

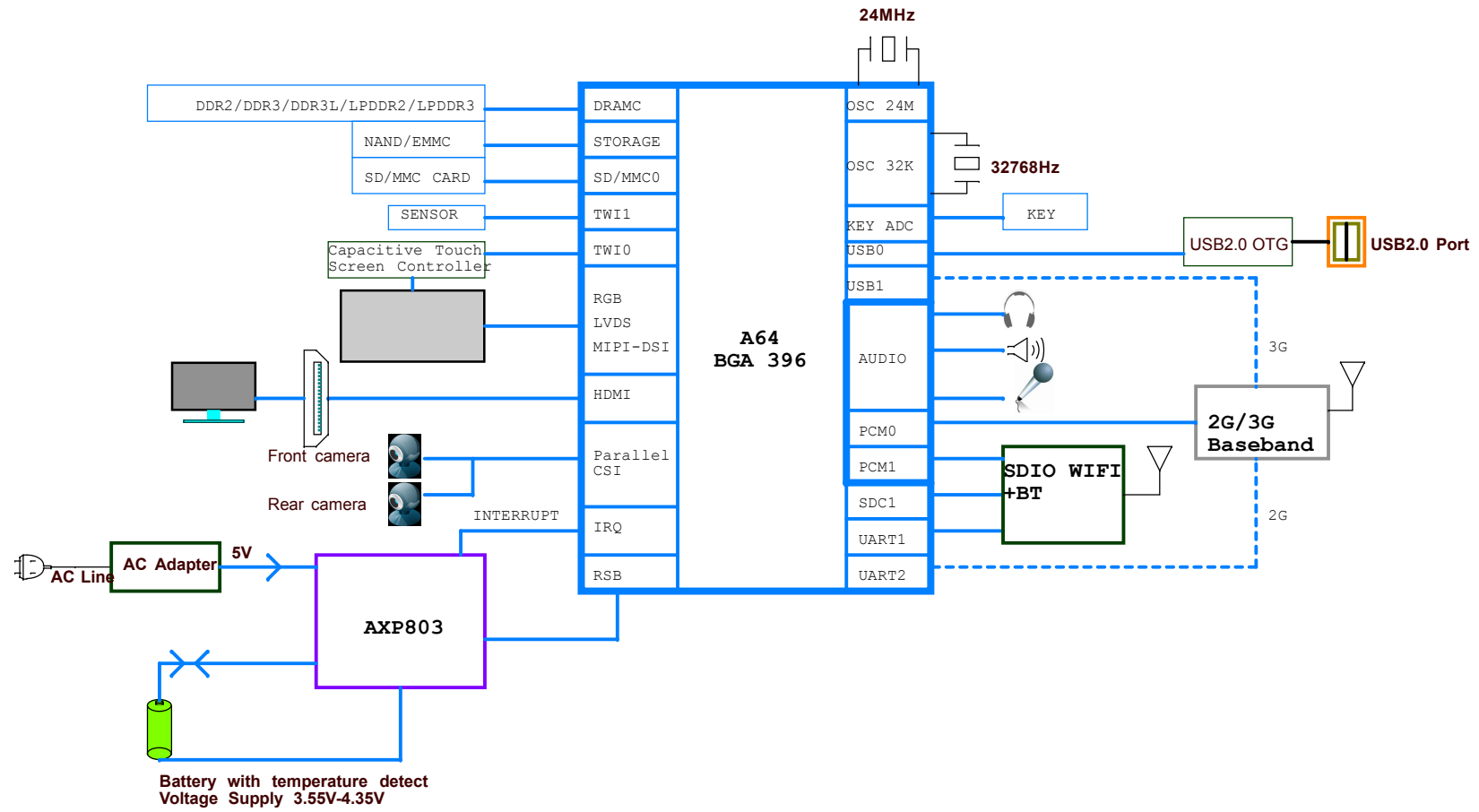
VERSION HISTORY

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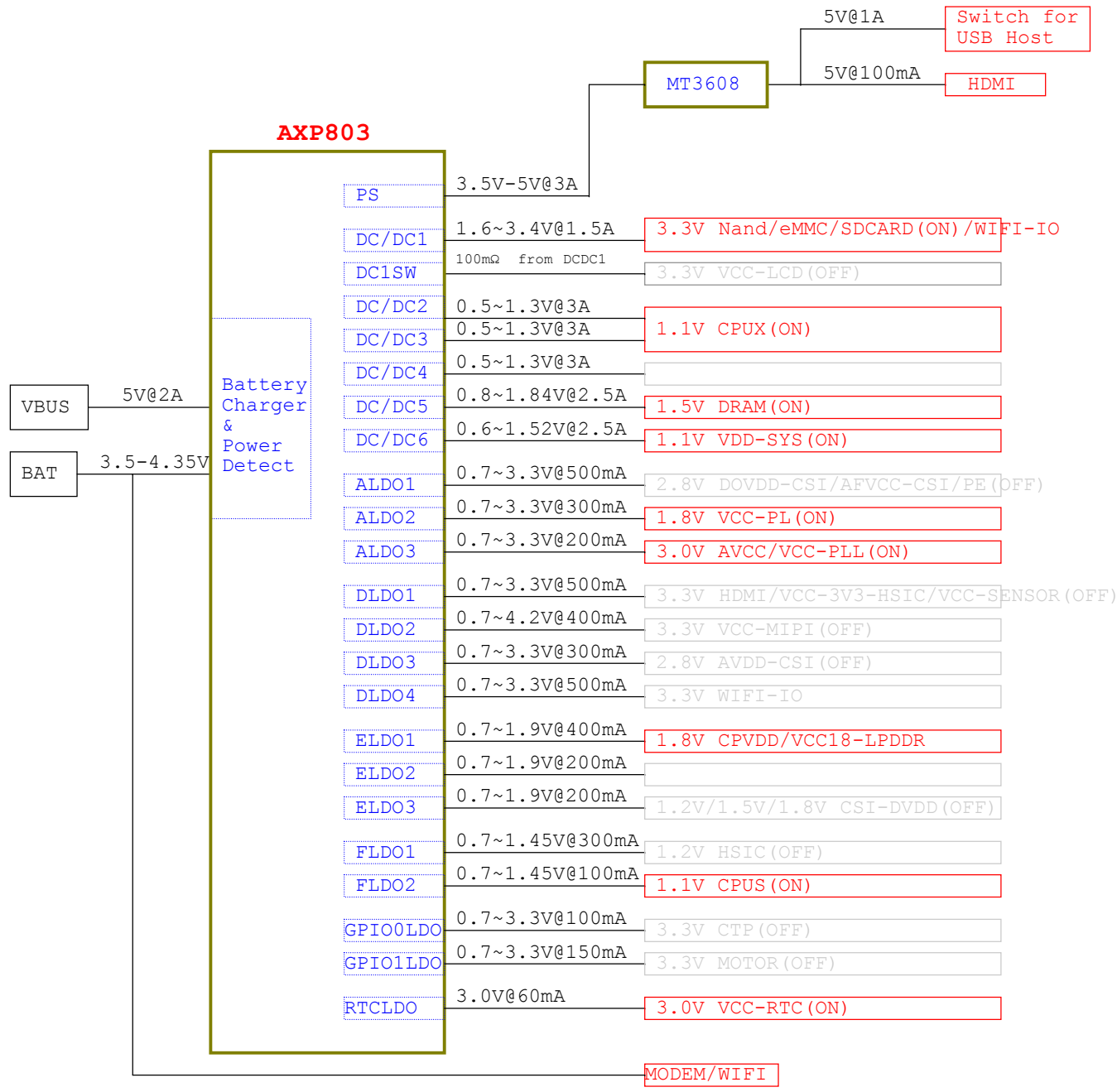
Revision	Description	Date	Drawn	Checked	Approved
Ver 3.0	Release version	2017-05-03			

