

Version	Date	Change Note	Approved
v1.0	20190102	NOTE: 1. 去掉SATA, HDMI接口 2. 去掉DVP接口	
v1.0	20190308	NOTE: 1. Page21, 新增LCM接口, 原CAM接口定义变更使之兼容屏, 并新增LCM及CAM自动识别电路。 2. Page25, 原24PIN PCIE接口座子改为侧插24PIN ZIF座子(变更PCB封装); 删除了USB连接;	
v1.0	20190311	NOTE: 1. Page25, PCIE座子恢复USB接口连接;	
v1.0	20190312	NOTE: 1. Page25, PCIE座子删除USB接口连接; 2. I2C1上拉电源开关电路兼容跳选电阻; 3. PCIE座子改为立式24PIN;	
v1.0	20190313	NOTE: 1. Page25, PCIE座子删除USB接口连接; 2. I2C1上拉电源开关电路兼容跳选电阻; 3. Page21, 预留的3.3V及1.8V电源删除, 改由PMU输出的VCC3V3_S3及VCC1V8_DVP供电; 4. Page21, I2C2上拉电源改为PMU输出的VCC3V0_TOUCH及VCC1V8_PMUPLL提供; 5. Page24, Type-C限流开关增加使能控制脚; 6. Page13, 新增温度检测ADC; 7. Page24, FUSB302的I2C及INT脚加上拉电阻; 8. Page21, 删除MOS开关, 使VCC_SYS与VCC5V0_SYS连接为同一网络;	
v1.0	20190708	1. Page23, AP6256 41、44引脚CTS、RTS网络对调; 2. Page9, LPDDR4电源网络VCC1V8_DDR接到VCC_1V8网络; 3. Page8, CPU电源电容群部分: C6, C9删除, C10改为10uF; C16, C17, C24, C25, C26, C40, C41, C42, C43, C44, C32, C33改为100nF; C8, C10, C11, C12, C16, C17, C18, C19, C23, C24, C25, C26, C27, C28, C31, C32, C33, C34, C35, C39, C40, C41, C42, C43, C44, C45, C46封装改为0402;	
	20190717	4. Page13, 增加ADC轻触按键电路: R8102、SW2107、C9055、ESD38; 5. Page15, 删除BORAD ID电路R74、R85、R68、R69; 6. Page15, TOUCH_RST_L1改用GPIO4_D1; 7. Page21, 删除LCD&CAM自动识别电路Q65033\Q65034\Q3\R90380\R90383\R90384, 改用IC FSA4157P6X(U919);	
	20190722	8. Page21, 删除上拉电平切换电路U919, R906; 9. Page15, I2C上拉电压改为VCC1V8_PMUPLL; 10. Page23, 37.4MHZ晶体X7匹配电容C90169、C190改为15pF; 11. Page15, 删除多余网络WL-WAKE-AP与GPIO4_D5的连接, 同时删除R436, GPIO4_D5改接CTF1_INT网络; 12. Page15, VCC5V0_TYPEC_EN网络连接由GPIO4_D2改为GPIO2_B4, GPIO4_D2改接CSI_EN_CTF_RST;	
	20190725	13. Page23, 删除电阻R134、R135以优化晶体走线; 14. Page25, GPIO座PIN7脚接改GPIO4_C6/PWM1; PCIE座P23脚改为GPIO1_A0;	
	20190726	15. Page21, CAM座子J4702复位信号CSI_RST_H与J8402共用, 改为独立GPIO0_A6控制CSI_RST_C; 16. Page21, CAM座子J4702改为与J4701共用I2C2; 17. Page21, 删除R90250、R90251; 18. Page21, J4701 EDP_CABC_EN改为接GPIO0_B5;	
	20190821	19. Page23, C90169、C190改为12pF; 20. Page26, 位号P3 USB座子PIN1-PIN4引脚定义倒置重新调整网络连接;	
	20190822	21. Page23, 新增电容C323; 22. Page05, U90017电池座改为焊盘TP50284、TP50285; 23. Page25, 调试串口串接R90406、R90407 1K电阻;	
	20190930	V1.2 24. Page23, WIFI大线匹配C90171、C411、C90168改为0402; 25. Page23, R138预留上拉, 改为预留下拉到地; 26. Page26, C323改为4.7uF;	
	20191030	V1.3 27. Page25, PCIE座子新增USB0_DM、DP连接;	
	20210426	V1.5 28. Page22, Audio Codec 更改为ES8316; 29. Page19, PHY芯片 更改为RTL8211F;	



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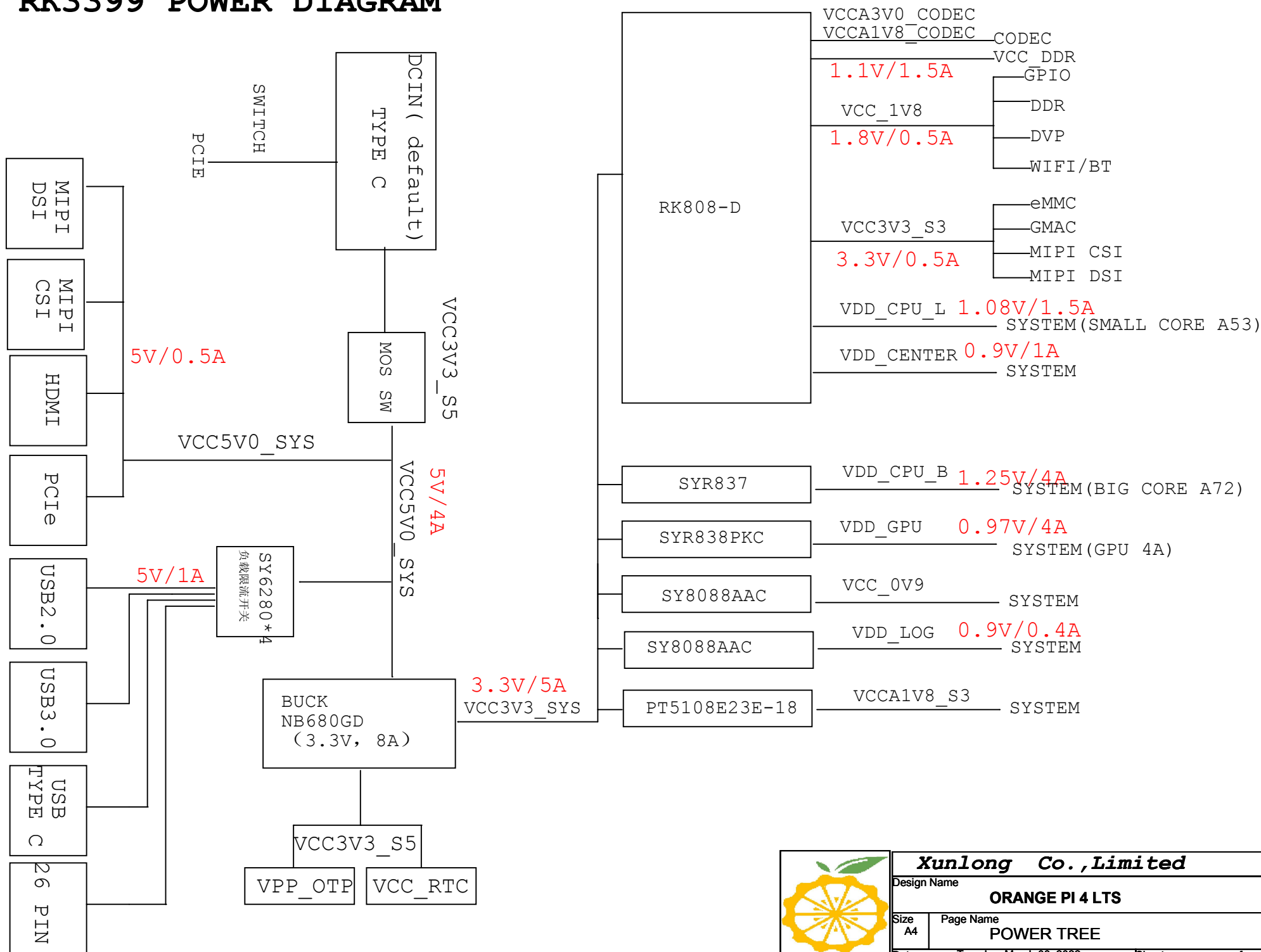
RK3399 I2C MAP

Port	Pin name	Domain	Bus name	Pull-up voltage	Slave Device	Slave Addr (MS 7Bits)	Note	Slave Bus Capability
I2C0	GPIO1_B7/SPI3_RXD/I2C0_SDA GPIO1_C0/SPI3_TXD/I2C0_SCL	PMUIO2 VCC1V8_PMU	I2C_SDA_PMIC I2C_SCL_PMIC	VCC1V8_PMU	TI LP8752-Q1	0x60	DC regulator	100kHz,400kHz,1MHz fast mode+ 3.4MHz high-speed mode
					Rockchip RK808	0x1b	PMIC	
					Fairchild FUSB302B	0x44,0x46	USB-TypeC Mux	100kHz,400kHz,1MHz fast mode+
I2C1	GPIO4_A1/I2C1_SDA GPIO4_A2/I2C1_SCL	APIO5 VCC1V8_IO	I2C_SDA_AUDIO I2C_SCL_AUDIO	VCCA1V8_CODEC	Everest ES8316	0x10	Audio codec	
			I2C_SDA_CAM I2C_SCL_CAM	VCCA1V8_CODEC	Omnivision OV8858	0x6c,0x20	MIPI Camera	
I2C2	GPIO2_A0/VOP_D0/CIF_D0/I2C2_SDA GPIO2_A1/VOP_D1/CIF_D1/I2C2_SCL	APIO2 VCC1V8_IO	Other pin function					
I2C3	GPIO4_C0/I2C3_SDA/UART2B_RX GPIO4_C1/I2C3_SCL/UART2B_TX	APIO4 VCC3V0_IO	I2C_SDA_HDMI I2C_SCL_HDMI	VCC3V0_IO				
I2C4	GPIO1_B3/I2C4_SDA GPIO1_B4/I2C4_SCL	PMUIO2 VCC1V8_IO	I2C_SDA_MEMS I2C_SCL_MEMS	VCC1V8_PMU	Capellamicro CM3218	0x10,0x0c	ALS Sensor	
					AsahiKasei AK8963C		Compass	
					InverSense MPU6500	0x34	Accer+Gyro	
			I2C_SDA_TOUCH I2C_SCL_TOUCH	VCC1V8_TOUCH	Silead GSL3680	0x40	Touch panel	
I2C5	GPIO3_B2/MAC_RXER/I2C5_SDA GPIO3_B3/MAC_CLK/I2C5_SCL	APIO1 VCC3V3_LAN	I2C_SDA_PCIE I2C_SCL_PCIE	VCC3V3_IO				
I2C6	GPIO2_B1/SPI2_RXD/CIF_HREF/I2C6_SDA GPIO2_B2/SPI2_TXD/CIF_CLKIN/I2C6_SCL	APIO2 VCC1V8_IO	I2C_SDA_BAT I2C_SCL_BAT	VCC1V8_DVP	Chrome Battery	0x19	Battery	100KHz
					TI BQ25700	0x6a (I2C) 0x09 (SMBus)	Charger	
					Fairchild FUSB302B	0x44,0x46	USB-TypeC Mux	100kHz,400kHz,1MHz fast mode+
I2C7	GPIO2_A7/VOP_D7/CIF_D7/I2C7_SDA GPIO2_B0/VOP_CLK/CIF_VSYNC/I2C7_SCL	APIO2 VCC1V8_IO	Other pin function					

