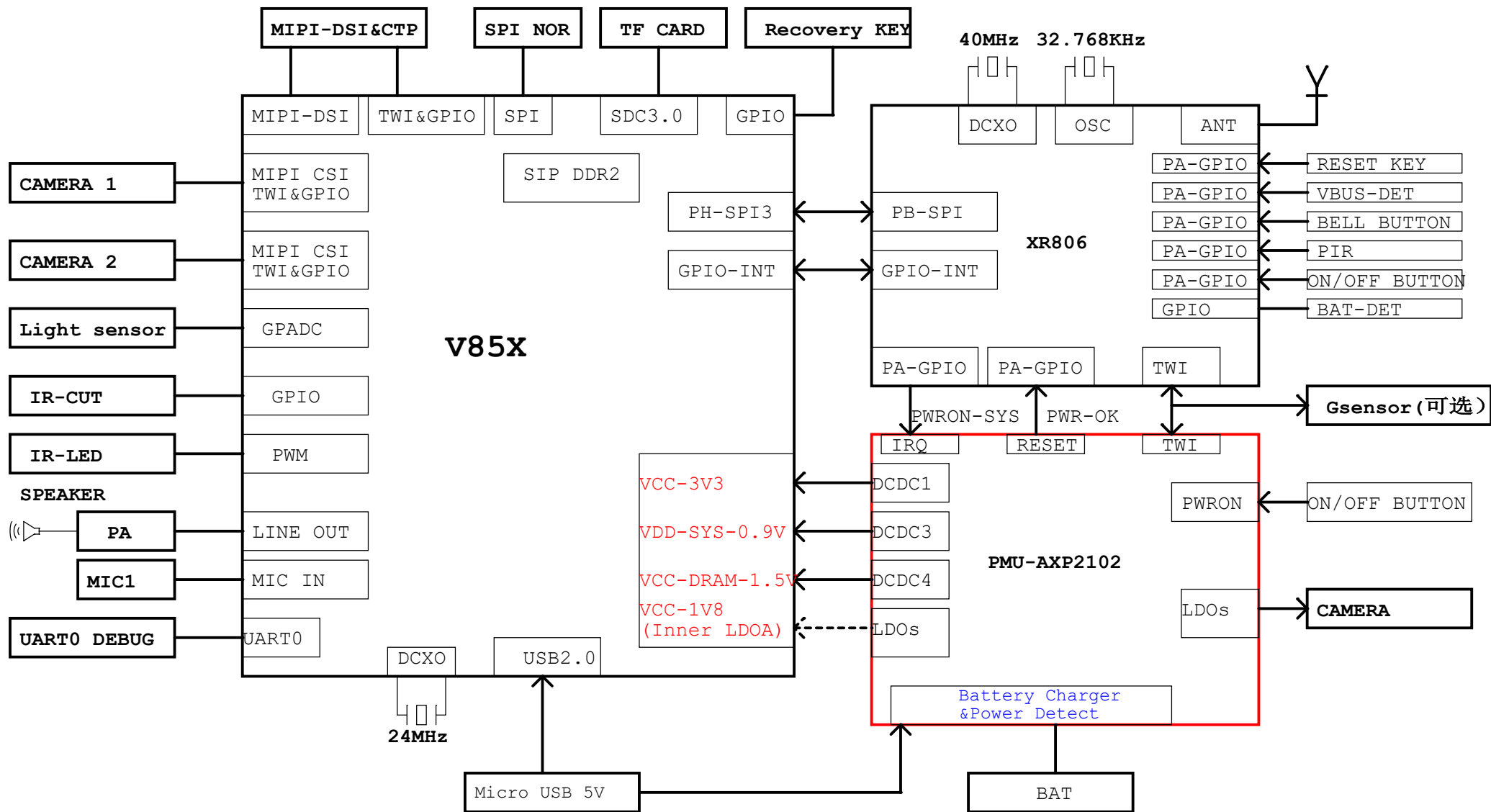


REVISION HISTORY

Schematics Index:

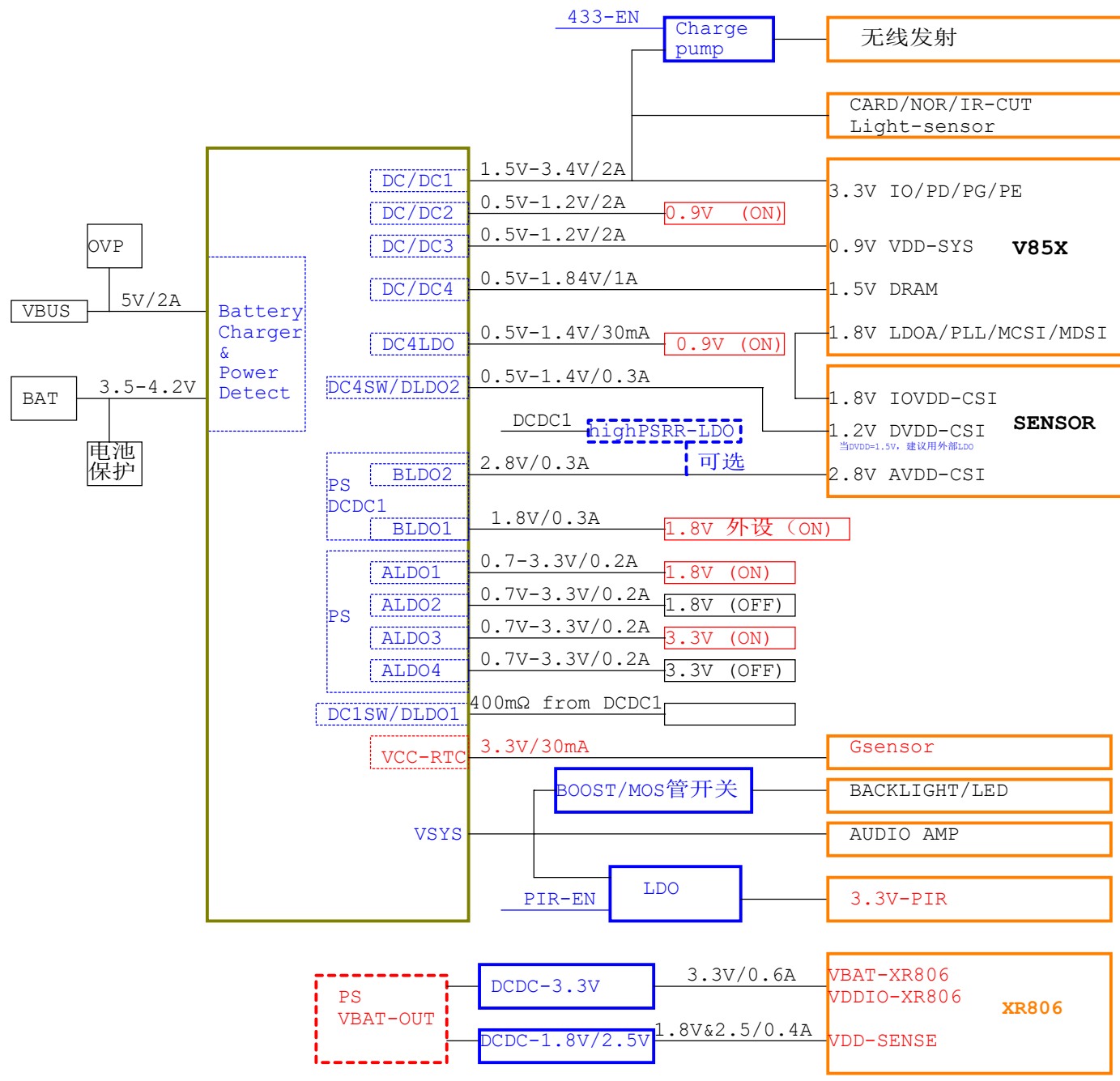
- P01: REVISION HISTORY
- P02: BLOCK
- P03: POWER TREE
- P04: V85X GPIO ASSIGNMENT
- P05: XR806 GPIO ASSIGNMENT
- P06: POWER-IN
- P07: POWER
- P08: CPU
- P09: CARD/AUDIO
- P10: MIPI CSI
- P11: XR806
- P12: PIR&GSENSOR&LED
- P13: LCD/CTP/DSI

