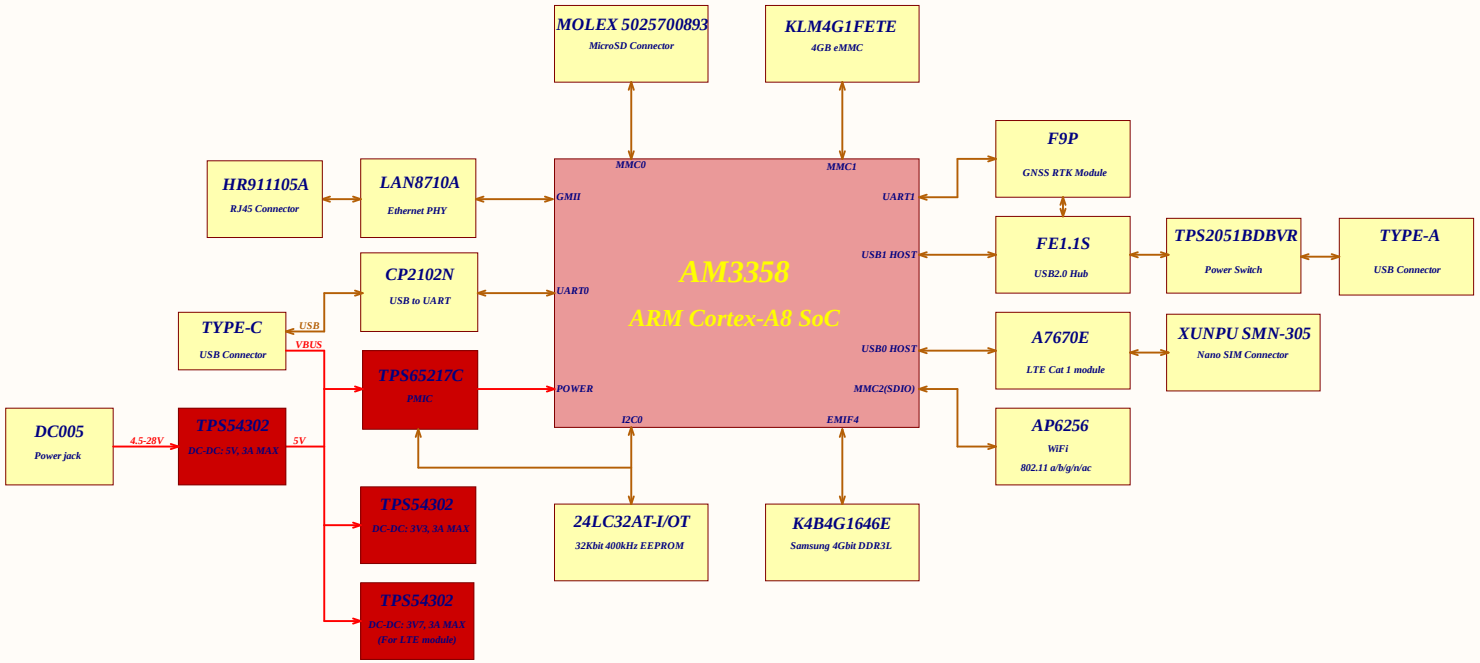
RockRTK Board Block Diagram



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Main Page

Designator
PowerSupplies.SchDoc

Designator
SoC_BootMode.SchDoc

Designator
SoC_Power.SchDoc

DDR3L Chip
DDR3LChip.SchDoc

DDR3L_A[0..14]
DDR3L_B[0..2]
DDR3L_RASN
DDR3L_CASN
DDR3L_WEN
DDR3L_CSN
DDR3L_CSE
DDR3L_ODT
DDR3L_CLK_P
DDR3L_CLK_N
DDR3L_D[0..15]
DDR3L_DQS0_N
DDR3L_DQS0_P
DDR3L_DQS1_P
DDR3L_DQS1_N
DDR3L_DQM0
DDR3L_DQM1
DDR3L_RESETN

AM3358 DDR Controller
SoC_DDR.SchDoc

DDR3L_A[0..14]
DDR3L_B[0..2]
DDR3L_RASN
DDR3L_CASN
DDR3L_WEN
DDR3L_CSN
DDR3L_CSE
DDR3L_ODT
DDR3L_CLK_P
DDR3L_CLK_N
DDR3L_D[0..15]
DDR3L_DQS0_N
DDR3L_DQS0_P
DDR3L_DQS1_P
DDR3L_DQS1_N
DDR3L_DQM0
DDR3L_DQM1
DDR3L_RESETN

Micro SD Card
SDCard.SchDoc

MMC0_CLK
MMC0_DAT[0..3]
MMC0_CMD
MMC0_SDCD

Designator
SoC_Jtag.SchDoc

SOC_SYS_RESET
MMC0_SDCD

SoC MMC
SoC_MMC.SchDoc

MMC0_CLK
MMC0_DAT[0..3]
MMC0_CMD
MMC0_SDCD
MMC1_CLK
MMC1_DAT[0..7]
MMC1_CMD
MMC2_CLK
MMC2_DAT[0..3]
MMC2_CMD

Designator
eMMCChip.SchDoc

MMC1_CLK
MMC1_DAT[0..7]
MMC1_CMD
EMMC_RSTN_BUF

Designator
WIFIModule.SchDoc

MMC2_CLK
MMC2_DAT[0..3]
MMC2_CMD
WIFI_REG_ON
WIFI_HOST_WAKE

Designator
USBHub.SchDoc

USB1_DRVVBUS
USB1_OCN
USB1_P
USB1_N
F9P_USB_P
F9P_USB_N

Designator
GNSSModule.SchDoc

F9P_USB_P
F9P_USB_N
SOC_UART1_TX
SOC_UART1_RX

Designator
LTEModule.SchDoc

USB0_P
USB0_N
LTE_PWRKEY_CNTRL

Designator
EEPROM.SchDoc

I2C0_SCL
I2C0_SDA

Designator
InputConnectors.SchDoc

UART0_TX
UART0_RX

Designator
PMIC.SchDoc

I2C0_SCL
I2C0_SDA
SOC_PMIC_PWR_EN
SOC_PWR_ONRSTN
SOC_EXTINTN
SOC_RTC_PWRONRSTN
SOC_EXT_WAKEUP

Designator
EthernetPHY.SchDoc

PHY_MDIO
PHY_MDC
PHY_TXCLK
PHY_TXD[0..3]
PHY_TXEN
PHY_RXCLK
PHY_RXD[0..3]
PHY_RXER
PHY_RXDV
PHY_REFCLK
PHY_COL
PHY_CRS
ETH_PHY_RST
SOC_SYS_RESET

Designator
SoC_MII.SchDoc

PHY_MDIO
PHY_MDC
PHY_TXCLK
PHY_TXD[0..3]
PHY_TXEN
PHY_RXCLK
PHY_RXD[0..3]
PHY_RXER
PHY_RXDV
PHY_REFCLK
PHY_COL
PHY_CRS

Designator
SoC_Peripheral.SchDoc

USB1_DRVVBUS
USB1_OCN
USB1_P
USB1_N
USB0_P
USB0_N
ETH_PHY_RST
WIFI_REG_ON
WIFI_HOST_WAKE
EMMC_RSTN_BUF
I2C0_SCL
I2C0_SDA
SOC_UART1_TX
SOC_UART1_RX
UART0_TX
UART0_RX
LTE_PWRKEY_CNTRL

Designator
SoC_Control.SchDoc

SOC_PMIC_PWR_EN
SOC_PWR_ONRSTN
SOC_EXTINTN
SOC_RTC_PWRONRSTN
SOC_EXT_WAKEUP
SOC_SYS_RESET

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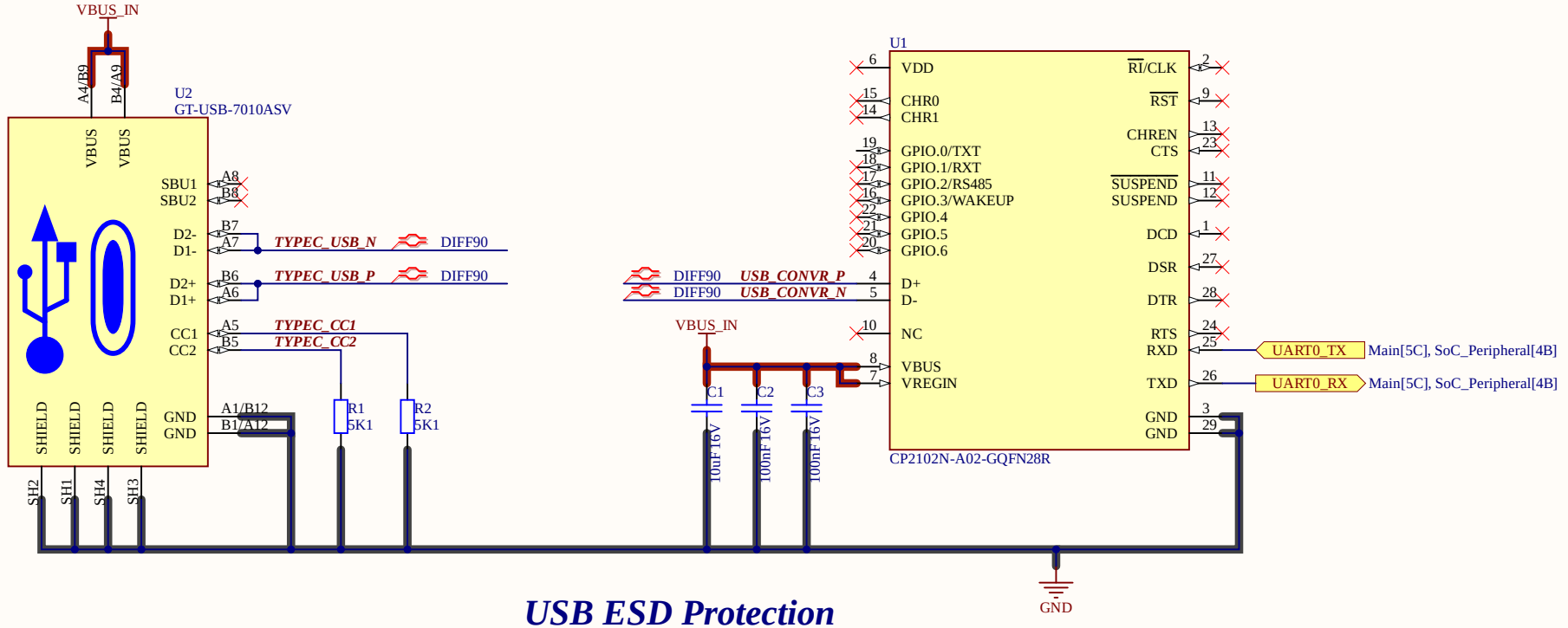
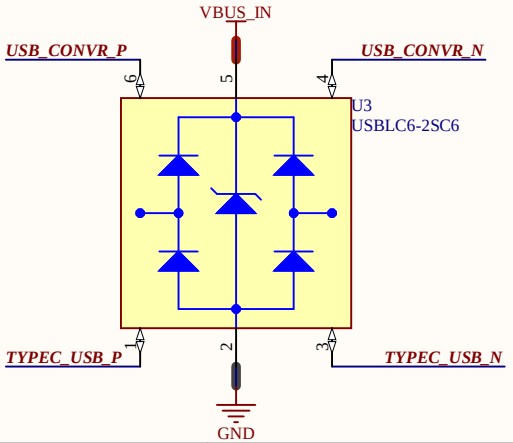
Input Connectors