BLOCK DIAGRAM

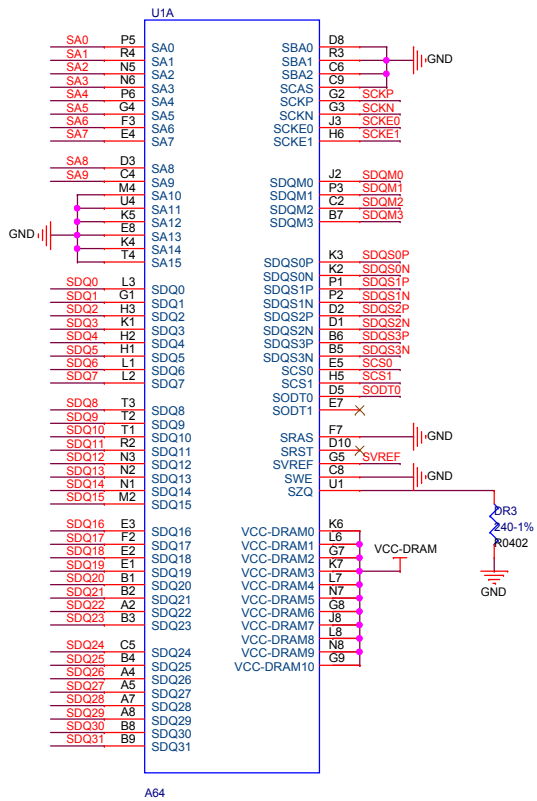


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POWER TREE

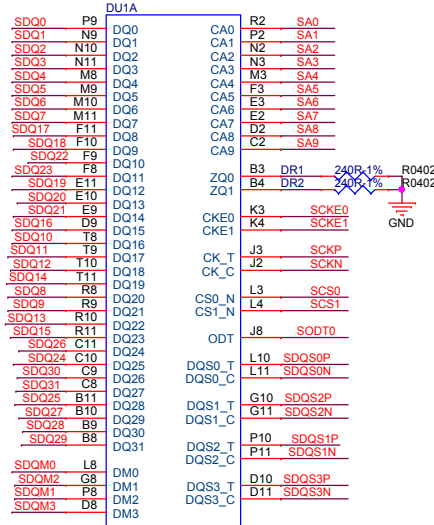


LPDDR3

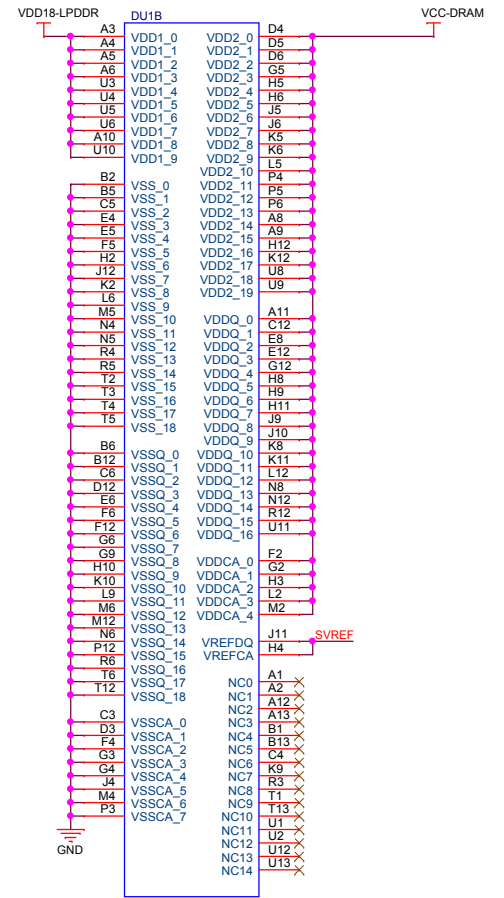


A64

2017-01-10

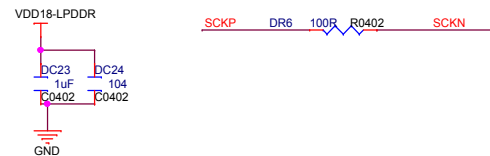
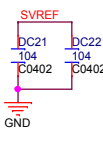
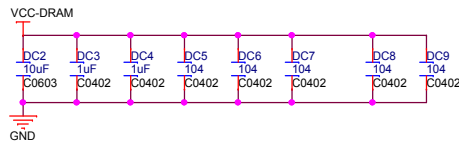
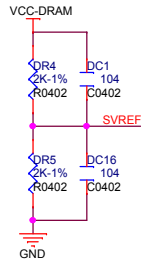
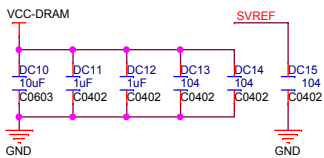


LPDDR3_FBGA178



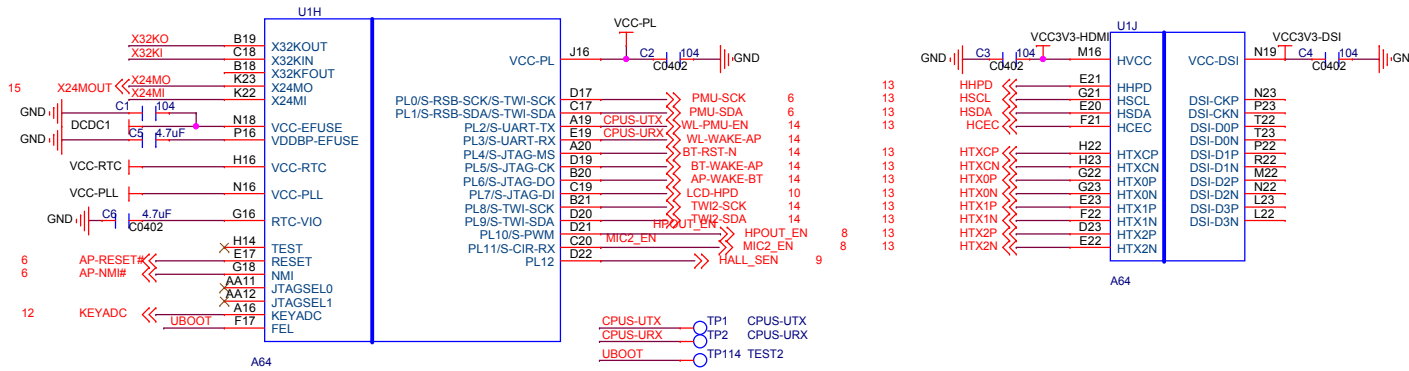
LPDDR3_FBGA178

2017-01-10

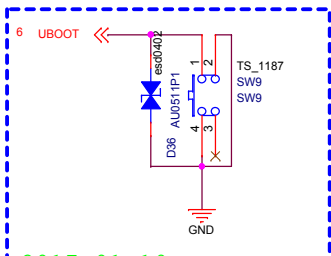
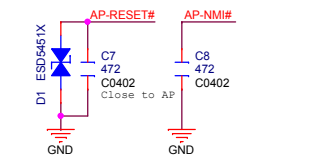


PINE64			
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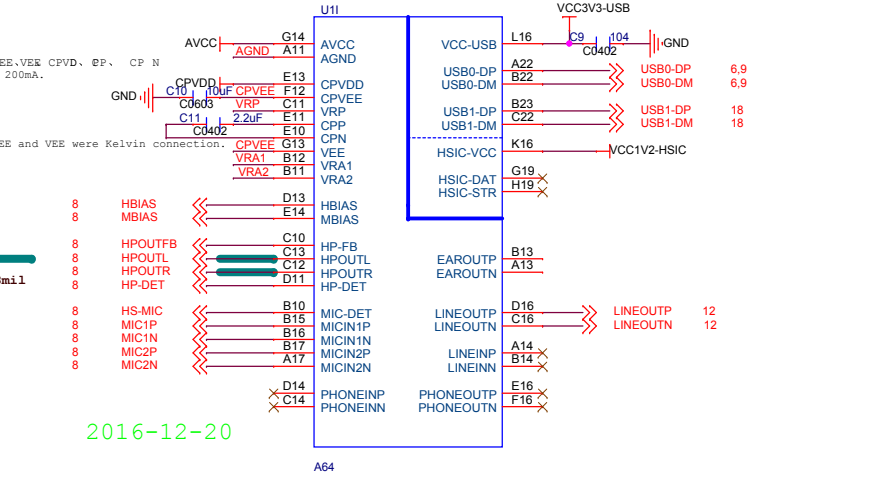
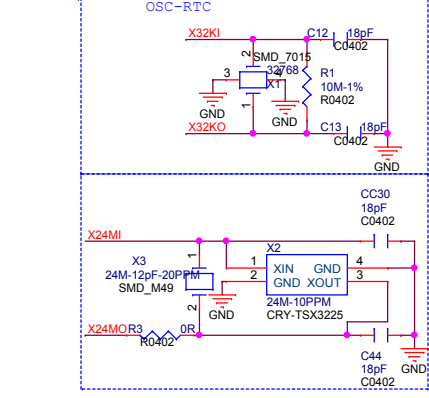
CPU



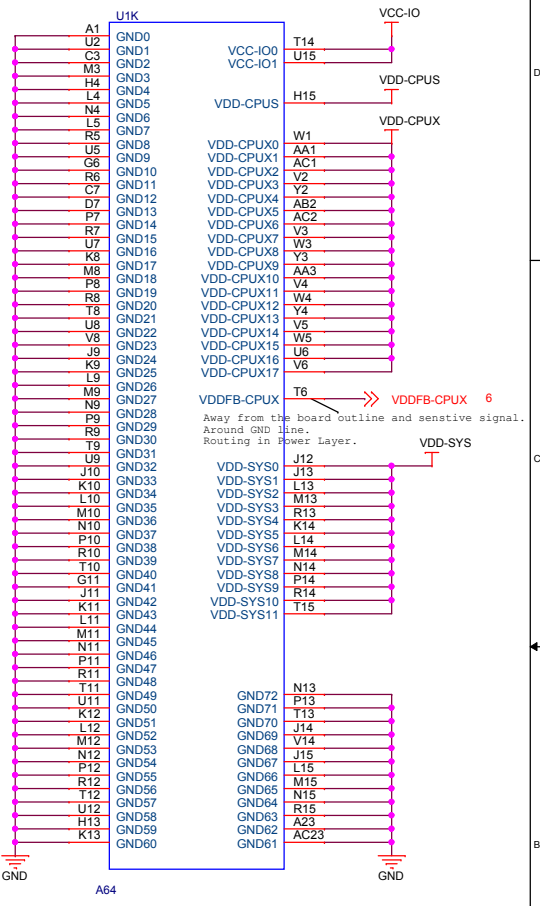
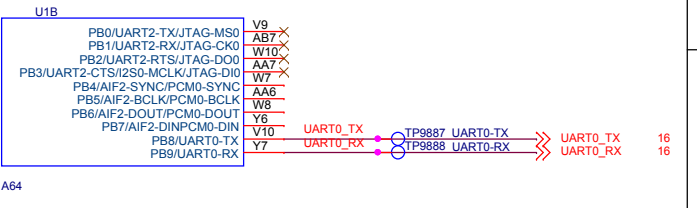
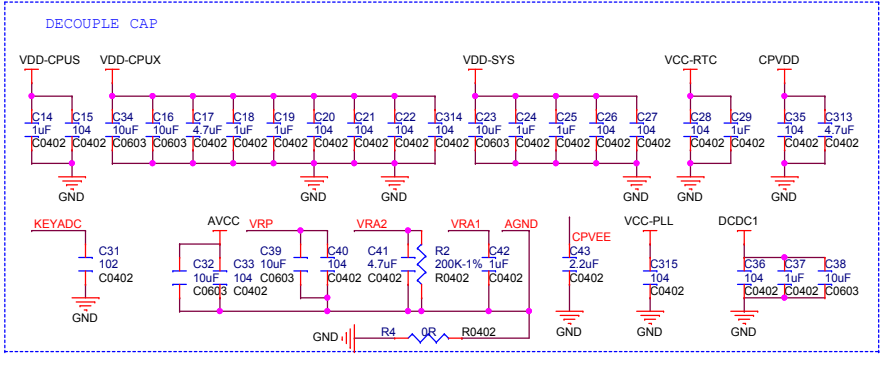
Away from the board outline and sensitive signal. Around GND line.



