

K1_MUSE-PI_P1_LP4XP200_32X1

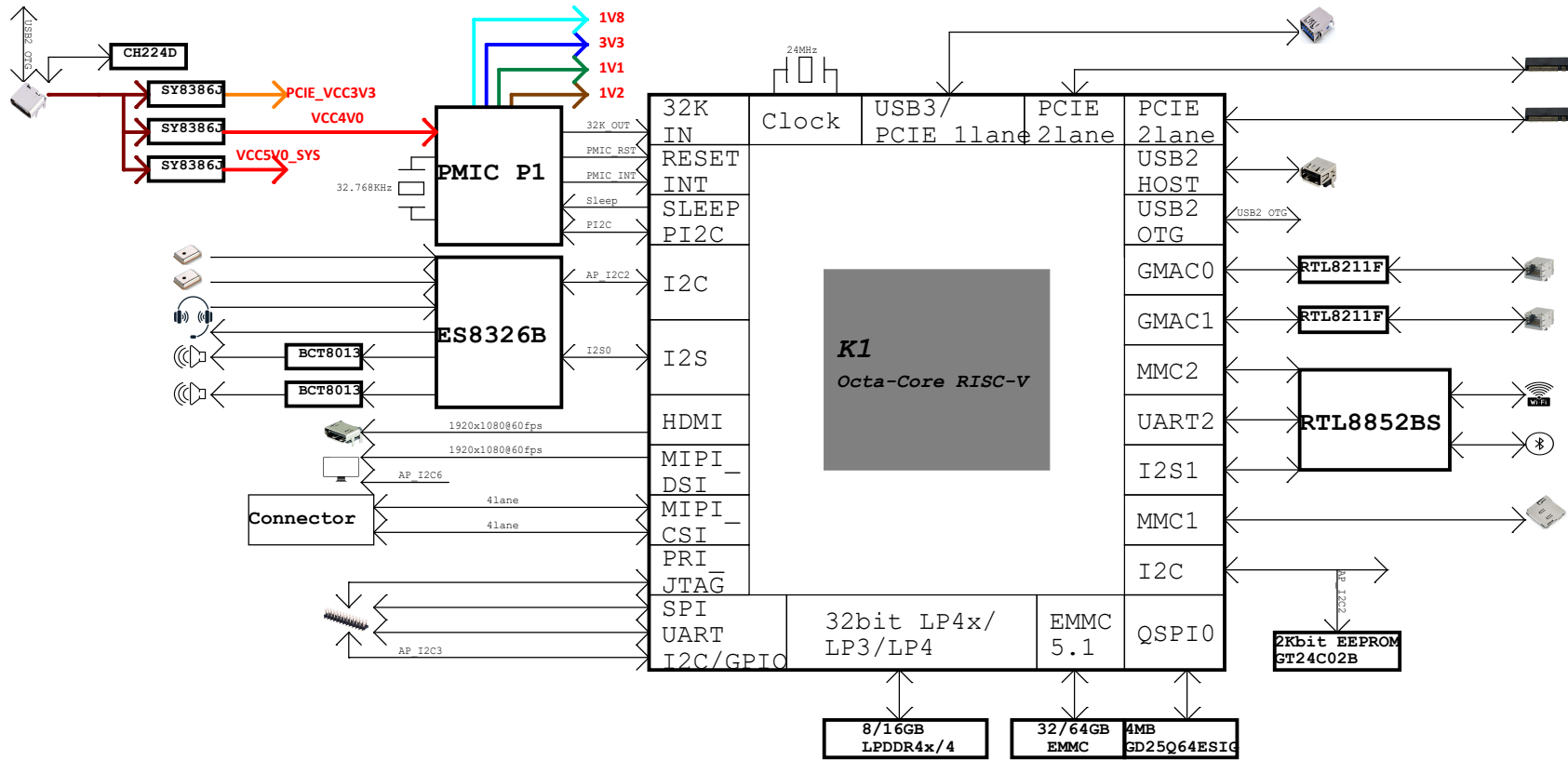
Revision	Date	Change Description
V1.0	20240801	Initial version
V1.1	20240506	Initial version
V1.2	20240619	Initial version

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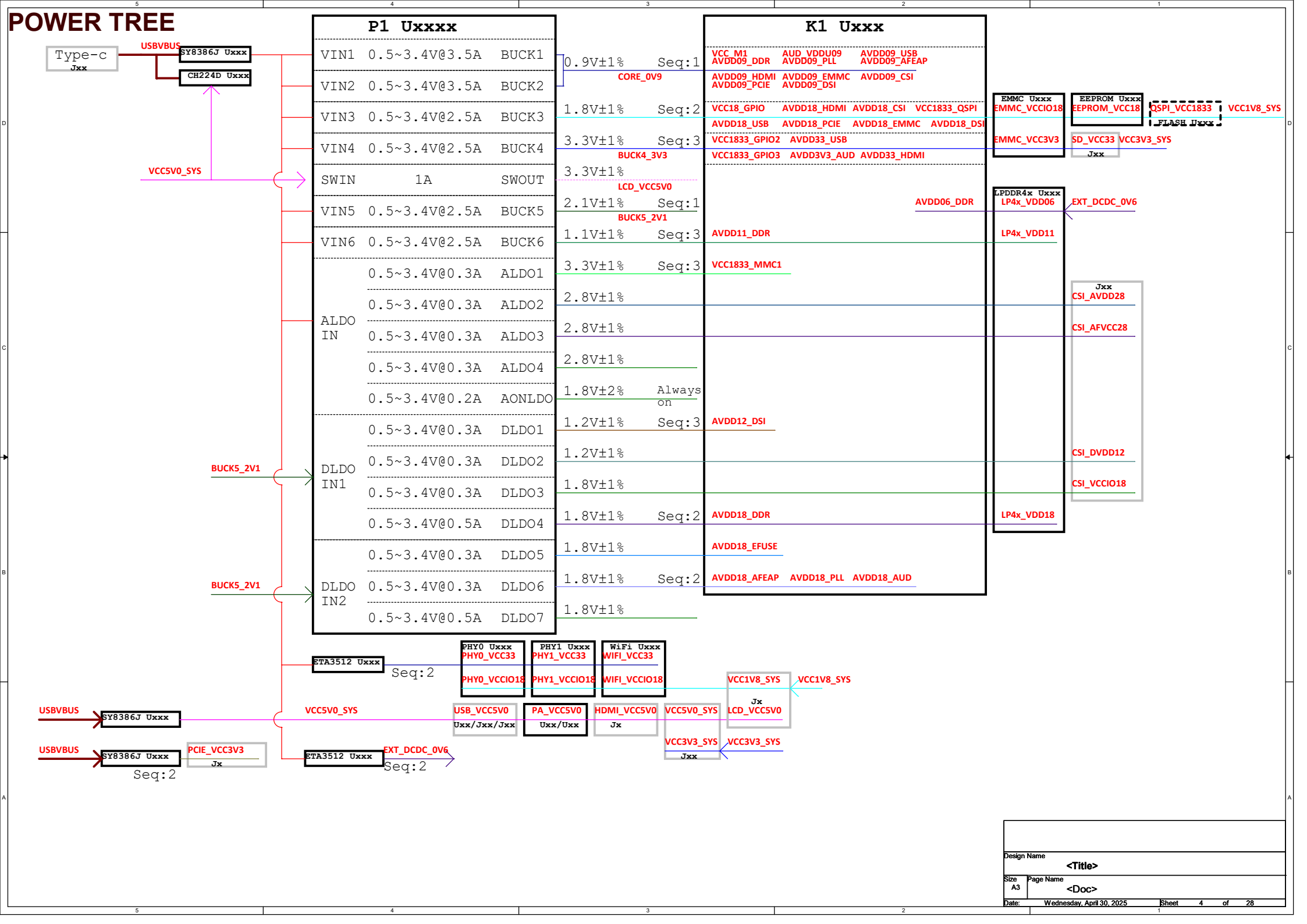
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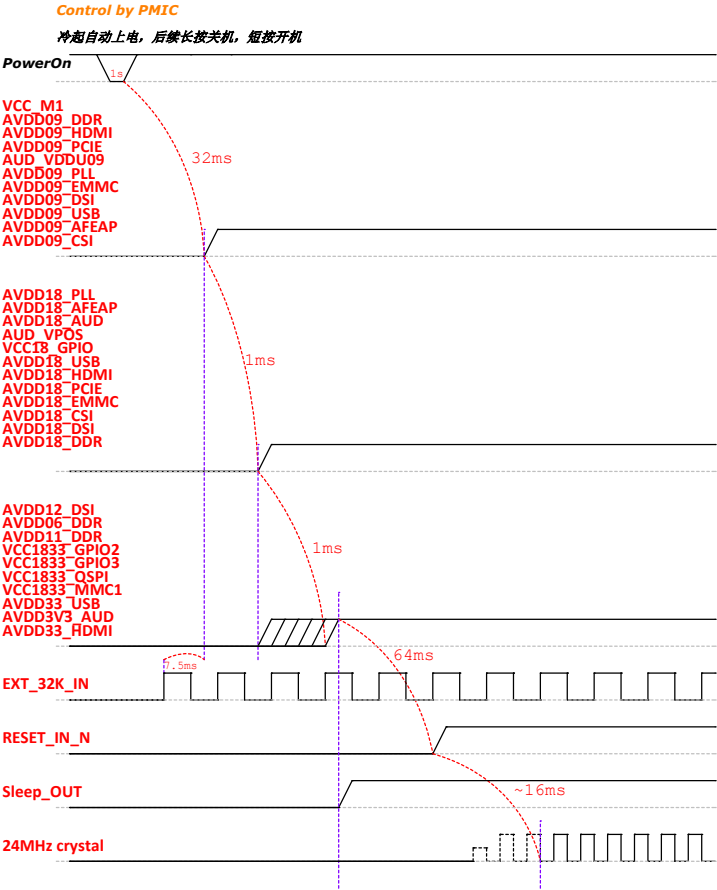
BLOCK



