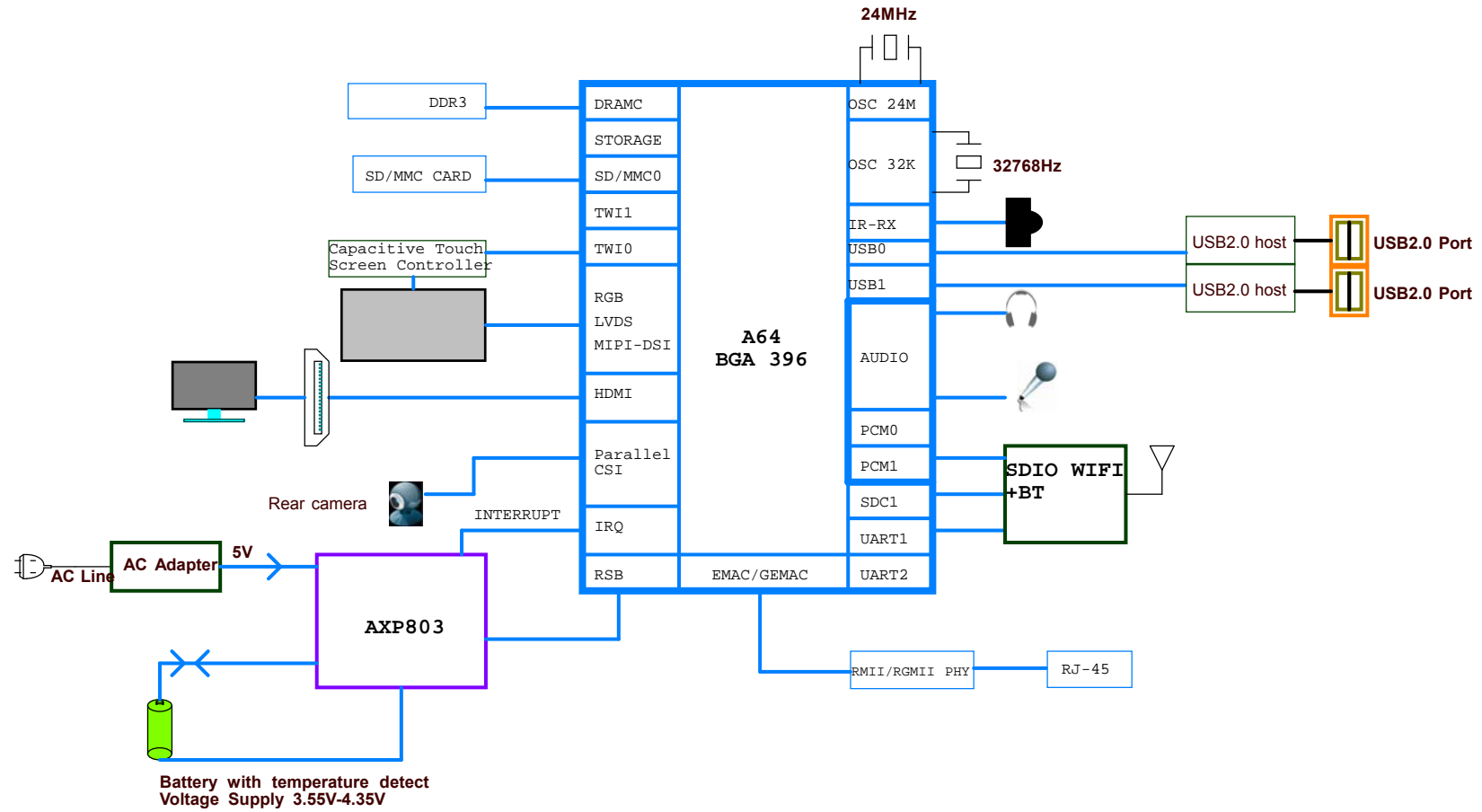
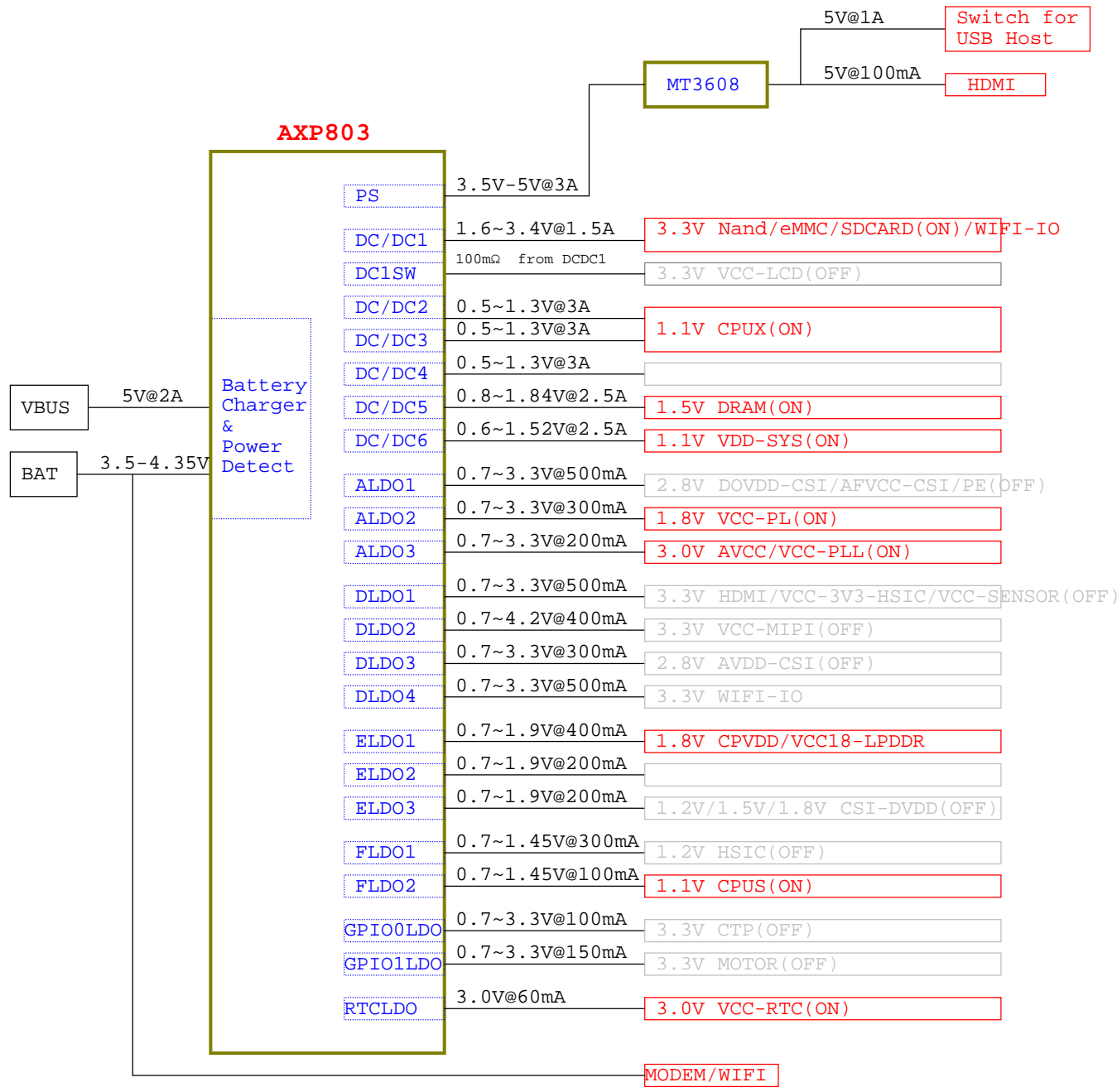