2017-01-10



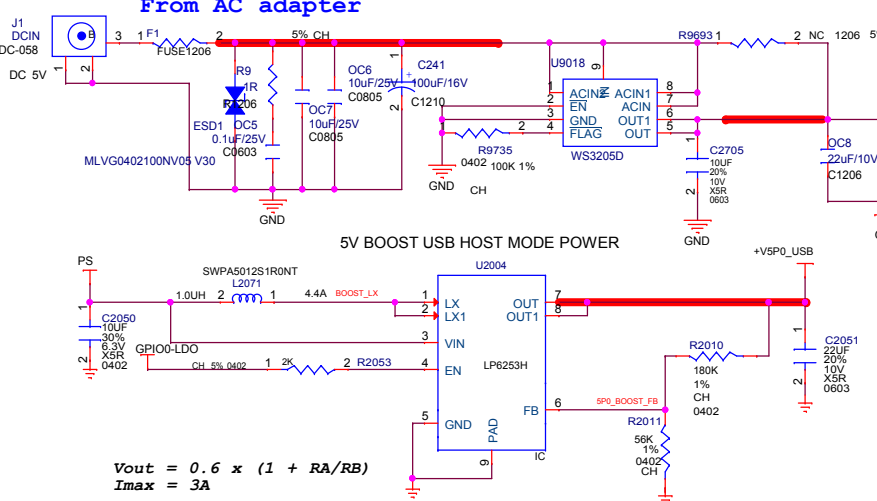
2016-12-20



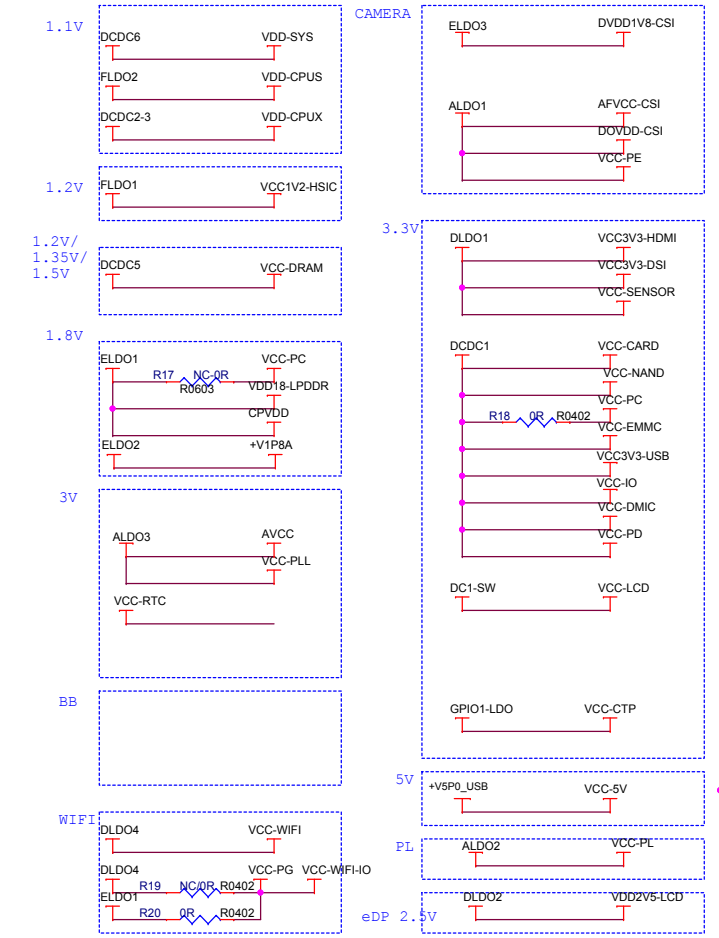
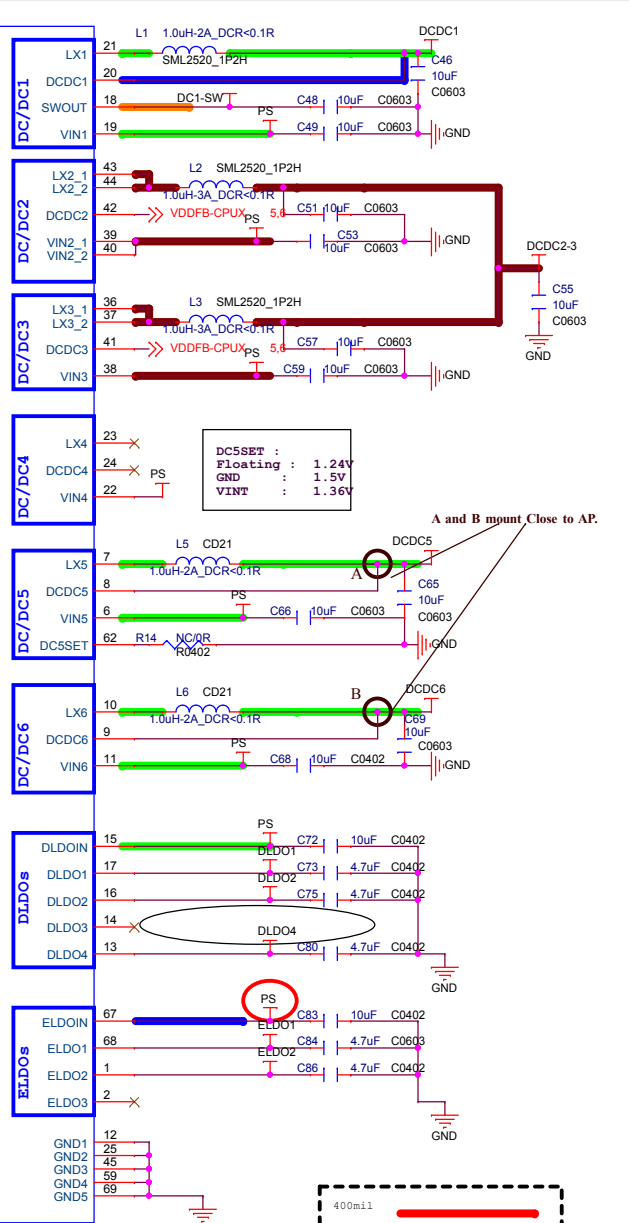
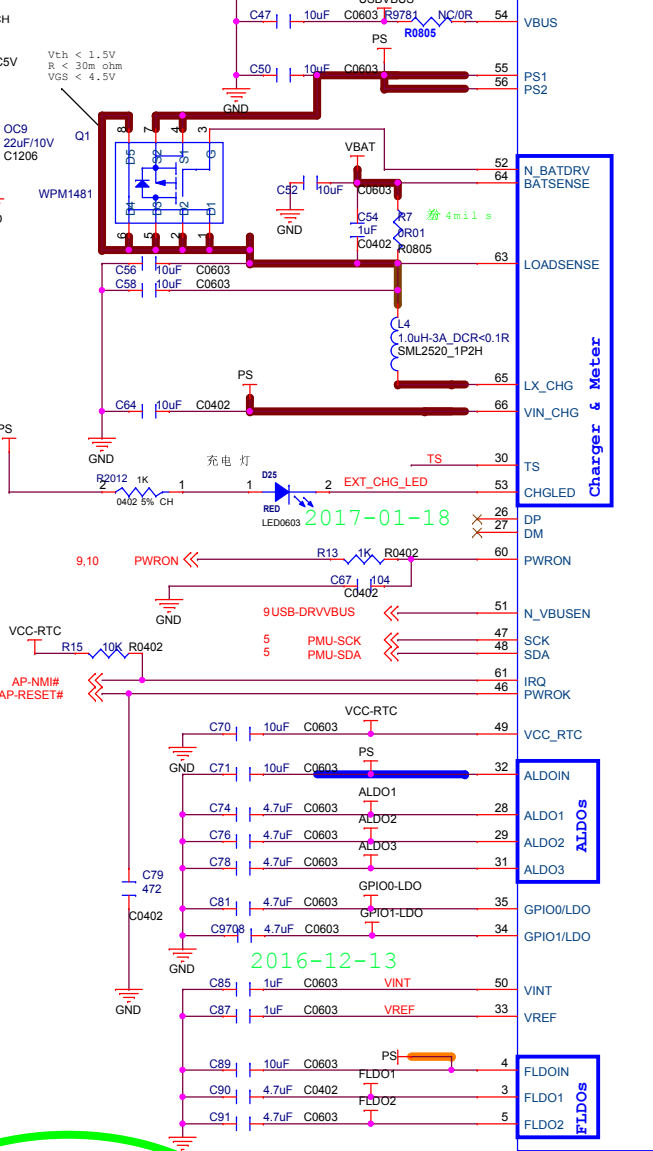
Away from the board outline and sensitive signal. Around GND line. Routing in Power Layer.