POWER TREE

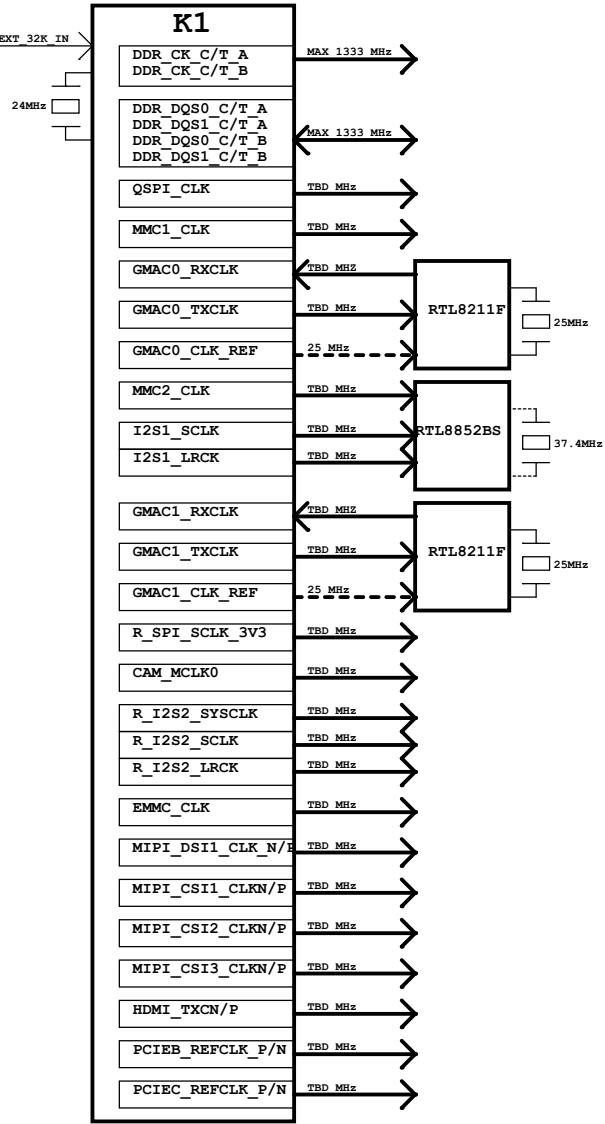


POWER SEQUENCE

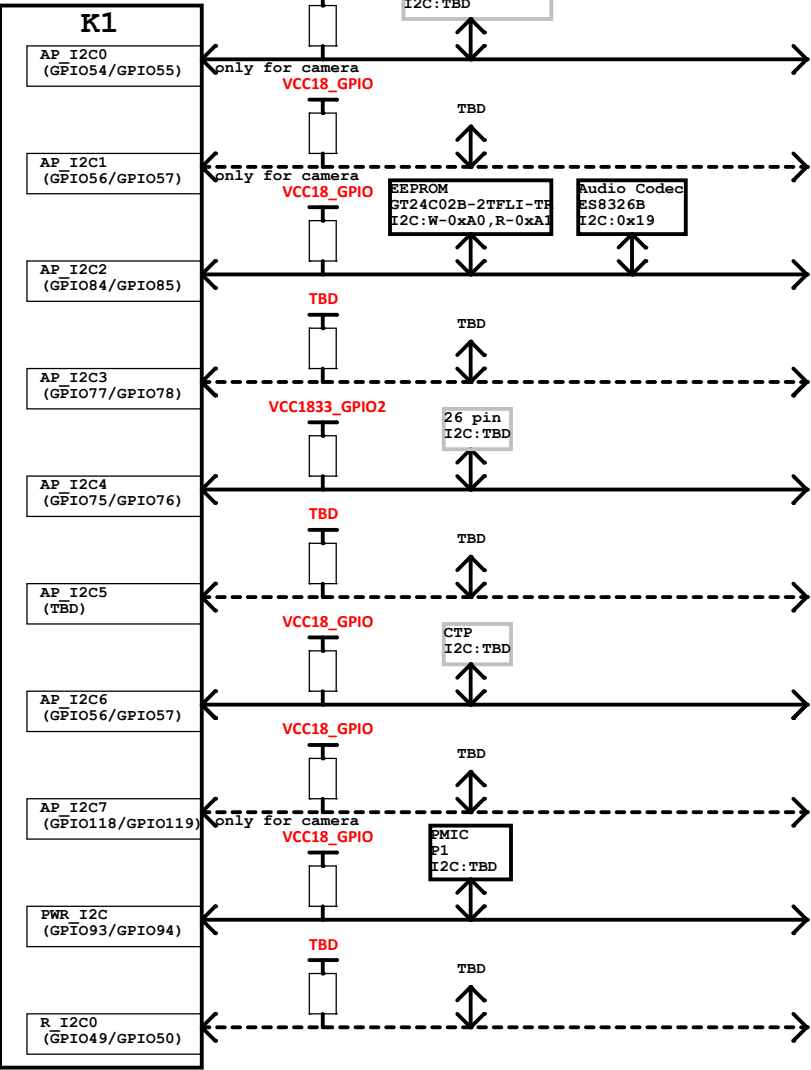


P1

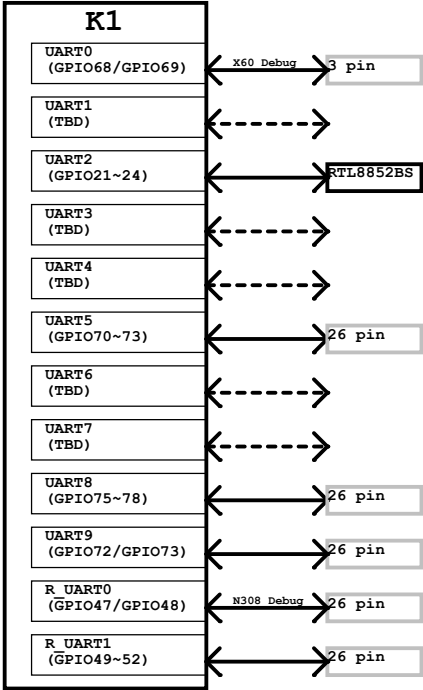
CLOCK MAP



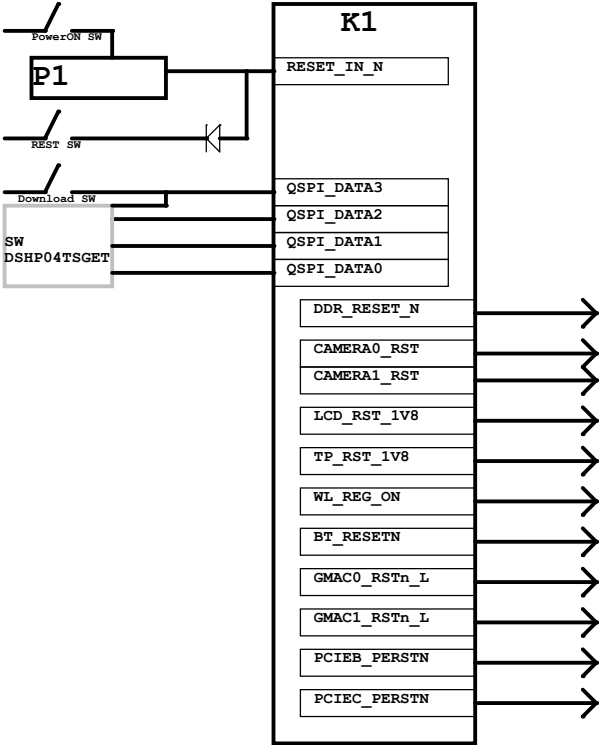
I2C MAP



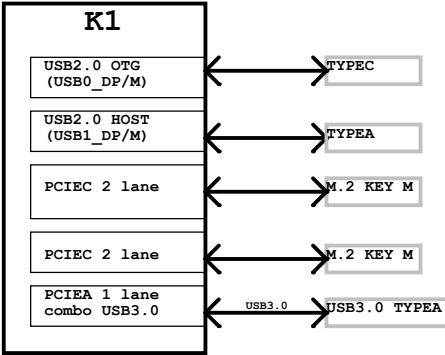
UART MAP



SW&RESET MAP



PCIE/USB MAP



GPIO ASSIGNMENT

PIN	Define	CFG	Function
GPIO0	GMAC0_RXDV	1	Ethernet -GMAC0
GPIO1	GMAC0_RXD0	1	
GPIO2	GMAC0_RXD1	1	
GPIO3	GMAC0_RXCLK	1	
GPIO4	GMAC0_RXD2	1	
GPIO5	GMAC0_RXD3	1	
GPIO6	GMAC0_TXD0	1	
GPIO7	GMAC0_TXD1	1	
GPIO8	GMAC0_TXCLK	1	
GPIO9	GMAC0_TXD2	1	
GPIO10	GMAC0_TXD3	1	
GPIO11	GMAC0_TXEN	1	
GPIO12	GMAC0_MDC	1	
GPIO13	GMAC0_MDIO	1	
GPIO14	GMAC0_INT_N	1	WiFi/BT
GPIO15	MMC2_DATA3	1	
GPIO16	MMC2_DATA2	1	
GPIO17	MMC2_DATA1	1	
GPIO18	MMC2_DATA0	1	
GPIO19	MMC2_CMD	1	
GPIO20	MMC2_CLK	1	
GPIO21	UART2_TXD	1	
GPIO22	UART2_RXD	1	
GPIO23	UART2_CTS_N	1	
GPIO24	UART2_RTS_N	1	
GPIO25	I2S1_SCLK	1	Ethernet -GMAC1
GPIO26	I2S1_LRCK	1	
GPIO27	I2S1_TXD	1	
GPIO28	I2S1_RXD	1	
GPIO29	GMAC1_RXDV	1	
GPIO30	GMAC1_RXD0	1	
GPIO31	GMAC1_RXD1	1	
GPIO32	GMAC1_RXCLK	1	
GPIO33	GMAC1_RXD2	1	
GPIO34	GMAC1_RXD3	1	
GPIO35	GMAC1_TXD0	1	
GPIO36	GMAC1_TXD1	1	
GPIO37	GMAC1_TXCLK	1	
GPIO38	GMAC1_TXD2	1	LCD/CTP
GPIO39	GMAC1_TXD3	1	
GPIO40	GMAC1_TXEN	1	
GPIO41	GMAC1_MDC	1	
GPIO42	GMAC1_MDIO	1	
GPIO43	GMAC1_INT_N	1	
GPIO44	LCD_BL_PWM_1V8	4	
GPIO45	GMAC0_CLK_REF	1	
GPIO46	GMAC1_CLK_REF	1	

PIN	Define	CFG	Function
GPIO110	GMAC0_RSTn_L	0	GMAC0
GPIO115	GMAC1_RSTn_L	0	GMAC1
GPIO116	WL_DIS_N	0	WiFi/BT
GPIO117	PCIEC_CLKREQN	4	PCIEC
GPIO118	I2S0_SCLK	3	Audio Codec
GPIO119	I2S0_LRCK	3	
GPIO120	I2S0_OUT	3	
GPIO121	I2S0_IN	3	
GPIO122	I2S0_SYSCCLK	3	USB2
GPIO123	USB2_PWREN	0	
GPIO124	CAMERA1_PDN	0	
GPIO125	AP_WAKE_BT	0	
GPIO126	CODEC_IRQ	0	Audio Codec
GPIO127	PA_SHUTDOWN	0	

PIN	Define	CFG	Function
GPIO53	CAM_MCLK0	1	CAMERA0
GPIO54	CAM_I2C0_SCL	1	
GPIO55	CAM_I2C0_SDA	1	
GPIO56	AP_I2C6_SCL	5	
GPIO57	AP_I2C6_SDA	5	LCD/CTP
GPIO58	TP_INT_1V8	0	
GPIO111	CAMERA0_RST	1	
GPIO112	PCIEC_WAKEN	3	
GPIO113	CAMERA0_PDN	1	CAMERA0
GPIO114	TP_RST_1V8	0	
GPIO63	BT_RESETN	0	
GPIO64	VBUS_ON0	0	
GPIO65	BT_WAKE_AP	0	WiFi/BT
GPIO66	WL_WAKE_AP	0	
GPIO67	WL_REG_ON	0	
GPIO68	UART0_TXD	2	
GPIO69	UART0_RXD	2	X60 Debug

PIN	Define	CFG	Function
GPIO59	PCIEB_PERSTN	4	PCIEB
GPIO60	PCIEB_WAKEN	4	
GPIO61	PCIEB_CLKREQN	4	
GPIO62	PCIEB_PERSTN	4	
GPIO70	GPIO70	1	26 pin
GPIO71	GPIO71	1	
GPIO72	GPIO72	1	
GPIO73	GPIO73	1	
GPIO74	GPIO74	0	

红色字体GPIO表示默认、持续上拉，等效上拉电阻约60K。需要软件修改才能解除默认上拉状态

PIN	Define	CFG	Function
GPIO93	PI2C_SCL	0	PMIC
GPIO94	PI2C_SDA	0	
GPIO95	SLEEP_OUT	0	
GPIO96	GPIO96	1	
GPIO97	CAMERA1_RST	1	CAMERA1
GPIO81	LCD_RST_1V8	0	
GPIO82	LCD_BL_EN_1V8	0	
GPIO83	LCD_PWR_EN_1V8	0	
GPIO84	AP_I2C2_SCL	4	EEPROM Audio
GPIO85	AP_I2C2_SDA	4	
GPIO86	HDMI_SCL	1	
GPIO87	HDMI_SDA	1	
GPIO88	HDMI_CEC	1	HDMI_OUT
GPIO89	HDMI_HPD	1	
GPIO90	GPIO90	0	
GPIO91	GPIO91	0	
GPIO92	GPIO92	0	26 pin

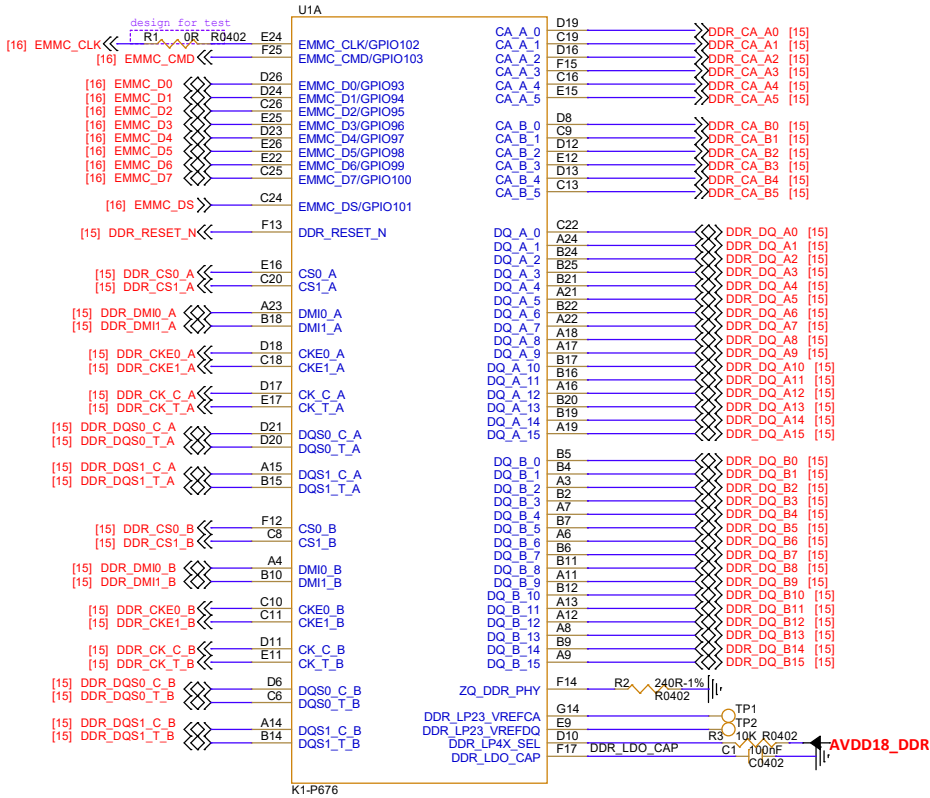
PIN	Define	CFG	Function
GPIO98	QSPI_DATA3	0	SPI FLASH
GPIO99	QSPI_DATA2	0	
GPIO100	QSPI_DATA1	0	
GPIO101	QSPI_DATA0	0	
GPIO102	QSPI_CLK	0	
GPIO103	QSPI_CS1	0	

PIN	Define	CFG	Function
GPIO104	MMC1_DATA3	0	TF CARD
GPIO105	MMC1_DATA2	0	
GPIO106	MMC1_DATA1	0	
GPIO107	MMC1_DATA0	0	
GPIO108	MMC1_CMD	0	
GPIO109	MMC1_CLK	0	

