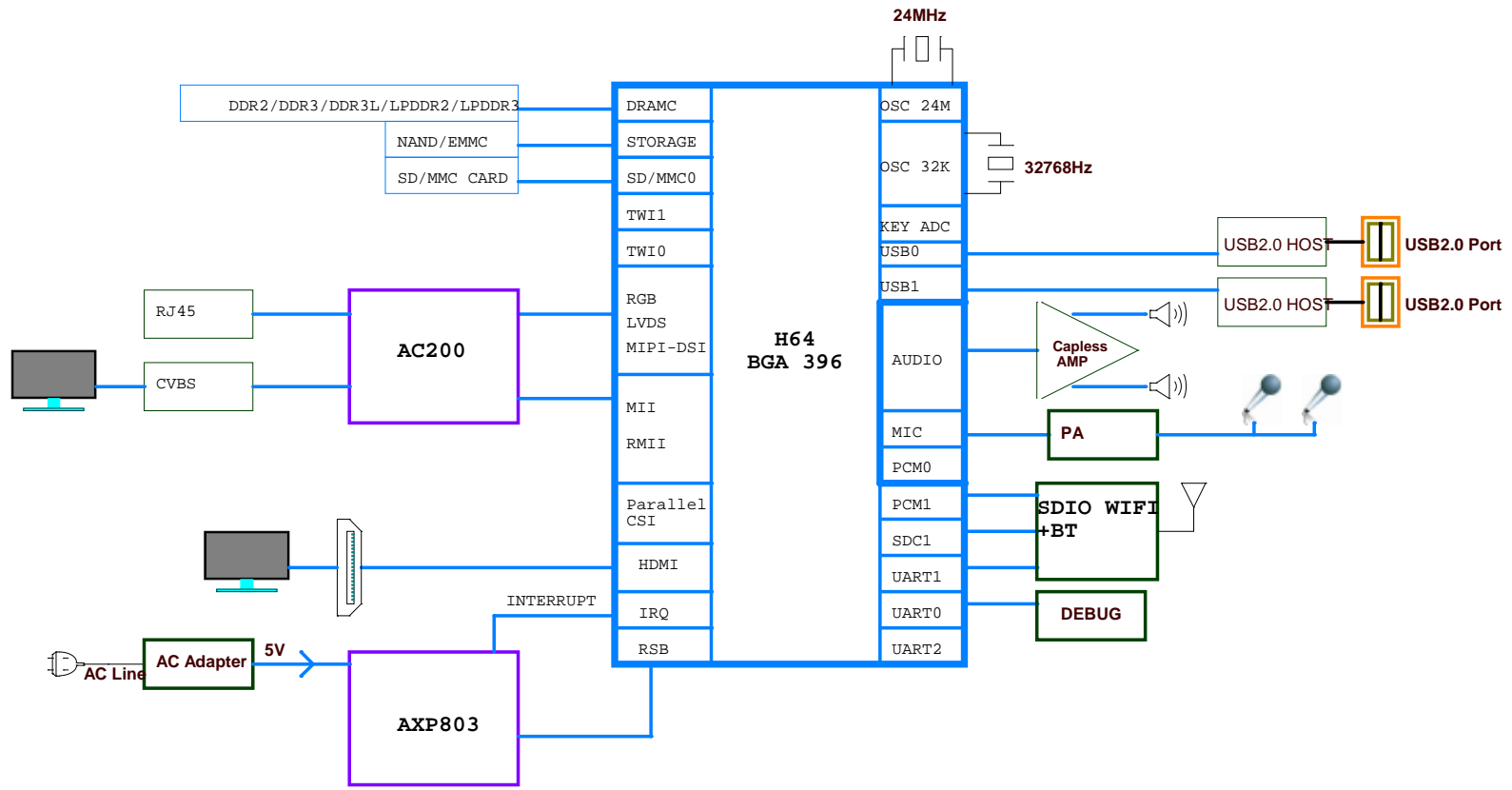


VERSION HISTORY

Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Releas version	2015-08-21			
Ver 1.1	<ol style="list-style-type: none"> 增加升压模块7208 WIFI部分更改为只兼容AP6212和8723BS 更改WIFI、CSI部分PMU供电 更改HDMI、PMU供电 	2016-09-24			
	<ol style="list-style-type: none"> NC R393 R392, WIFI电源部分 增加R394 R395 R396 (NC) R397, VBUS供电 USB使能检测 R110变更为10K, R111变更为6K2 音频部分更改为带MIC, MIC部分修改 LED灯PMU IO口控制一路更改为DCDC1电源 	2016-11-02			
	<ol style="list-style-type: none"> 增加跳线插件J6 增加KEYADC上拉和滤波电容 增加兼容NOR FLASH 更改DDR为两颗 	2016-12-28			

BLOCK DIAGRAM



POWER TREE

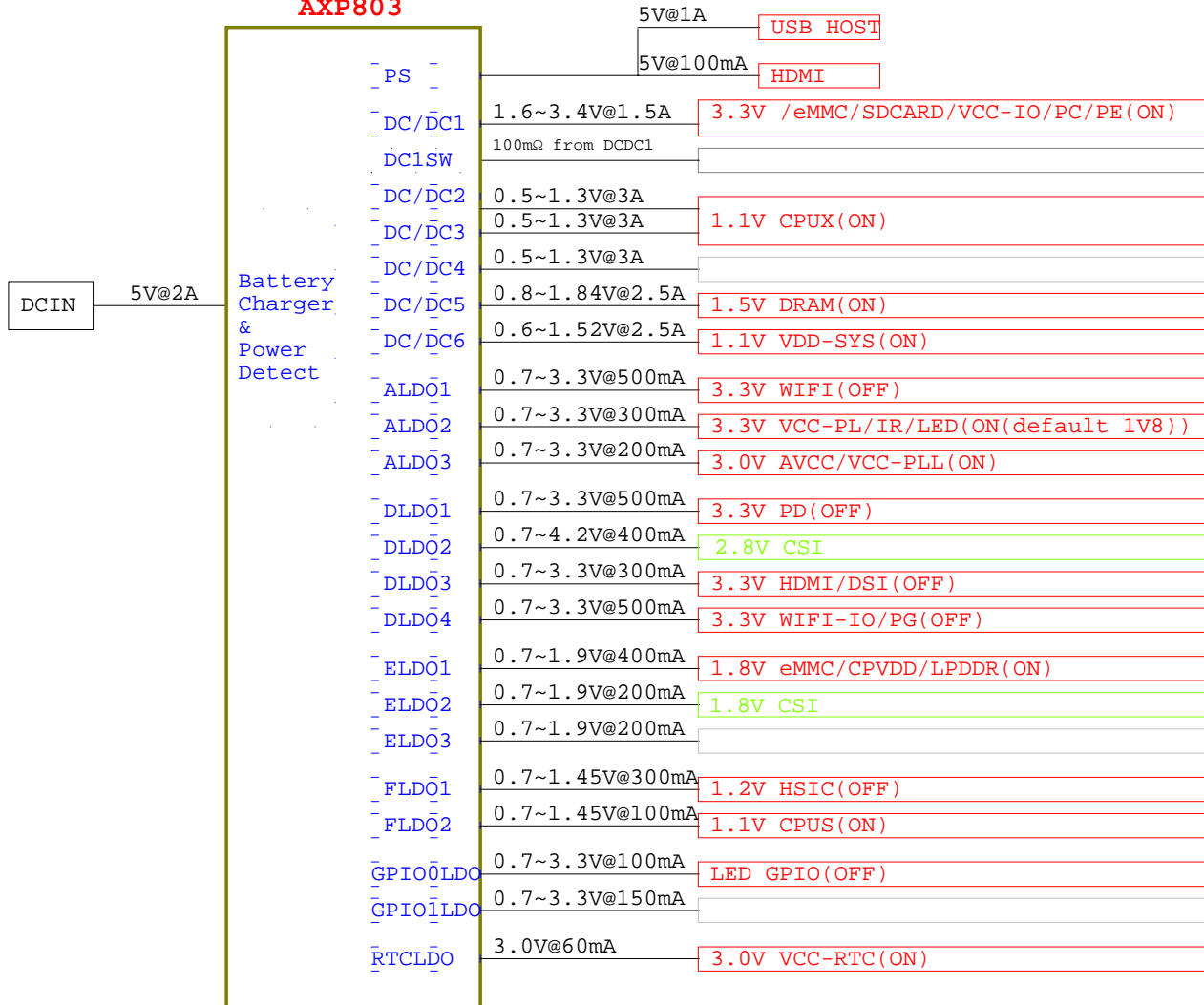
4

3

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1

AXP803



GPIO ASSIGNMENT

PIN	Define	CFG	Function
PB0	UART1_TX		GPIO
PB1	UART1_RX		
PB2	UART1_RTS		
PB3	UART1_CTS		
PB4	PA7		
PB5	PA8		
PB6	PA9		
PB7	PA10		DEBUG
PB8	UART0-TX	4	
PB9	UART0-RX	4	

