



Radxa CM3I

schematic

V1.31



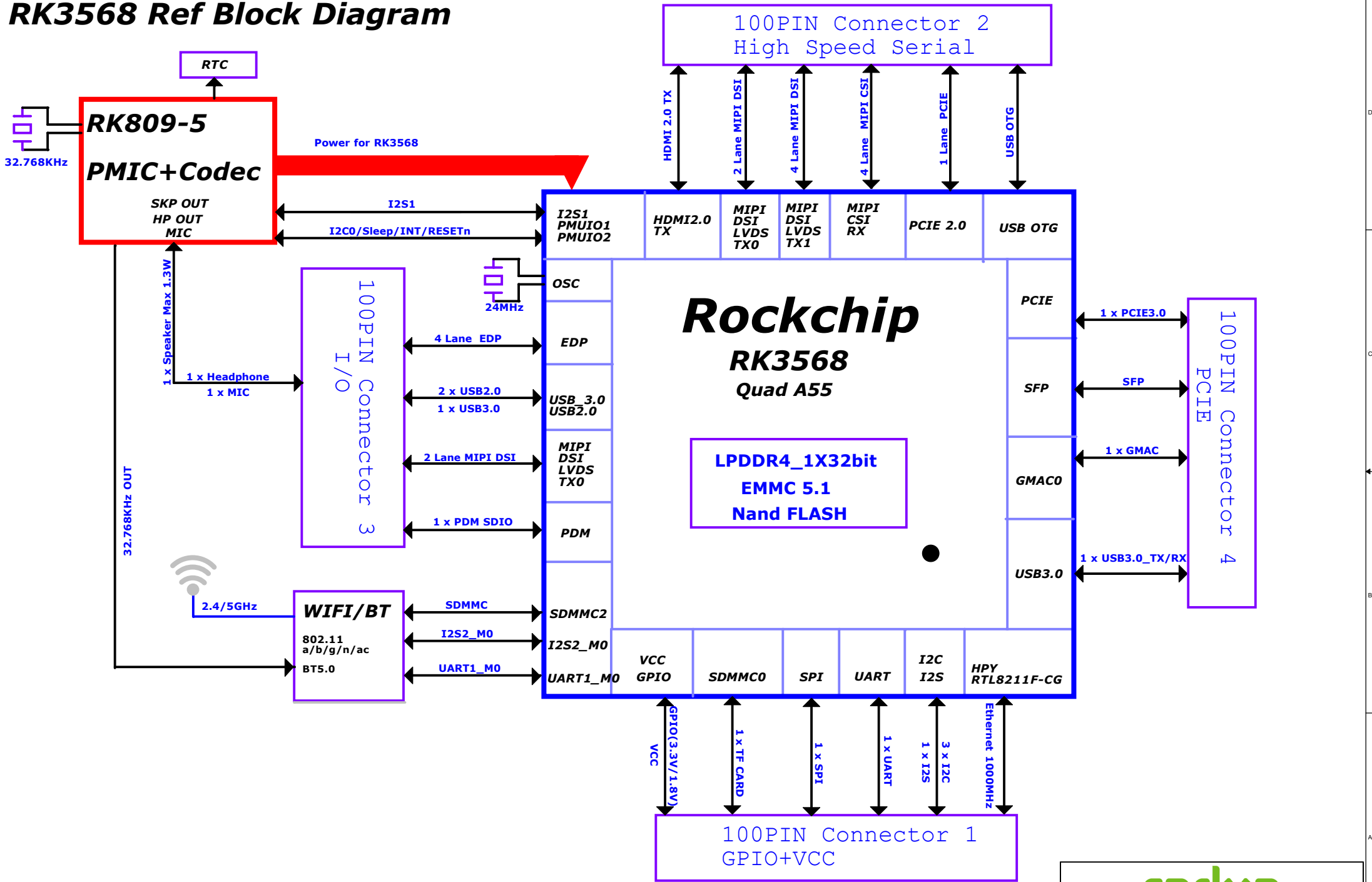
Table of Content

- 01.cover
- 02.Index and Notes
- 03.Block Diagram
- 04.RK3568 Power/GND
- 05.RK3568 USB/PCIE/SDMMC0
- 06.RK3568 GMAC0/CSI/SARADC
- 07.RK3568 DSI/EDP/HDMI
- 08.RK3568 OSC/PLL/PMUIO/EEPRO
- 09.RK3568 I2S/EMMC/FSPI/GMAC1
- 10.RK3568 DDR PHY
- 11.RK3568 GPIO2 GPIO3
- 12.DRAM-LPDDR4X_1X32bit_200P
- 13.Memory-eMMC
- 14.WIFI/BT
- 15.RTL8211FS VS CG
- 16.Flash-SPI/HDMI
- 17.Power PMIC
- 18.Power DC IN
- 19.GPIO+VCC Connector
- 20.High Speed Serial Connector
- 21.EDP/USB3.0 Connector
- 22.PCIE/GMAC0 Connector