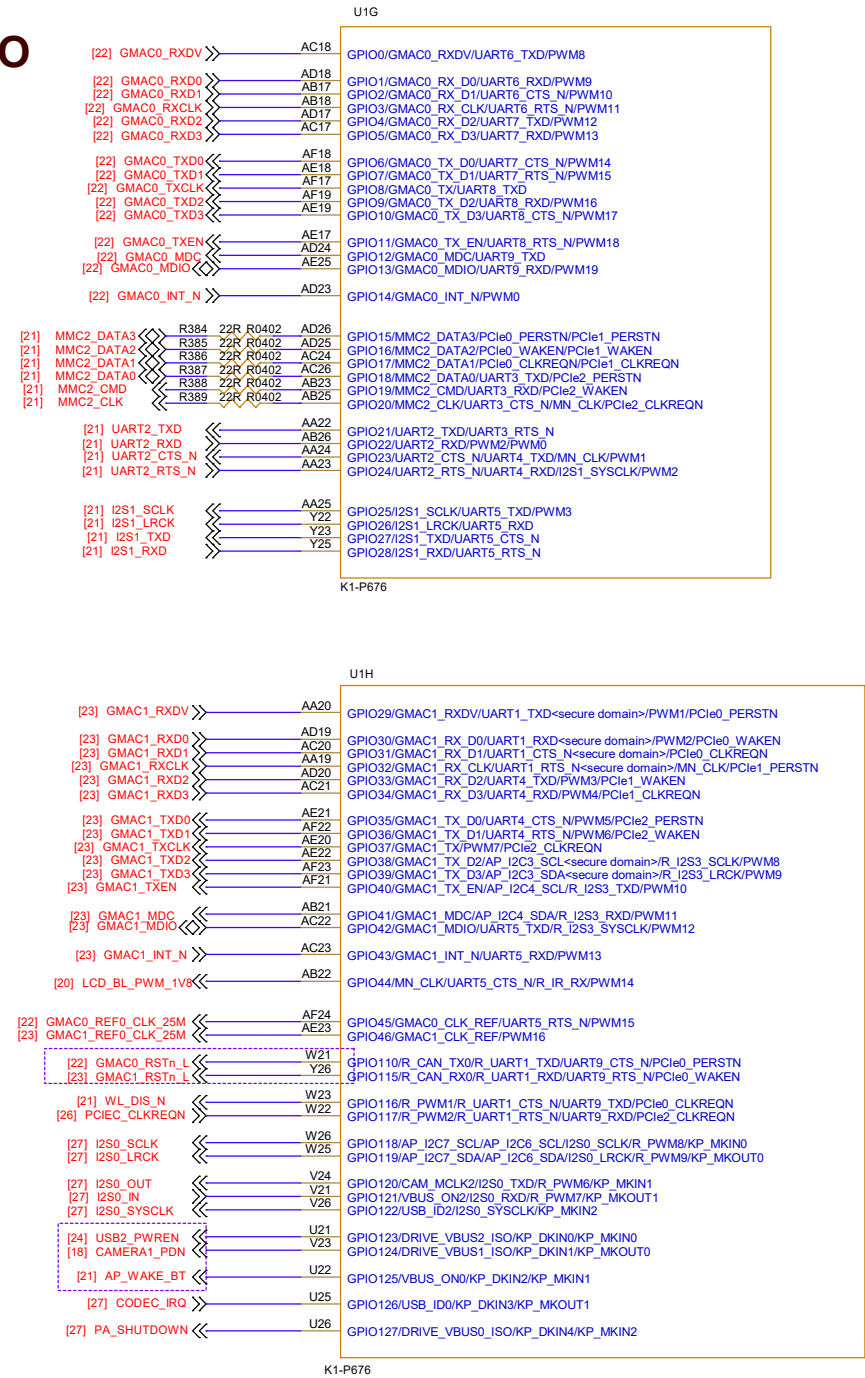
PIN	Define	CFG	Function
GPIO75	SPI3_SCLK_3V3	2	26 pin
GPIO76	SPI3_CS_3V3	2	
GPIO77	SPI3_MOSI_3V3	2	
GPIO78	SPI3_MISO_3V3	2	
GPIO79	USB3_PWREN	2	
GPIO80	SD_CD_3V3	1	USB3

PIN	Define	CFG	Function
GPIO47	R_UART0_TXD_3V3	1	26 pin
GPIO48	R_UART0_RXD_3V3	1	
GPIO49	GPIO_49_3V3	0	
GPIO50	GPIO_50_3V3	0	
GPIO51	AP_I2C4_SCL_3V3	4	
GPIO52	AP_I2C4_SDA_3V3	4	

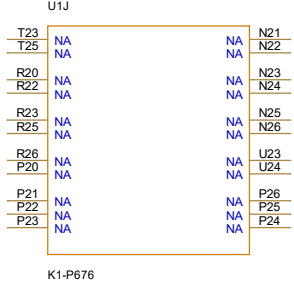
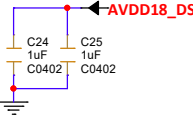
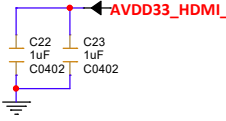
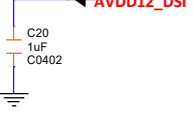
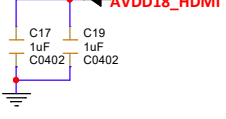
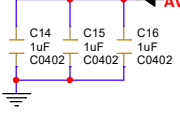
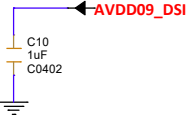
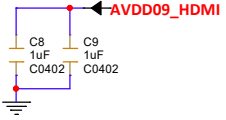
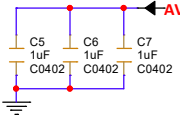
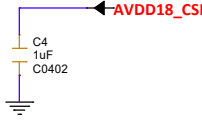
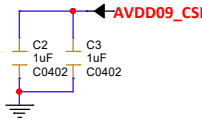
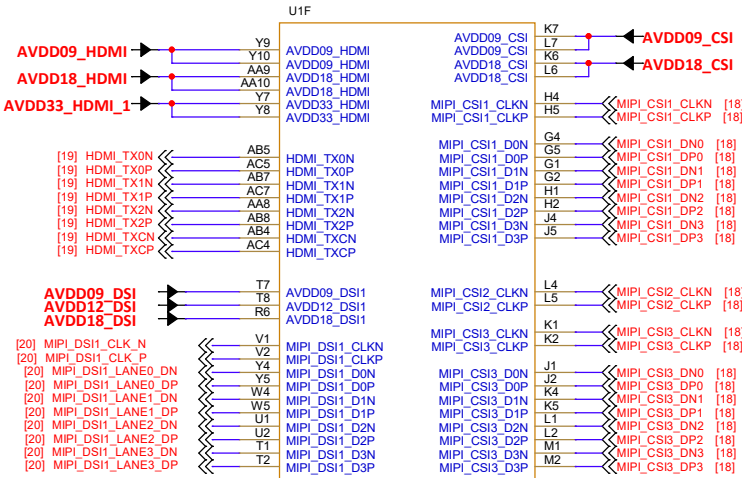
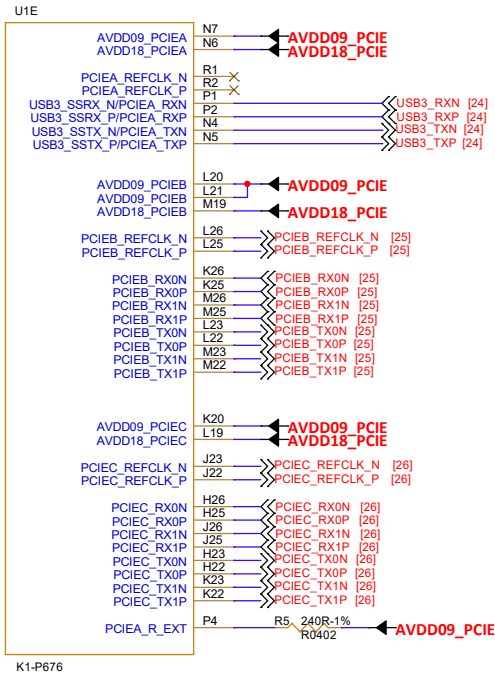
eMMC+DDR



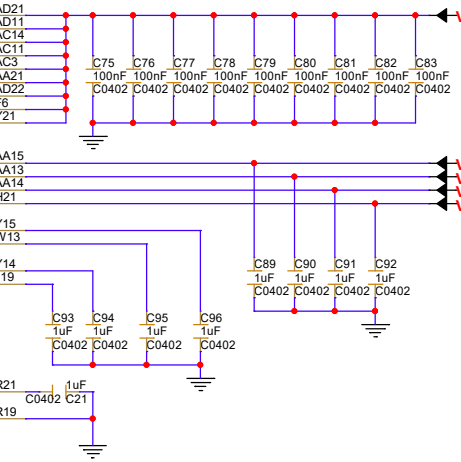
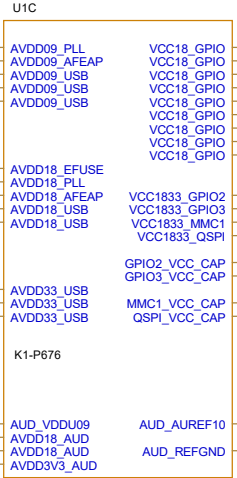
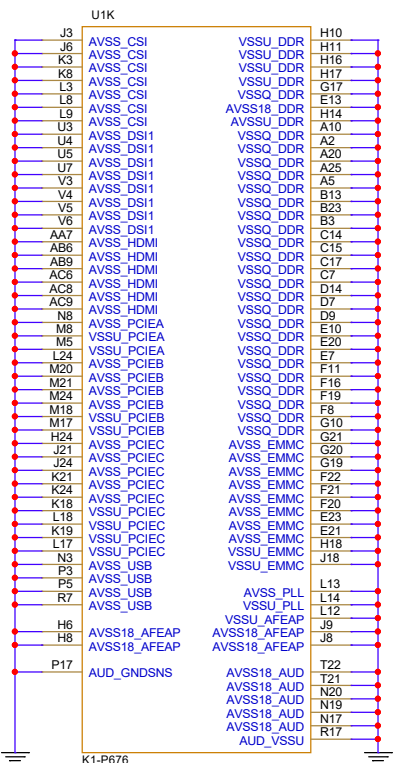
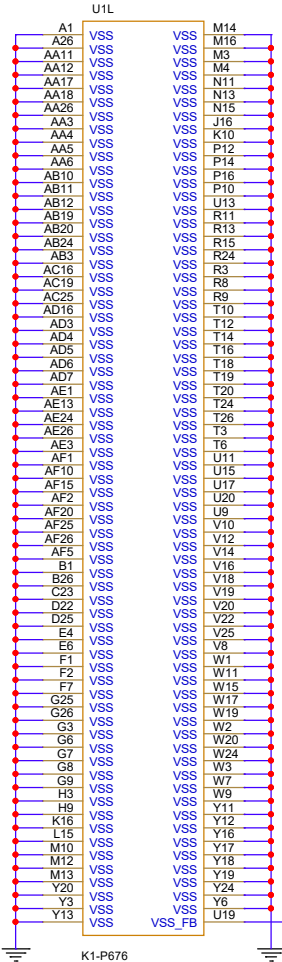
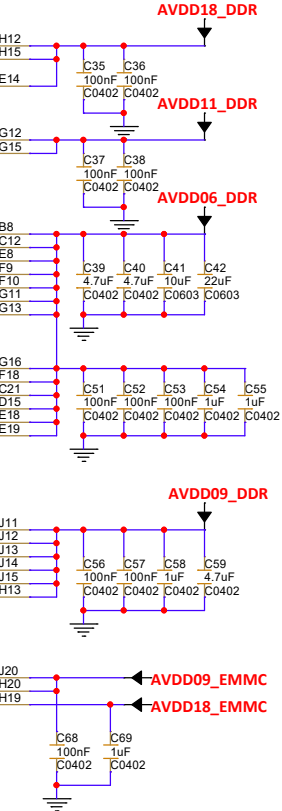
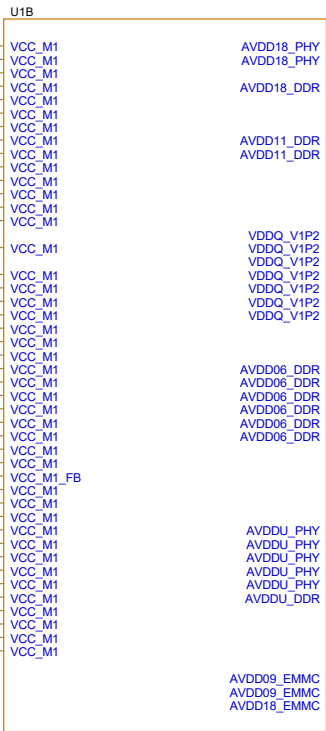
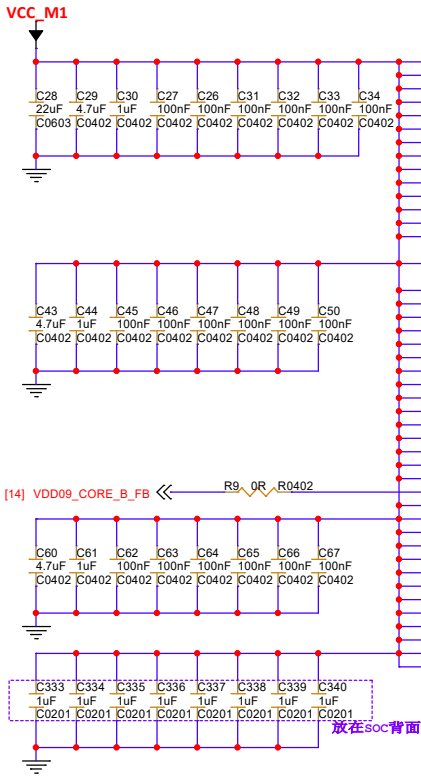
GPIO