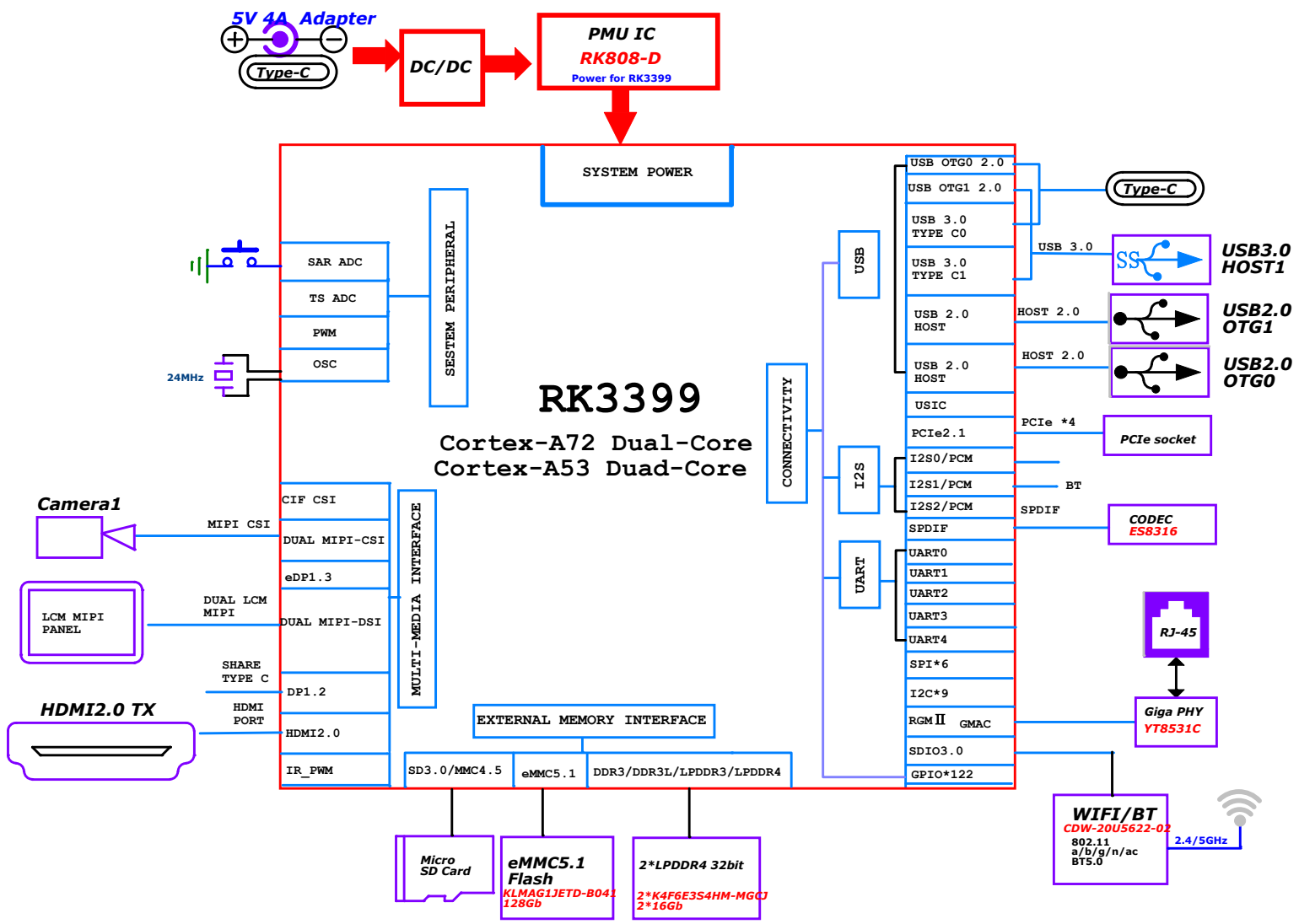


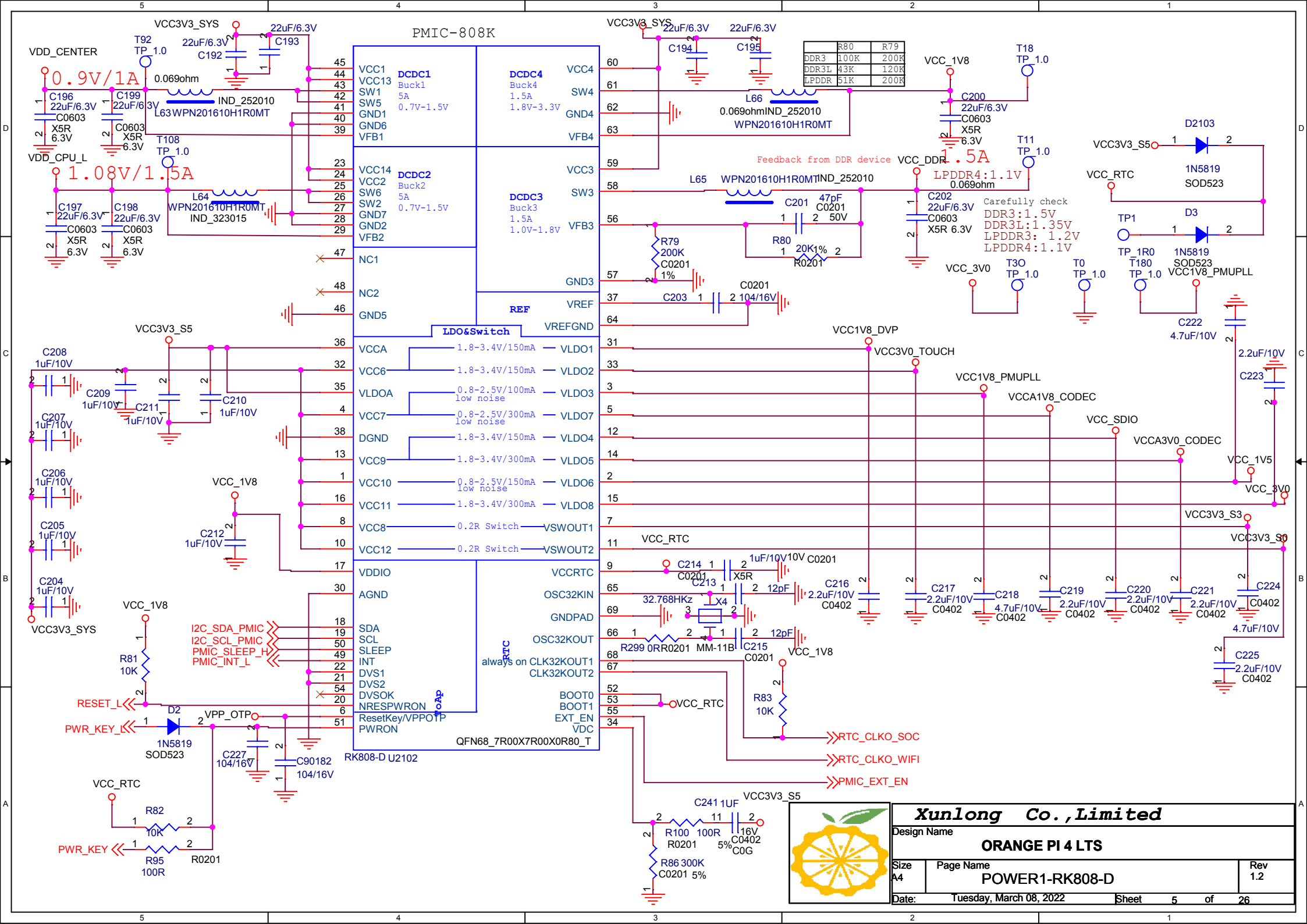
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RK3399 POWER DIAGRAM



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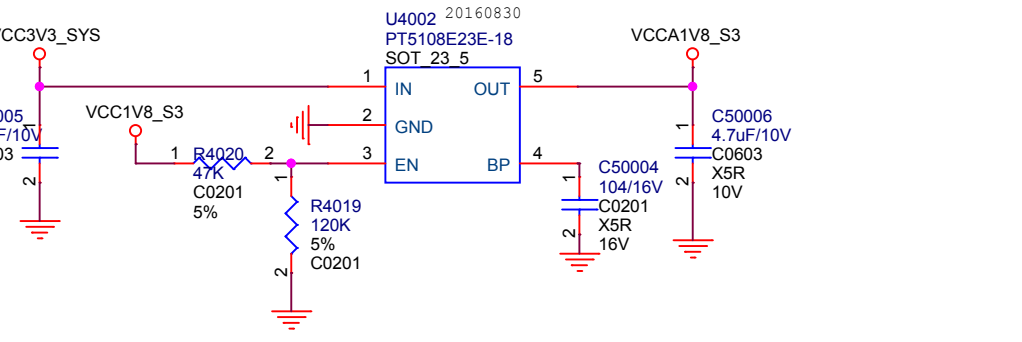
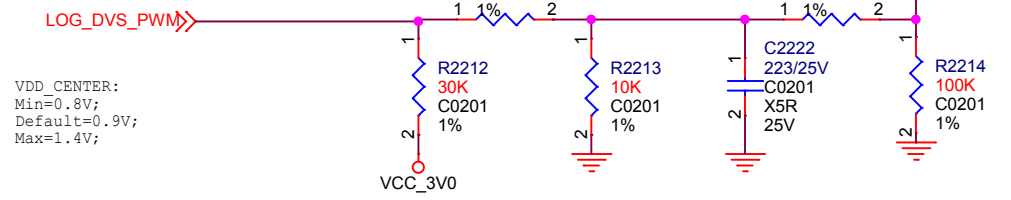
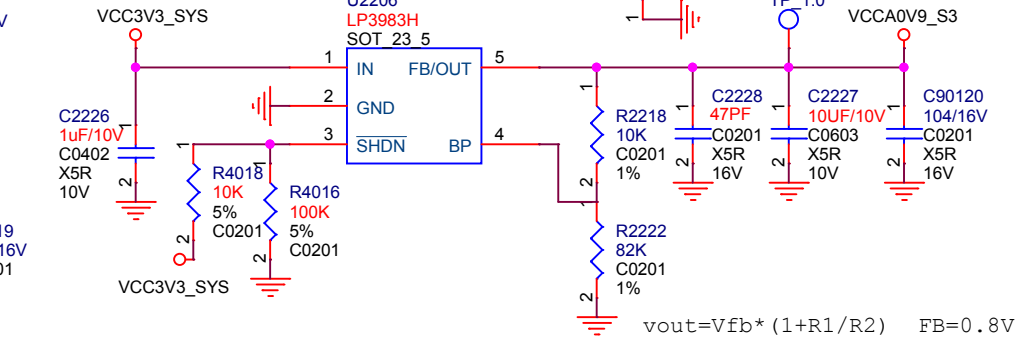
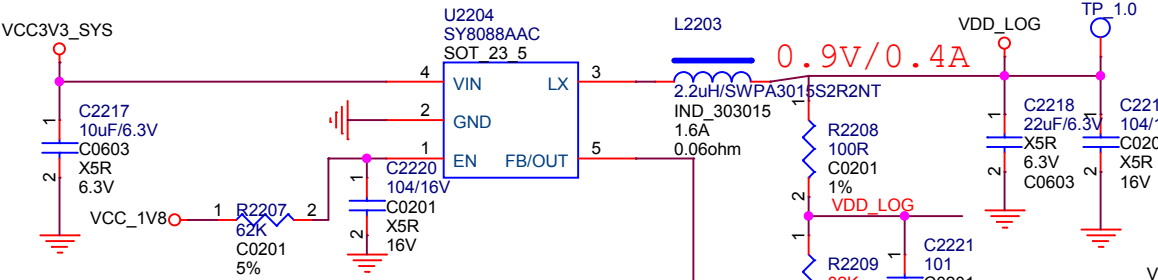
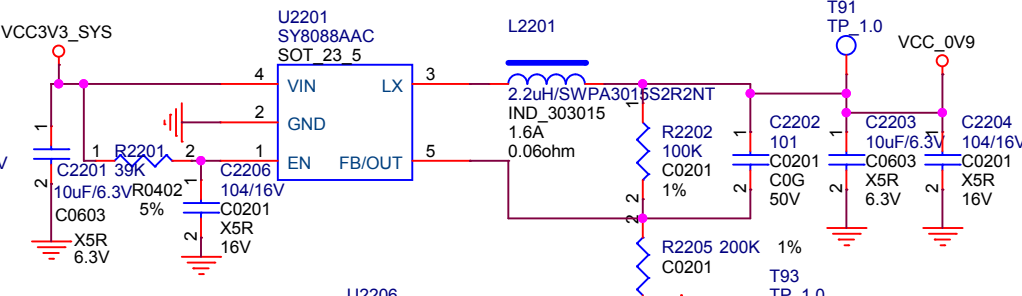
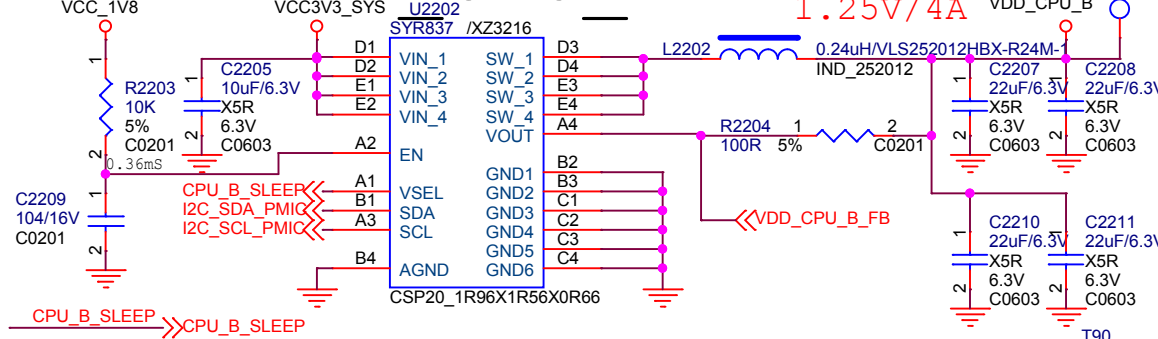
R80	R79
DDR3 100K	200K
DDR3L 43K	120K
LPDDR	51K 200K

Carefully check
 DDR3: 1.5V
 DDR3L: 1.35V
 LPDDR3: 1.2V
 LPDDR4: 1.1V

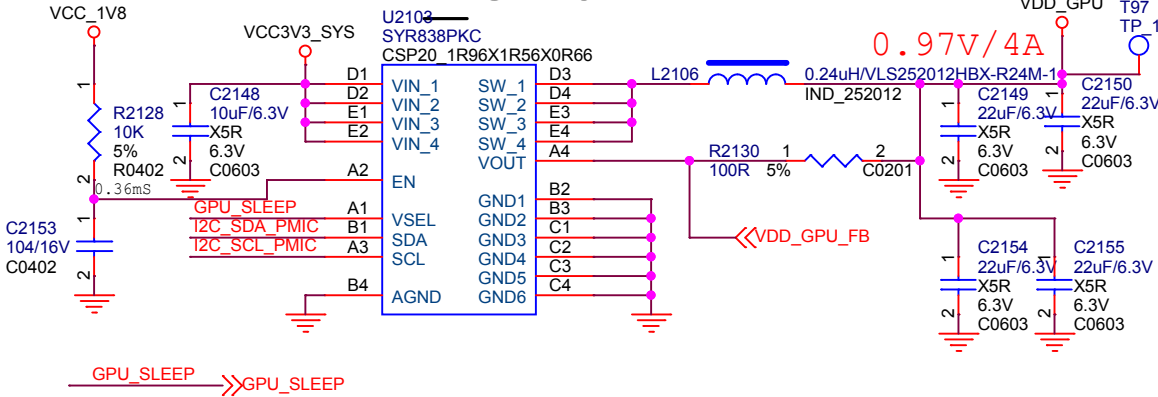


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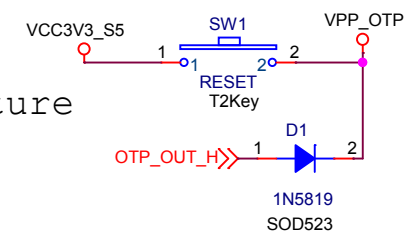
VDD CPU_B