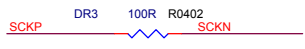
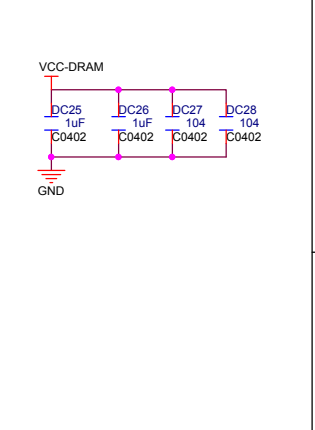
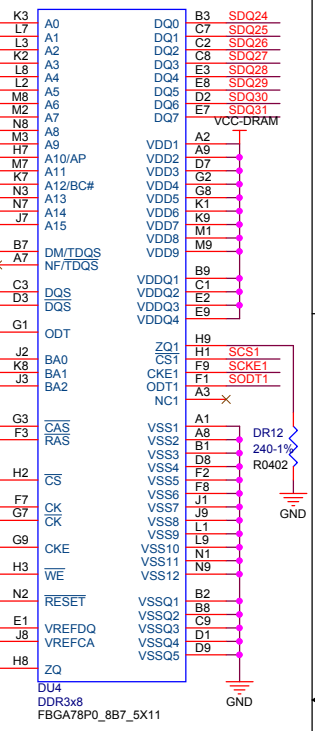
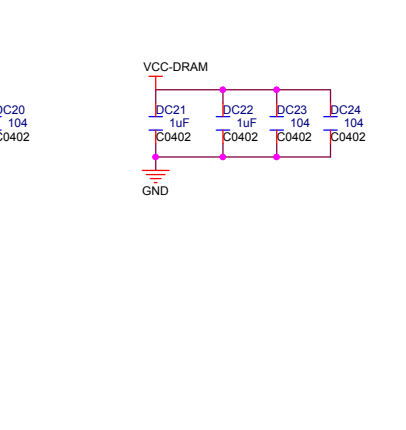
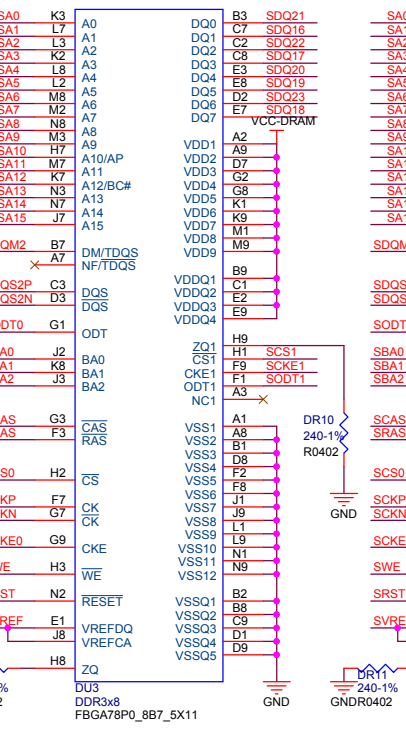
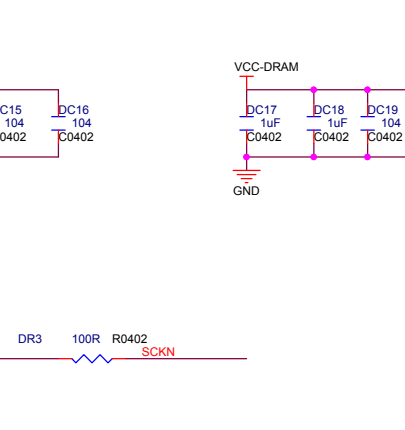
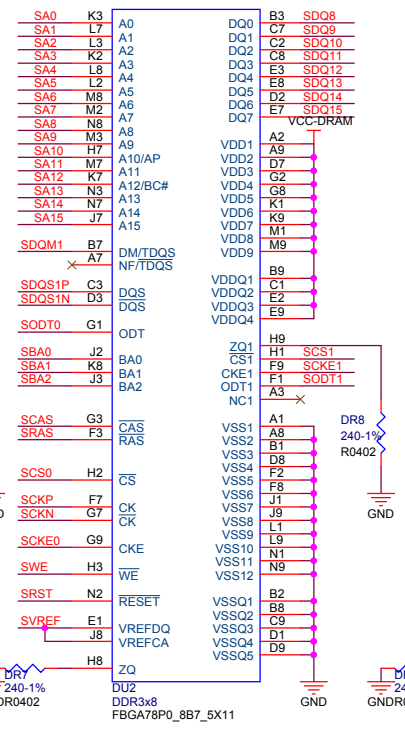
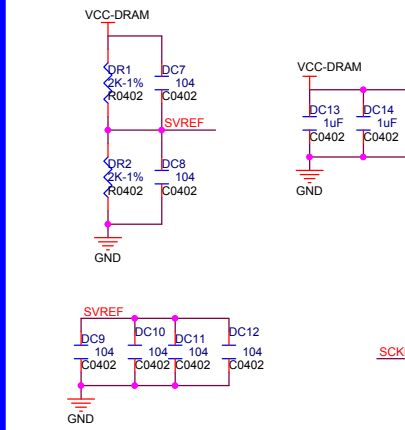
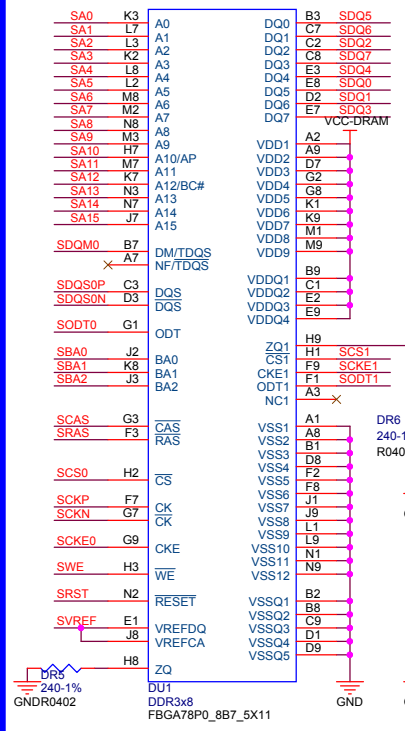
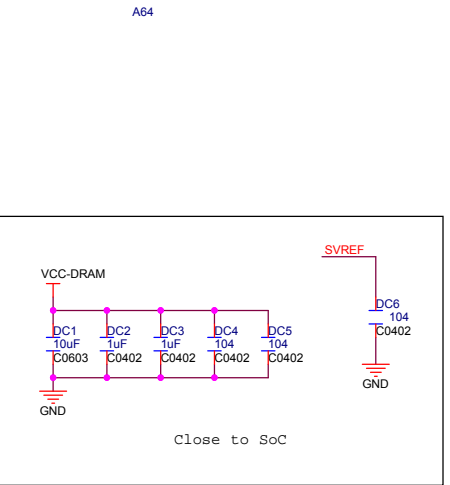
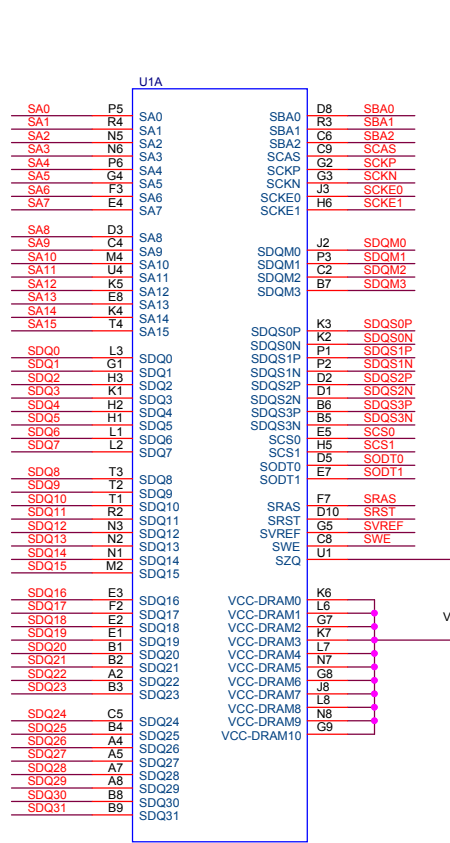
BLOCK DIAGRAM



POWER TREE

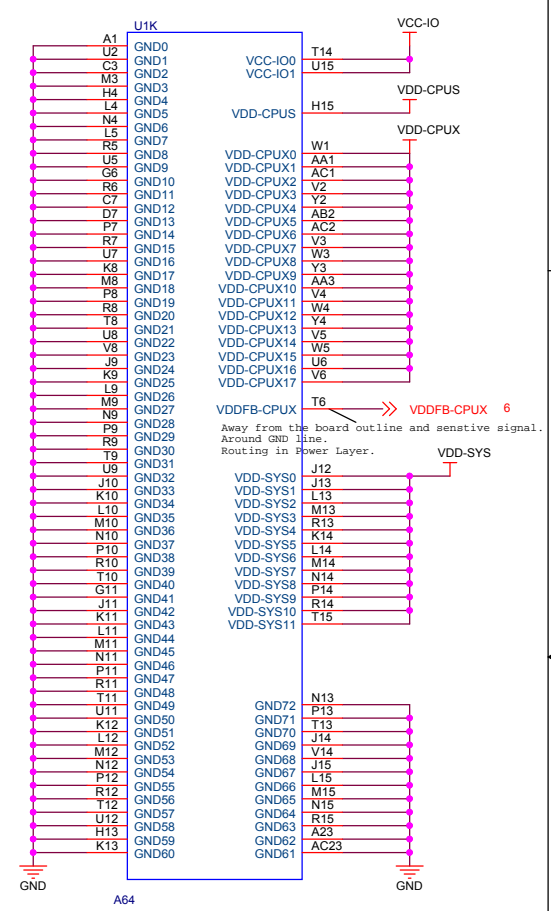
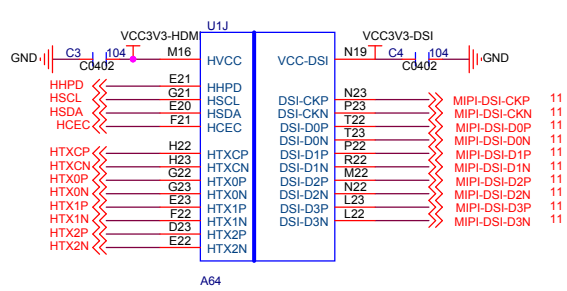
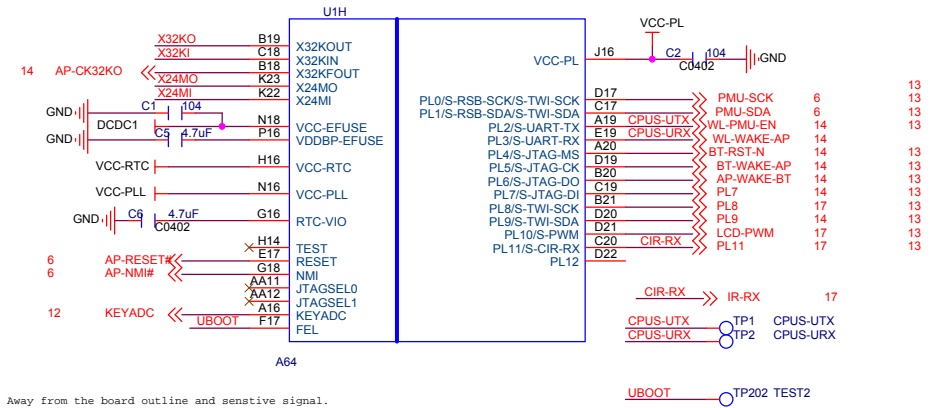