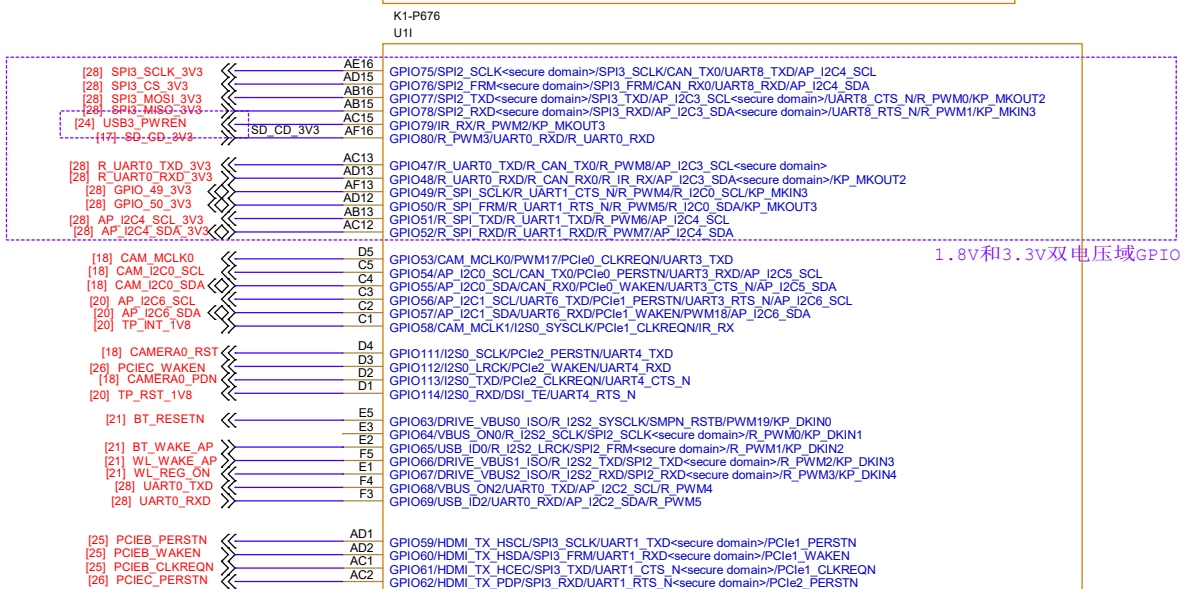
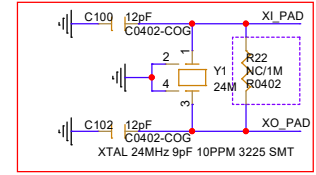
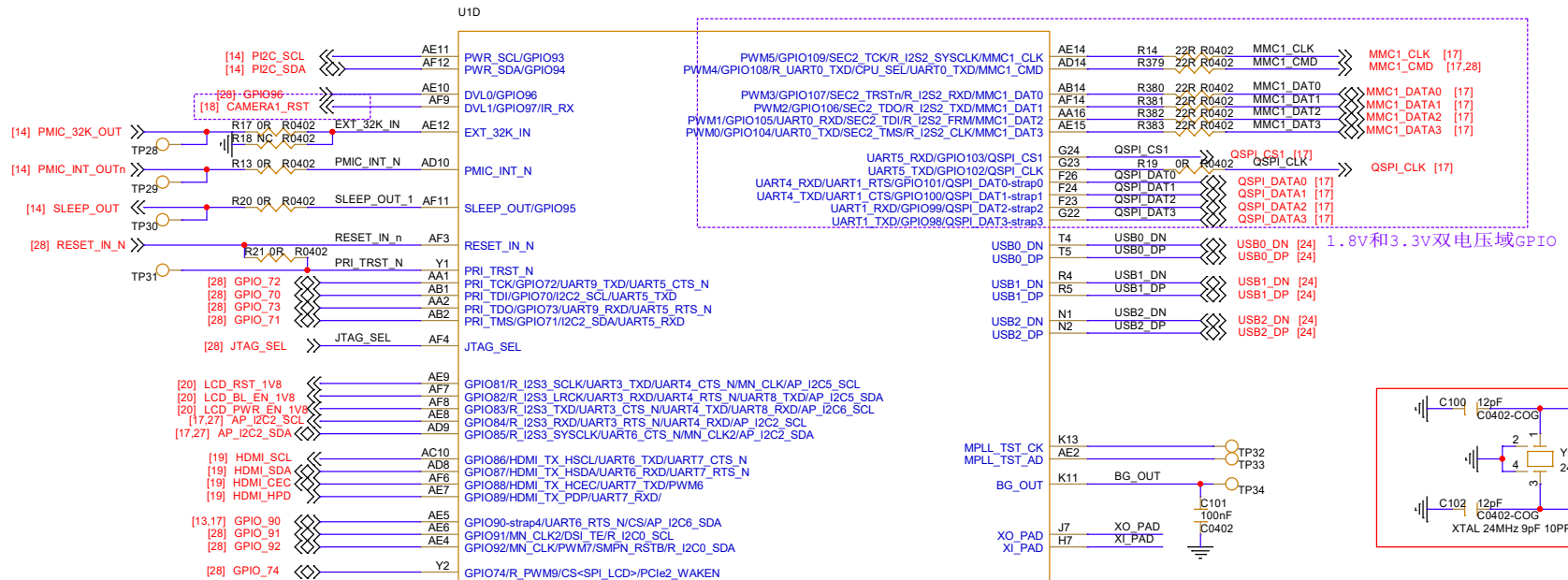
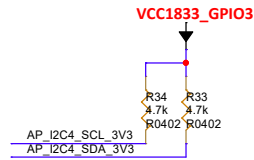
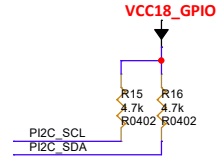
Perphery



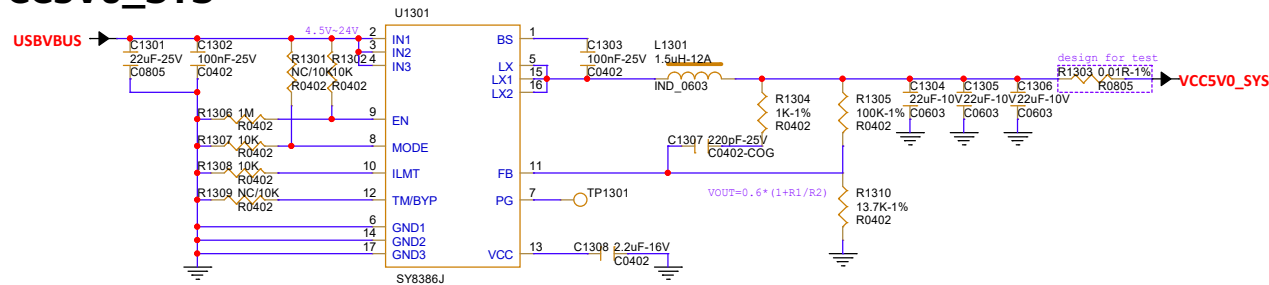
CPU-PWR



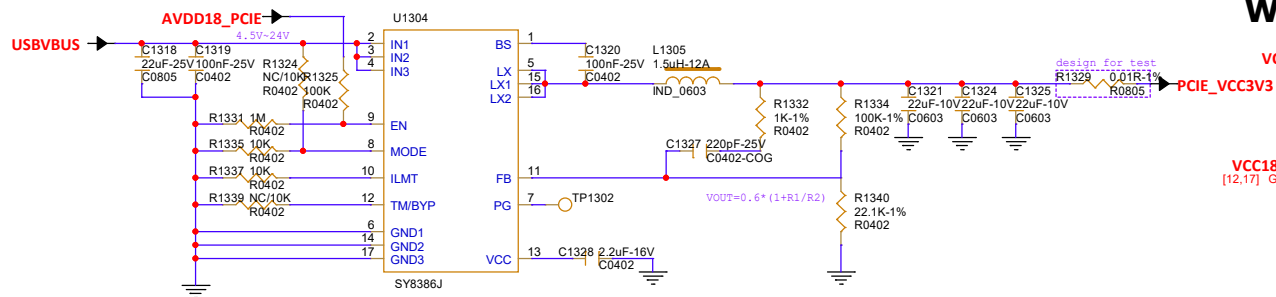
SYS-GPIO



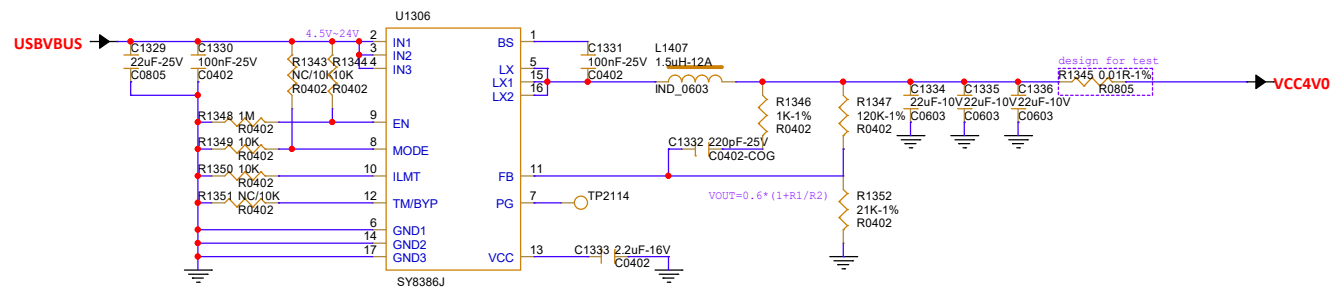
VCC5V0_SYS



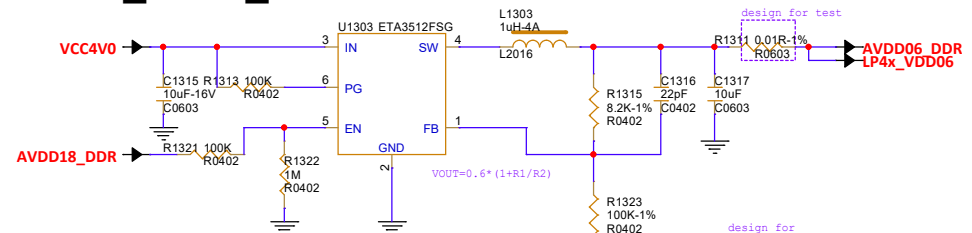
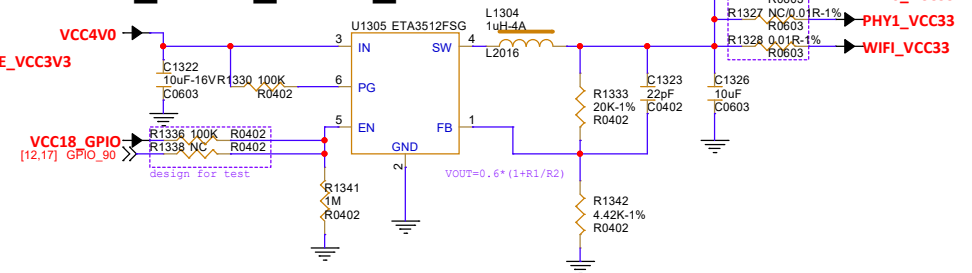
PCIE_VCC3V3