PIN	Define	CFG	Function
PC0	PC7	2	GPIO
PC1	eMMC_DS	2	LCD
PC2		2	
PC3	LCD-BL-EN	2	
PC4	LCD-RST	2	
PC5	eMMC-CLK	2/3	eMMC
PC6	eMMC-CMD	2/3	
PC7		2	
PC8	eMMC-D0	2/3	
PC9	eMMC-D1	2/3	
PC10	eMMC-D2	2/3	
PC11	eMMC-D3	2/3	
PC12	eMMC-D4	2/3	
PC13	eMMC-D5	2/3	
PC14	eMMC-D6	2/3	
PC15	eMMC-D7	2/3	
PC16	eMMC-RST	2/3	

PIN	Define	CFG	Function
PD0	SPI0_CS0	5	GPIO
PD1	SPI0_CLK		
PD2	SPI0_MOSI	5	
PD3	SPI0_MISO	5	
PD4	PD14	5	
PD5	PA20	5	
PD6	PA21	5	
PD7	USB0-DRVVBUS	5	GMAC
PD8	ERXD3	5	
PD9	ERXD2	5	
PD10	ERXD1	4	
PD11	ERXD0	4	
PD12	ERXCK		
PD13	ERXDV	4	
PD14	EMAC-PWR-EN		
PD15	ETXD3	5	
PD16	ETXD2	5	
PD17	ETXD1	4	
PD18	ETXD0	4	
PD19	ECRS	4	
PD20	ETXEN	4	
PD21	ECOL		
PD22	EMDC	4	
PD23	EMDIO	4	
PD24			

PIN	Define	CFG	Function	
PE0	CSI-PCLK		CSI	
PE1	CSI-MCLK			
PE2	CSI-HSYNC			
PE3	CSI-VSYNC			
PE4	CSI-D0			
PE5	CSI-D1			
PE6	CSI-D2			
PE7	CSI-D3			
PE8	CSI-D4			
PE9	CSI-D5			
PE10	CSI-D6			
PE11	CSI-D7			
PE12	CSI-SCK			
PE13	CSI-SDA			
PE14	TWI2-SCK			GPIO
PE15	TWI2-SDA			
PE16	CSI-RESET#			
PE17	CSI-STBY-EN			

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		

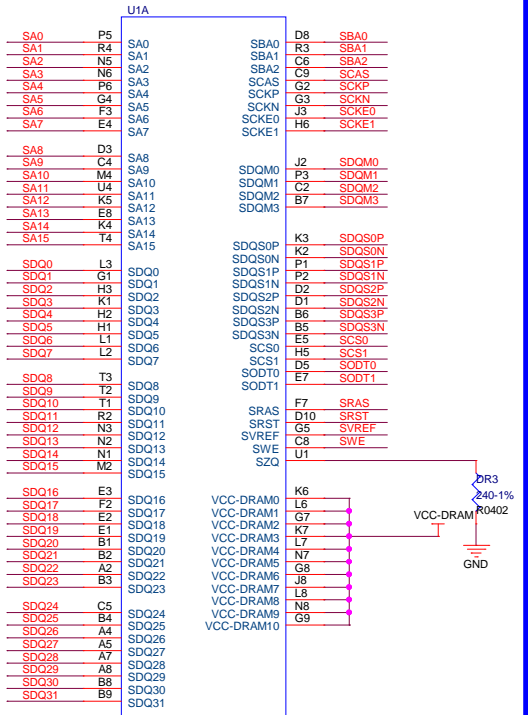
PIN	Define	CFG	Function
PG0	WL-SDIO-CLK	2	WIFI+BT
PG1	WL-SDIO-CMD	2	
PG2	WL-SDIO-D0	2	
PG3	WL-SDIO-D1	2	
PG4	WL-SDIO-D2	2	
PG5	WL-SDIO-D3	2	
PG6	BT-UART-RX	2	
PG7	BT-UART-TX	2	
PG8	BT-UART-CTS	2	
PG9	BT-UART-RTS	2	
PG10	BT-PCM-SYNC	3	
PG11	BT-PCM-CLK	3	
PG12	BT-PCM-DIN	3	
PG13	BT-PCM-DOU	3	

PIN	Define	CFG	Function
PH0		2	GPIO
PH1		2	
PH2	TWI1-SCK		
PH3	TWI1-SDA		
PH4	UART2_TX		
PH5	UART2_RX		
PH6	UART2_RTS		
PH7	UART2_CTS		
PH8	TP-INT	2	
PH9	USB0-IDDET	1	
PH10	TP-RST		
PH11	STATUS-LED	2	LED

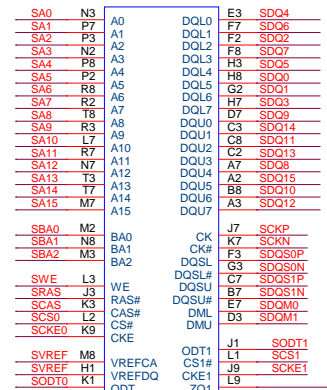
PIN	Define	CFG	Function
PL0	PMU-SCK	2	RSB
PL1	PMU-SDA	2	
PL2	UART3_TX	1	GPIO
PL3	UART3_RX	1	
PL4	BT-RST-N	1	
PL5	BT-WAKE-AP	1	WIFI+BT
PL6	AP-WAKE-BT	3	
PL7	WL-WAKE-AP		
PL8	WL-PMU-EN		GPIO
PL9	PC4	2	
PL10	PWM1	1	
PL11	IR-RX	1	

TP_SCK
TP_SDA
TP

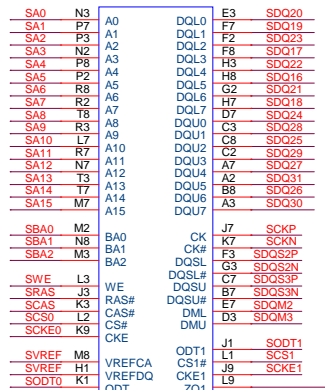
DDR3 16x2



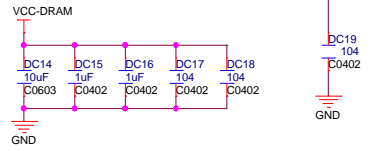
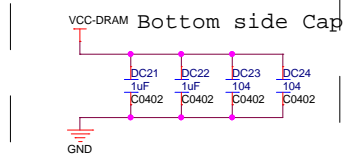
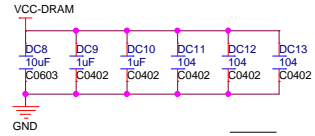
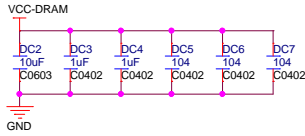
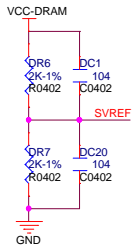
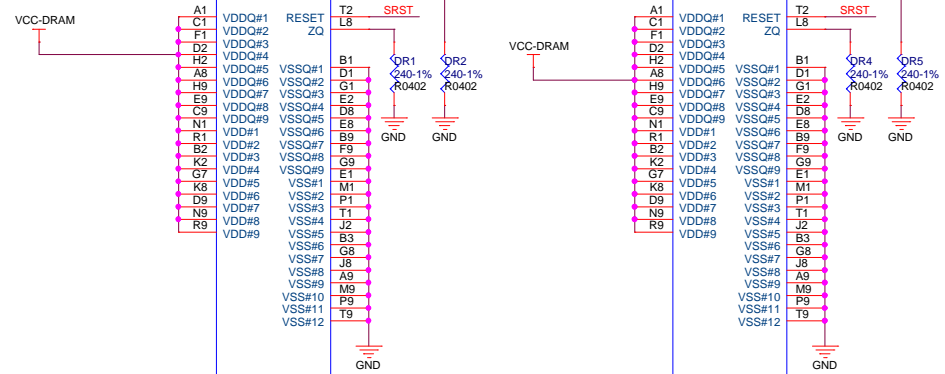
H64



