

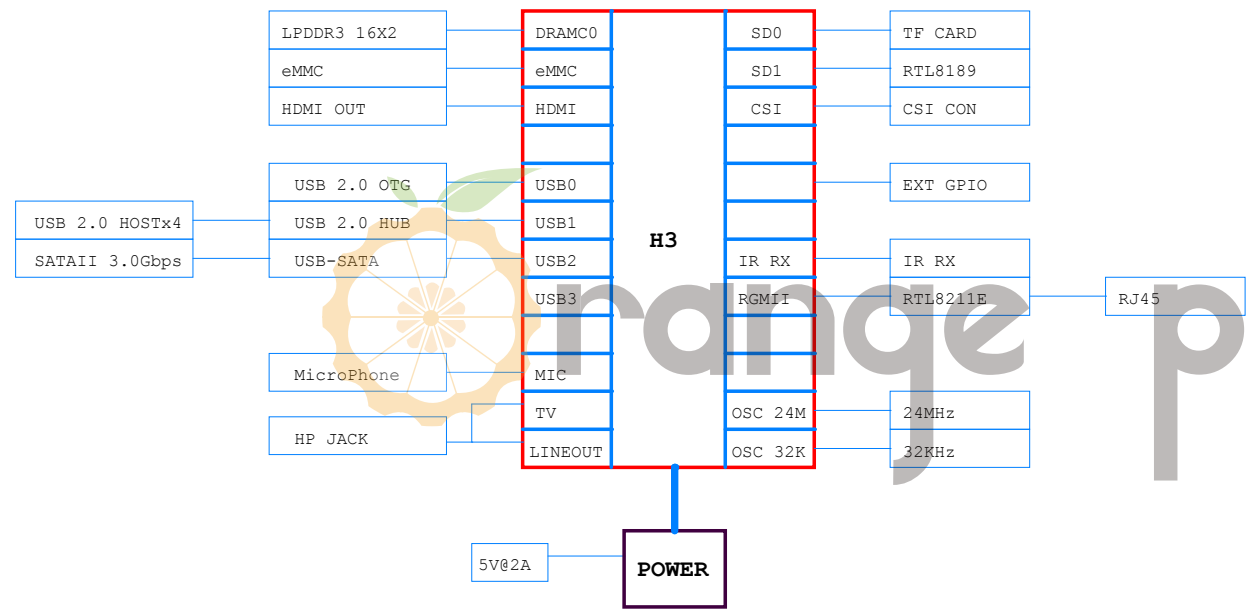
# REVISION HISTORY

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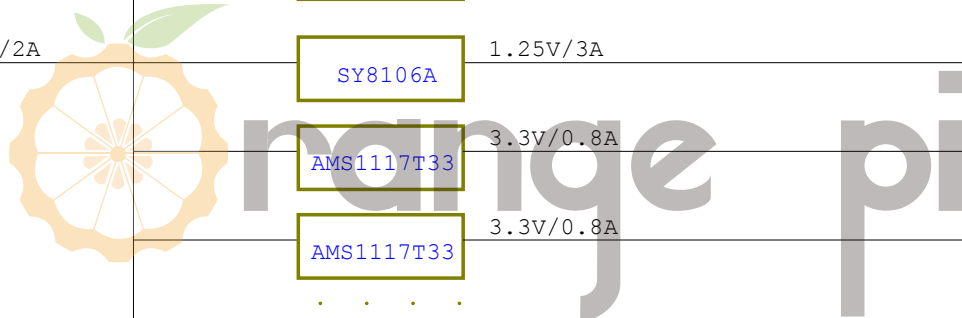
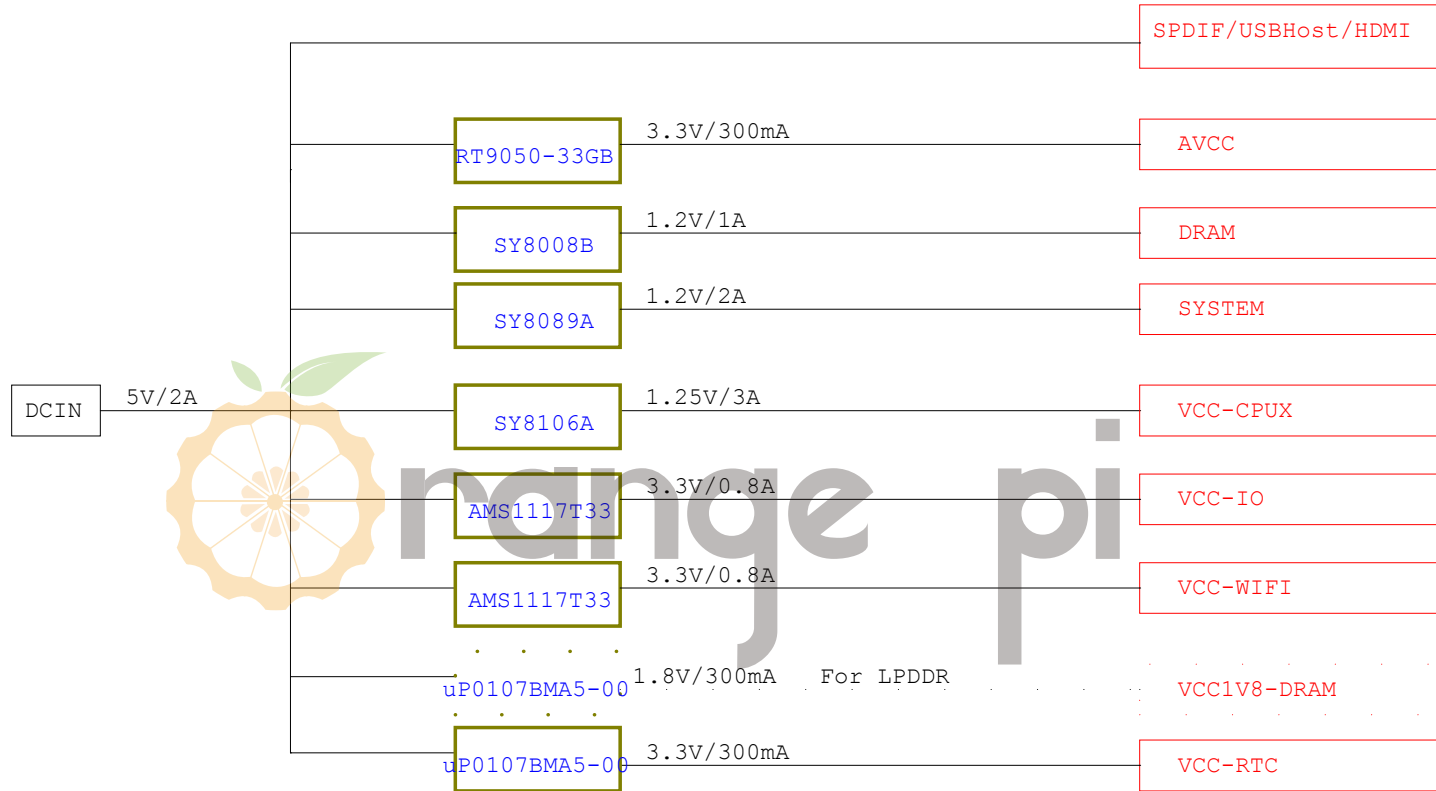
Revision	Description	Date	Drawn	Checked
Ver 1.0	Initial	2015-02-06		
ORANGE_PI_Lite_Ver 1.1	Initial	2016-04-09		