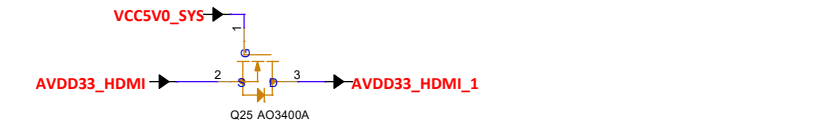
PMIC_VCC4V0



EXT_DCDC_0V6

**WIFI_PHY0_PHY1_3V3**

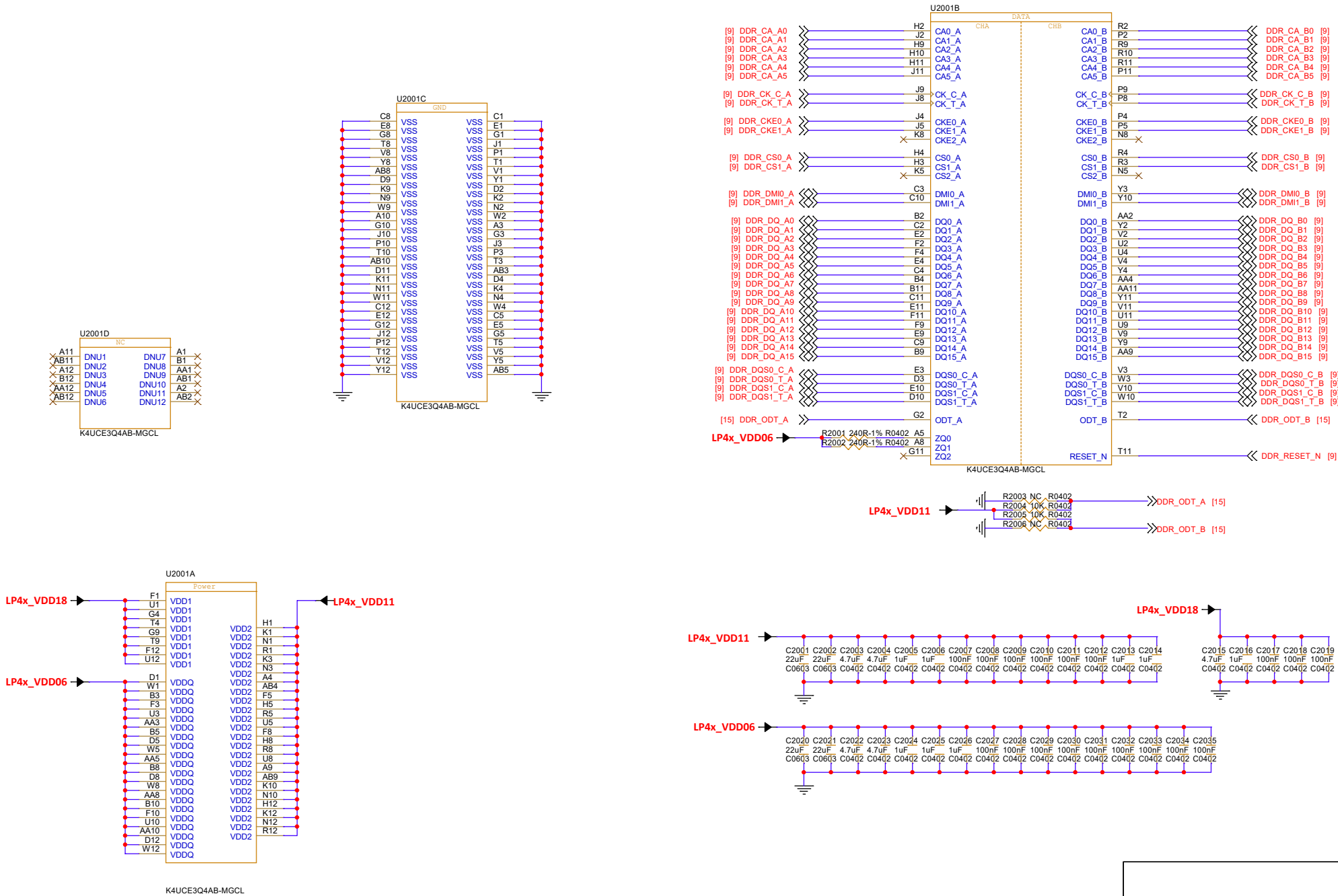
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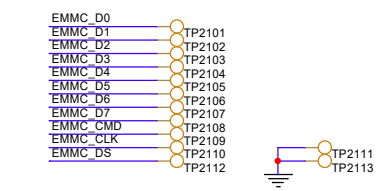
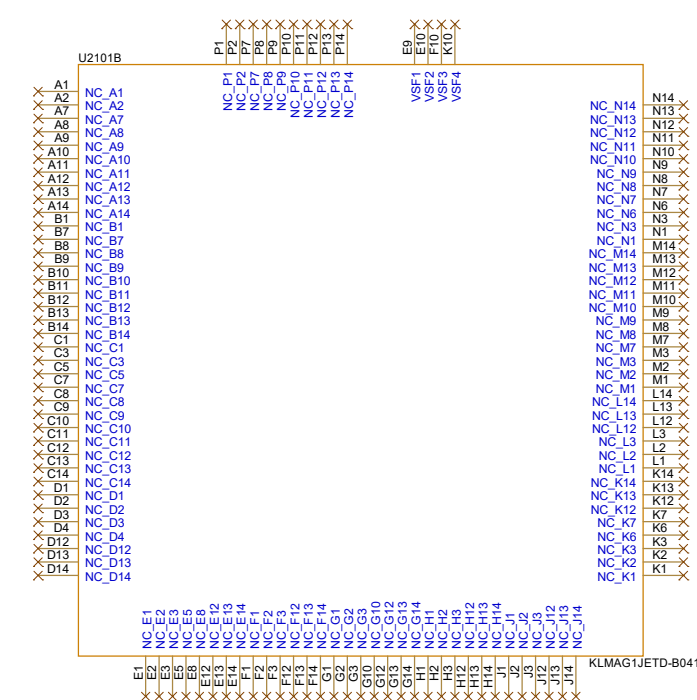
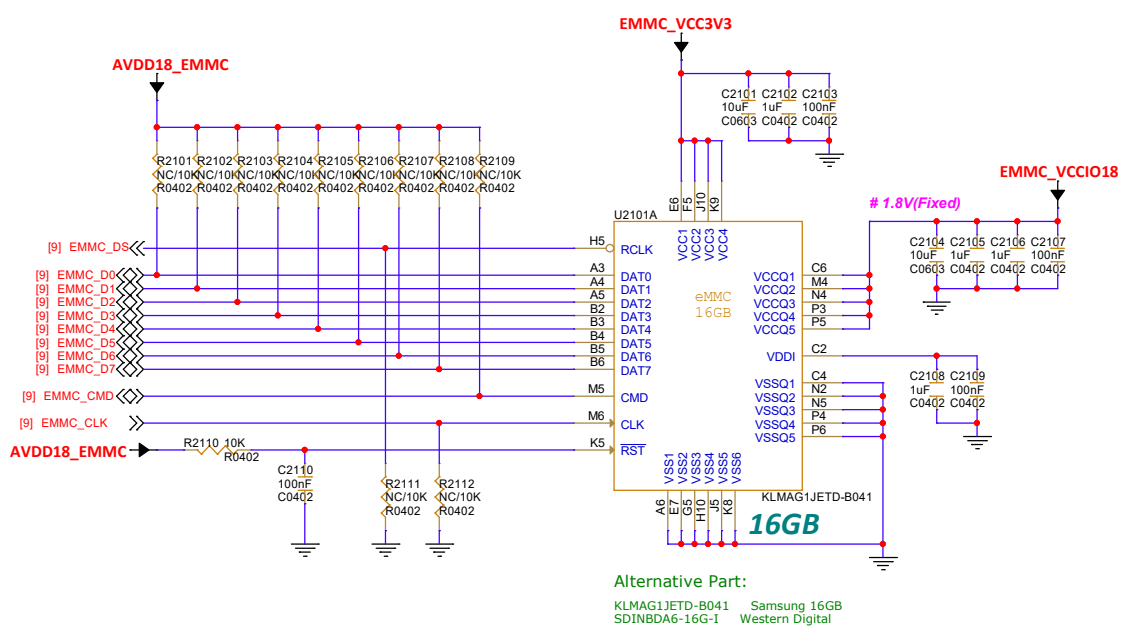
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LPDDR4X

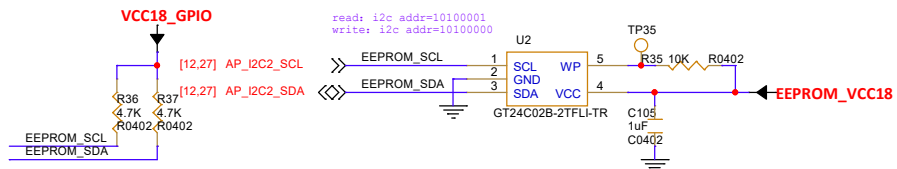
NOTE:CKE2/CS2/ZQ2 NC IN SAMSUNG



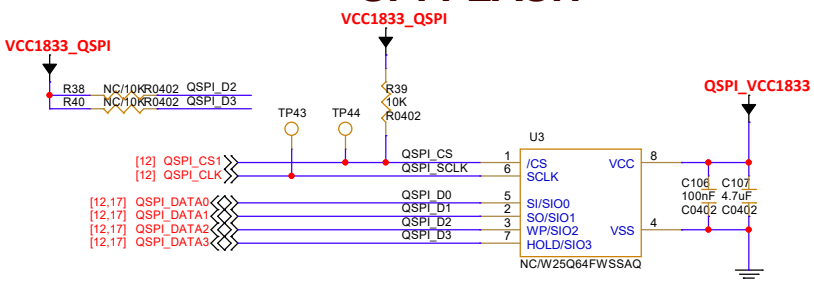
EMMC



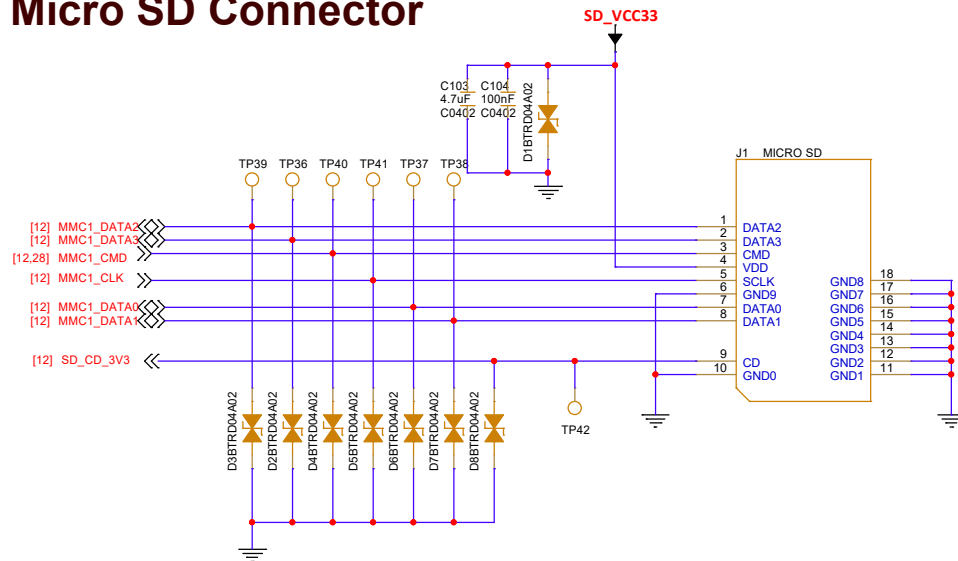
EEPROM



SPI FLASH



Micro SD Connector



VCC18_GPIO

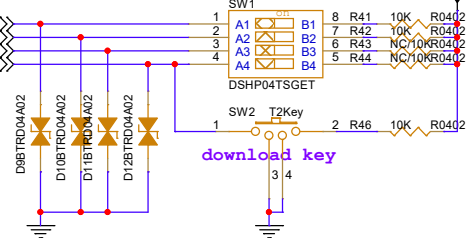
[12,13] GPIO_90

GPIO90	Function
0	1V8
1	3V3

SPI Flash推荐使用1.8V电压

VCC1833_QSPI

[12,17] QSPI_DATA0
[12,17] QSPI_DATA1
[12,17] QSPI_DATA2
[12,17] QSPI_DATA3



Boot SEL

boot download sel

download sel

QSPI_DATA3	Function
0	启动
1	下载

QSPI_DATA2	Function
0	USB
1	UART

QSPI_DATA1	QSPI_DATA0	Function
0	0	TF Card -> EMMC
0	1	TF Card -> SPI NOR
1	0	TF Card -> SPI NAND
1	1	TF Card -> SD

Design Name

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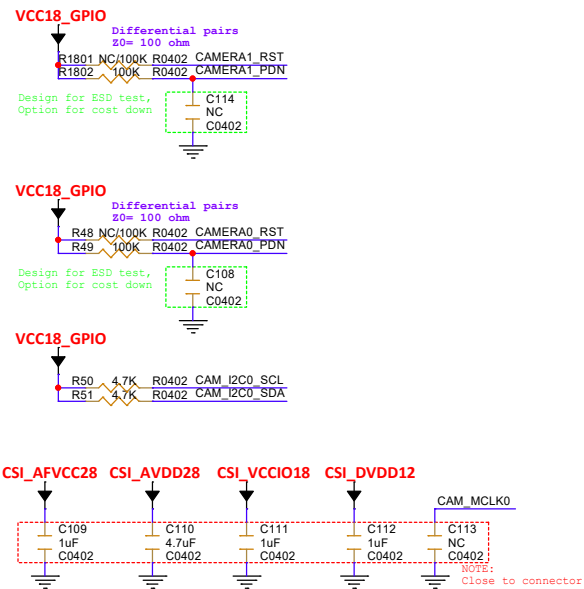
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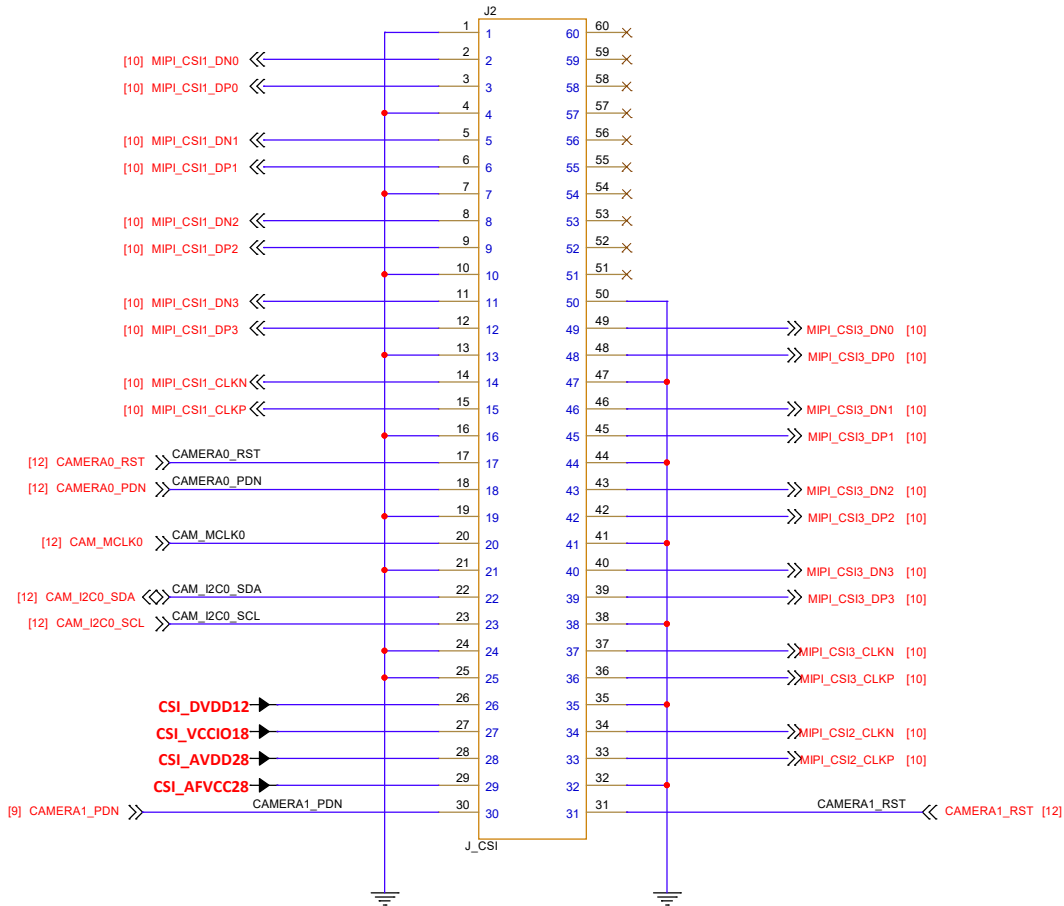
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CAMERA