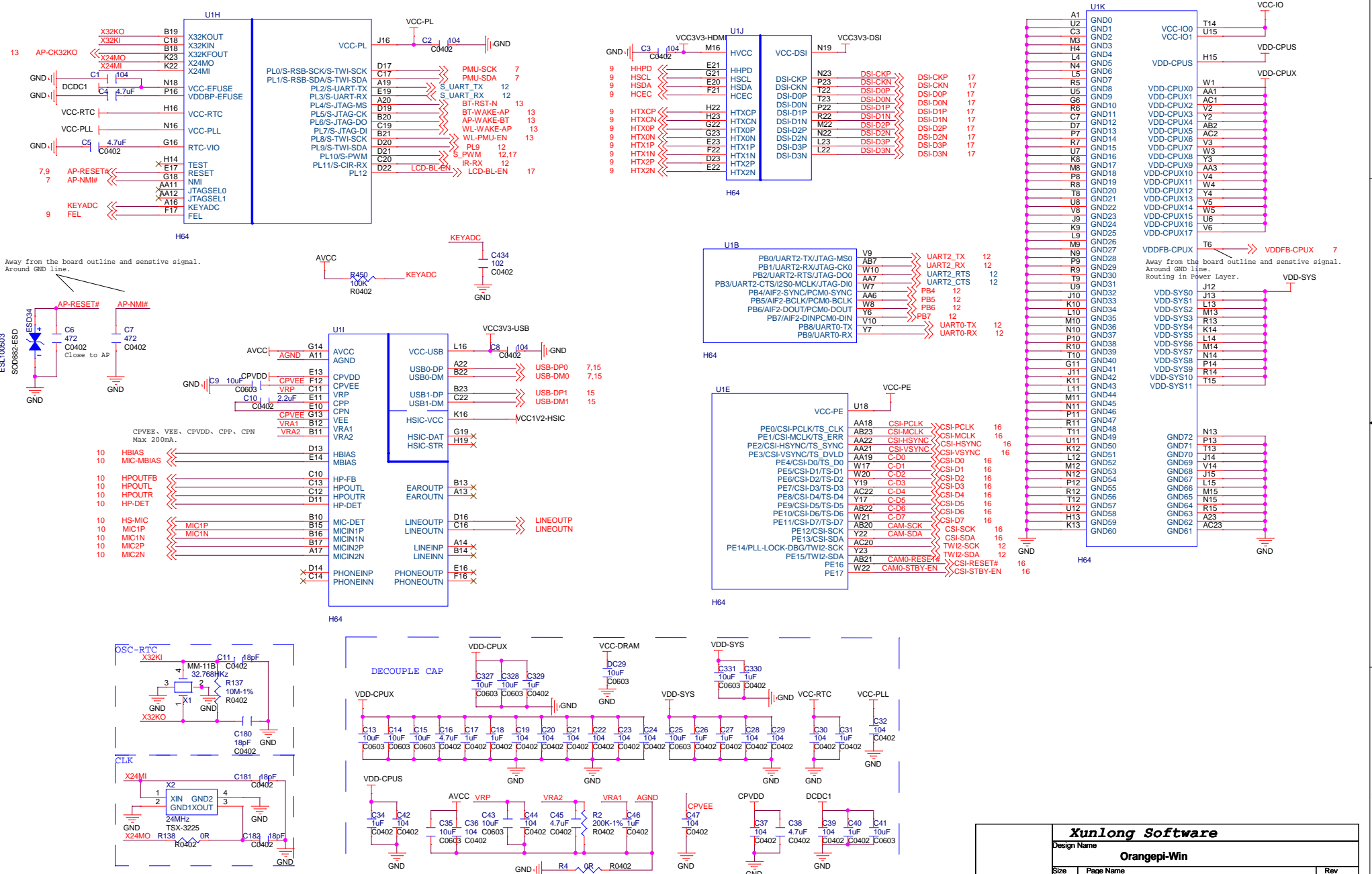
DU1
DDR3-FBGA96
BGA96P0_80B11_00X14_00



DU2
DDR3-FBGA96
BGA96P0_80B11_00X14_00

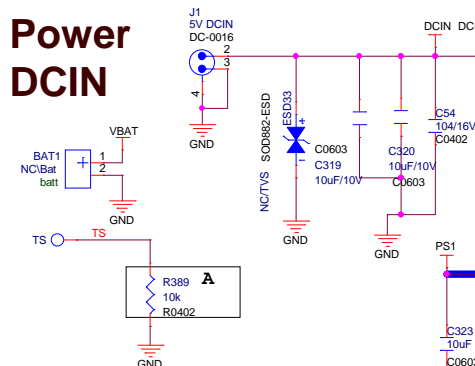


CPU



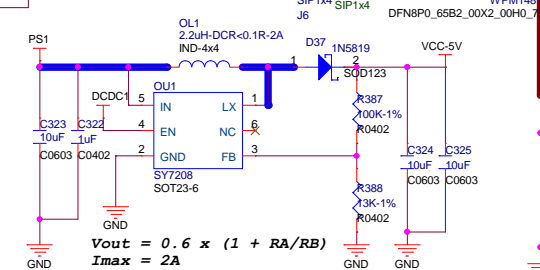
Xunlong Software			
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Power DCIN

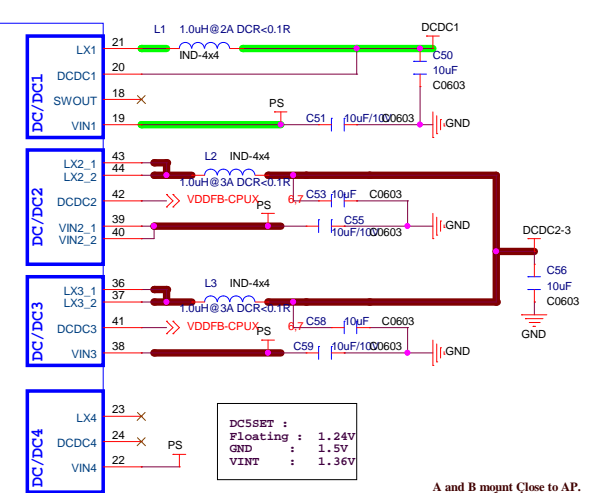
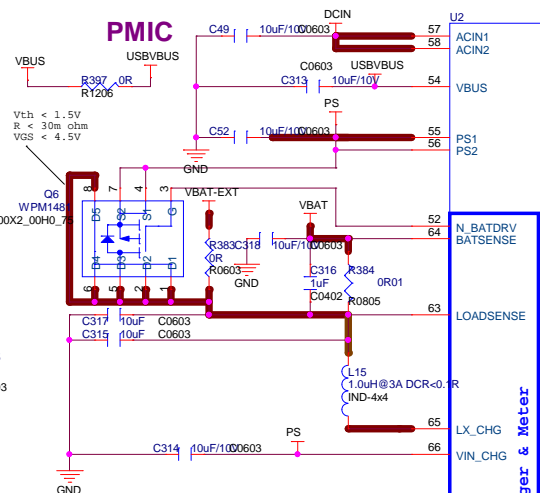