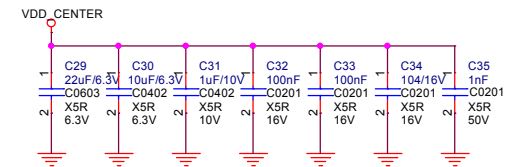
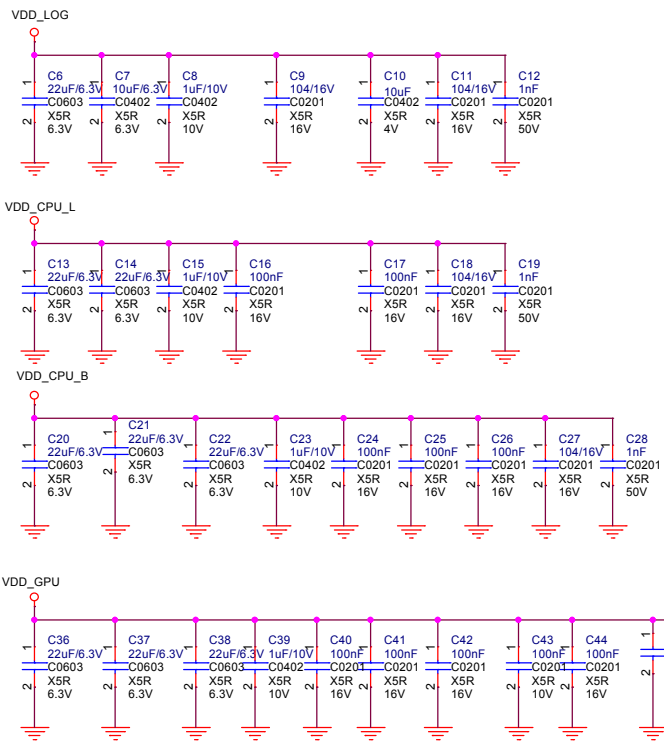
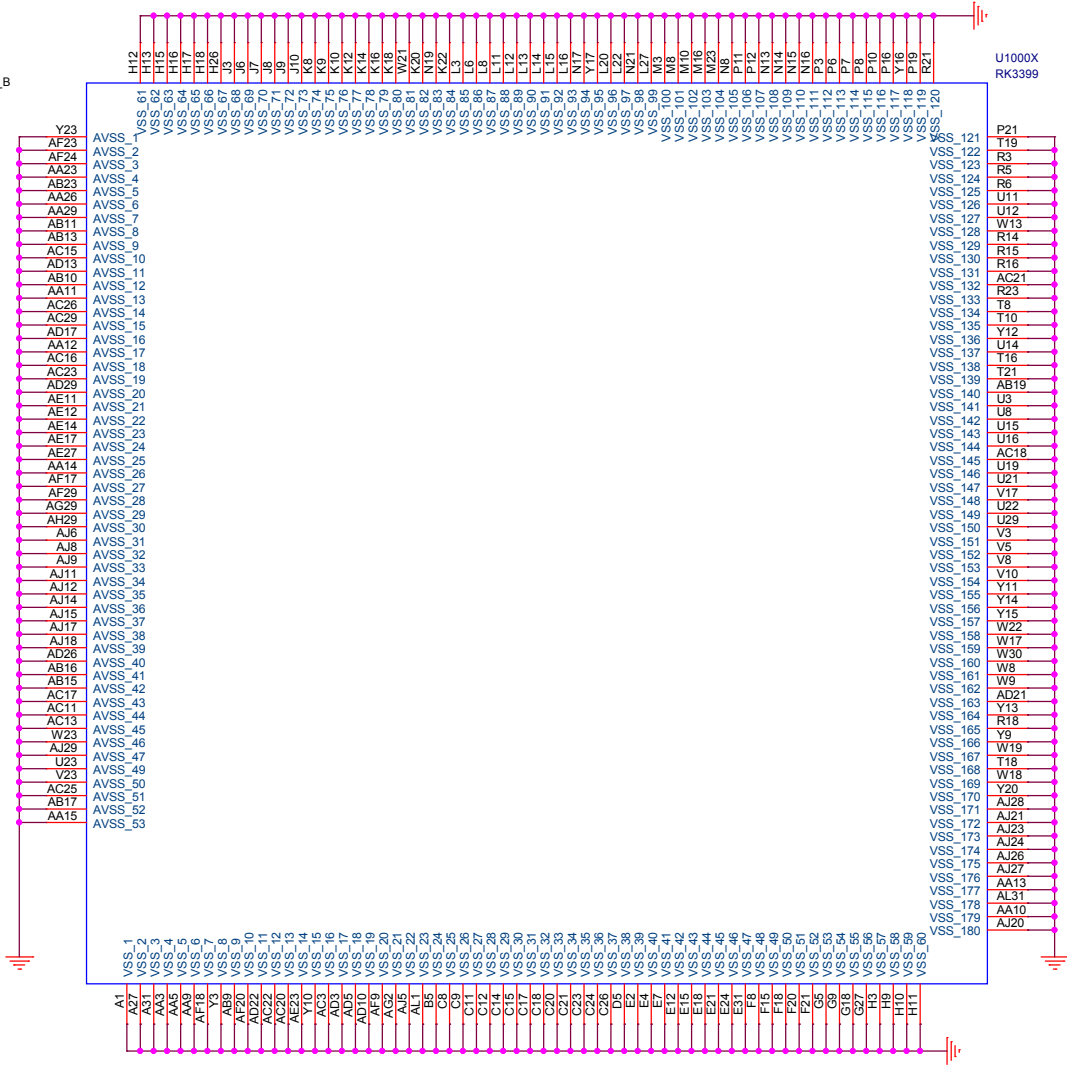
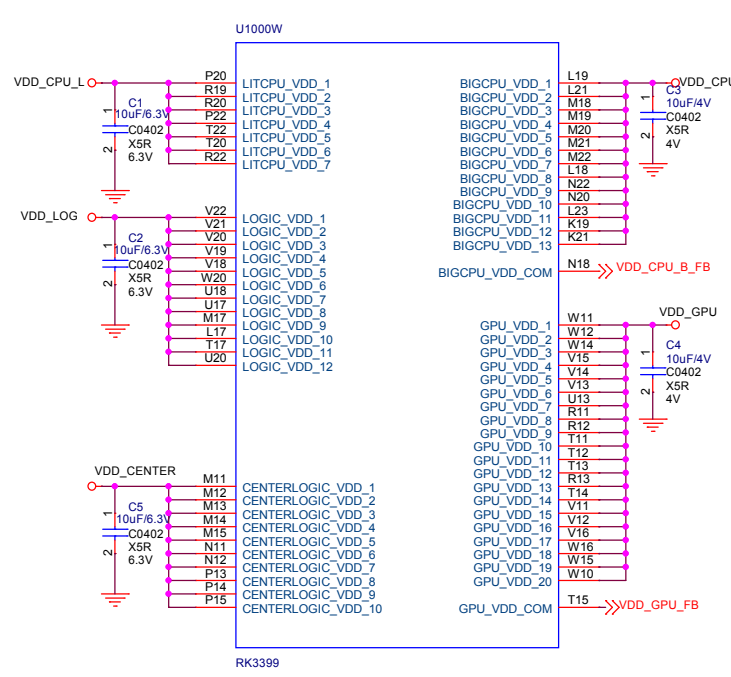
VDD GPU

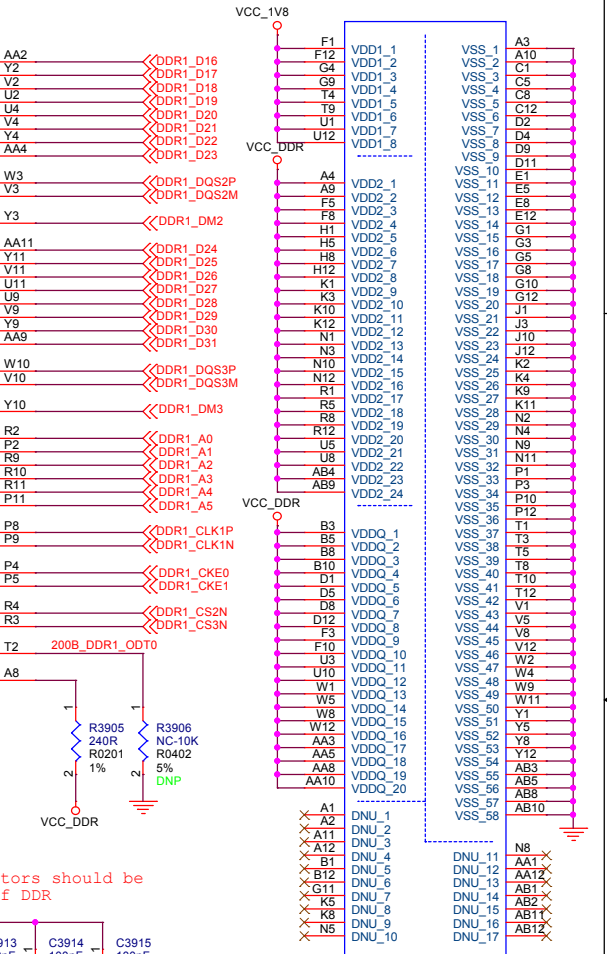
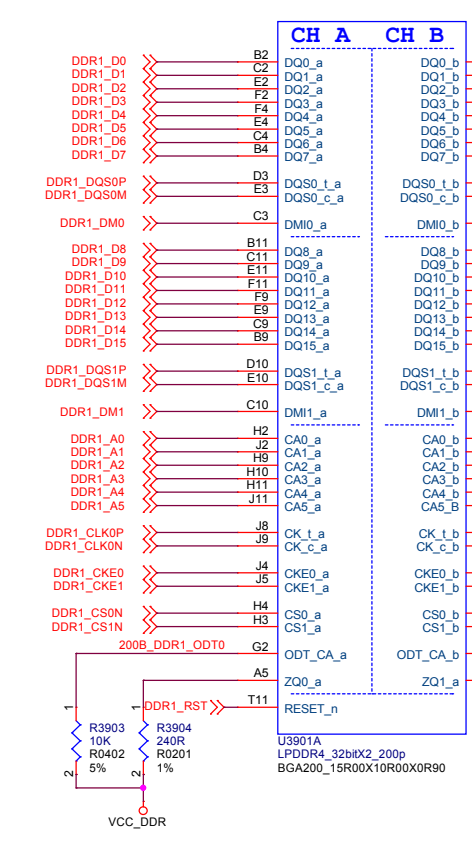
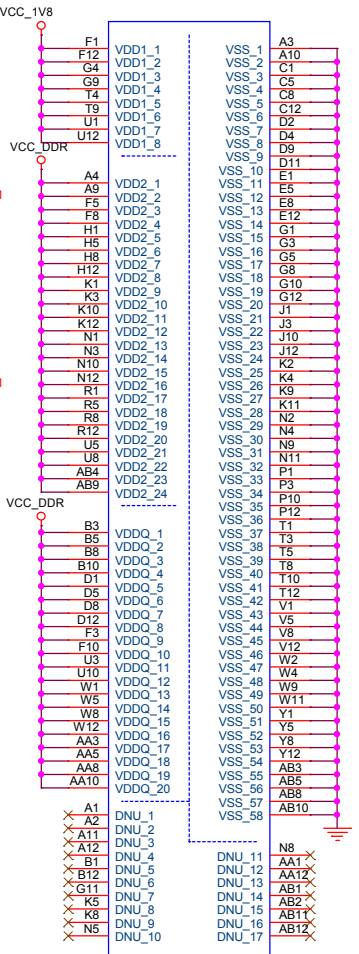
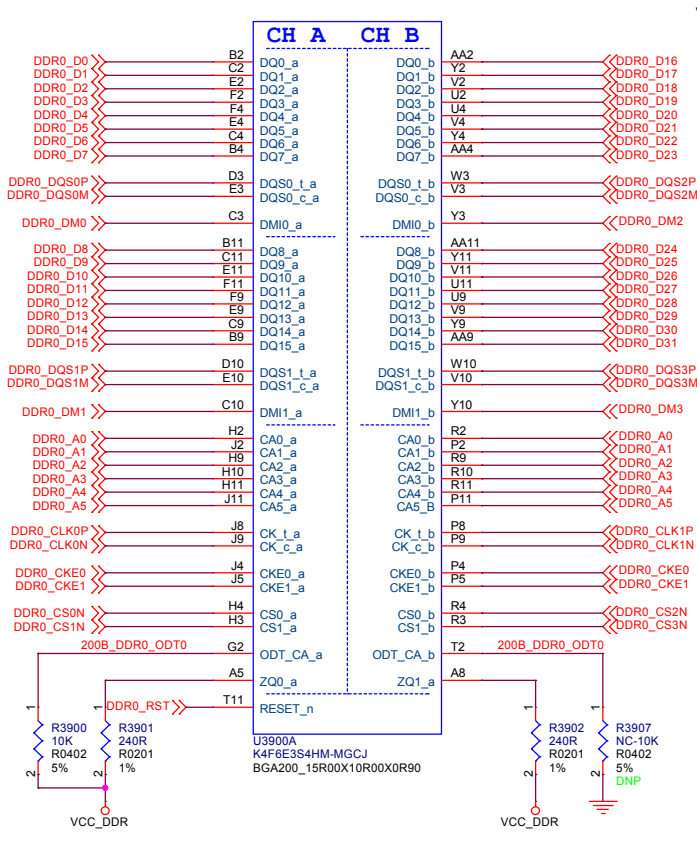


Over-temperature Protection



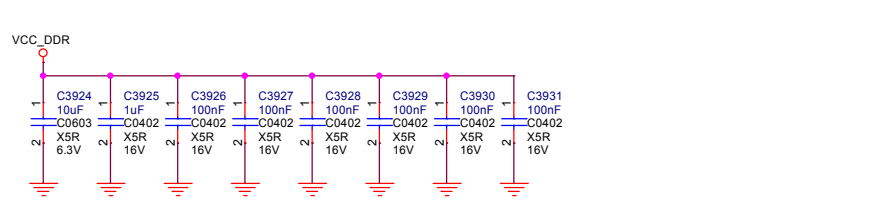
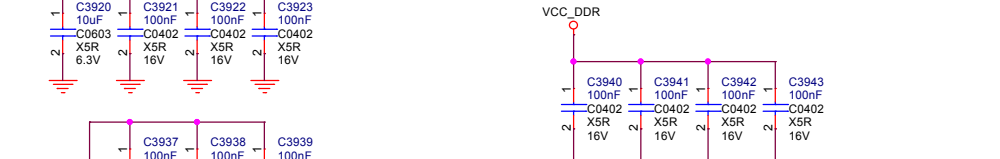
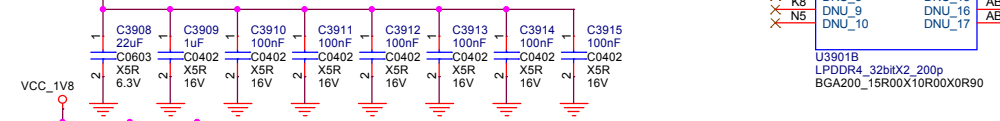
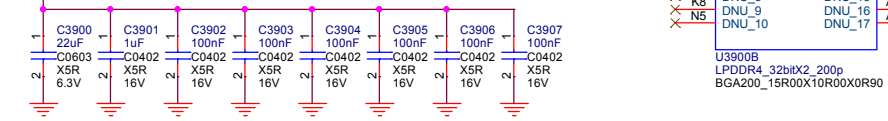
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Note: All the Power filter capacitors should be placed close to the power pins of DDR