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# POWER TREE



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# GPIO ASSIGNMENT

PIN	Define	CFG	Function
PA0	DMS/DRVVBUS0	3/1	JTAG /USB
PA1	ECK/DRVVBUS1	3/1	
PA2	TDO/WPS	3/1	
PA3	FDI	3	UART
PA4	JART-TX	3	
PA5	JART-RX	3	
PA6	NC	7	
PA7	NC	7	
PA8	NC	7	
PA9	NC	7	
PA10	NC	7	
PA11	NC	7	
PA12	NC	7	
PA13	NC	7	
PA14	NC	7	
PA15	STATUS-LED	1	LED
PA16	MUTE	1	AV
PA17	SPDIF-OUT	2	SPDIF
PA18	NC	7	
PA19	NC	7	
PA20	NC	7	
PA21	NC	7	

PIN	Define	CFG	Function
PC0	NWE	2/3	NAND /eMMC /NOR
PC1	NALE	2/3	
PC2	NCLE	2/3	
PC3	NCE1	2/3	
PC4	NCE0	2	
PC5	NRE	2/3	
PC6	NRB0	2/3	
PC7	NRB1	2	
PC8	NDQ0	2/3	
PC9	NDQ1	2/3	
PC10	NDQ2	2/3	
PC11	NDQ3	2/3	
PC12	NDQ4	2/3	
PC13	NDQ5	2/3	
PC14	NDQ6	2/3	
PC15	NDQ7	2/3	
PC16	NDQS	2/3	

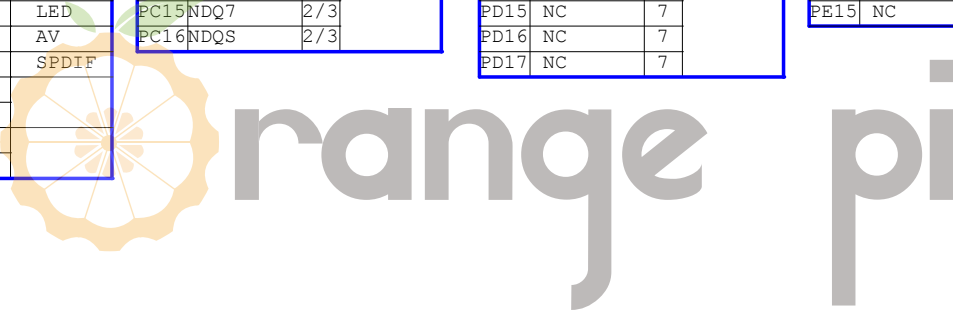
PIN	Define	CFG	Function
PD0	NC	7	
PD1	NC	7	
PD2	NC	7	
PD3	NC	7	
PD4	NC	7	
PD5	NC	7	
PD6	NC	7	
PD7	NC	7	
PD8	NC	7	
PD9	NC	7	
PD10	NC	7	
PD11	NC	7	
PD12	NC	7	
PD13	NC	7	
PD14	NC	7	
PD15	NC	7	
PD16	NC	7	
PD17	NC	7	

PIN	Define	CFG	Function
PE0	NC	7	
PE1	NC	7	
PE2	NC	7	
PE3	NC	7	
PE4	NC	7	
PE5	NC	7	
PE6	NC	7	
PE7	NC	7	
PE8	NC	7	
PE9	NC	7	
PE10	NC	7	
PE11	NC	7	
PE12	NC	7	
PE13	NC	7	
PE14	NC	7	
PE15	NC	7	

PIN	Define	CFG	Function
PF0	D1	2	CARD0
PF1	D0	2	
PF2	CLK	2	
PF3	CMD	2	
PF4	D3	2	
PF5	D2	2	
PF6	DET	0	

PIN	Define	CFG	Function
PG0	NC	7	
PG1	NC	7	
PG2	NC	7	
PG3	NC	7	
PG4	NC	7	
PG5	NC	7	
PG6	NC	7	
PG7	NC	7	
PG8	NC	7	
PG9	NC	7	
PG10	NC	7	
PG11	NC	7	
PG12	NC	7	
PG13	NC	7	