DDR3 8bx4

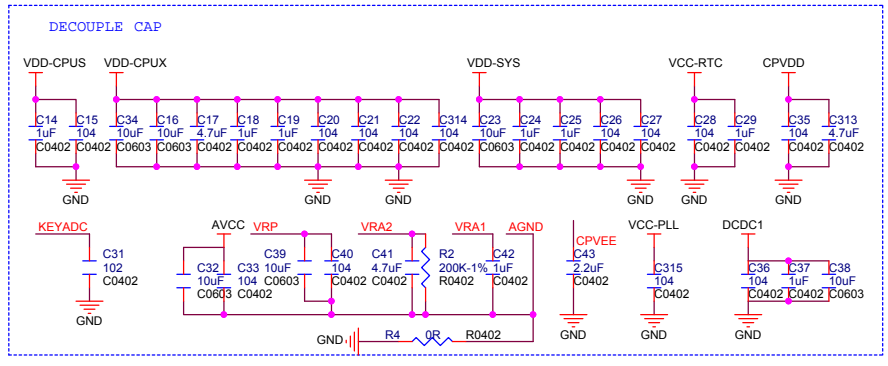
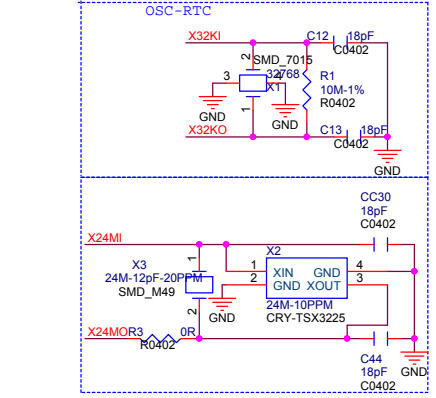
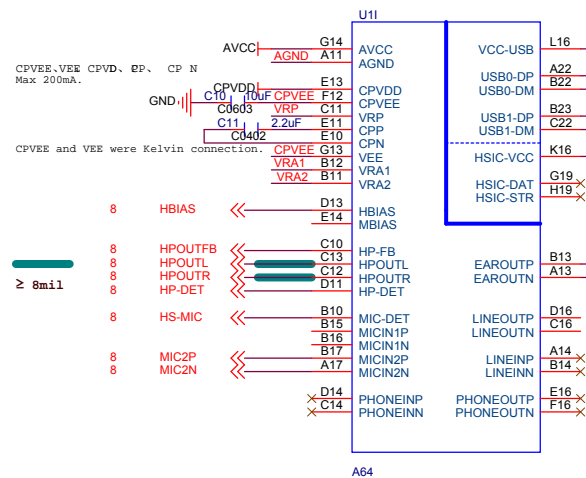
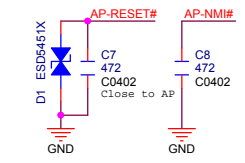


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CPU

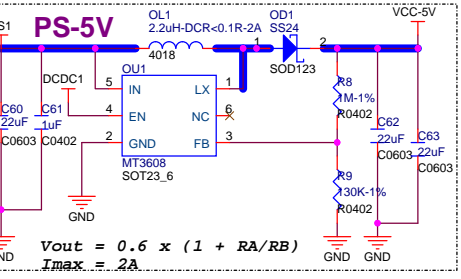
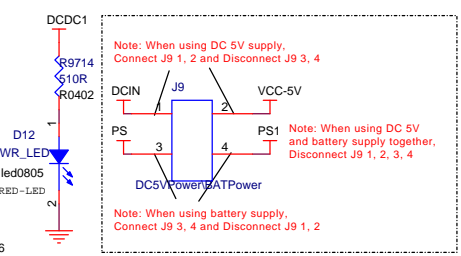
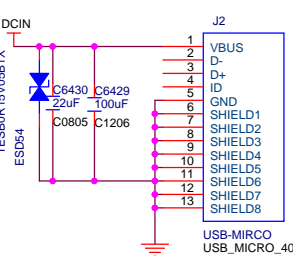


Away from the board outline and sensitive signal. Around GND line.



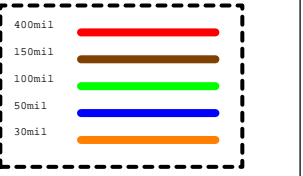
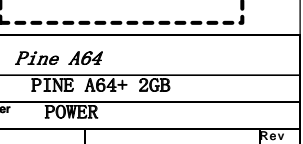
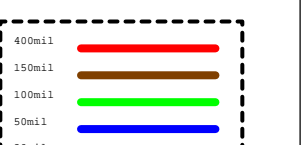
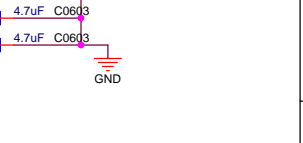
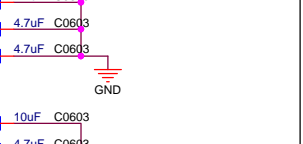
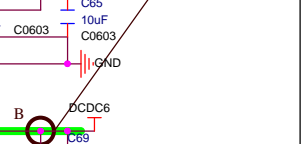
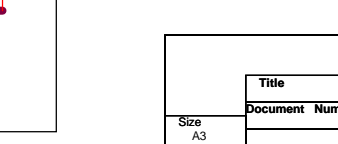
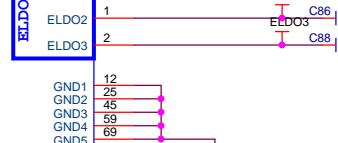
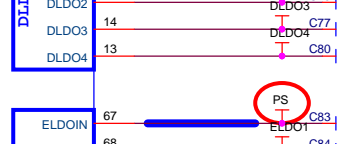
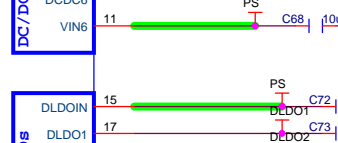
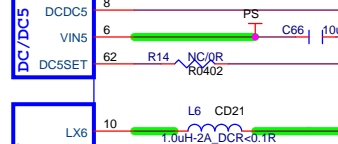
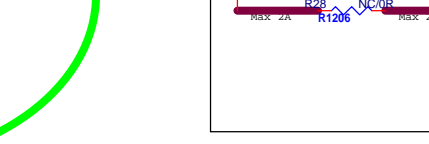
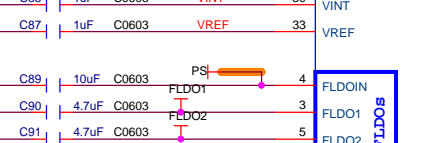
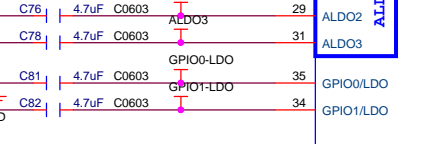
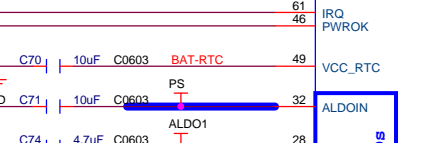
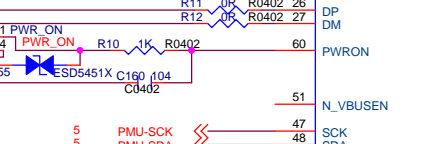
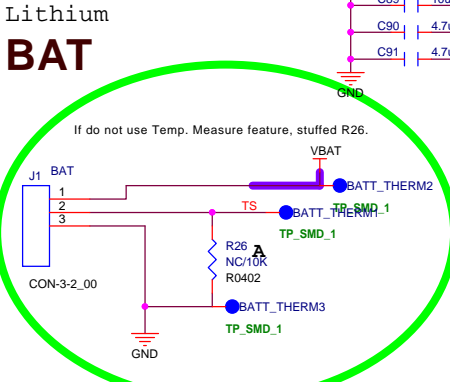
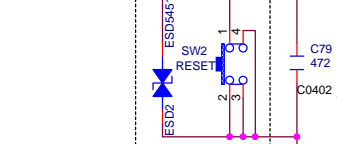
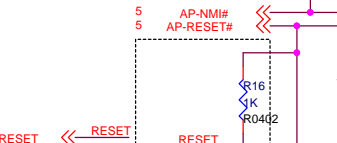
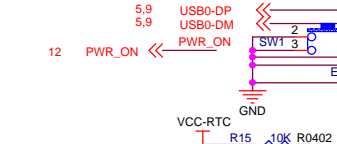
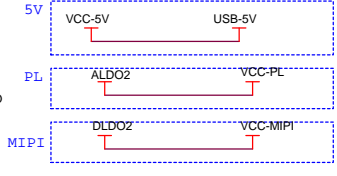
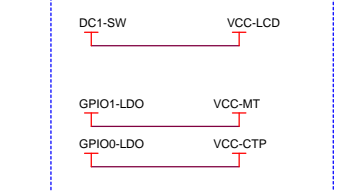
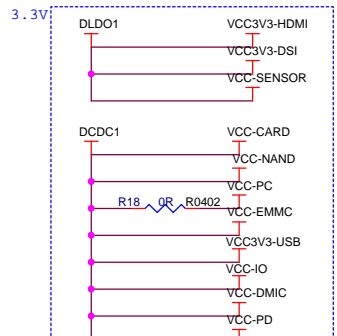
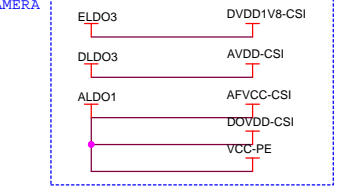
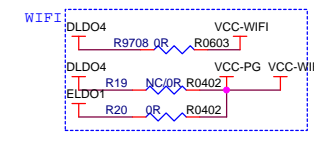
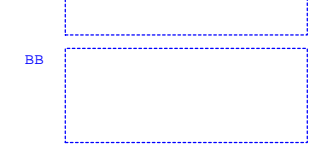
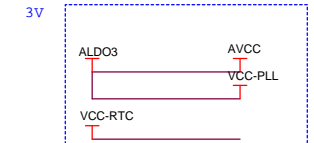
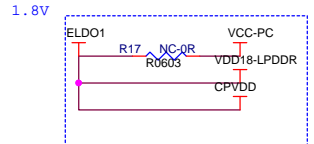
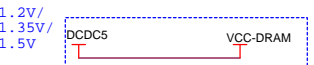
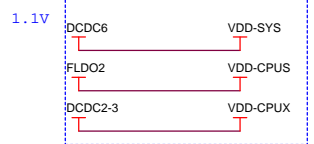
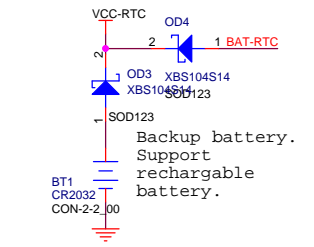
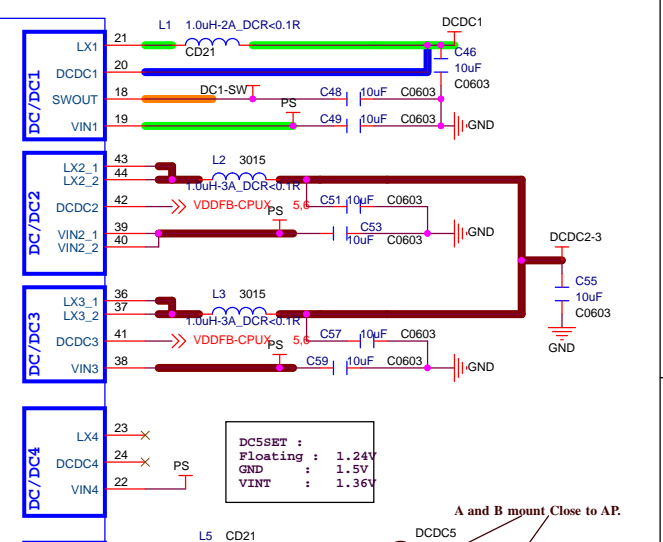
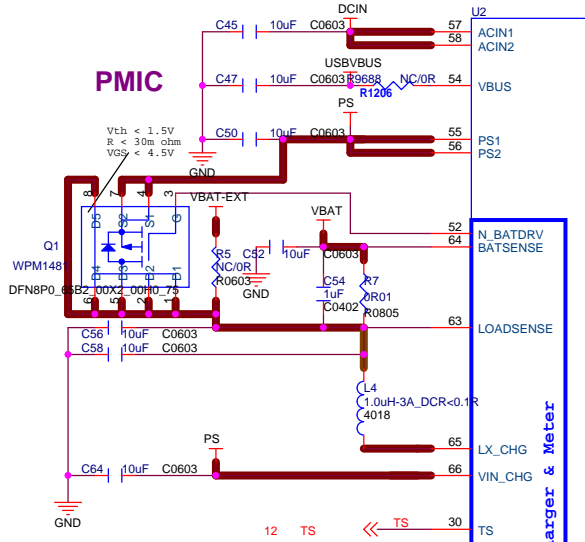
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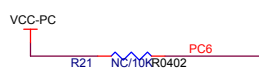
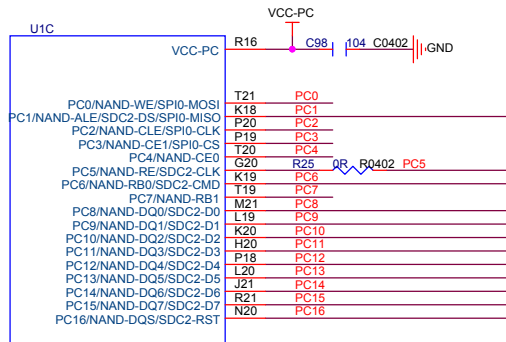
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$$I_{max} = 2A$$