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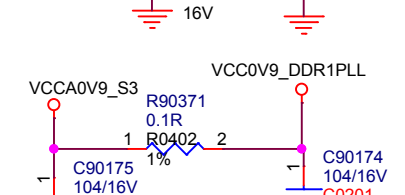
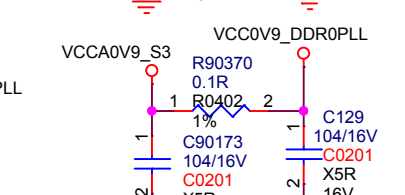
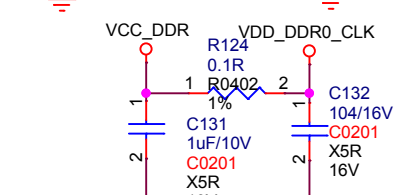
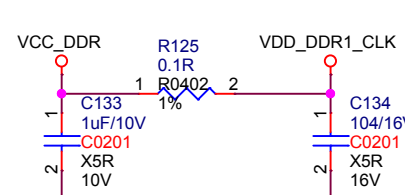
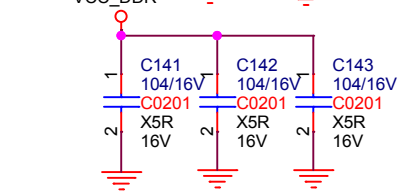
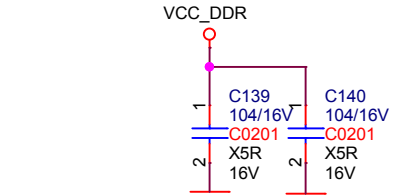
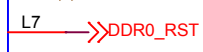
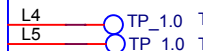
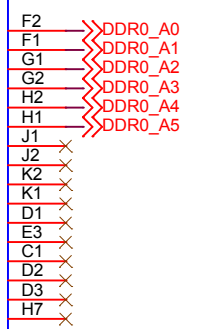
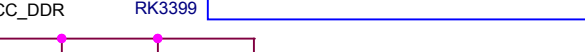
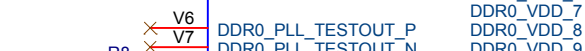
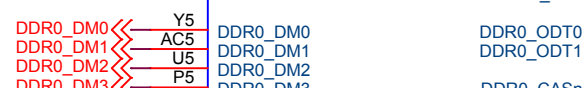
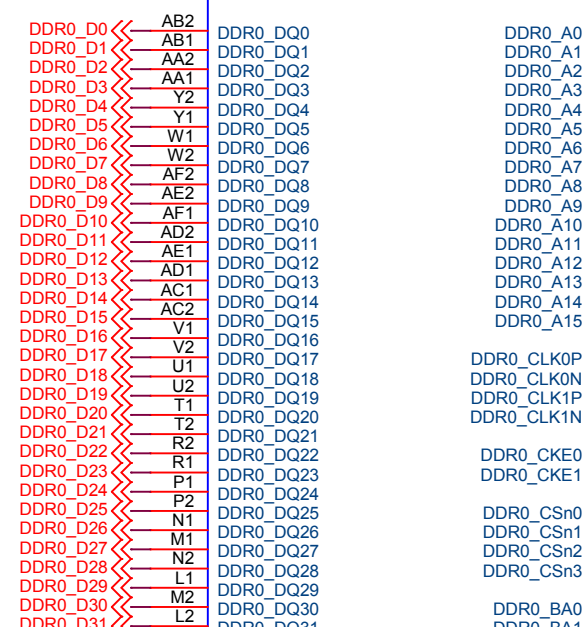
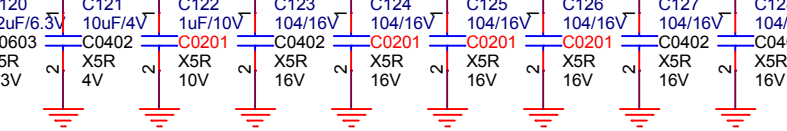
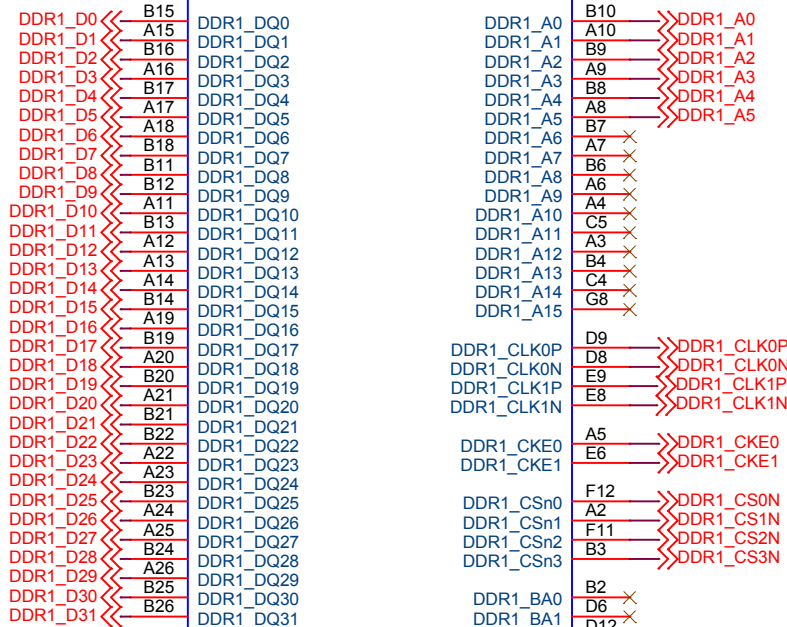
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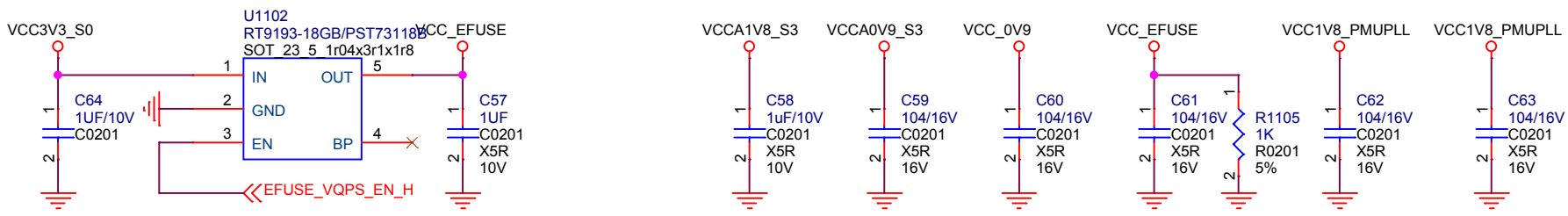
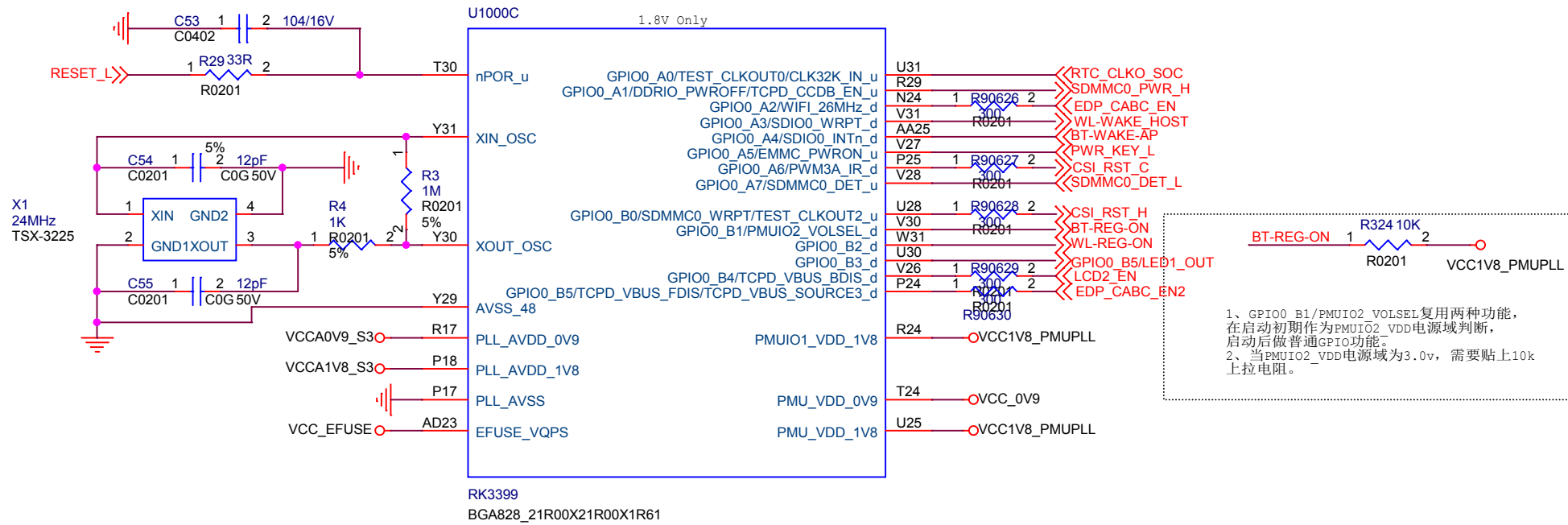
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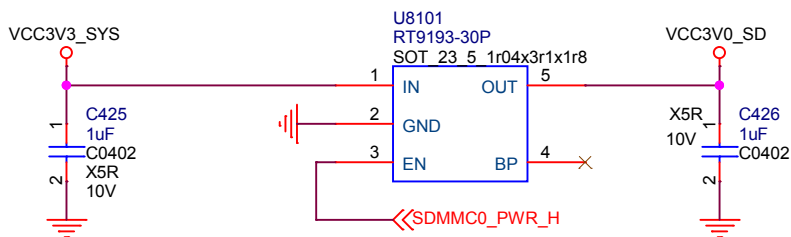
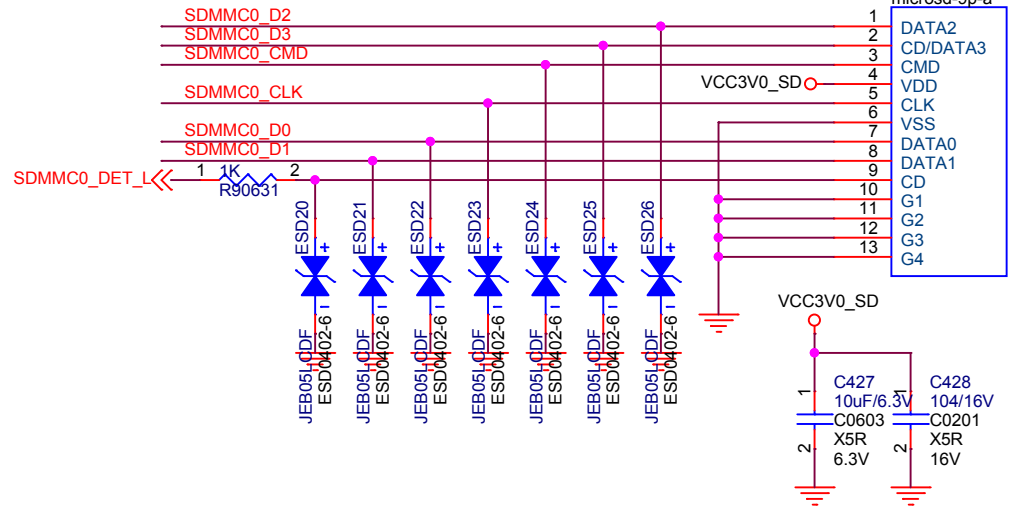
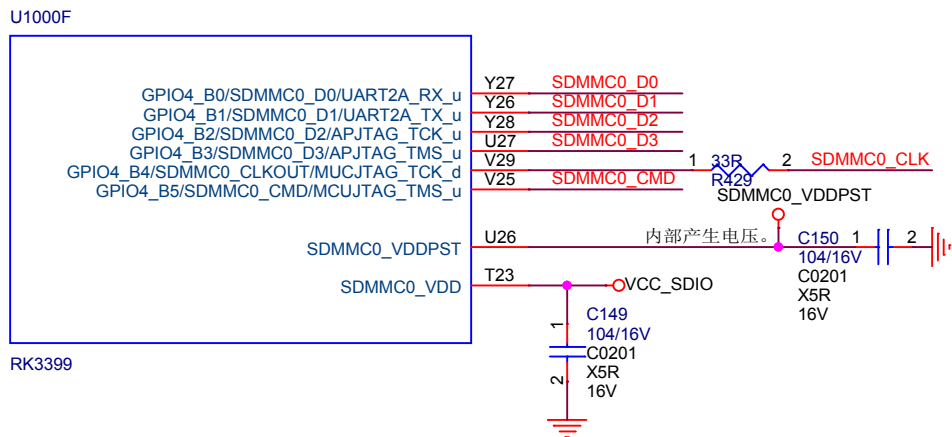
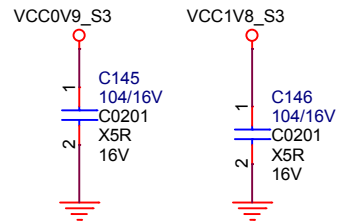
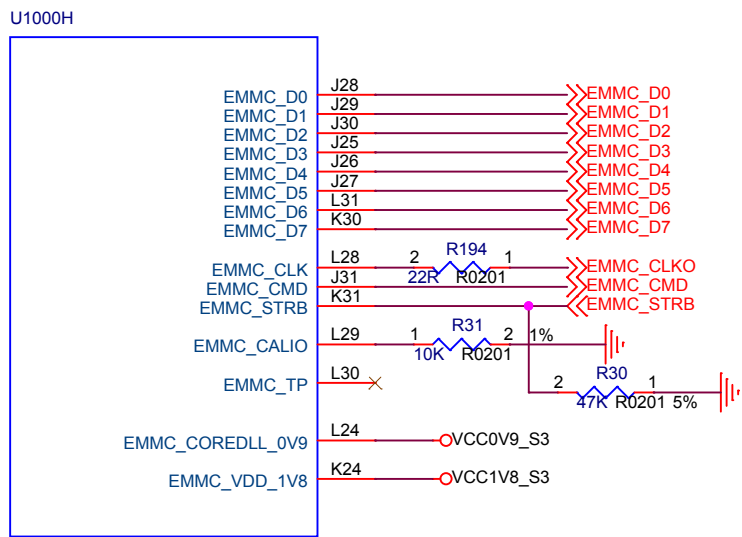
U1000A