Note: When using DCIN 5V supply, Connect J6 1, 2 and Disconnect J6 3, 4
 Note: When using battery supply, Connect J6 3, 4 and Disconnect J6 1, 2
 Note: When using DCIN 5V and battery supply together, Disconnect J6 1, 2, 3, 4

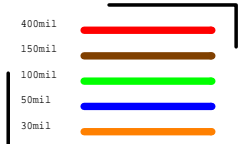
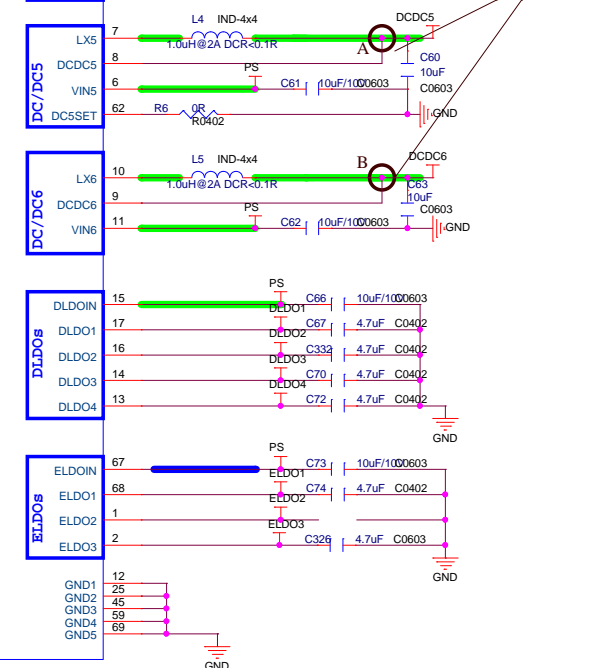
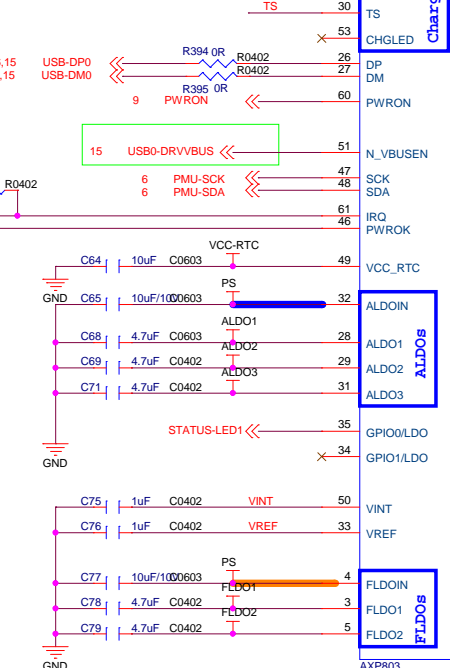
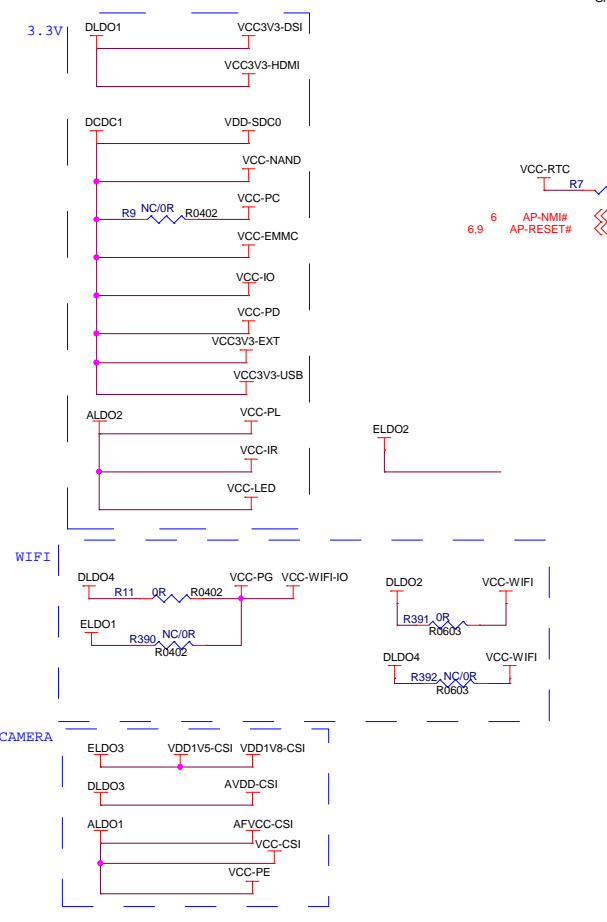
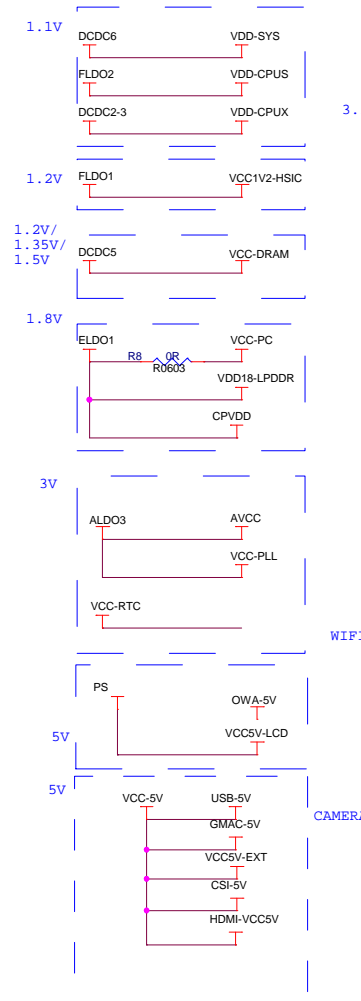
PS-5V



PMIC



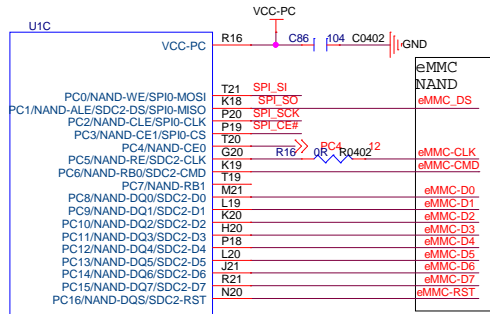
IF use the battery temperature sensor: A=NC otherwise: A=10k



Xunlong Software

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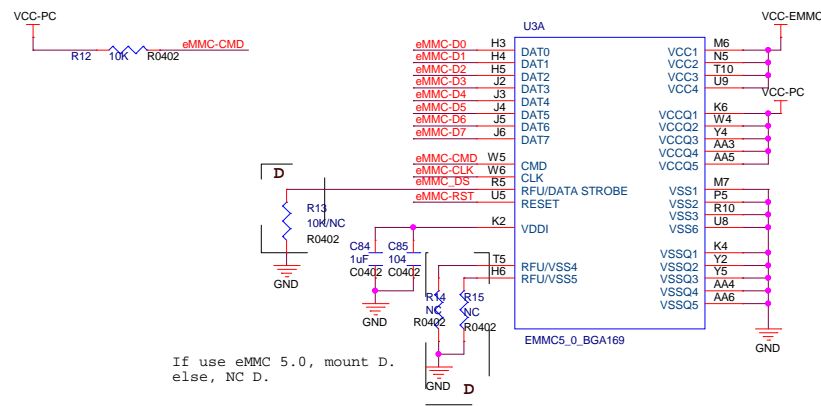
NAND/eMMC



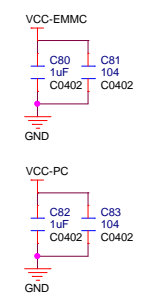
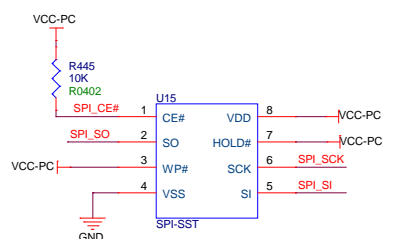
H64

VCC-NAND
VCC-PC
VCC-EMMC

根据实际需要
选择vcc-pc的电压
(1.8v或者3.3v)