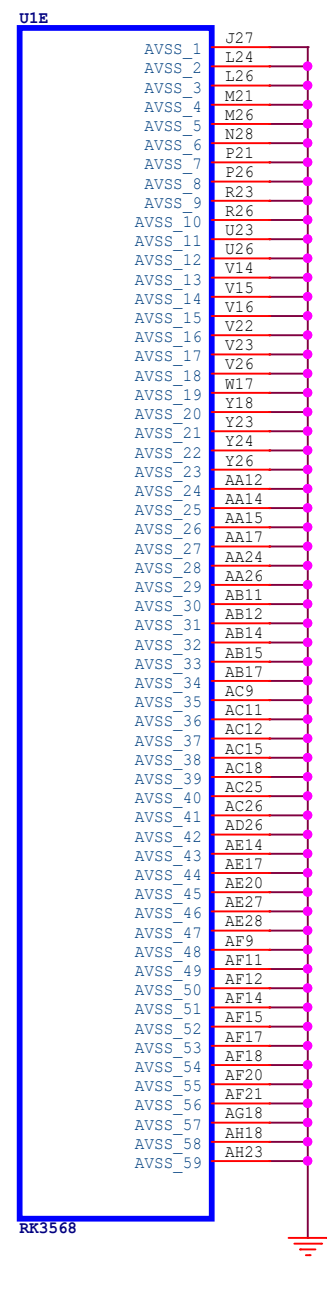
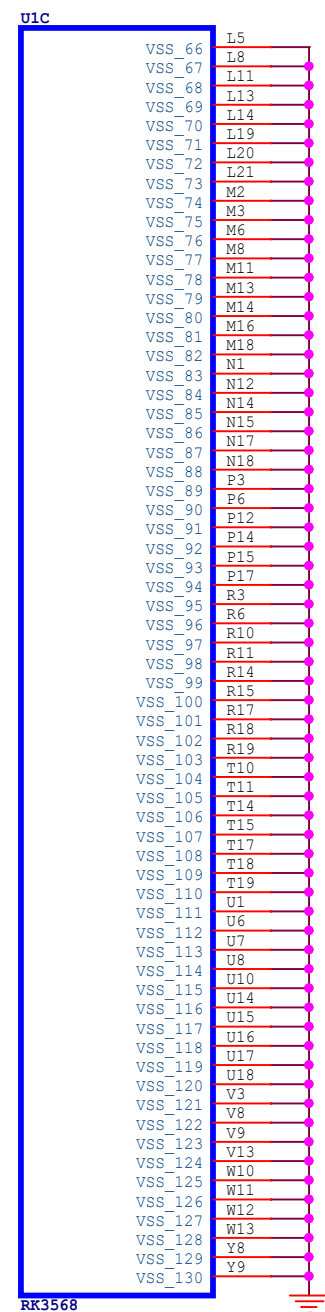
