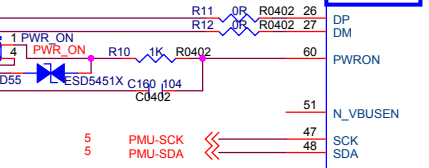
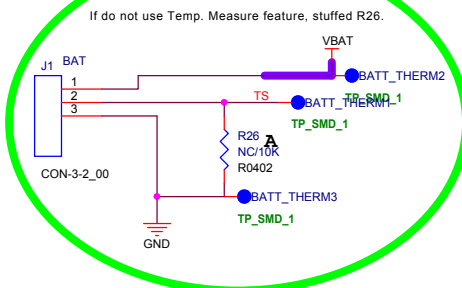
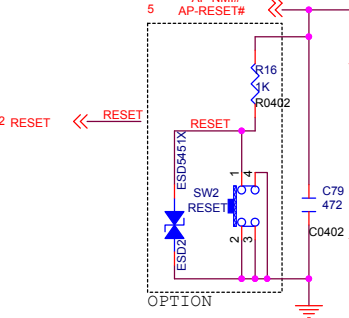
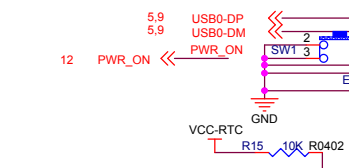
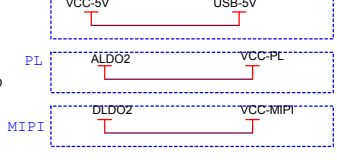
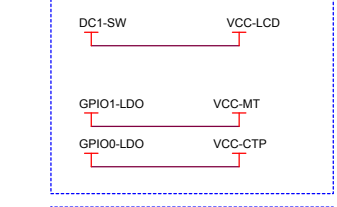
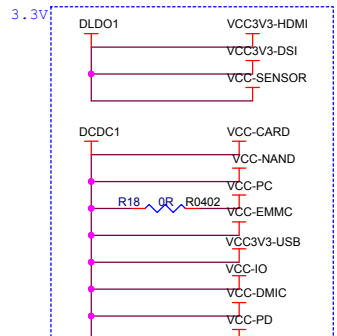
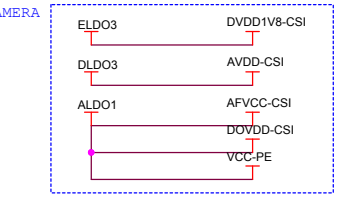
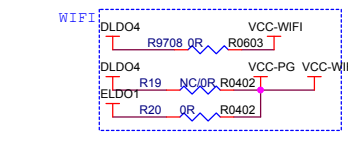
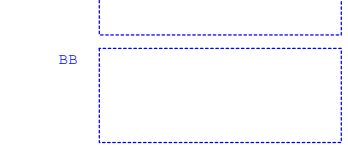
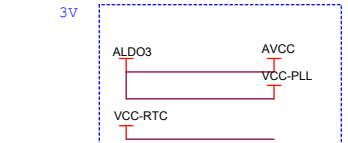
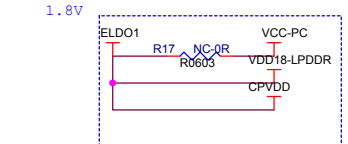
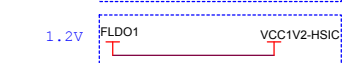
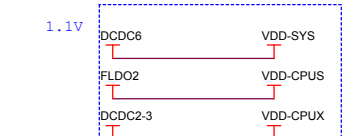
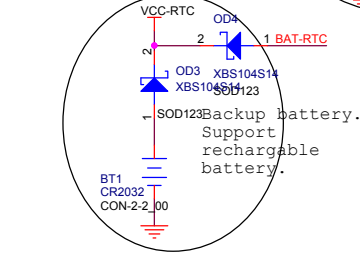
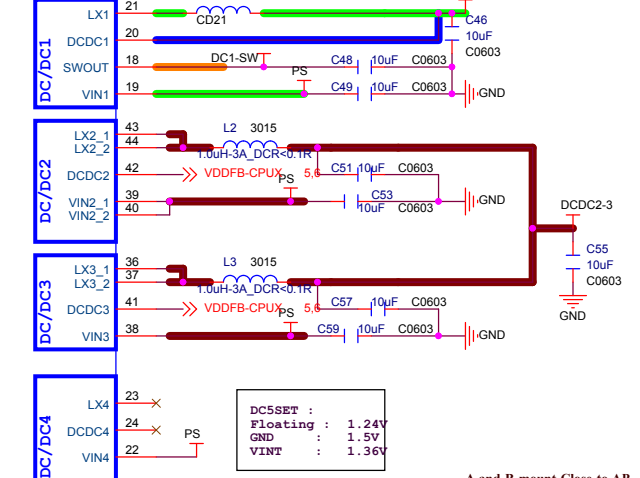
PS-5V



PMIC

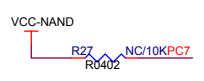
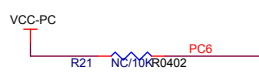
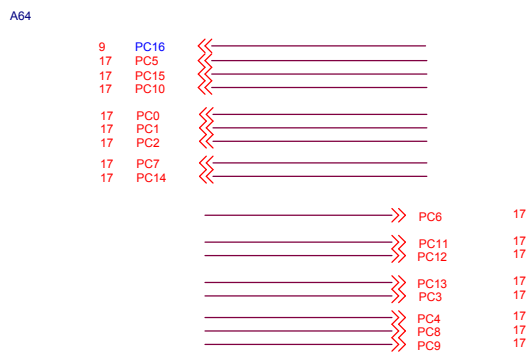
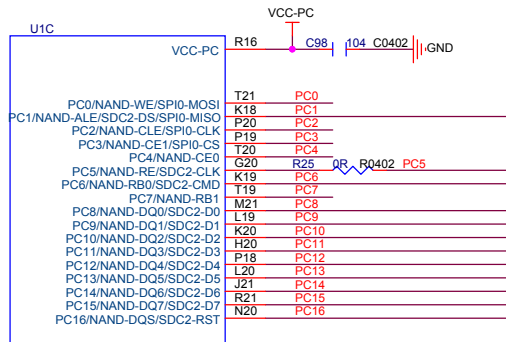


Charger & Meter



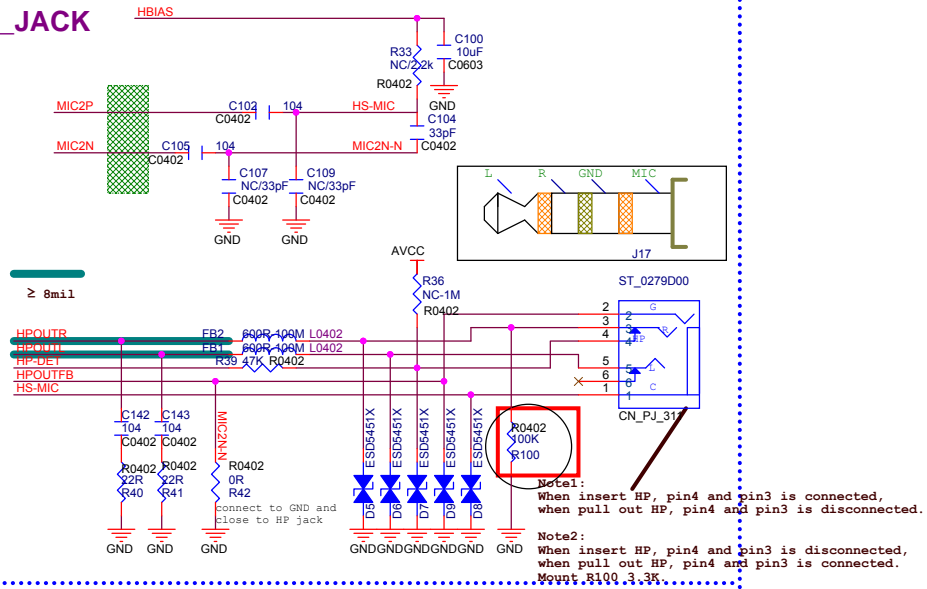
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NAND/eMMC



