

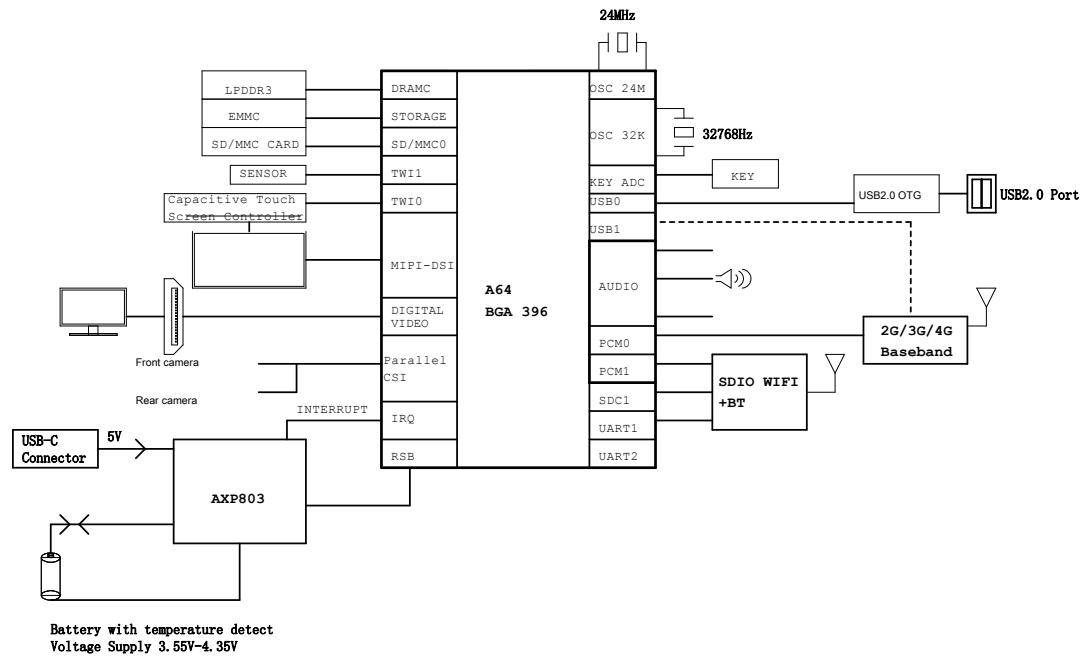
## VERSION HISTORY

### Index :

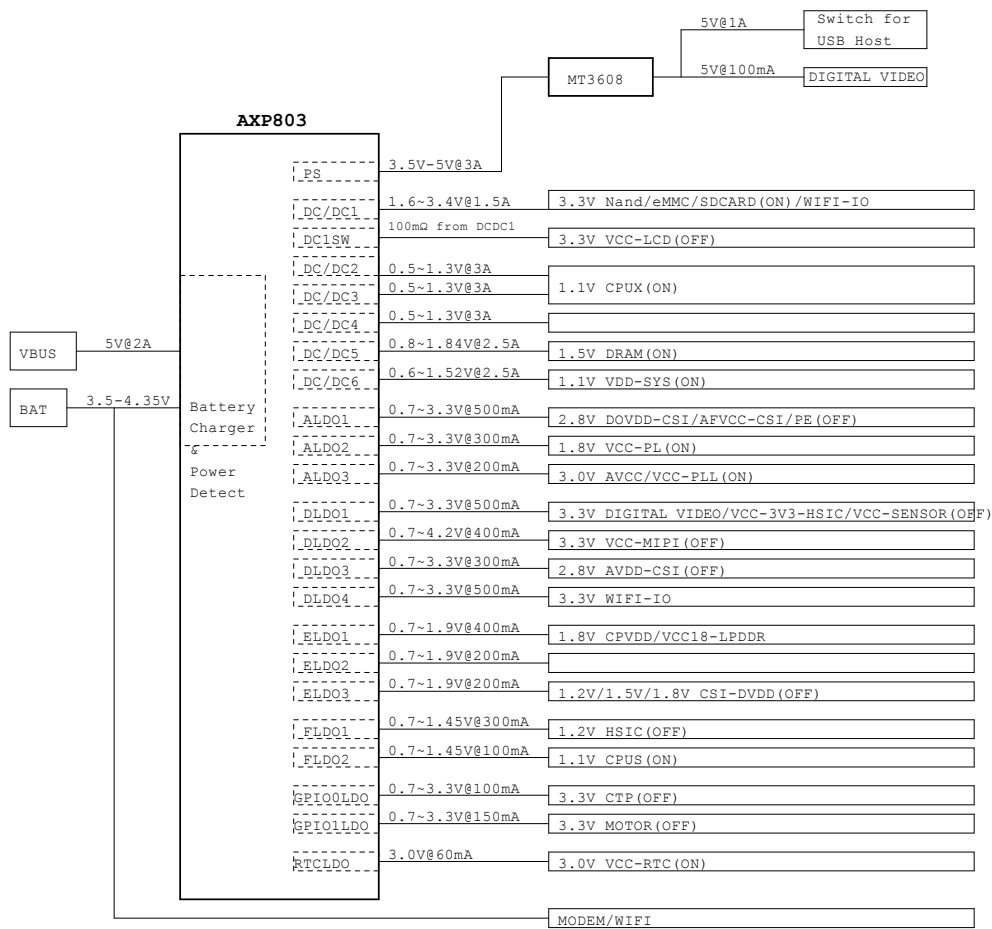
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Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Release version	2019-05-28	HE		
Ver 1.1	Solved the TRX of UART3 and RTS CTS of UART4 could not work synchronously Modified PC3 and PD24 network interface problem Modified the problem of WiFi module in RTL8723CS NTC increases the series resistance	2019-07-06	HE		
Ver 1.2	Refer to below link or v1.2 change <a