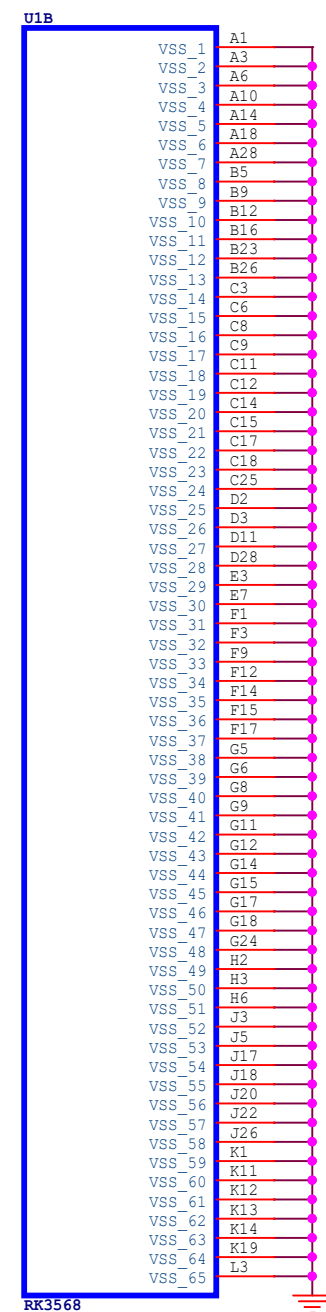
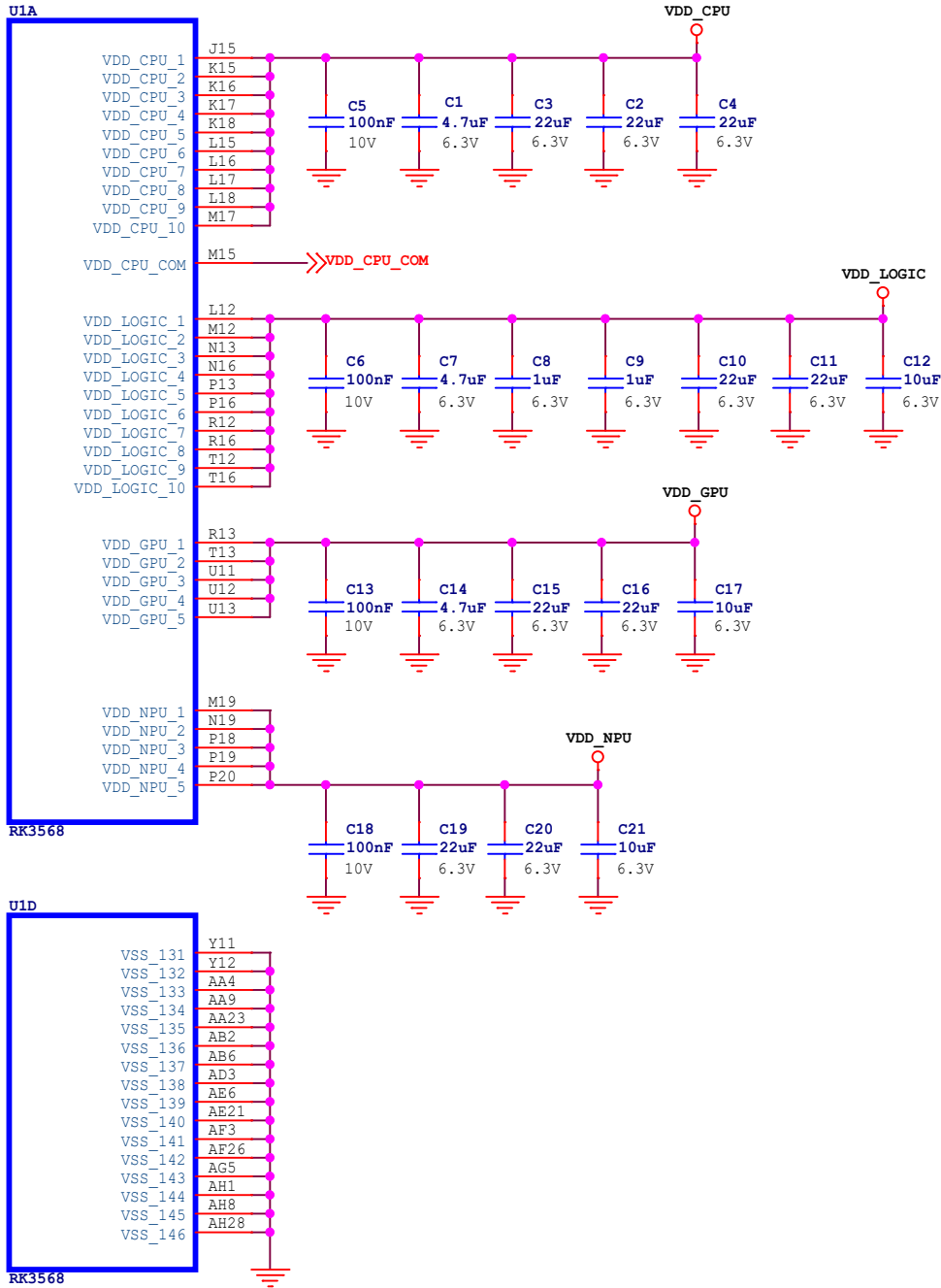