PIN	Define	CFG	Function
PL0	TWI	2	TWI
PL1	TWI	2	TWI
PL2	USB0-DRVVBUS	1	USB
PL3	USB1-DRVVBUS	1	
PL4	RECOVERY	0	KEY
PL5	VCC-IO-EN	1	IO-EN
PL6	NC	7	
PL7	WIFI-EN	7	WIFI-EN
PL8	PWR-STB	1	
PL9	PWR-DRAM	1	
PL10	PWR-LED	1	
PL11	IR-RX	2	



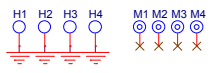
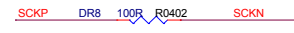
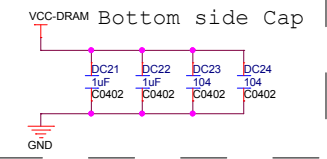
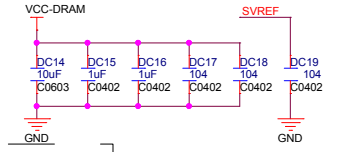
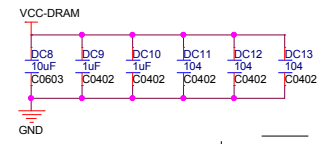
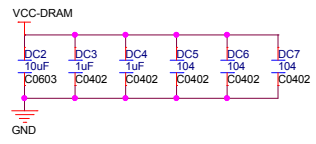
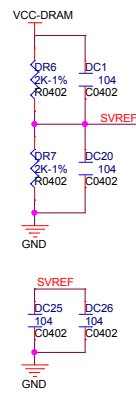
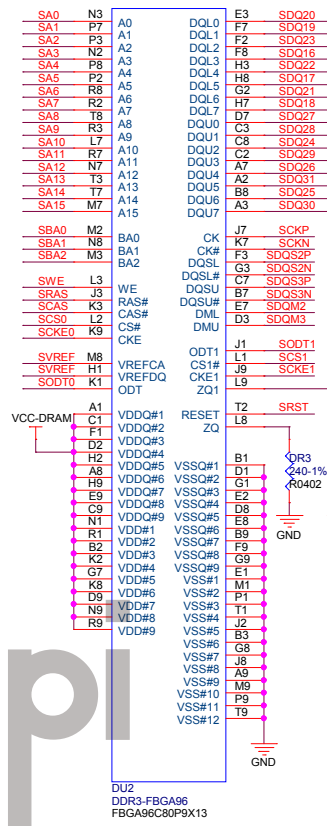
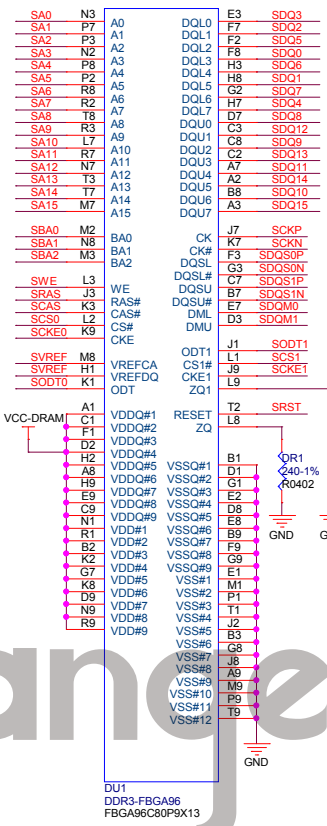
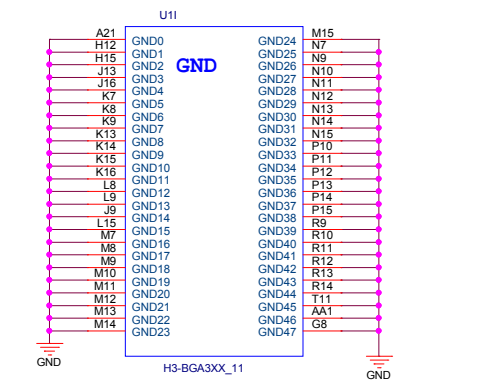
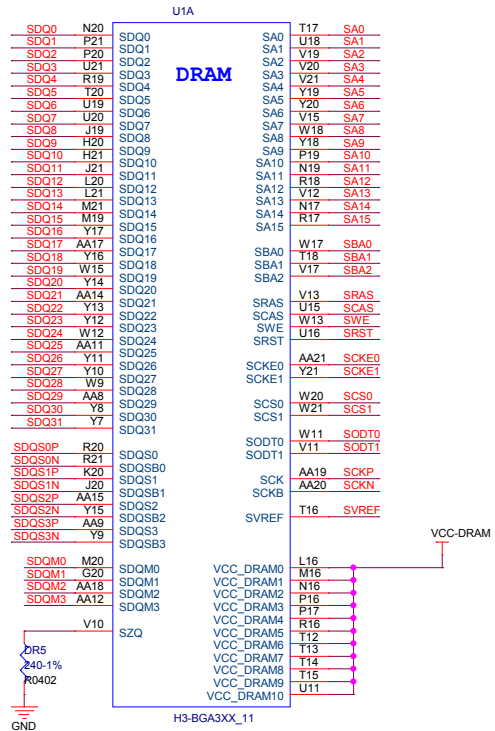
# DDR3 16x2