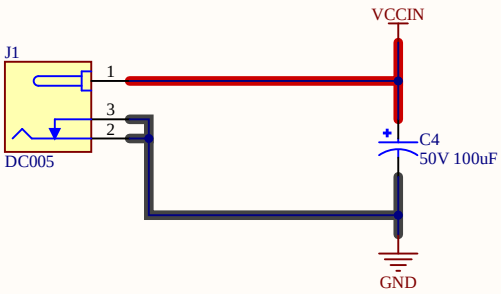
Type-C Conenctor and USB-UART Convertor

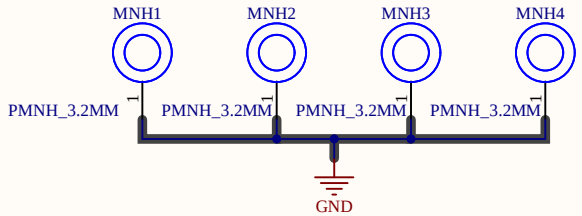


USB ESD Protection



DC005 Power Input





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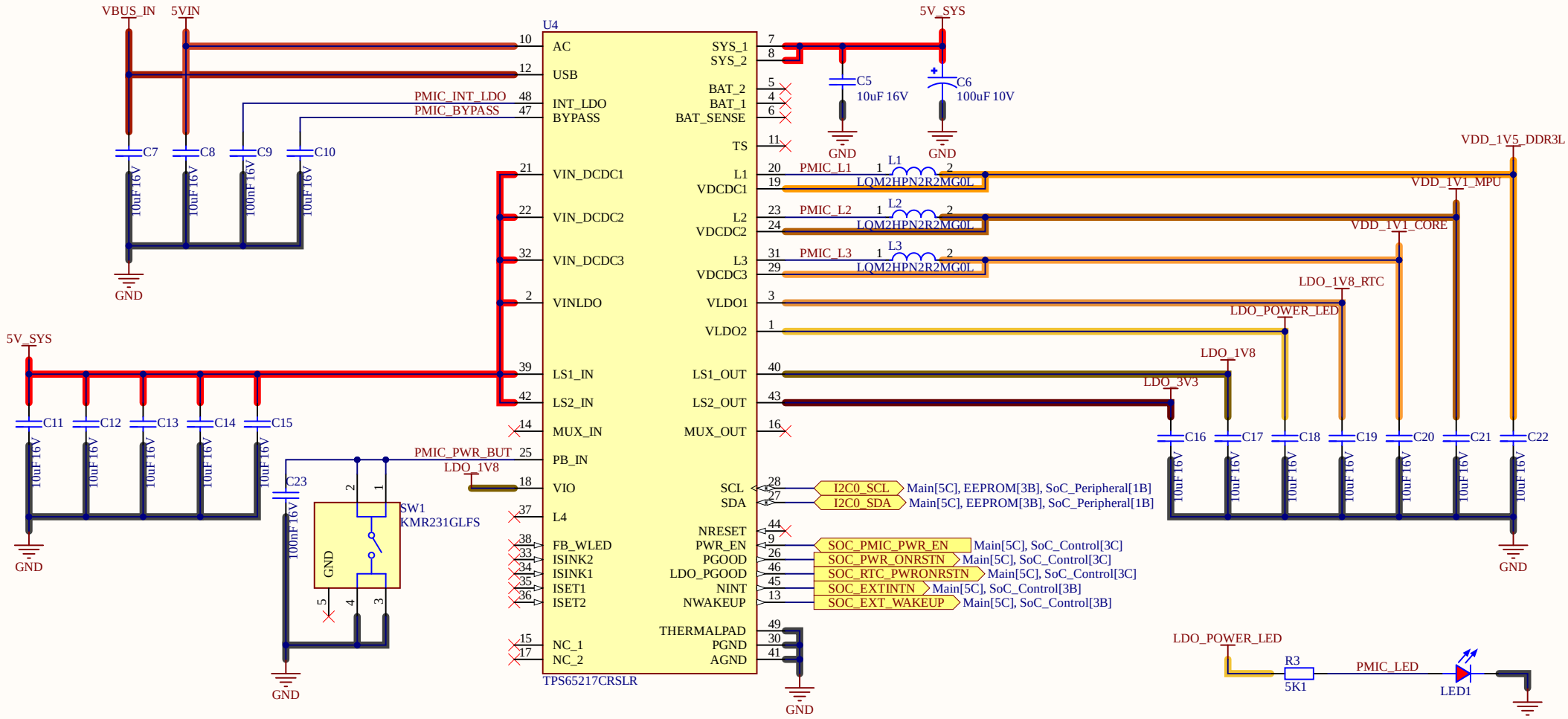
Power Management IC Circuit



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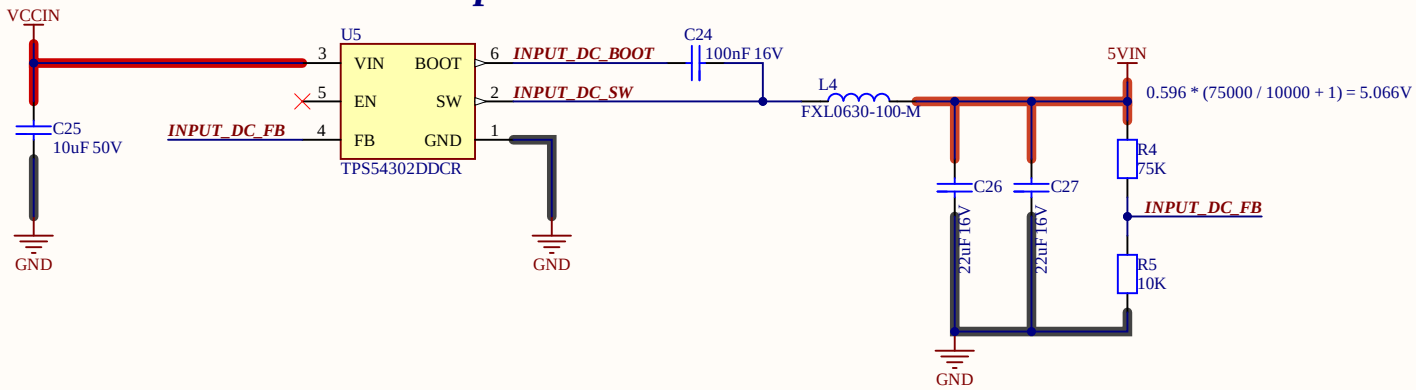
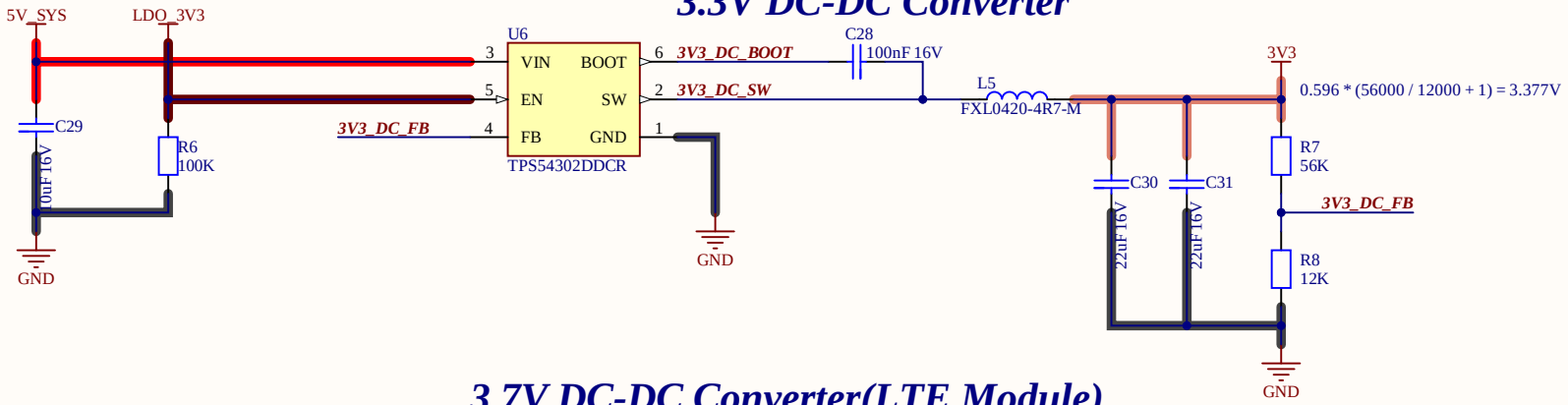
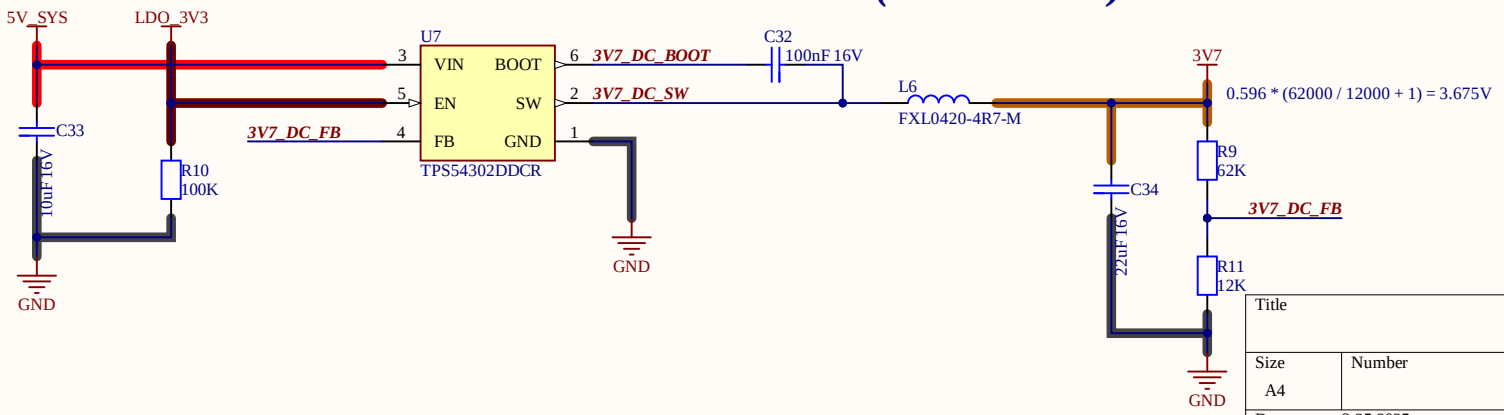
Input DC-DC Converter



3.3V DC-DC Converter



3.7V DC-DC Converter(LTE Module)