href="https://wiki.pine64.org/index.php?title=PinePhone_v1.2">https://wiki.pine64.org/index.php?title=PinePhone_v1.2</a>	2020-03-10	HE		
Ver 1.2a	Change USB-C CC switch component part number	2020-06-08	HE		

# BLOCK DIAGRAM

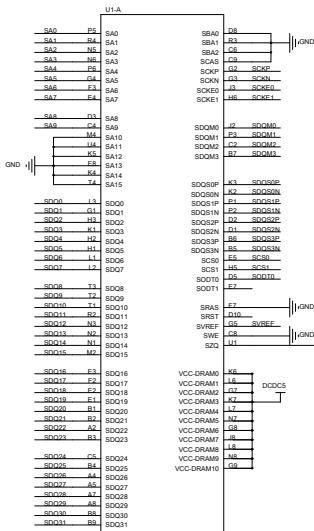


# POWER TREE

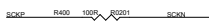
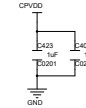
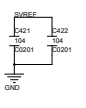
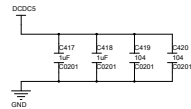
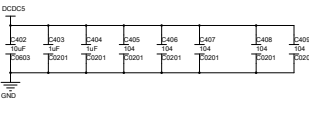
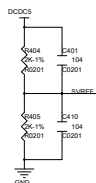
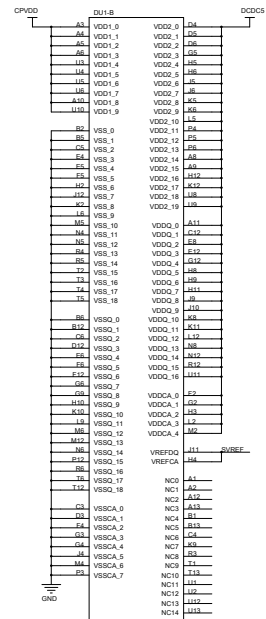
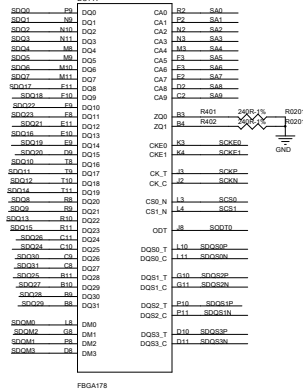


