

AM62x SKEVM

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GPIO MAPPING TABLE

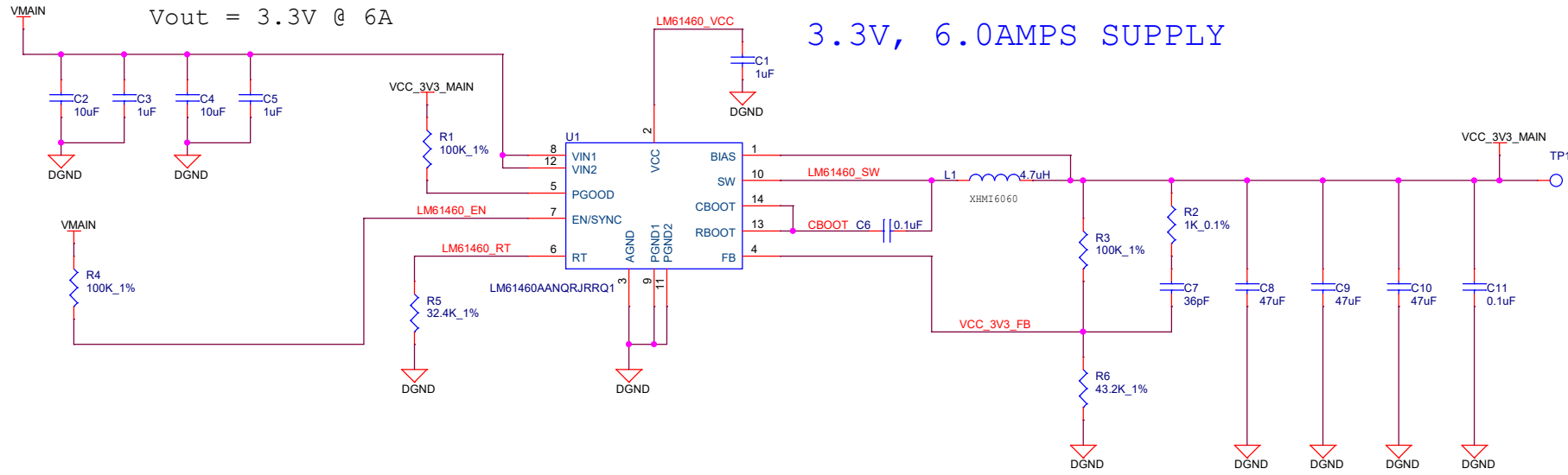
SL NO.	GPIO DESCRIPTION	GPIO NETNAME	FUNCTIONALITY	GPIO USED	SOC MUXED SIGNAL NAME	DIRECTION WITH RESPECT TO CONTROL	DEFAULT STATE	ACTIVE STATE	VOLTAGE DOMAIN ON SOC SIDE	VOLTAGE CONNECTED ON SKEVM
1	Enable for WLAN Interface	WLAN_EN	ENABLE	GPIO0_71	MMC2_SDCD	OUTPUT	LOW	HIGH	VDDSHV6	SoC_DVDD1V8
2	WLAN Interrupt	WLAN_IRQ	INTERRUPT	GPIO0_72	MMC2_SDWP	INPUT	HIGH	LOW	VDDSHV6	SoC_DVDD1V8
3	Enable for BT Interface	BT_EN_SOC	ENABLE	MCU_GPIO0_1	MCU_SPI0_CS0	OUTPUT	LOW	HIGH	VDDSHV_MCU	SoC_DVDD3V3
4	CPSW Ethernet PHY Interrupt	CPSW_RGMII_INTn/PRU_INTn	INTERRUPT	GPIO1_31	EXTINTn	INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
	PRU Connector Interrupt									
	PMIC_INTn									
5	OSPI Reset Control GPIO	GPIO_OSPI_RSTn	RESET	GPIO0_12	OSPI0_CSn1	OUTPUT	HIGH	LOW	VDDSHV1	SoC_DVDD1V8
6	OSPI Interrupt	OSPI_INTn	INTERRUPT	GPIO0_13	OSPI0_CSn2	INPUT	HIGH	LOW	VDDSHV1	SoC_DVDD1V8
7	SD Card IO Voltage Select	VSEL_SD	ENABLE	GPIO0_31	GPMC0_CLK	OUTPUT	LOW	HIGH	VDDSHV3	SoC_DVDD3V3
8	IO Expander Interrupt	GPIO1_23_INTn	INTERRUPT	SoC_GPIO1_23	UART0_RTSN	INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
9	User Interrupt Push Button/ TEST GPIO1 from Test Automation Connector									
10	User Test LED 1	SOC_GPIO1_49	GPIO	GPIO1_49	MMC1_SDWP	OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
IO EXPANDER - 01										
1	CPSW Ethernet PHY-2 Reset Control GPIO	GPIO_CPSW2_RST	RESET	IO EXPANDER - P00		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
2	CPSW Ethernet PHY-1 Reset Control GPIO	GPIO_CPSW1_RST	RESET	IO EXPANDER - P01		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
3	PRU Board Detection	PRU_DETECT	DETECTION	IO EXPANDER - P02		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
4	SD Card Load Switch Enable	MMC1_SD_EN	ENABLE	IO EXPANDER -P03		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
5	SOC eFuse Voltage(VPP=1.8V) Regulator Enable	VPP_LDO_EN	ENABLE	IO EXPANDER - P04		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
6	EXP CONN 3.3V Power Switch Enable	EXP_PS_3V3_EN	ENABLE	IO EXPANDER - P05		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
7	EXP CONN 5V Power Switch Enable	EXP_PS_5V0_EN	ENABLE	IO EXPANDER - P06		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
8	EXP CONN HAT Board Detection	EXP_HAT_DETECT	DETECTION	IO EXPANDER - P07		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
9	Audio Codec Reset Control GPIO	GPIO_AUD_RSTn	DETECTION	IO EXPANDER - P10		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
10	eMMC Reset control GPIO	GPIO_eMMC_RSTn	RESET	IO EXPANDER - P11		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
11	UART1 FET Switch and Buffer Enable signal	UART1_FET_BUF_EN	ENABLE	IO EXPANDER - P12		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
12	Enable for Wilink Level Translators	WL_LT_EN	ENABLE	IO EXPANDER - P13		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
13	HDMI Transmitter Reset Control GPIO	GPIO_HDMI_RSTn	RESET	IO EXPANDER - P14		OUTPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
14	Raspberry Pi Camera CSIO GPIO1	CSI_GPIO1	INPUT/OUTPUT	IO EXPANDER - P15		NA	NA	NA	VDDSHV0	SoC_DVDD3V3
15	Raspberry Pi Camera CSIO GPIO2	CSI_GPIO2	INPUT/OUTPUT	IO EXPANDER - P16		NA	NA	NA	VDDSHV0	SoC_DVDD3V3
16	PRU Power Switch Enable	PRU_3V3_EN	ENABLE	IO EXPANDER - P17		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
17	HDMI Interrupt	HDMI_INTn	INTERRUPT	IO EXPANDER - P20		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
18	PD Controller Interrupt	PD_I2C_IRQ	INTERRUPT	IO EXPANDER - P21		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
19	MCASP1 FET Switch Enable	MCASP1_FET_EN	ENABLE	IO EXPANDER - P22		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
20	MCASP1 Level Translator buffer for BT Enable	MCASP1_BUF_BT_EN	ENABLE	IO EXPANDER - P23		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
21	MCASP1 FET Switch select pin status	MCASP1_FET_SEL	GPIO	IO EXPANDER - P24		INPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
22	SOC UART1 FET Switch Select	UART1_FET_SEL	SELECT	IO EXPANDER - P25		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3
23	OLDI Display Touch Interrupt	TS_INT#	INTERRUPT	IO EXPANDER - P26		INPUT	HIGH	LOW	VDDSHV0	SoC_DVDD3V3
24	User Test LED 2	IO_EXP_TEST_LED	GPIO	IO EXPANDER - P27		OUTPUT	LOW	HIGH	VDDSHV0	SoC_DVDD3V3

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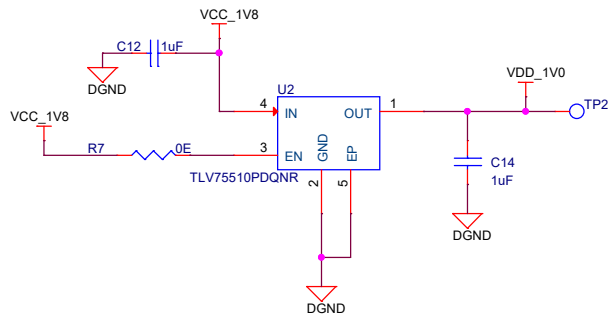
PERIPHERAL POWER SUPPLY

VinMin = 4.5V
 VinMax = 24V
 Vout = 3.3V @ 6A

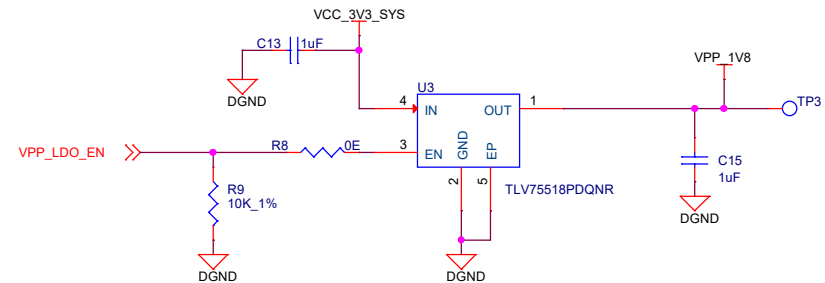
3.3V, 6.0AMPS SUPPLY



1.0V, 0.5AMPS SUPPLY (ETHERNET)



1.8V VPP, 0.5AMPS SUPPLY

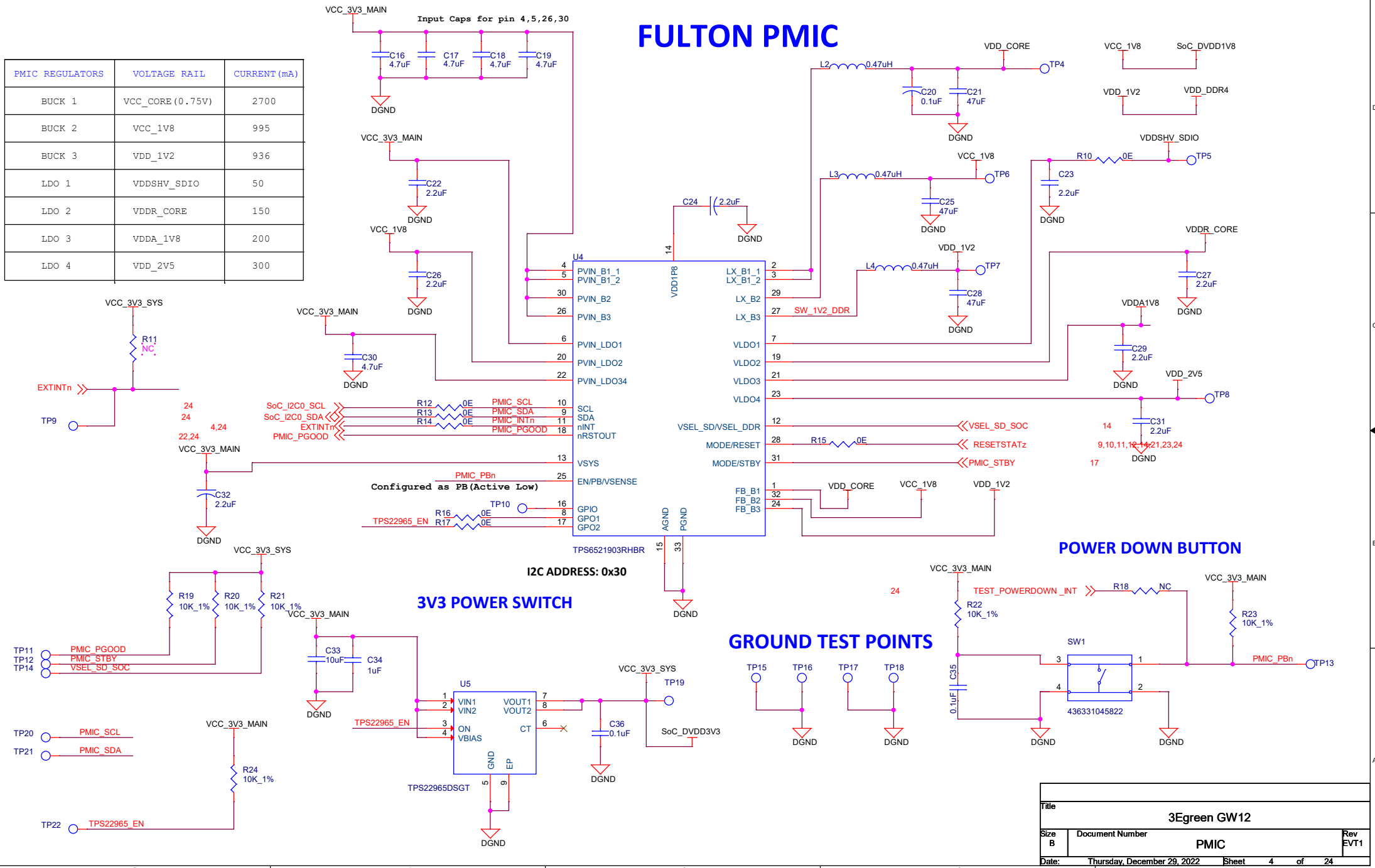


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PMIC REGULATORS	VOLTAGE RAIL	CURRENT (mA)
BUCK 1	VCC_CORE (0.75V)	2700
BUCK 2	VCC_1V8	995
BUCK 3	VDD_1V2	936
LDO 1	VDDSHV_SDIO	50
LDO 2	VDDR_CORE	150
LDO 3	VDDA_1V8	200
LDO 4	VDD_2V5	300