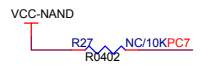
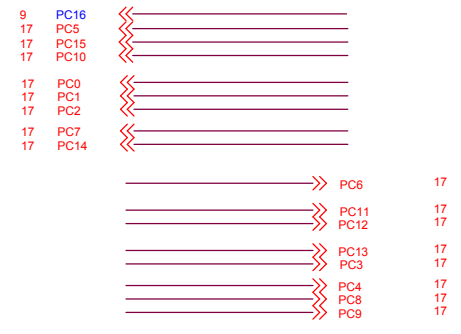


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NAND/eMMC

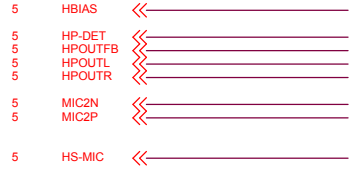
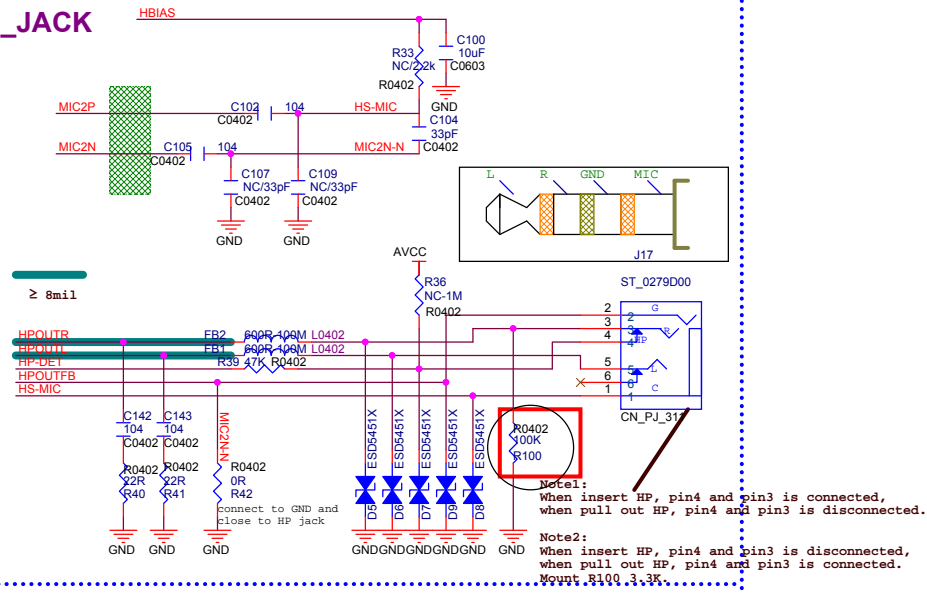


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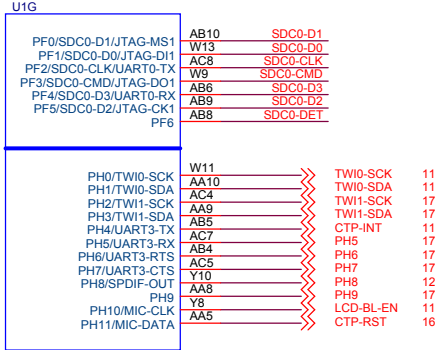


AUDIO

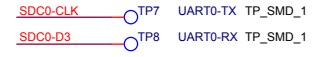
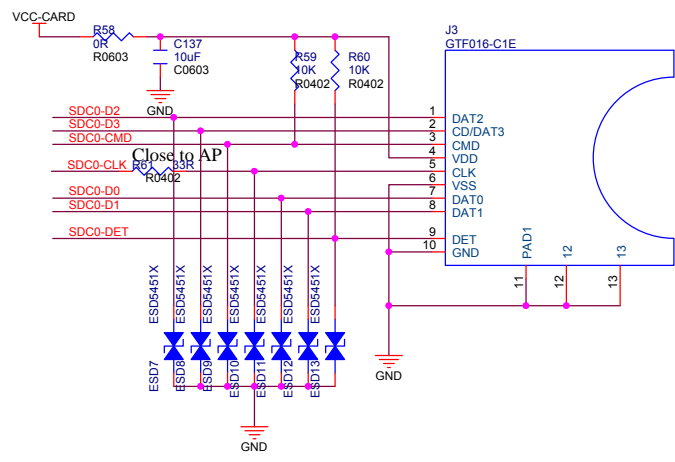
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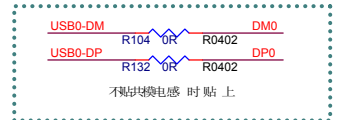
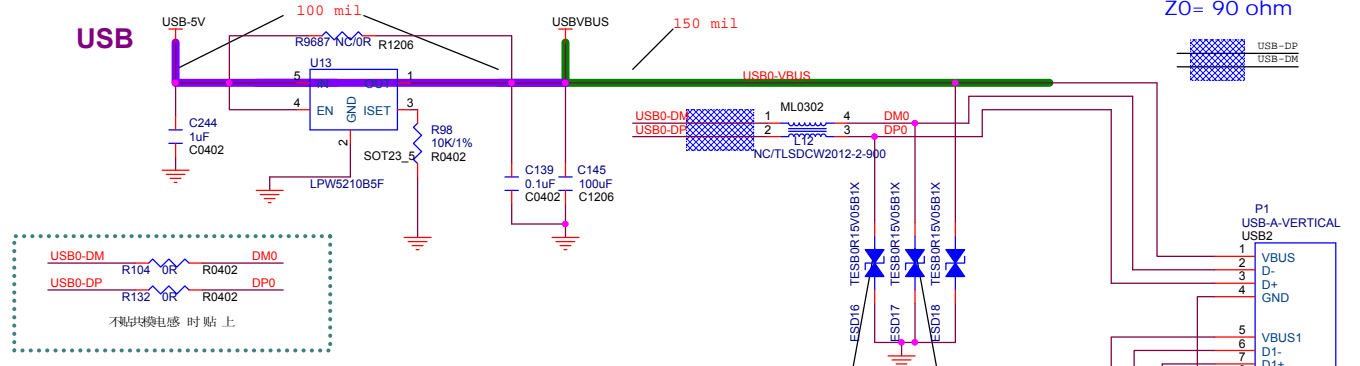
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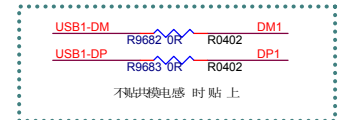
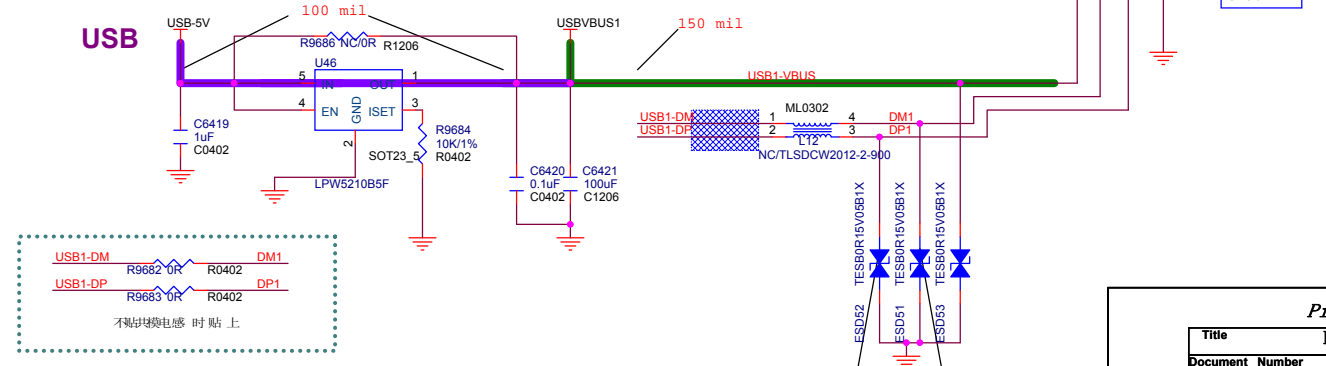
T-CARD