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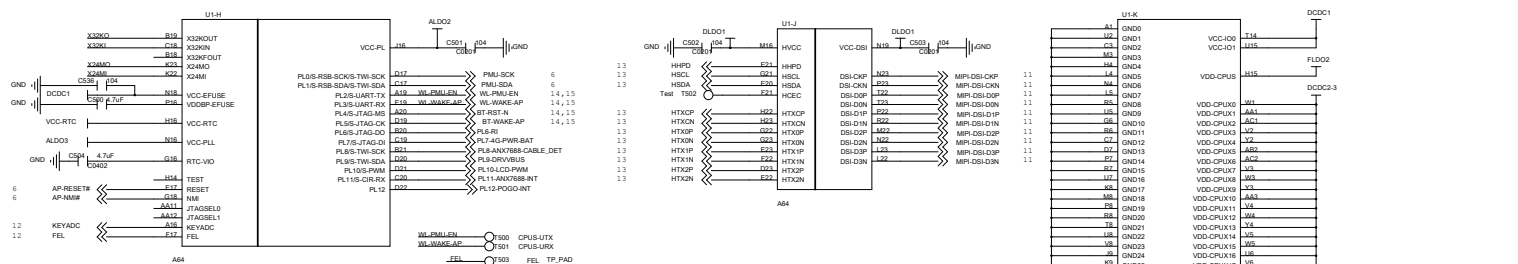
# LPDDR3



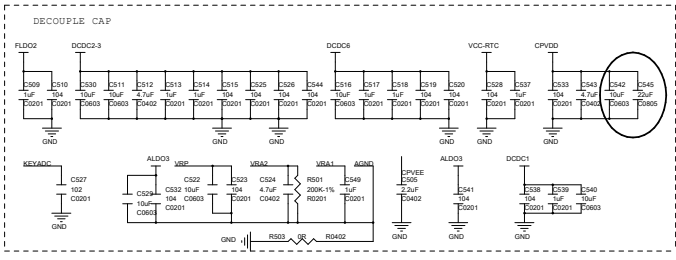
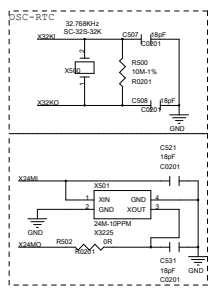
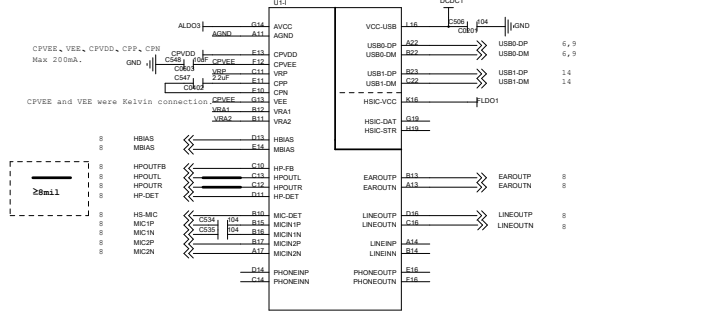
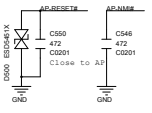
If use LPDDR3, mount VDD18-LPDDR (ELD01) is 1.8V by Standby.



# CPU



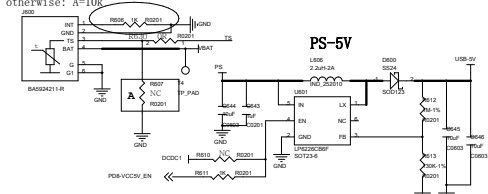
Away from the board outline and sensitive signal. Around GND line.