AUDIO

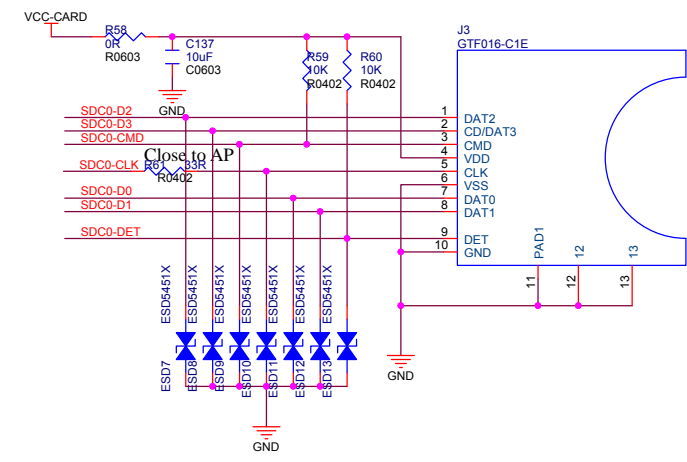
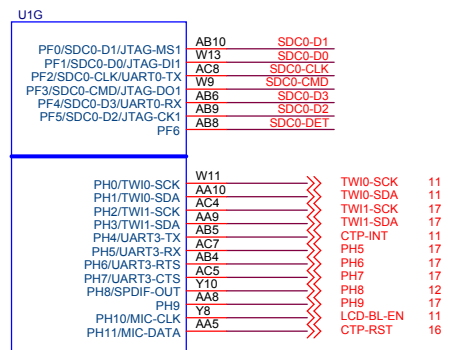
HP_JACK



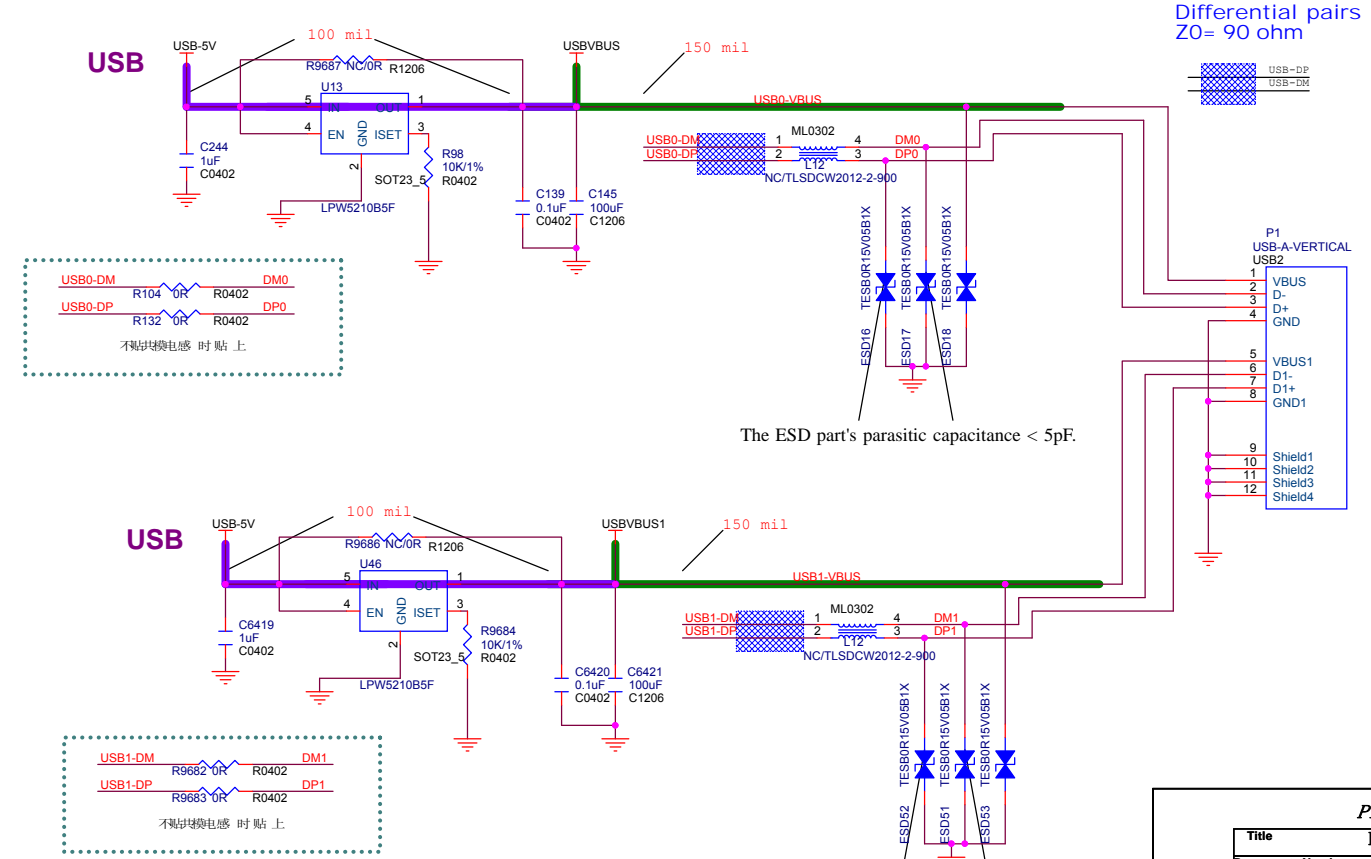
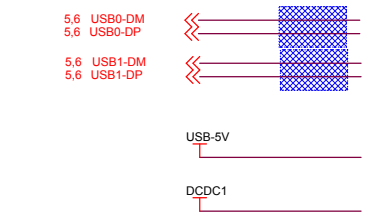
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T-CADD/USB