Size	Title: Radxa CM3I	REV
A4	Page Name: Index	V1.31
Date: Tuesday, September 26, 2023		
Sheet 02 of 22		

RK3568 Ref Block Diagram

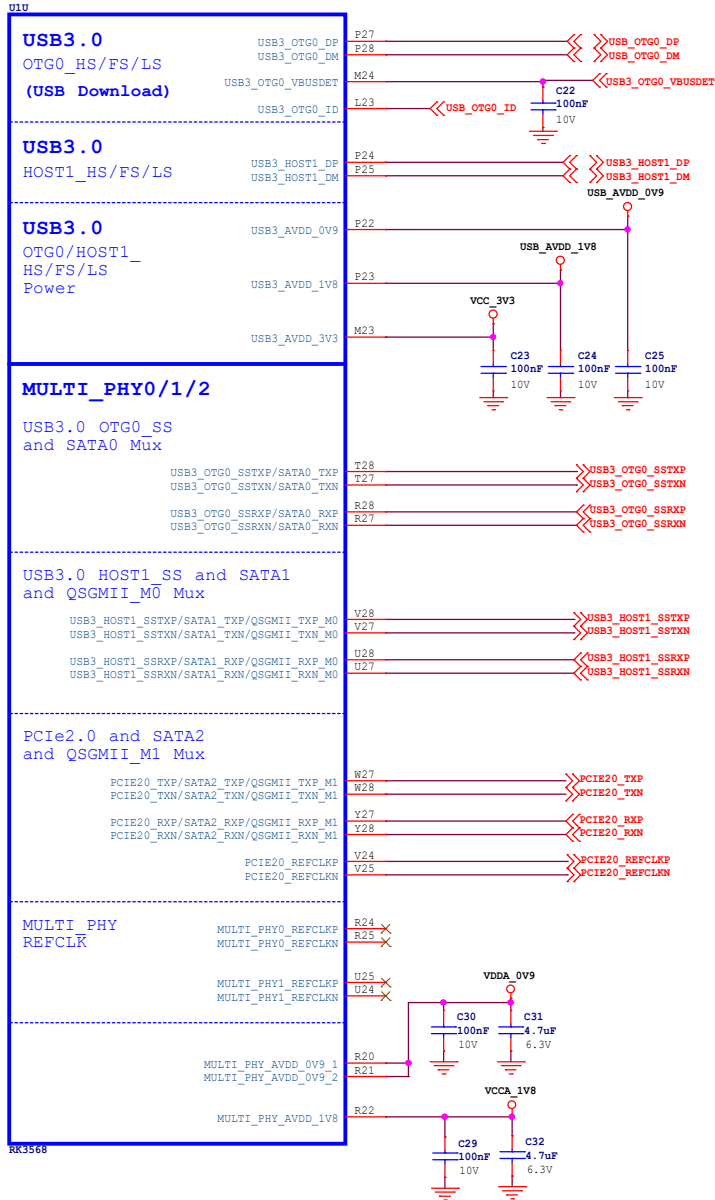


RK3568_ABCDE (Power&Gnd)

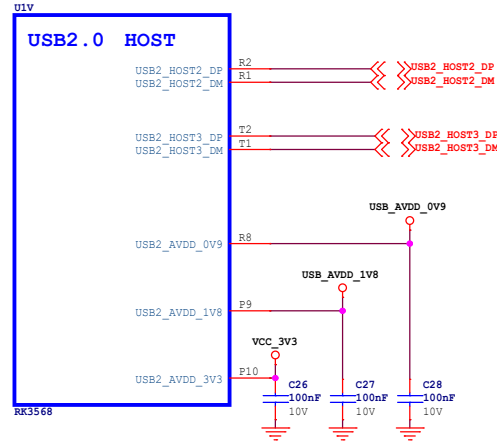


Size	Title: Radxa CM3I	REV
A4	Page Name: RK3568_Power/GND	V1.31
Date: Tuesday, September 26, 2023 Sheet 04 of 22		

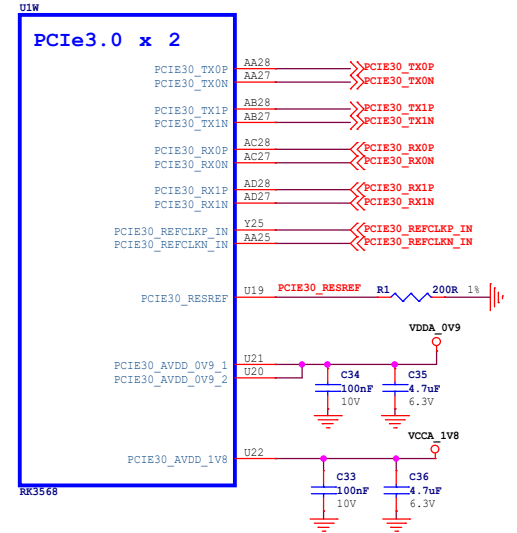
RK3568_U (USB3.0/SATA/QSGMII/PCIE2.0 x1)



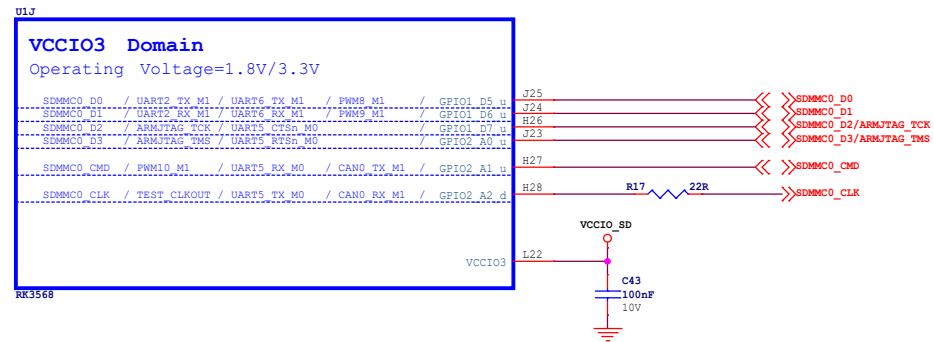
RK3568_V (USB2.0 HOST)



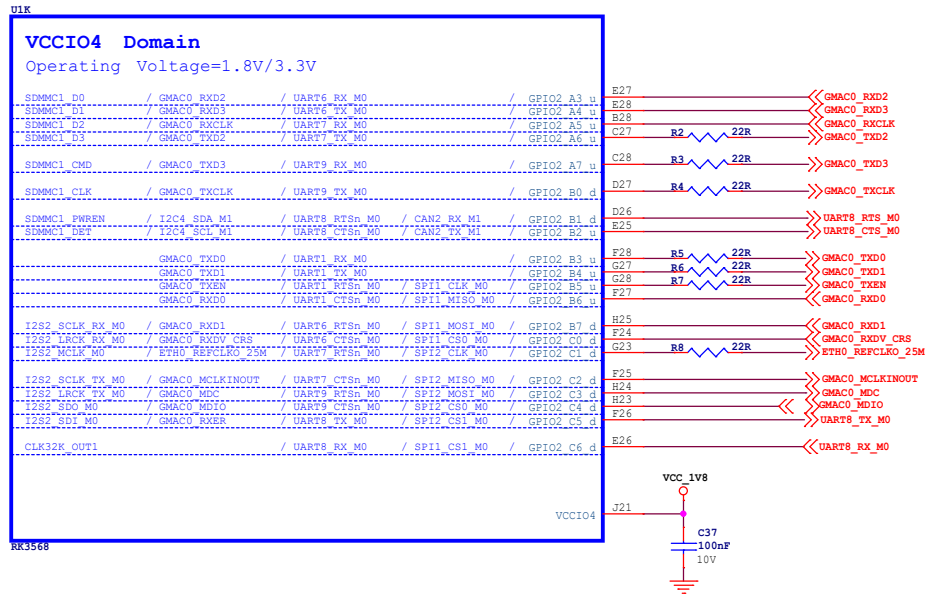
RK3568_W (PCIE3.0 x2)