# Power

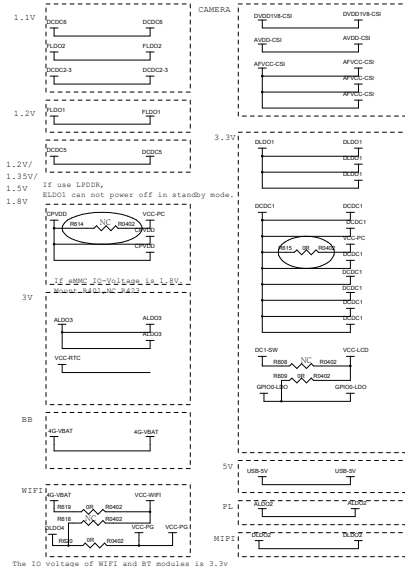
## BAT

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



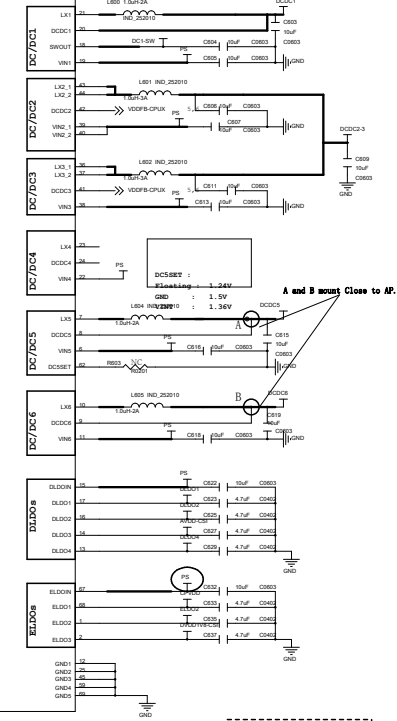
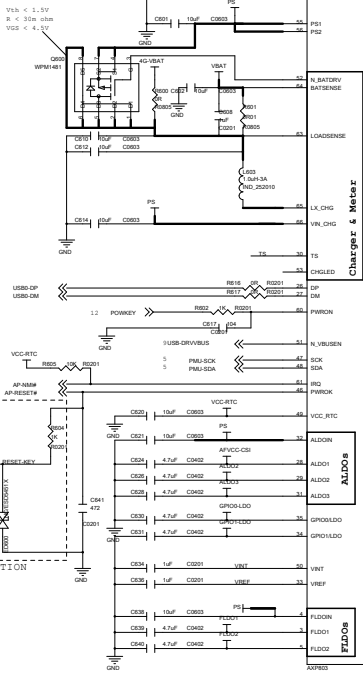
$$V_{out} = 0.6 \times (1 + R_A/R_B)$$

$$I_{max} = 2A$$



The IO voltage of WIFI and BT module is 3.3v

## PMIC



A and B must Close to AF.

**PINE64**

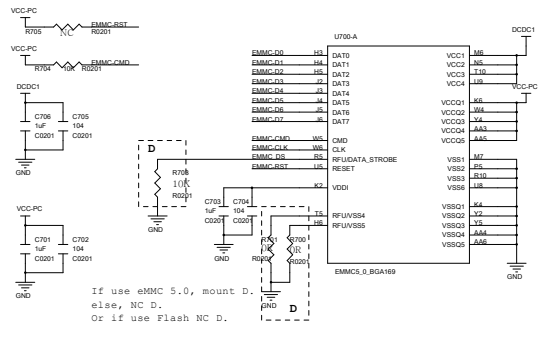
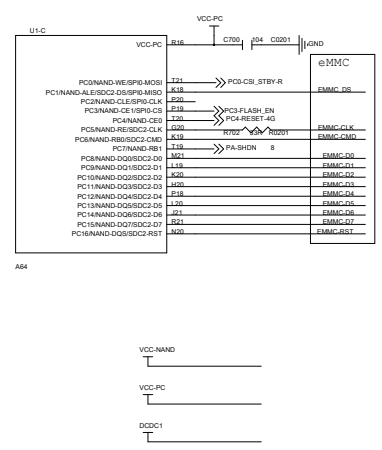
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# NAND/eMMC