D

C

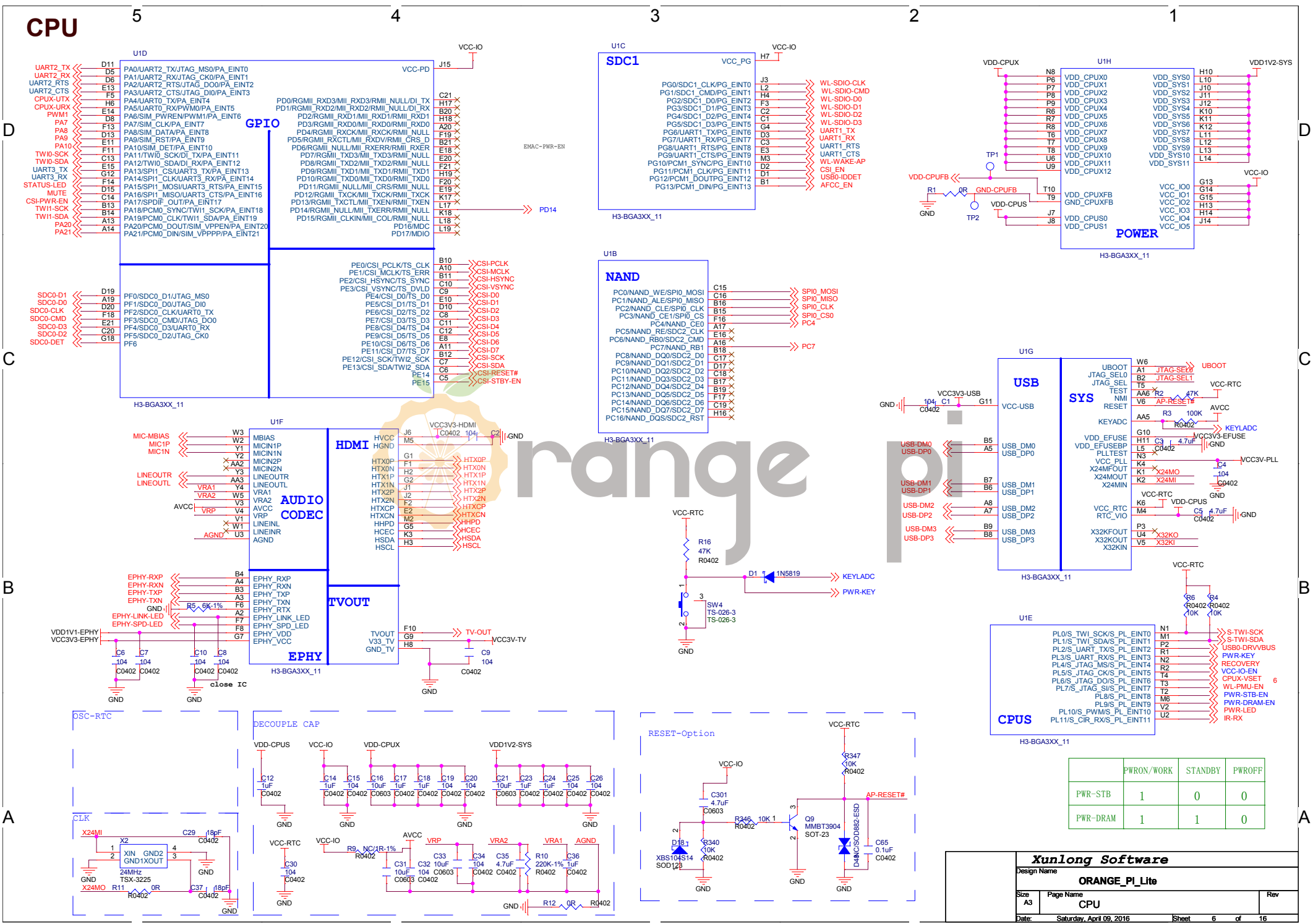
B

A

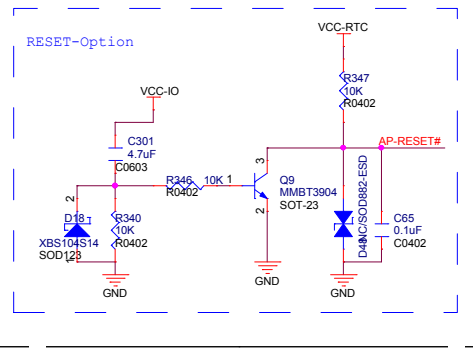
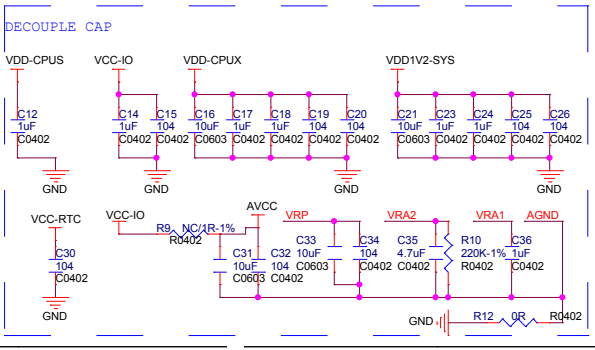
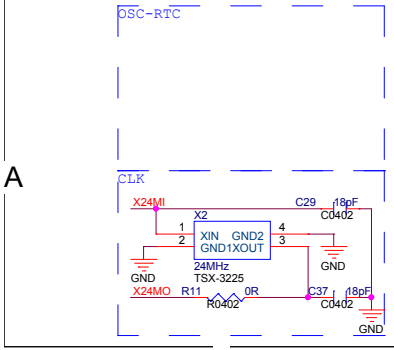
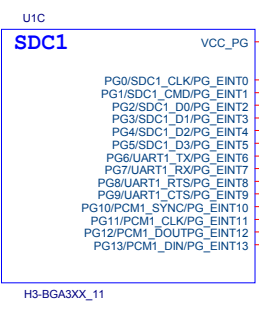
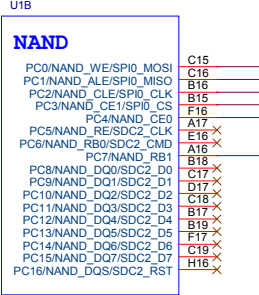
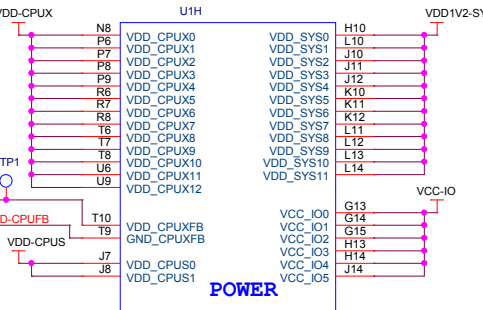
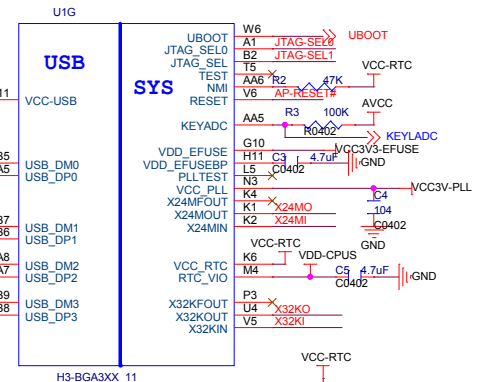
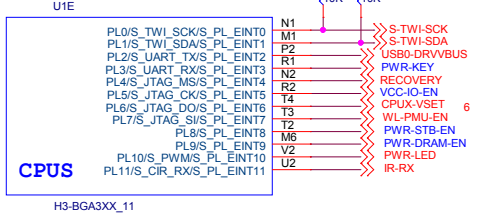