Revision	Description	Date	Drawn	Checked
Ver 1.1	XR806-SPI-CS信号增加防漏电电路	2022-06-08	AWA0791	
Ver 1.2	1.修正主控symbol 为V851S; 2.修正双目PA10/PA11 CKN/CKP顺序; 3.XR806 PB6 信号XR806-SPI-CS0 增加防漏电说明; 4.VCC3V3-STBY 的反馈电阻RP88改为1M-1%, RP87改为220K-1% 减少静态功耗; 5.主控端的SPI-CS信号对地1nF NC; 6.VDD-SYS 默认值由0.9v 修改为0.93v;	2022-07-05	AWA0791	



POWER TREE

 DEFAULT POWER ON
 DEFAULT POWER OFF



5

4

3

2

1

GPIO ASSIGNMENT

注意1: 注意使用io的电压域是否正确, 电平是否匹配

D

D

C


C

B

B

A

A

	AllWinner Technology Co., Ltd		
	Design Name V851S-PER2		
	Size A3	Page Name GPIO ASSIGNMENT	Rev
Date: Tuesday, July 05, 2022		Sheet	4 of 13

5

4

3

2

1

5

4

3

2

1

GPIO ASSIGNMENT

注意1: 注意使用io的电压域是否正确, 电平是否匹配

D

D

C


C

B

B

A

A

			AllWinner Technology Co., Ltd		
			Design Name V851S-PER2		
Size A3	Page Name XR806 GPIO ASSIGNMENT		Rev		
Date: Tuesday, July 05, 2022		Sheet 5 of 13			

5

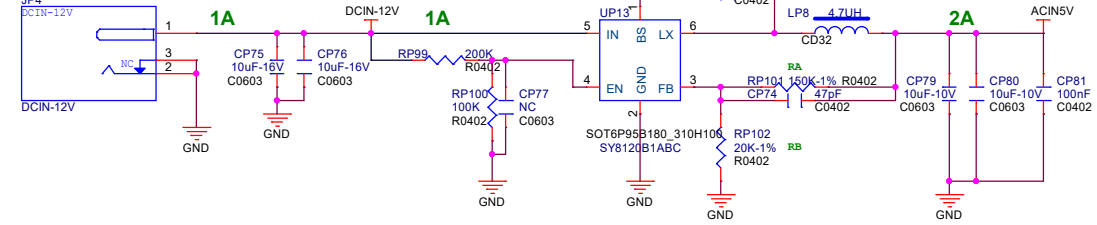
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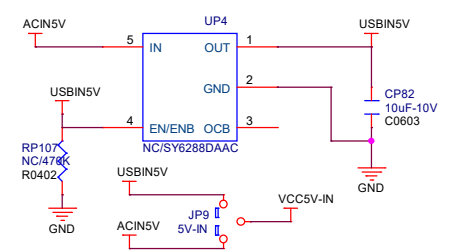
2