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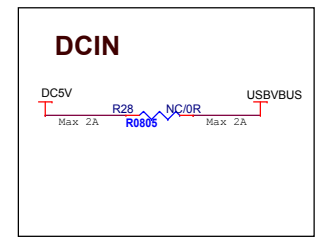
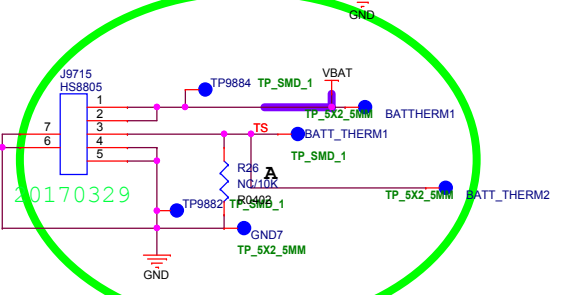
Power



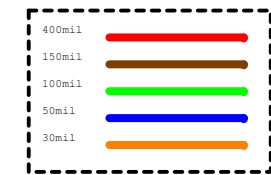
PMIC



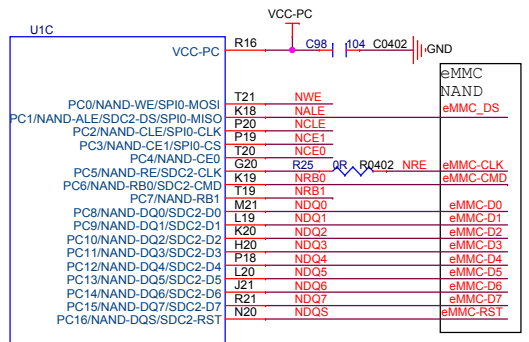
BAT



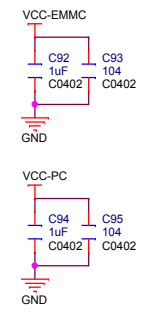
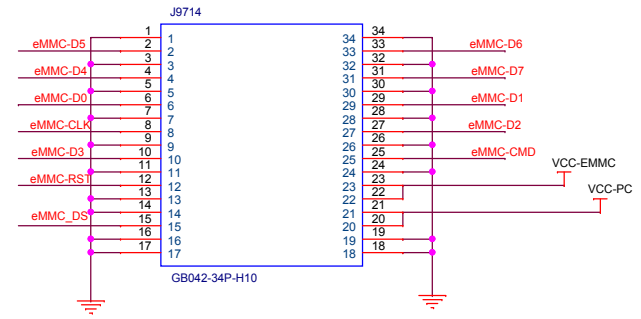
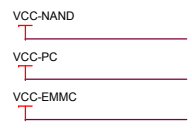
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NAND/eMMC



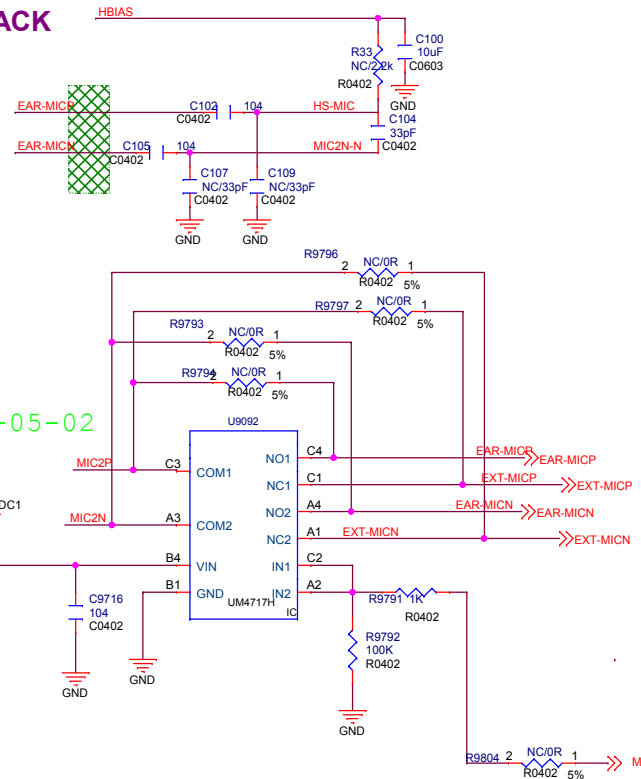
A64



Both eMMC NAND and first TSOP NAND layout together

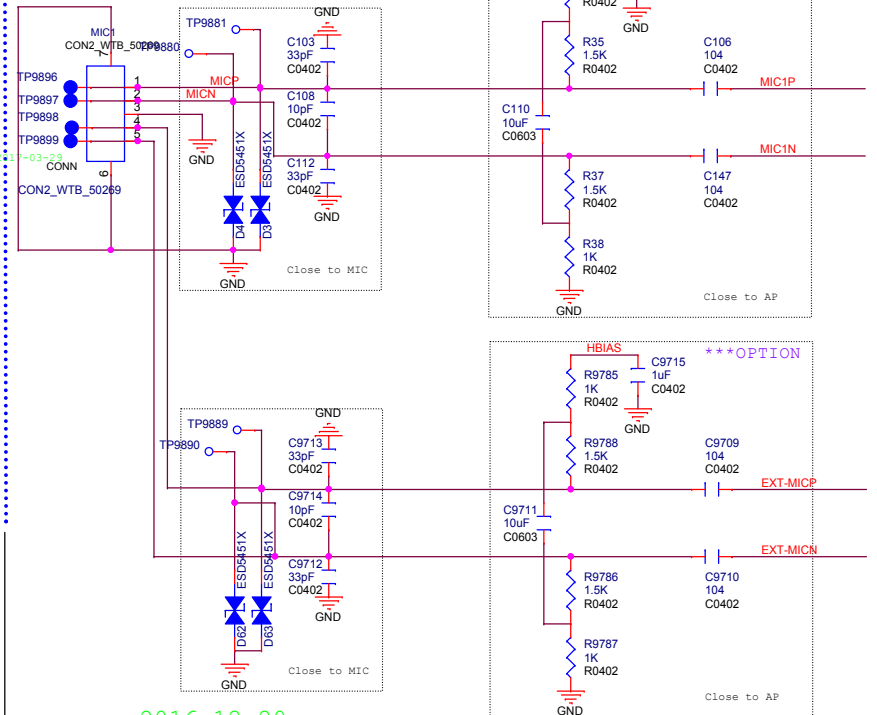
AUDIO

HP_JACK



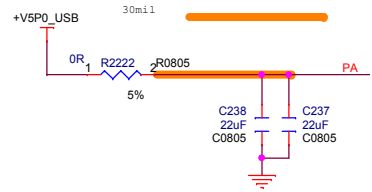
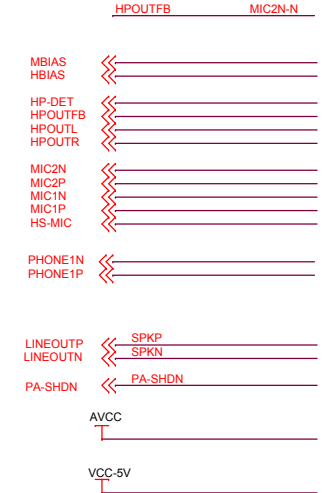
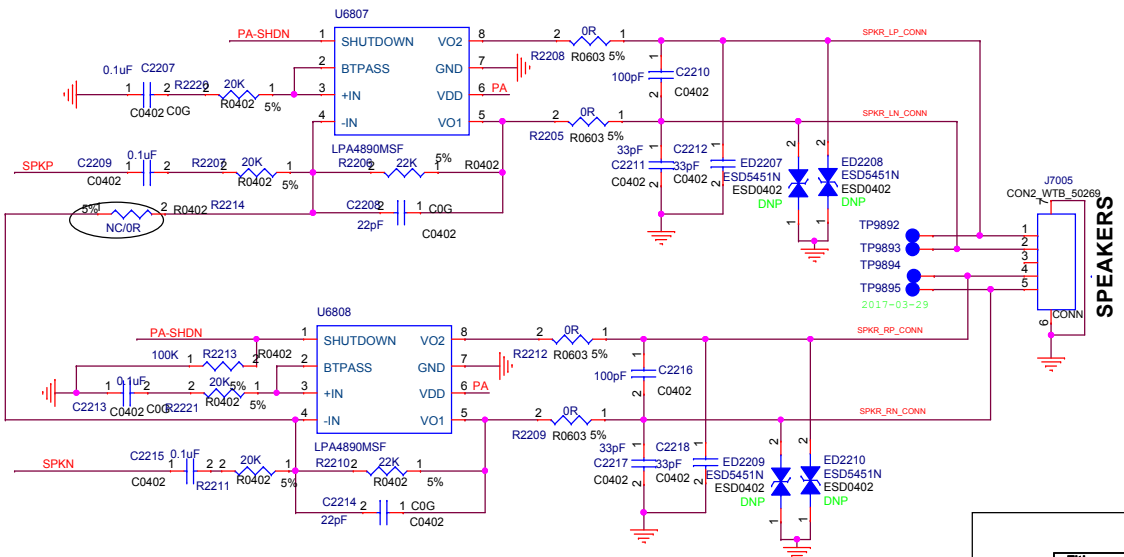
2017-05-02