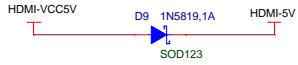
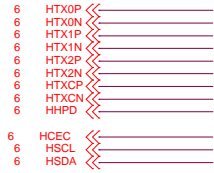
NOR FLASH



U3B			
A4	NC1	NC68	P13
A6	NC2	NC69	P14
A9	NC3	NC70	R1
A11	NC4	NC71	R3
B2	NC5	NC72	R2
B13	NC6	NC73	R12
D1	NC7	NC74	R13
D14	NC8	NC75	R14
H1		NC76	T1
H2		NC77	T2
H7		NC78	T3
H8		NC79	T13
H10	NC12	NC80	T14
H11	NC13	NC81	U1
H12	NC14	NC82	U2
H13	NC15	NC83	U3
H14	NC16	NC84	U6
J1	NC17	RFU10(NC85)	U7
J7	NC18	RFU11(NC86)	U10
J8	NC19	RFU12(NC87)	U12
J9	NC20	NC88	U13
J10	NC21	NC89	V1
J11	NC22	NC90	V2
J12	NC23	NC91	V3
J13	NC24	NC92	V12
J14	NC25	NC93	V13
K1	NC26	NC94	V14
K3	NC27	NC95	V14
K5		NC96	W1
K7	NC31	NC97	W2
K8	NC32	NC98	W3
K9	NC33	NC99	W7
K10	NC34	NC100	W8
K11	NC35	NC101	W9
K12	NC36	NC102	W10
K13	NC37	NC103	W11
K14	NC38	NC104	W12
L1	NC39	NC105	W13
L2	NC40	NC106	W14
L3	NC41	NC107	Y1
L4		NC108	Y3
L12	NC43	NC109	Y6
L13	NC44	NC110	Y7
L14	NC45	NC111	Y8
M1	NC46	NC112	Y9
M2	NC47	NC113	Y10
M3	NC48	NC114	Y11
M12	NC49	NC115	Y12
M13	NC50	NC116	Y13
M14	NC51	NC117	Y14
M5		NC118	AA1
M8	RFU3(NC52)	NC119	AA2
M9	RFU4(NC53)	NC120	AA7
M10	RFU5(NC54)	RFU13(NC121)	AA8
N1	RFU6(NC55)	NC122	AA9
N2	NC56	NC123	AA10
N3	NC57	RFU14(NC124)	AA11
N10	NC58	NC125	AA12
N12	RFU7(NC59)	NC126	AA13
N13	NC60	NC127	AA14
N14	NC61	NC128	AE1
P1	NC62	NC129	AE14
P2	NC63	NC130	AG2
P3	NC64	NC131	AG13
P10	RFU8(NC65)	NC132	AH4
P12	RFU9(NC66)	NC133	AH6
	NC67	NC134	AH9
		NC135	AH11
		NC136	

EMMC5_0_BGA169

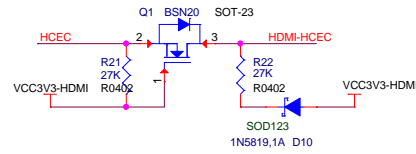
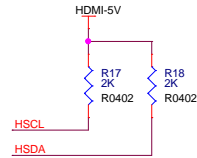
HDMI/KEY



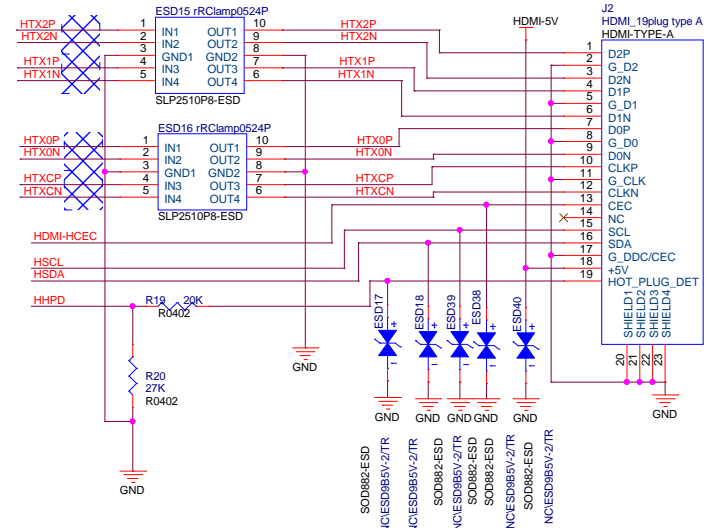
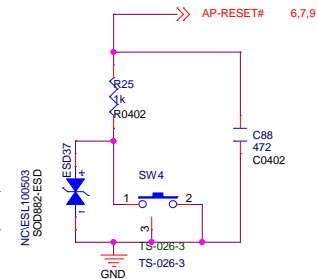
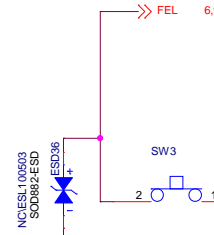
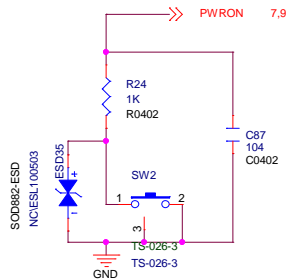
HDMI



Differential pairs
Z0= 100 ohm



KEY

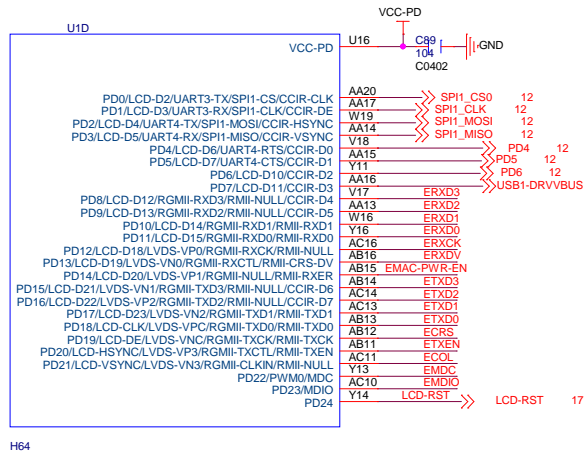
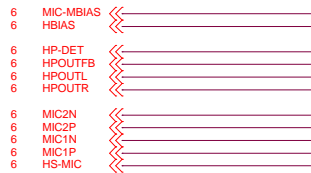


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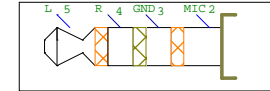
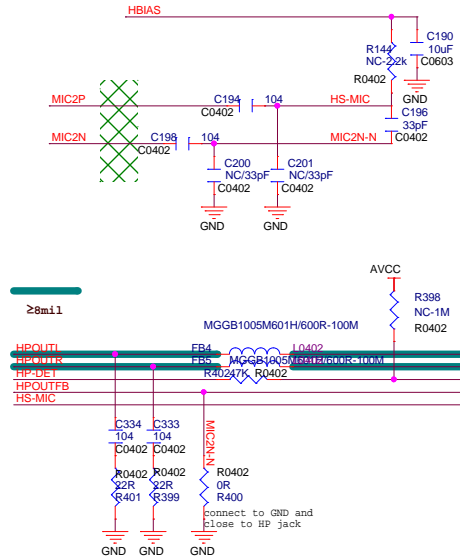
VIDEO/MAC



VCC-AVE

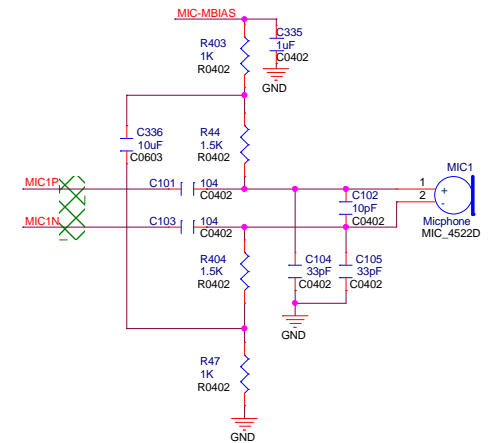


AUDIO



Note1:
When insert HP, pin4 and pin6 is connected,
when pull out HP, pin4 and pin6 is disconnected.