1

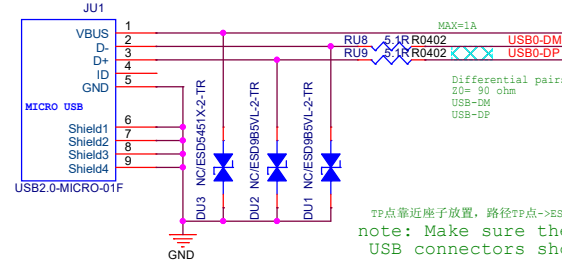
DCIN-12V



5V SW

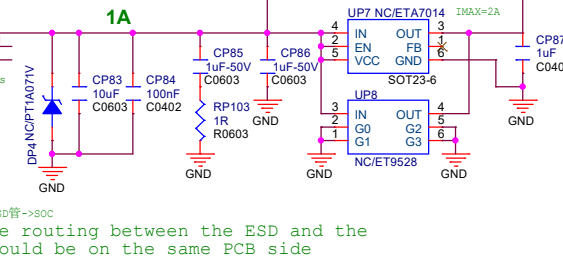


DC IN

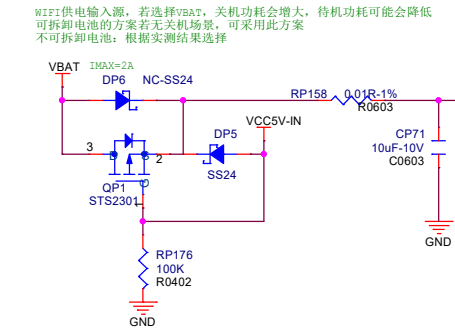


8 USB0-DM
8 USB0-DP

OVP

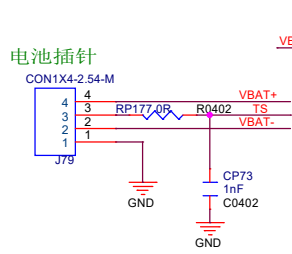


VBAT-OUT SEL

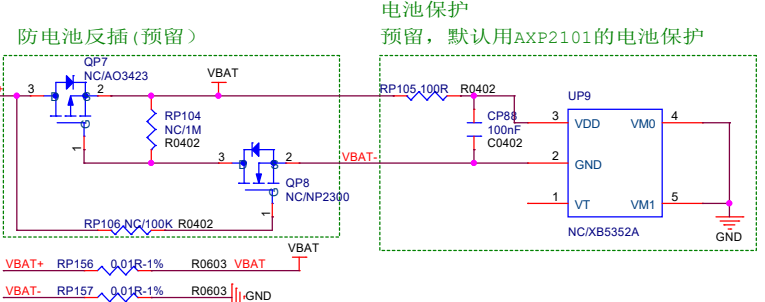


WiFi供电输入源，若选择VBAT，关机功耗会增大，待机功耗可能会降低
可拆卸电池的方案若无关机场景，可采用此方案
不可拆卸电池：根据实测结果选择

VBAT

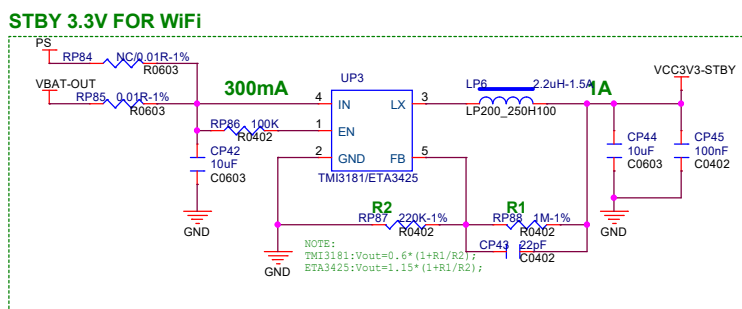


7 TS
VBAT
VCC5V-IN
VBAT-OUT



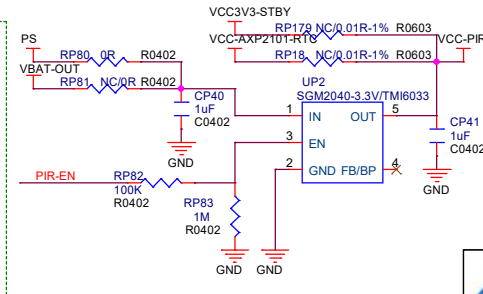
电池保护
预留，默认用AXP2101的电池保护

STBY-3.3V

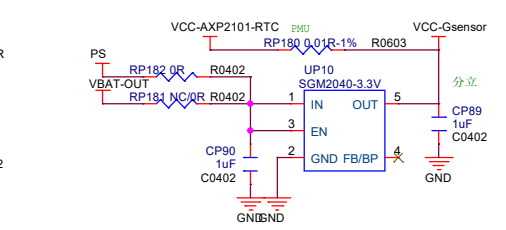


11 PIR-EN

PIR-3.3V

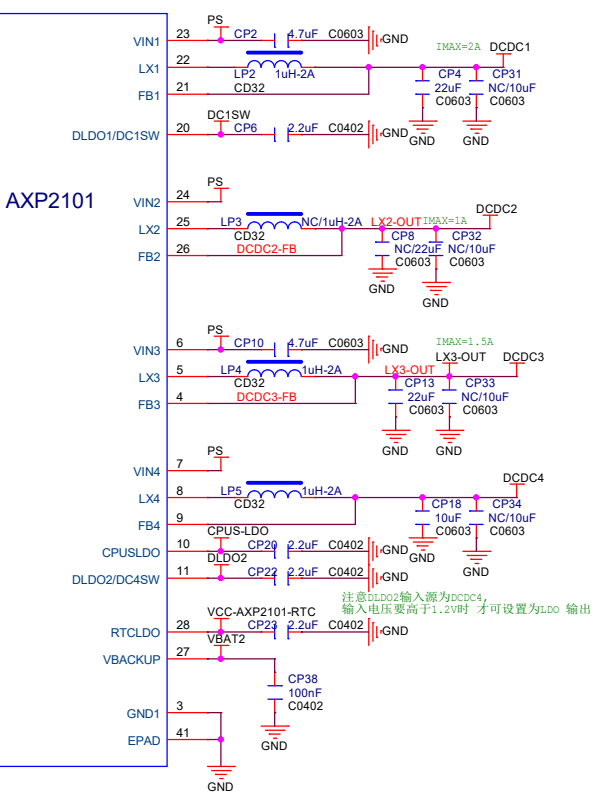
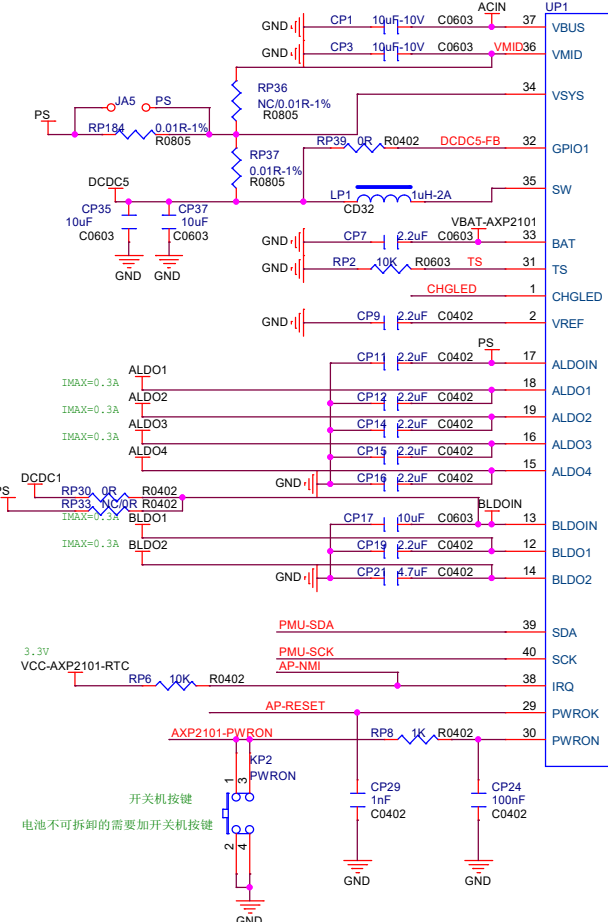
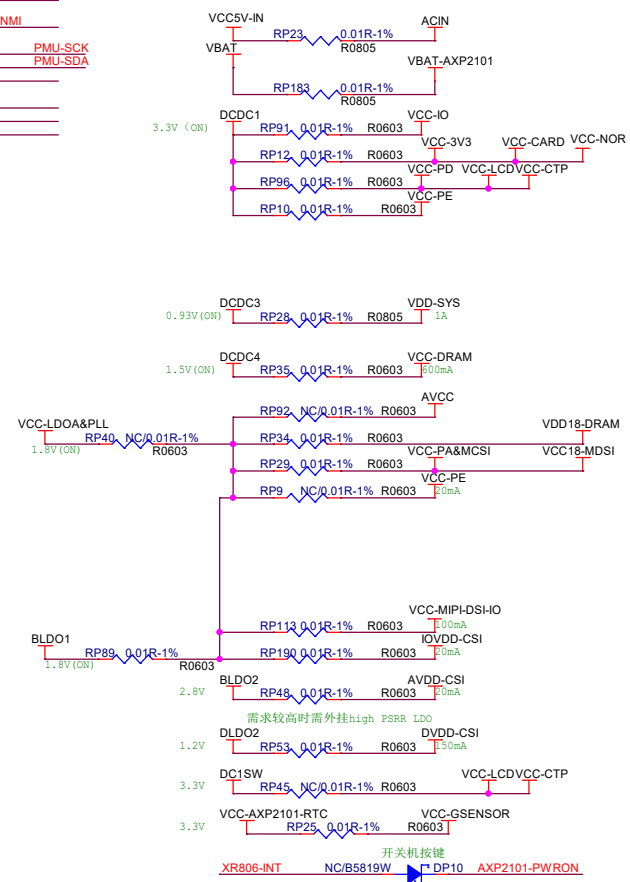


Gsensor-3.3V



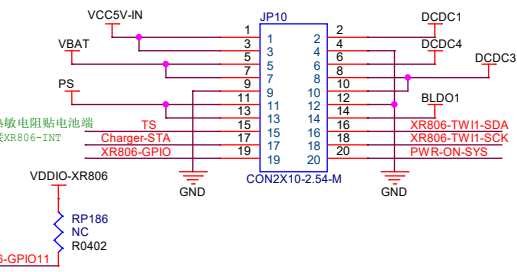
AXP2102使用开关充电

- 热敏电阻贴电池端
- 6 TS
- 12 CHGLED
- 12 AXP2101-IRQ
- 11,12 XR806-TW11-SCK
- 11,12 XR806-TW11-SDA
- 12 AXP2101-PWRON
- 11 PWR-ON-SYS
- 11,12 PWRON-IN



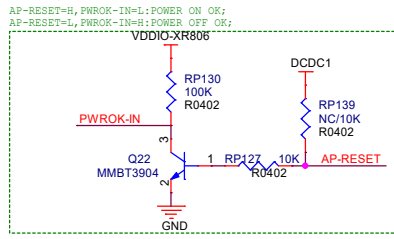
- 11 Charger-STA
- 11 XR806-GPIO11

需要核对分立电源子板的线序!

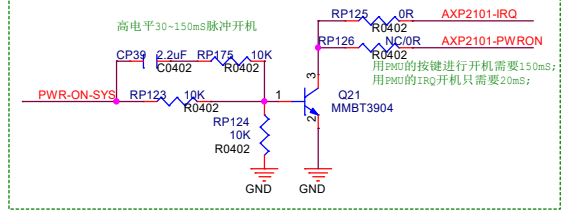


- AXP2101-PWRON TP103
- AP-NMI TP104
- AP-RESET TP105

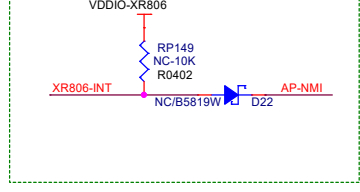
PMU 发出RESET信号, 唤醒或告知MCU PMU上电状态



MCU_GPIO_控制PMU开机



PMU的IRQ信号, debug用



AllWinner Technology Co., Ltd			
Design Name		V851S-PER2	
Size	Page Name	Rev	
A3	POWER		
Date:	Tuesday, July 05, 2022	Sheet	7 of 13