ECM AMIC



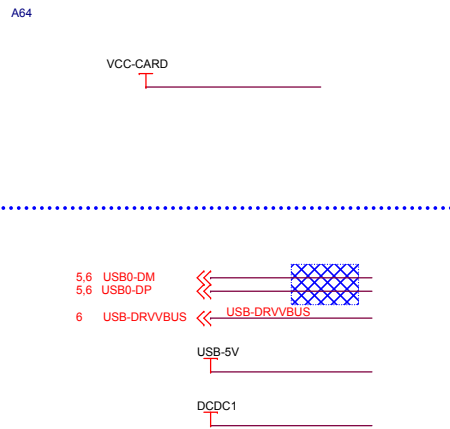
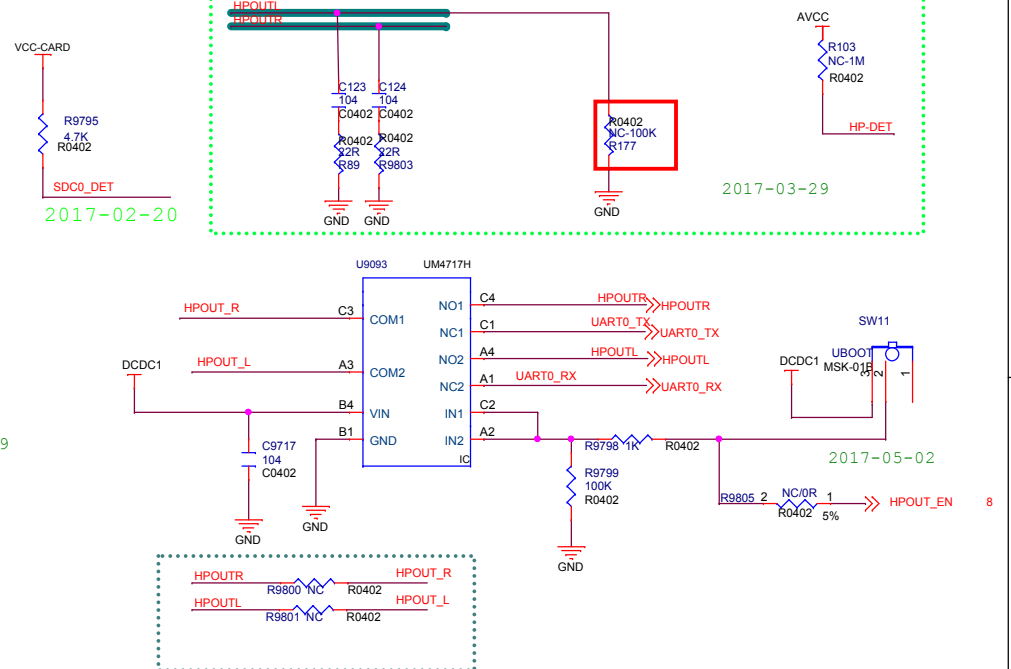
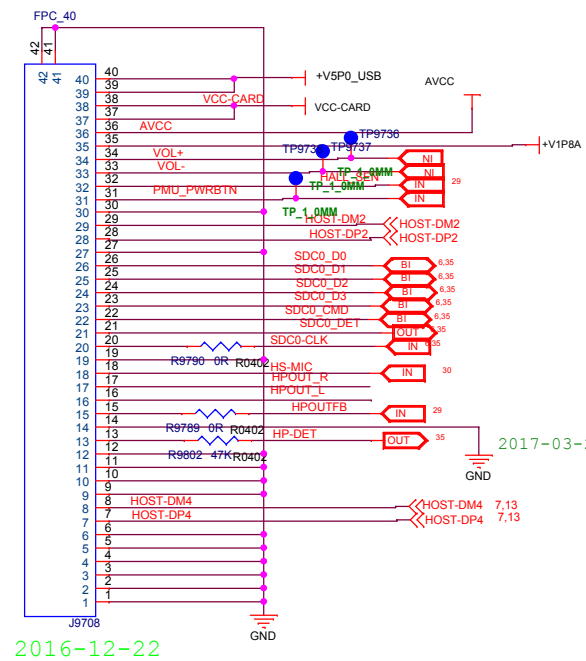
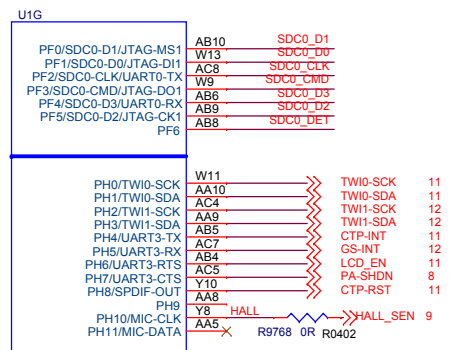
2016-12-20

SPEAKER



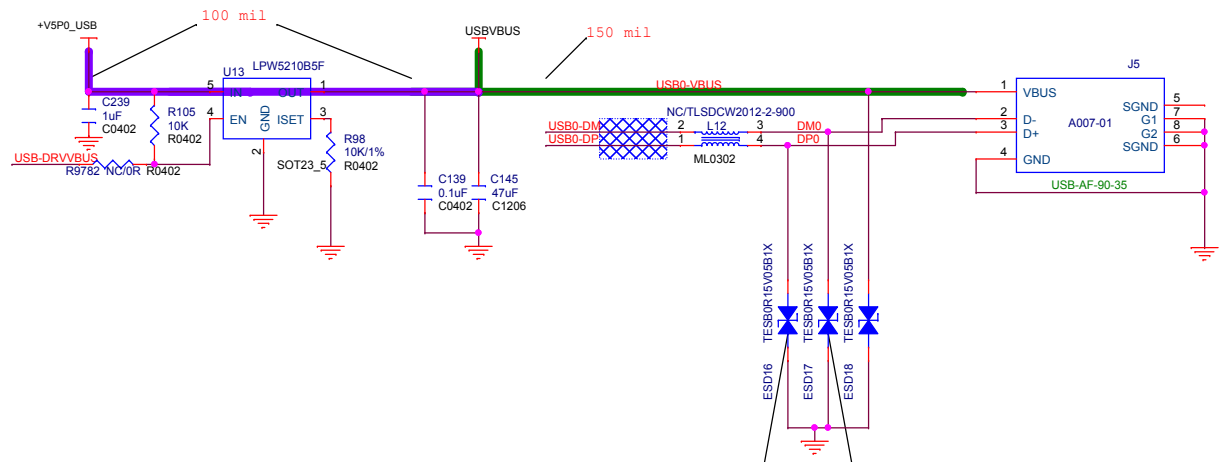
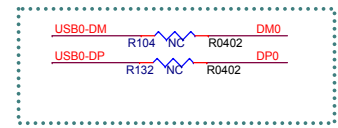
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T-CARD/USB