FULTON PMIC

Input Caps for pin 4,5,26,30



3V3 POWER SWITCH

GROUND TEST POINTS

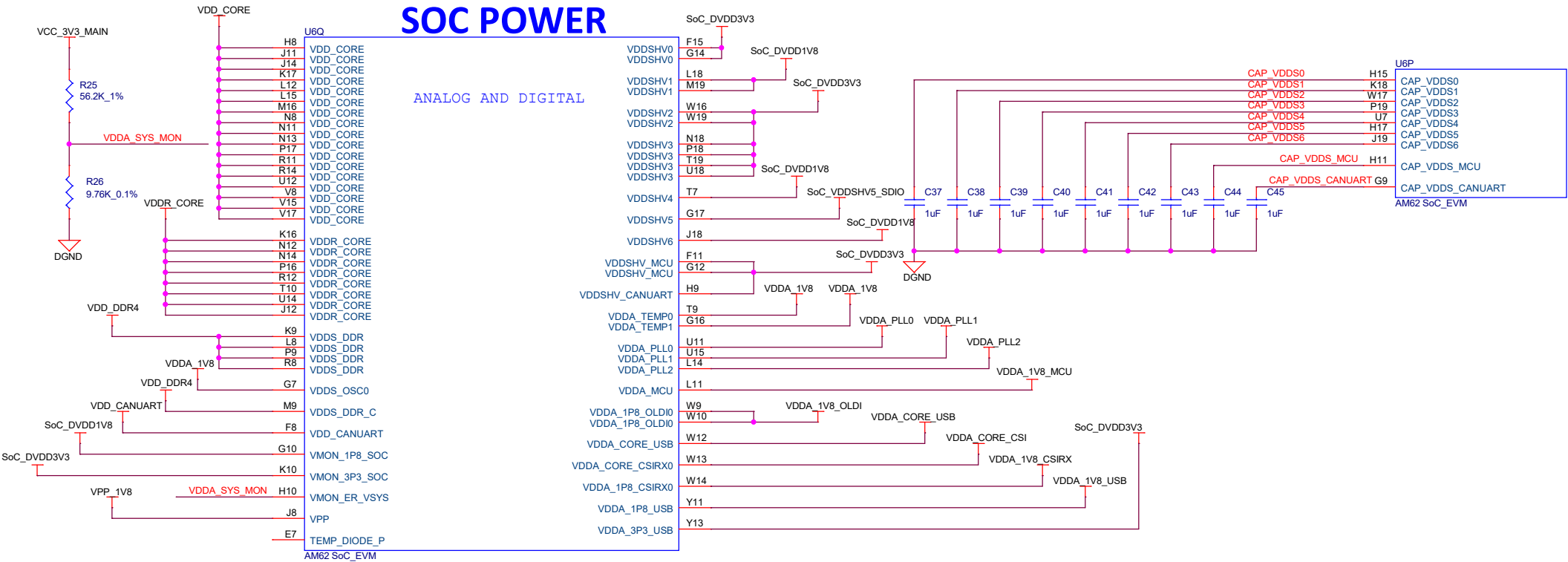
POWER DOWN BUTTON

I2C ADDRESS: 0x30

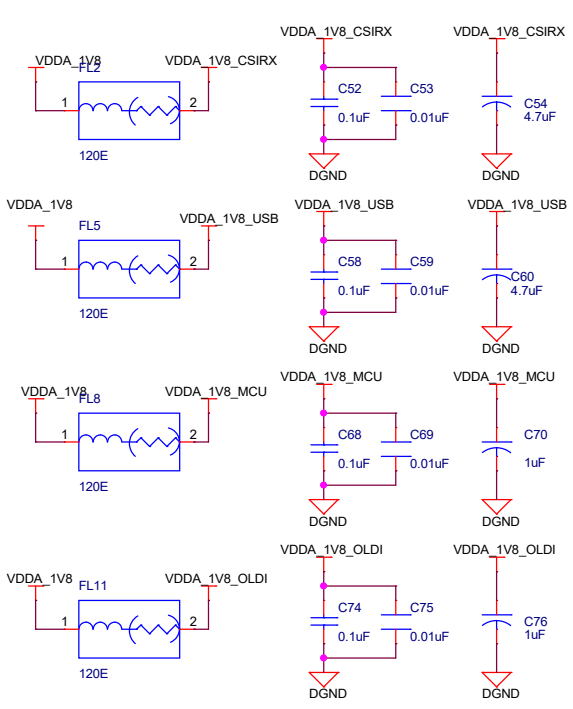
Configured as PB (Active Low)

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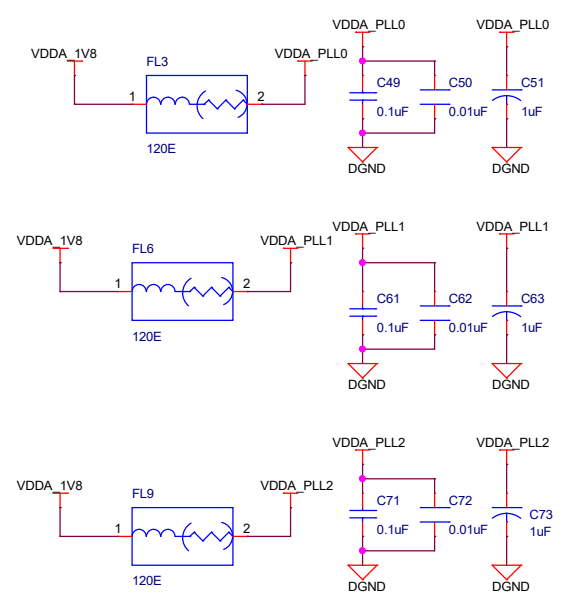
SOC POWER



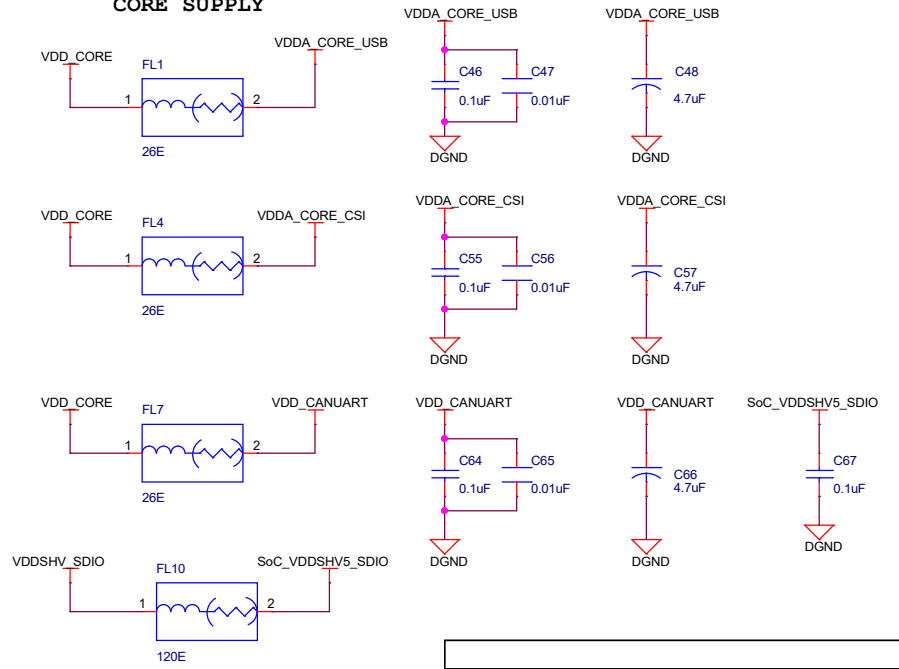
1.8V Analog SUPPLY



3.3V/1.8V MMC1 SUPPLY

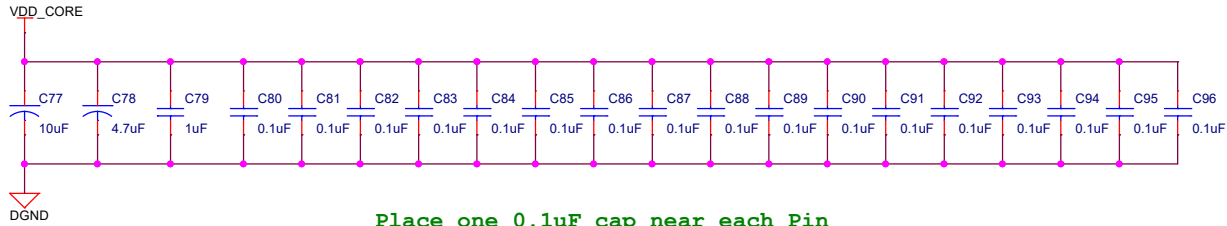


CORE SUPPLY

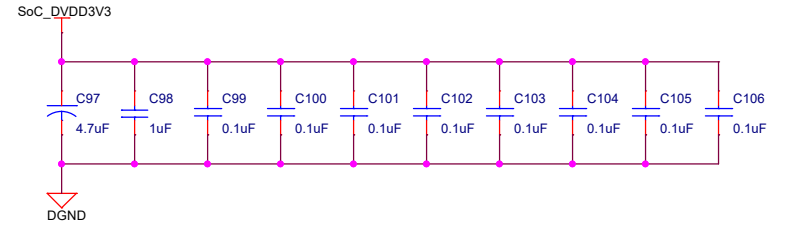


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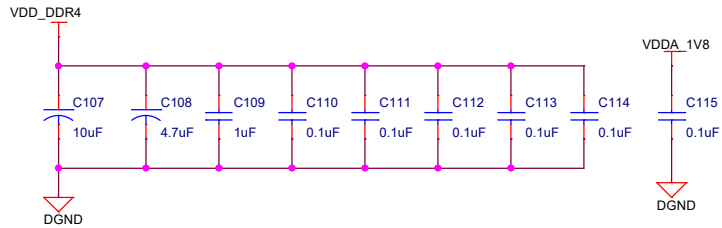
SOC POWER DECAPS



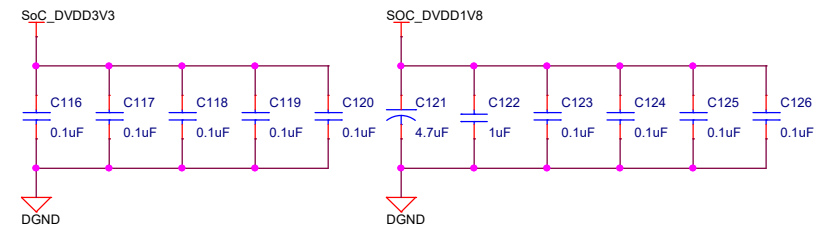
Place one 0.1uF cap near each Pin



Place one 0.1uF cap near each Pin

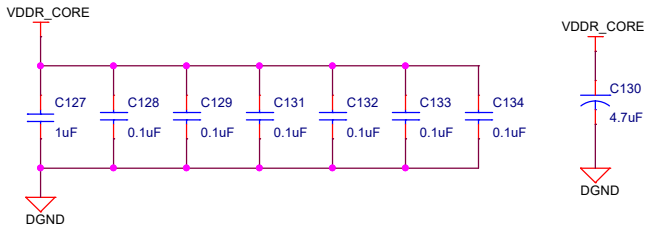
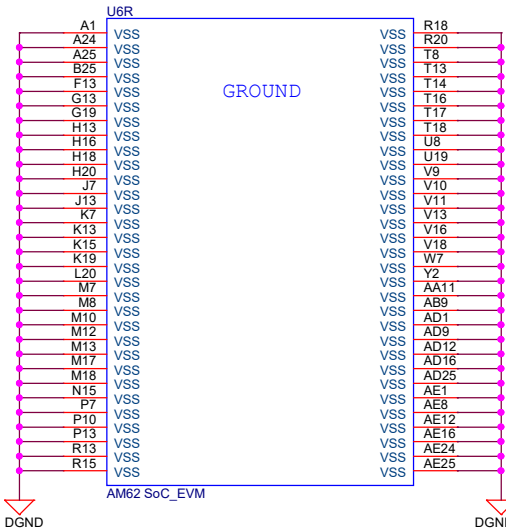