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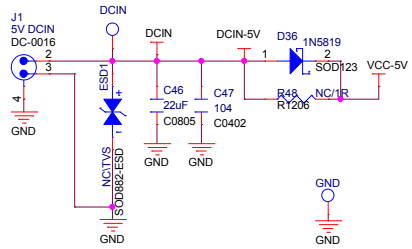
# CPU



	PWRON/WORK	STANDBY	PWROFF
PWR-STB	1	0	0
PWR-DRAM	1	1	0



# DCIN

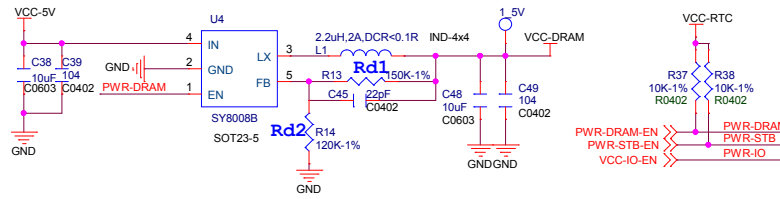


# POWER

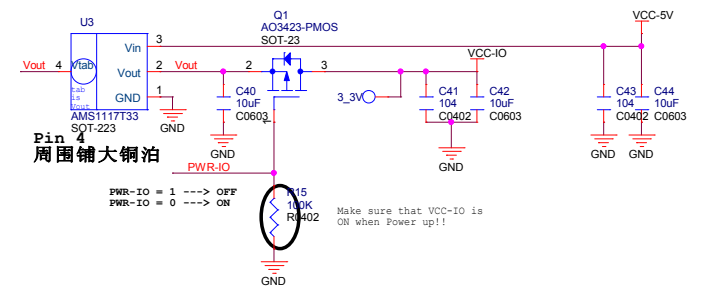
$$V_{out} = 0.6 * (1 + R_{d1}/R_{d2})$$

$$V_{DRAM} = 1.5V/1A, R_2 = 100K-1\%$$

$$V_{DRAM} = 1.35V/1A, R_2 = 120K-1\%$$

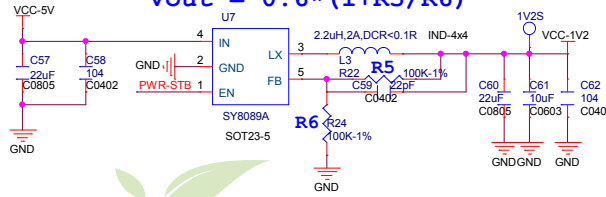


## VCCIO 3.3V/1A

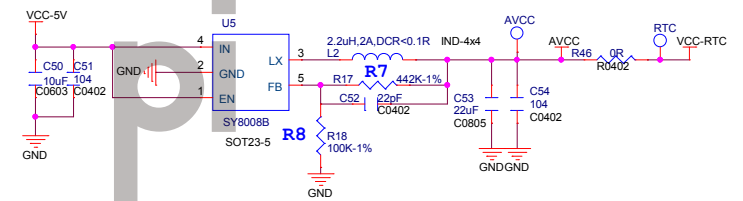


### SYSTEM 1.2V/2A

$$V_{out} = 0.6 * (1 + R_5/R_6)$$

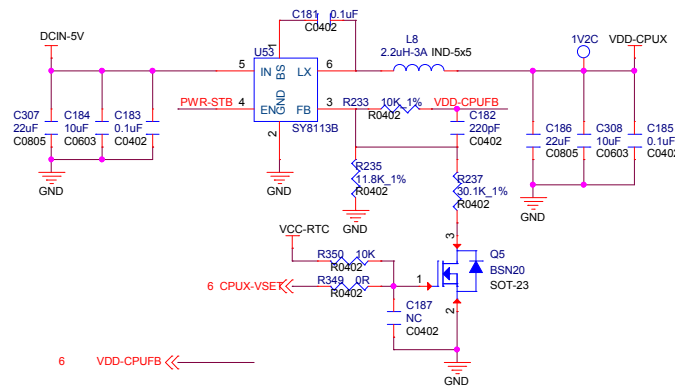


## AVCC 3.3V/1A

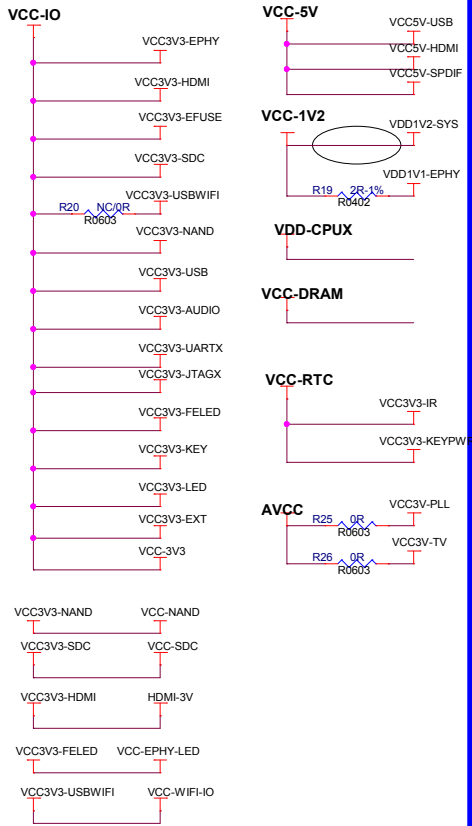