USB

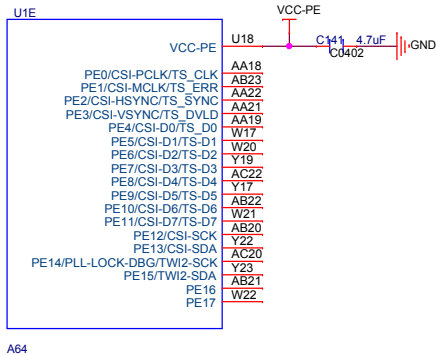
Differential pairs
Z0= 90 ohm



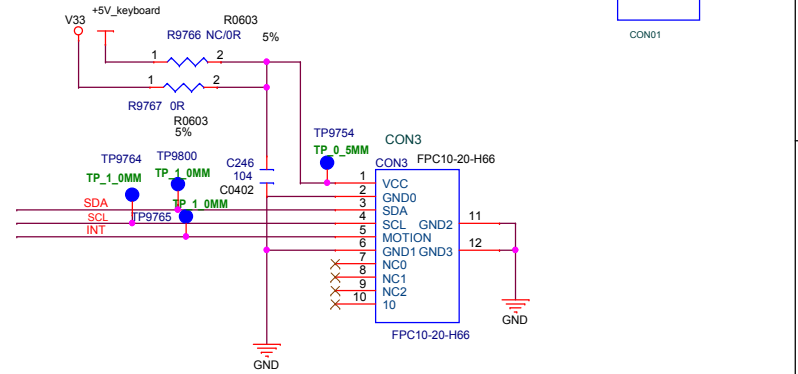
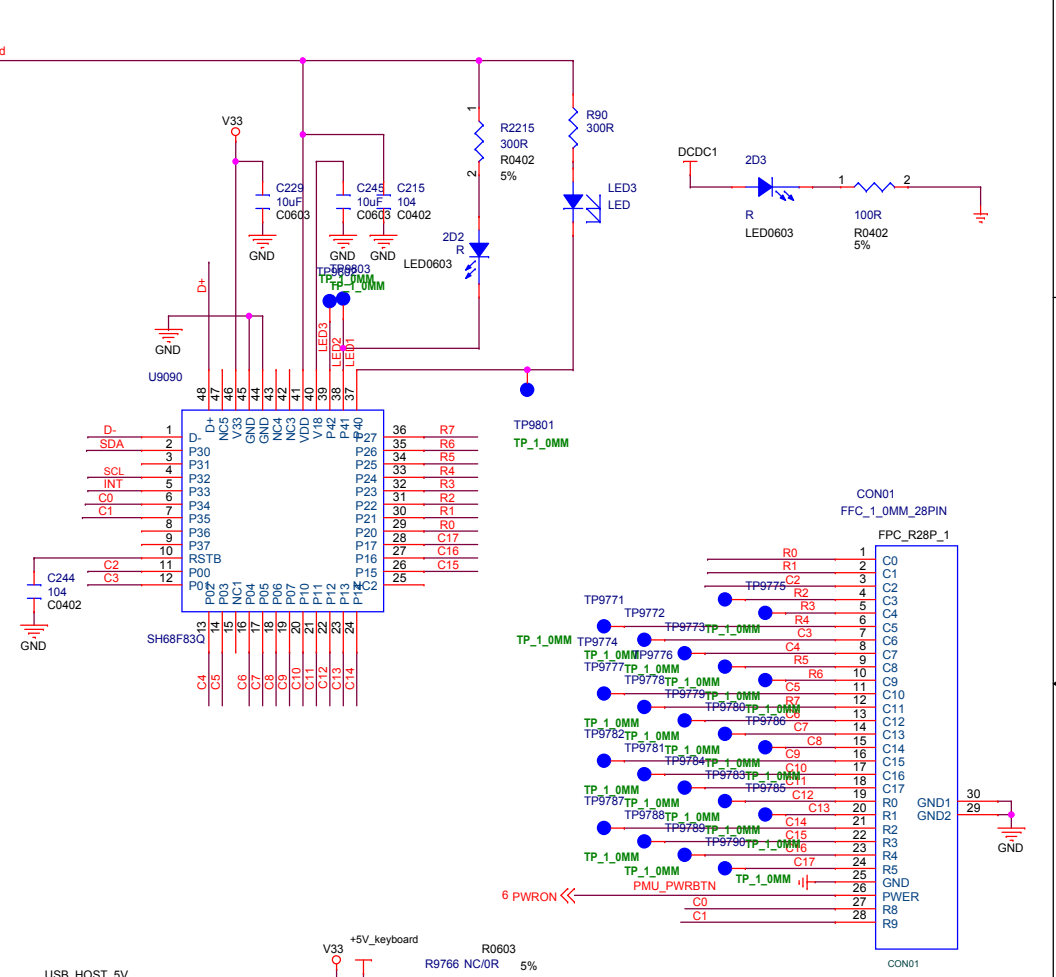
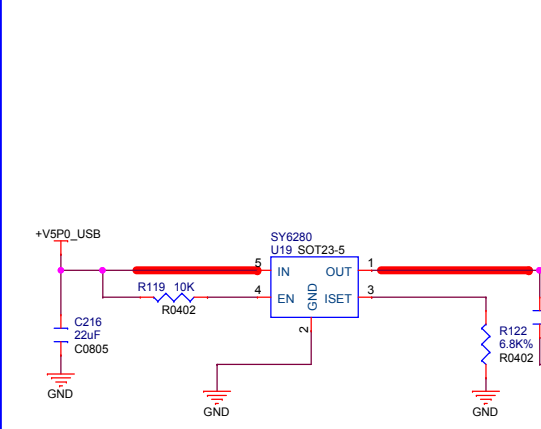
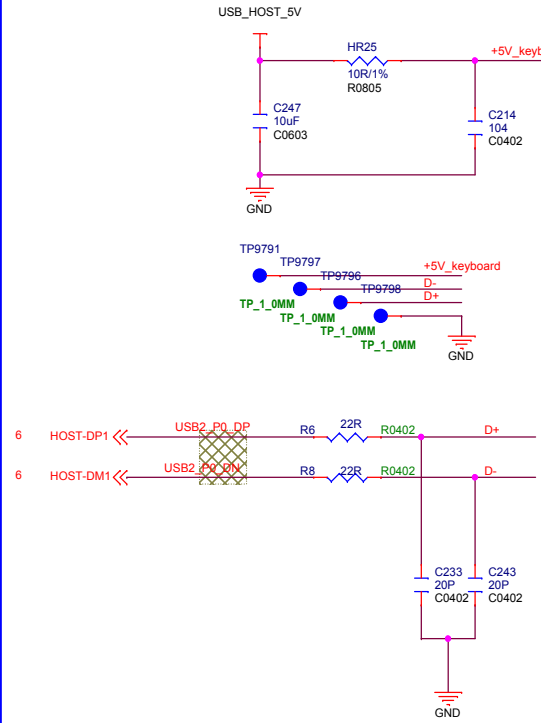
The ESD part's parasitic capacitance < 5pF.

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CAMERA



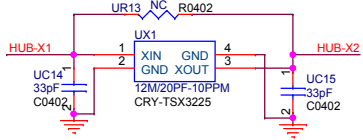
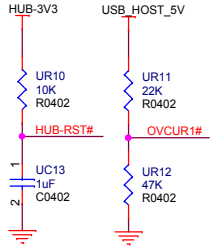
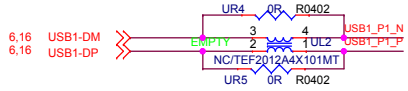
A64



PINE64			
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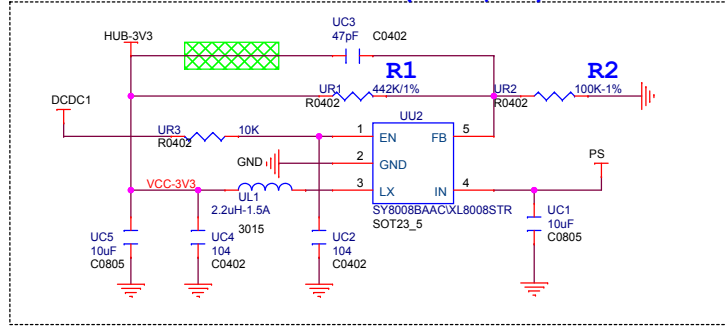
CTP