USB



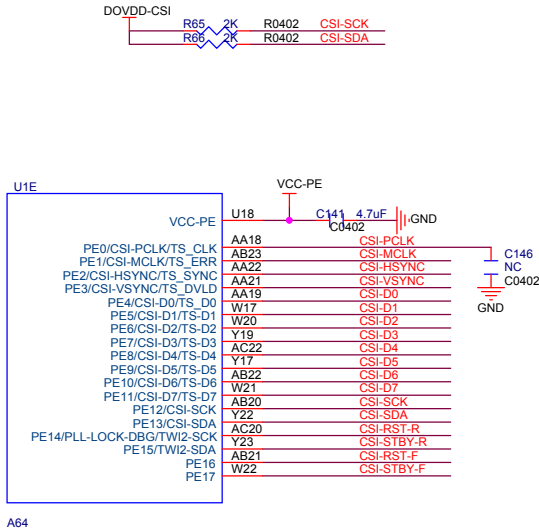
USB



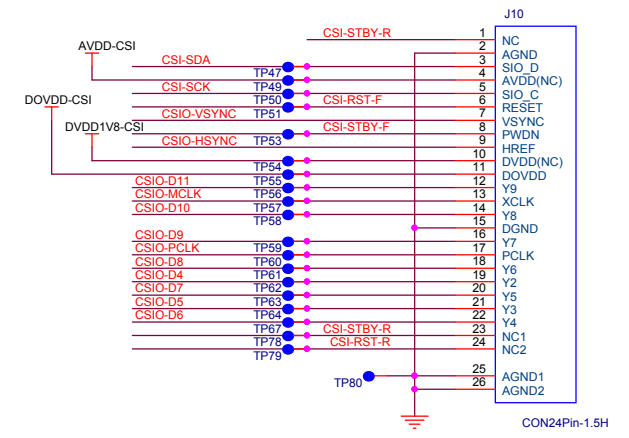
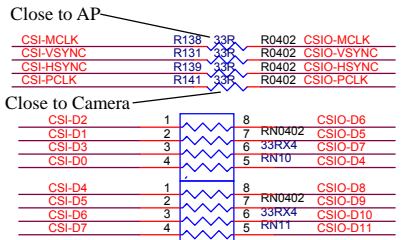
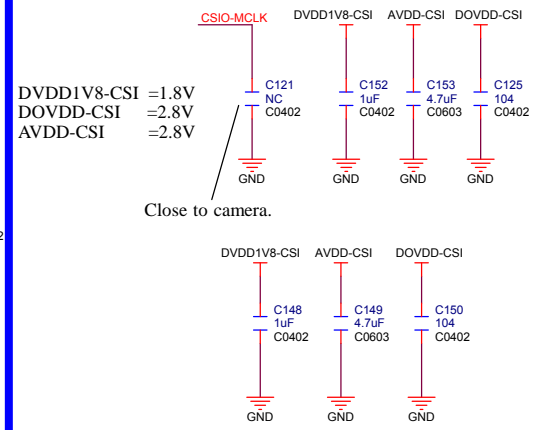
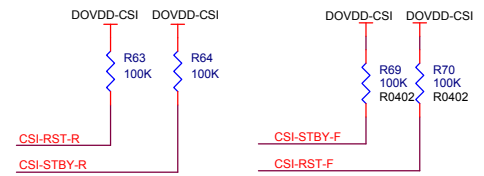
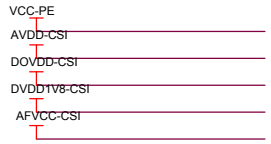
Differential pairs
 ZO= 90 ohm

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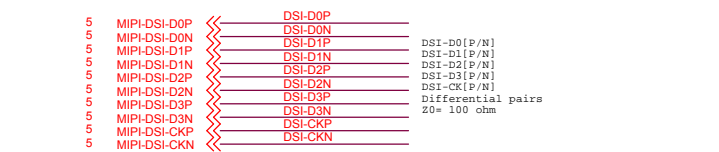
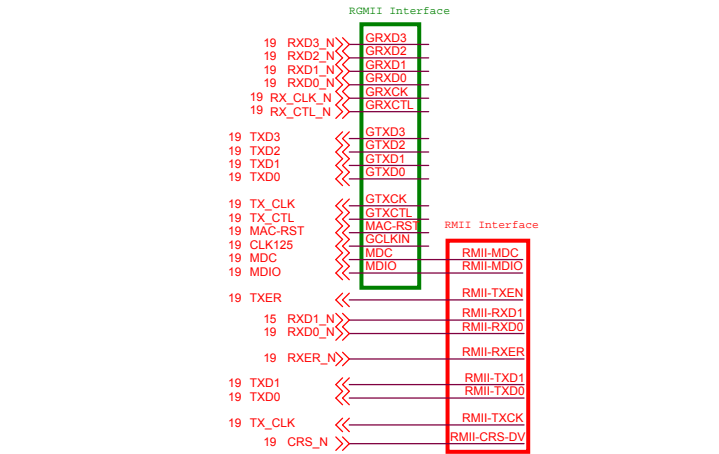
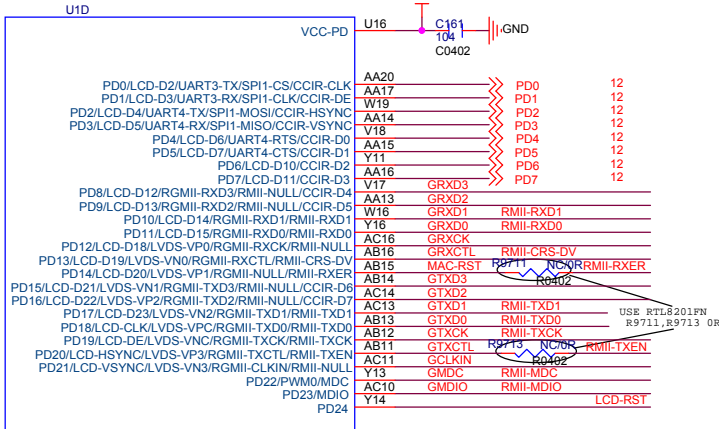
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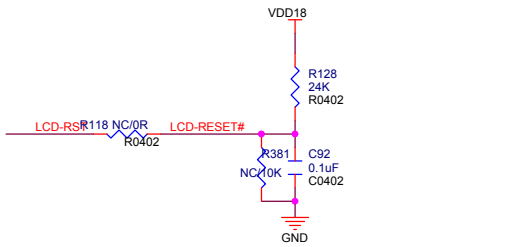
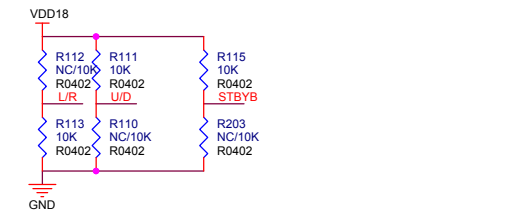
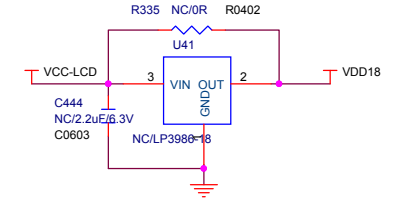
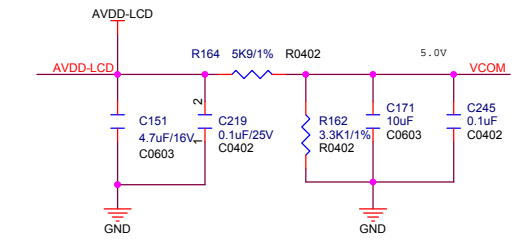
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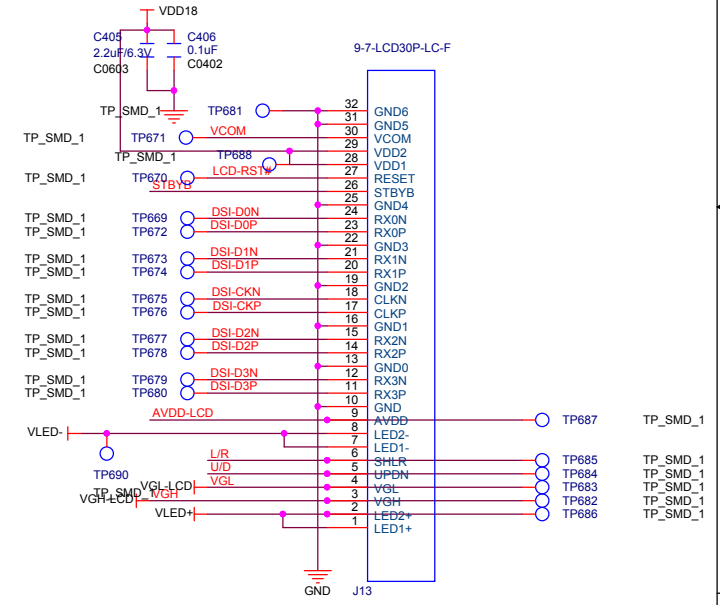
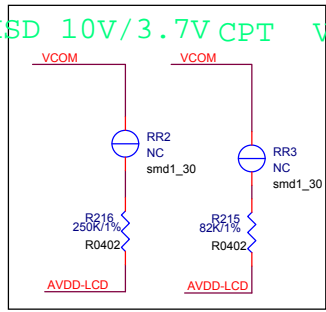
LCD