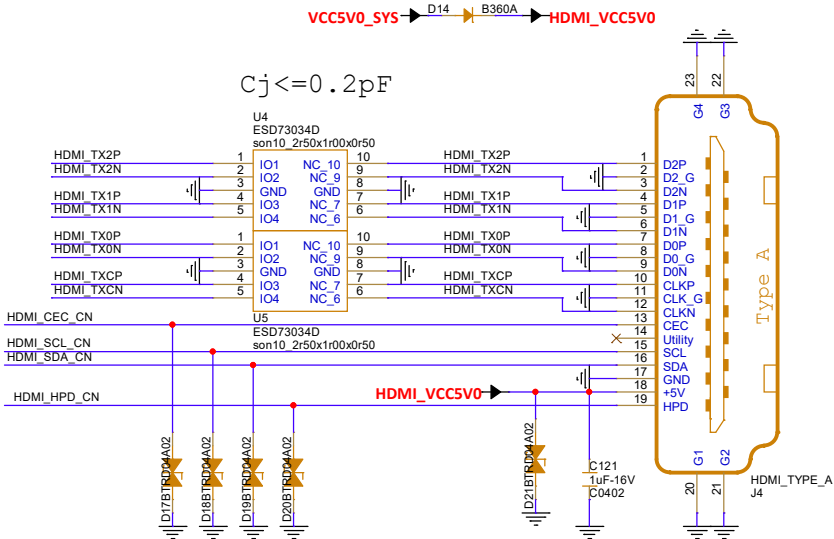
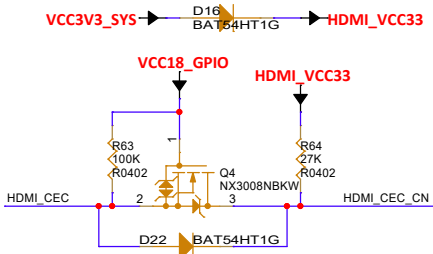
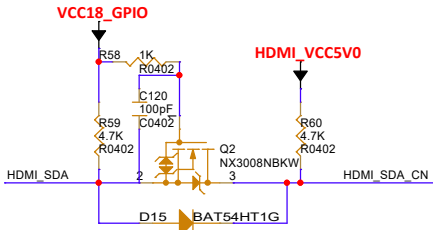
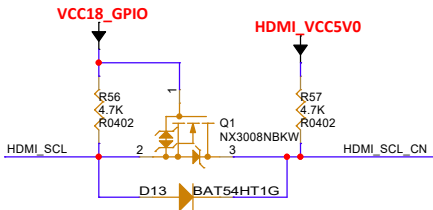
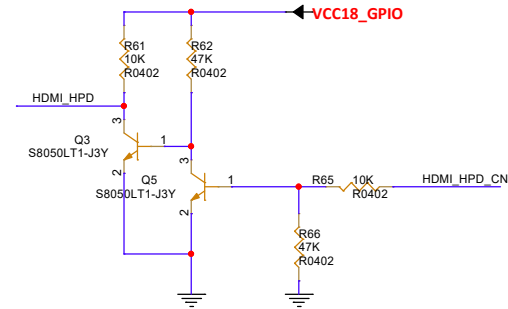
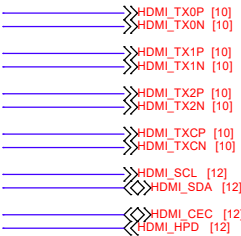


		信号	时钟	I2C	RST&PDN
		MIPI_CSI1_D0 MIPI_CSI1_D1 MIPI_CSI1_D2 MIPI_CSI1_D3	CAM_MCLK0 MIPI_CSI1_CLK	CAM_I2C0	CAMERA0_PDN CAMERA0_RST
4+2+2	CSI1	MIPI_CSI1_D0 MIPI_CSI1_D1 MIPI_CSI1_D2 MIPI_CSI1_D3	CAM_MCLK0 MIPI_CSI1_CLK	CAM_I2C0	CAMERA0_PDN CAMERA0_RST
	CSI2	MIPI_CSI3_D2 MIPI_CSI3_D3	CAM_MCLK1 MIPI_CSI2_CLK	CAM_I2C1	CAMERA1_PDN CAMERA1_RST
	CSI3	MIPI_CSI3_D0 MIPI_CSI3_D1	CAM_MCLK2 MIPI_CSI3_CLK	CAM_I2C2	CAMERA2_PDN CAMERA2_RST

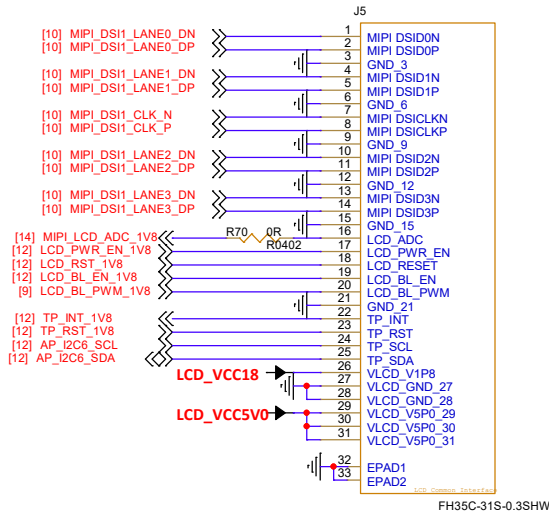
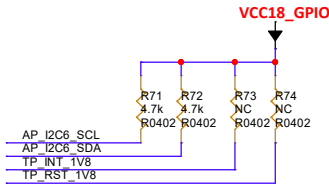
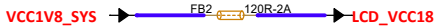
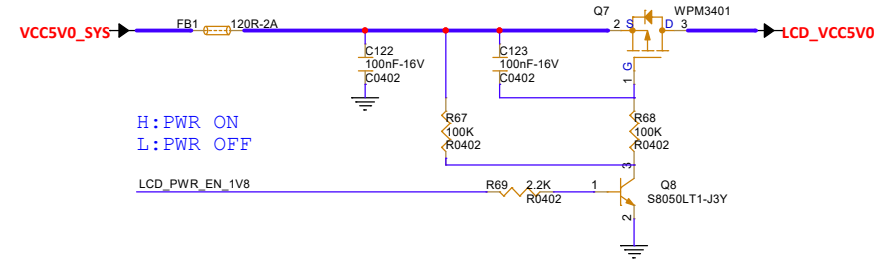
		信号	时钟	I2C	RST&PDN
		MIPI_CSI1_D0 MIPI_CSI1_D1 MIPI_CSI1_D2 MIPI_CSI1_D3	CAM_MCLK0 MIPI_CSI1_CLK	CAM_I2C0	CAMERA0_PDN CAMERA0_RST
4+4	CSI1	MIPI_CSI1_D0 MIPI_CSI1_D1 MIPI_CSI1_D2 MIPI_CSI1_D3	CAM_MCLK0 MIPI_CSI1_CLK	CAM_I2C0	CAMERA0_PDN CAMERA0_RST
	CSI2	MIPI_CSI3_D0 MIPI_CSI3_D1 MIPI_CSI3_D2 MIPI_CSI3_D3	CAM_MCLK1 MIPI_CSI3CLK	CAM_I2C1	CAMERA1_PDN CAMERA1_RST



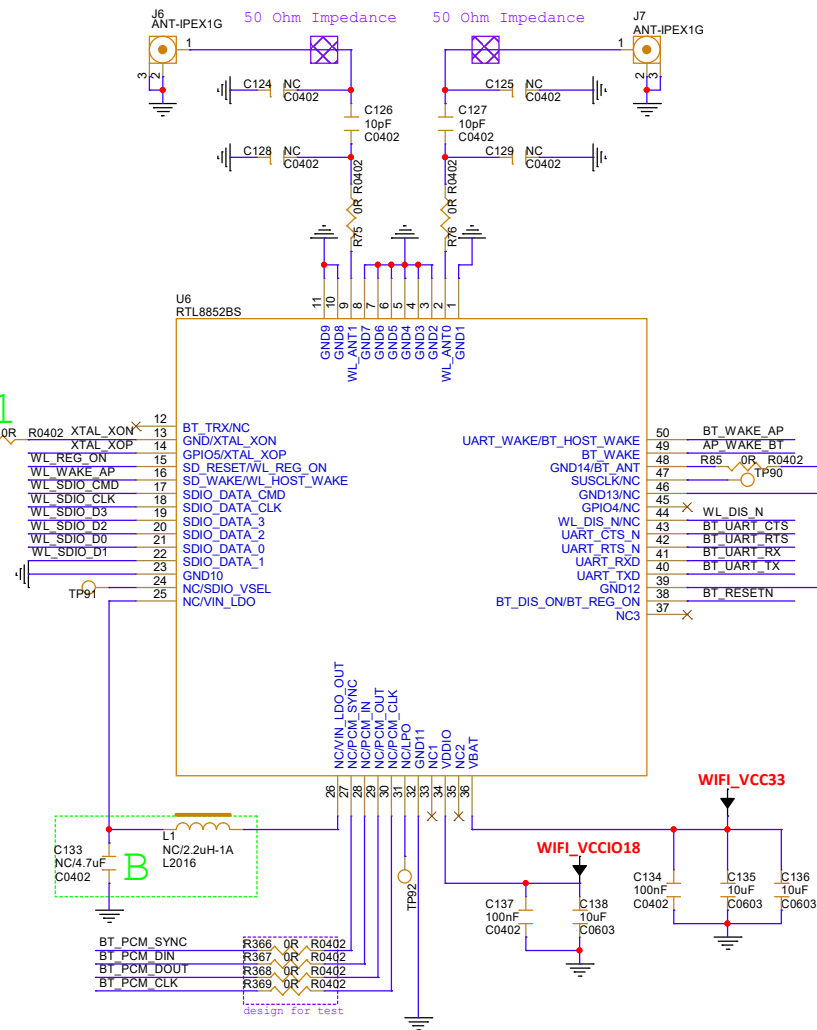
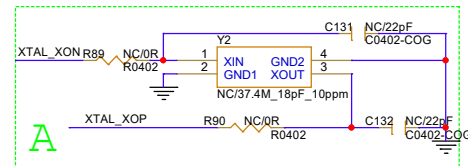
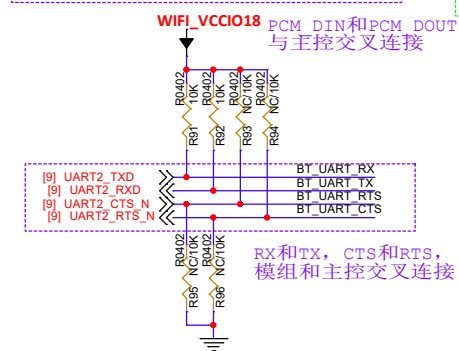
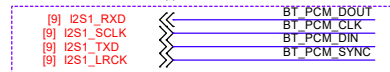
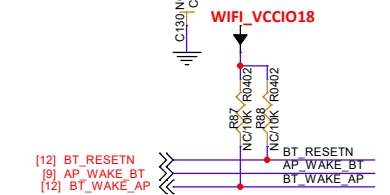
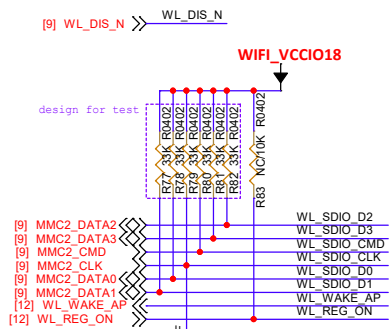
HDMI