Differential pairs
Z0= 90 ohm +/-5 ohm



VCC-3V3

$$V_{out} = 0.6 * (1 + R1/R2) = 3.25V$$

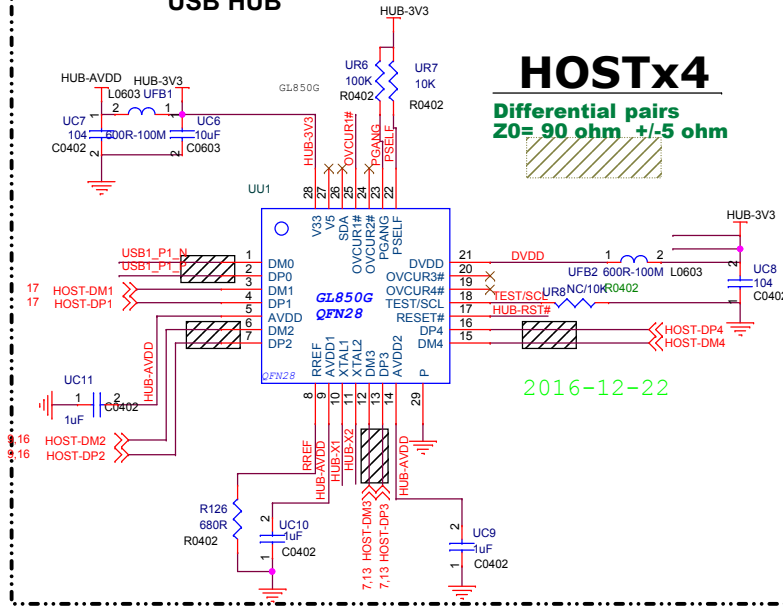


USB HUB_USB_CONN

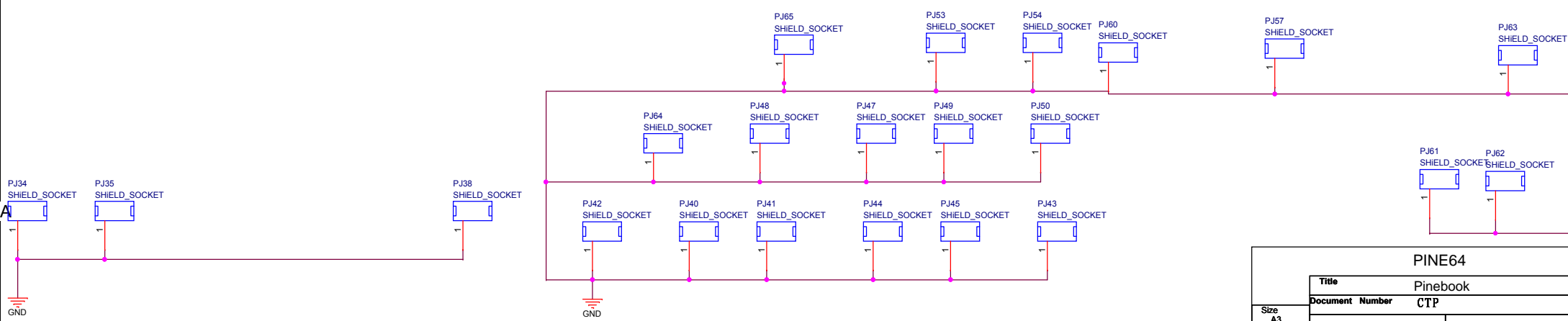
USB HUB

HOSTx4

Differential pairs
Z0= 90 ohm +/-5 ohm



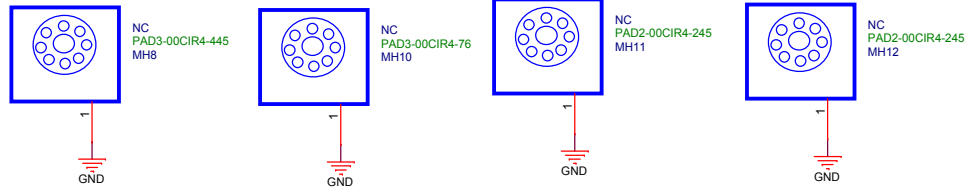
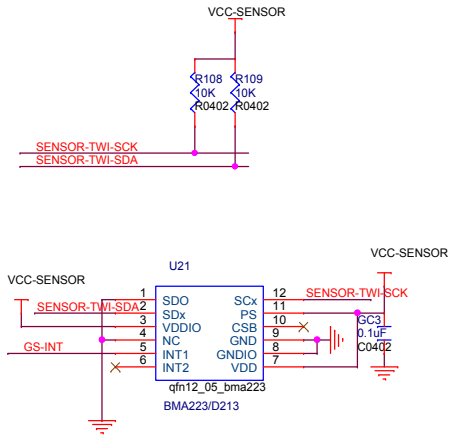
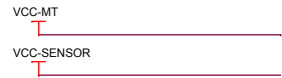
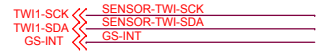
2016-12-22



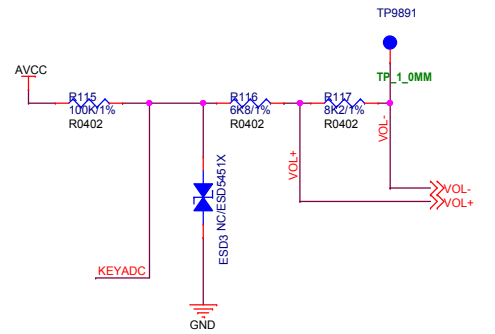
PINE64			
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SENSORs/MT/KEY

SENSOR



KEY

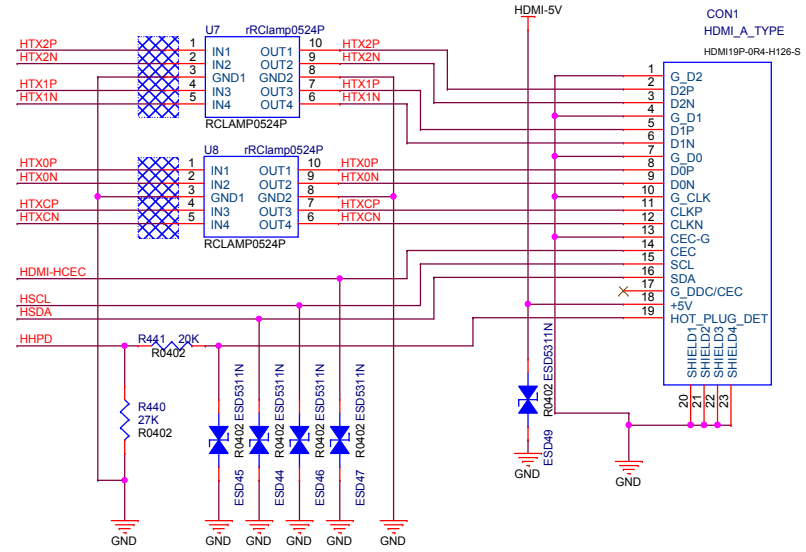
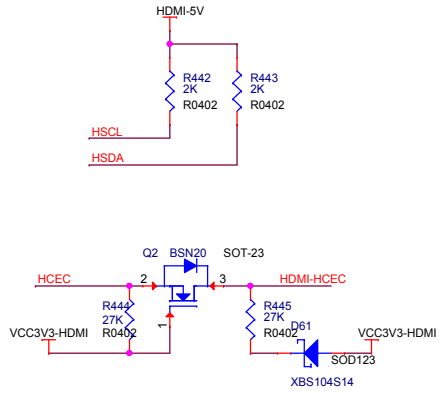
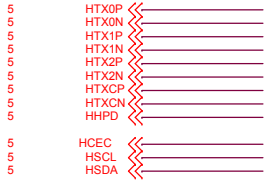


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HDMI

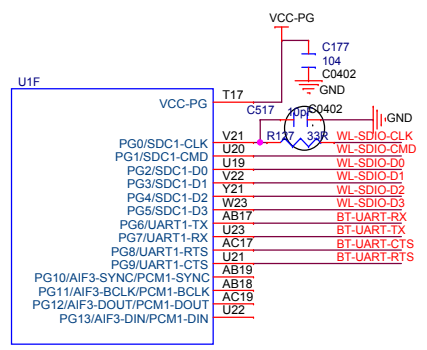


Differential pairs
Z0= 100 ohm

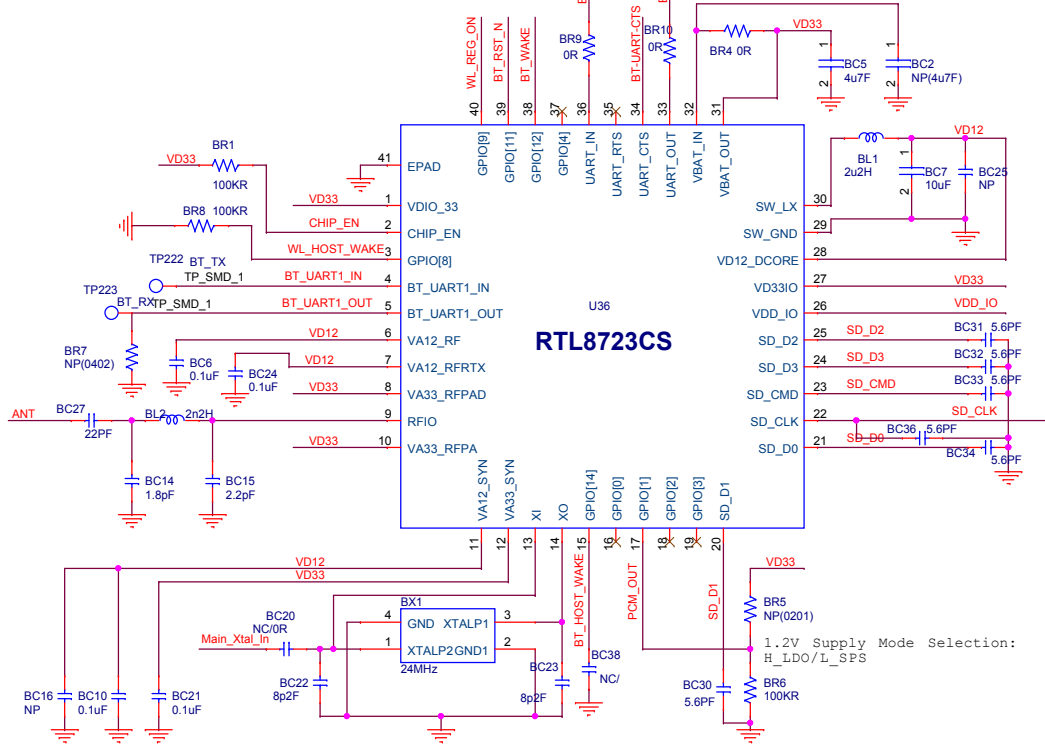
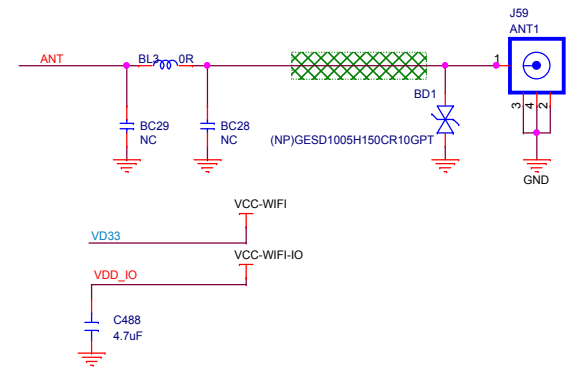
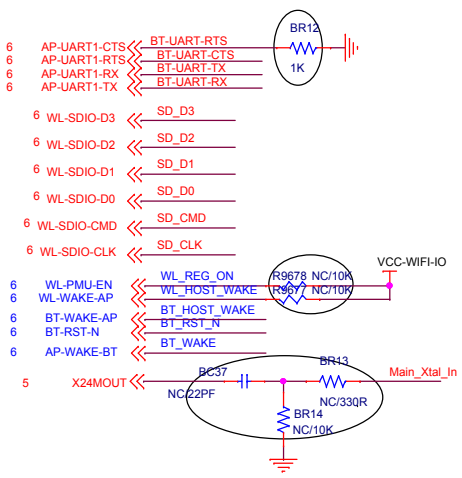