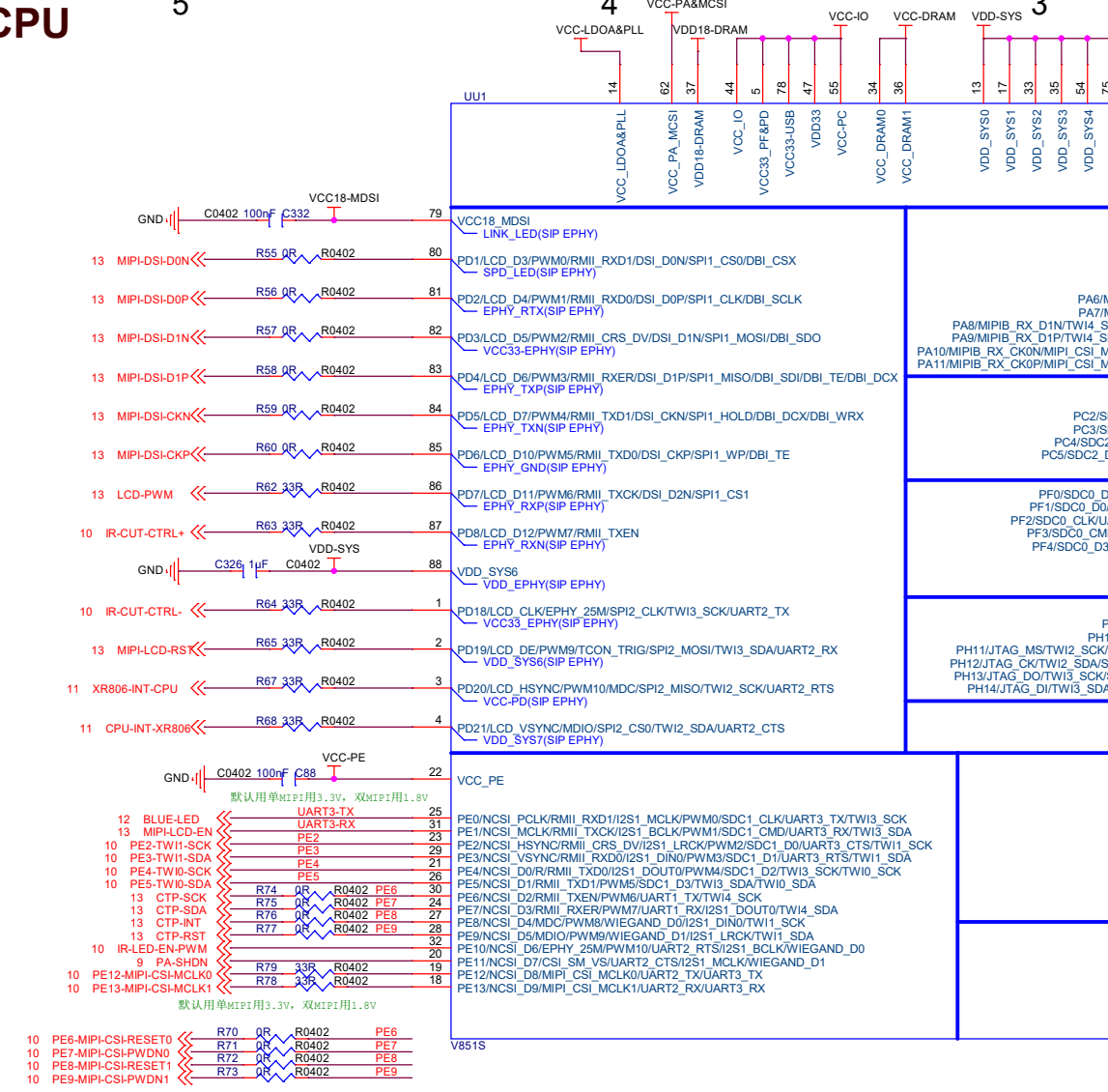
CPU

D

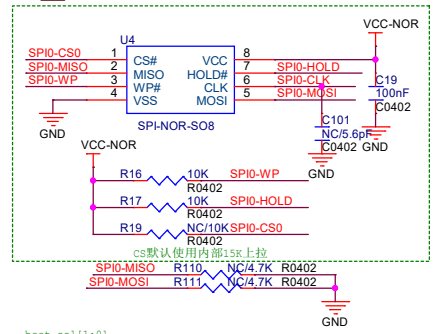
C

B

A



SPI_NOR



注意MIPI-csi信号不要接反!

FF口信号禁止上加电阻!

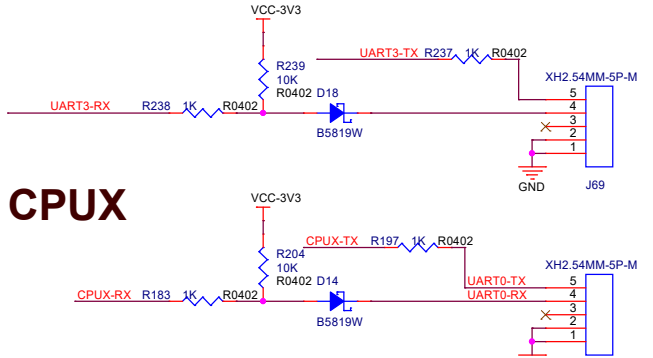
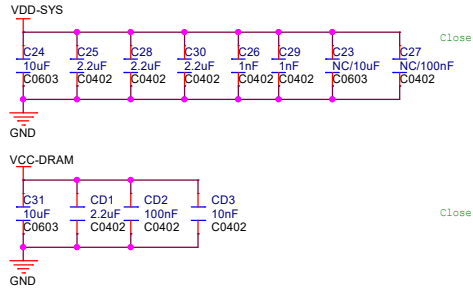
```

boot_sel[1:0]
0 0 SPI NAND->SPI NOR(4线)->SPI NOR(1线)->USB
0 1 SPI NOR(4线)->SPI NOR(1线)->SPI NAND->USB(快捷)
1 0 SDC0->SPI NAND->SPI NOR(4线)->
SPI NOR(1线)->UART BRUN->USB
1 1 (默认) SDC0->SPI NOR(4线)->SPI NOR(1线)->
SPI NAND->UART BRUN->USB
  
```

E907-UART

FEL

DECOUPLE CAP



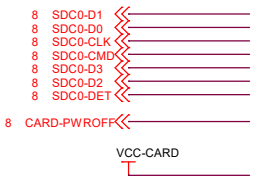
CPUX

Allwinner Technology Co., Ltd

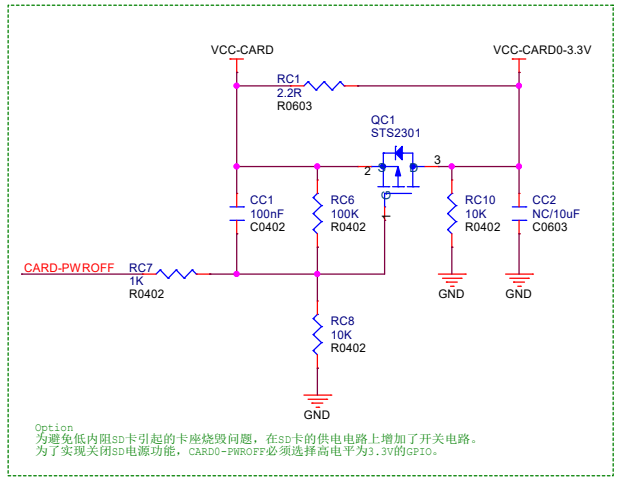
Design Name: **V851S-PER2**

Size: A3 Page Name: CPU/UART Rev: _____

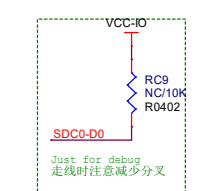
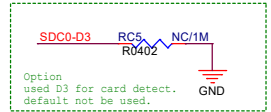
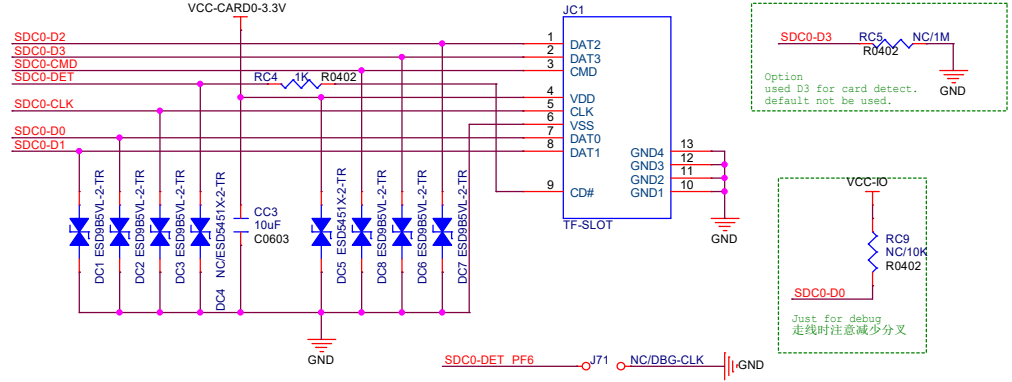
Date: Tuesday, July 05, 2022 Sheet: 8 of 13