Place one 0.1uF cap near each Pin



Place one 0.1uF cap near each Pin

SOC VSS

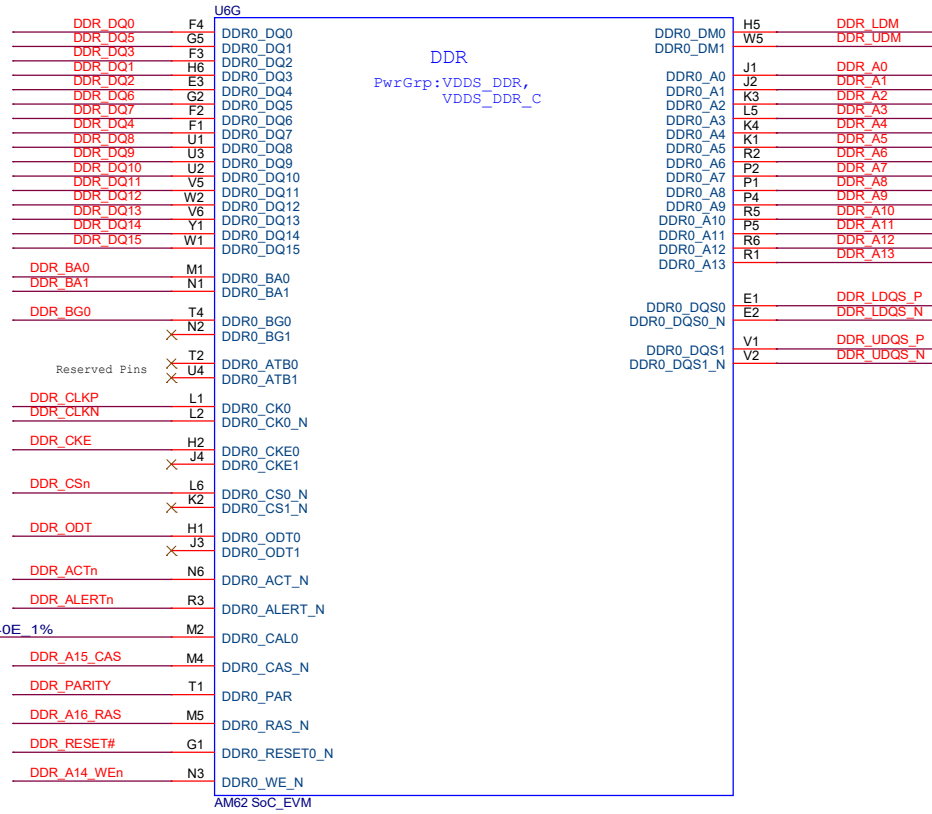


Place one 0.1uF cap near each Pin

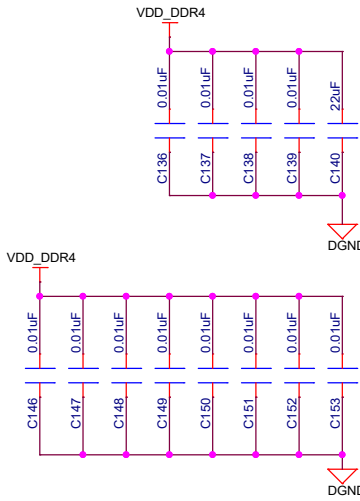
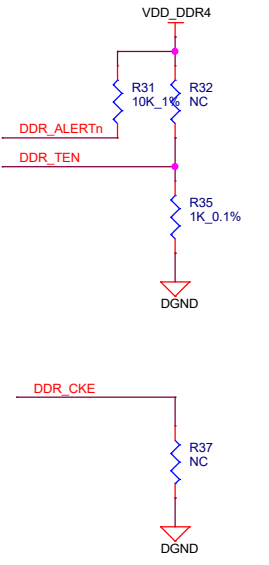
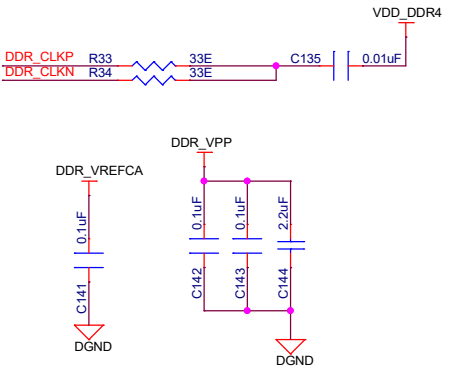
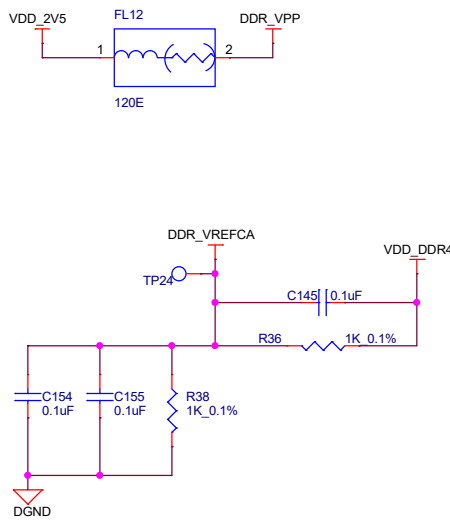
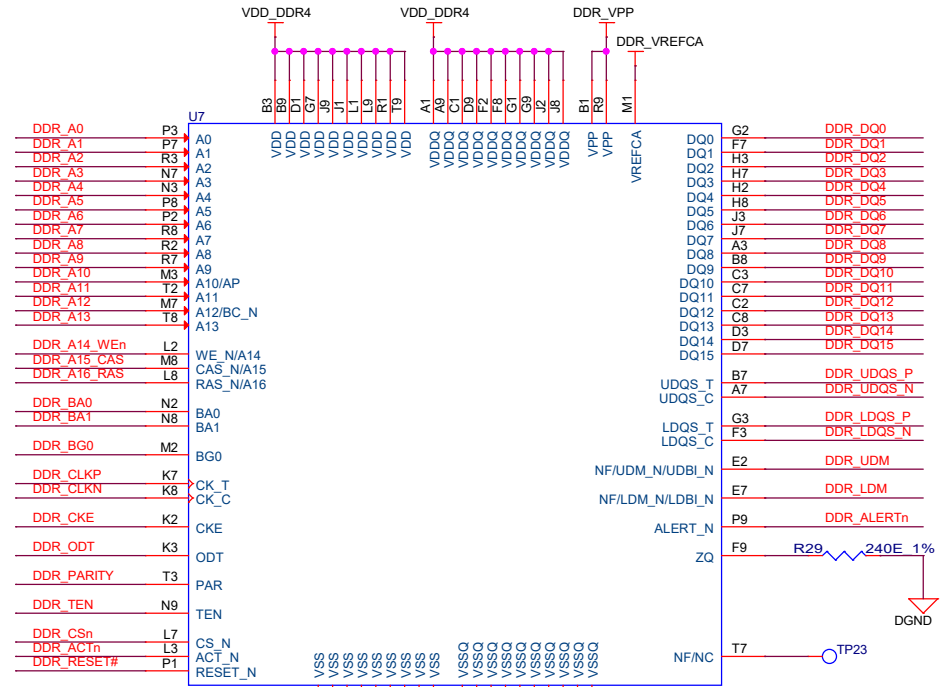
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SOC DDR INTERFACE

NOTE: DDR DQ Lines Swapped
Within Data Byte

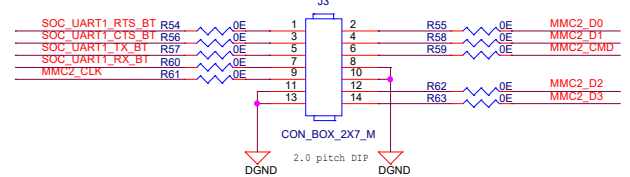
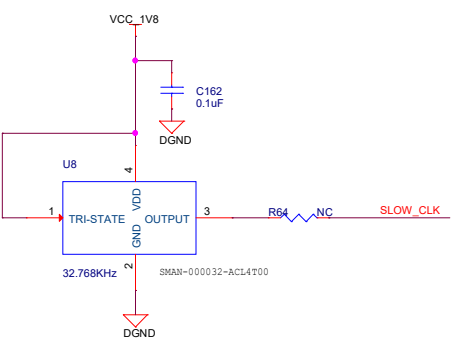
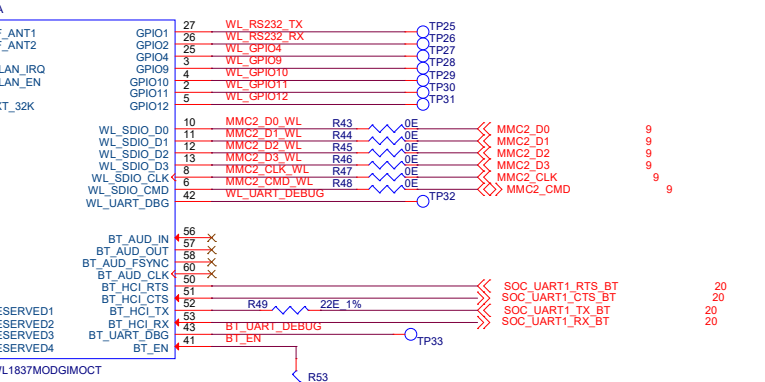
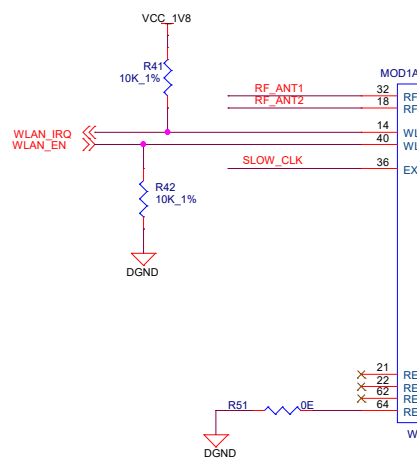
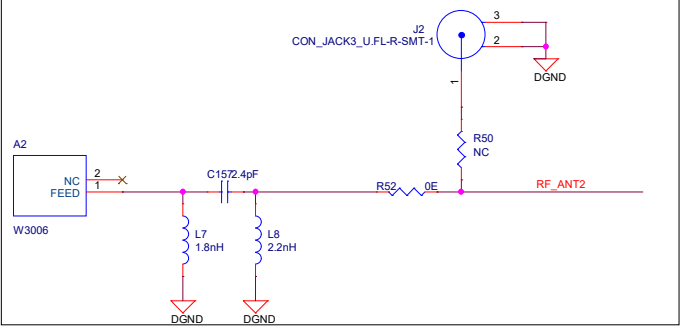
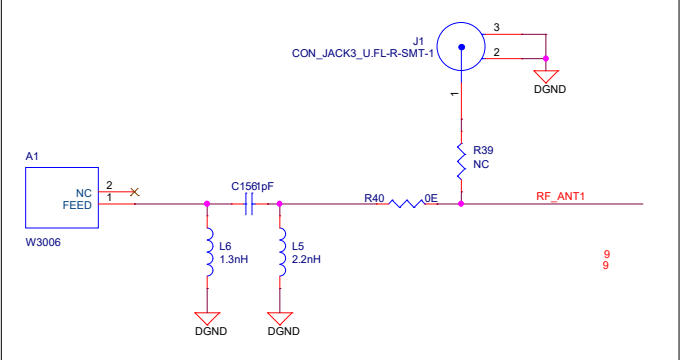


DDR4 DEVICE

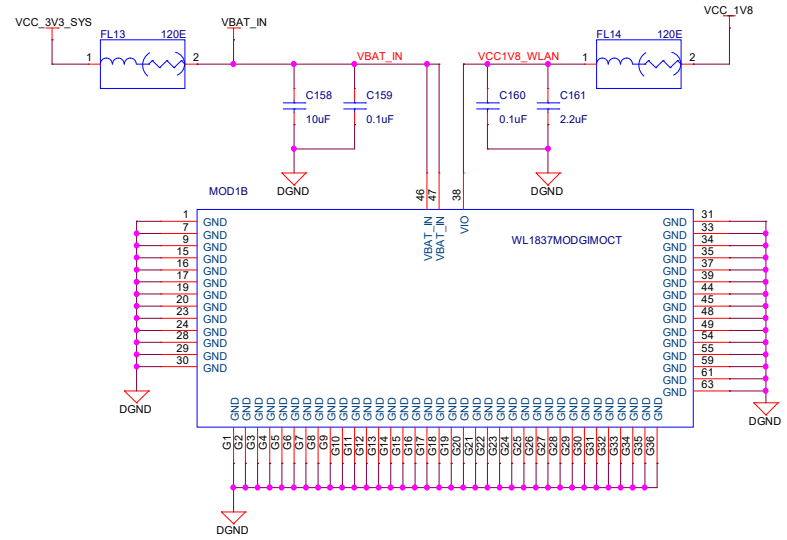


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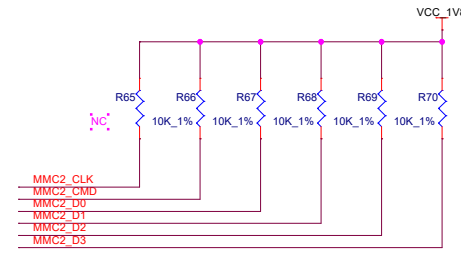
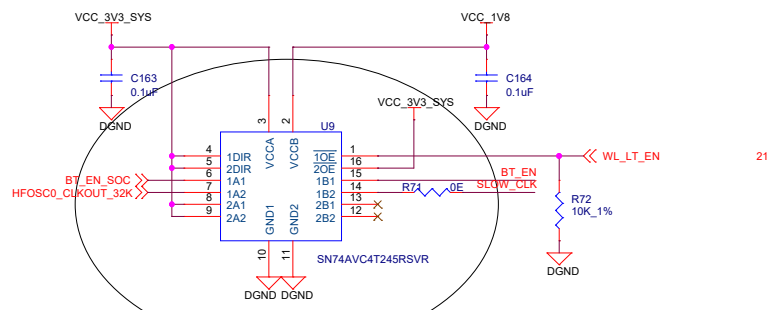
WL1837 MODULE



Place Series resistors for MMC2 signals as Tripad to avoid stub.