T-CARD



USB



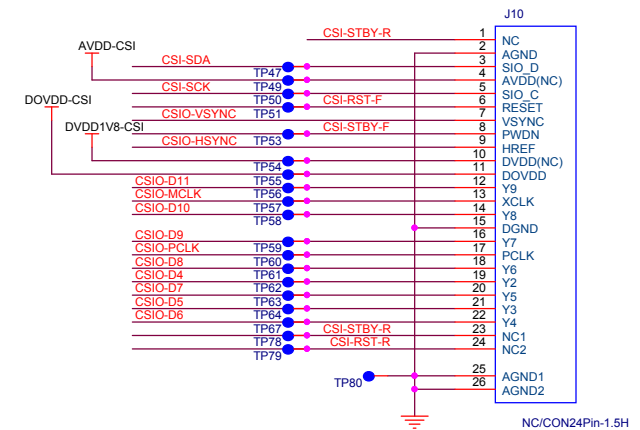
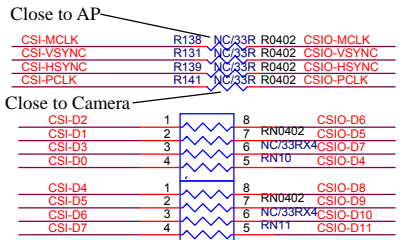
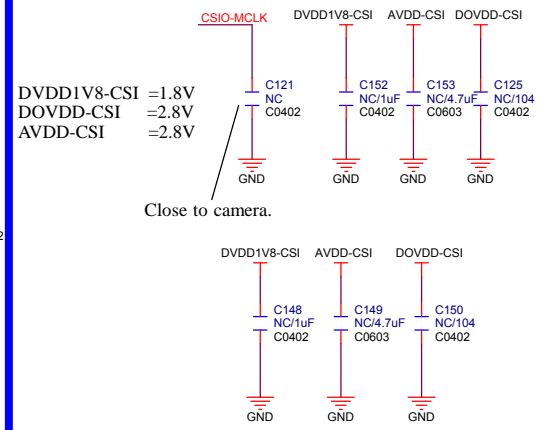
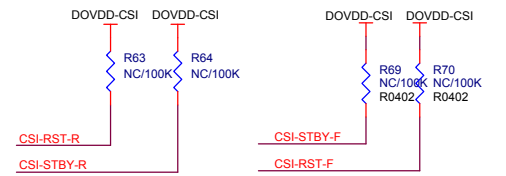
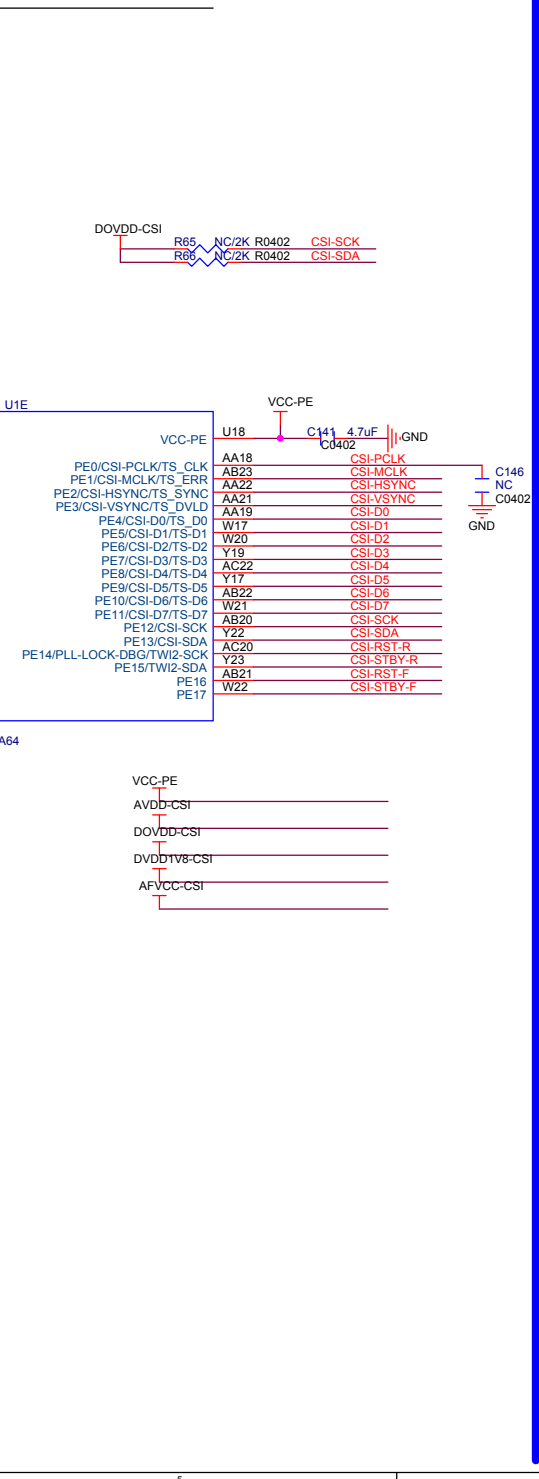
Differential pairs
 ZO= 90 ohm

The ESD part's parasitic capacitance < 5pF.

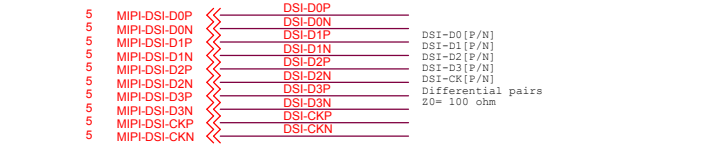
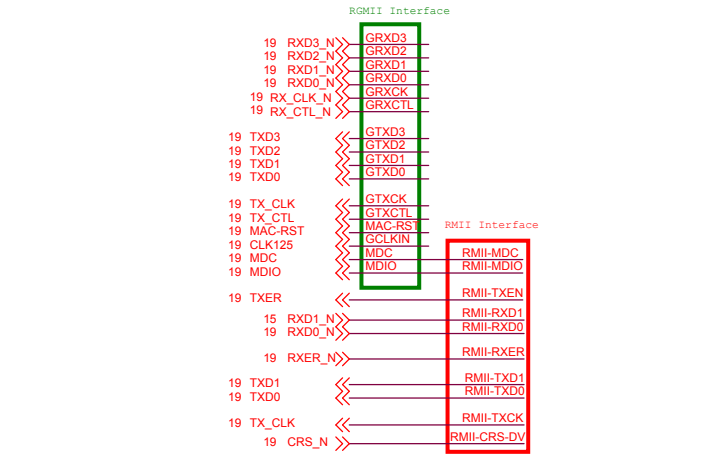
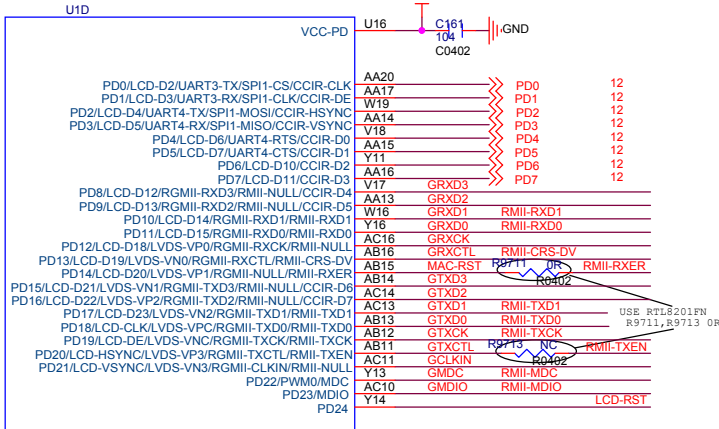
The ESD part's parasitic capacitance < 5pF.