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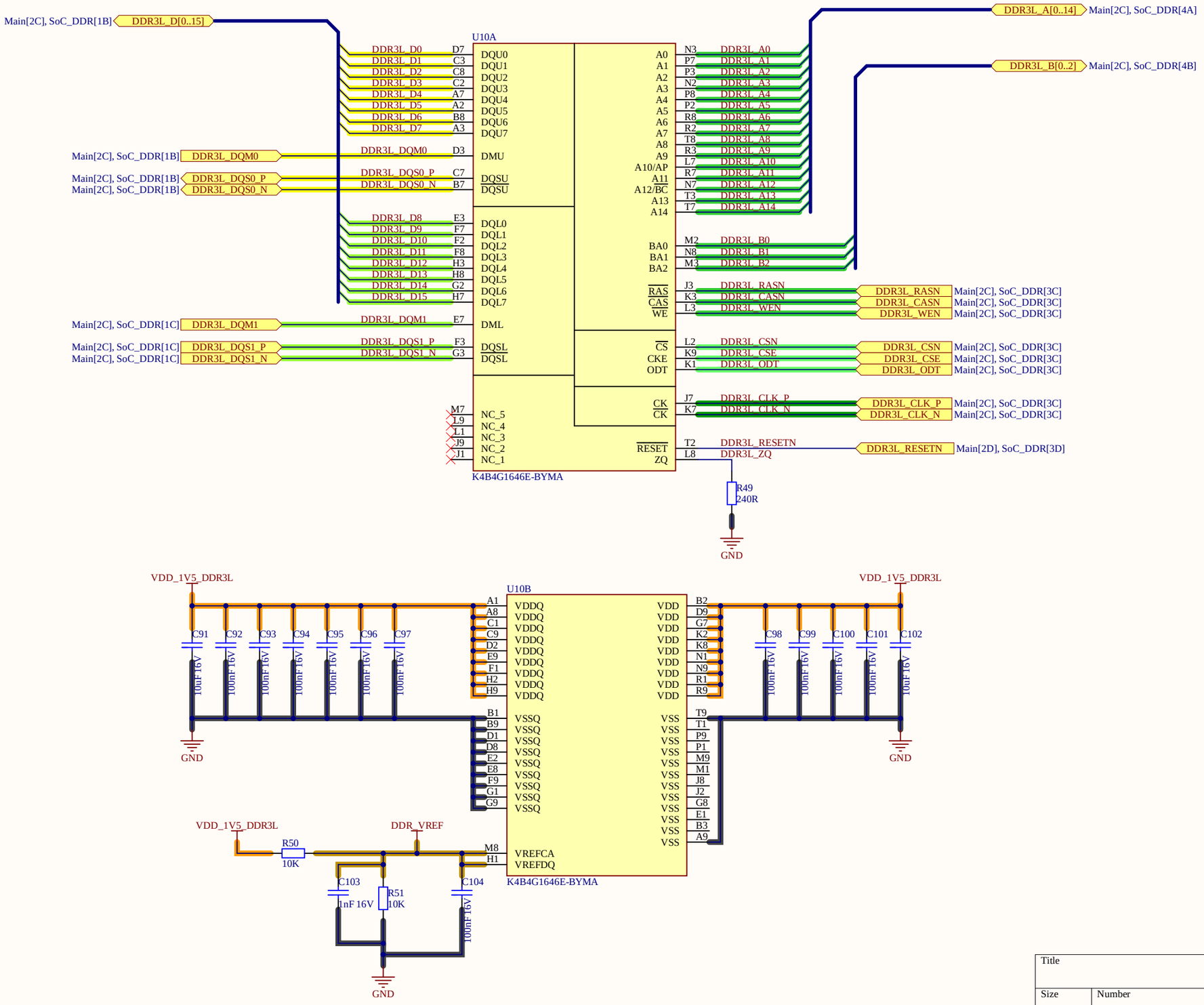
K4B4G1646E-BYMA DDR3L Chip



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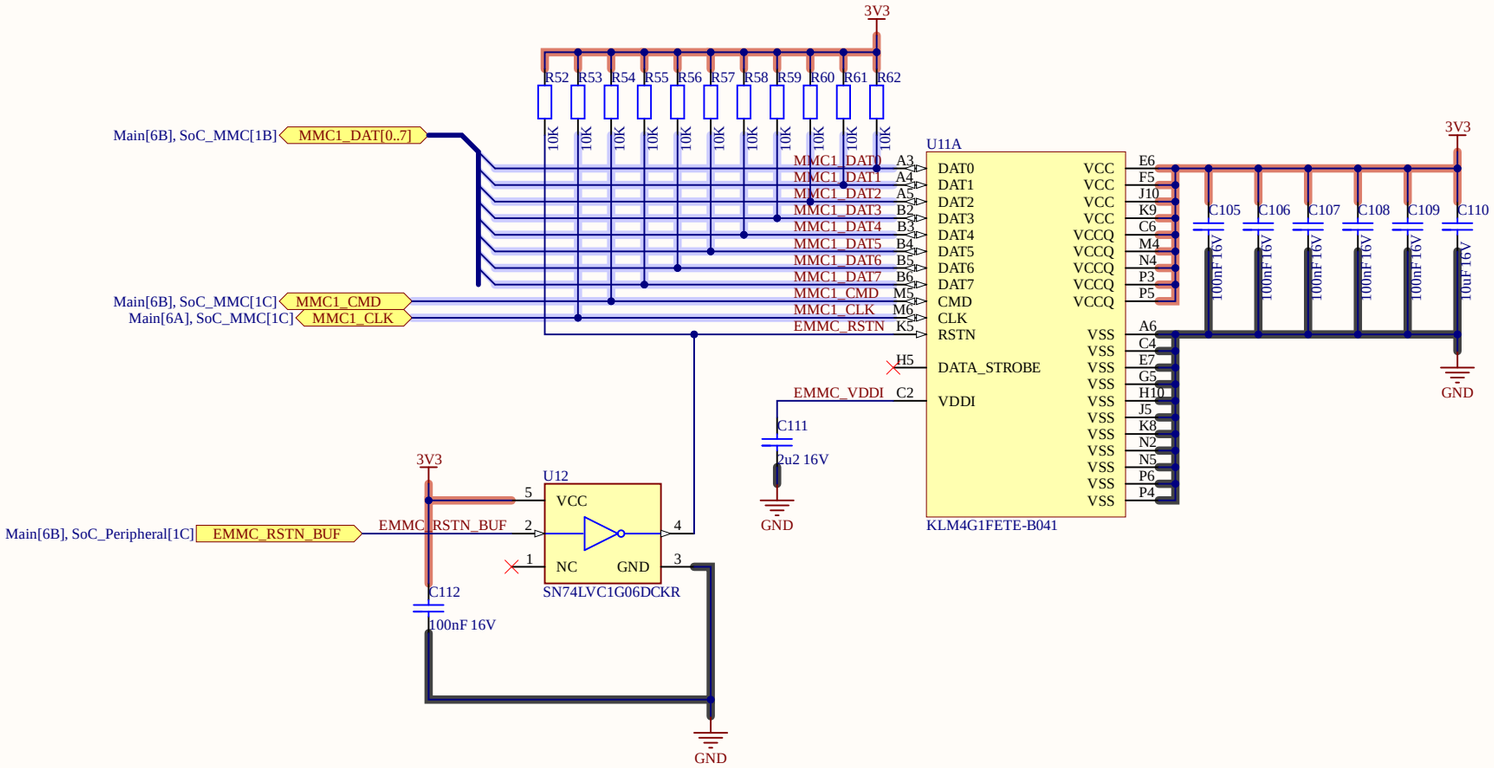
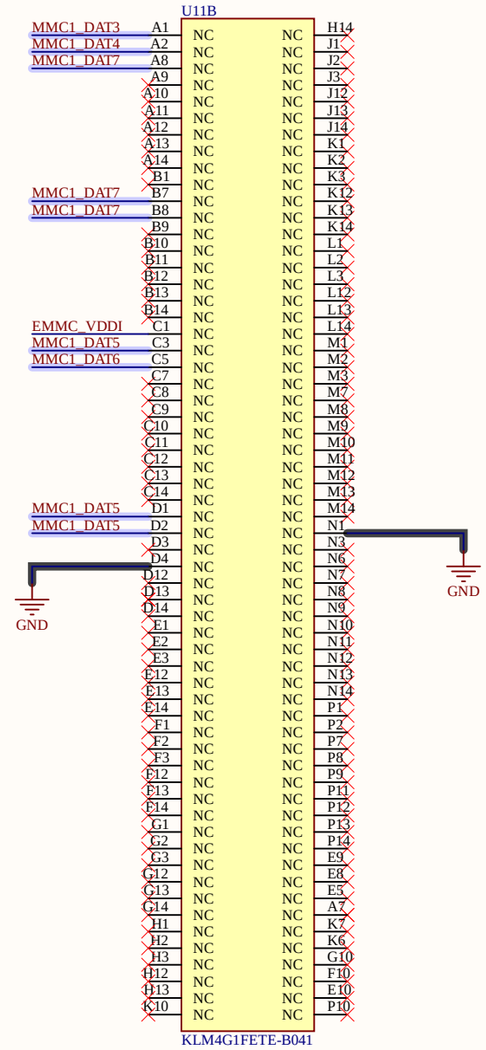
KLM4G1FETE-B041 eMMC Chip





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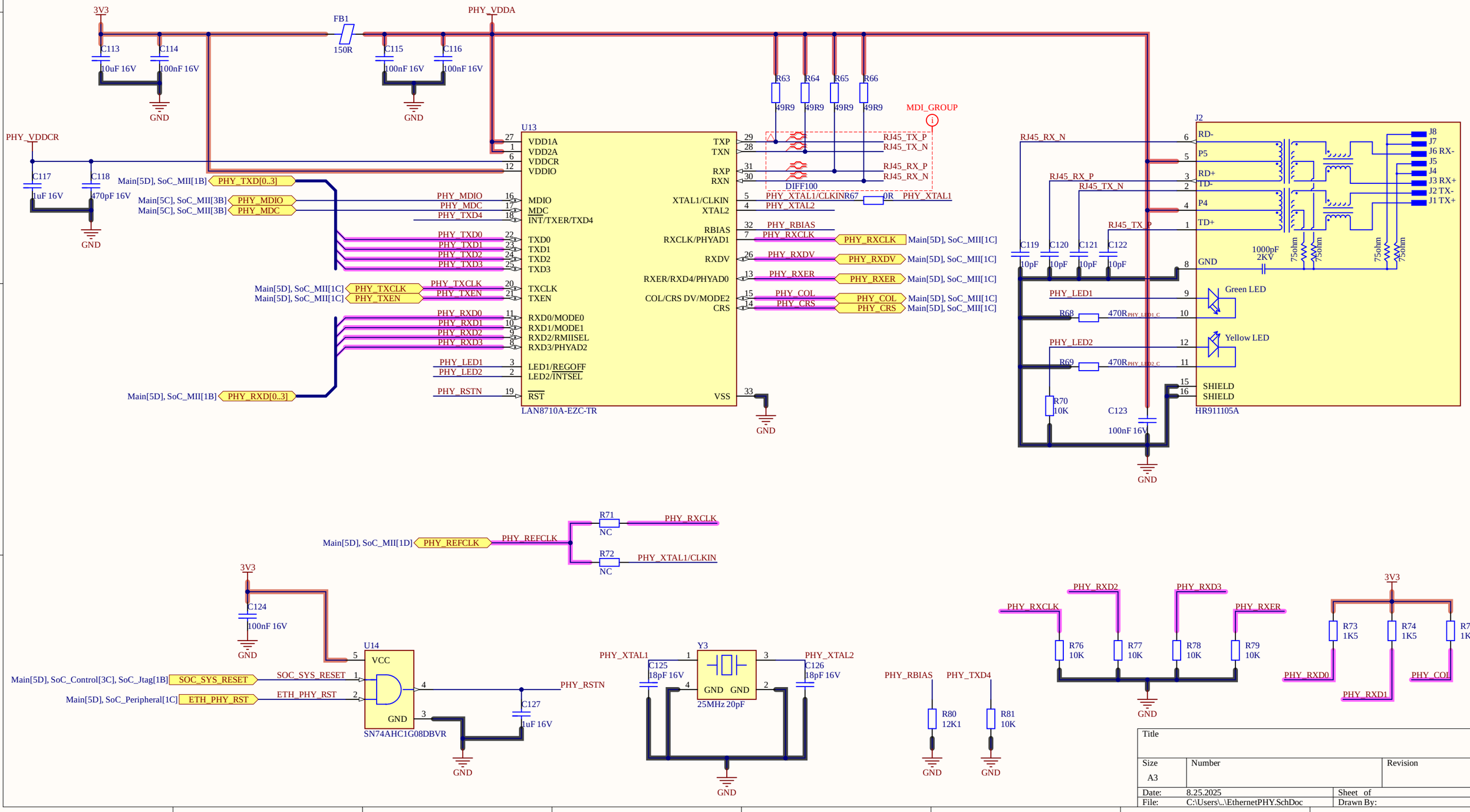
LAN8710A Ethernet Transceiver