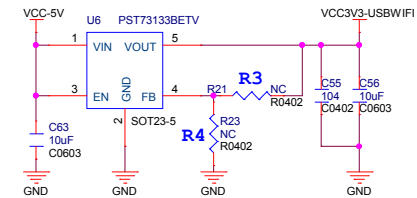


### CPUX 1.2V/6A

$$V_{out} = 0.6 * (1 + R_1/R_2)$$



## WIFI Power 3.3V/300mA

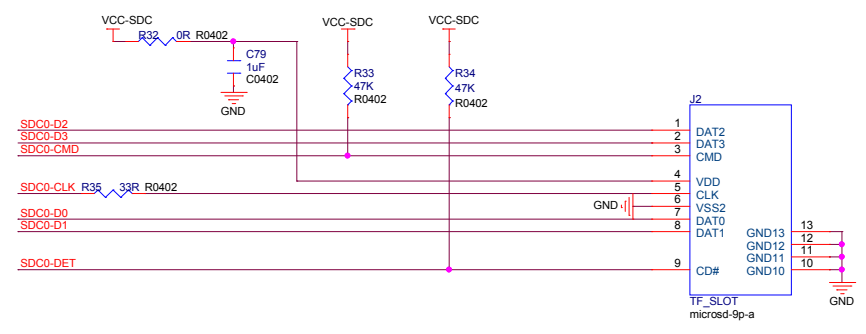


# range

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# TF-eMMC

- SDC0-D1
- SDC0-D0
- SDC0-CLK
- SDC0-CMD
- SDC0-D3
- SDC0-D2
- SDC0-DET



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# USB

5

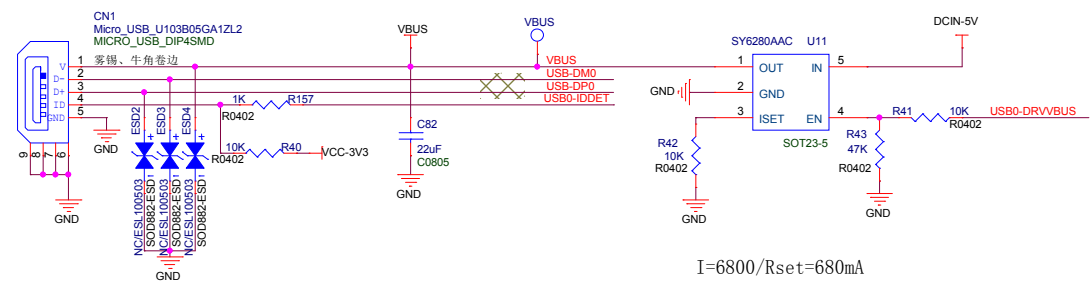
4

3

2

1

USB-DM0  
USB-DP0  
USB0-IDDET  
USB0-DRVVBUS



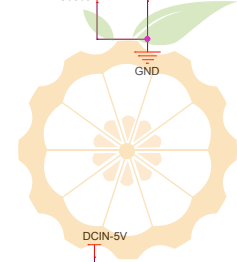
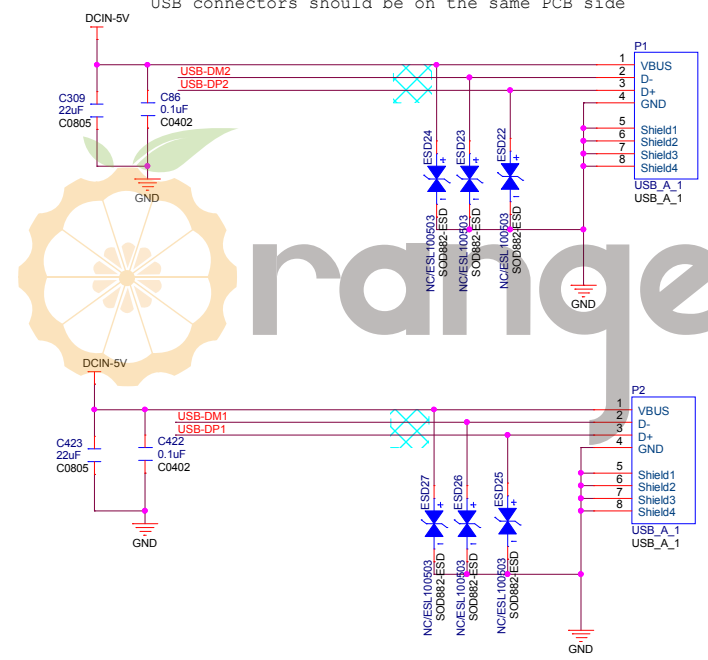
I=6800/Rset=680mA

note: Make sure the routing between the ESD and the USB connectors should be on the same PCB side