U1000B



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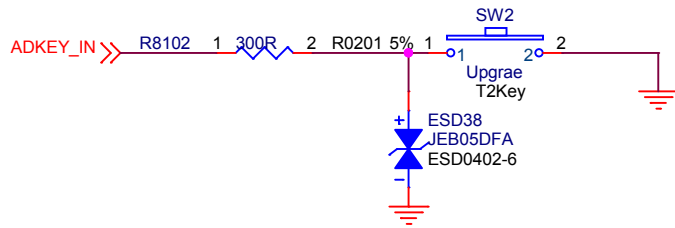
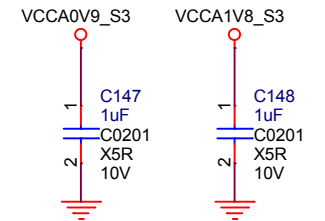
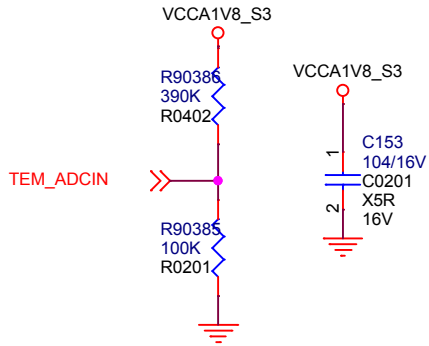
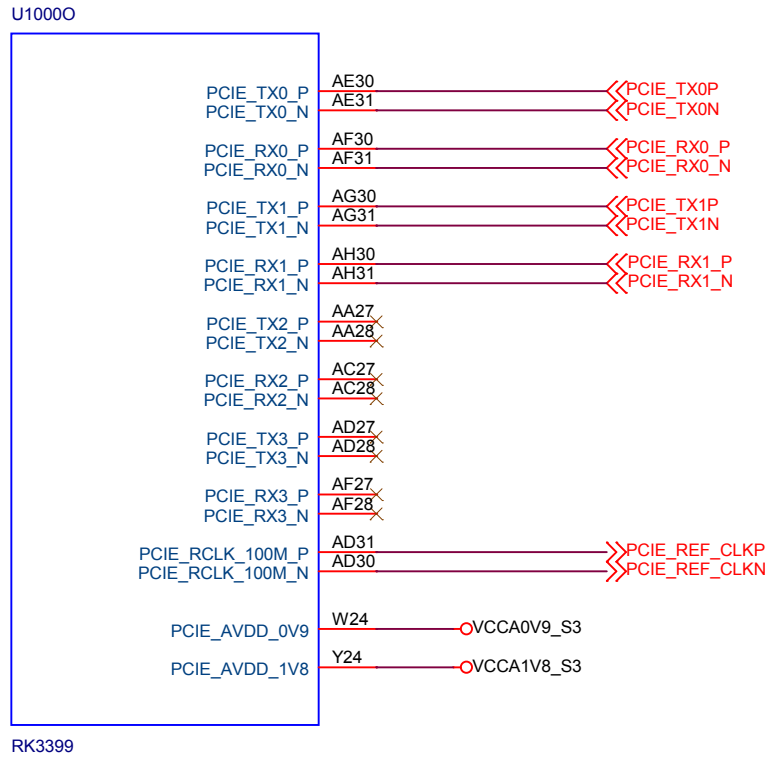
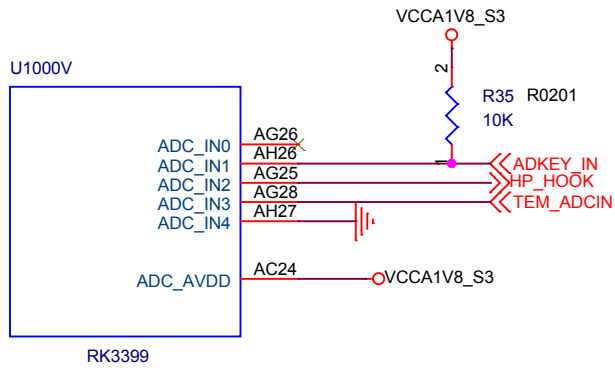




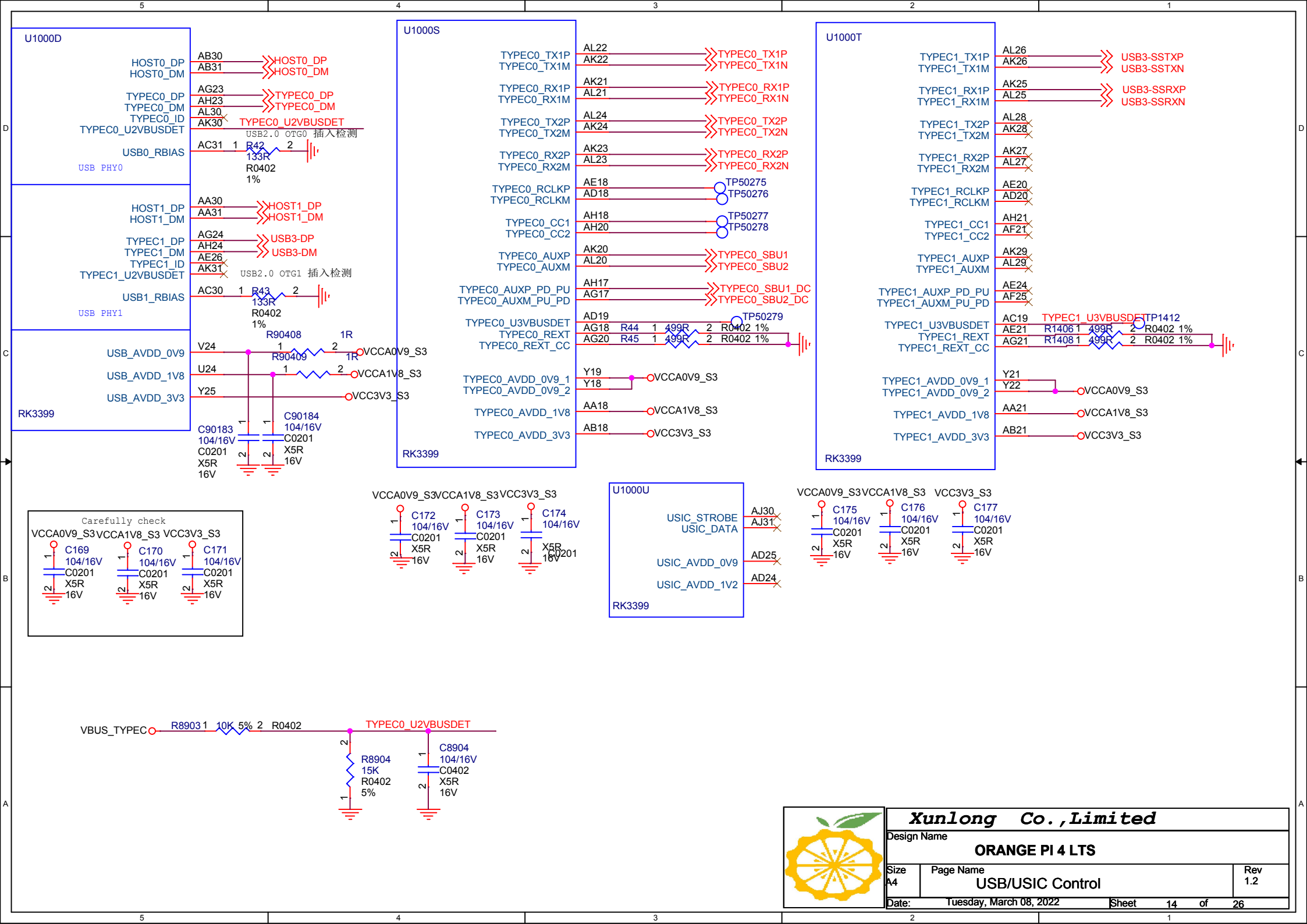
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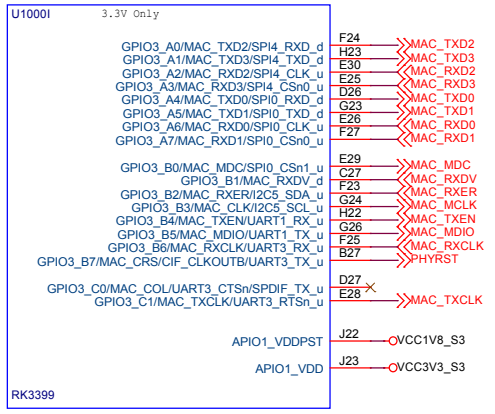


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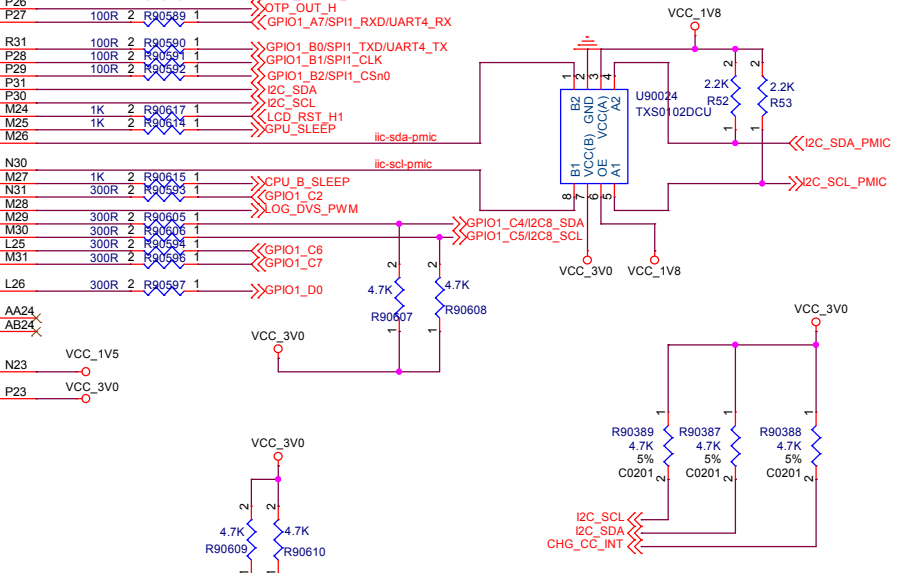
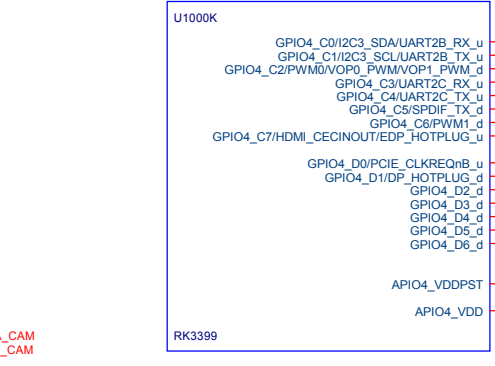
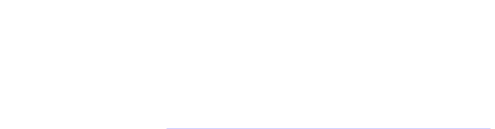
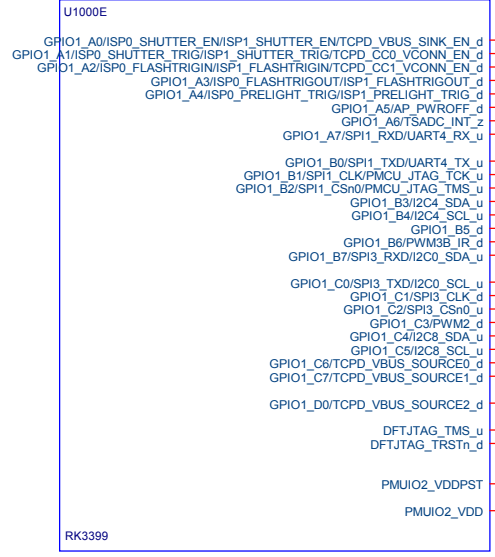
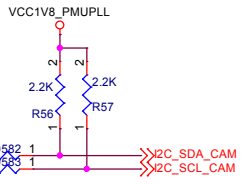
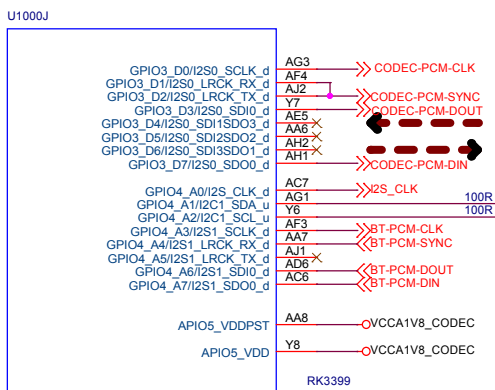
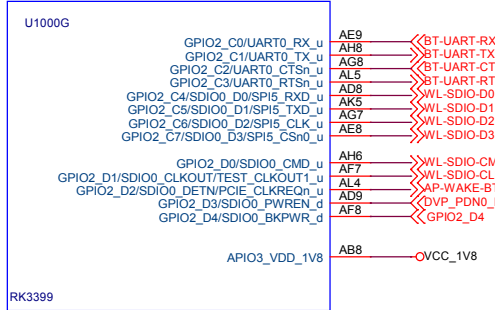