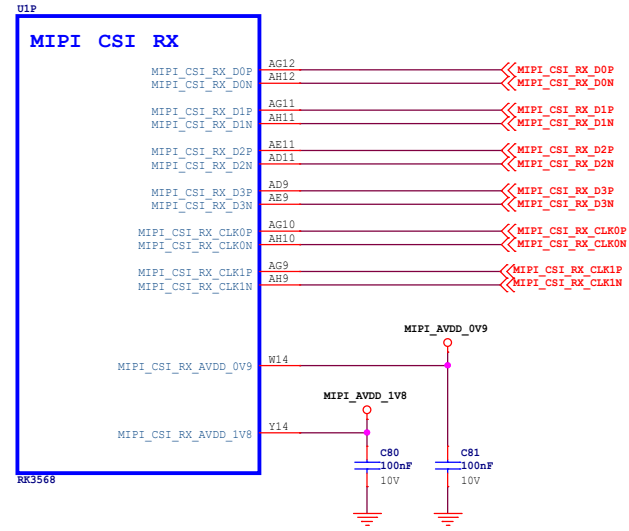
RK3568_J (VCCIO3 Domain)



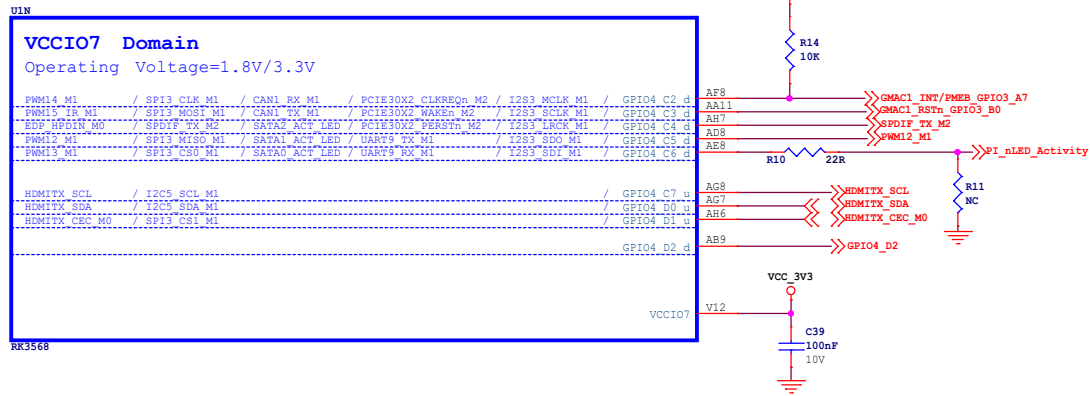
RK3568_K (VCCIO4 Domain)



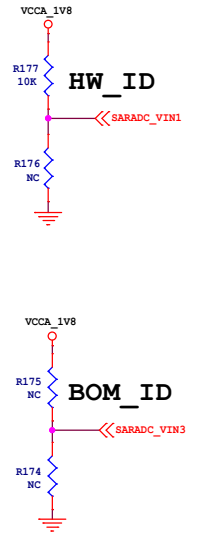
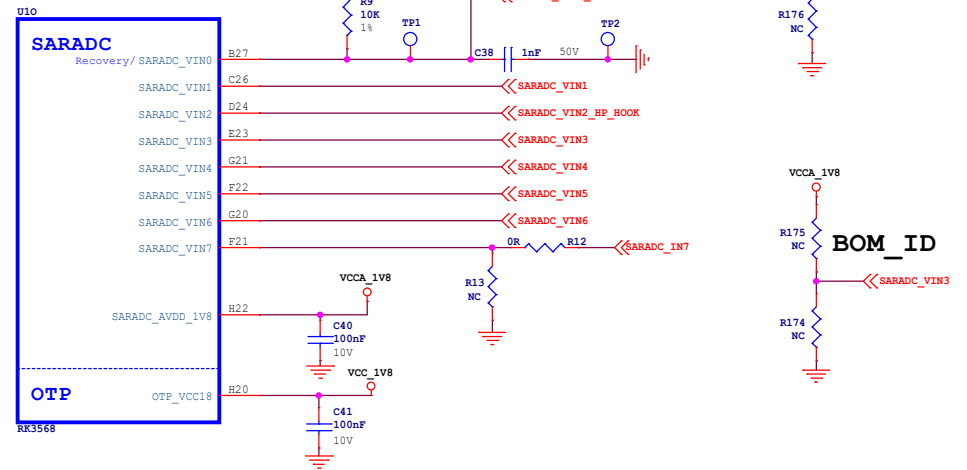
RK3568_P (MIPI_CSI_RX)