Note2:
When insert HP, pin4 and pin6 is disconnected,
when pull out HP, pin4 and pin6 is connected.
Mount R161 100K.

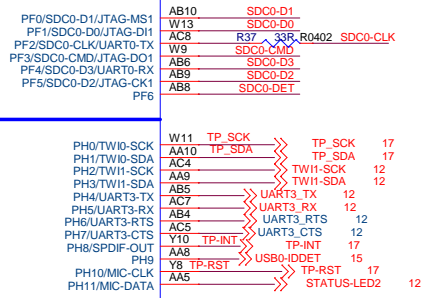


Xunlong Software		
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A3	VIDEO/MAC	1.1
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T-CADD/USB

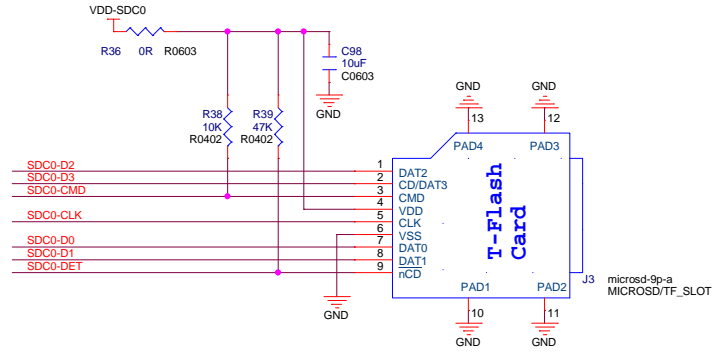
T-CARD

U1G



H64

VDD-SDC0



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IR-SPDIF-LED-DEBUG

6 UART0-TX <-> UART0-TX
6 UART0-RX <-> UART0-RX

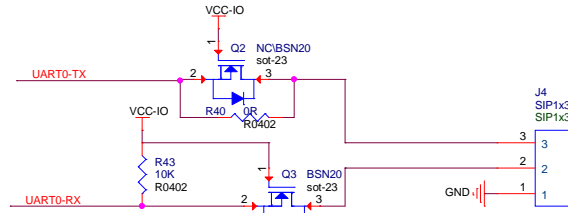
VCC-IO

VCC-IR

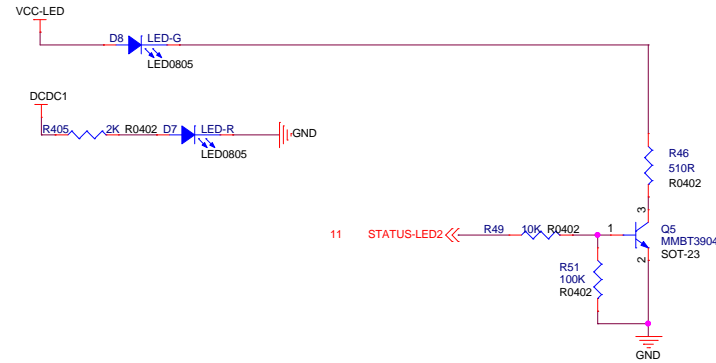
VCC-LED

OWA-5V

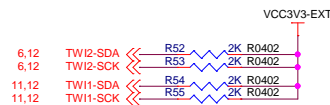
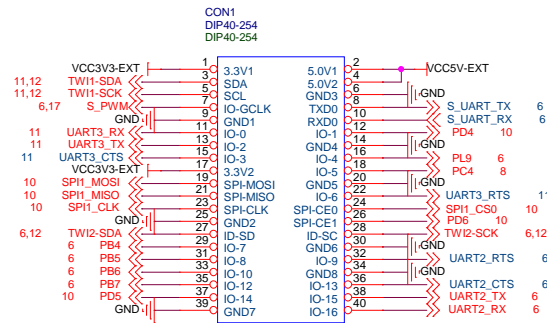
DEBUG



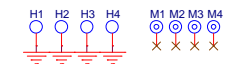
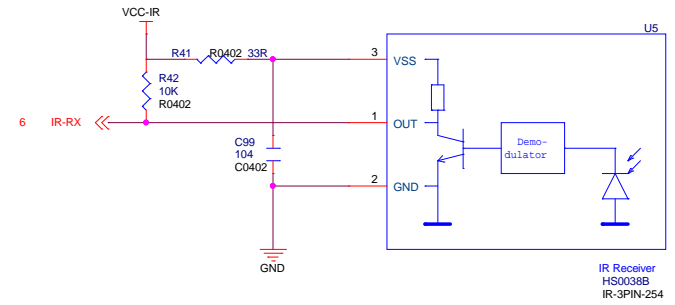
LED



Ext Port



IR



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A3	IR/MIC/SPDIF/LED/DEBUG/EXT	1.1
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WIFI+BT

A

B

C

D

E

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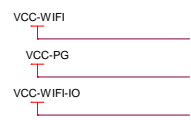
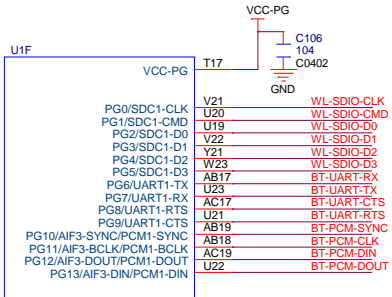
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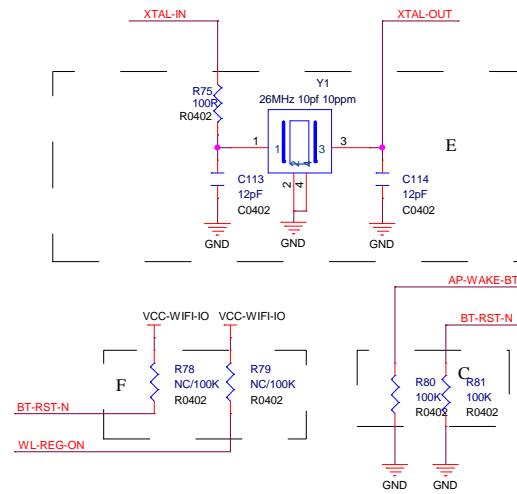
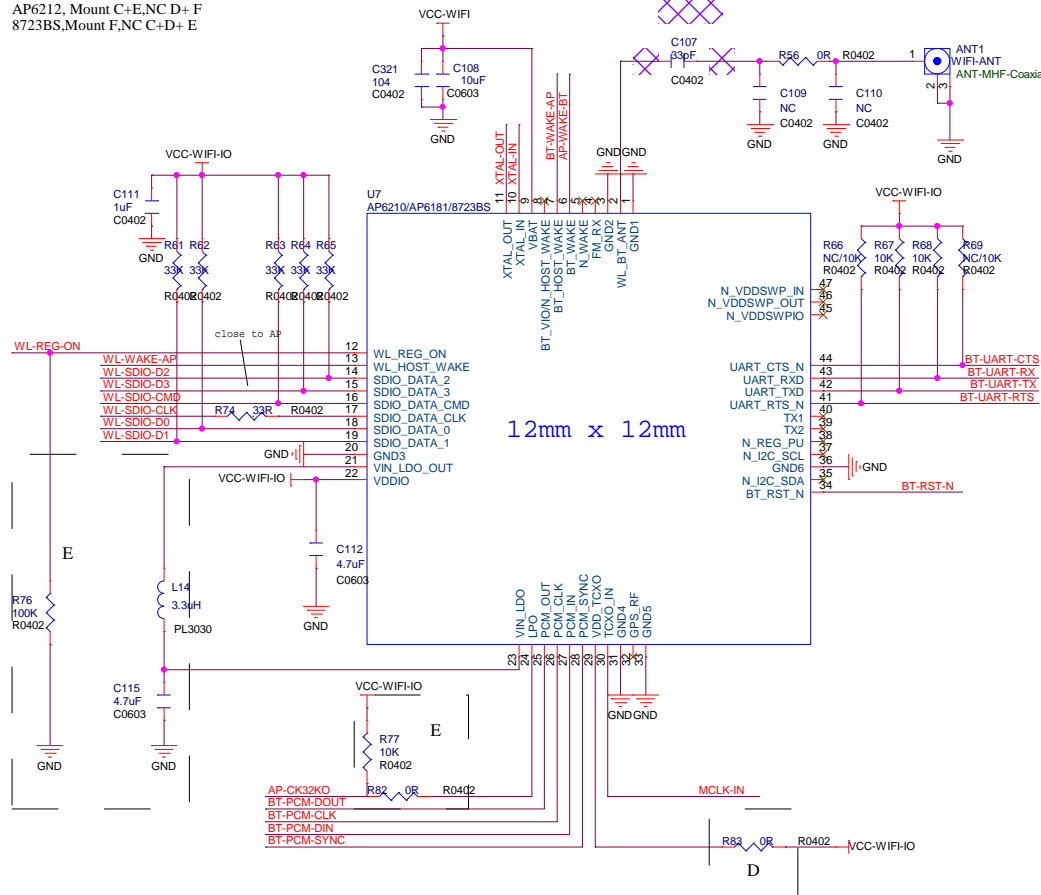
2