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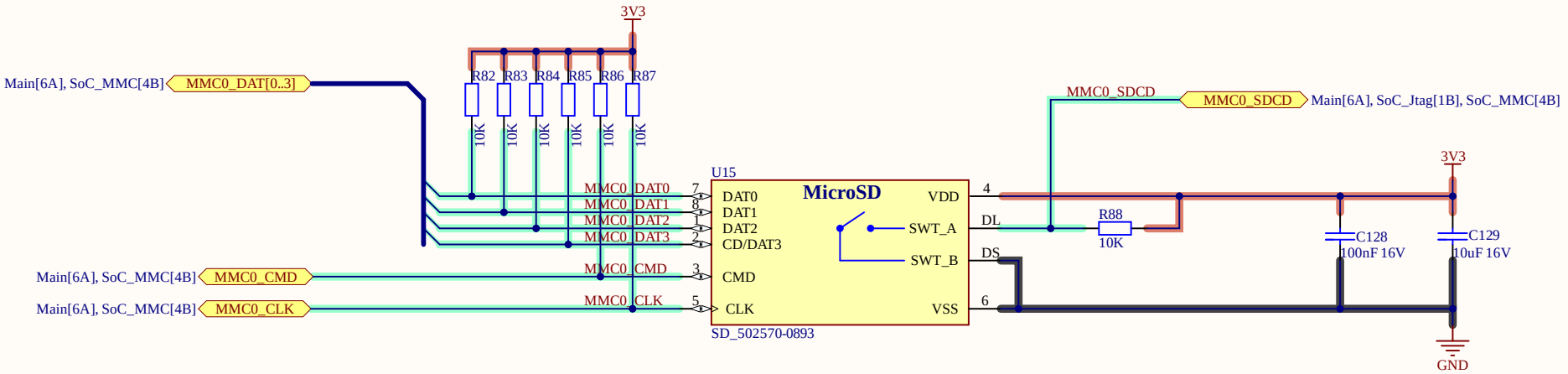
Micro SD Card



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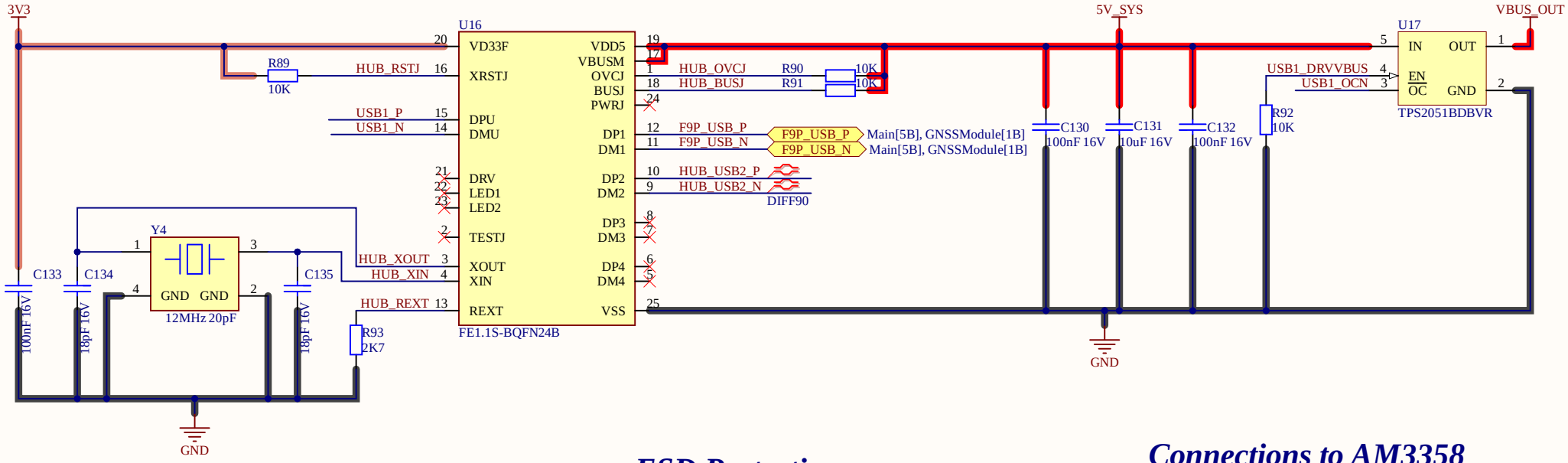
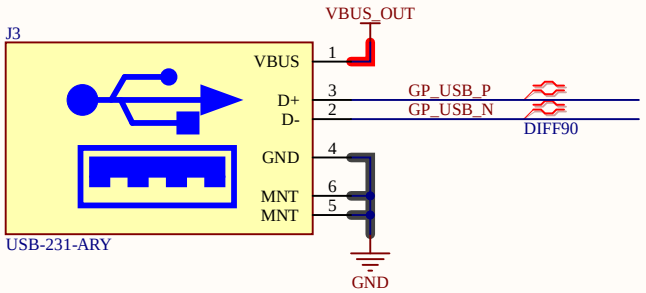
USB Hub & TYPE-A Connector

USB Hub

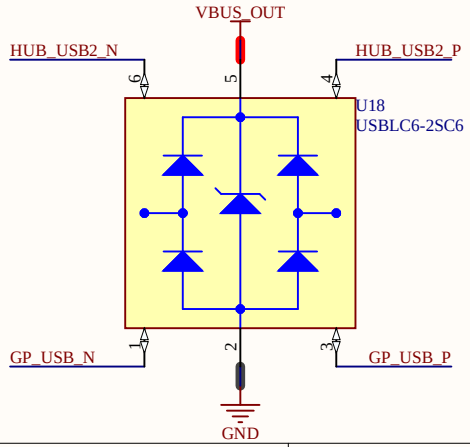


Power-distribution switch

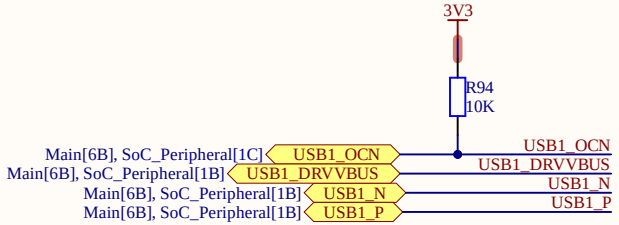
Type-A Connector



ESD Protection



Connections to AM3358



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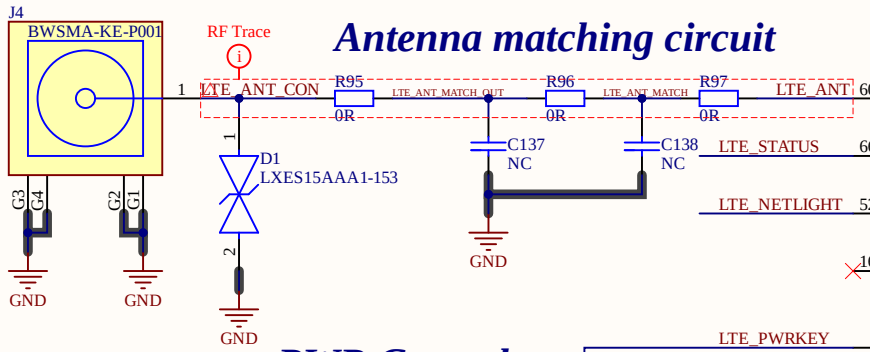
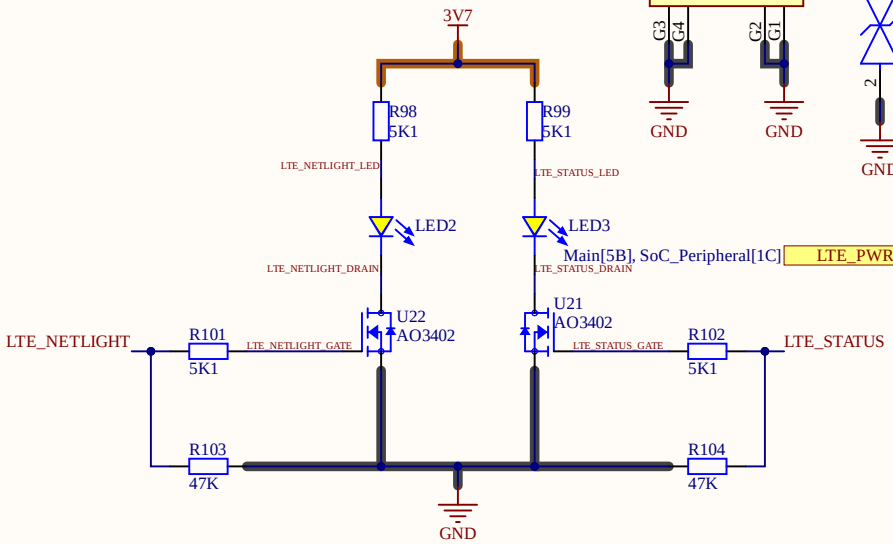
LTE 4G A7670E Module