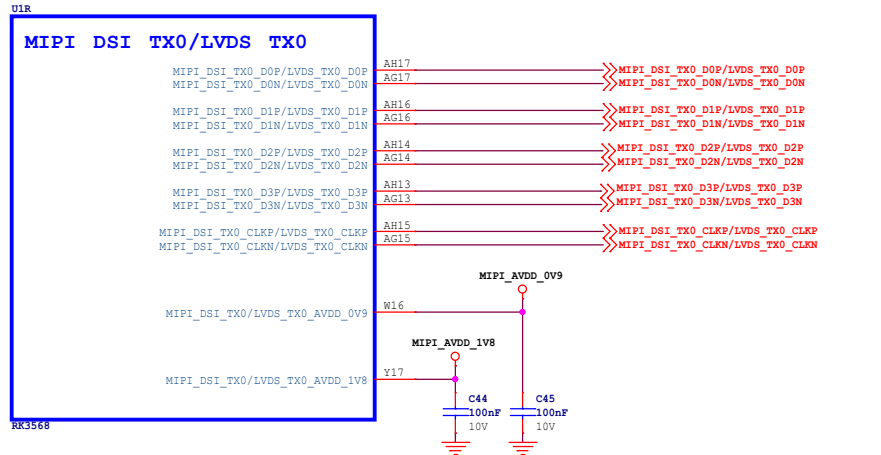
RK3568_N (VCCIO7 Domain)



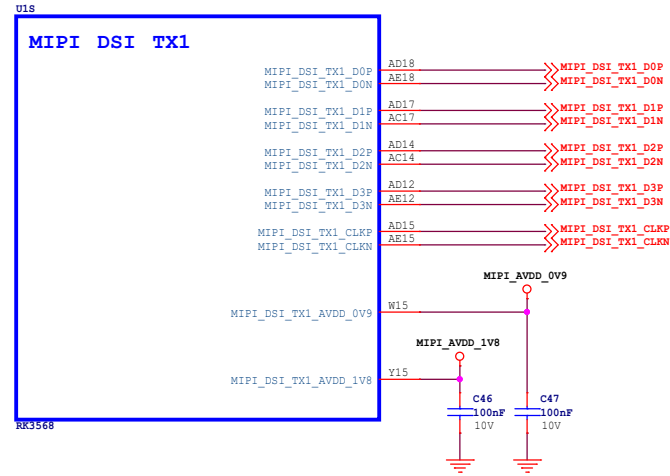
RK3568_O (SARADC/OTP)



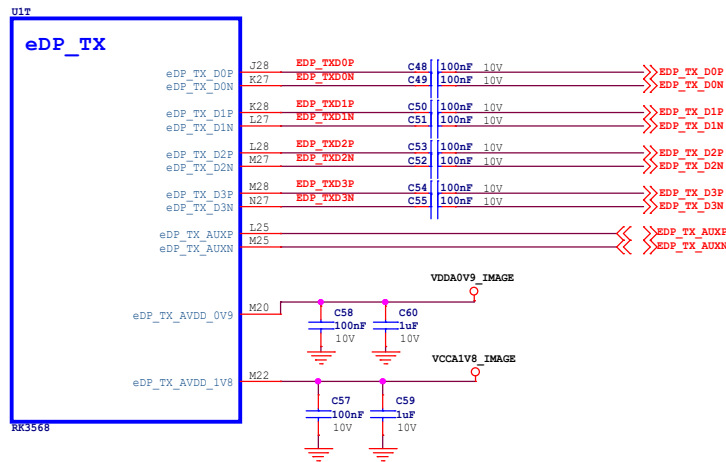
RK3568_R (MIPI_DSI_TX0/LVDS_TX0)



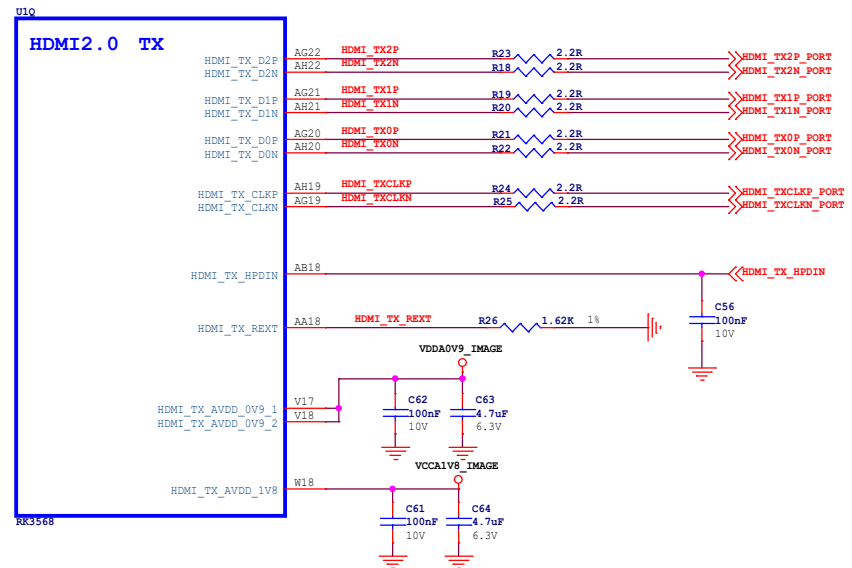
RK3568_S (MIPI_DSI_TX1)