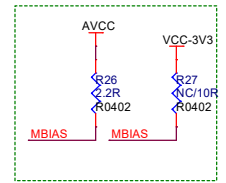
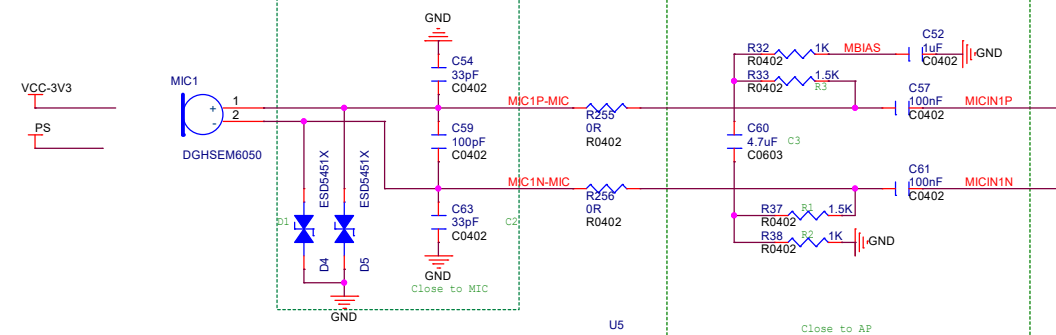
CARD



NOTE:
使用内部上拉



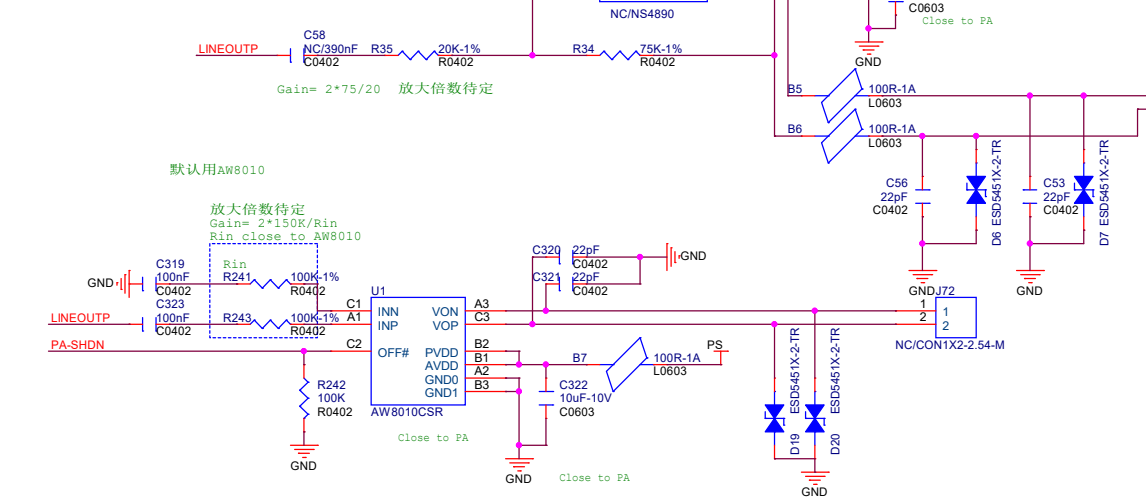
Audio



COMPONENT	Diferential	Single-ended
R1 R2 C3 D1	USE	NC
C2	33pF	0R
R3	1.5K	1K

	C54	R256	R317	R32/R33/C60	R37/R38
line in	1nF	4.7K	4.7K	NC	0R
mic in	33pF	0R/22R	NC	USE	1.5K/1K

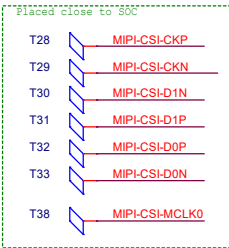
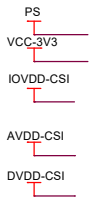
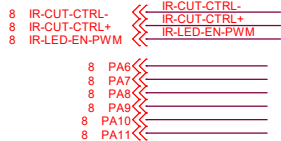
SPEAKER



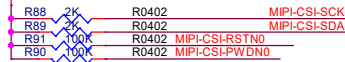
Allwinner Technology Co., Ltd
Design Name: **V851S-PER2**

Size: A3	Page Name: CARD/JTAG/UART	Rev:
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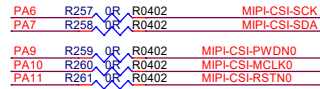
IO	两组MIPI-2lane	MIPI-4lane
PA0	MIPIA-CSTI-CKOP	MIPI-CSTI-CKP
PA1	MIPIA-CSTI-CKON	MIPI-CSTI-CKN
PA2	MIPIA-CSTI-D1N	MIPI-CSTI-D1N
PA3	MIPIA-CSTI-D1P	MIPI-CSTI-D1P
PA4	MIPIA-CSTI-D0P	MIPI-CSTI-D0P
PA5	MIPIA-CSTI-D0N	MIPI-CSTI-D0N
PA6	MIPIB-CSTI-D0N	MIPI-CSTI-D2P
PA7	MIPIB-CSTI-D0P	MIPI-CSTI-D2N
PA8	MIPIB-CSTI-D1N	MIPI-CSTI-D3N
PA9	MIPIB-CSTI-D1P	MIPI-CSTI-D3P
PA10	MIPIB-CSTI-CKOP	MIPI-CSTI-D3P
PA11	MIPIB-CSTI-CKON	MIPI-CSTI-D3N



VCC-PA&MCSI



注意TWI上拉电阻都在主板上，
 此部分上拉电阻要删除减少走线分支！
 验证B1120接口时需要拿掉电阻

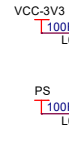
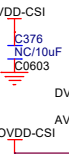
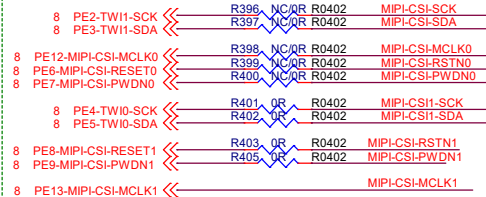
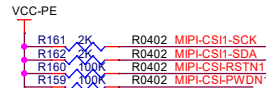