MIPI-LCD

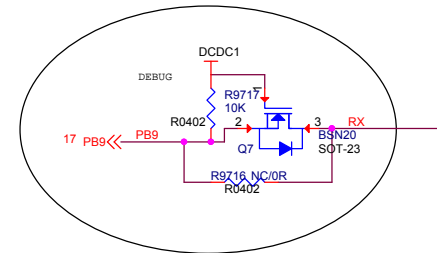
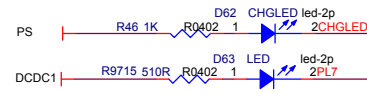
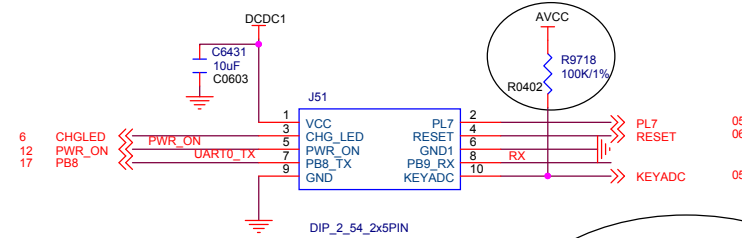
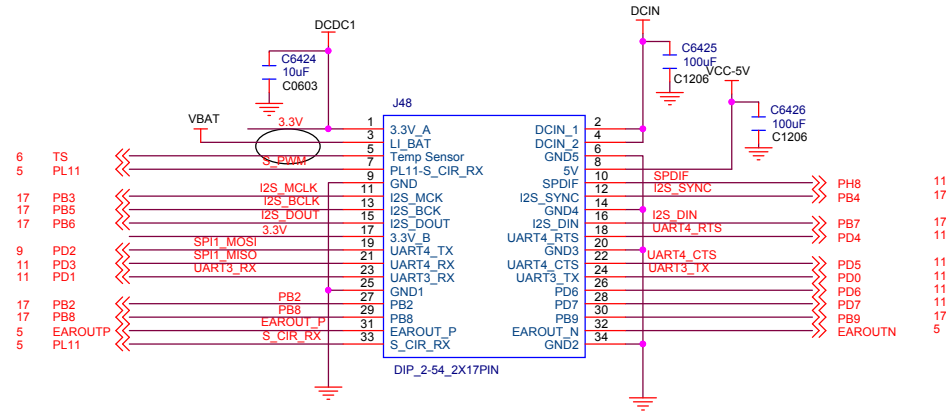


HSD 10V/3.7V CPT Vcom=4.3V



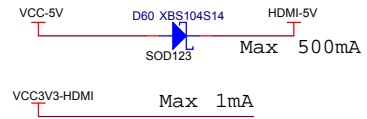
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Title	PINE A64+ 2GB
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Euler bus

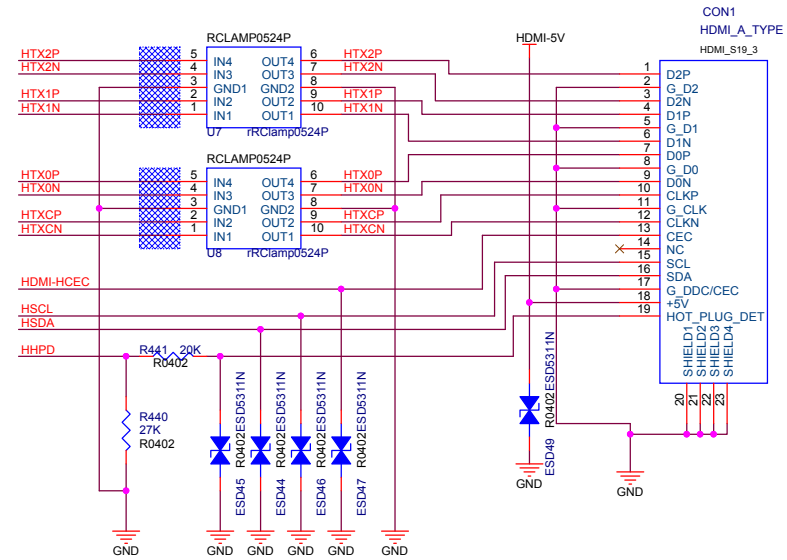
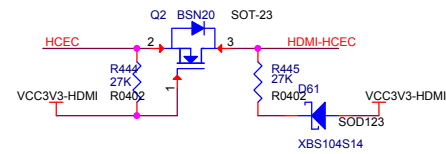
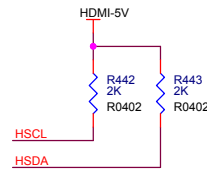


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HDMI

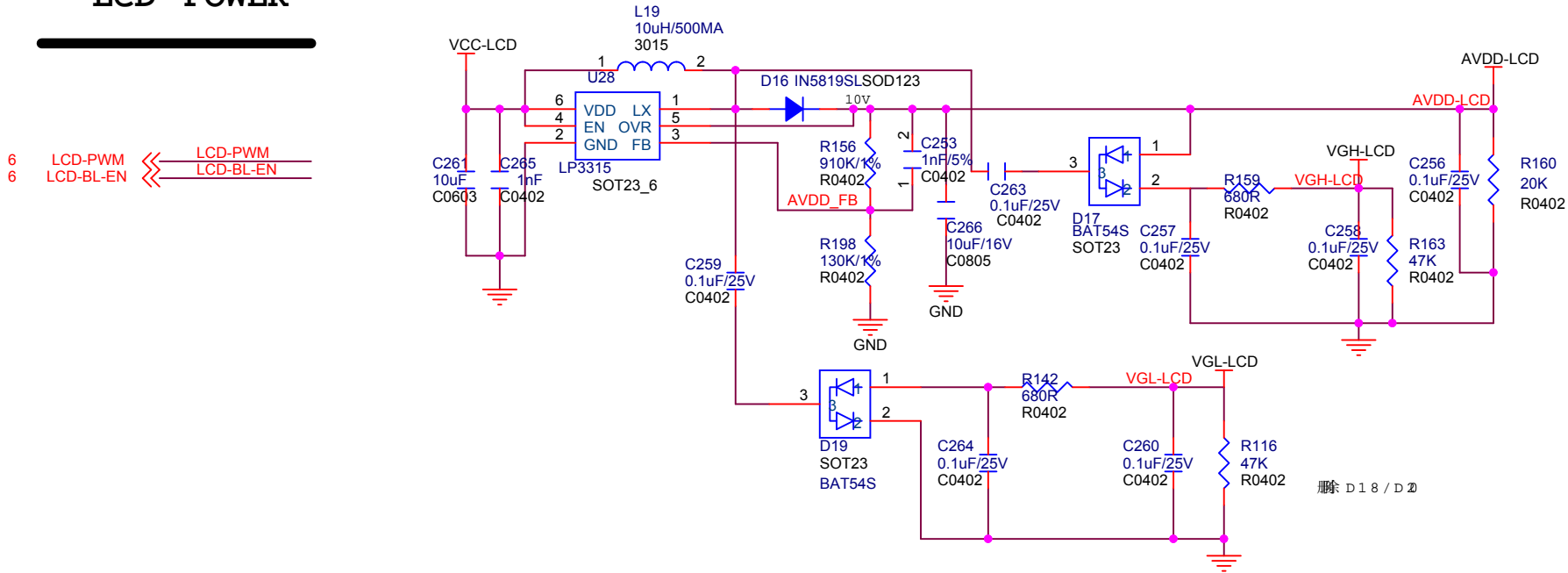


Differential pairs
Z0= 100 ohm



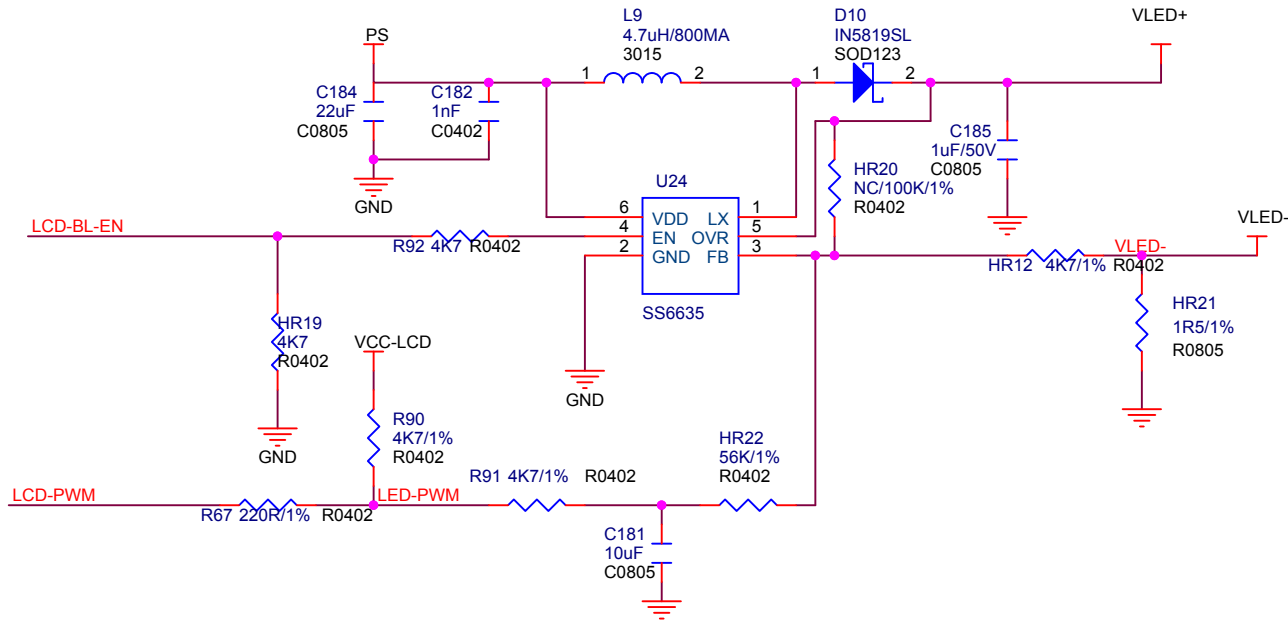
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Title PINE A64+ 2GB		
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LCD POWER



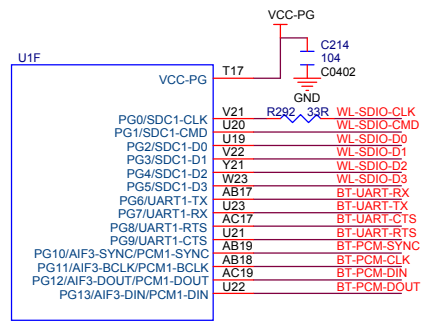
删除 D18 / D20

Backlight

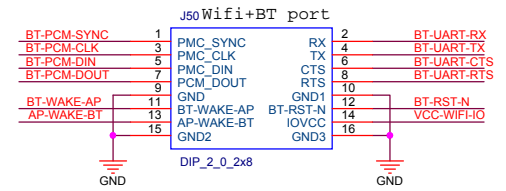
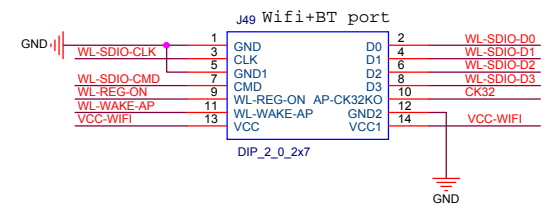
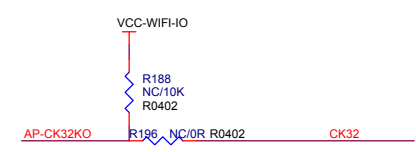
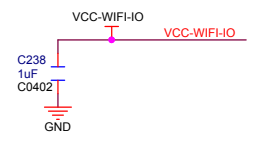
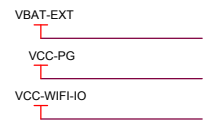