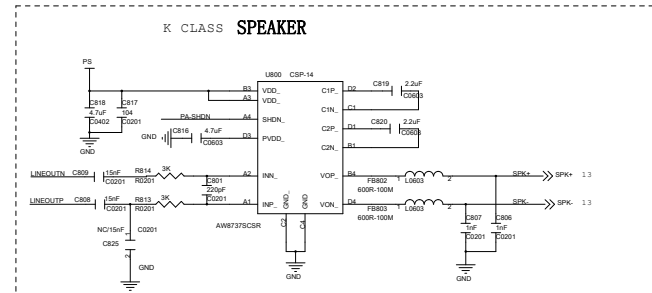
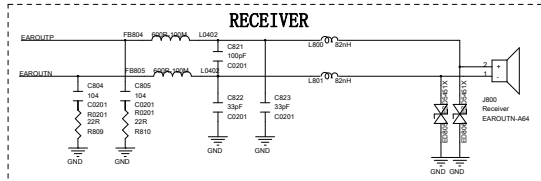
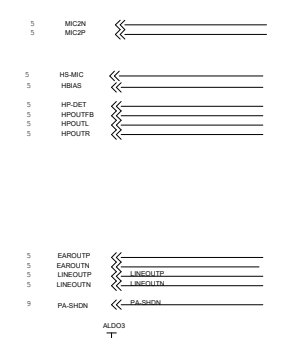
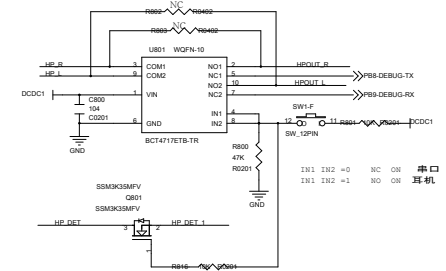
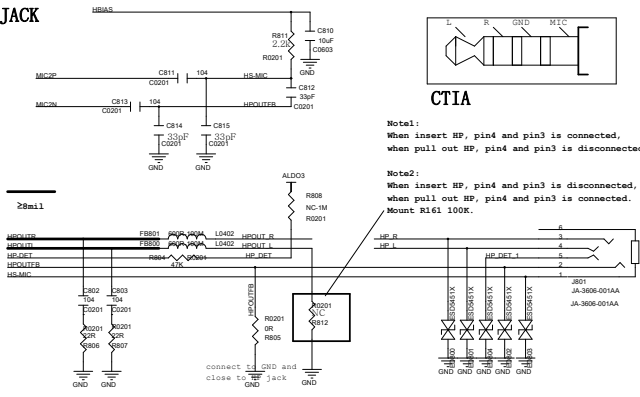


If use eMMC 5.0, mount D. else, NC D. Or if use Flash NC D.

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# AUDIO

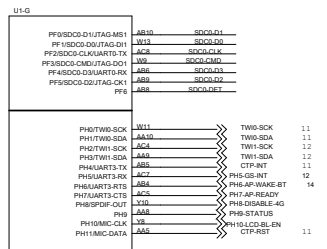
## HP JACK



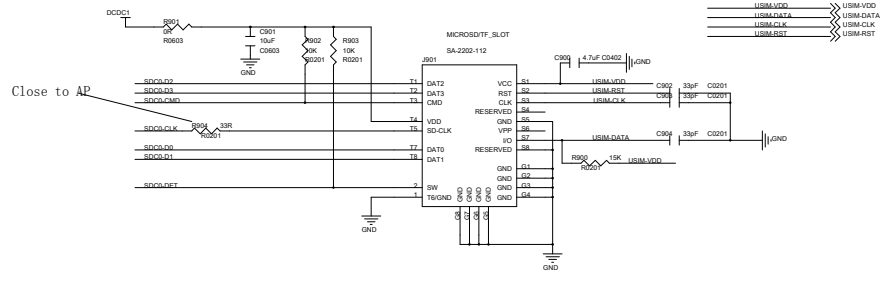
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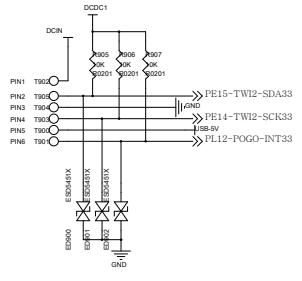
# T-CADD/SIM