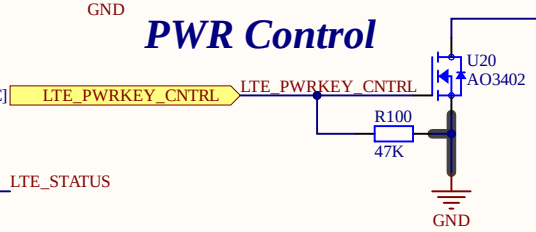
Antenna matching circuit

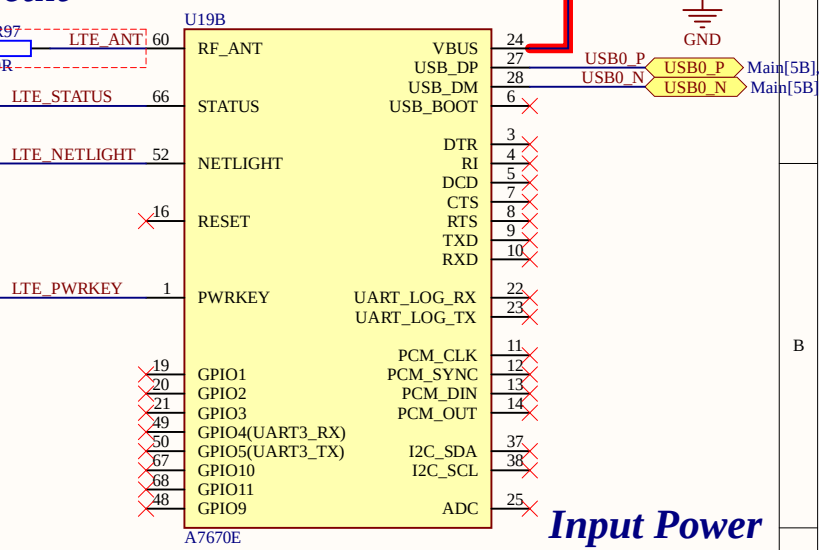


LED Indication

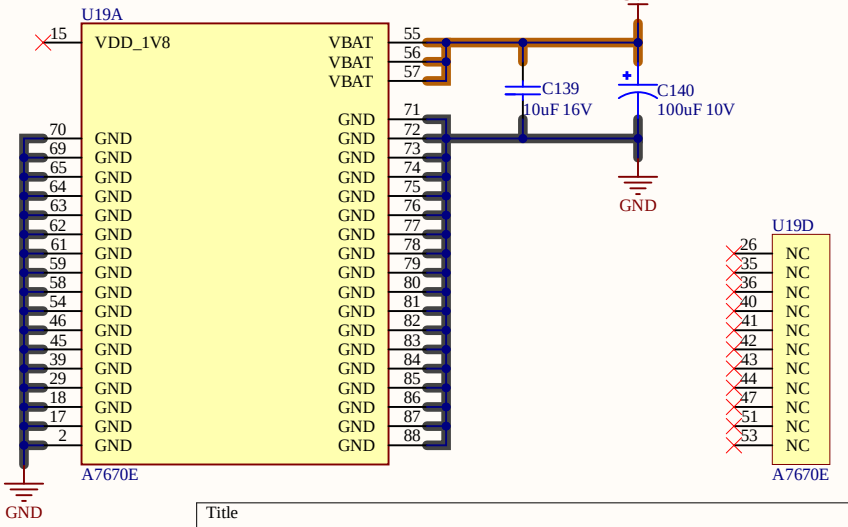


PWR Control

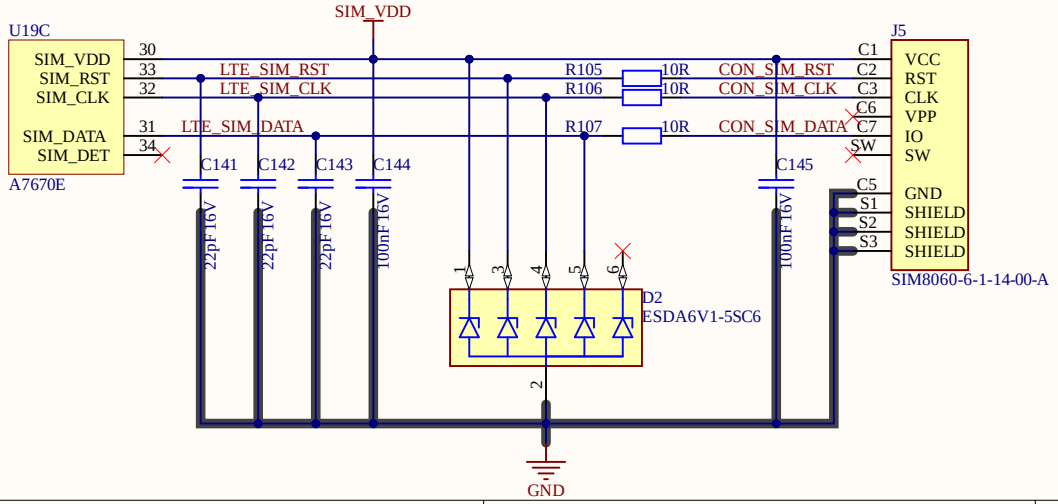




Input Power



ESD Protection



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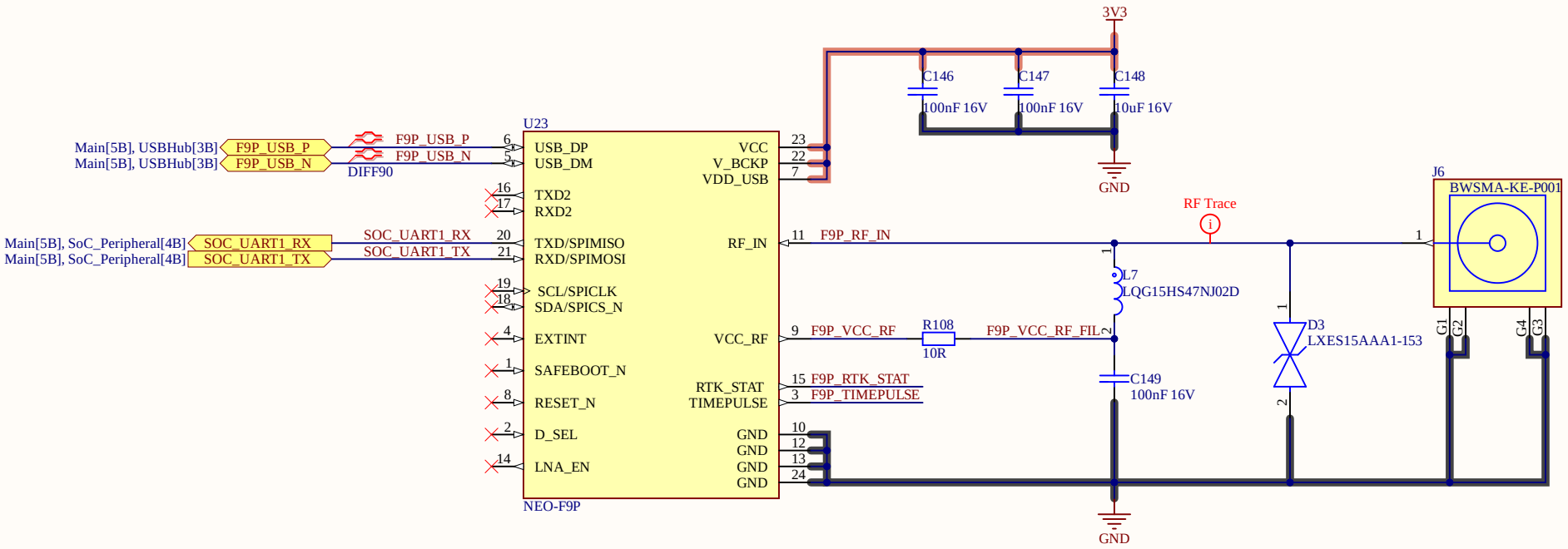
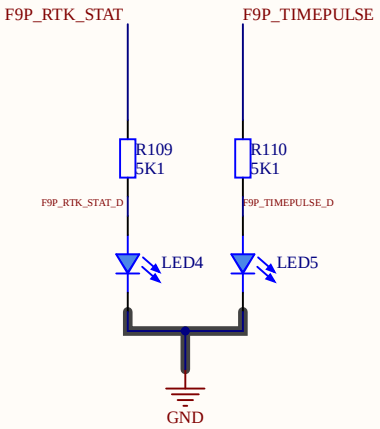
GNSS NEO-F9P Module





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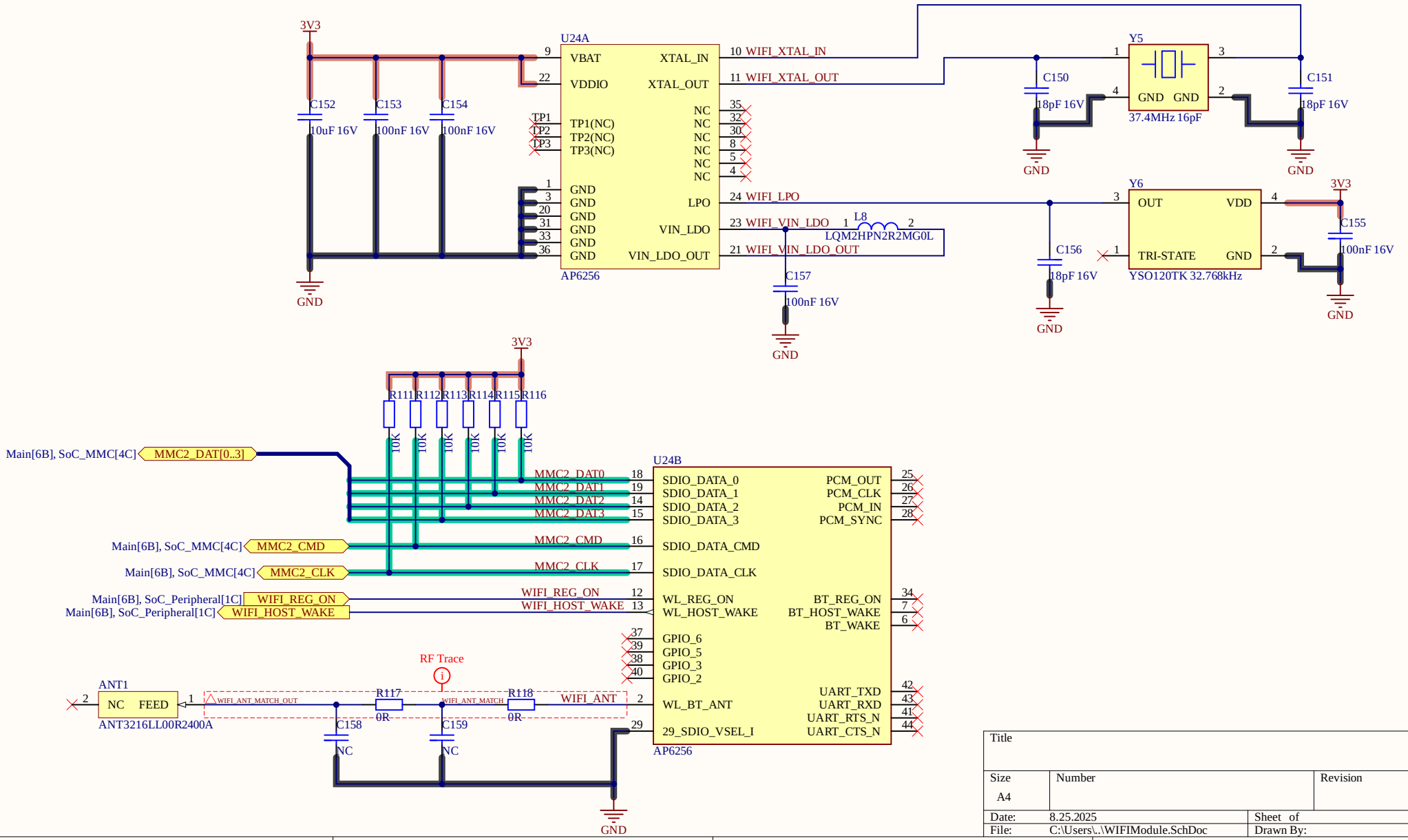
AP6256 WiFi Module