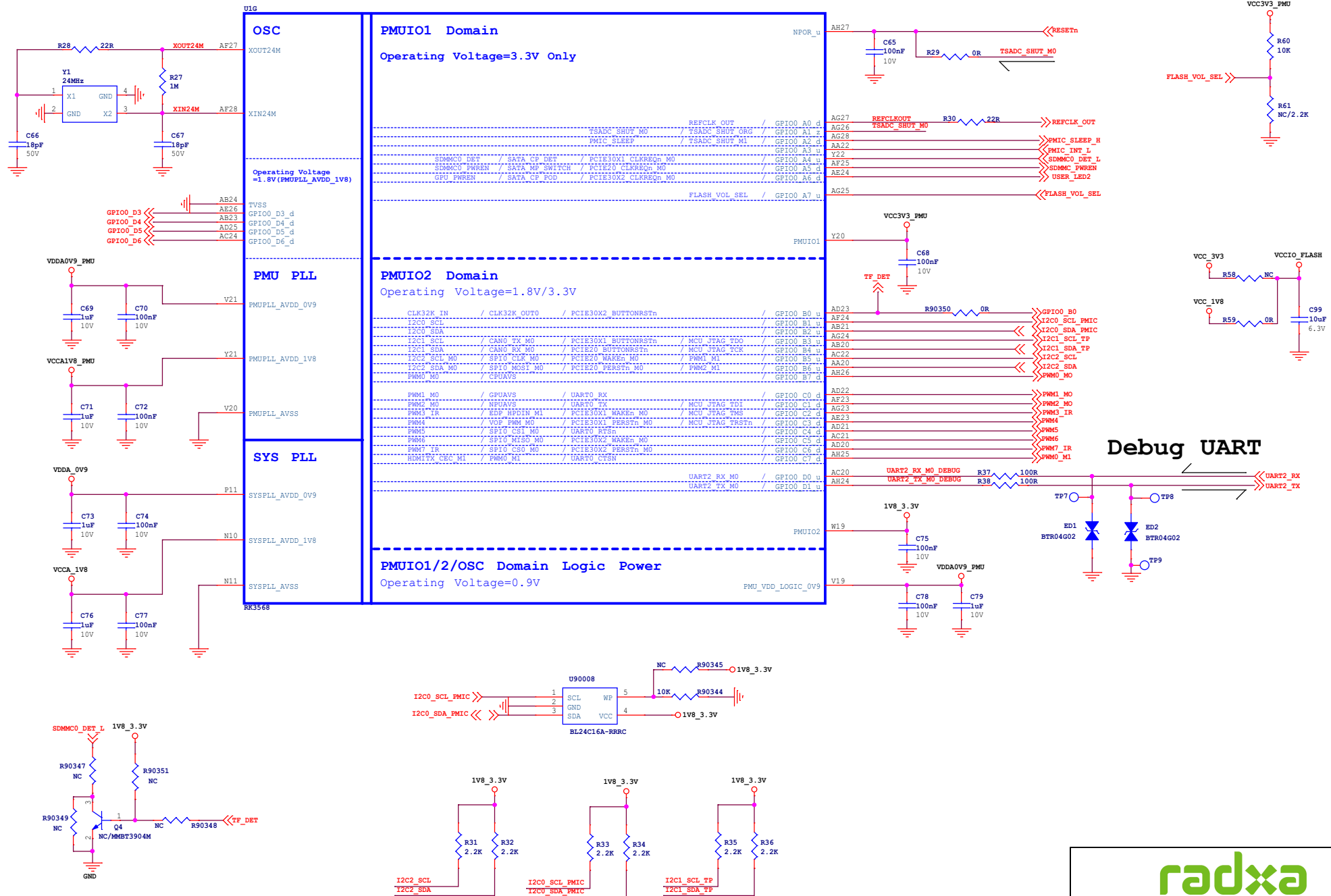
RK3568_T (eDP TX)



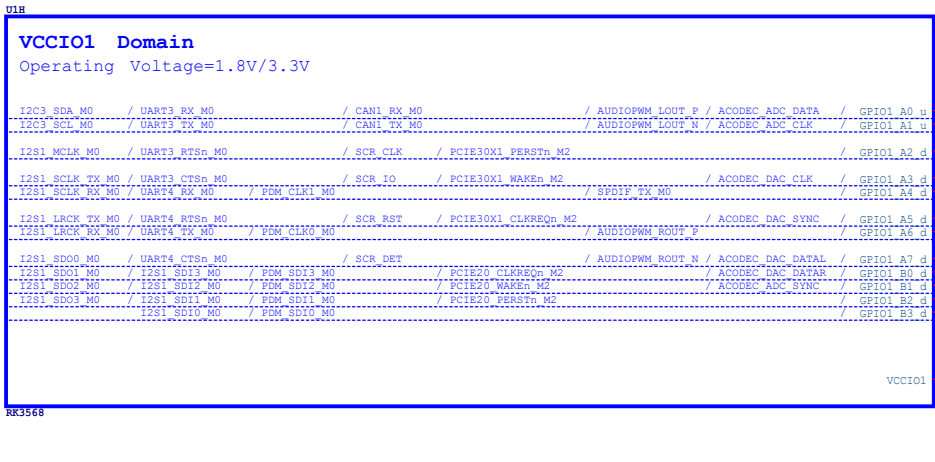
RK3568_Q (HDMI2.0 TX)