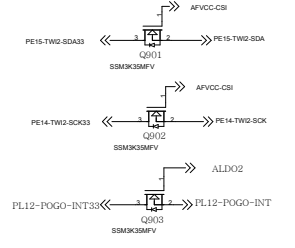
# T-CARD



# POGO PIN



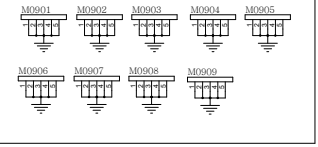
## level shift



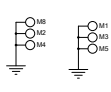
## MARK



## Shield clamp

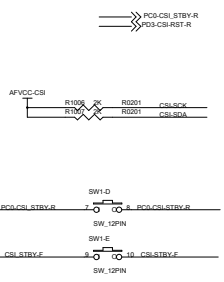
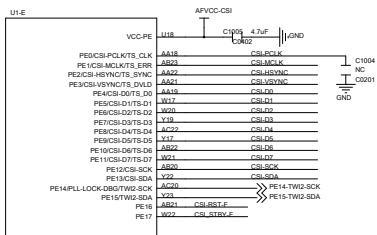


## PTH



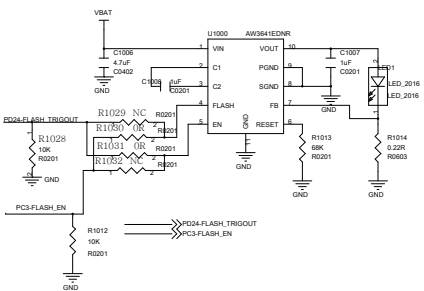
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# CAMERA