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WIFI+BT

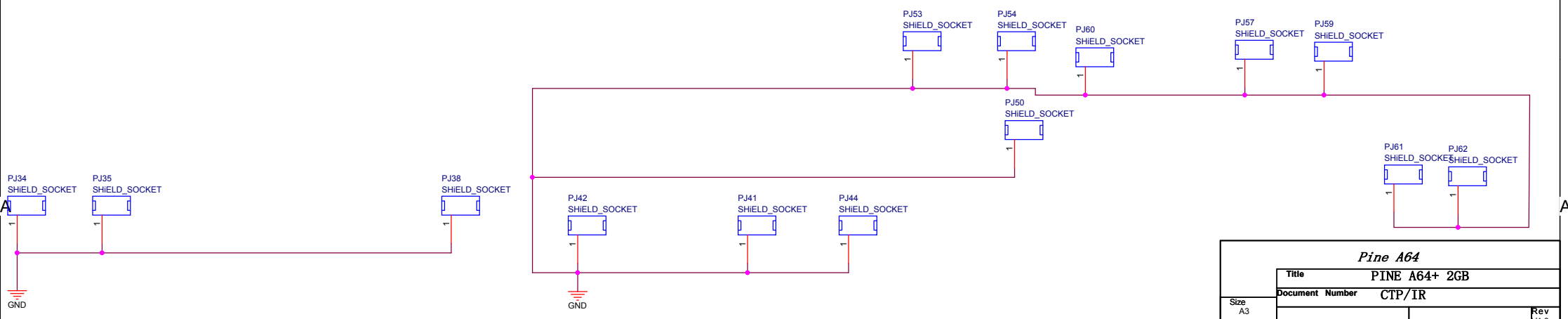
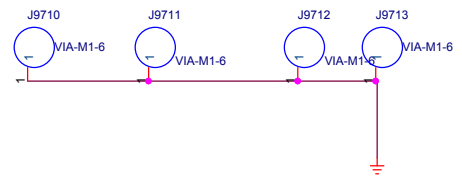
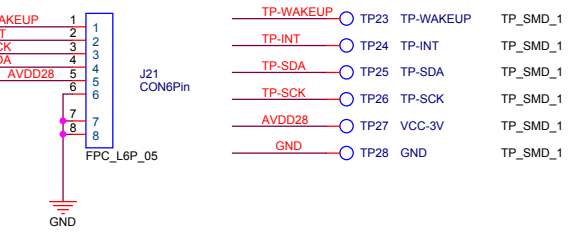
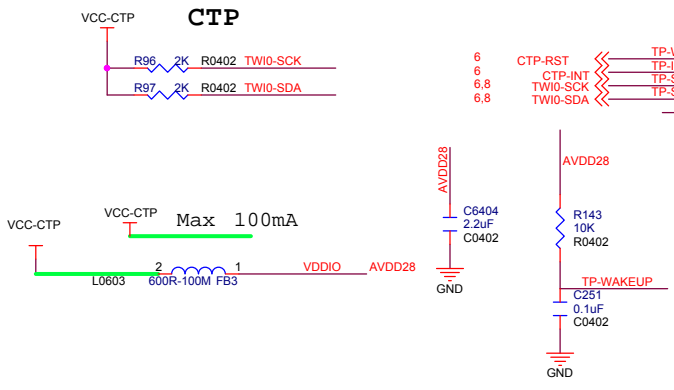
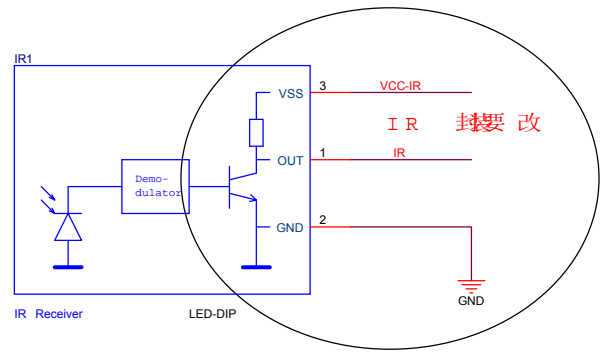
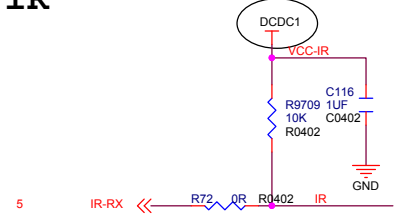


A64



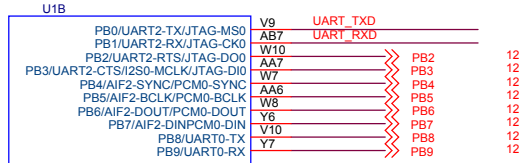
CTP

IR

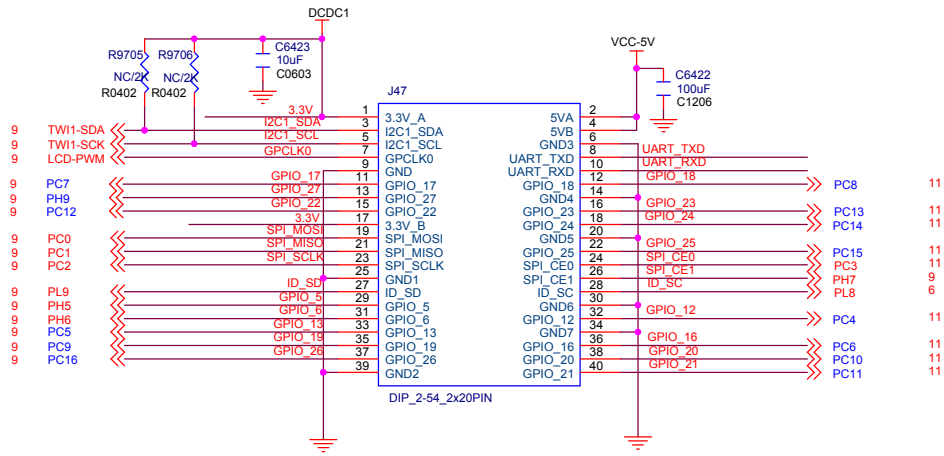


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PI-2 bus

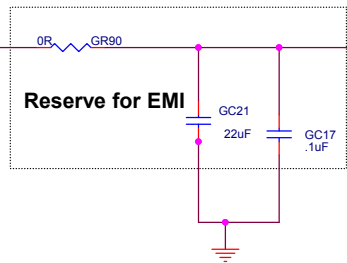


A64



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GMAC-3V



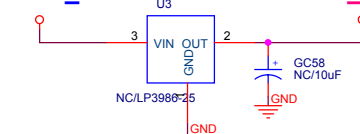
PHY_VDD33

PHY_AVDD33

3.3/2.5V RGMII Power

PHY_VDD33

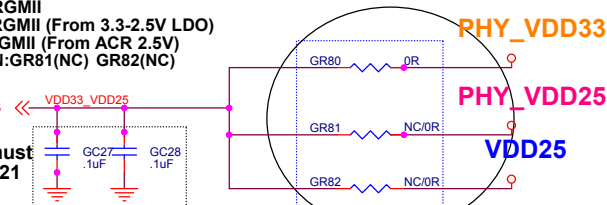
PHY_VDD25



Reserve for 2.5V RGMII power (if MAC support 2.5V RGMII)

- R80 for 3.3V RGMII
- R81 for 2.5V RGMII (From 3.3-2.5V LDO)
- R82 for 2.5V RGMII (From ACR 2.5V)
- RTL8201FN/EN: GR81(NC) GR82(NC)

For EMI GC27, GC28 must be close to pin15 and pin21



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)

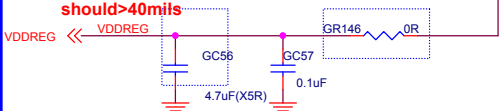


VDDREG

RTL8211D/8211CN: L1=4.7uH
RTL8211E: L1=2.2uH

Note 2: The Trace length from C56, C57 to Pin 44,45 must be within 1 cm. The trace width from PHY_AVDD33 to Pin 44,45 should >40mils

PHY_AVDD33

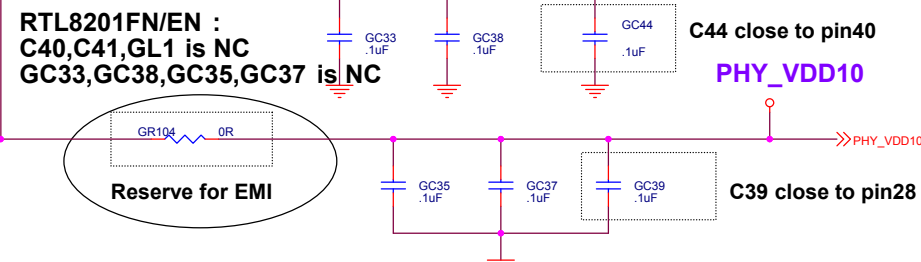


Isolation VDDREG and AVDD33
RTL8201FN/EN: GC56(NC), GC57(NC), GR146(NC)
RTL8211CN/8211D: GC56 22uF(X5R)
RTL8211E: GC56 4.7uF(X5R)

External Power Source

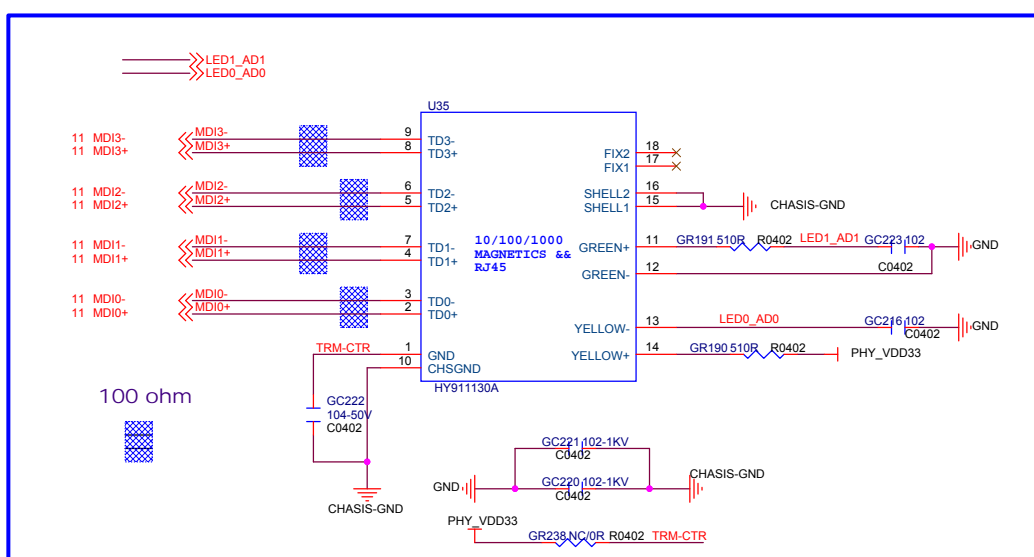
U10, GC69, GC68, GR122, GR120 and GR121 are only used by 8211CN/8211D/8211E application when switching regulator is disabled. For other applications, please remove them.