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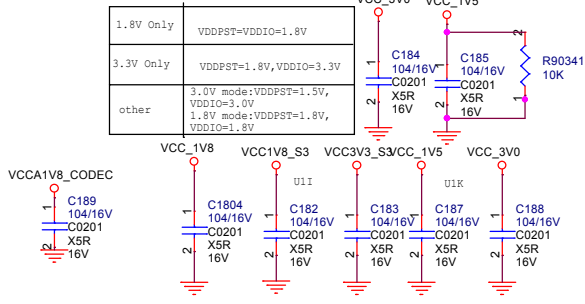




1.8V Only



1.8V Only	VDDPST=VDDIO=1.8V
3.3V Only	VDDPST=1.8V, VDDIO=3.3V
other	3.0V mode: VDDPST=1.5V, VDDIO=3.0V 1.8V mode: VDDPST=1.8V, VDDIO=1.8V



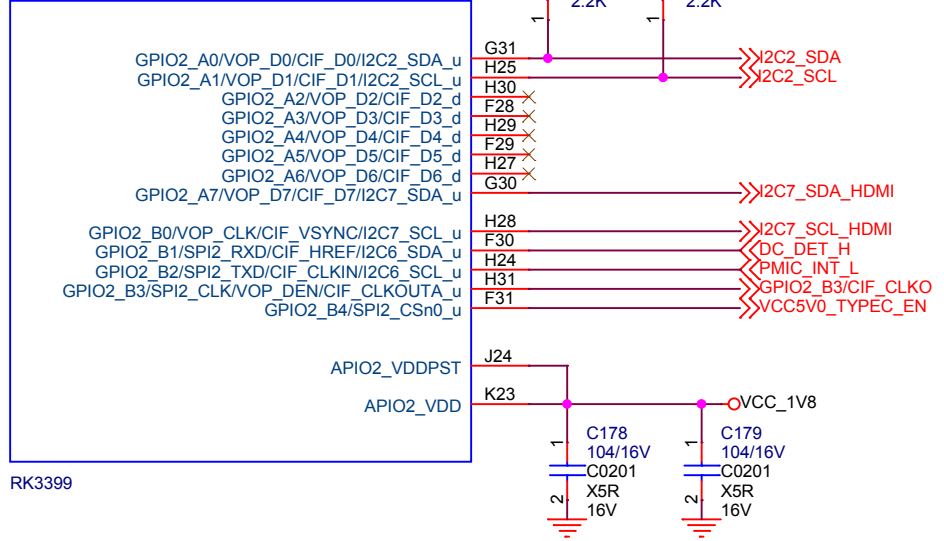
Xunlong Co., Limited

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Size: A3 Page Name: **RK3399 GPIO**

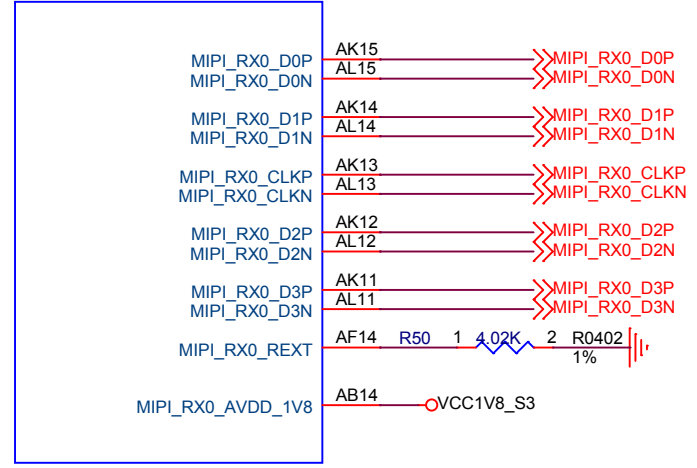
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U1000L

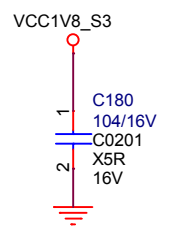


func1	func2	func3
GPIO2 A0/CIF D0		I2C2 SDA
GPIO2 A1/CIF D1		I2C2 SCL
GPIO2 A7/CIF D7		I2C7 SDA
GPIO2 B0/CIF VSYNC		I2C7 SCL
GPIO2 B1/CIF HREF	SPI2 RXD	I2C6 SDA
GPIO2 B2/CIF CLKI	SPI2 TXD	I2C6 SCL
GPIO2 B3/CIF CLKO	SPI2 CLK	
GPIO2 B4/DVP PDN0 H	SPI2 CSN	

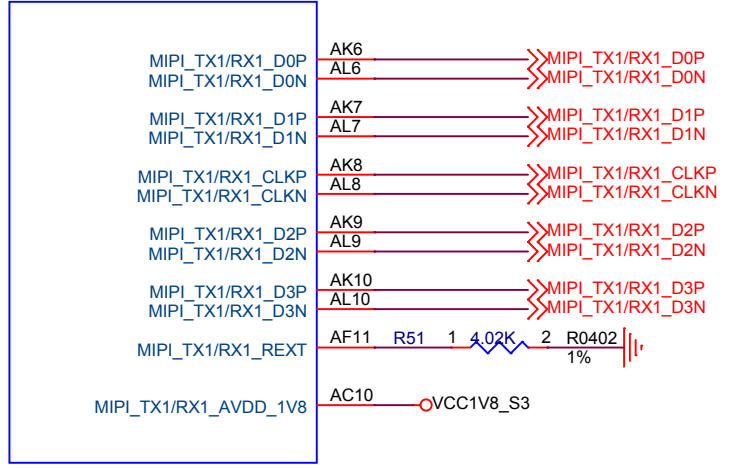
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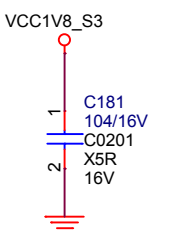
RK3399



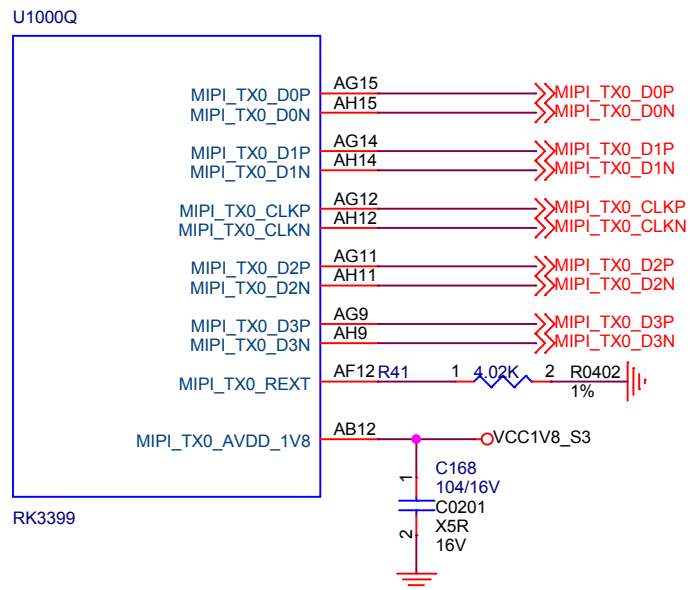
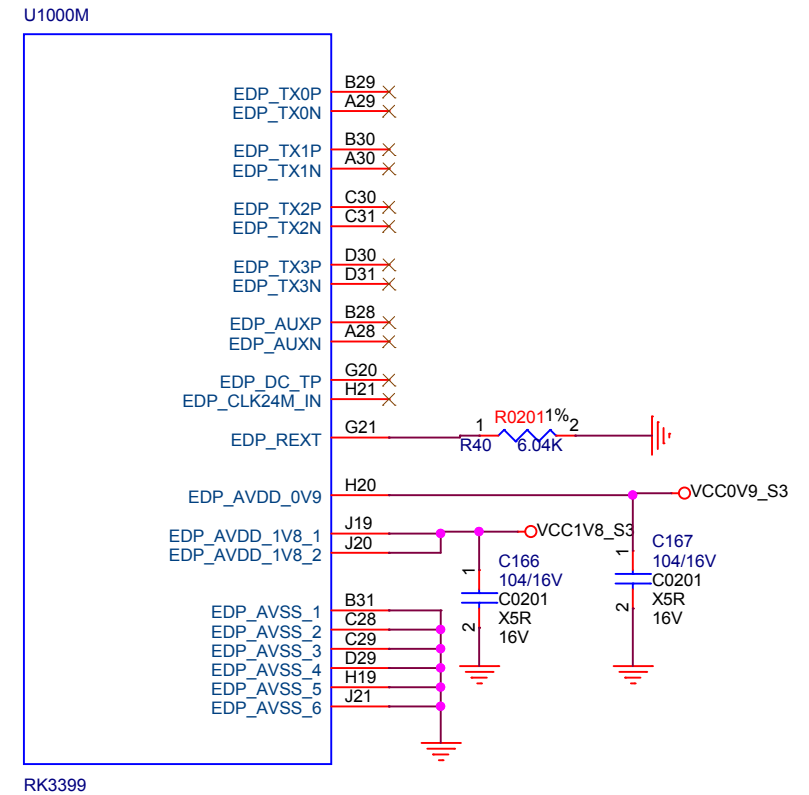
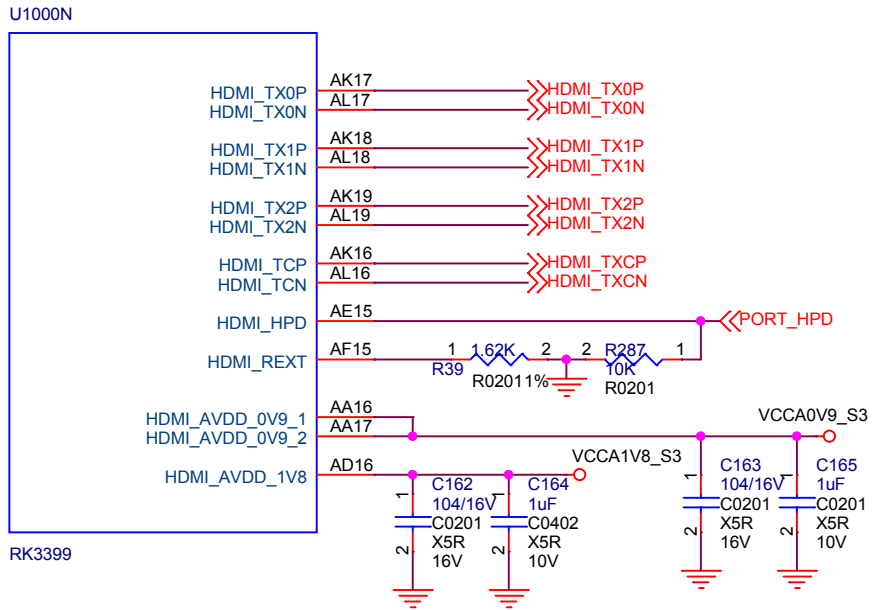
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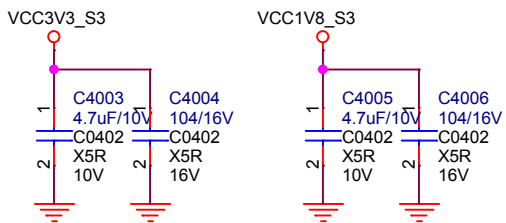
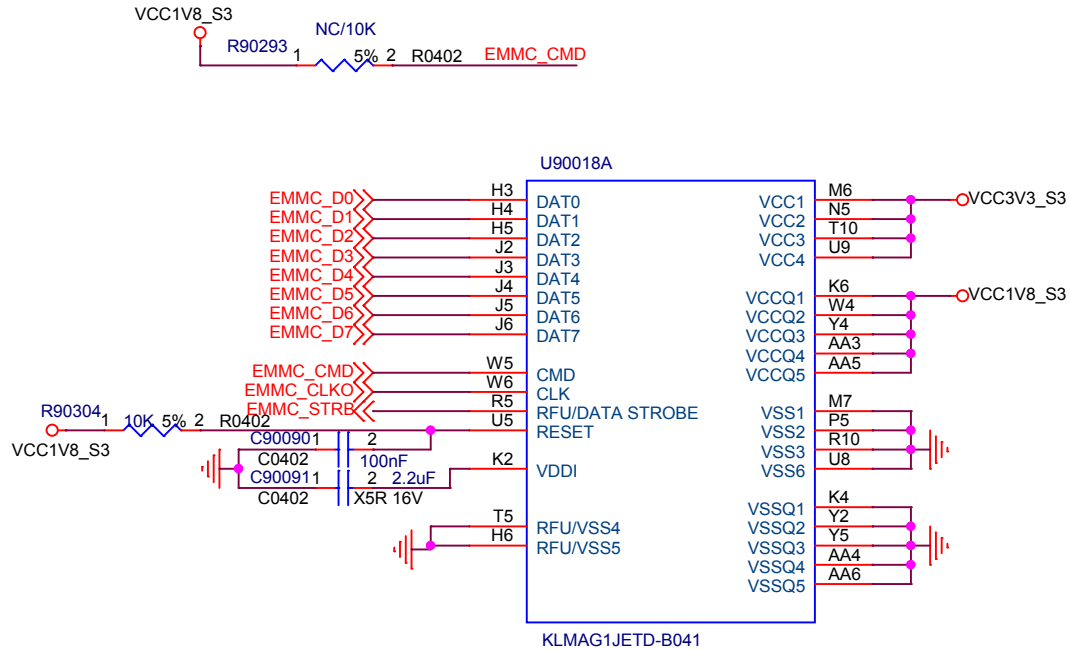
RK3399



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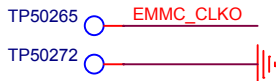
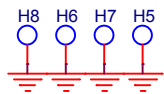


eMMC FLASH



Note: All the Power filter capacitors should be placed close to the power pins of eMMC

Note:
Reserve TestPoint for firmware update.
If EMMC_CLKO=0V at power-on reset,
then system will enter into Maskrom mode.