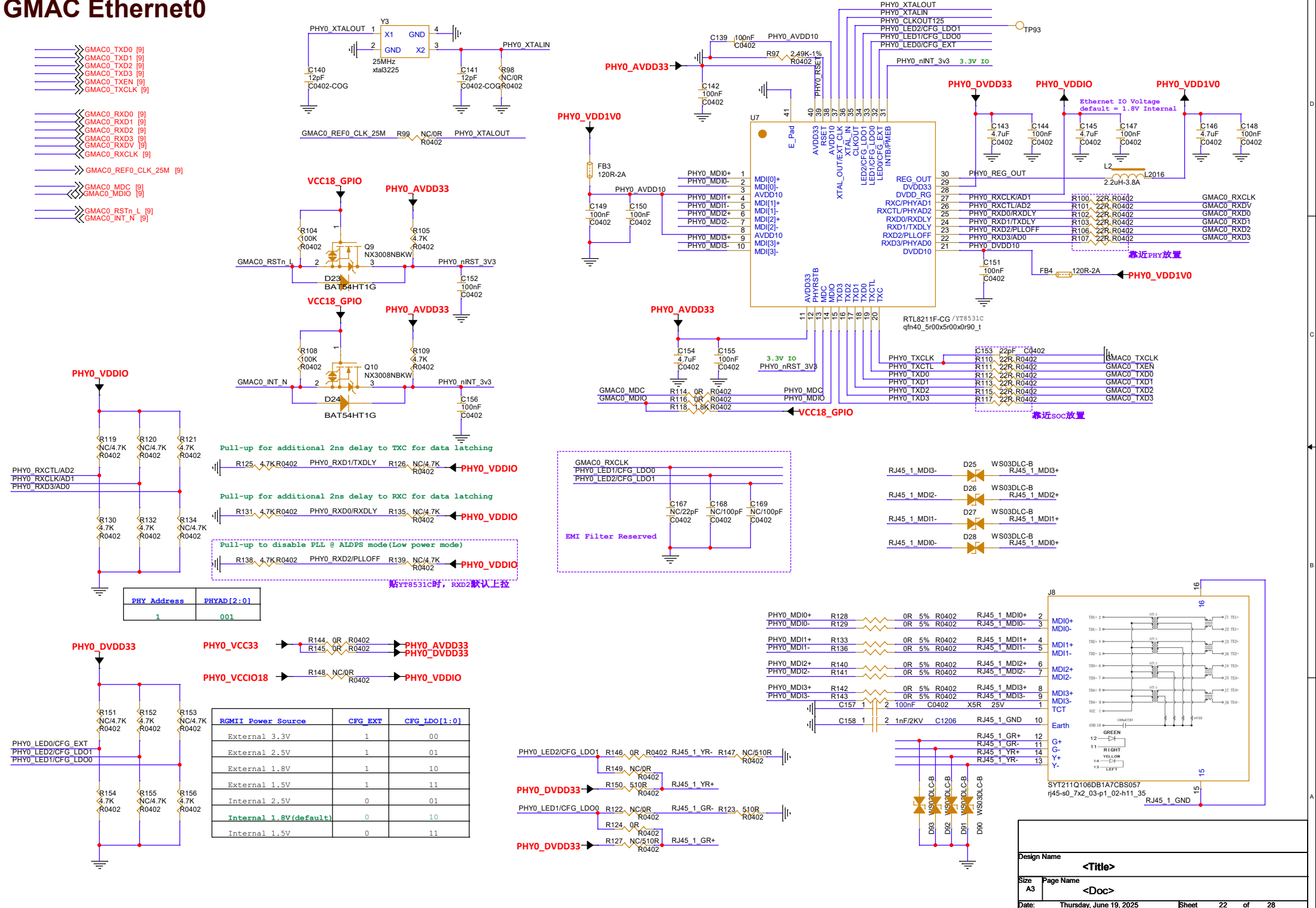
MIPI-DSI



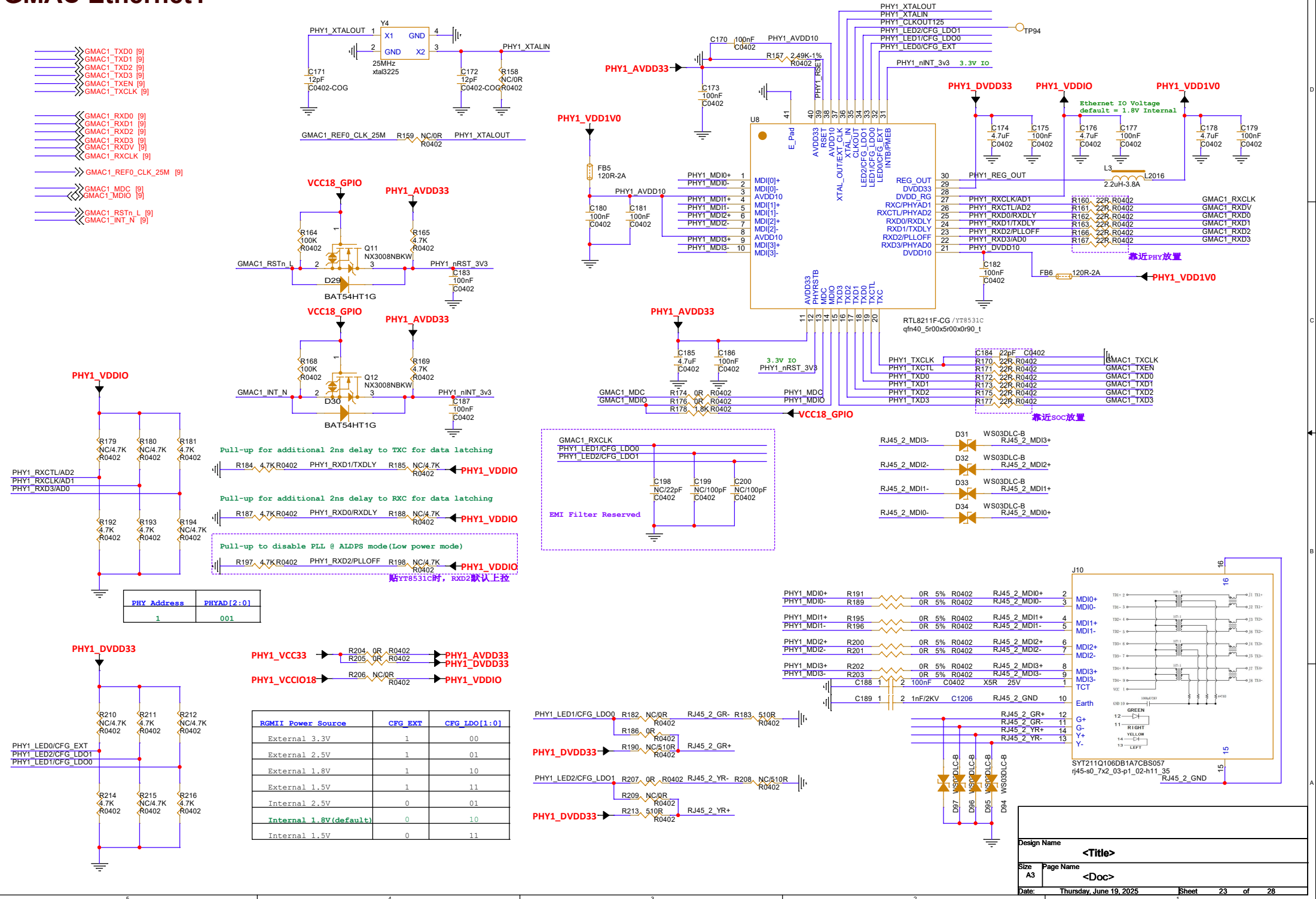
RTL8852BS



GMAC Ethernet0



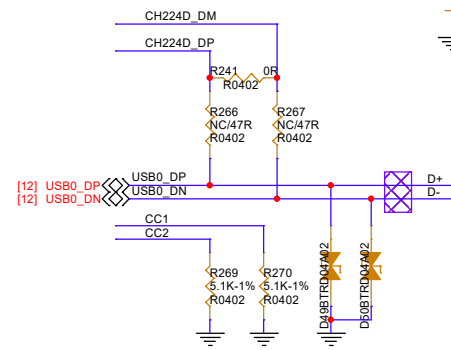
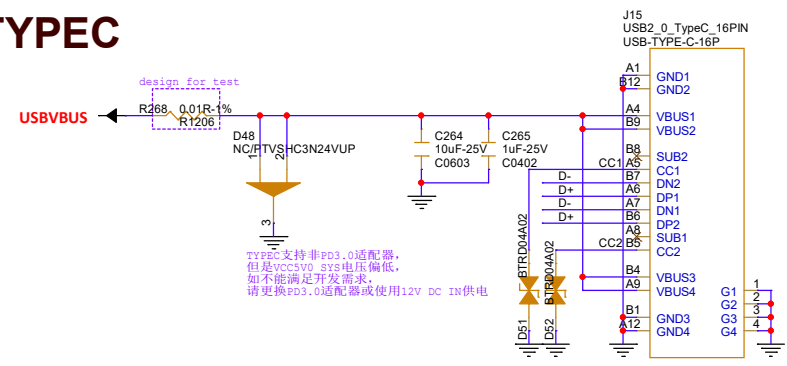
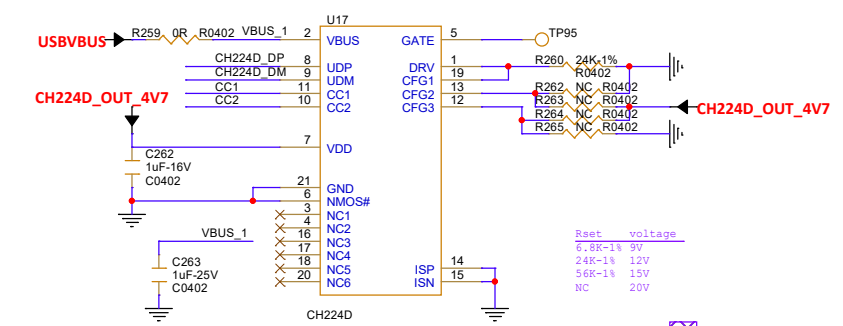
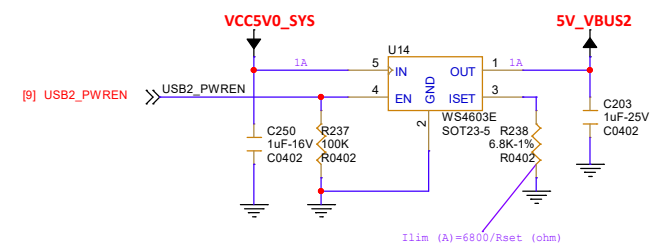
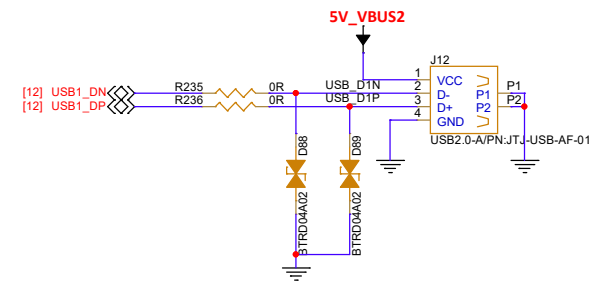
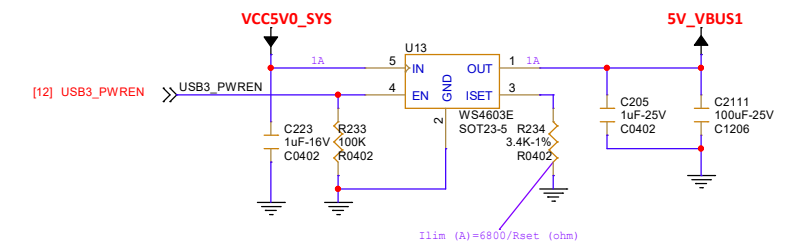
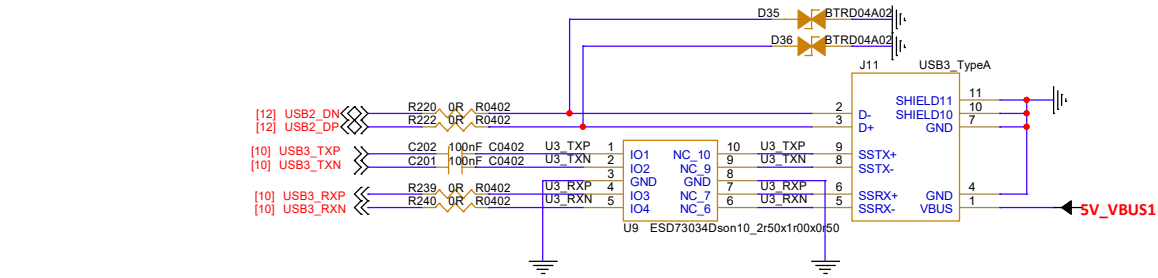
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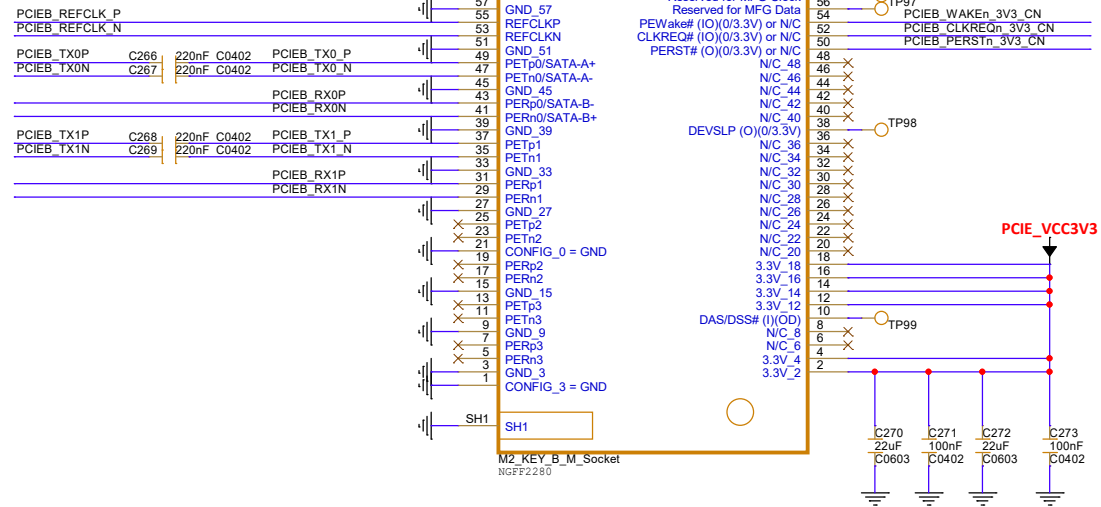
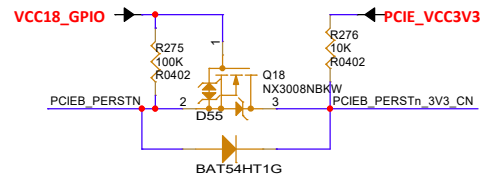
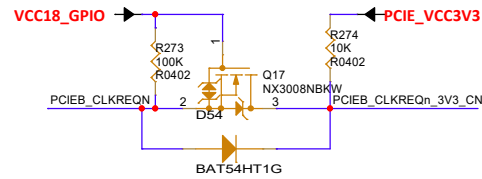
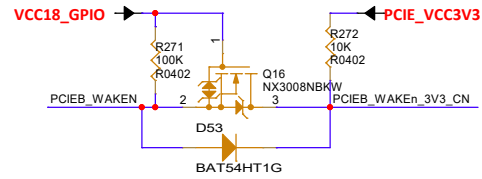
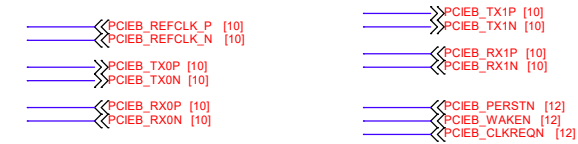