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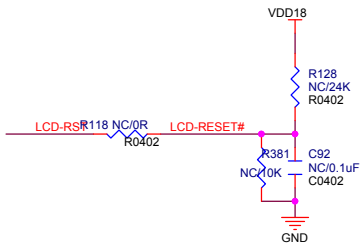
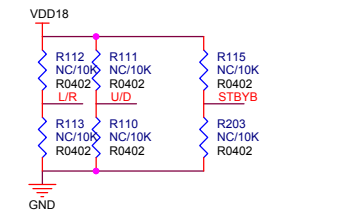
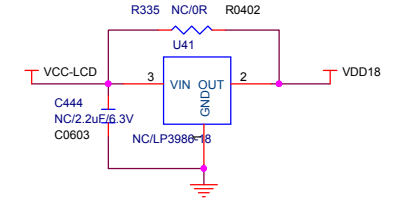
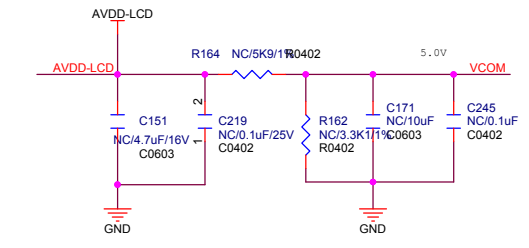
CAM9R5



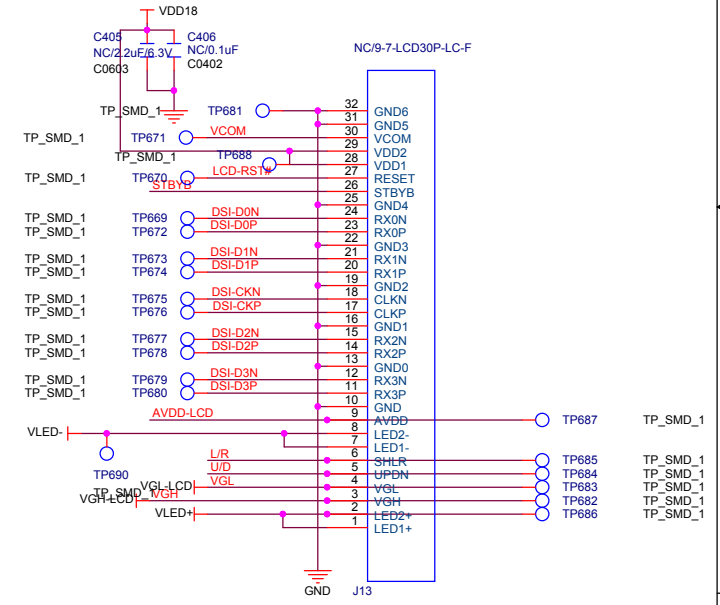
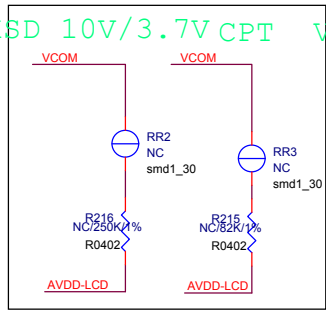
LCD



MIPI-LCD

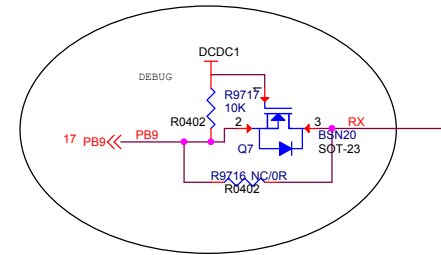
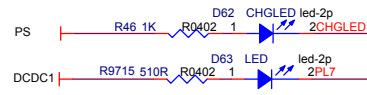
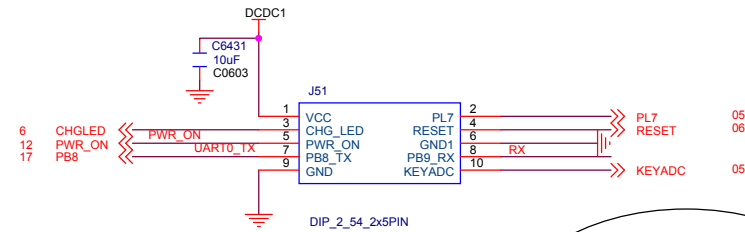
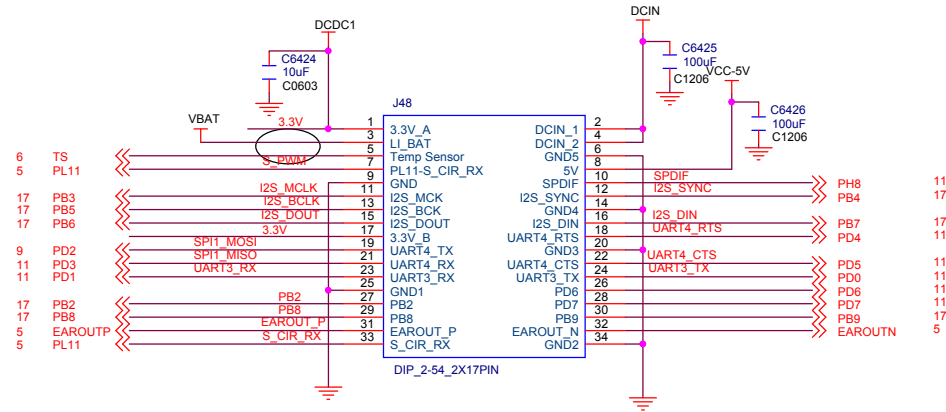


HSD 10V/3.7V CPT Vcom=4.3V



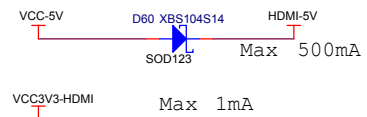
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Euler bus

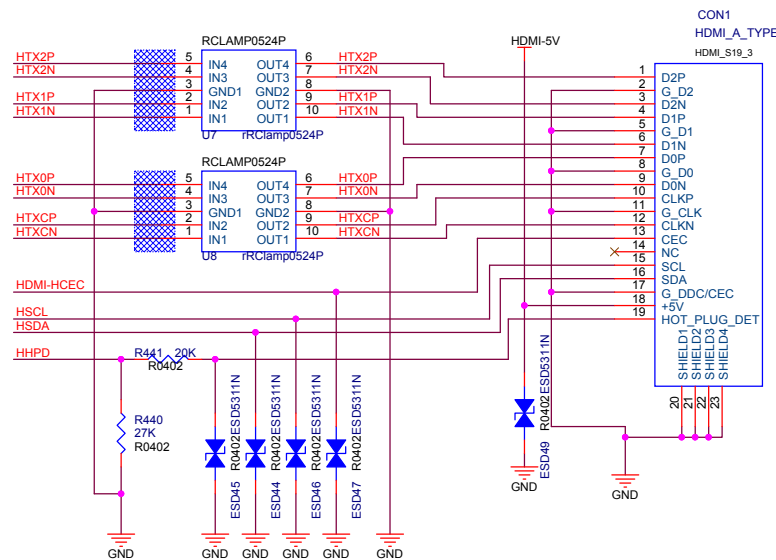
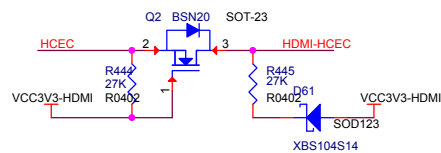
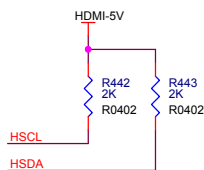