默认为MIPI-2lane 配置

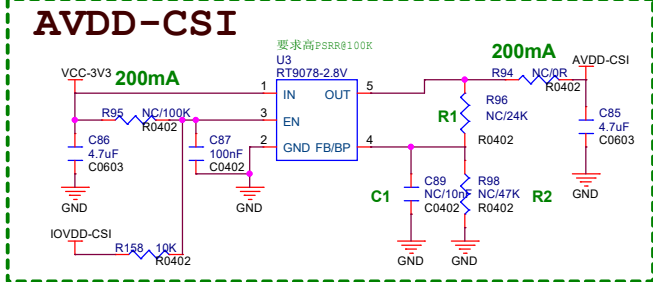
双MIPI



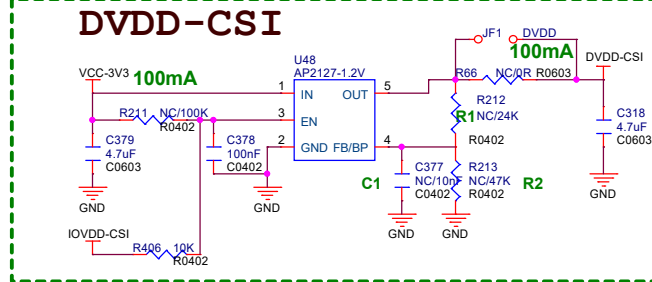
双MIPI控制采用PE口，VCC-PE改为1.8V



一般放在sensor子板上

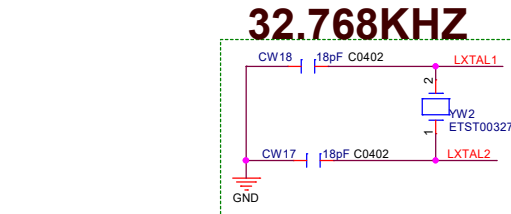
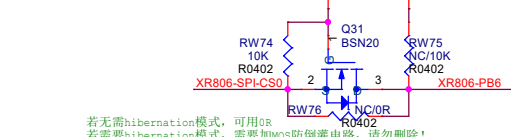
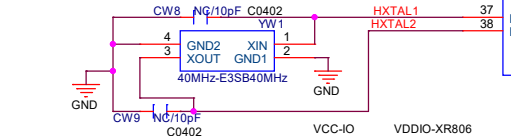
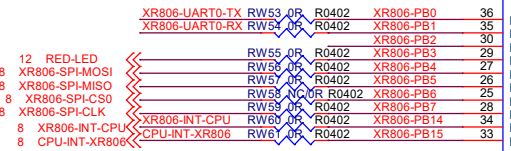
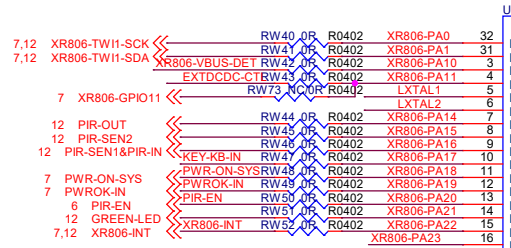


一般放在sensor子板上

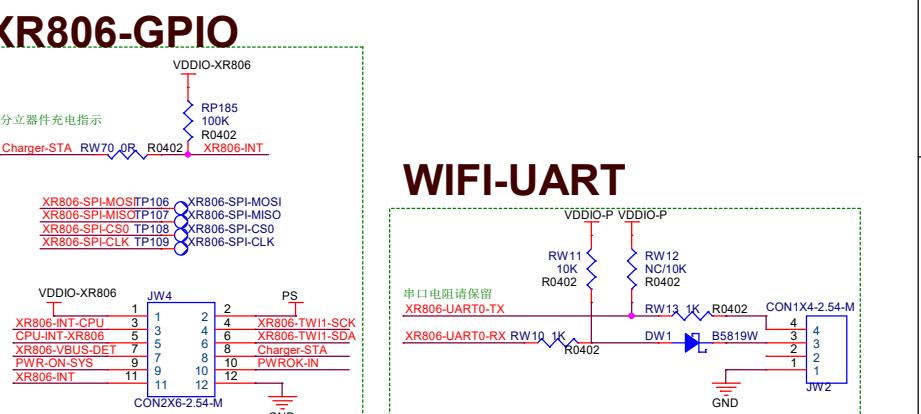
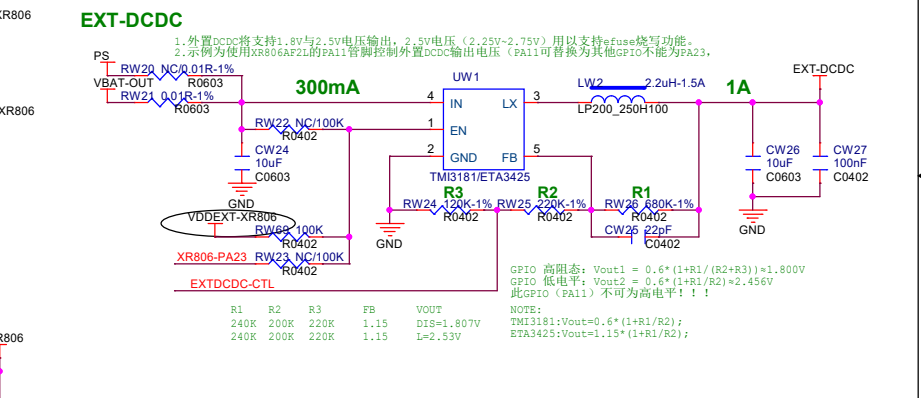
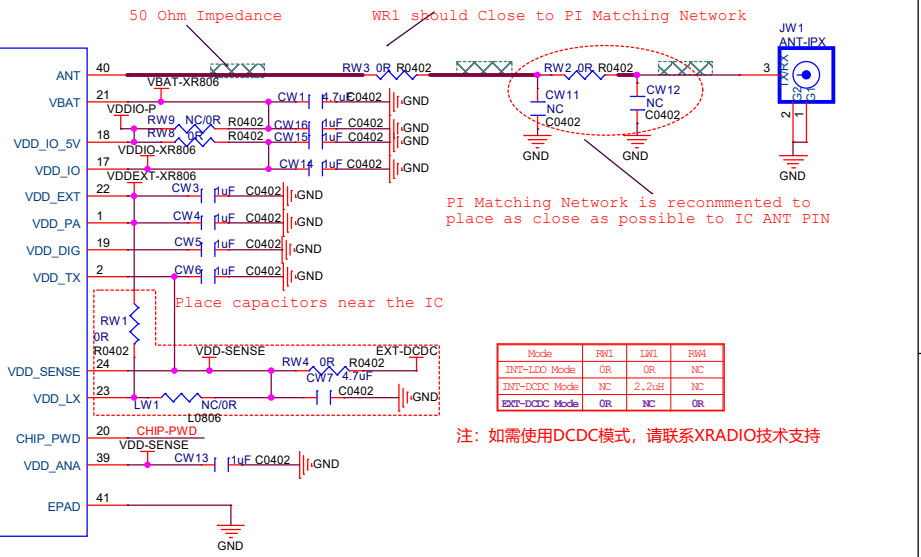
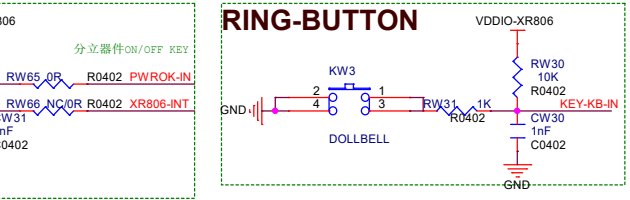
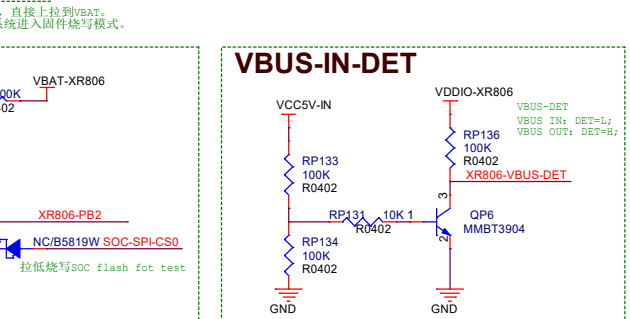
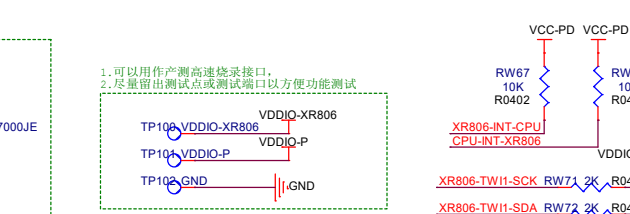
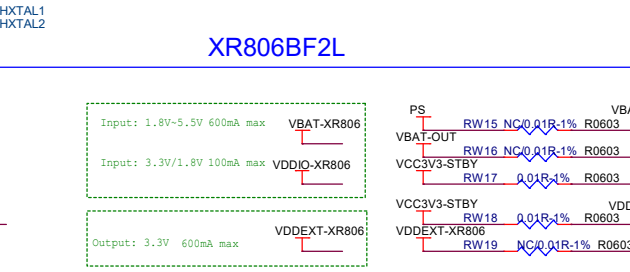
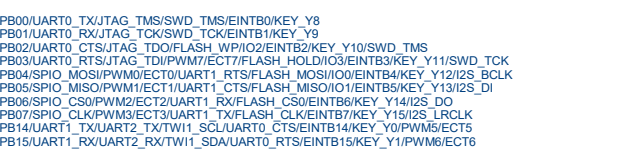
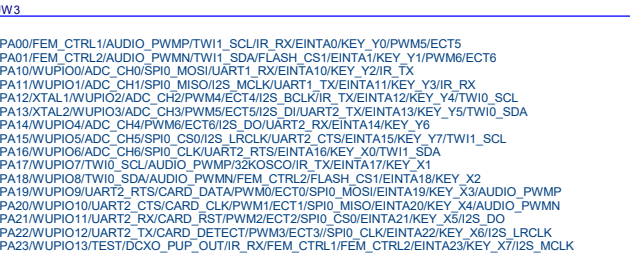
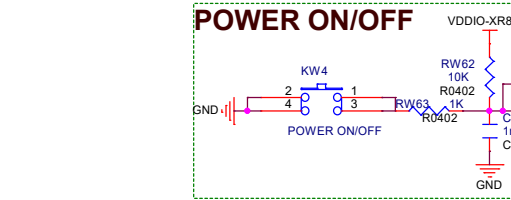
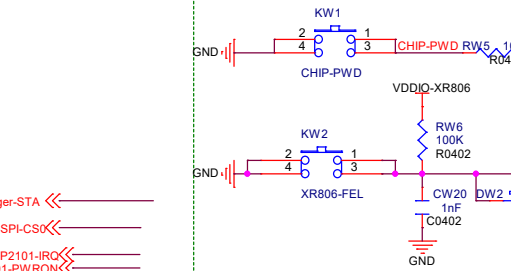