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1



Note:
AP6212, Mount C+E,NC D+ F
8723BS,Mount F,NC C+D+ E

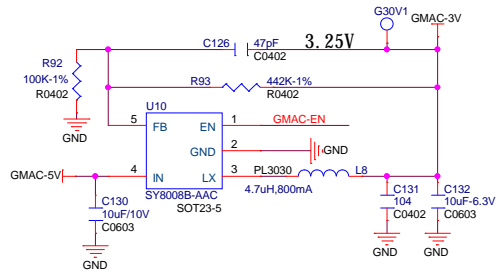
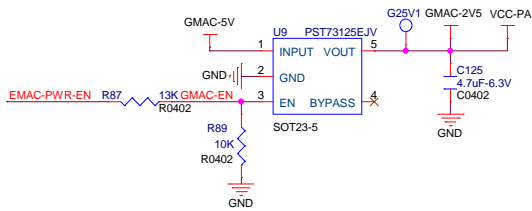
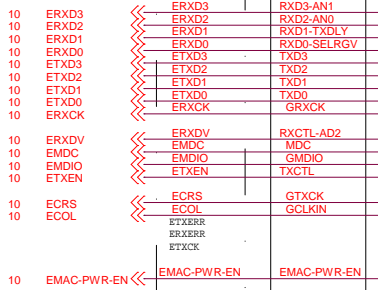


Xunlong Software		
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OrangePi-Win		
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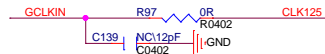
GMAC

10/100/1000 RGMII Ethernet PHY

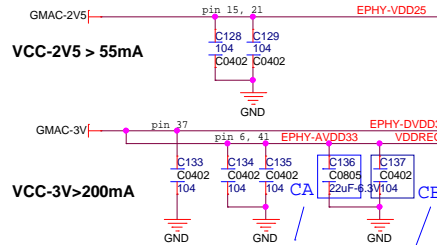
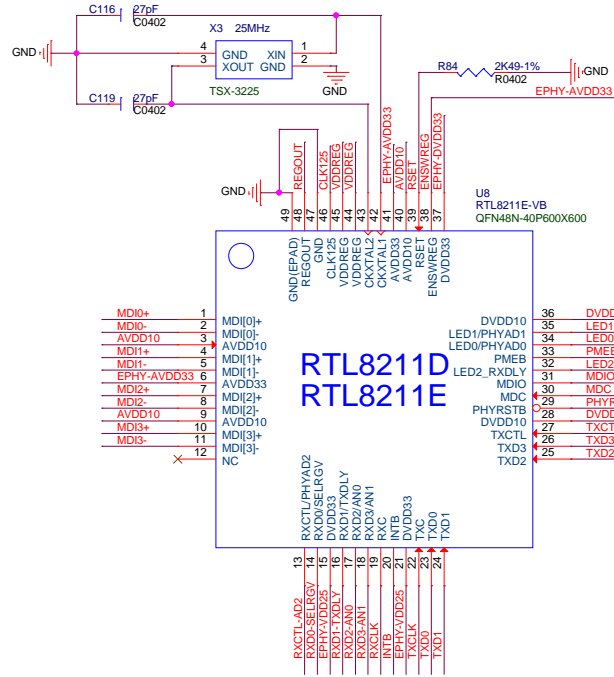
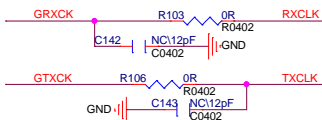
EMAC-MI/GMAC-MI GMAC-RGMII



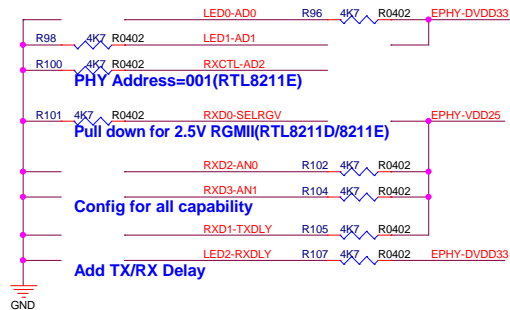
Place filter network close to CLK125.
Reserved for EMI



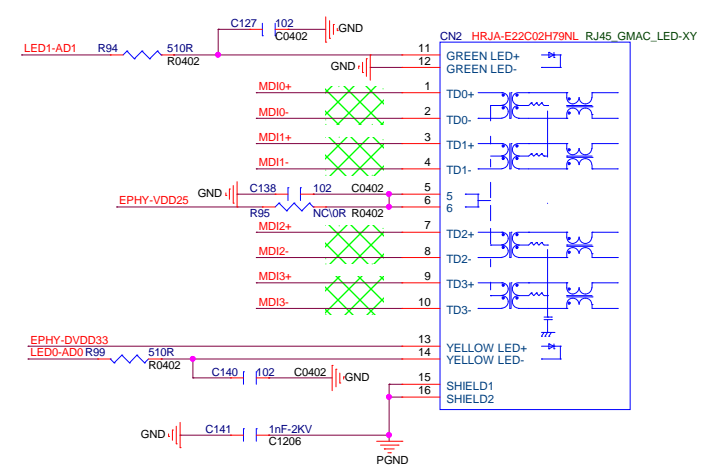
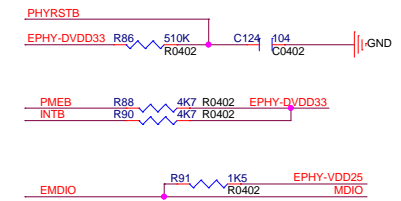
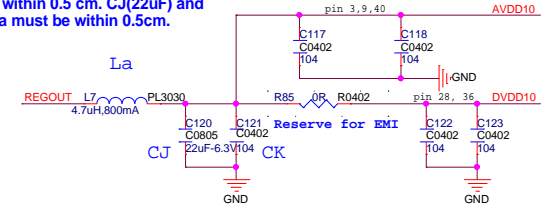
Place filter network close to RX_CLK.
Reserved for EMI



Note 2: The Trace length from CA(22uF),CB(0.1uF) to Pin 44,45(VDDREG) must be within 0.5 cm. The trace width from AVDD33 to Pin 44,45 should be 40mils.



Note 1: The Trace length between La and PHY's Pin48 must be within 0.5 cm. Cj(22uF) and Ck(0.1uF) to La must be within 0.5cm.