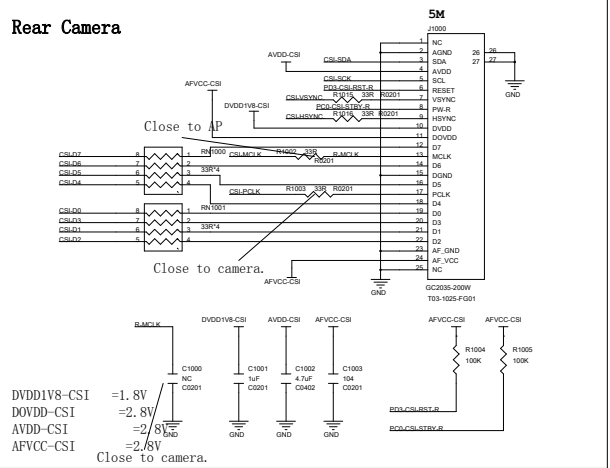


## FLASH LED Drive

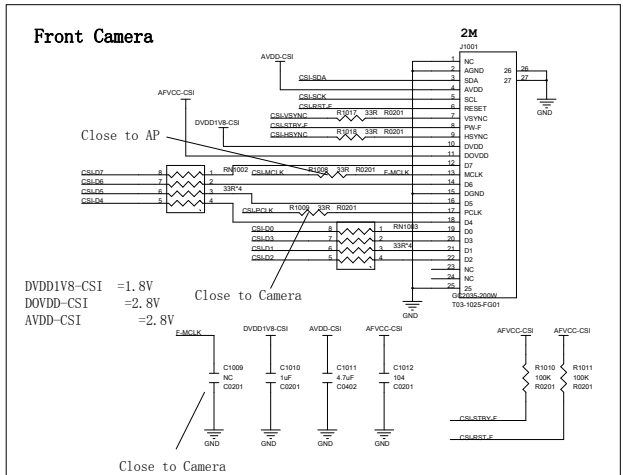
note: Drive up to 1A



## Rear Camera



## Front Camera

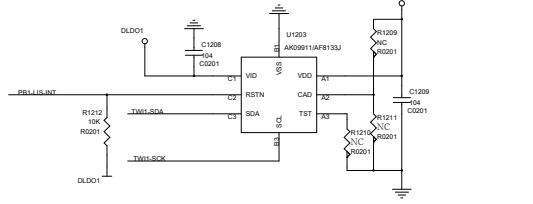
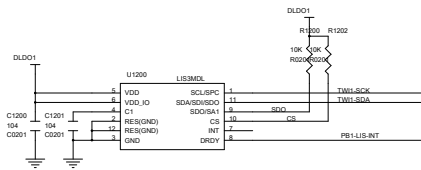
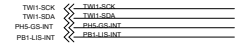
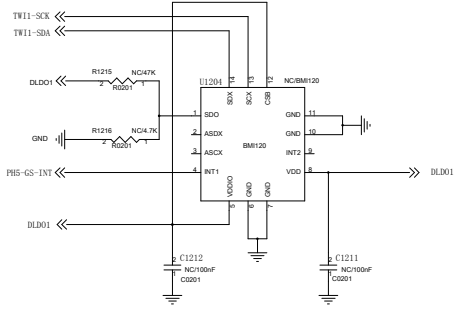
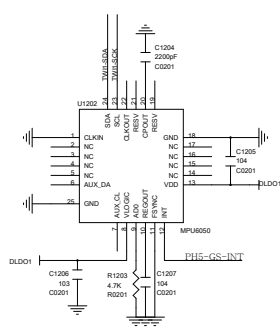
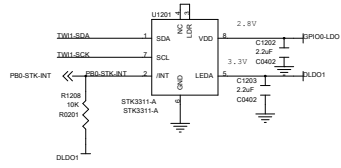


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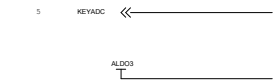
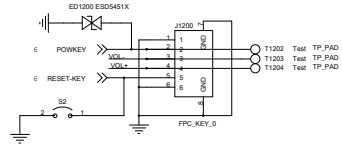
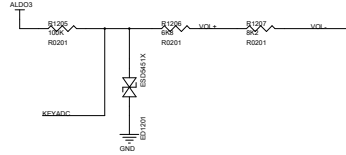