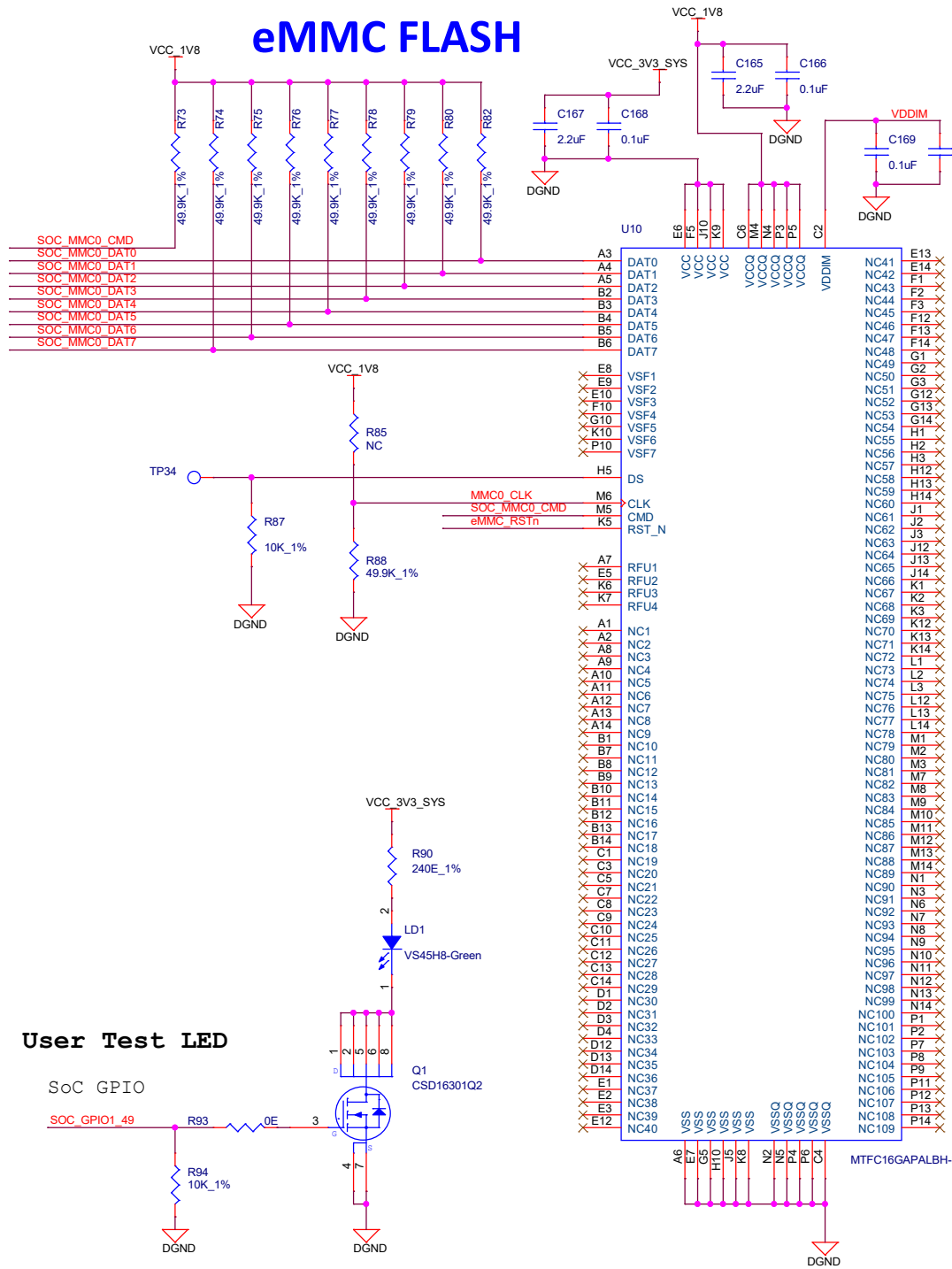


WILINK LEVEL TRANSLATOR

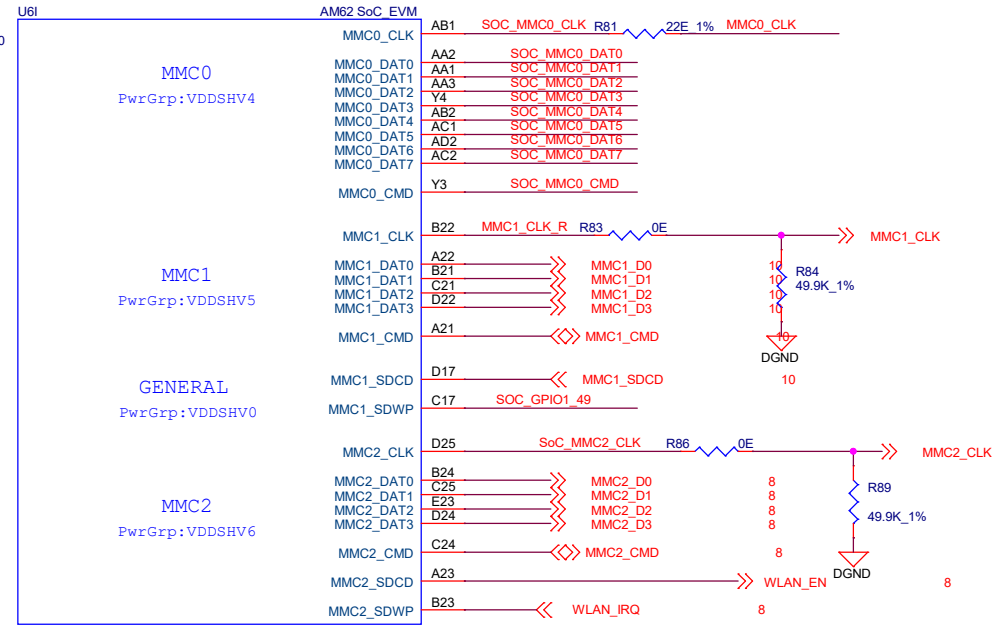


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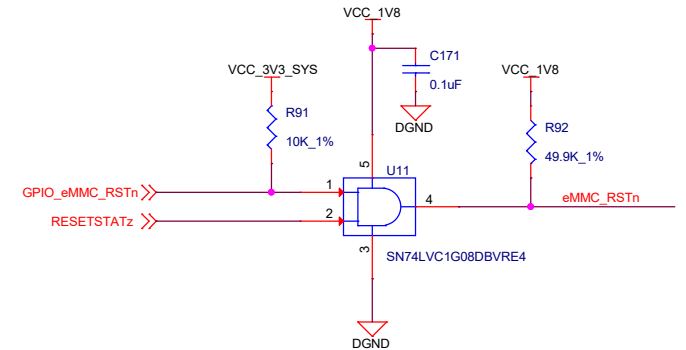
eMMC FLASH



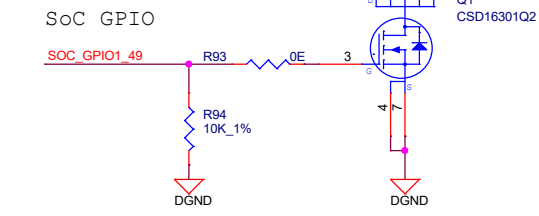
SOC - MMC Interface



eMMC FLASH RESET



User Test LED

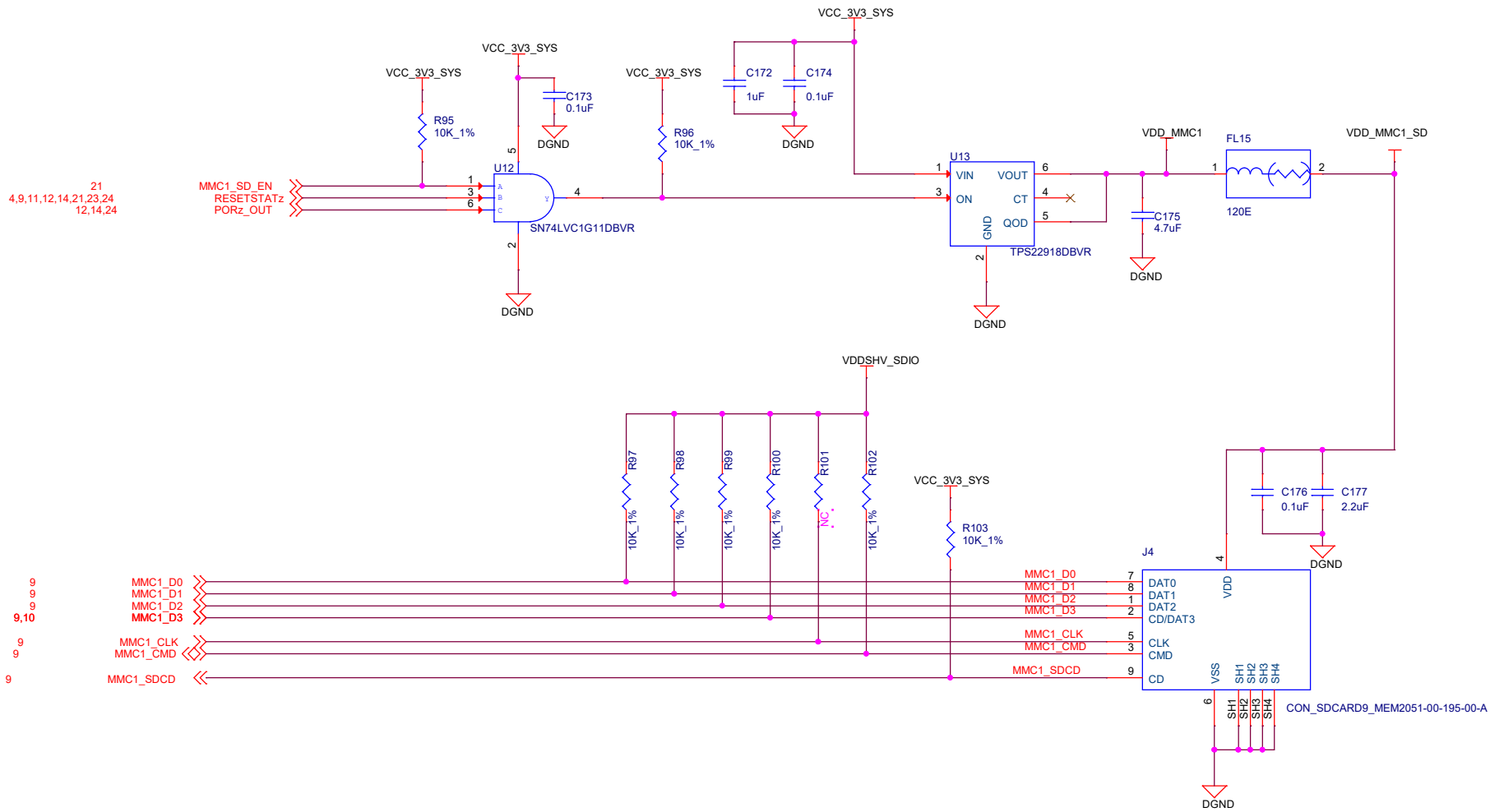


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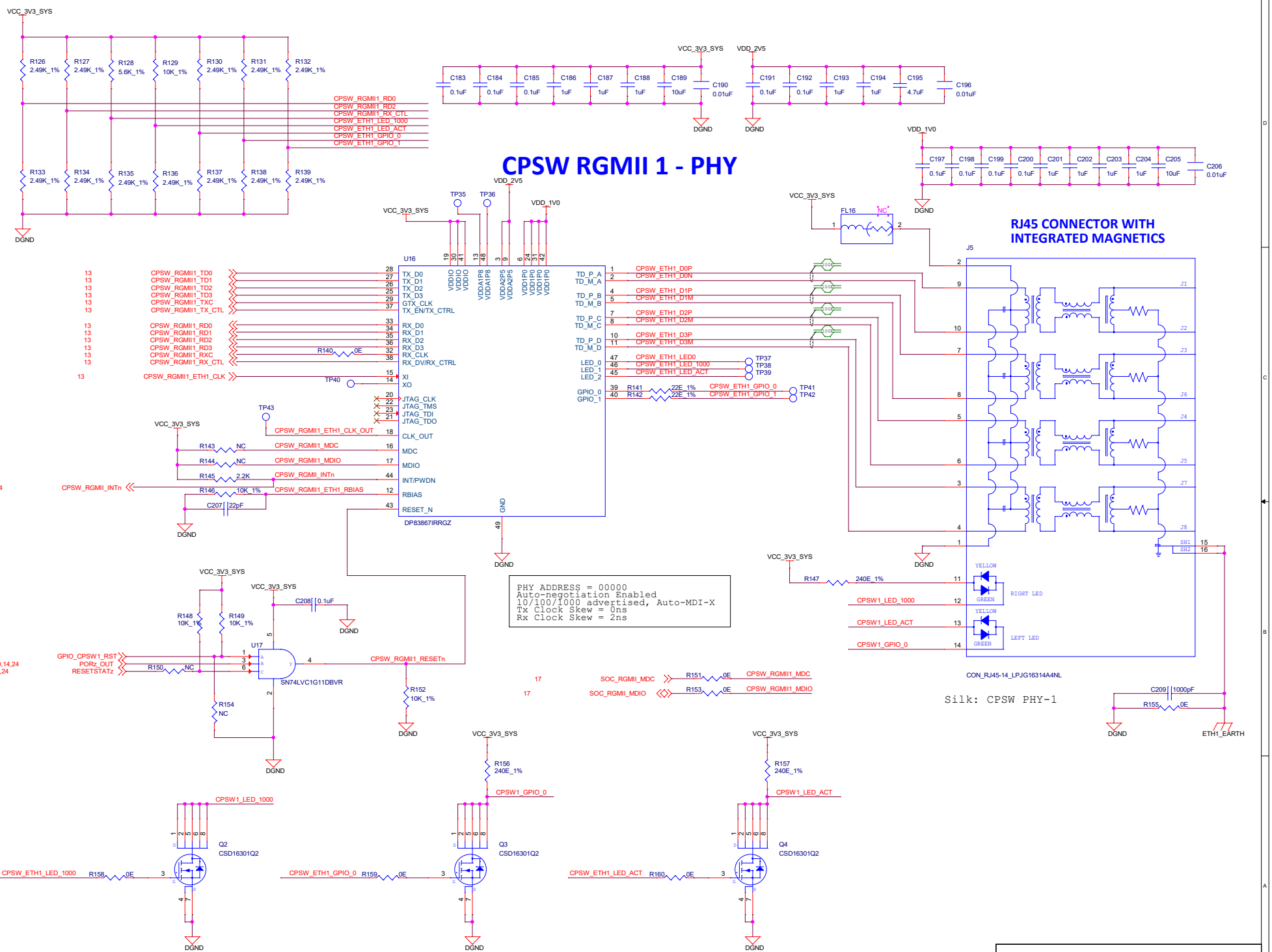
SD CARD INTERFACE