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HDMI

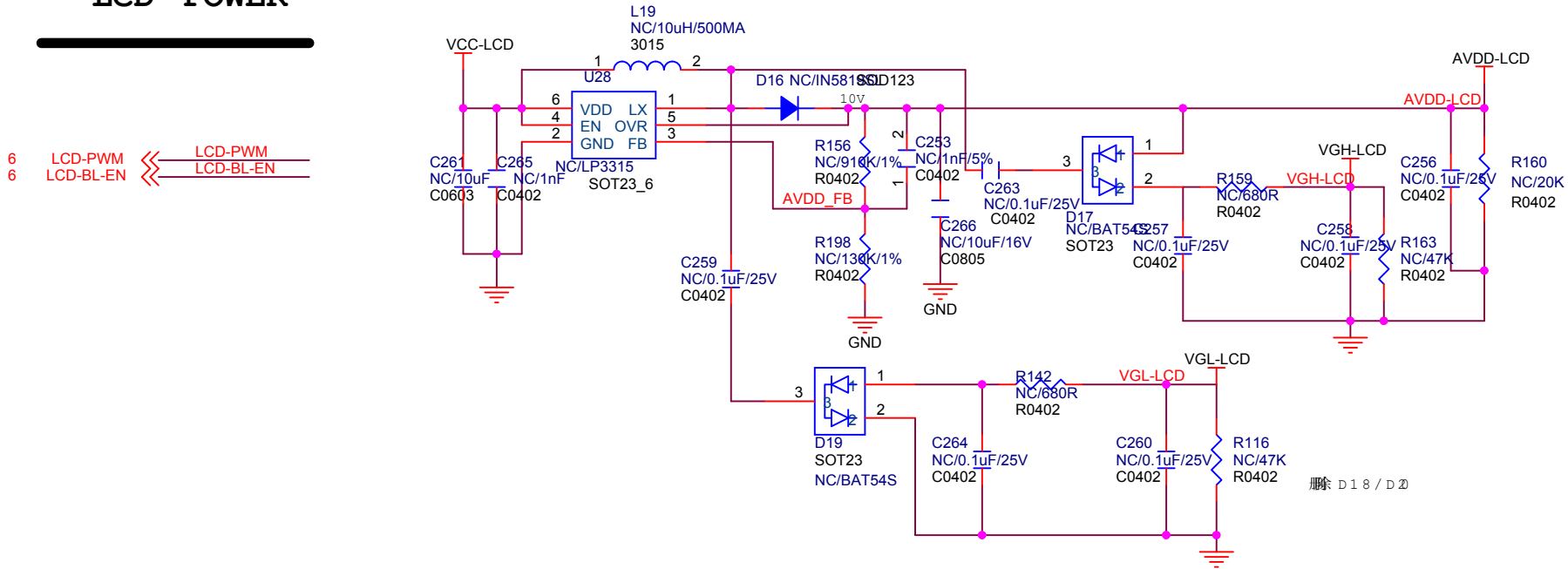


Differential pairs
Z0= 100 ohm

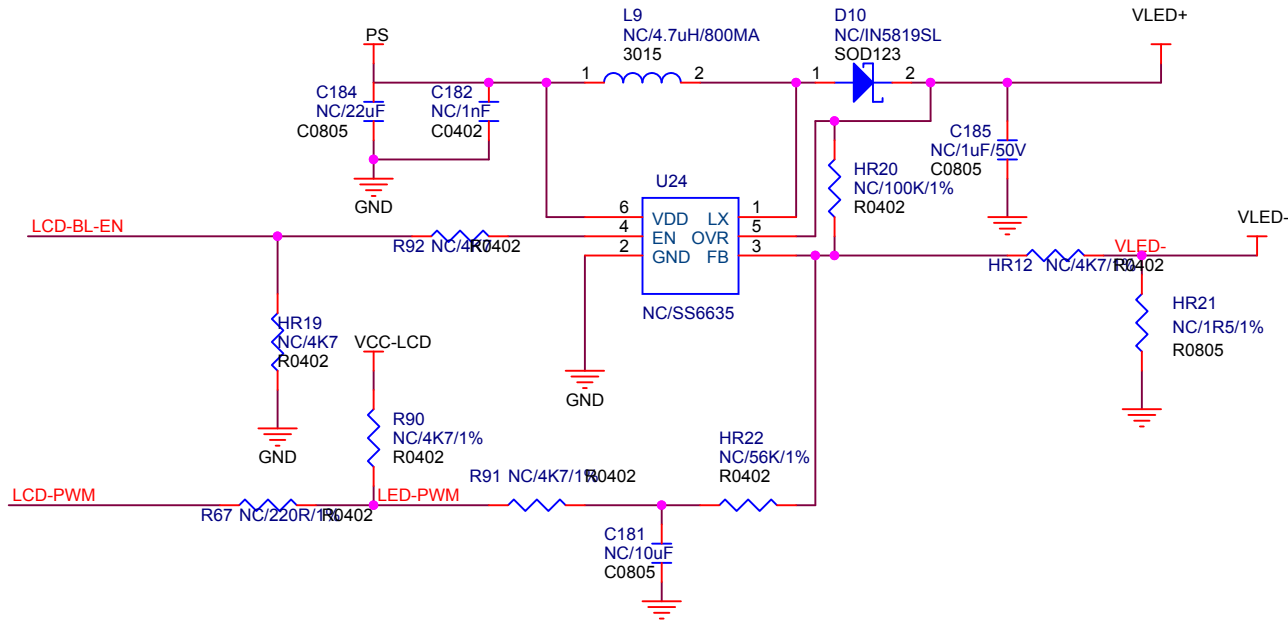


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LCD POWER



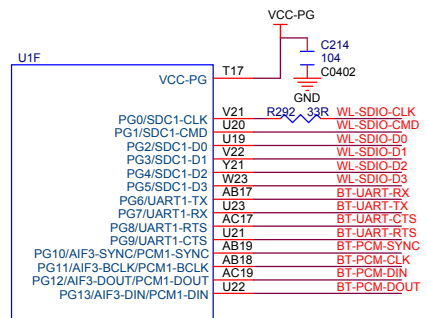
Backlight



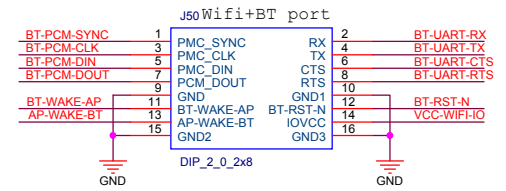
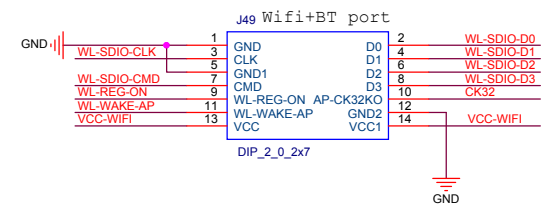
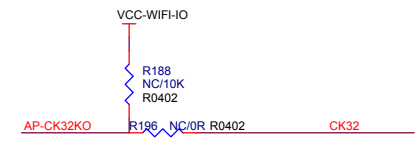
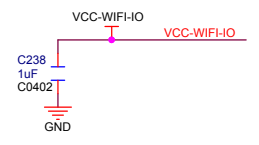
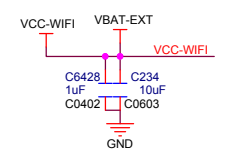
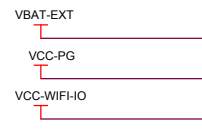
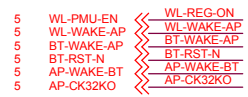
删除 D18 / D20