# SENSORs/MT/KEY

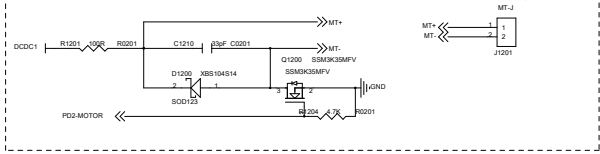
## SENSOR



## KEY

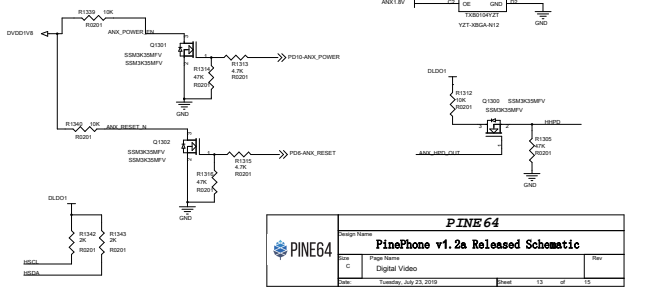
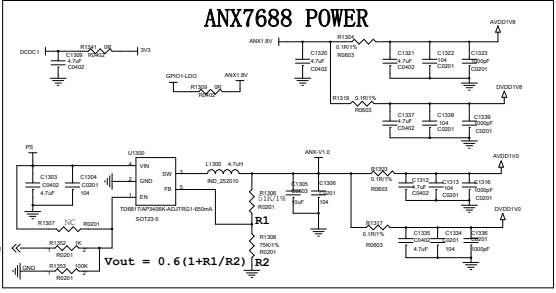
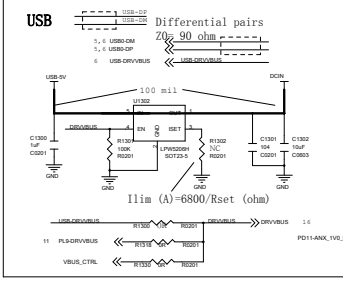
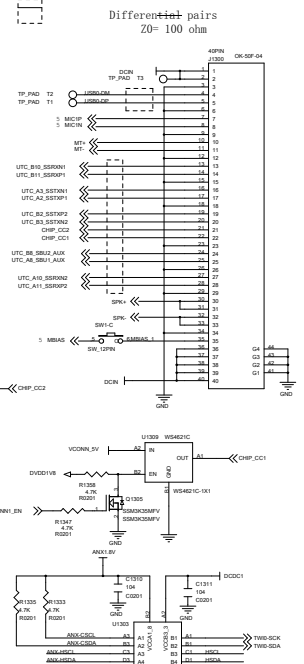
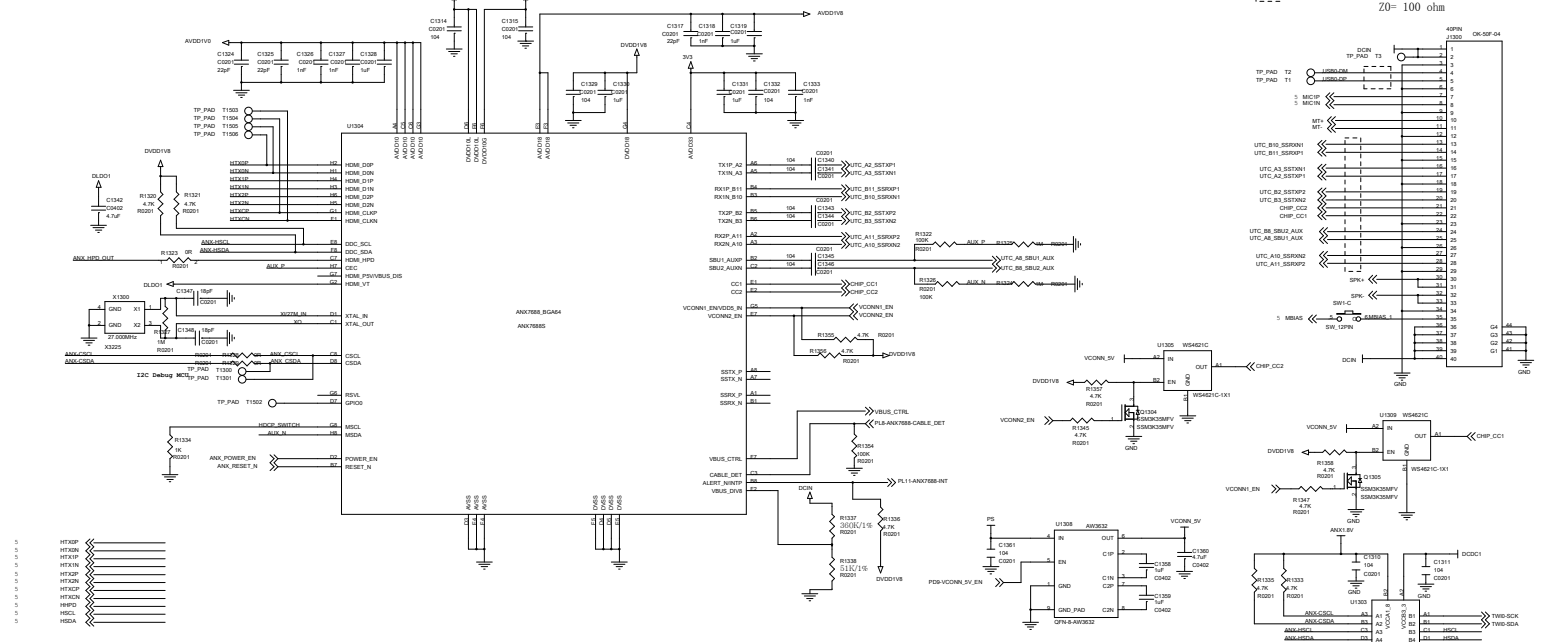


## Motor

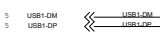
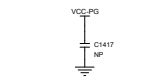
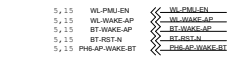
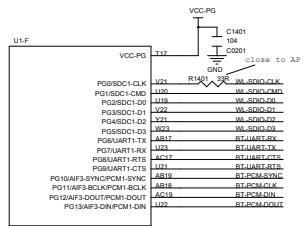


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# DIGITAL VIDEO



# WIFI+BT



RTL8723CS power supply:  
 VCC-WIFI=VBAT-EXT=3.5~4.35V  
 VCC-WIFI-IO=DLDO4=3.3V