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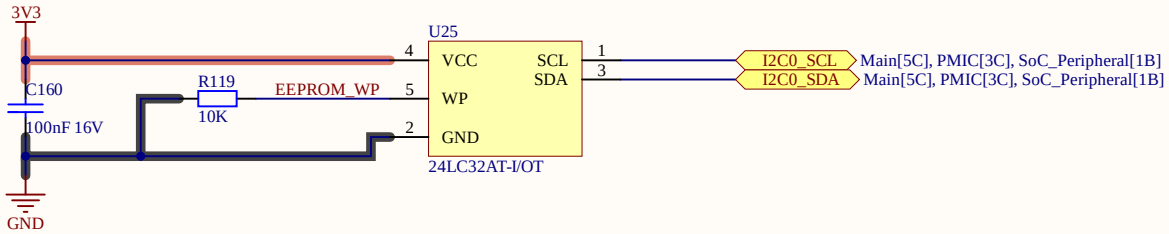
24LC32AT-I/OT EEPROM Chip



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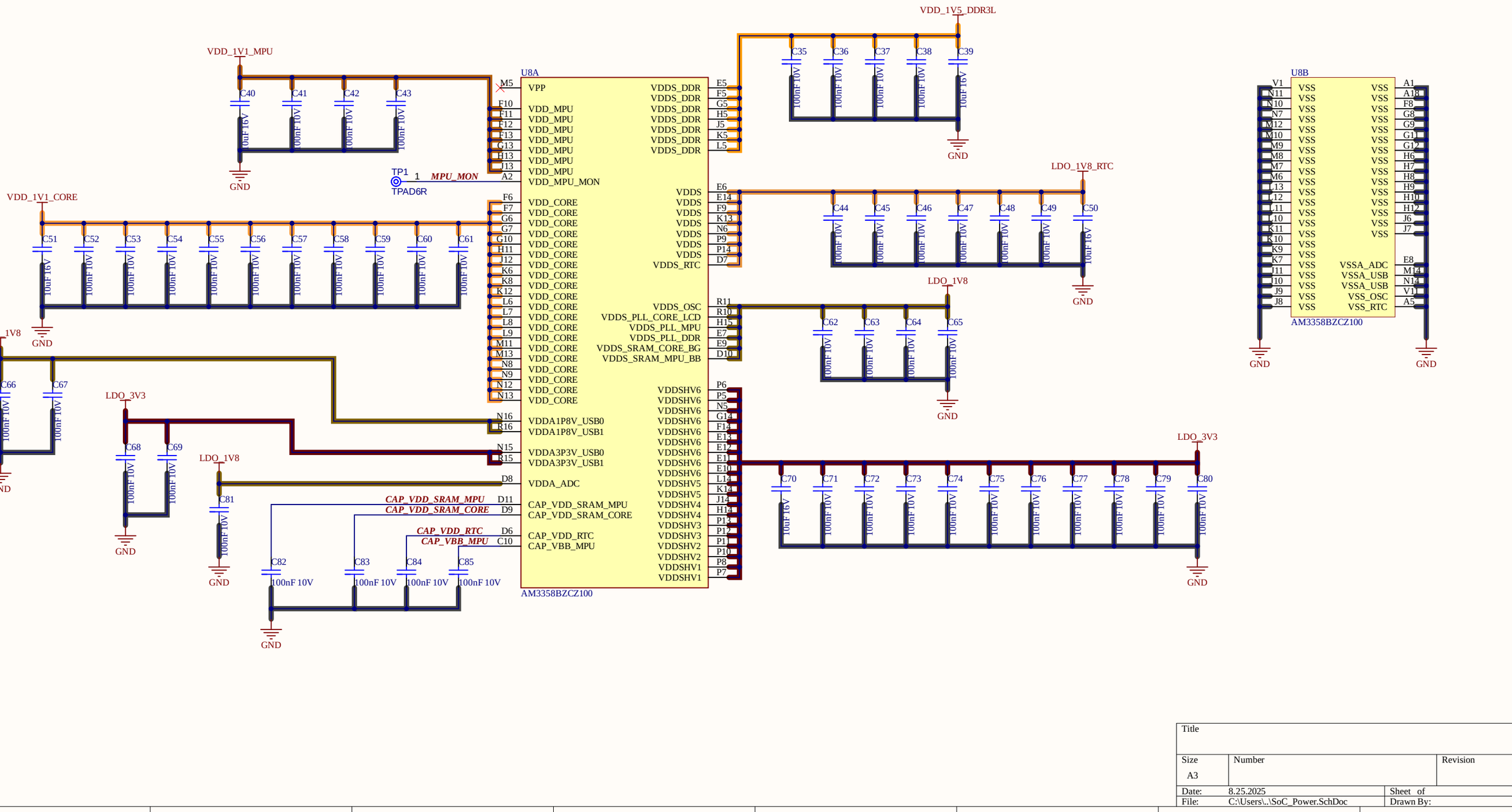
AM3358 Power Rails



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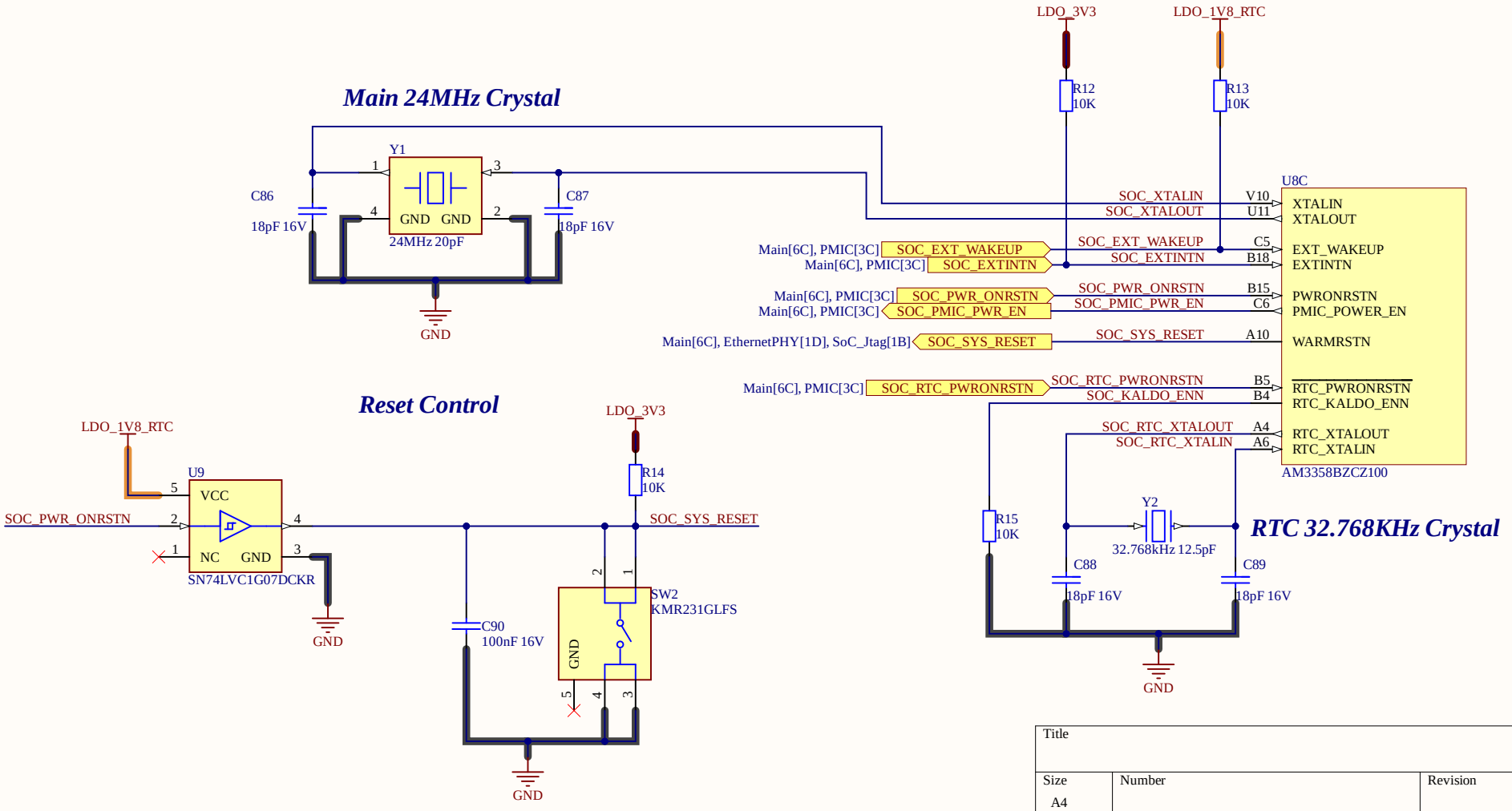
AM3358 Control Signals



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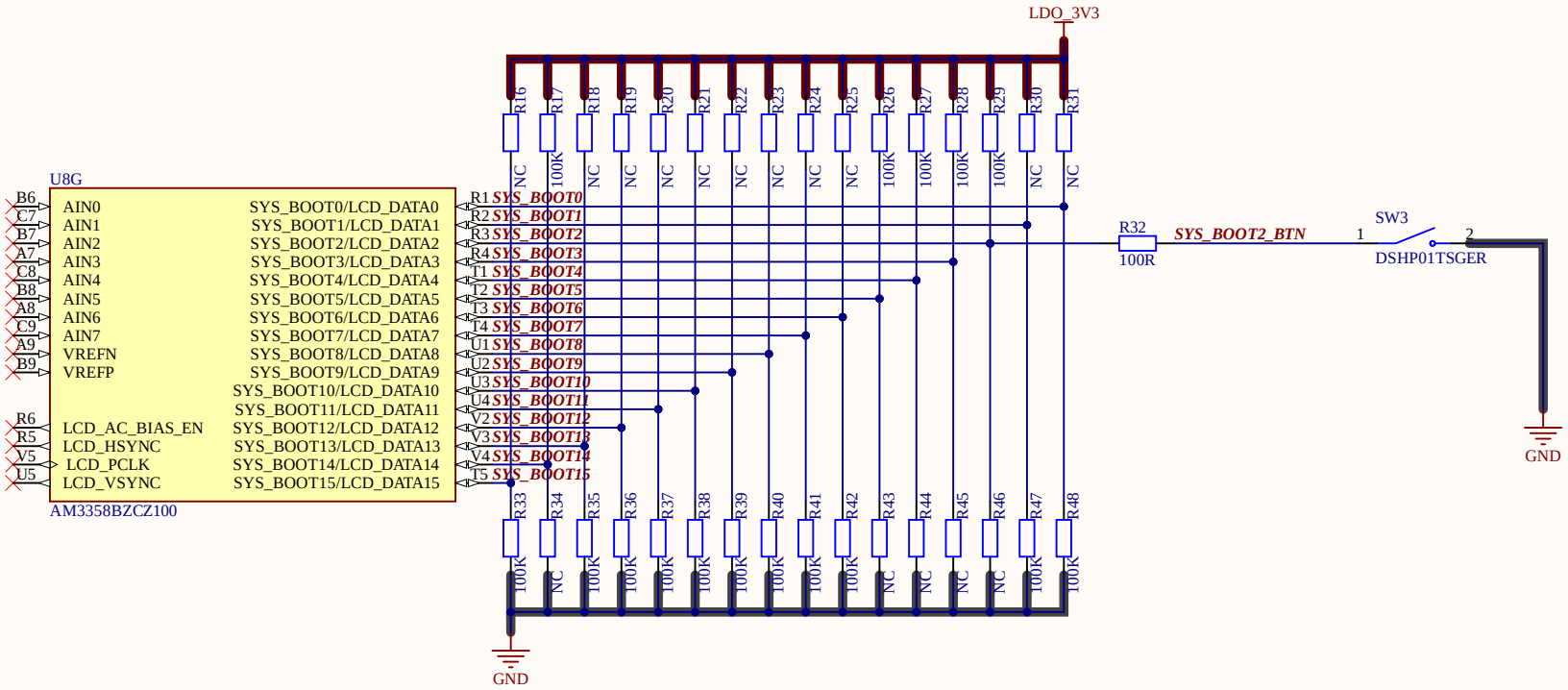
AM3358 Boot Mode Configuration