<i>Pine A64</i>	
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WIFI+BT

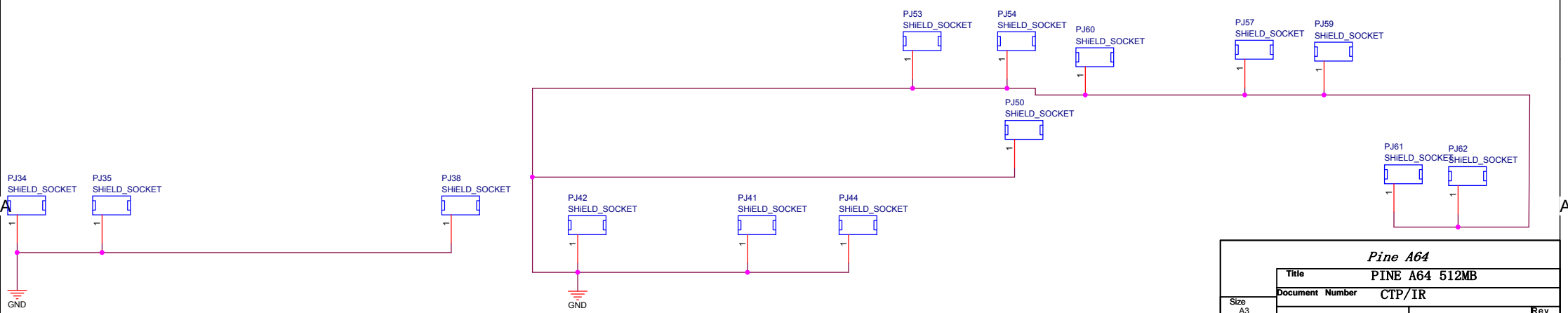
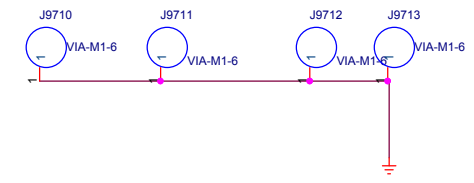
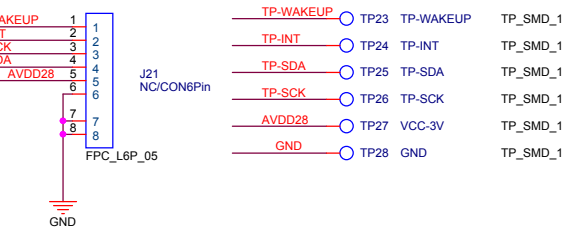
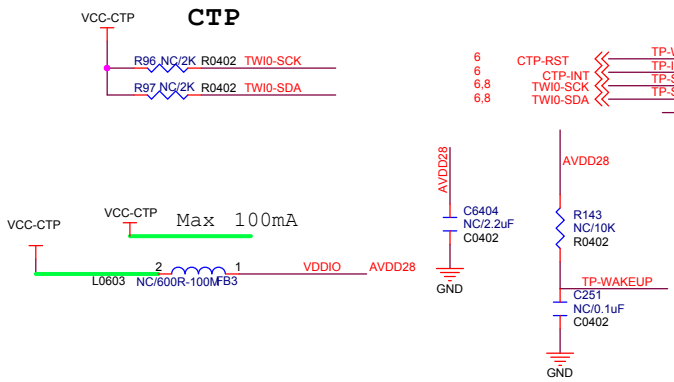
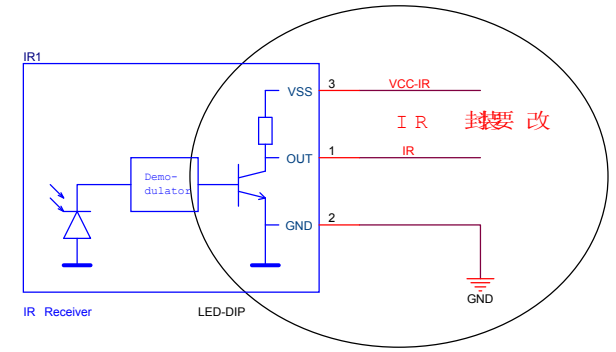
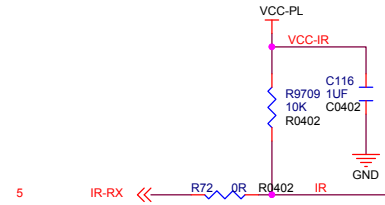


A64



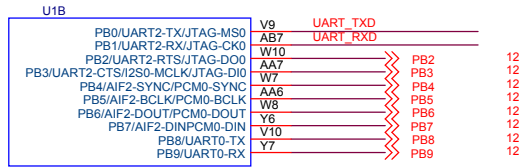
CTP

IR

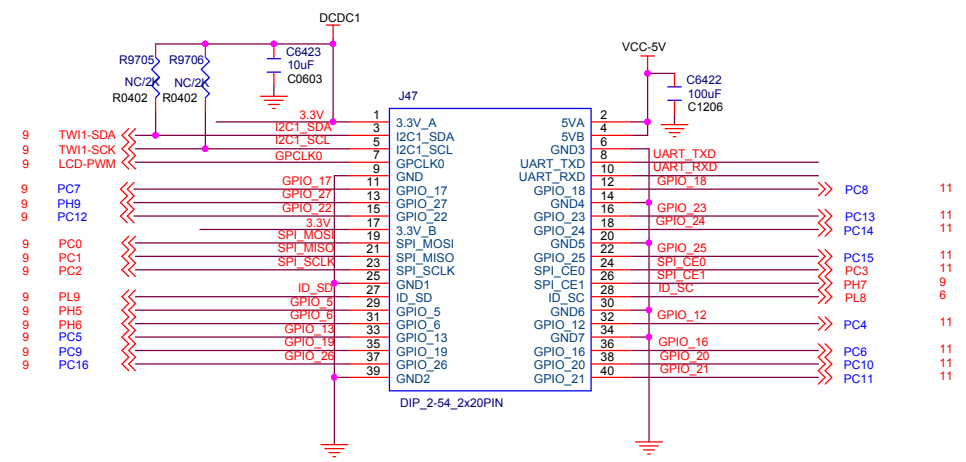


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PI-2 bus

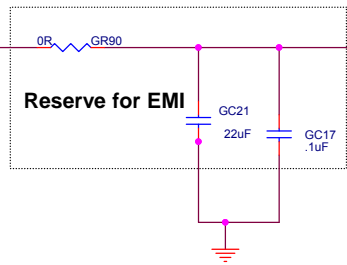


A64

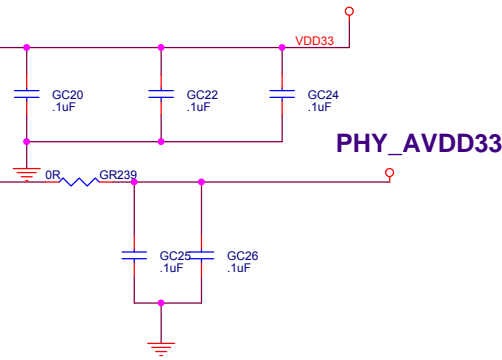


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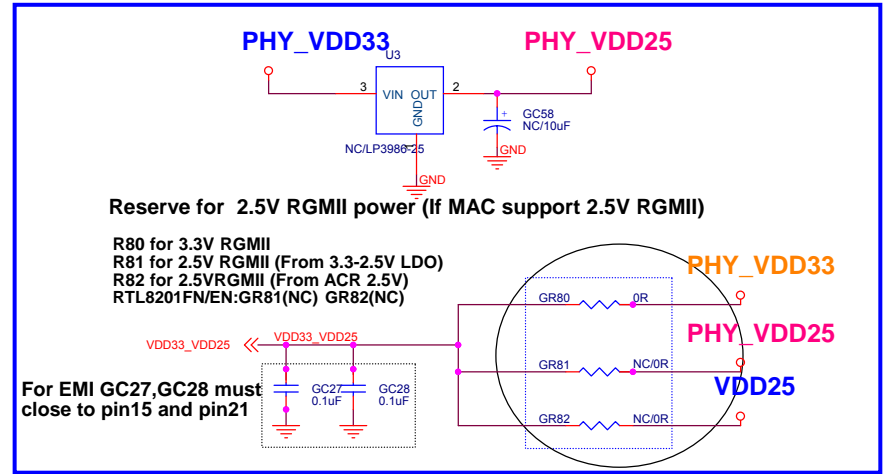
GMAC-3V