AllWinner Technology Co., Ltd		
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XR806BF2L



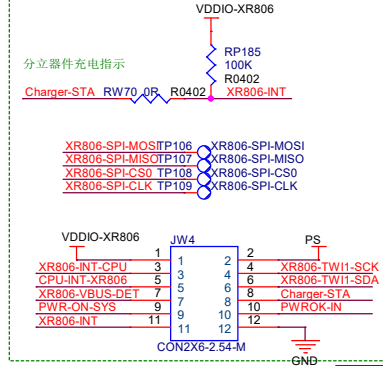
1. 芯片复位信号为CHIP_PWD, 当不需要控制CHIP_PWD时, 直接上拉到VBAT.
2. 复位信号(CHIP_PWD)释放后, 当PB2为低电平时, 系统进入固件烧写模式。
3. 当芯片上电启动或者复位时, PA23不能为高电平。



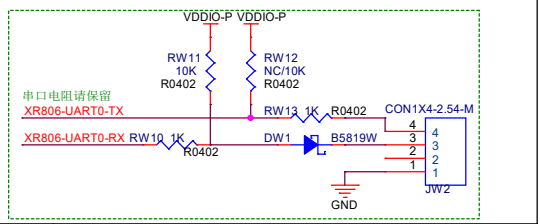
Mode	RW1	LW1	RW4
INT-LDO Mode	OR	OR	NC
TINY-DCDC Mode	NC	2.2uH	NC
EXT-DCDC Mode	OR	NC	OR

注: 如需使用DCDC模式, 请联系XRADIO技术支持

XR806-GPIO



WIFI-UART

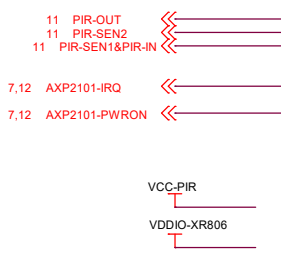


Allwinner Technology Co., Ltd

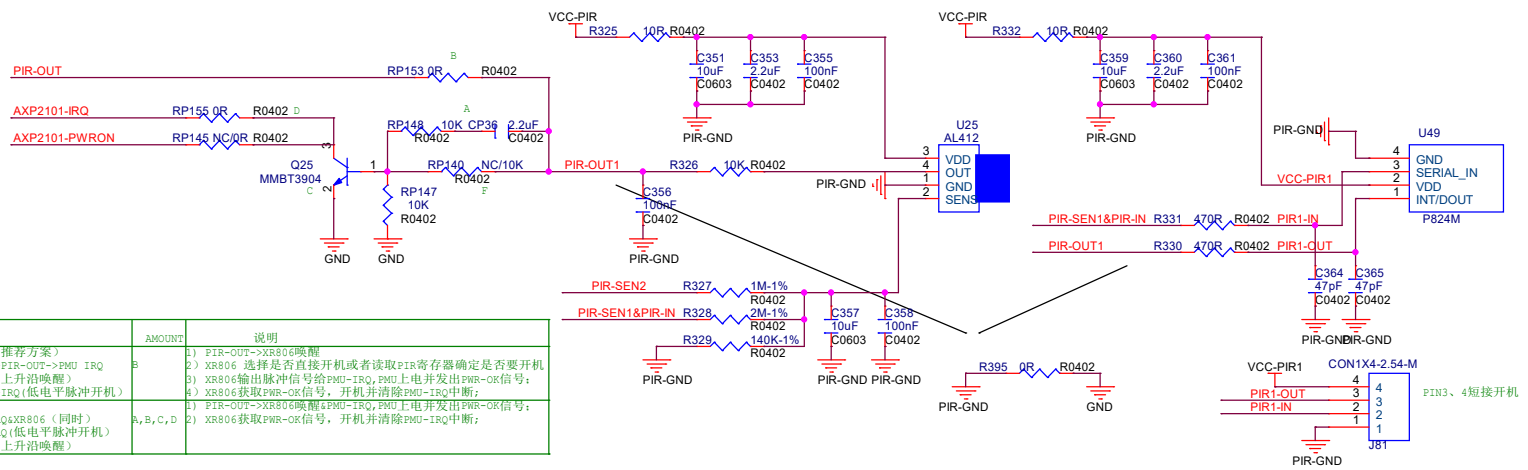
Design Name: **V851S-PER2**

Size A3 Page Name: **XR806**

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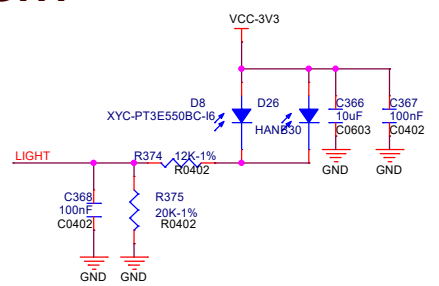
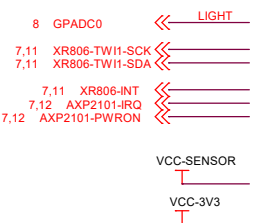