SD CARD RESET

LOAD SWITCH

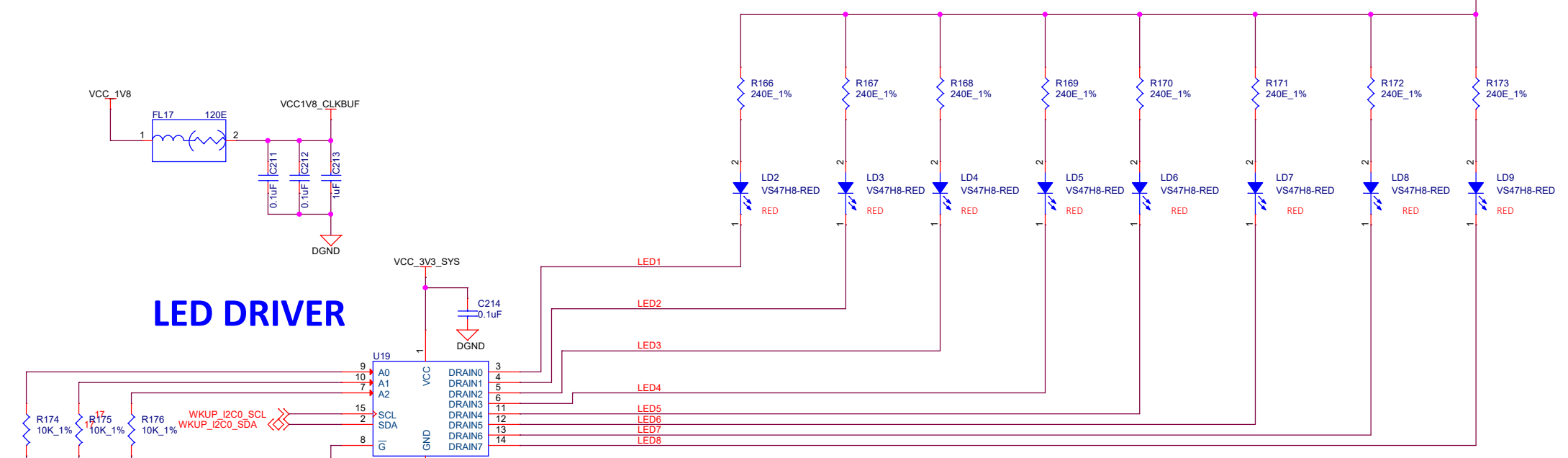
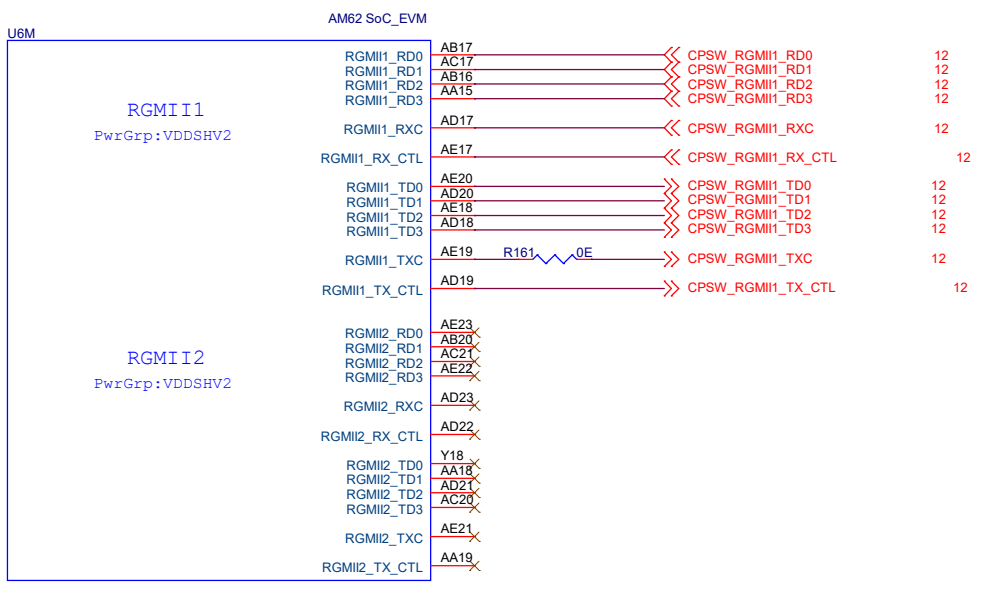


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ETHERNET PHY CLOCK BUFFER

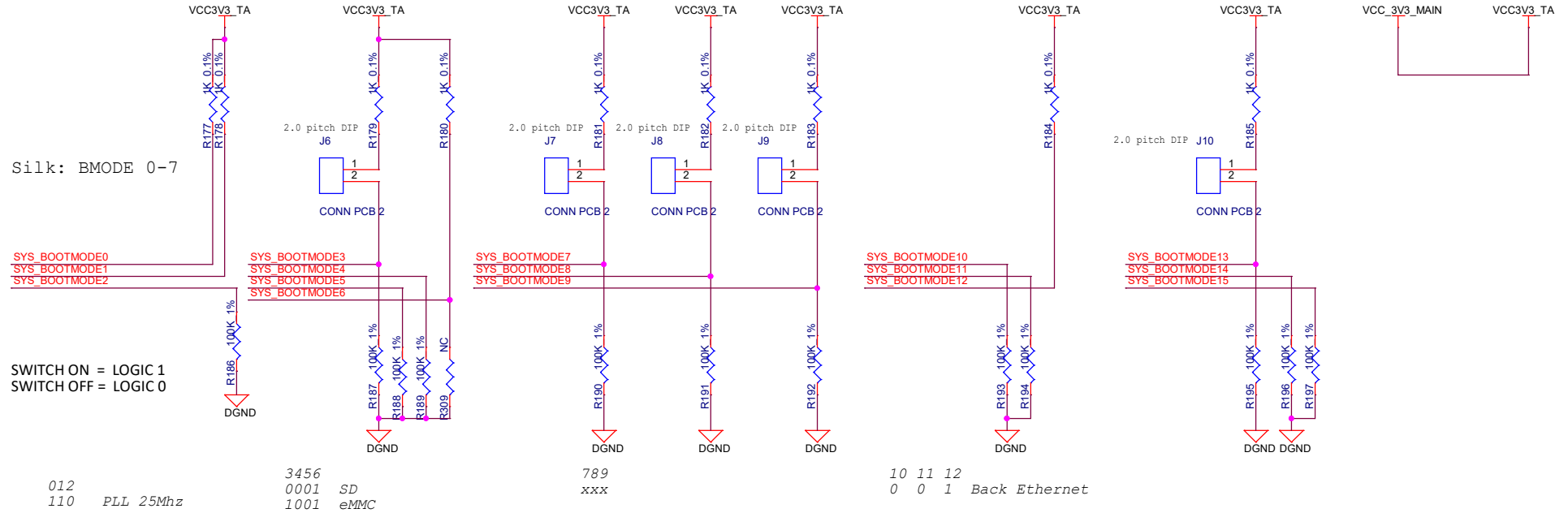


LED DRIVER

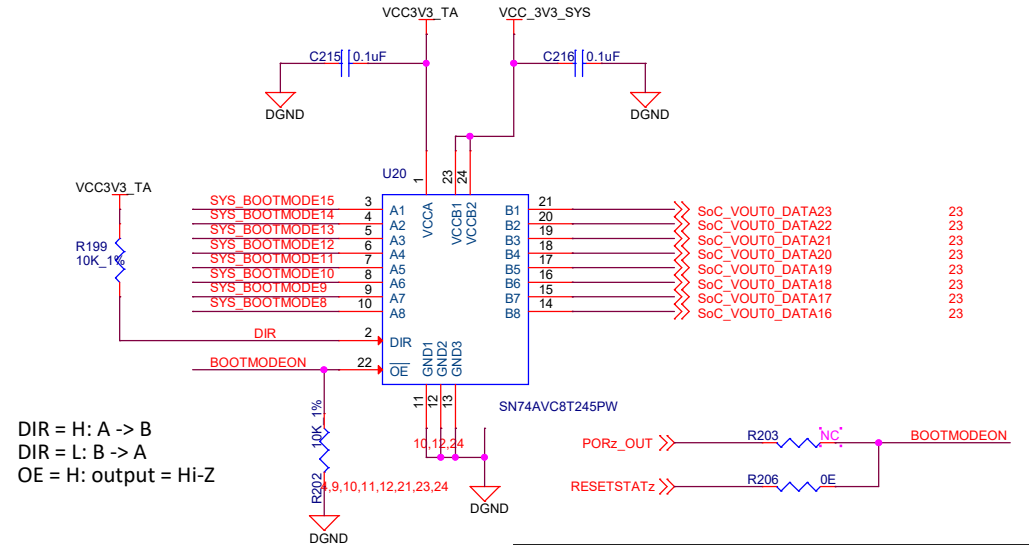
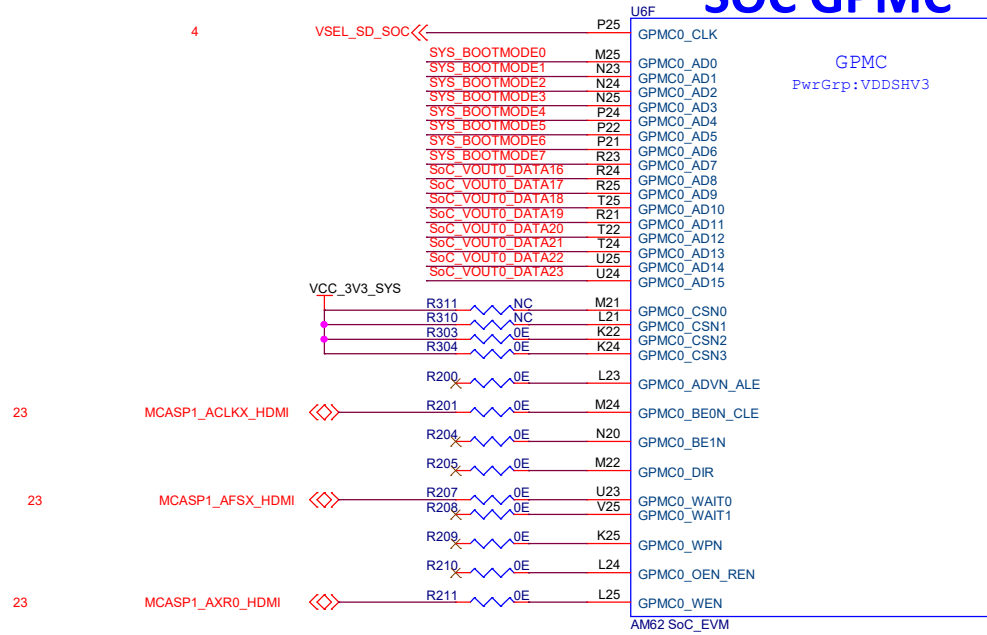
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BOOT MODE Setting