PHY_VDD33



3.3/2.5V RGMII Power



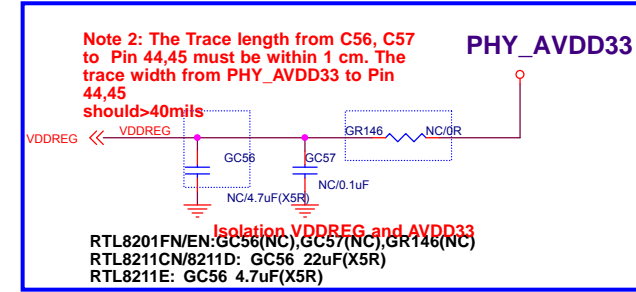
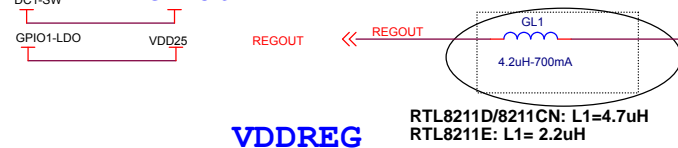
RTL8211CN/D/E	GL1	C56	U10	GR65	GR66	GR122	GC41/GC57
Enable switching regulator	○	○	✗	○	✗	✗	○
Disable switching regulator	✗	✗	○	✗	○	○	✗

Note 1: The Trace length between GL1 and Pin 48 must be within 0.5 cm. GC40 and GC41 to G L1 must be within 0.5cm.

RTL8211D/8211CN:GC40 22uF(X5R)
RTL8211E: GC40 4.7uF(X5R)

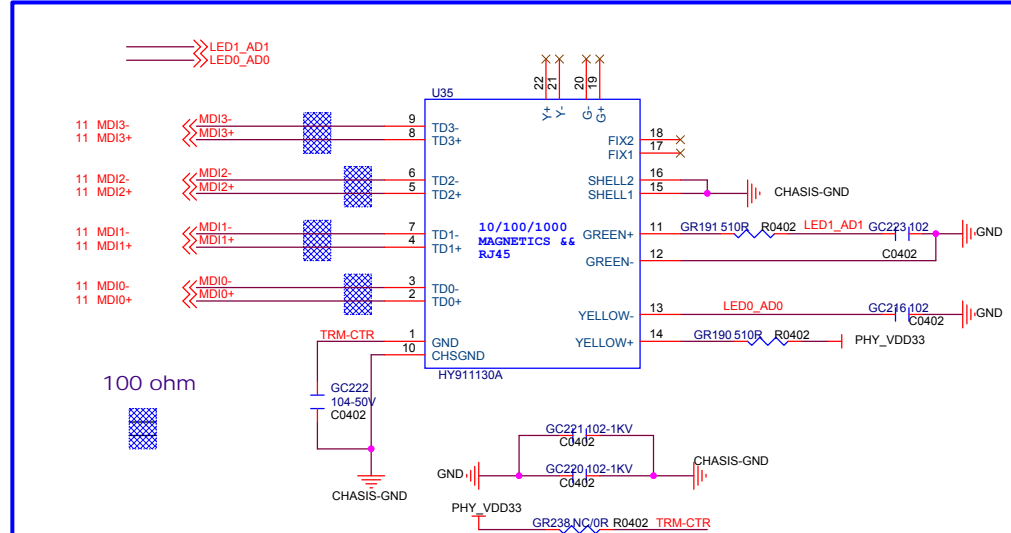
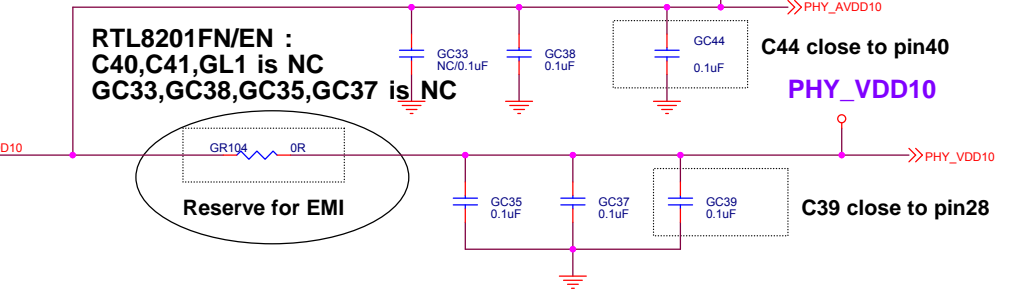
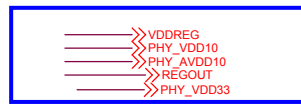
RTL8201FN/EN :
C40,C41,GL1 is NC
GC33,GC38,GC35,GC37 is NC