PIR

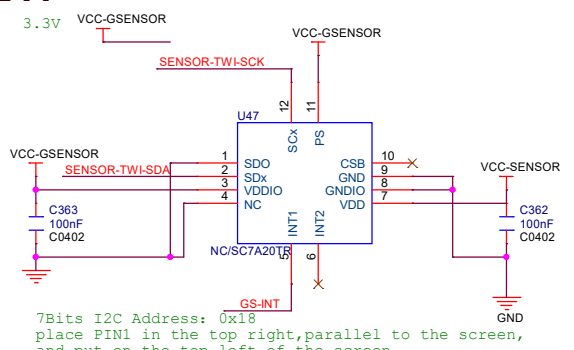
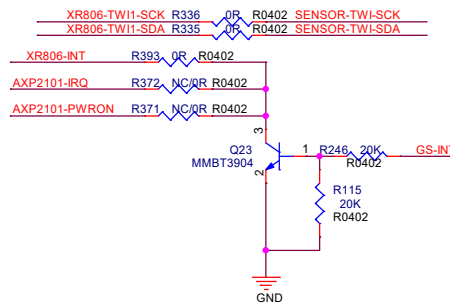


	PIR唤醒方式	AMOUNT	说明
AL412/A105	方案1 (默认推荐方案)		1) PIR-OUT->XR806唤醒
F824M/PYD1598	PIR->XR806-PIR-OUT->PMU IRQ	B	2) XR806 选择是否直接开机或者读取PIR寄存器确定是否要开机
	PIR->XR806 (上升沿唤醒)		3) XR806 输出脉冲信号给PMU-IRQ, PMU上电并发出PWR-OK信号;
	XR806->PMU-IRQ (低电平脉冲开机)		4) XR806获取PWR-OK信号, 开机并清除PMU-IRQ中断;
	方案2		1) PIR-OUT->XR806唤醒&PMU-IRQ, PMU上电并发出PWR-OK信号;
AL412/A105	PIR->PMU IRQ&XR806 (同时)	A, B, C, D	2) XR806获取PWR-OK信号, 开机并清除PMU-IRQ中断;
	PIR->PMU IRQ (低电平脉冲开机)		
	PIR->XR806 (上升沿唤醒)		

LIGHT



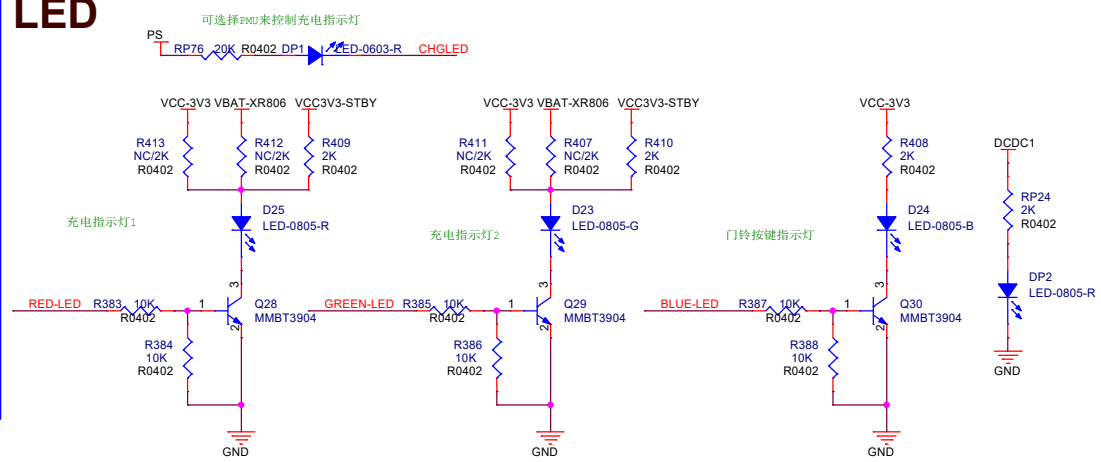
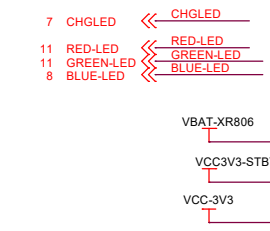
GSENSOR/SC7A20TR/DA217

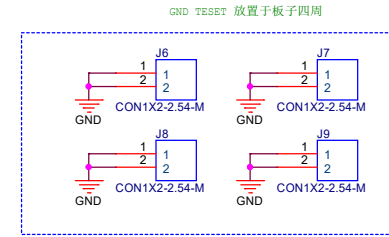
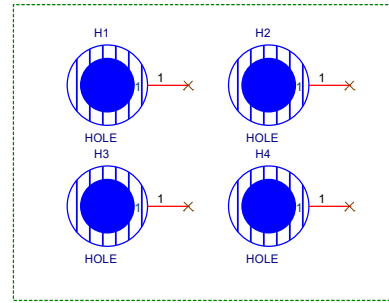


7Bits I2C Address: 0x18
 place PIN1 in the top right, parallel to the screen,
 and put on the top left of the screen.

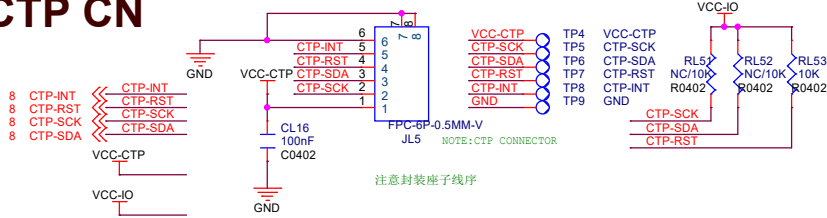
- 1、关机前配置为中断输出，采用高电平脉冲中断方式；
- 2、PMU接收到上述产生的4ms以上低电平后快速上电开机；
- 3、开机之后，配置屏蔽中断输出，采用I2C轮询方式；

LED

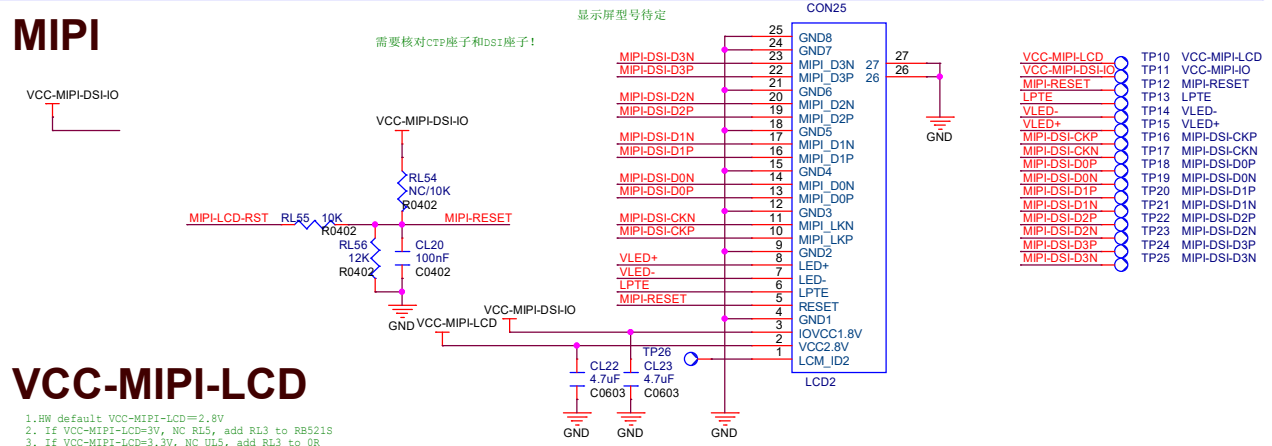




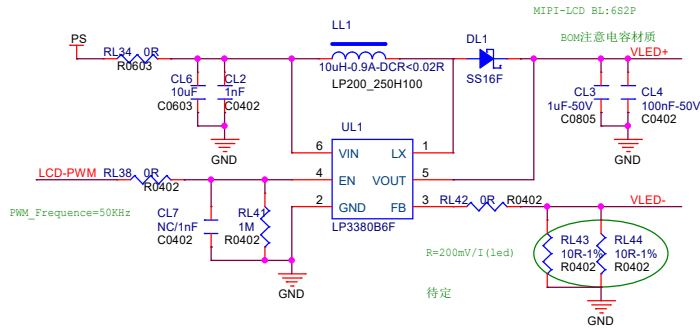
CTP CN



MIPI



Backlight



VCC-MIPI-LCD