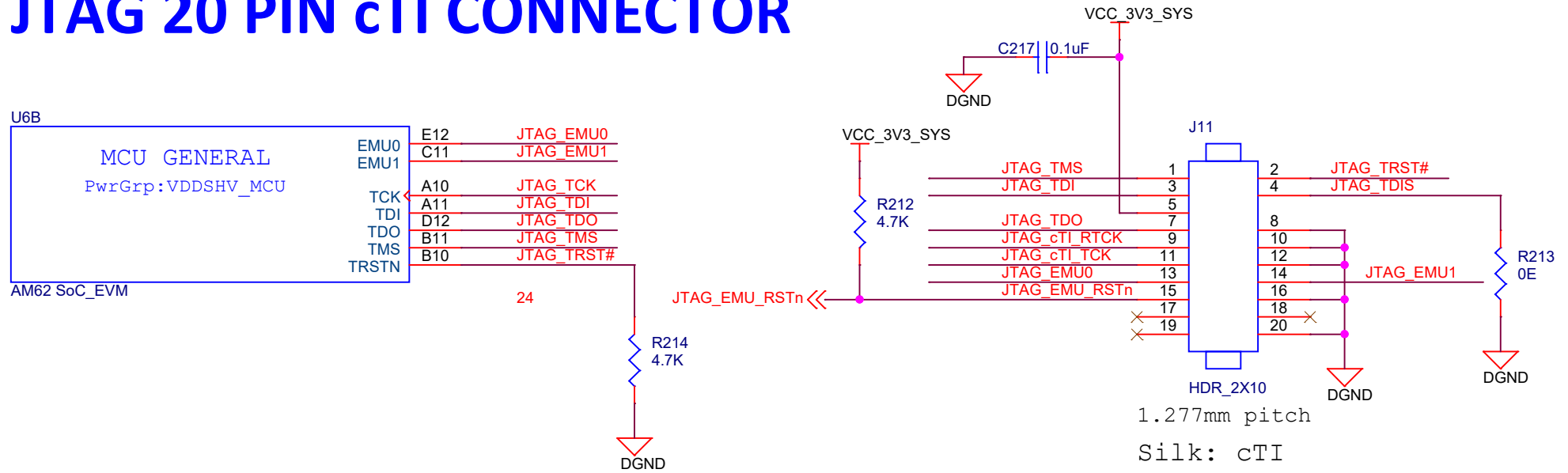


SOC GPMC

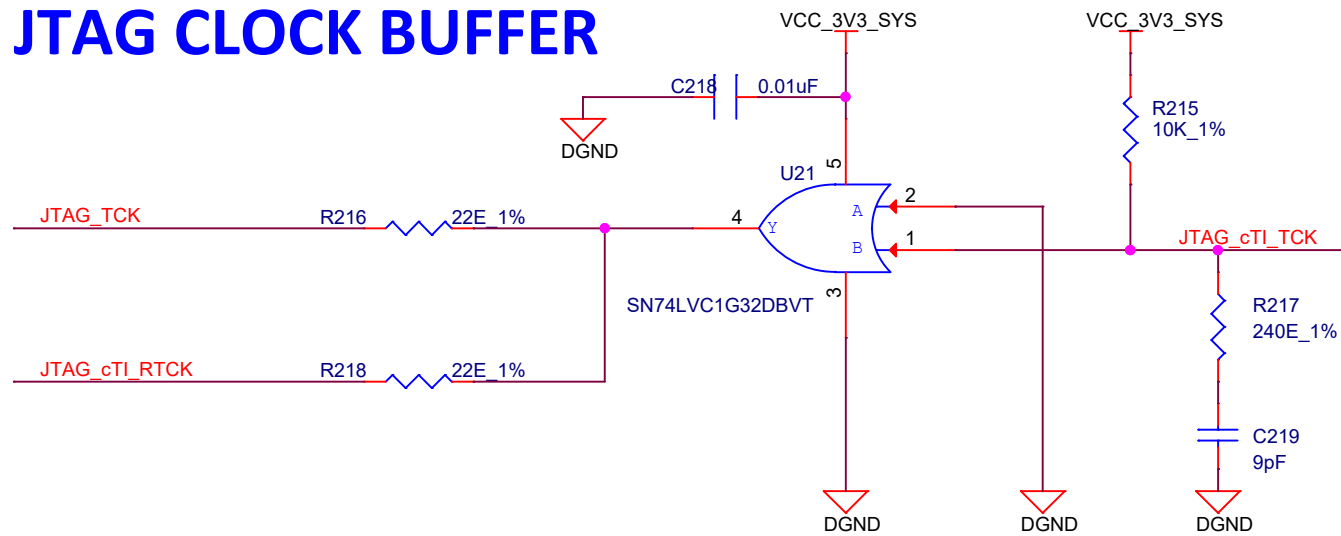


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JTAG 20 PIN cTI CONNECTOR

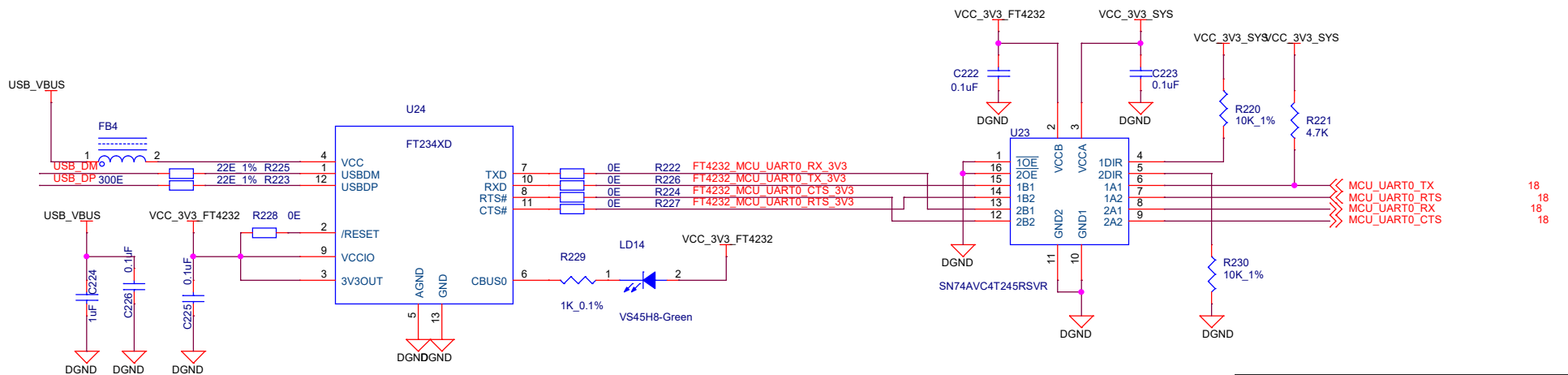
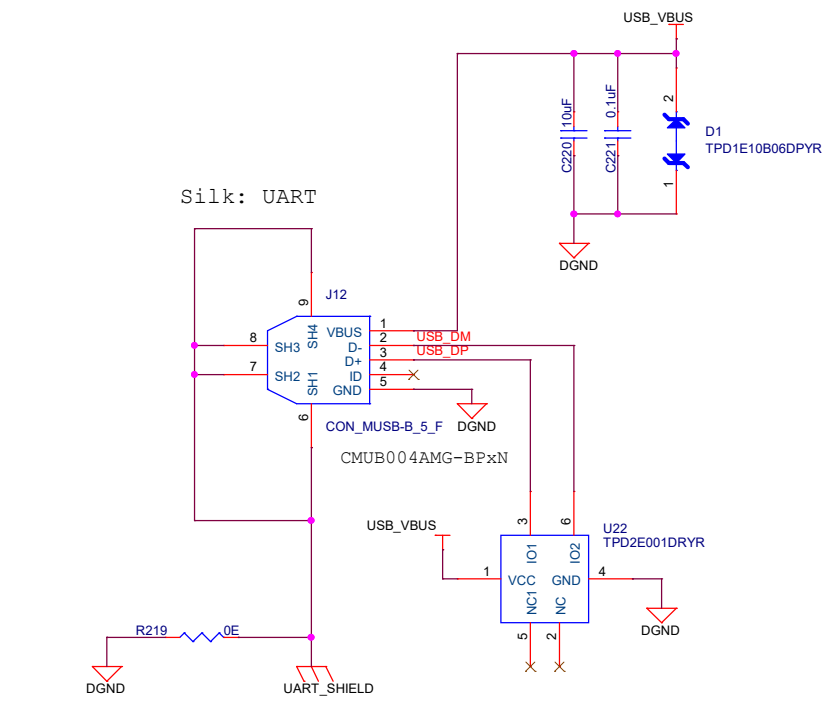


JTAG CLOCK BUFFER



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Silk: UART

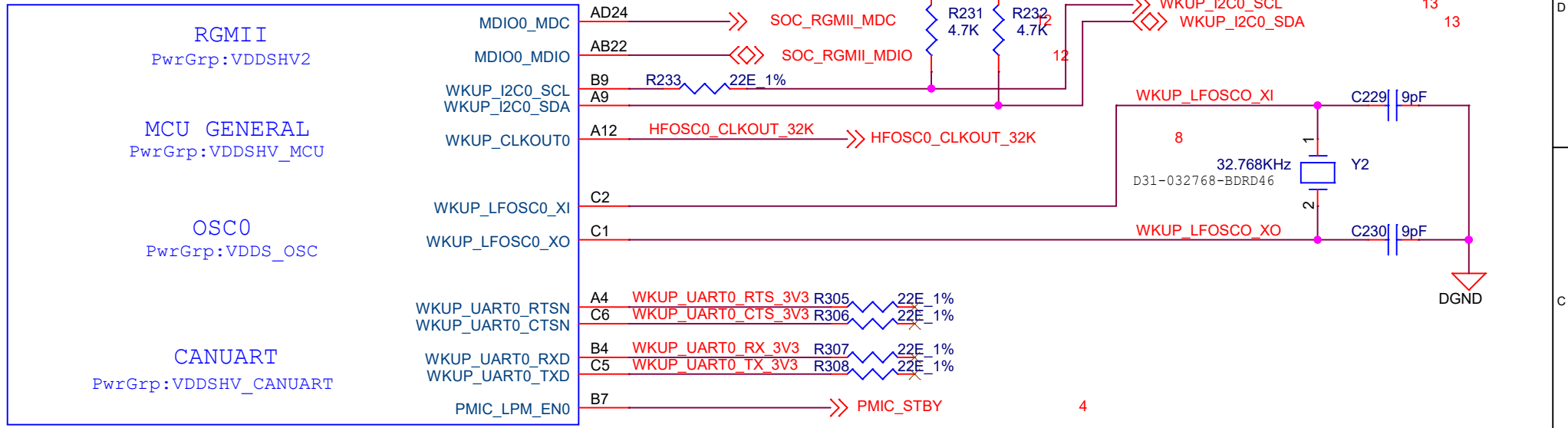


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SOC WKUP DOMAIN

U60

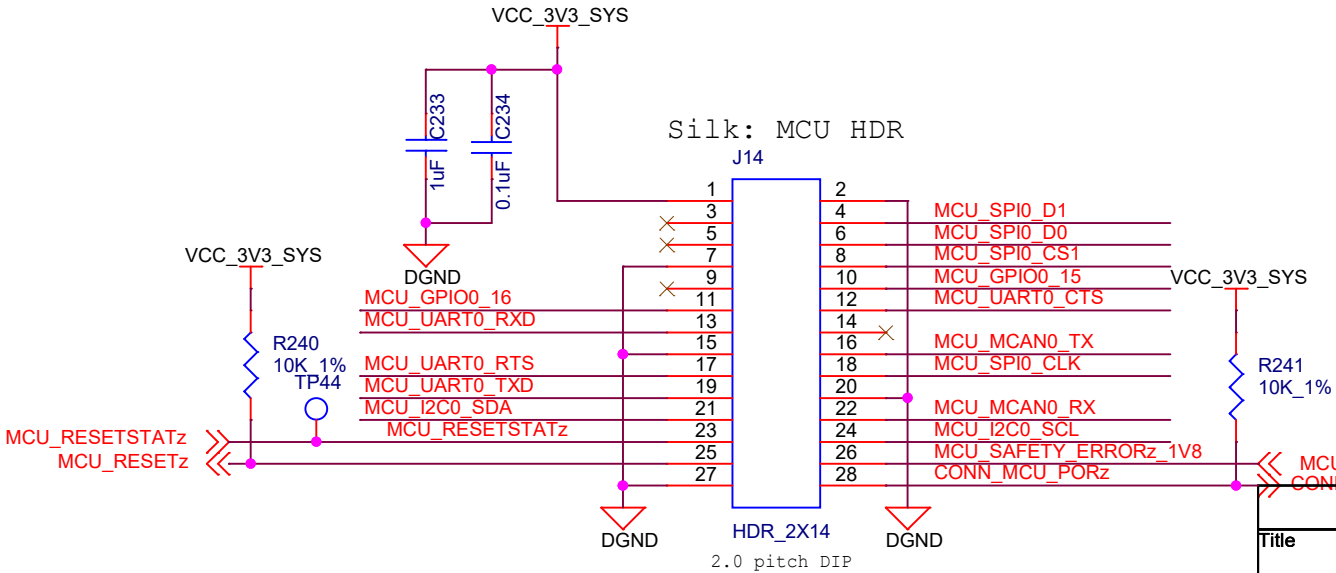
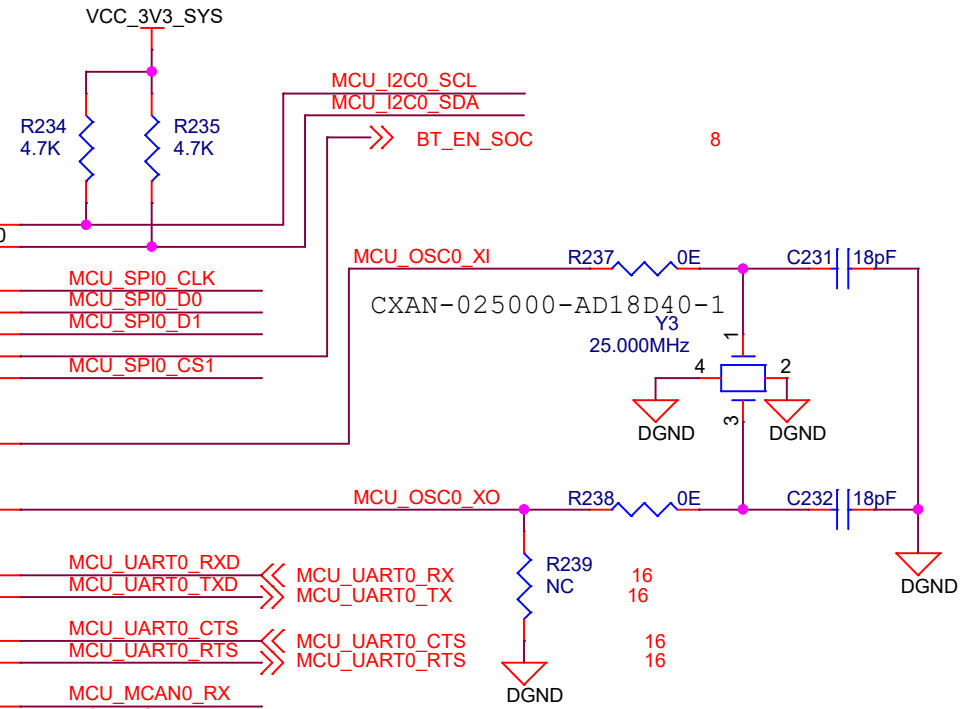
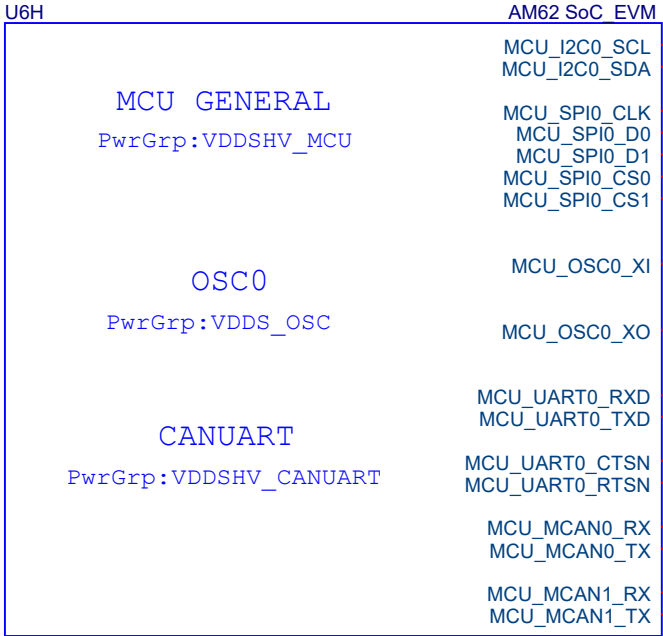
AM62 SoC_EVM



Silk: cTI

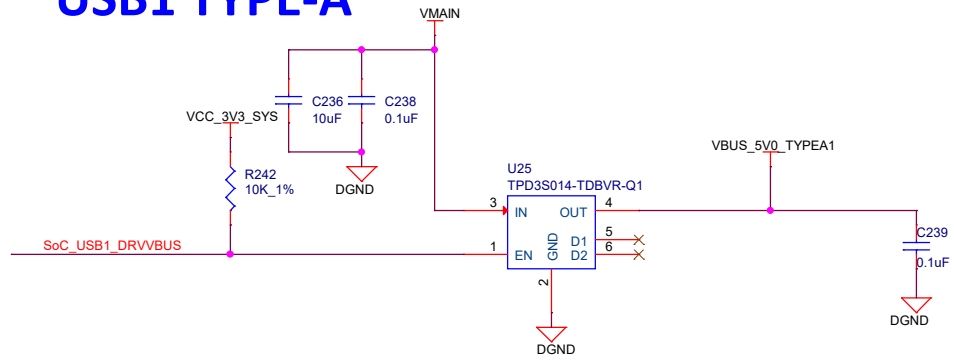
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SOC - MCU DOMAIN

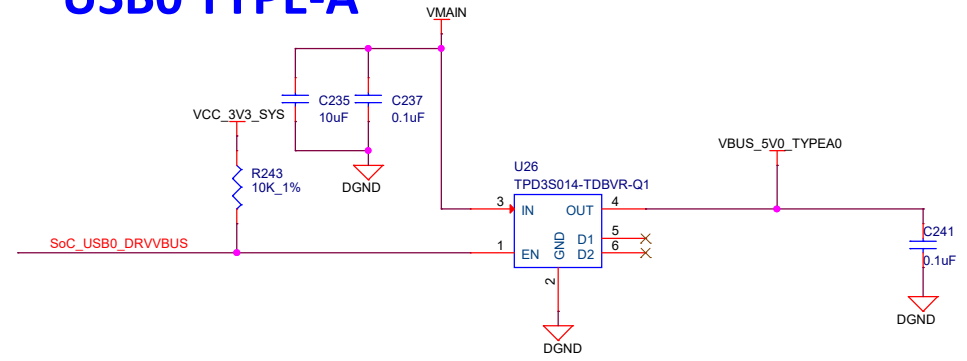


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USB1 TYPE-A

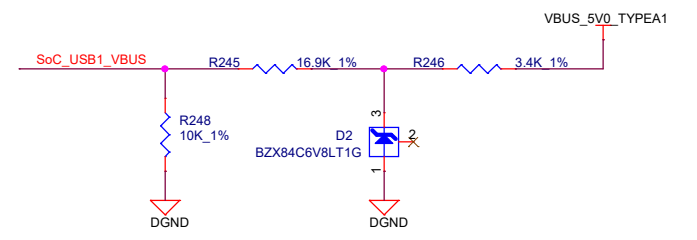
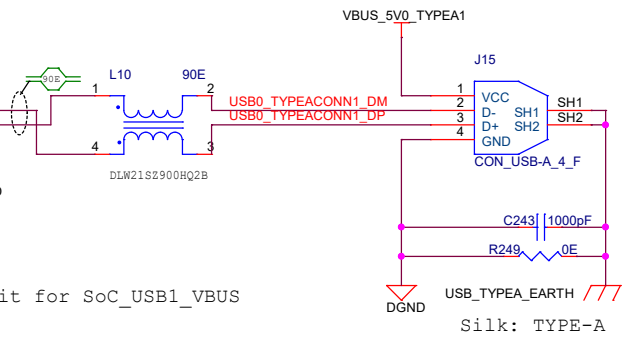