LED0: Blinking=Transmitting or Receiving.
LED1: Link Up/Down

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USB

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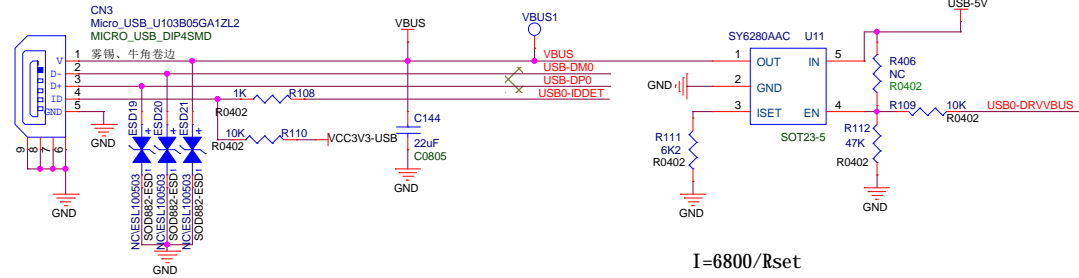
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3

2

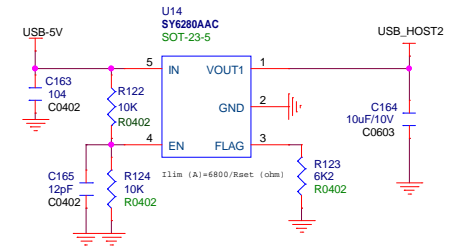
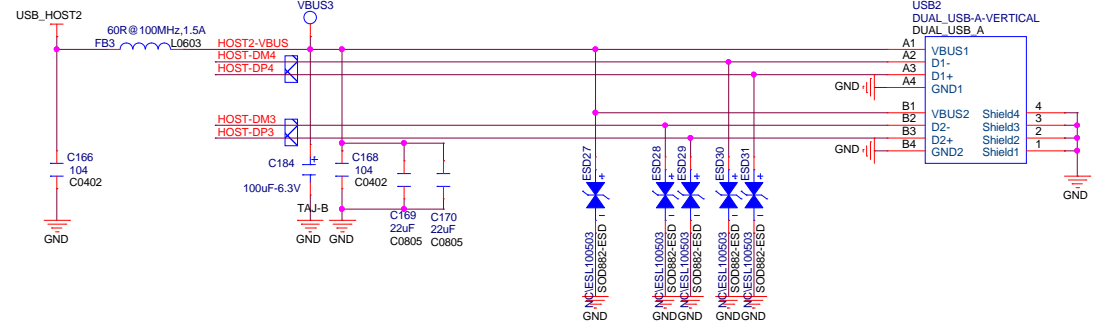
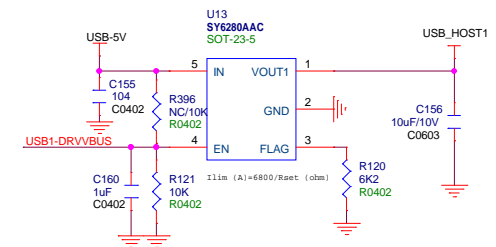
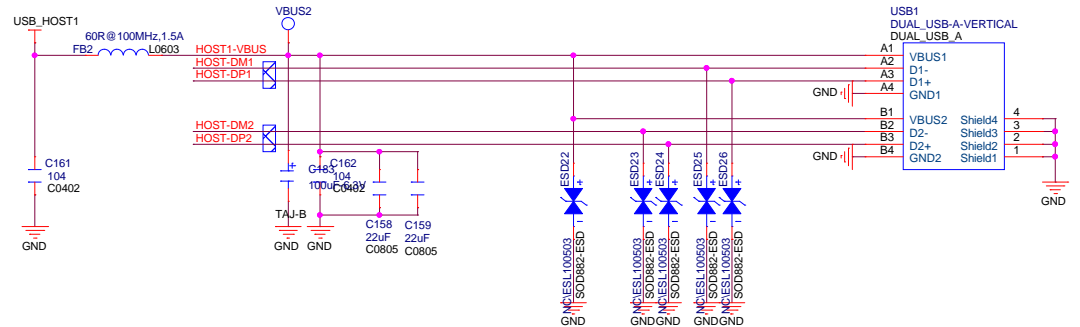
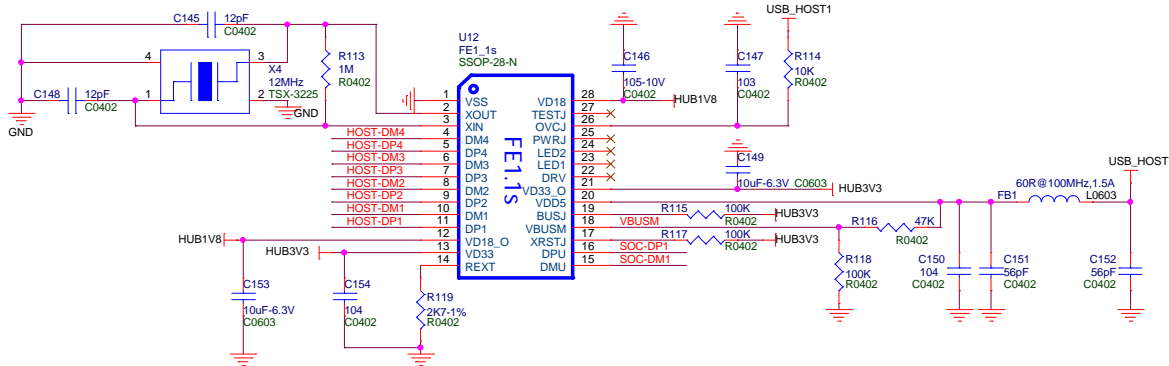
1

- 6,7 USB-DM0
- 6,7 USB-DP0
- 11 USB0-IDDET
- 7 USB0-DRVVBUS



I=6800/Rset

- 6 USB-DM1
- 6 USB-DP1
- 10 USB1-DRVVBUS



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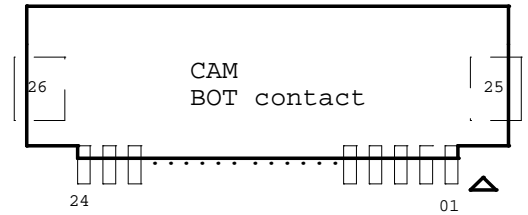
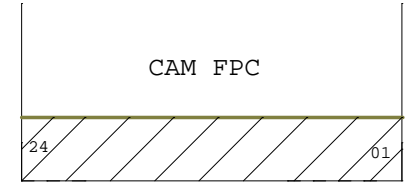
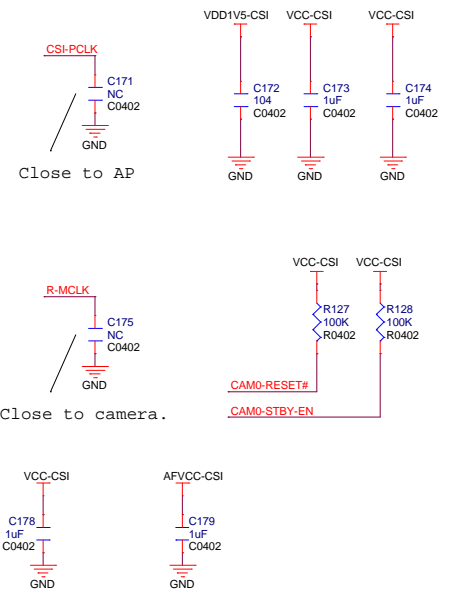
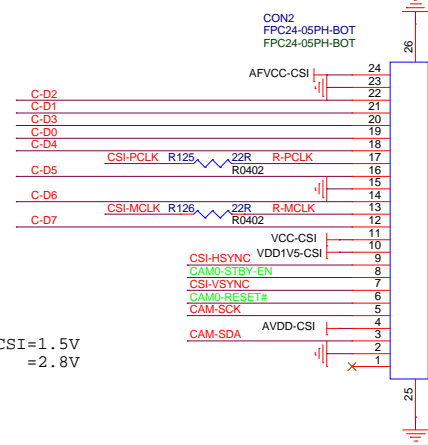
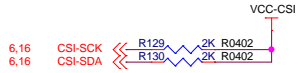
Camera

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

6,16 CSI-SCK <<< CAM-SCK
 6,16 CSI-SDA <<< CAM-SDA
 6 CSI-PCLK <<< CSI-PCLK
 6 CSI-MCLK <<< CSI-MCLK
 6 CSI-HSYNC <<< CSI-HSYNC
 6 CSI-VSYNC <<< CSI-VSYNC

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

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



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LCD