USB3.0 TYPEA

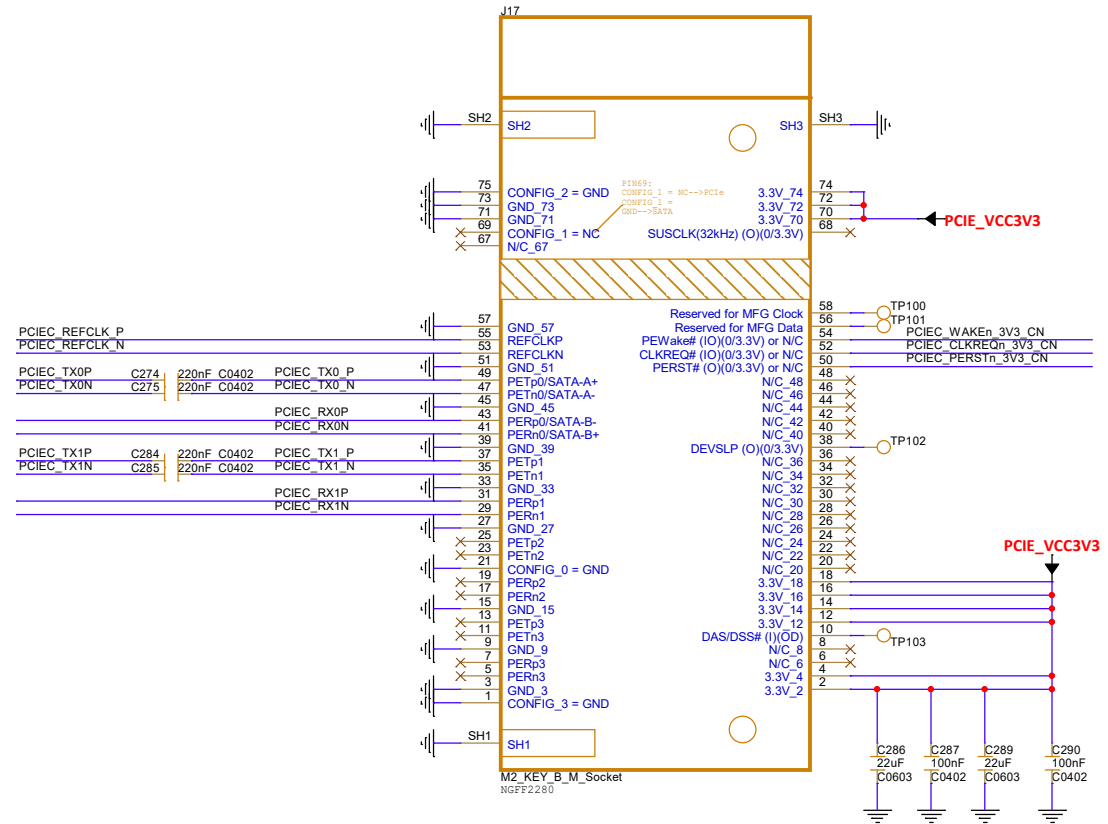
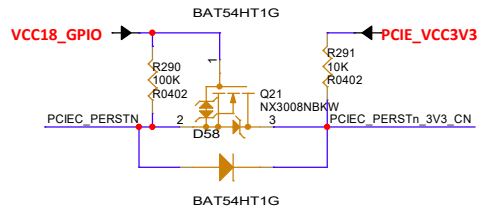
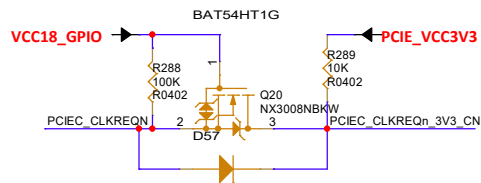
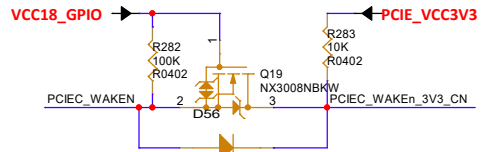
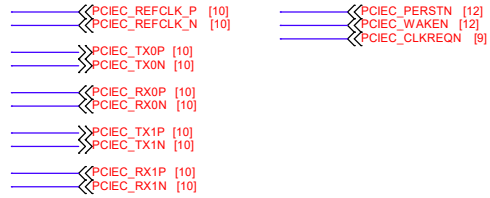
USB2.0 TYPEA-HOST

USB2.0 TYPEC

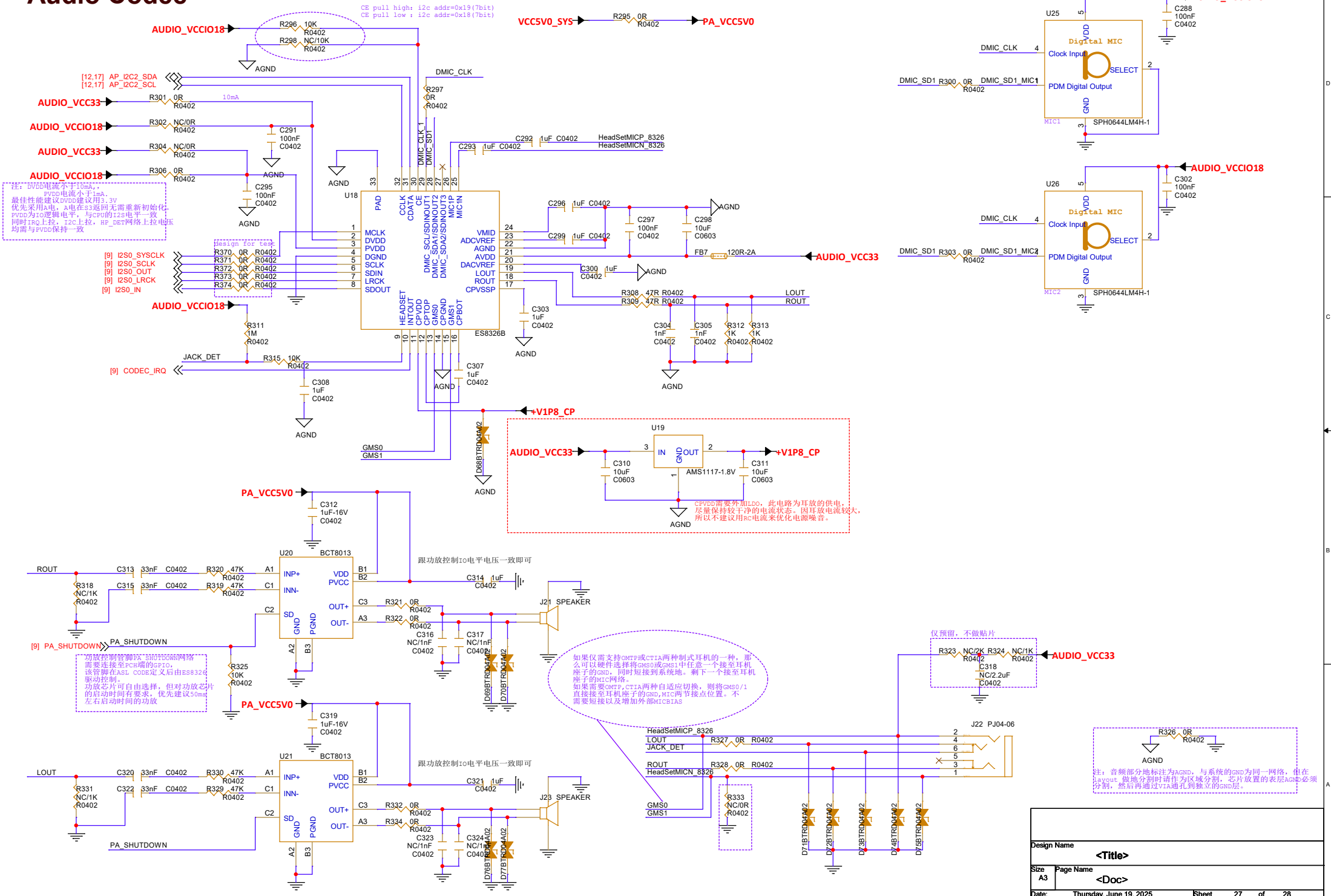


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PCIEC

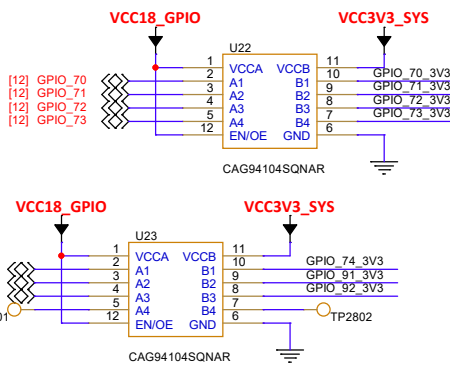
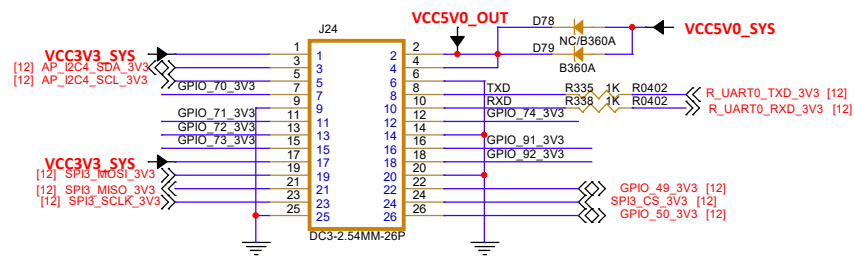
Audio Codec



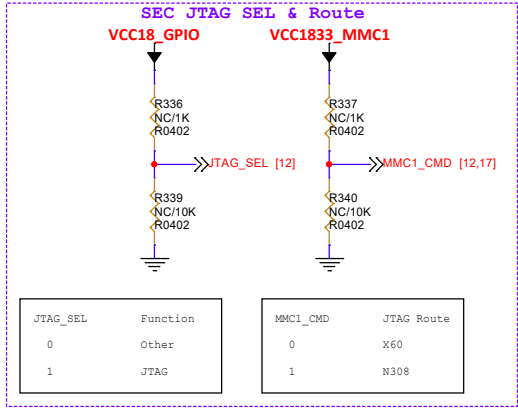
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Date:	Thursday, June 19, 2025	Sheet	27 of 28

26 pin GPIO

1.SPI_LCD:GPIO_70~74+GPIO_91+GPIO_92
2.PR1 JTAG:GPIO_70~73
3.N308 Debug:R_UART0_TXD_3V3/R_UART0_RXD_3V3

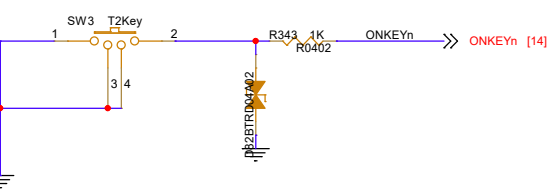


JTAG SEL

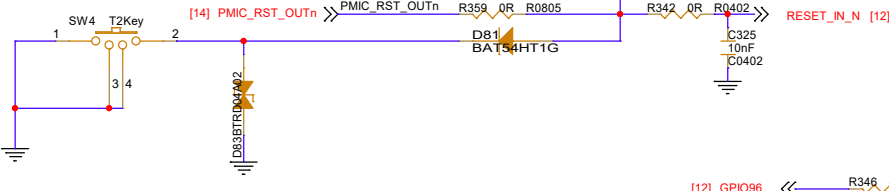


JTAG_SEL	Function	MMC1_CMD	JTAG Route
0	Other	0	X60
1	JTAG	1	N308

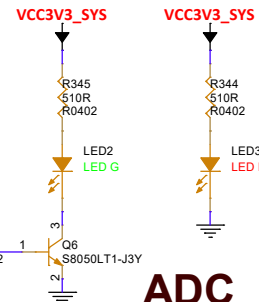
PowerON



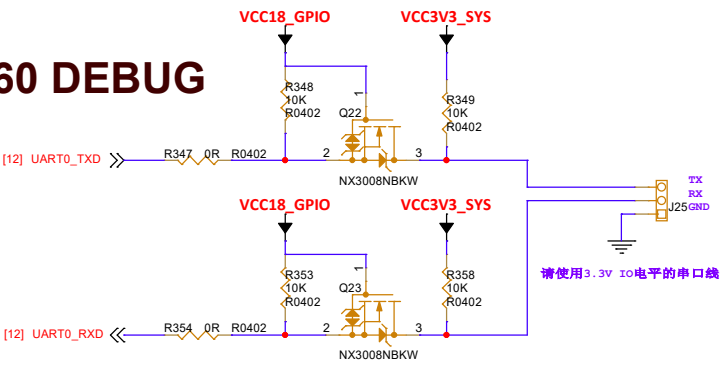
REST



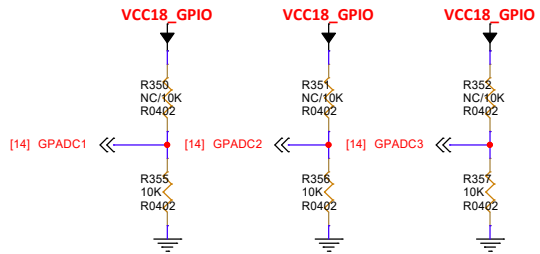
LED



X60 DEBUG



ADC



Mark Port