USB0 TYPE-A

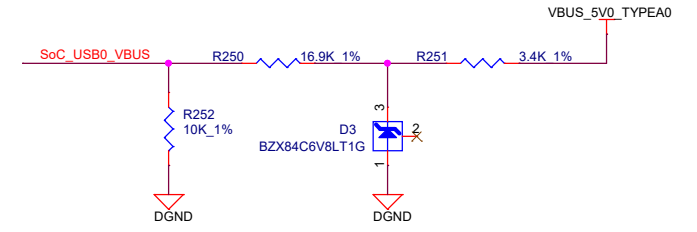
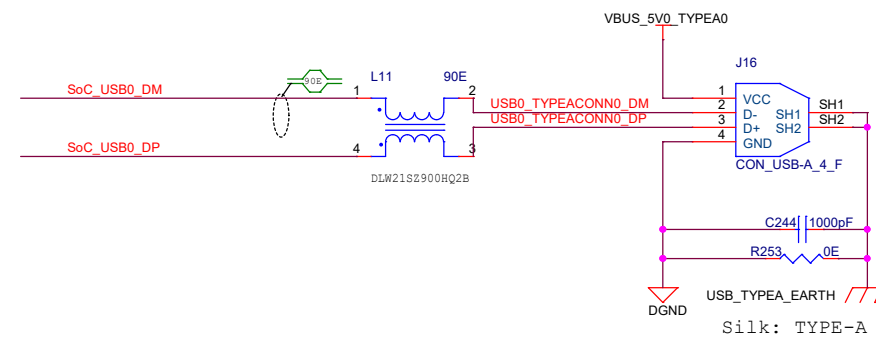


U6D	
USB0	
PwrGrp:VDDA_1P8_USB, VDDA_3P3_USB	USB0_DP AD11 SoC_USB0_DP
	USB0_DM AE11 SoC_USB0_DM
	USB0_RCALIB AE10 R244 499E 0.1%
	USB0_VBUS AC11 SoC_USB0_VBUS
USB1	
PwrGrp:VDDA_1P8_USB, VDDA_3P3_USB	USB1_DP AE9 SoC_USB1_DP
	USB1_DM AD10 SoC_USB1_DM
	USB1_RCALIB AC9 R247 499E 0.1%
	USB1_VBUS AB10 SoC_USB1_VBUS
GENERAL	
PwrGrp:VDDSHV0	USB0_DRVVBUS C20 SoC_USB0_DRVVBUS
	USB1_DRVVBUS F18 SoC_USB1_DRVVBUS

Note: Recommended VBUS circuit for SoC_USB1_VBUS

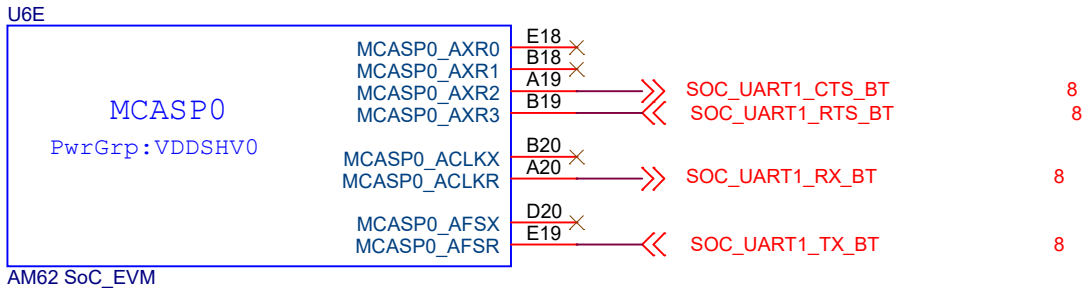
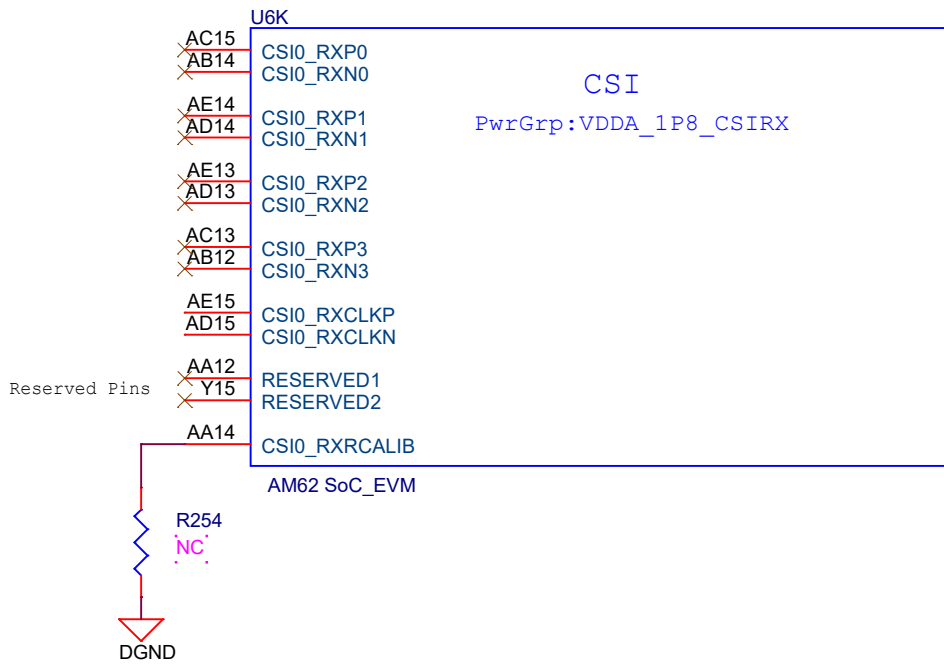
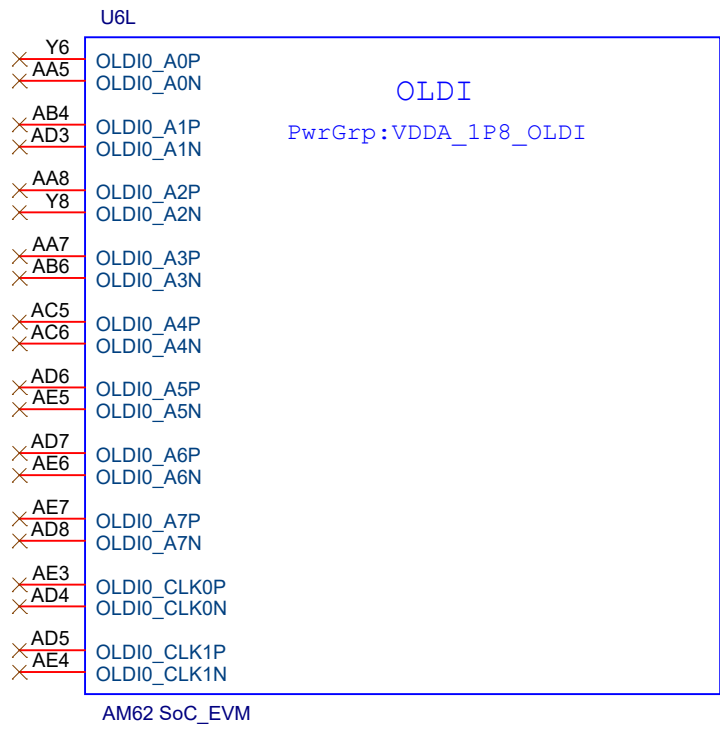


Silk: TYPE-A



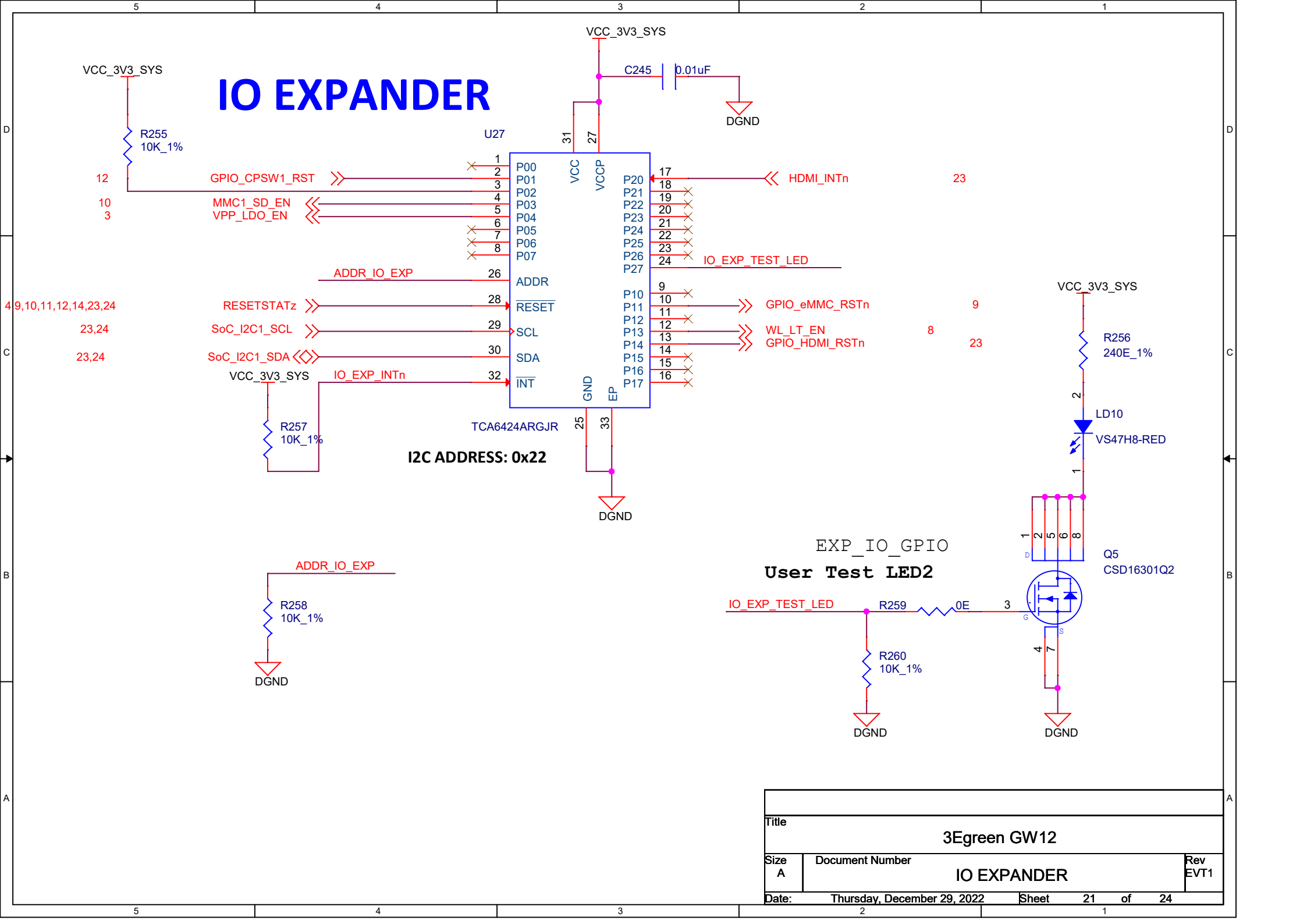
Silk: TYPE-A

Title		
3Egreen GW12		
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	USB1 TYPE-A	EVT1
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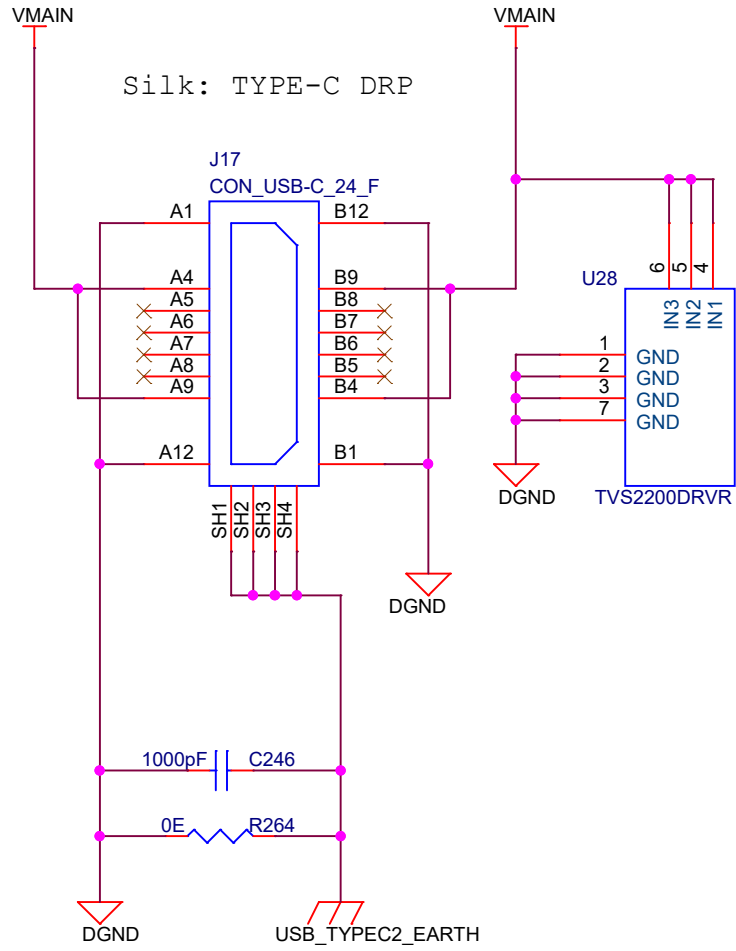
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Size A	Document Number	Rev	
	CSI	EVT1	
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IO EXPANDER