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RTL8703AS/8723BS-COB



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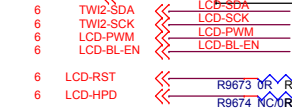
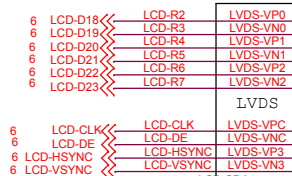
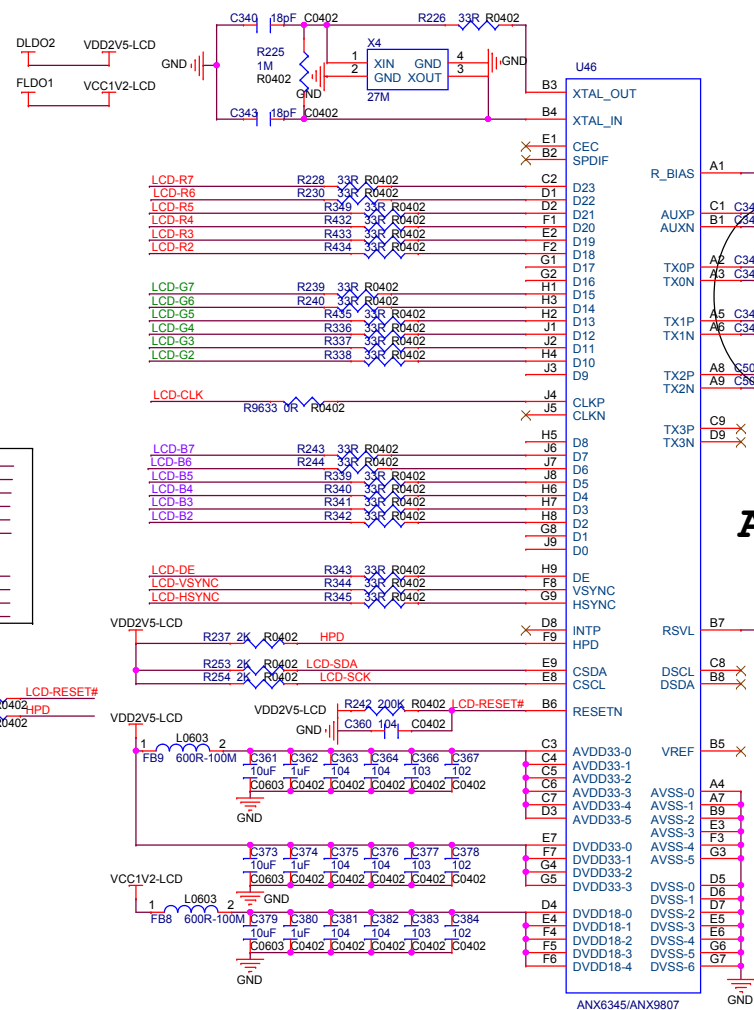


GPIO[8]/EXT_WOL/WL_WAKE_HST/WL_LED/BT_LED/ANTSEL2/ SD_OB_INT
 BT_UART1_IN/BT_3DD_SEL/BT_GPIO/BT_LED/ ANTSEL1/ANTSEL1
 BT_UART1_OUT/BT_3DD_SYNC/BT_GPIO/(WL_WAKE_HST)/TEST_MD_SEL/ANTSEL0
 GPIO[9]/WL_DISn/EXT_WOLO
 GPIO[11]/BT_DISn/ BT_EXT_WOL
 GPIO[12]/HST_WAKE_DEV/LTE_COEX/ FM_I2S_SDOUT/WPS
 GPIO[4]/EEPROM_SEL/WL_LTE_UART_OUT/BT_GPIO(BT_WAKE_HST)/FM_I2S_WS/FM_I2C_SDA
 GPIO[14]/DEV_WAKE_HST/(WL_WAKE_HST)
 GPIO[0]/ICFG0/BT_GPIO/PCMC_IN

Supply Voltage Options

Part	VBAT==3.3V	VBAT=3.3~5.5V (Battery)
BR4	0R	NP
BR1	100KR	NP(CHIP_EN: Off Module Pull High)
BC2	NP	4.7uF

LCD-eDP-TP



HPD → HPD 6

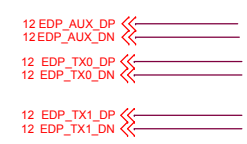
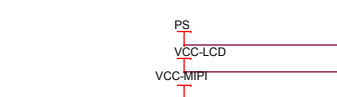
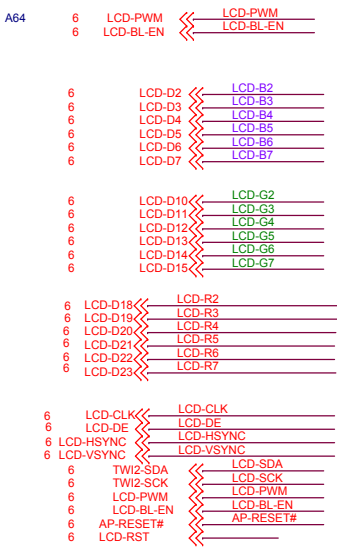
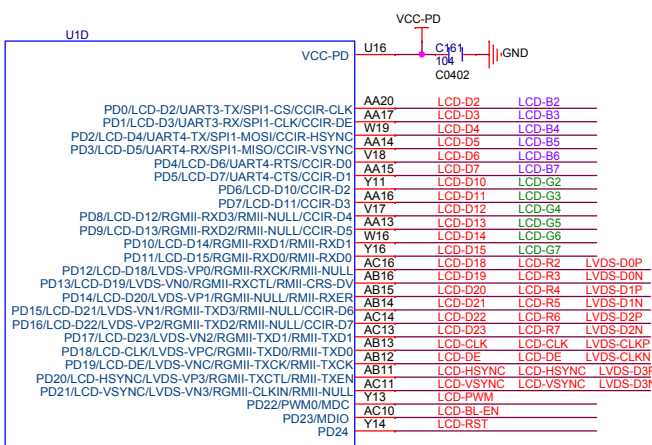
LG Display
MODEL: LP0970x1

Differential pairs
Z0= 100 ohm

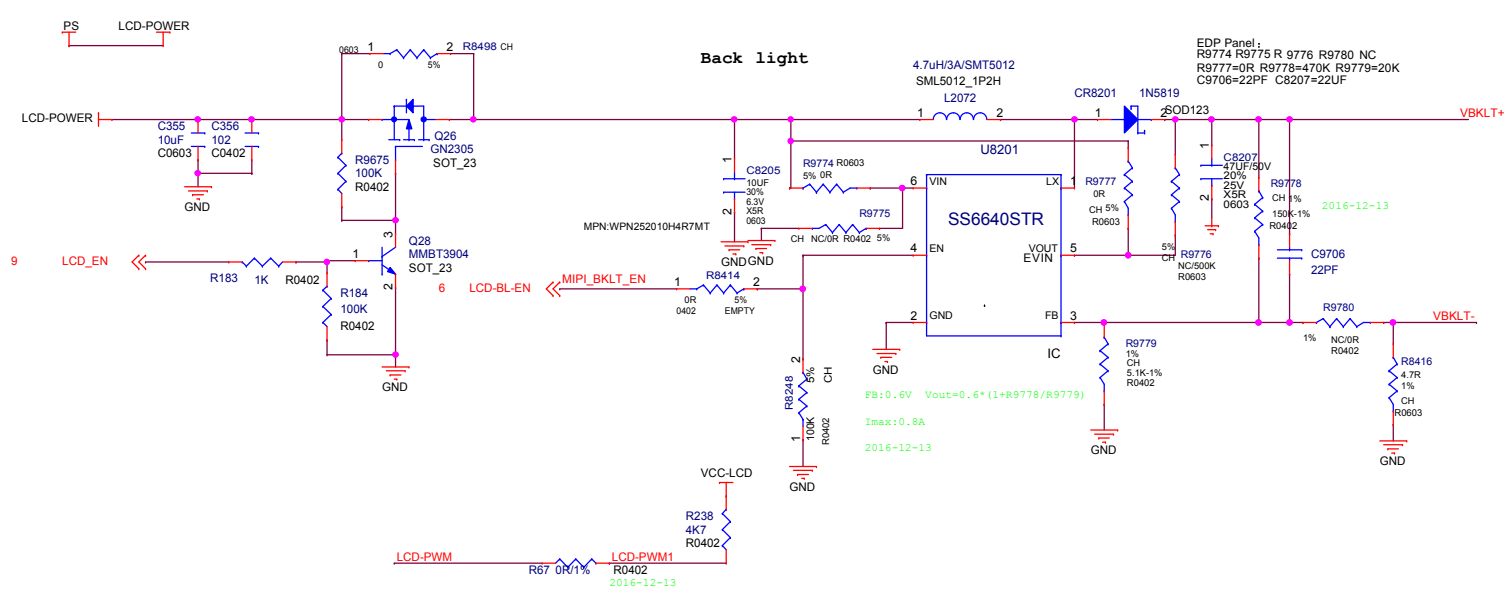
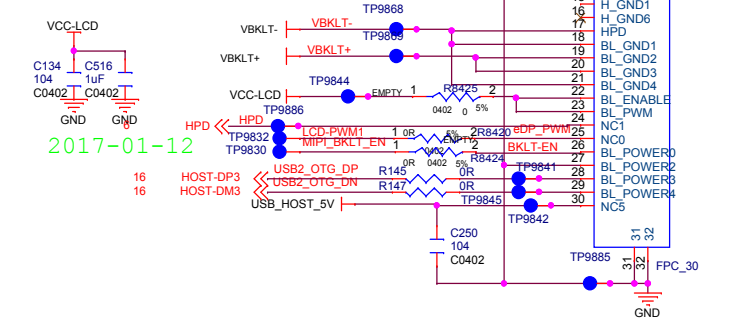
A

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EDP/MIPI



Differential pairs
 Z0= 100 ohm



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