RESERVE

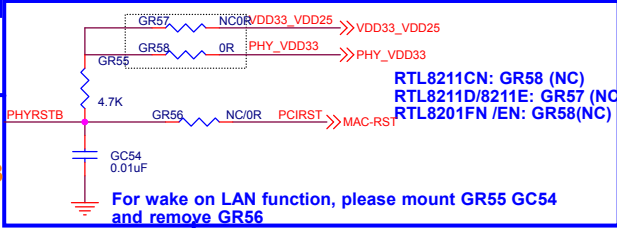
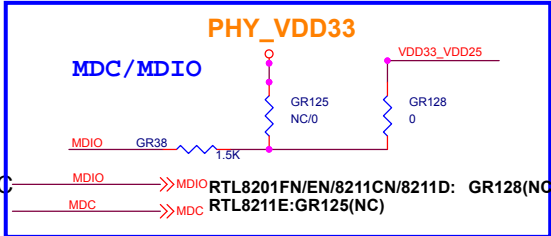
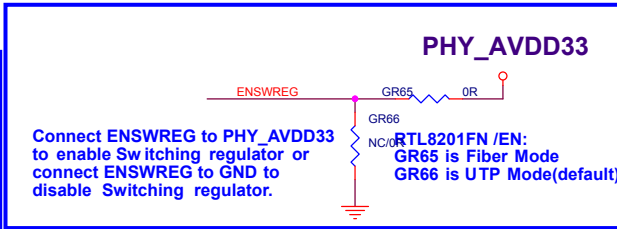
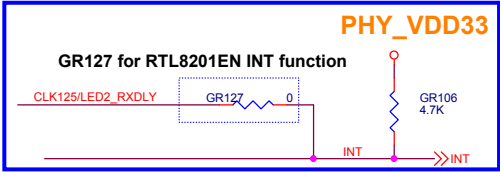
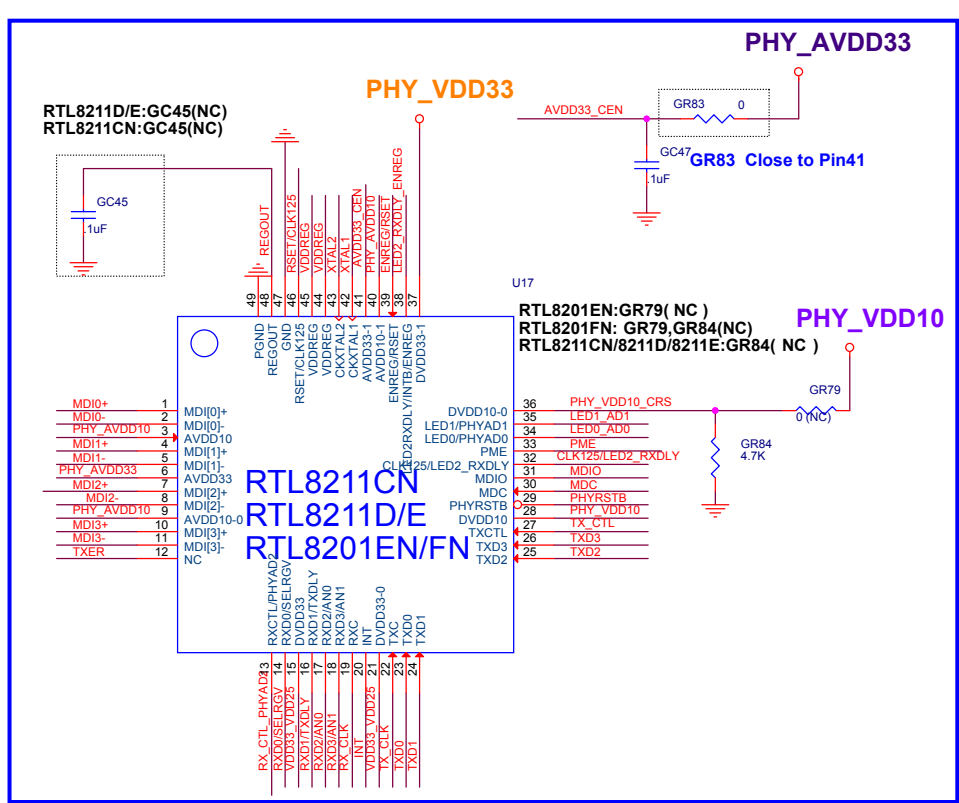
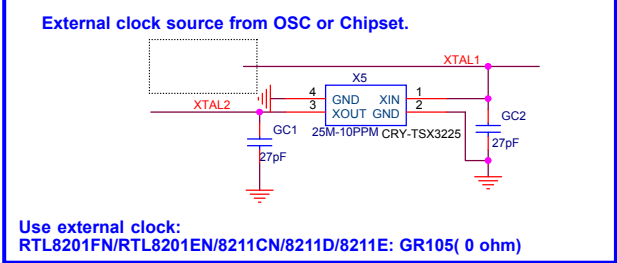
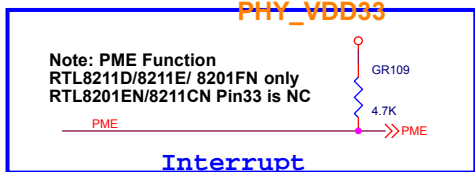


RTL8201FN/EN :
C40, C41, GL1 is NC
GC33, GC38, GC35, GC37 is NC

Reserve for EMI

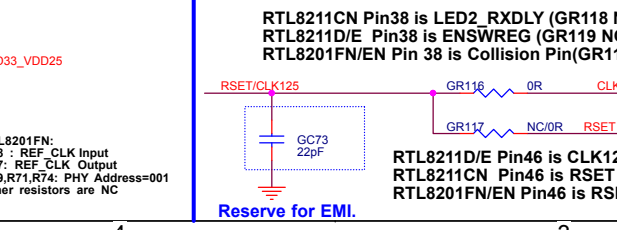
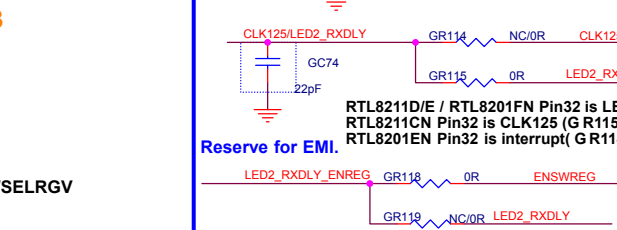
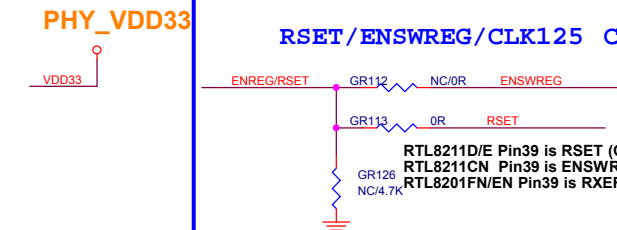


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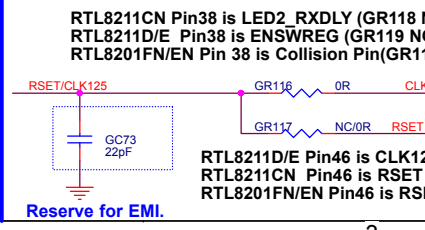
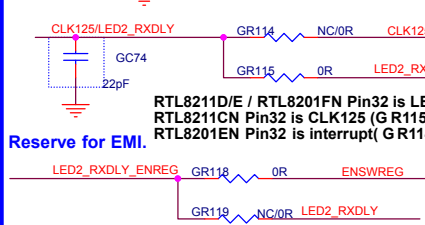
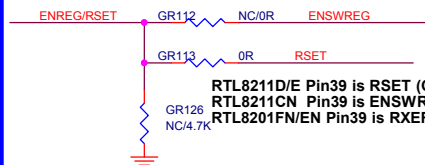


Configuration Setting

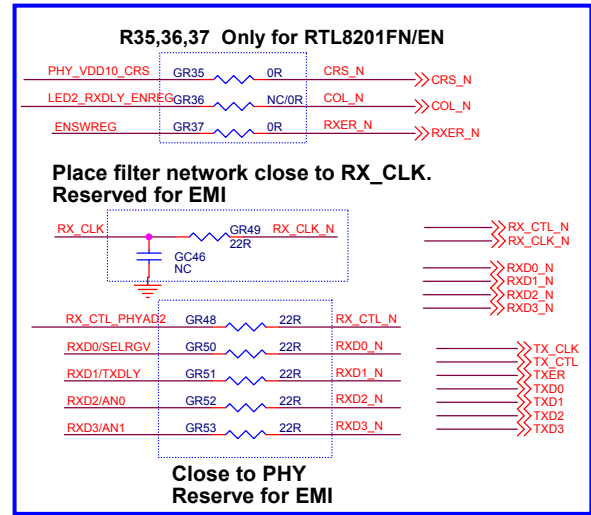
MII/RMII Setting only for RTL8201FN & RTL8201EN PHYAD2
Setting only for RTL8211E



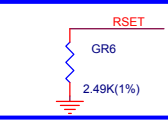
RSET/ENSWREG/CLK125 Co-layout



RGMII/RMII



RSET



Others