U90018B		U90018A	
A4	NC1	P13	
A6	NC2	P14	
A9	NC3	R1	
A11	NC4	R2	
B2	NC5	R3	
B13	NC6	R12	
D1	NC7	R13	
D14	NC8	R14	
H1		NC75	T1
H2		NC76	T2
H7		NC77	T3
H8		NC78	T12
H9	NC12	NC79	T13
H10	NC13	NC80	T14
H11	NC14	NC81	U1
H12	NC15	NC82	U2
H13	NC16	NC83	U3
H14	NC17	NC84	U6
J1	NC18	RFU10(NC85)	U7
J7	NC19	RFU11(NC86)	U10
J8	NC20	RFU12(NC87)	U12
J9	NC21	NC88	U13
J10	NC22	NC89	U14
J11	NC23	NC90	V1
J12	NC24	NC91	V2
J13	NC25	NC92	V3
J14	NC26	NC93	V12
K1	NC27	NC94	V13
K3		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		NC109	Y3
L12	NC43	NC110	Y6
L13	NC44	NC111	Y7
L14	NC45	NC112	Y8
M1	NC46	NC113	Y9
M2	NC47	NC114	Y10
M3	NC48	NC115	Y11
M12	NC49	NC116	Y12
M13	NC50	NC117	Y13
M14	NC51	NC118	Y14
M5	NC52	NC119	AA1
M8	RFU3(NC52)	NC120	AA2
M9	RFU4(NC53)	NC121	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	

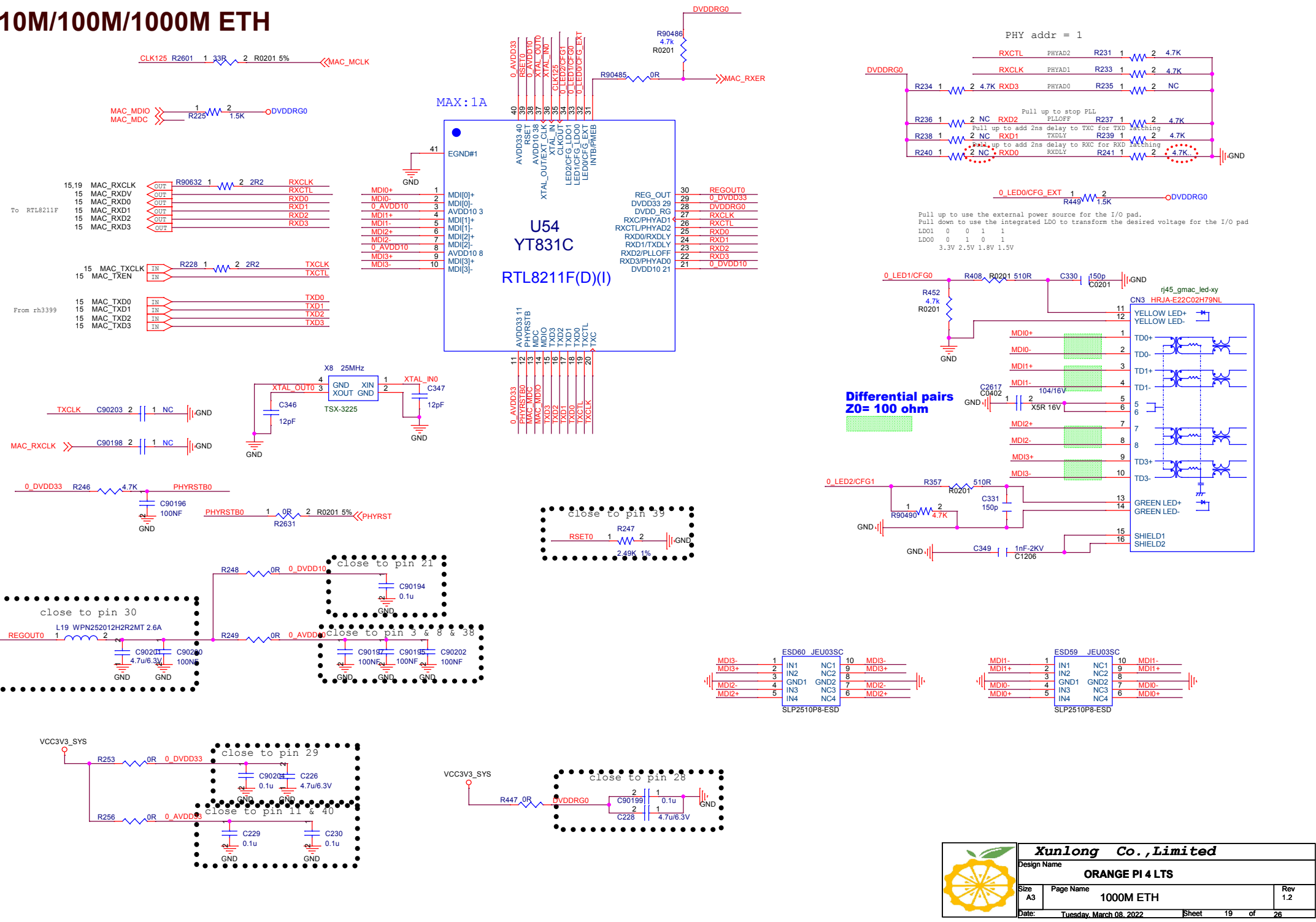
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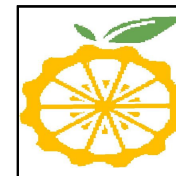
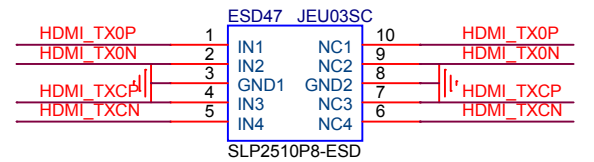
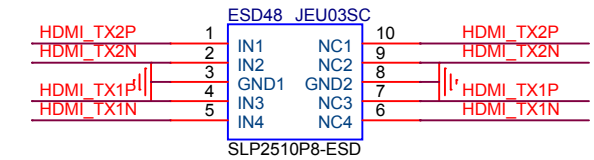
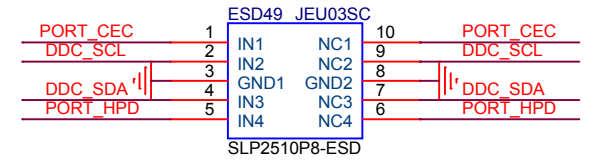
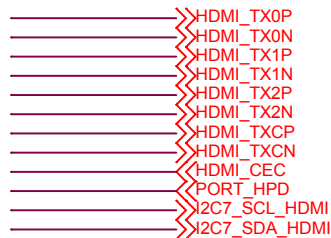
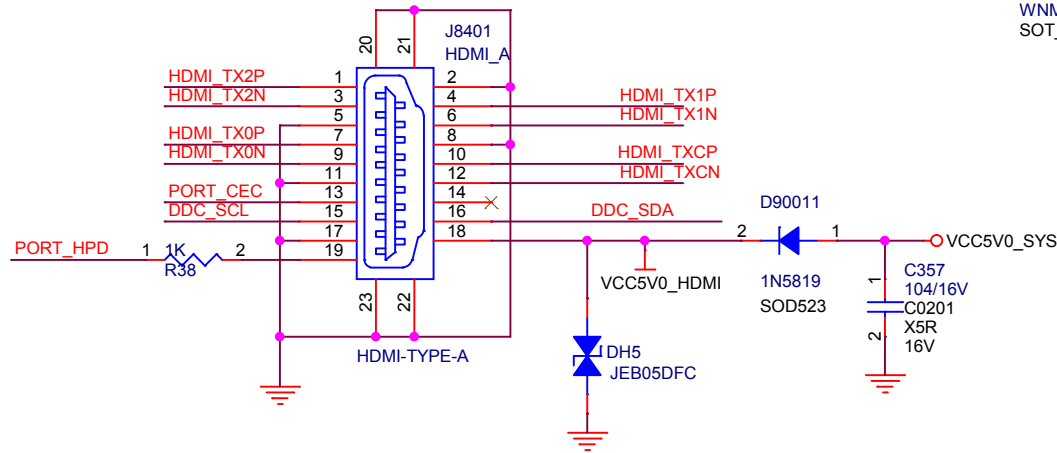
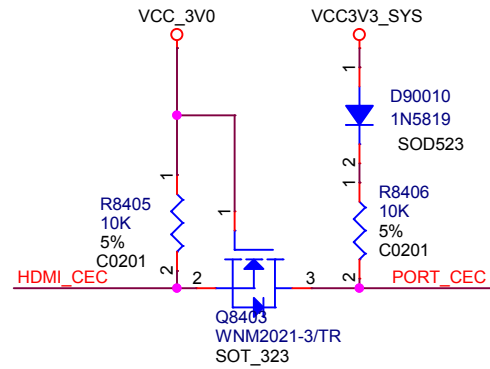
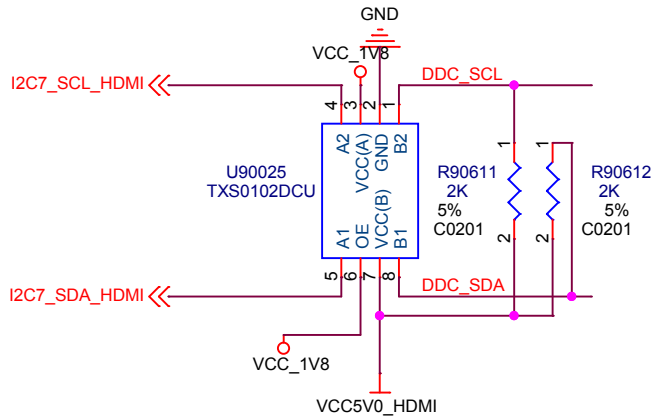
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10M/100M/1000M ETH



HDMI Port



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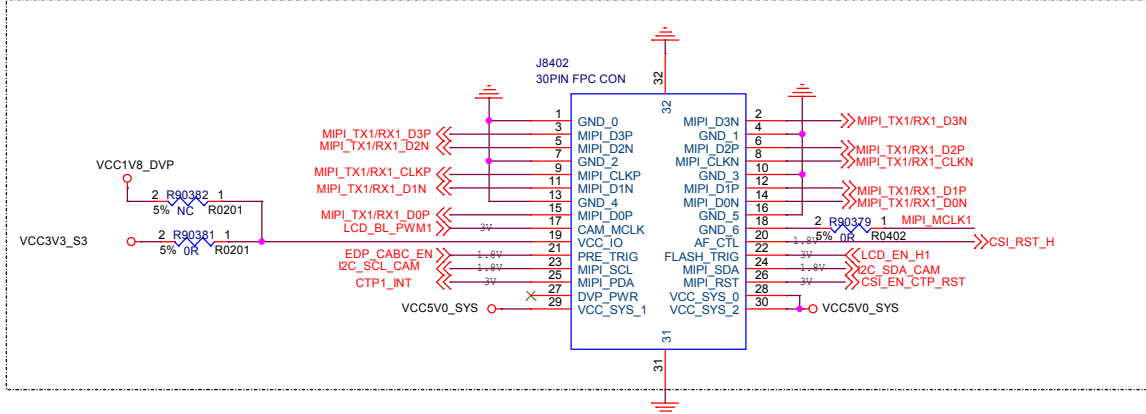
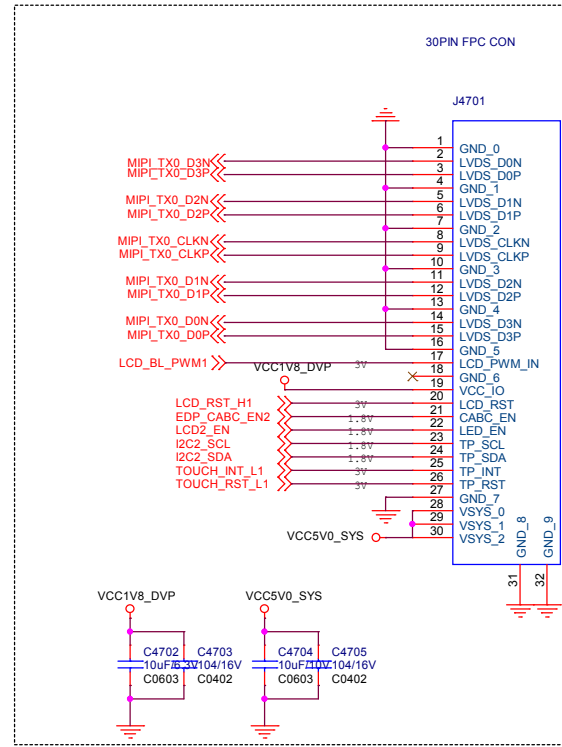
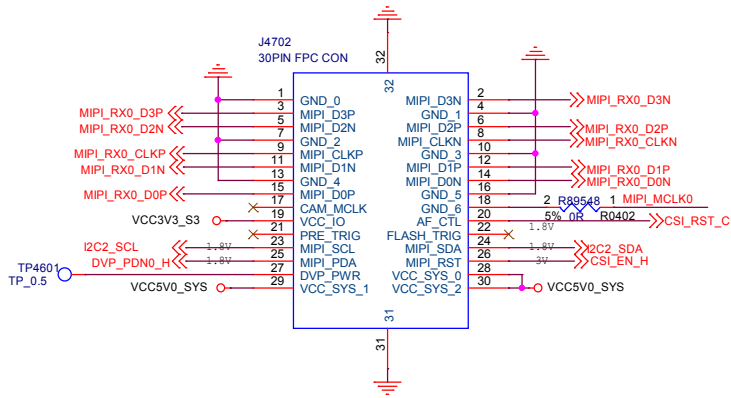
Size
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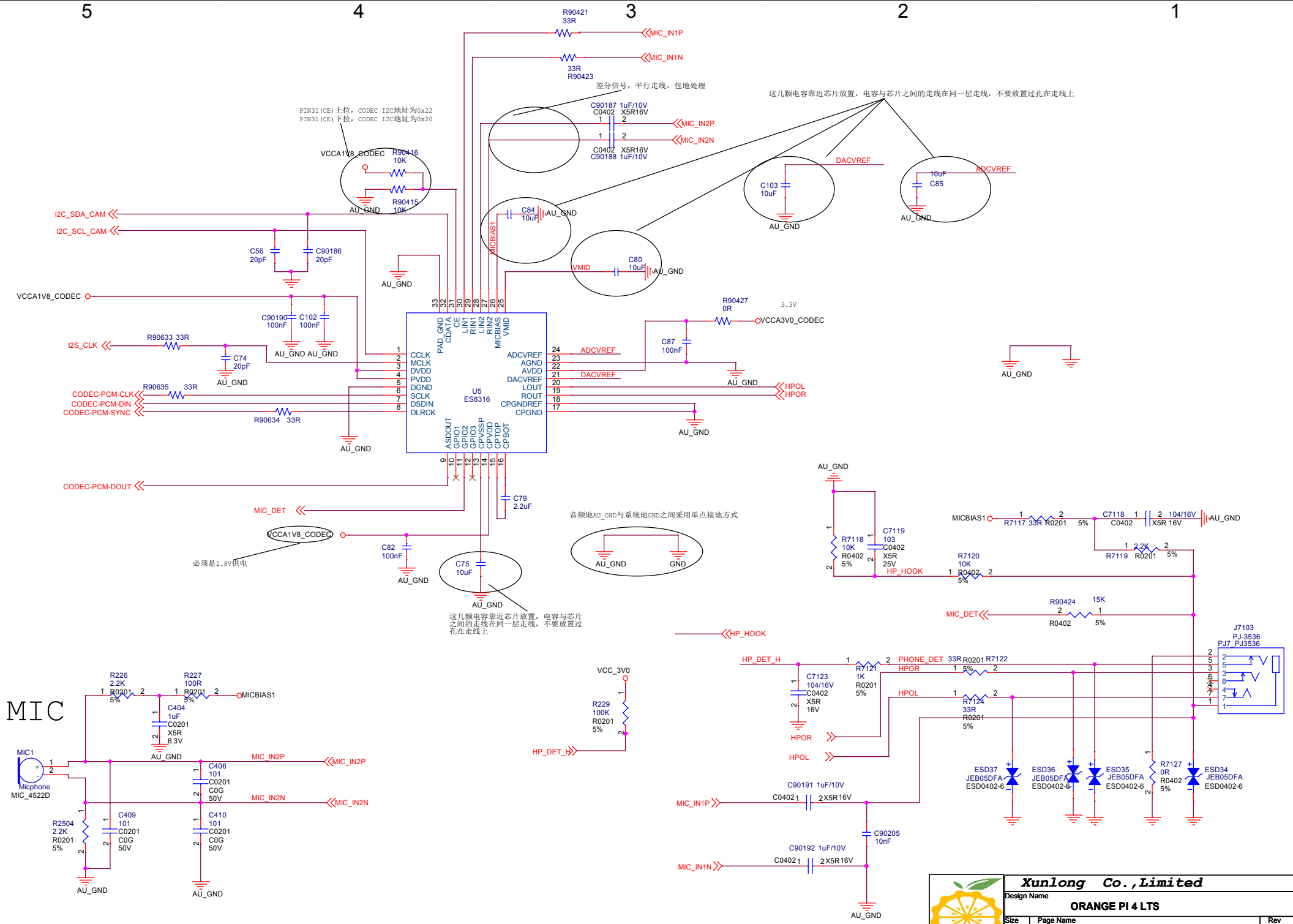
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1.2