SYSBOOT[15:14]	SYSBOOT[13:12]	SYSBOOT[11:10]	SYSBOOT[9]	SYSBOOT[8]	SYSBOOT[7:6]	SYSBOOT[5]	SYSBOOT[4:0]	Boot Sequence			
00b = 19.2MHz 01b = 24MHz 10b = 25MHz 11b = 26MHz	00b (all other values reserved)	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	0 = CLKOUT1 disabled 1 = CLKOUT1 enabled	11100b	MMC1	MMC0	UART0	USB0
00b = 19.2MHz 01b = 24MHz 10b = 25MHz 11b = 26MHz	00b (all other values reserved)	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	Don't care for ROM code	0 = CLKOUT1 disabled 1 = CLKOUT1 enabled	11000b	SPI0	MMC0	USB0	UART0

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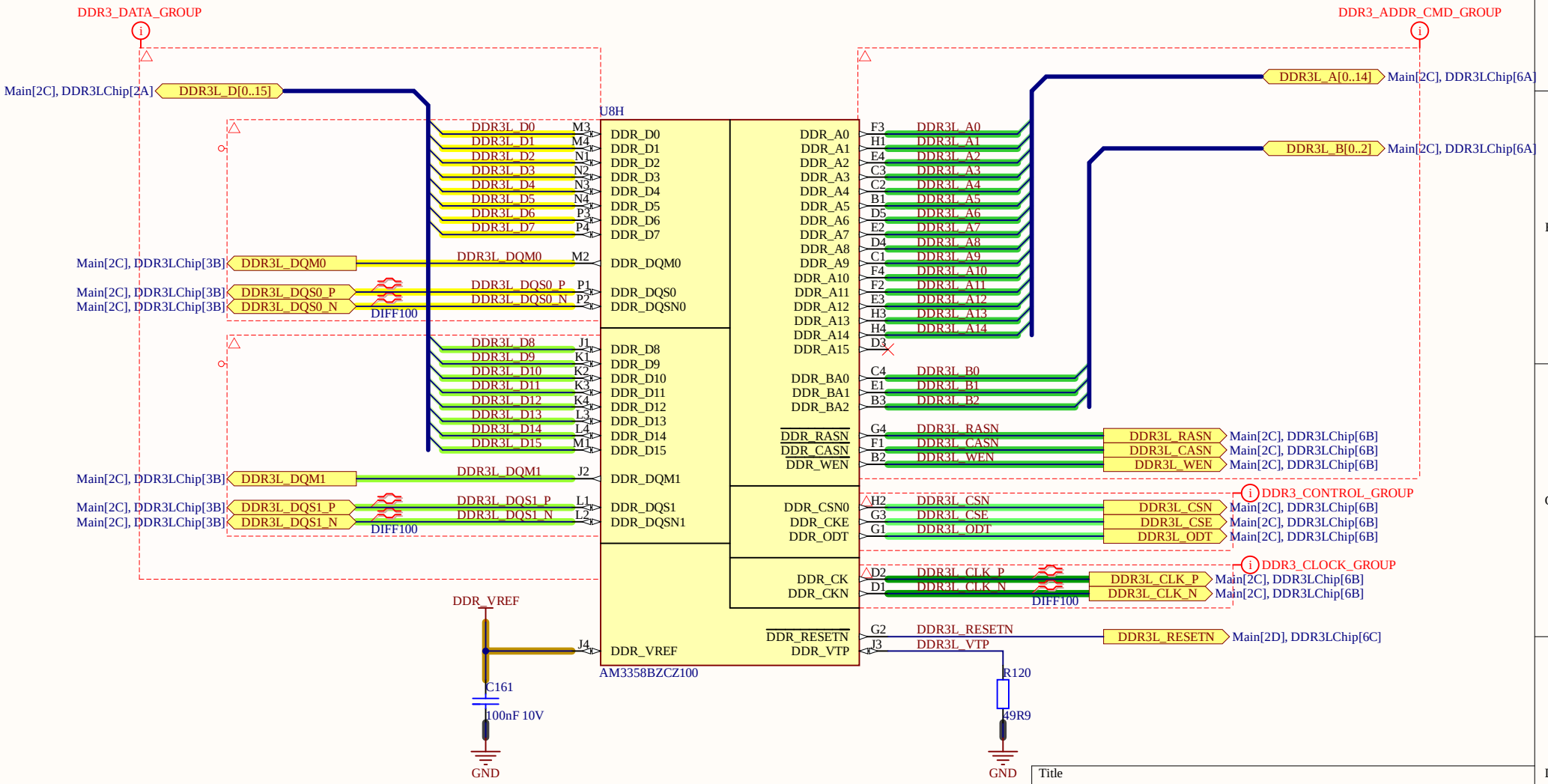
AM3358 DDR Controller



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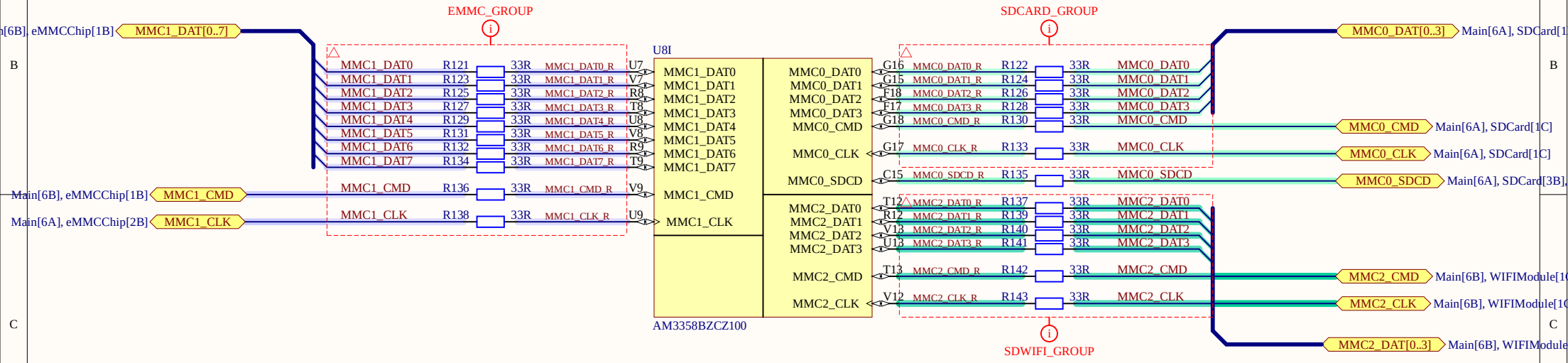
AM3358 Multimedia card interface



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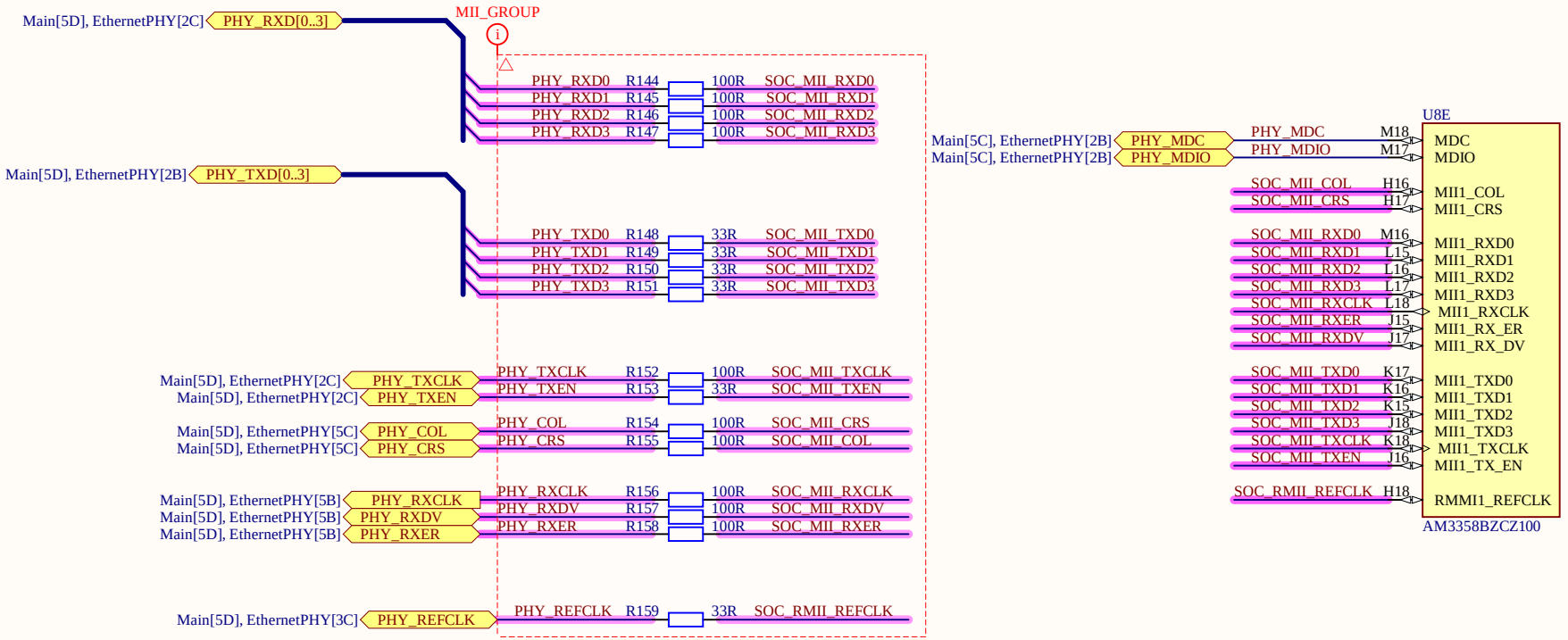
AM3358 Media-independent interface