USB-DM1  
USB-DP1

USB-DM2  
USB-DP2

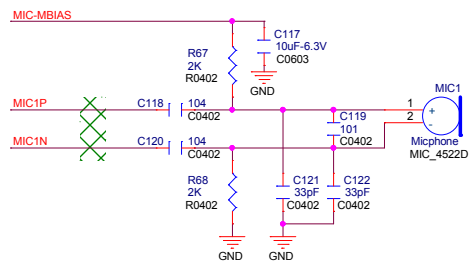
USB-DM3  
USB-DP3



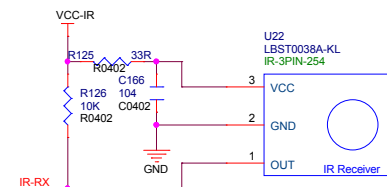
# orange pi

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# AV-MIC-IR



# IR



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# Camera

CSI-RESET# << CAM0-RESET#  
 CSI-STBY-EN << CAM0-STBY-EN  
 CSI-PWR-EN << CSI-PWR-EN

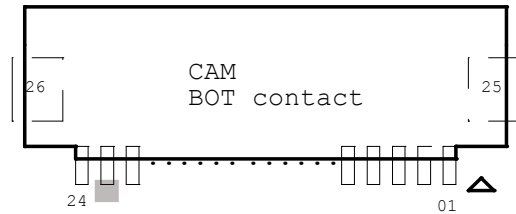
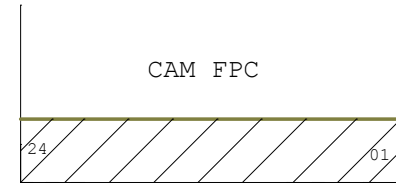
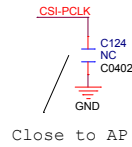
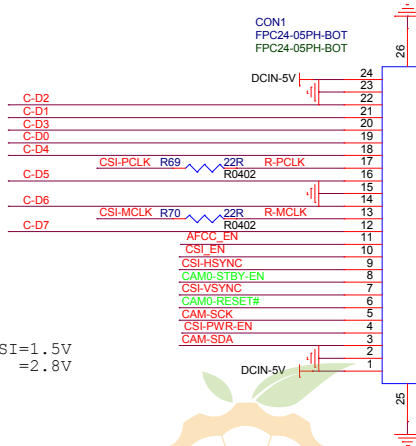
CSI-SCK << CAM-SCK  
 CSI-SDA << CAM-SDA  
 CSI-PCLK << CSI-PCLK  
 CSI-MCLK << CSI-MCLK  
 CSI-HSYNC << CSI-HSYNC  
 CSI-VSYNC << CSI-VSYNC

CSI-D0 << C-D0  
 CSI-D1 << C-D1  
 CSI-D2 << C-D2  
 CSI-D3 << C-D3  
 CSI-D4 << C-D4  
 CSI-D5 << C-D5  
 CSI-D6 << C-D6  
 CSI-D7 << C-D7