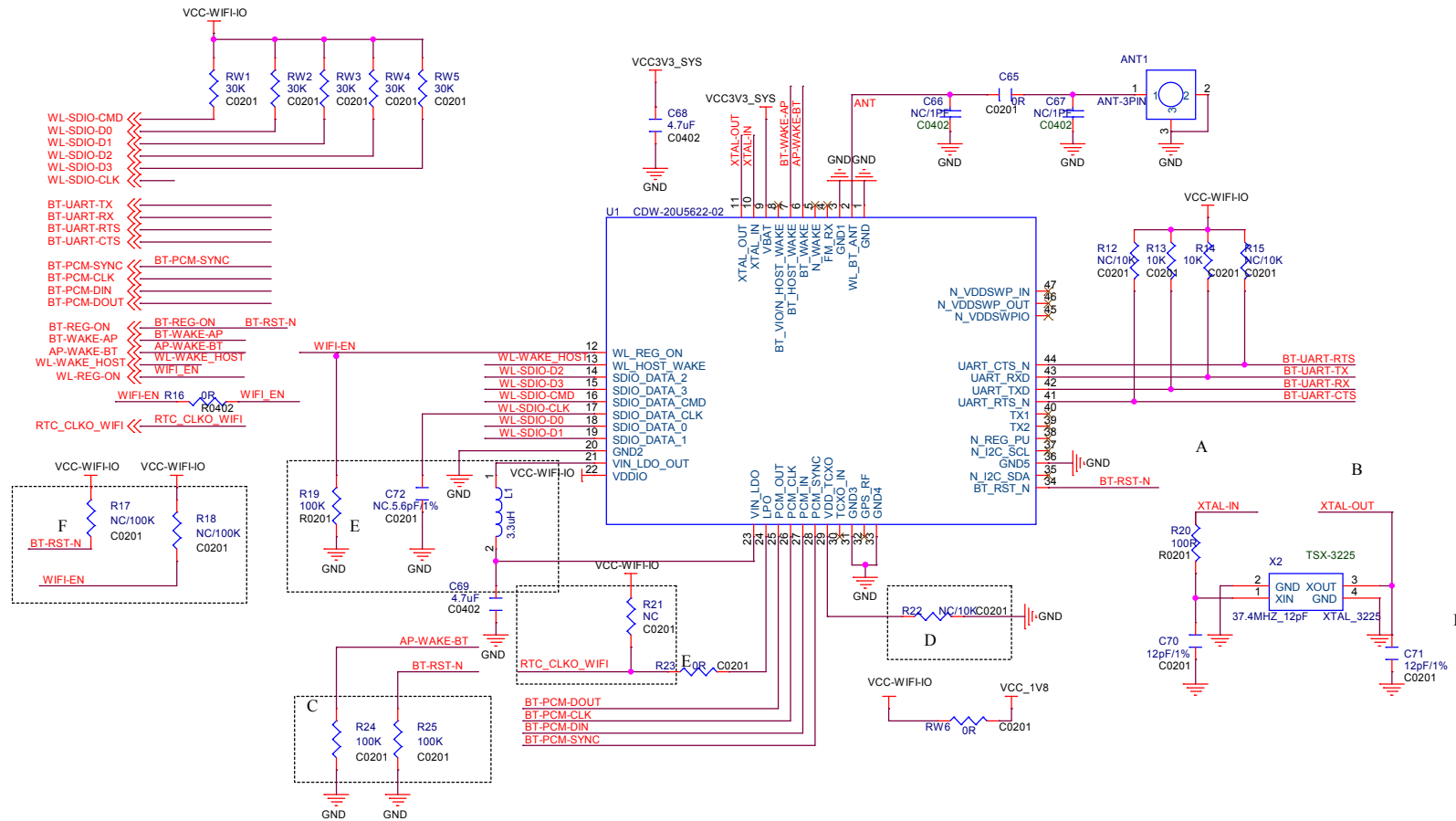
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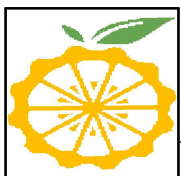
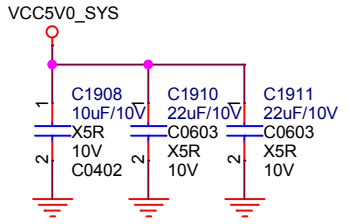
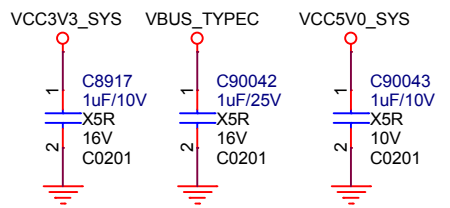
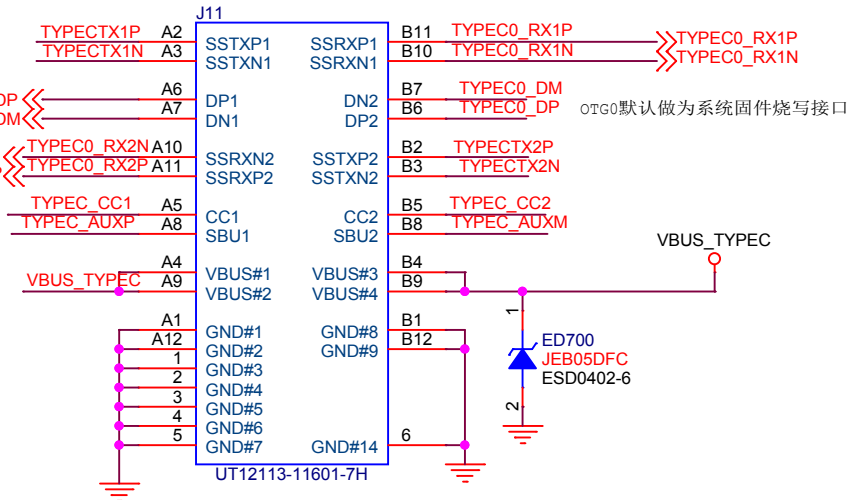
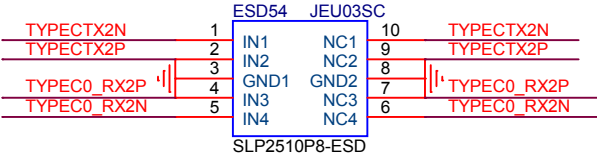
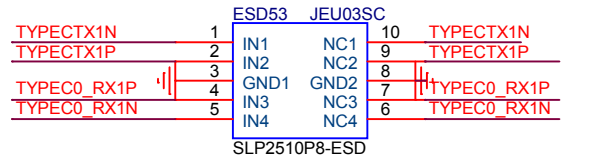
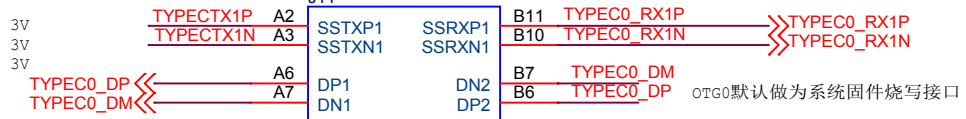
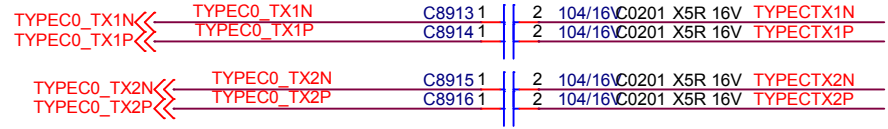
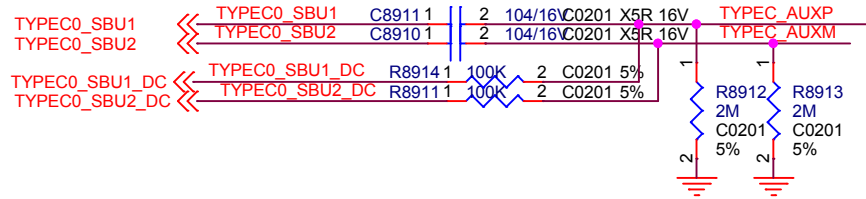
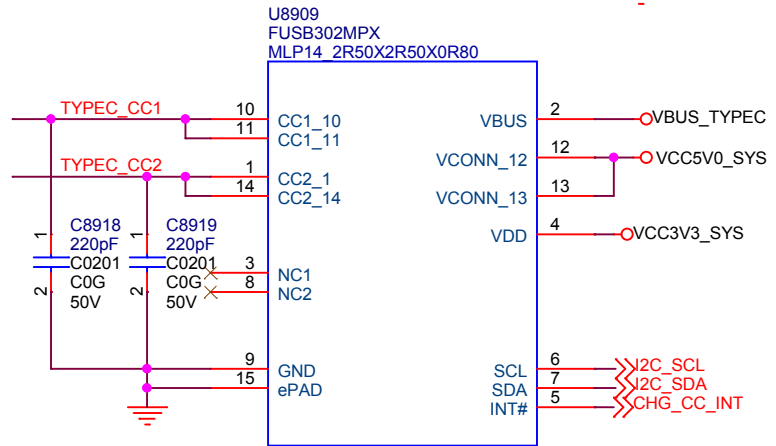
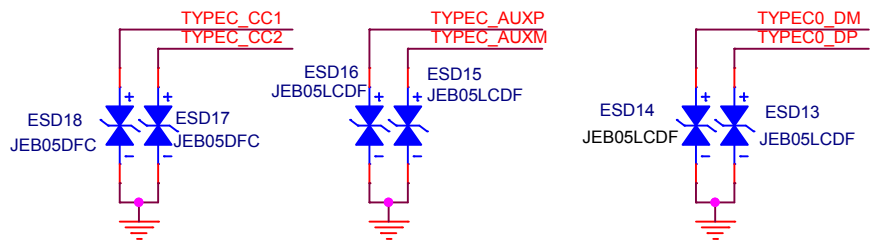
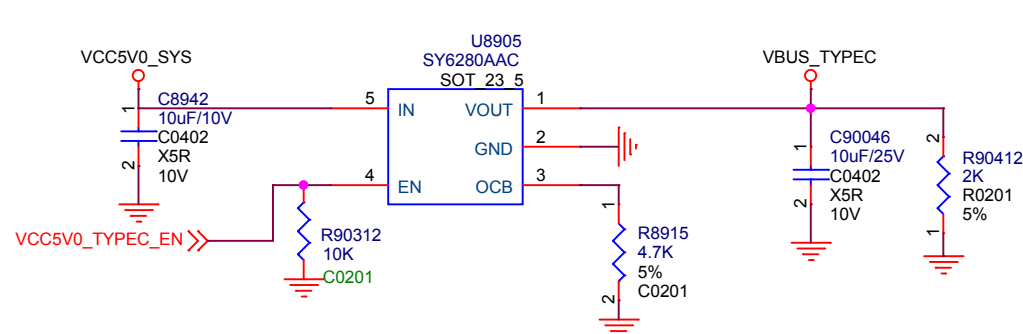
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WIFI+BT





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