C44 close to pin40



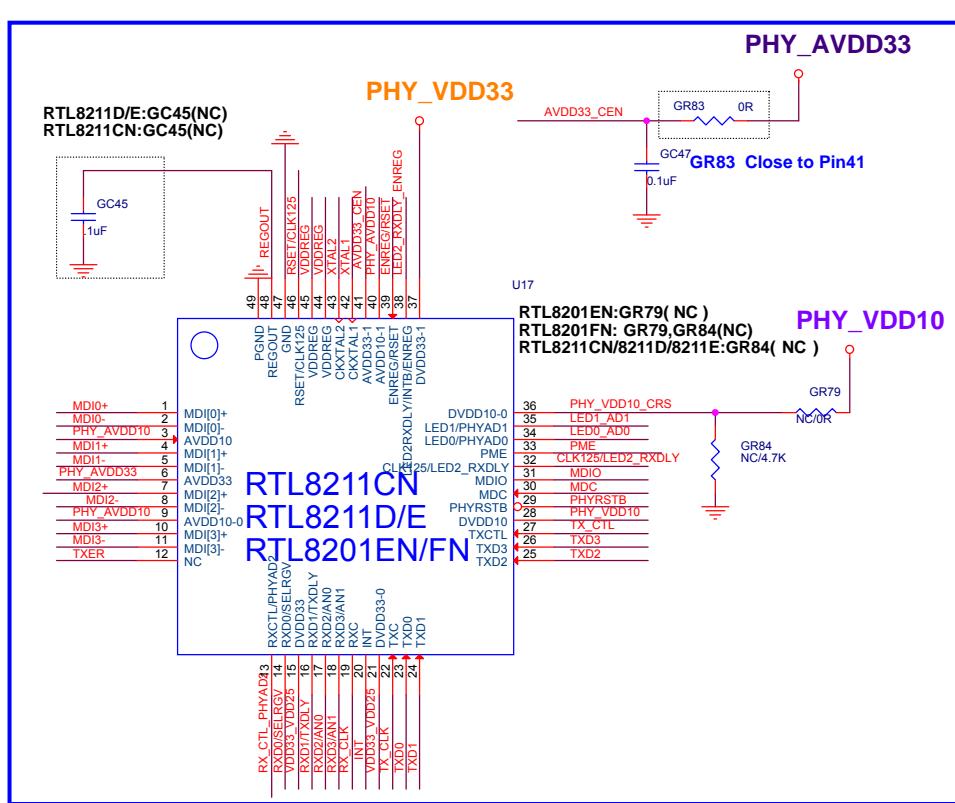
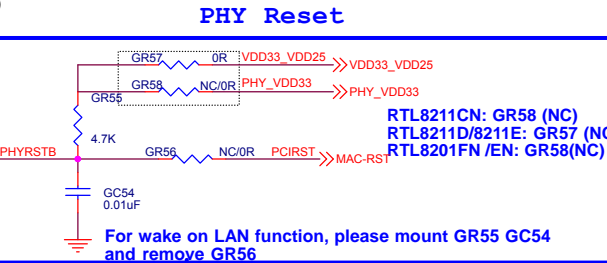
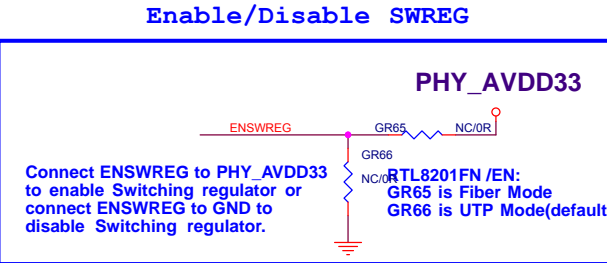
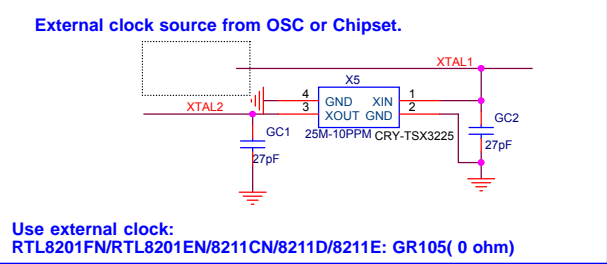
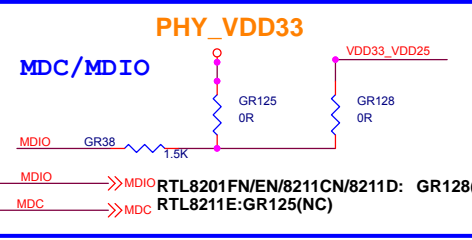
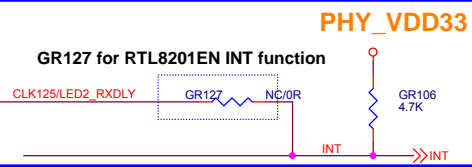
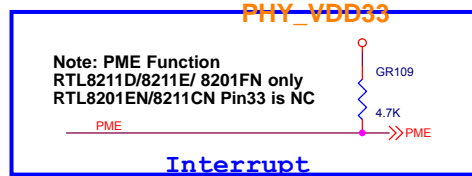
External Power Source

U10,GC69,GC68, GR122,GR120 and GR121 are only used by 8211CN/8211D/8211E application when switching regulator is disabled. For other applications, please remove them.

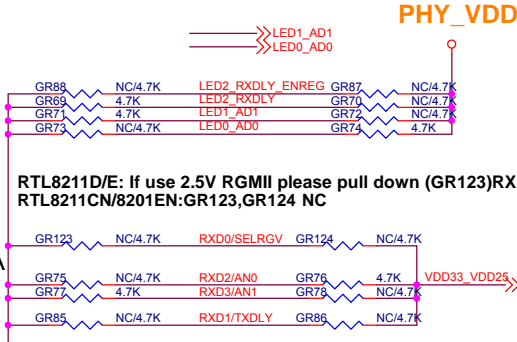
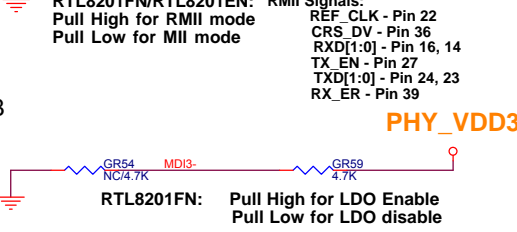
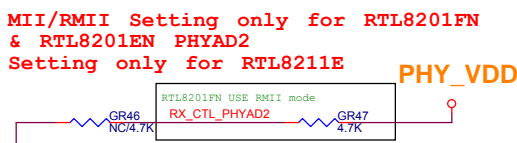


RESERVE

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Configuration Setting

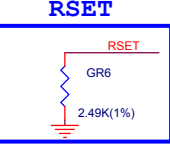
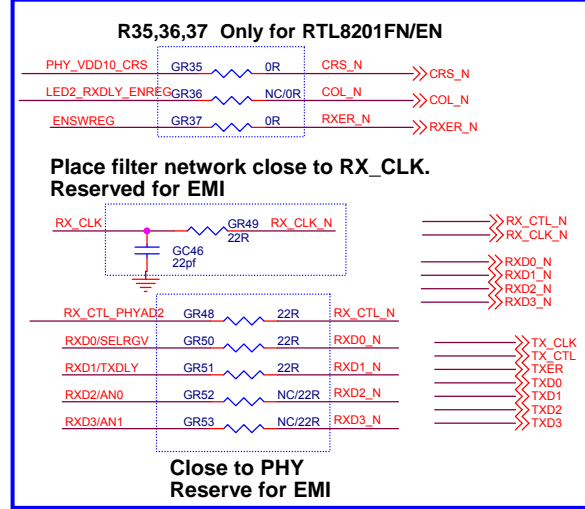


RTL8211CN/8211D/8211E:
GR76,GR78: Config for all capability
GR71,GR74: PHY Address=01 (8211D/8211CN)
GR46,GR71,R74: PHY Address=001 (8211E)
GR69,GR85: Without TX/RX Delay

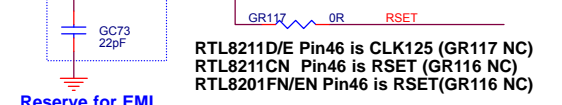
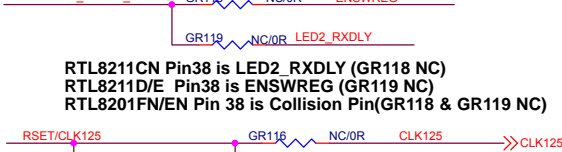
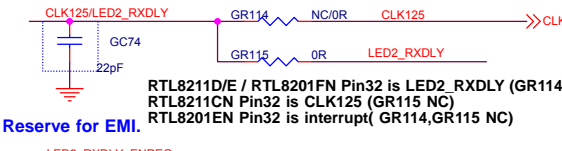
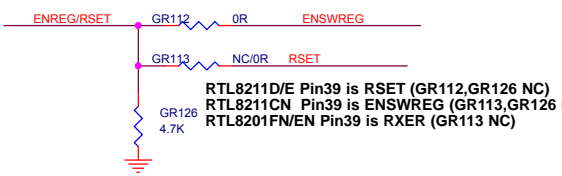
RTL8201EN:
GR88:MII Interface
GR87:SN Interface
GR71,GR74: PHY Address=001
Other resistors are NC

RTL8201FN:
R78 : REF CLK Input
R77: REF CLK Output
R69,R71,R74: PHY Address=001
Other resistors are NC

RGMII/RMII



RSET/ENSWREG/CLK125 Co-layout



RTL8211D/E Pin46 is CLK125 (GR117 NC)
RTL8211CN Pin46 is RSET (GR116 NC)
RTL8201FN/EN Pin46 is RSET(GR116 NC)