AFCC\_EN << AFCC\_EN

CSI\_EN << CSI\_EN

VDD1V5-CSI=1.5V  
 VCC-CSI =2.8V

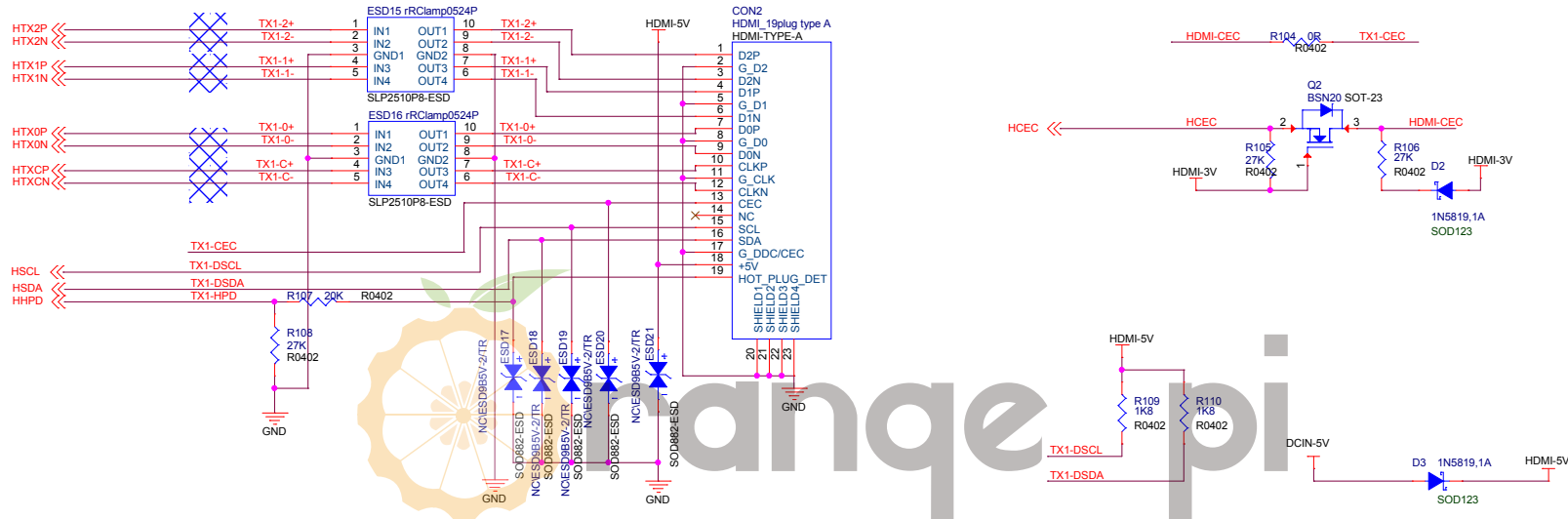


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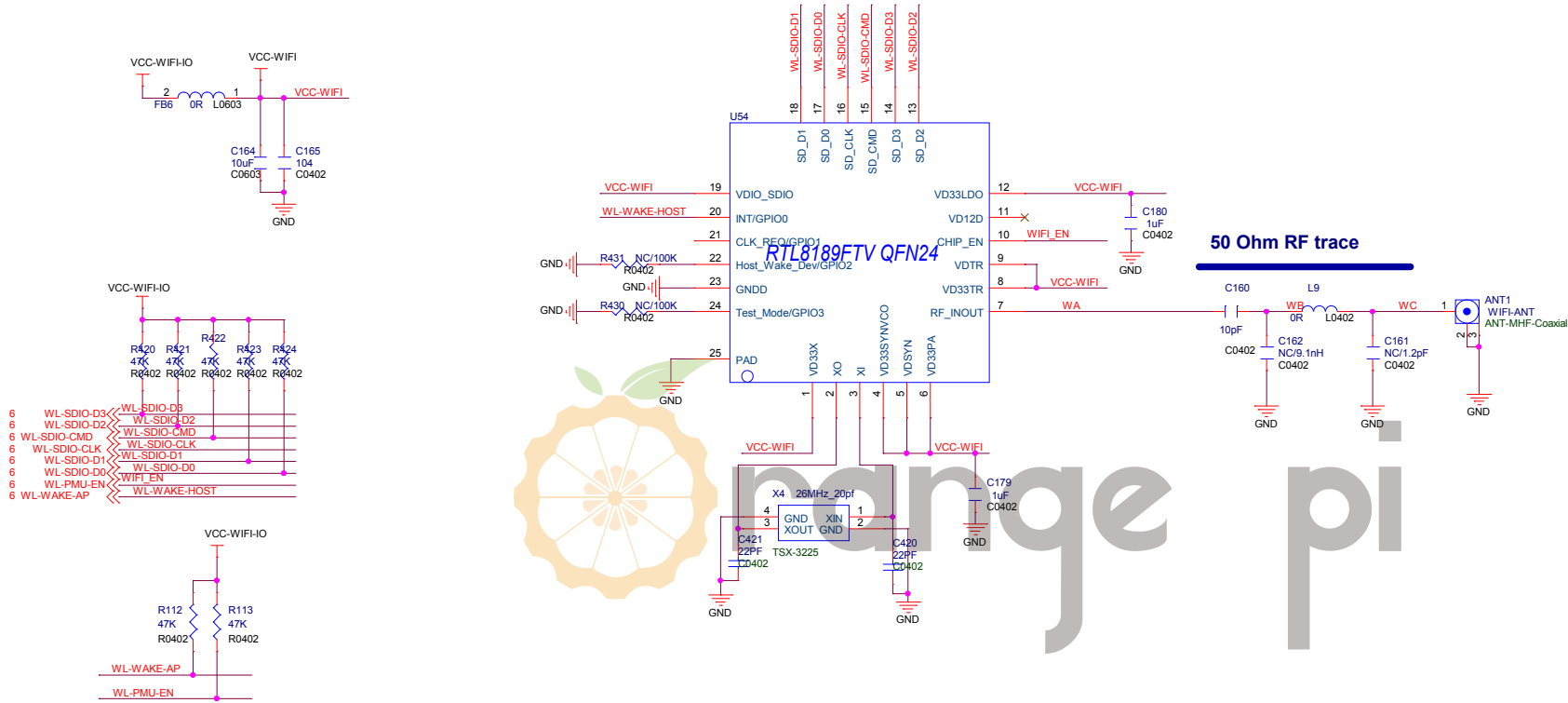
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# HDMI



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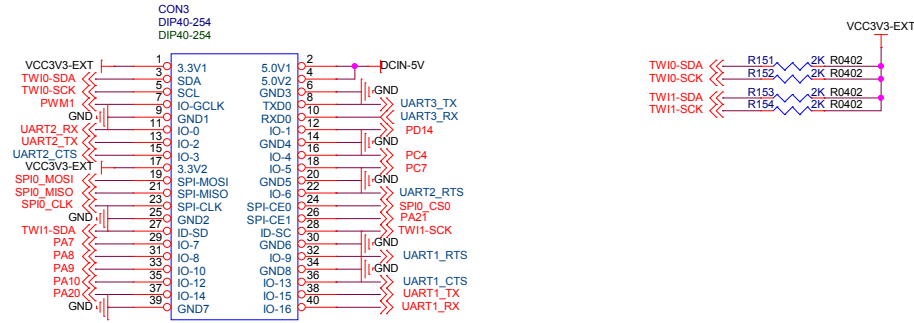
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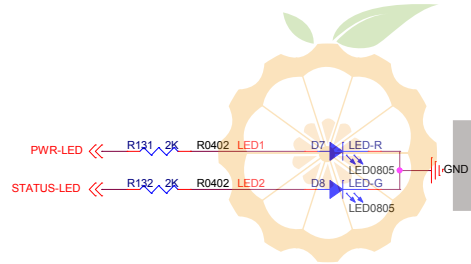
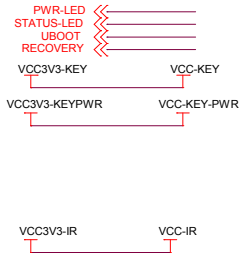
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# Ext Port

## Ext



## LED

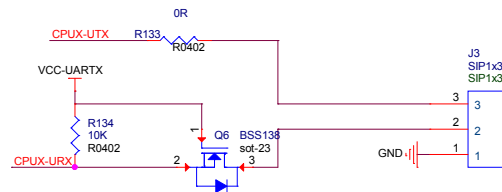
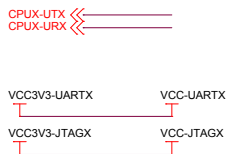


## KEY



## IR

## DEBUG



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