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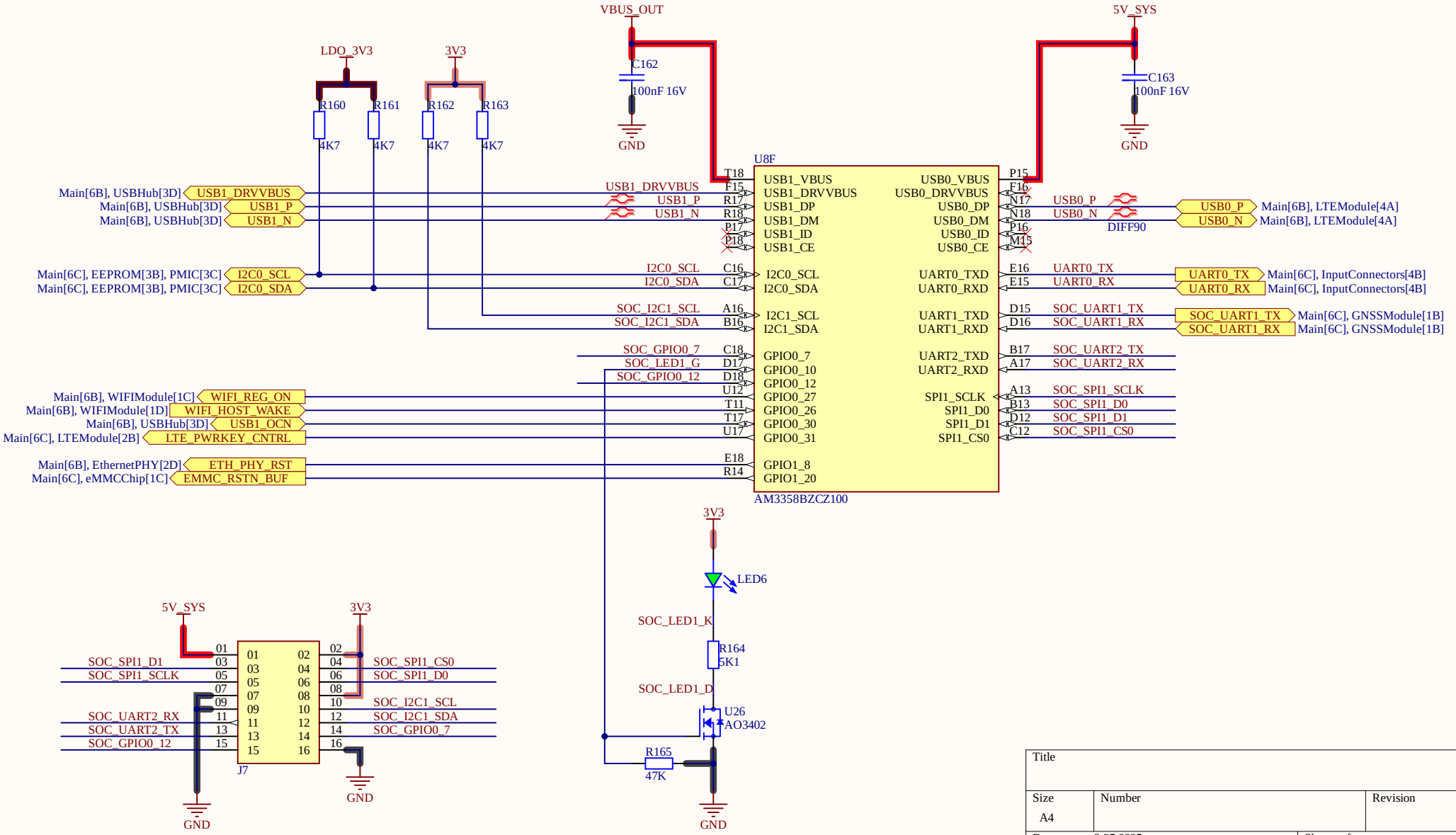
AM3358 Peripheral



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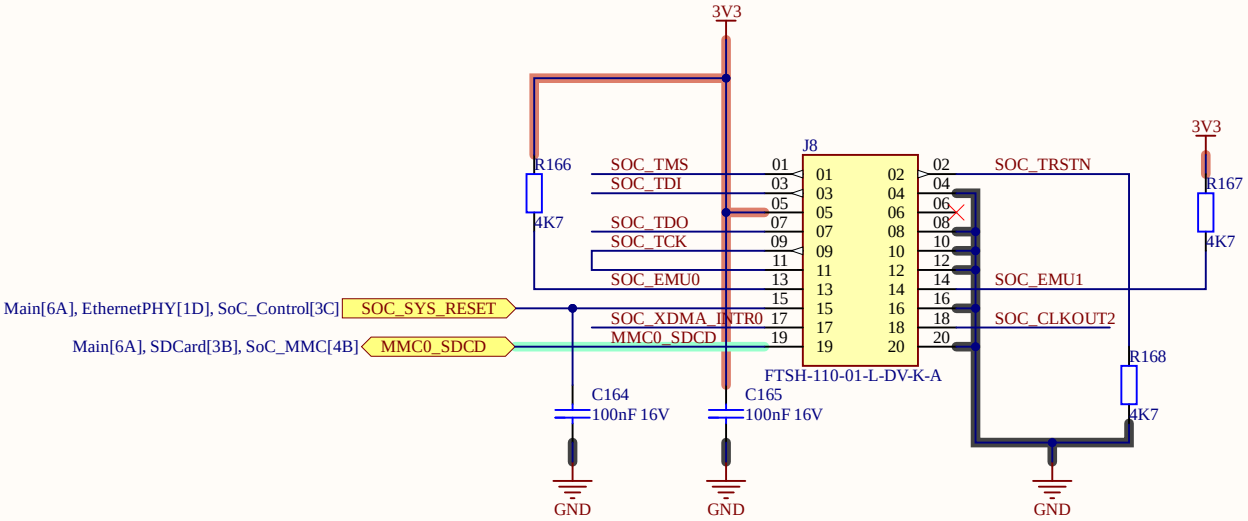
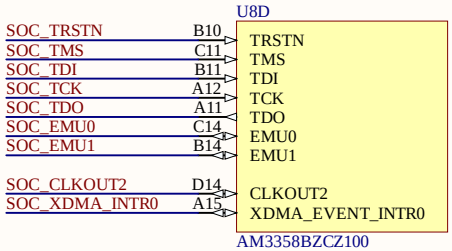
JTAG Debug Probe





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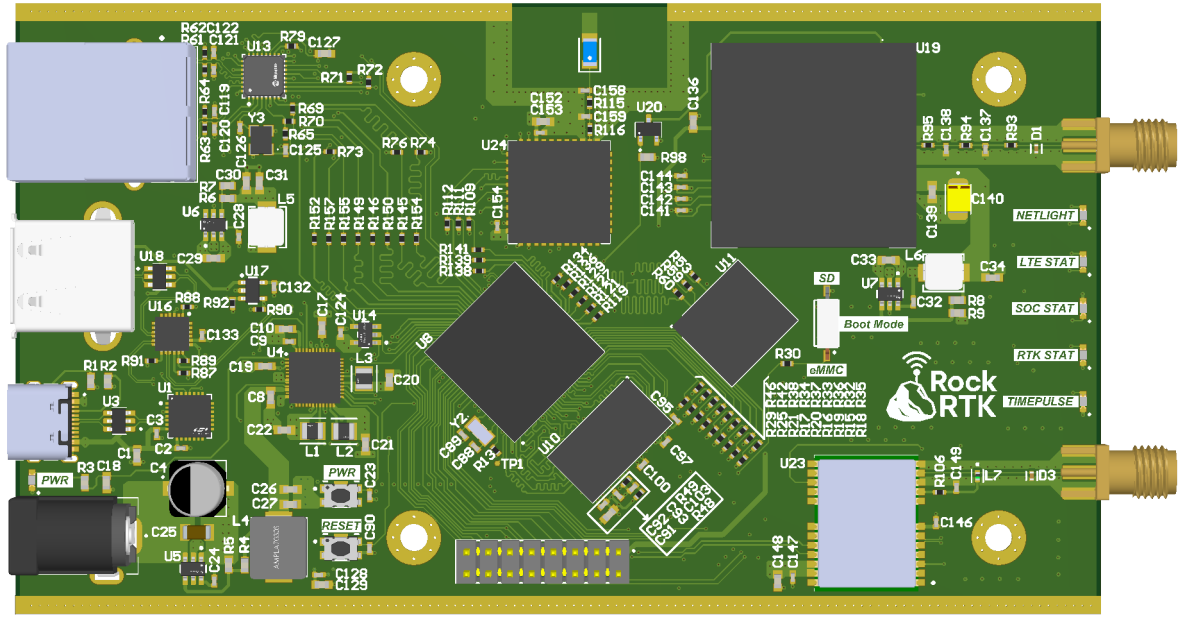
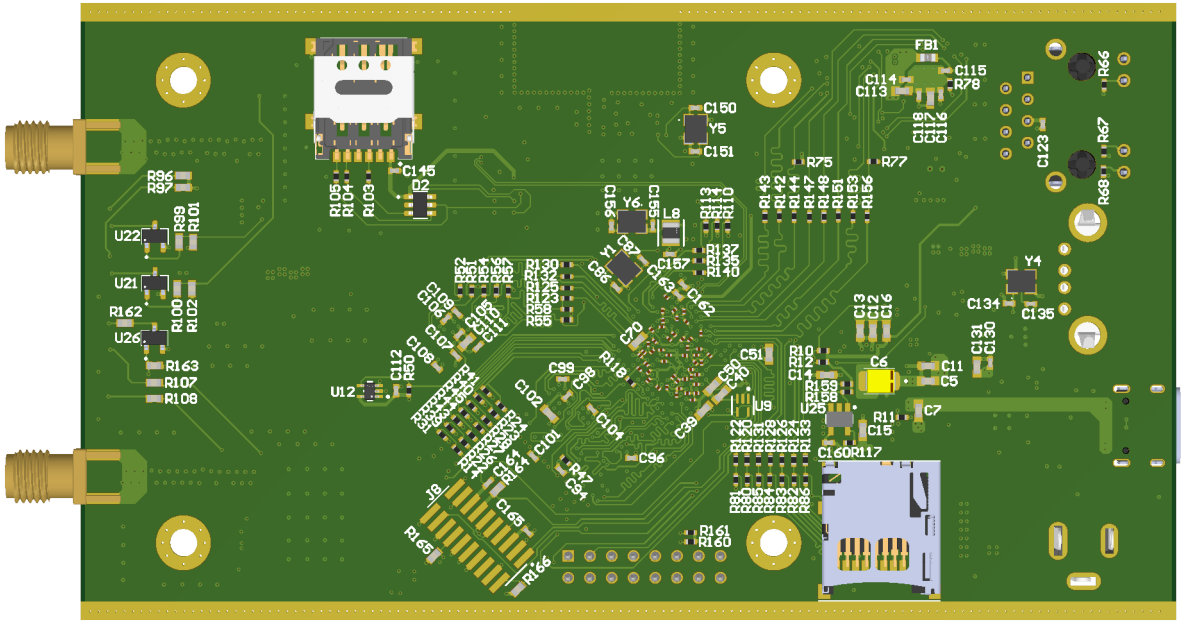
RockRTK

Realistic View



Realistic View