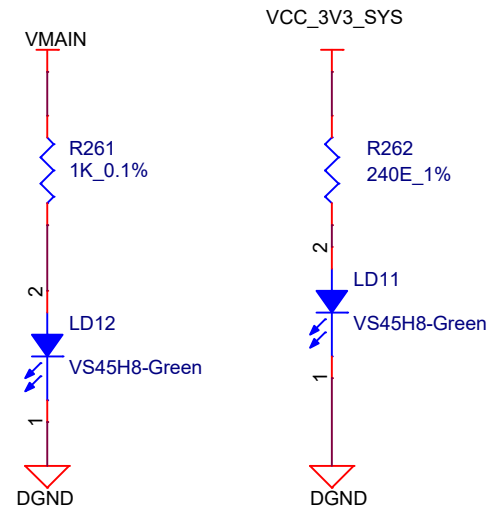
Title		
3Egreen GW12		
Size A	Document Number	Rev EVT1
IO EXPANDER		
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POWER USB0 TYPE-C

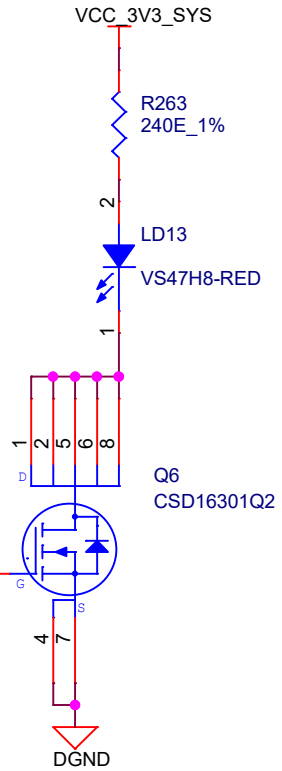


Silk: TYPE-C DRP

POWER INDICATION LED: VBUS_TYPEC2



POWER RAIL LEDS



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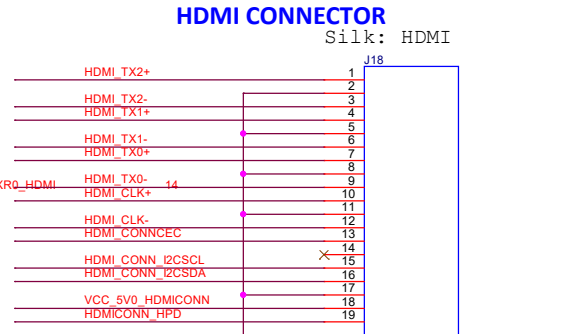
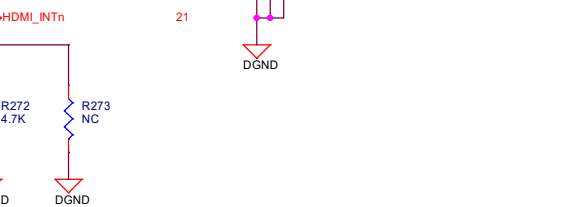
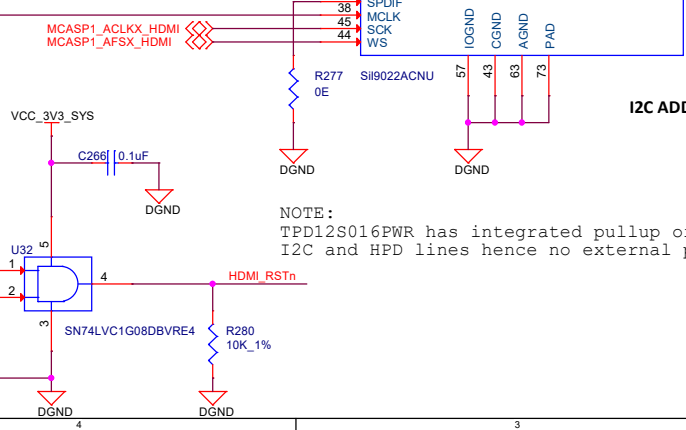
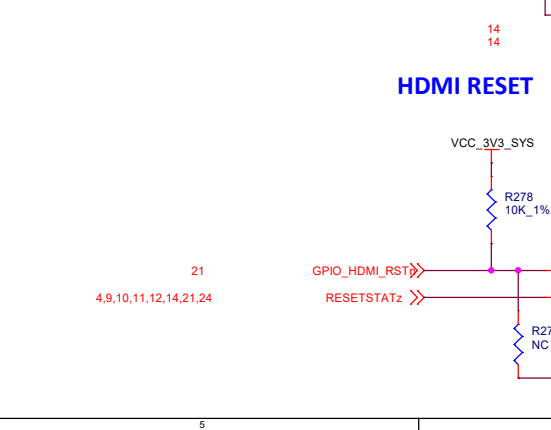
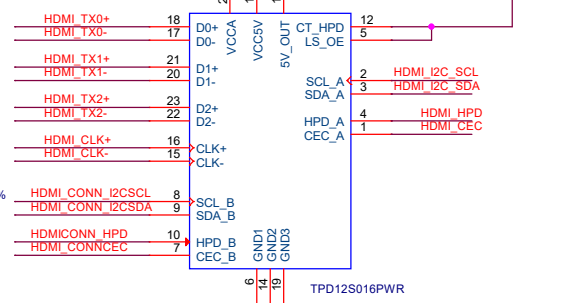
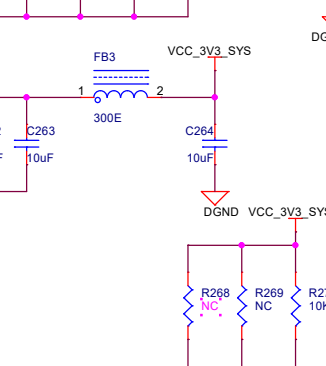
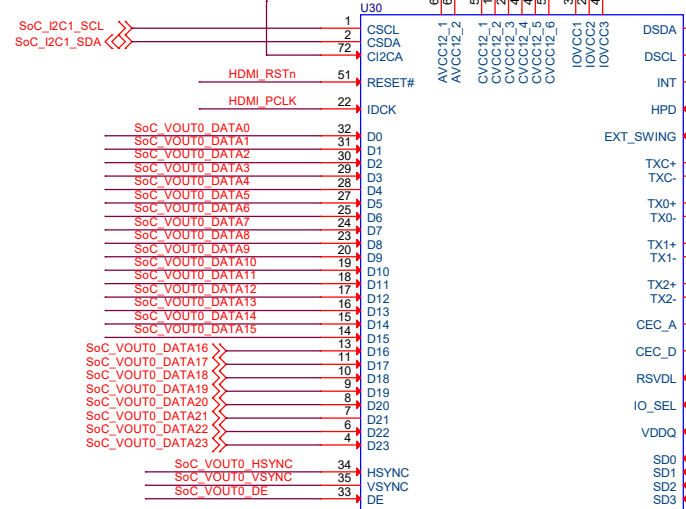
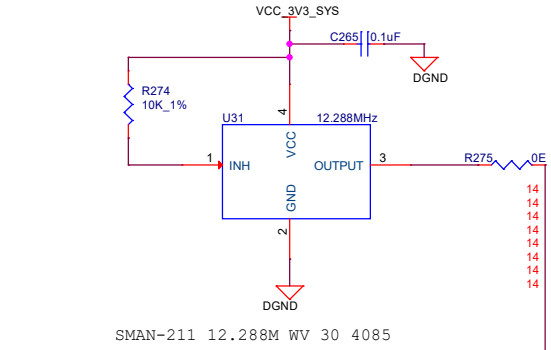
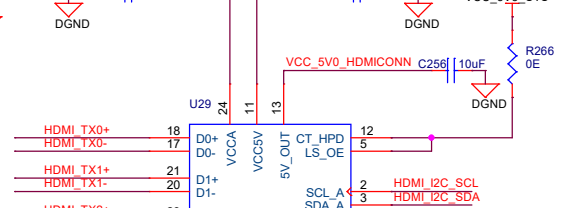
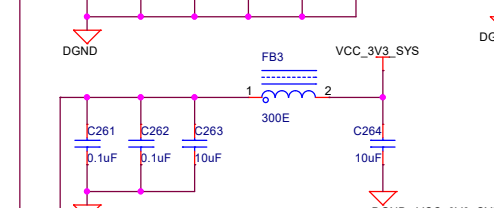
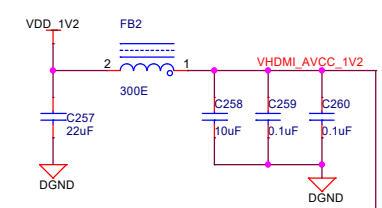
PMIC_PGOOD

Title		
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	POWER USB0 TYPE-C	EVT1
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HDMI INTERFACE

U6N AM62 SoC_EVM

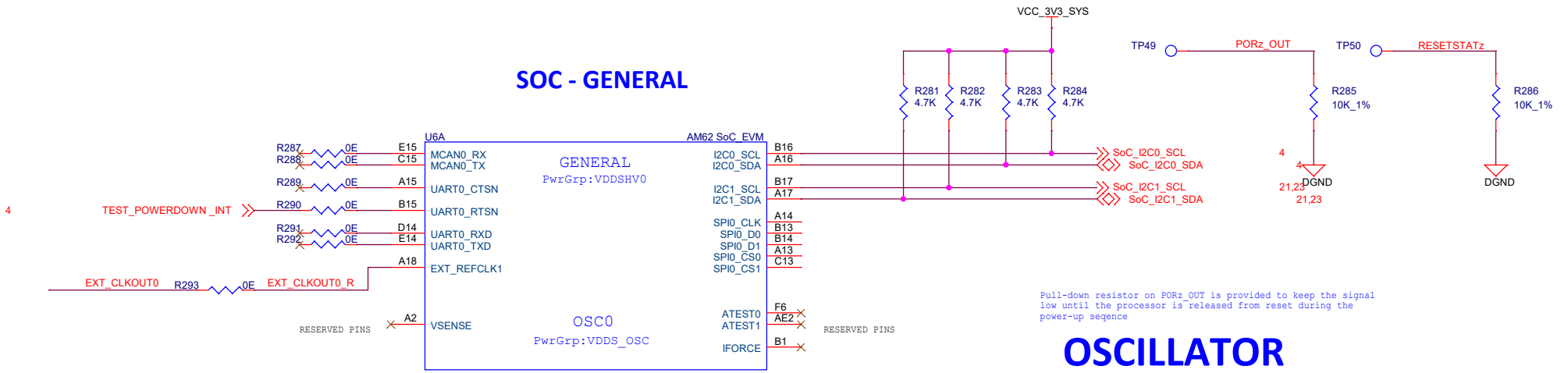
VOUT0_DATA0	U22	SoC_VOUT0_DATA0
VOUT0_DATA1	V24	SoC_VOUT0_DATA1
VOUT0_DATA2	W25	SoC_VOUT0_DATA2
VOUT0_DATA3	W24	SoC_VOUT0_DATA3
VOUT0_DATA4	Y25	SoC_VOUT0_DATA4
VOUT0_DATA5	Y24	SoC_VOUT0_DATA5
VOUT0_DATA6	Y23	SoC_VOUT0_DATA6
VOUT0_DATA7	AA25	SoC_VOUT0_DATA7
VOUT0_DATA8	V21	SoC_VOUT0_DATA8
VOUT0_DATA9	W21	SoC_VOUT0_DATA9
VOUT0_DATA10	V20	SoC_VOUT0_DATA10
VOUT0_DATA11	AA23	SoC_VOUT0_DATA11
VOUT0_DATA12	AB25	SoC_VOUT0_DATA12
VOUT0_DATA13	AA24	SoC_VOUT0_DATA13
VOUT0_DATA14	Y22	SoC_VOUT0_DATA14
VOUT0_DATA15	AA21	SoC_VOUT0_DATA15
VOUT0_PCLK	AC24	SoC_VOUT0_PCLK R267 0E
VOUT0_DE	Y20	SoC_VOUT0_DE
VOUT0_VSYNC	AC25	SoC_VOUT0_VSYNC
VOUT0_HSYNC	AB24	SoC_VOUT0_HSYNC



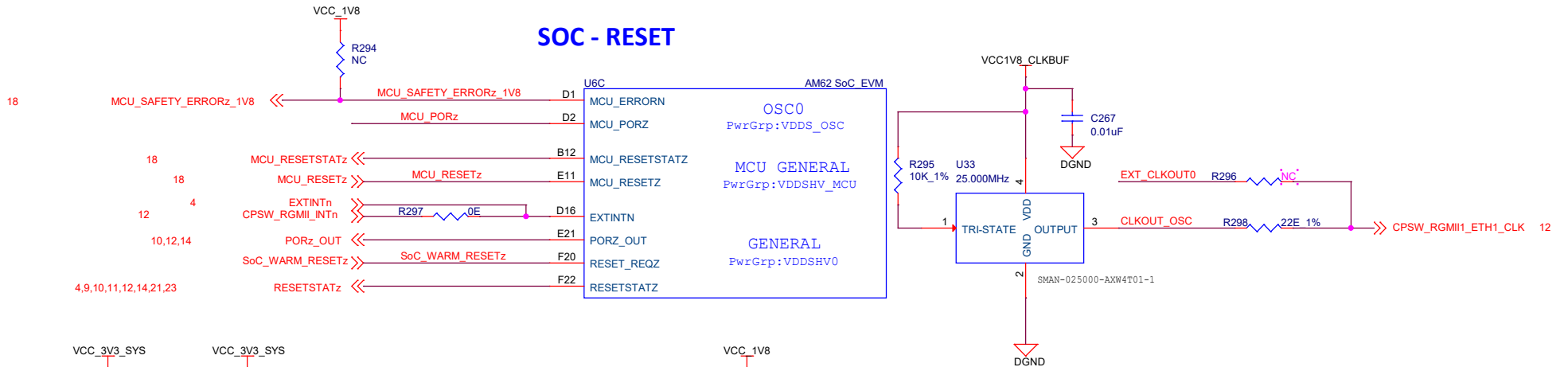
NOTE:
TPD12S016PWR has integrated pullup or pulldown resistors on the I2C and HPD lines hence no external pullup or pulldown required.

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SOC - GENERAL



SOC - RESET



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