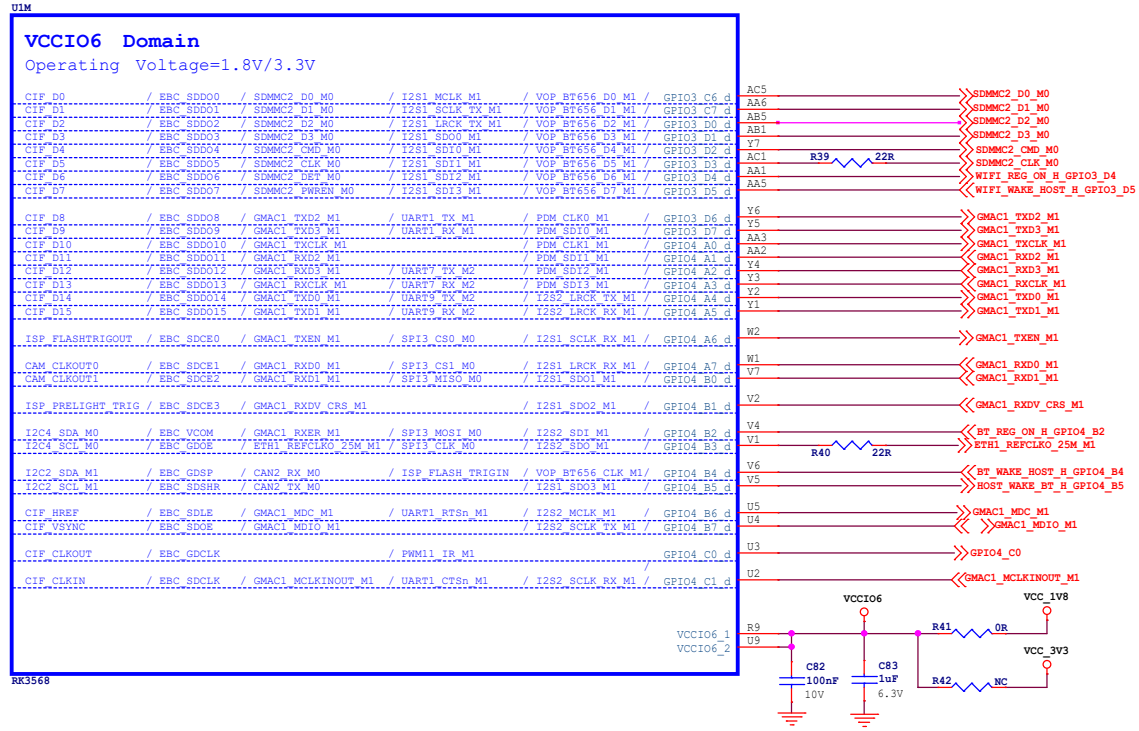
RK3568_G (OSC/PLL/PMUIO1/2)



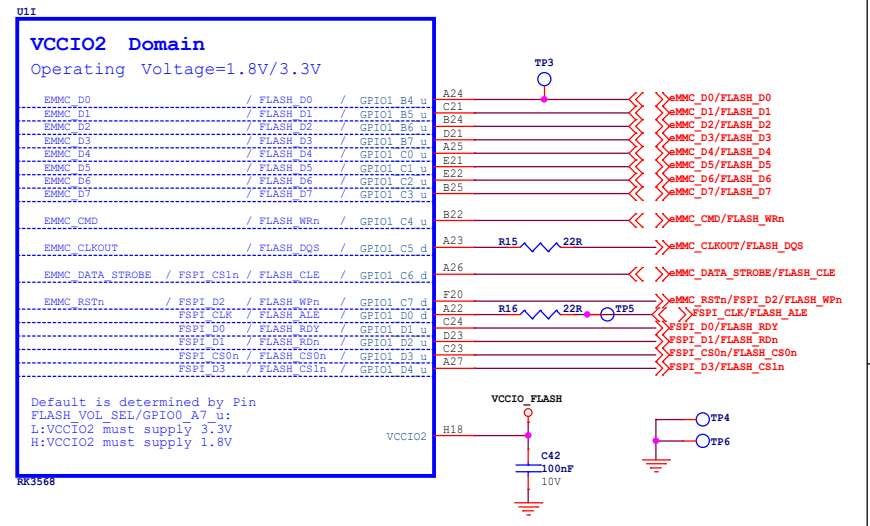
RK3568_H (VCCIO1 Domain)



RK3568_M (VCCIO6 Domain)

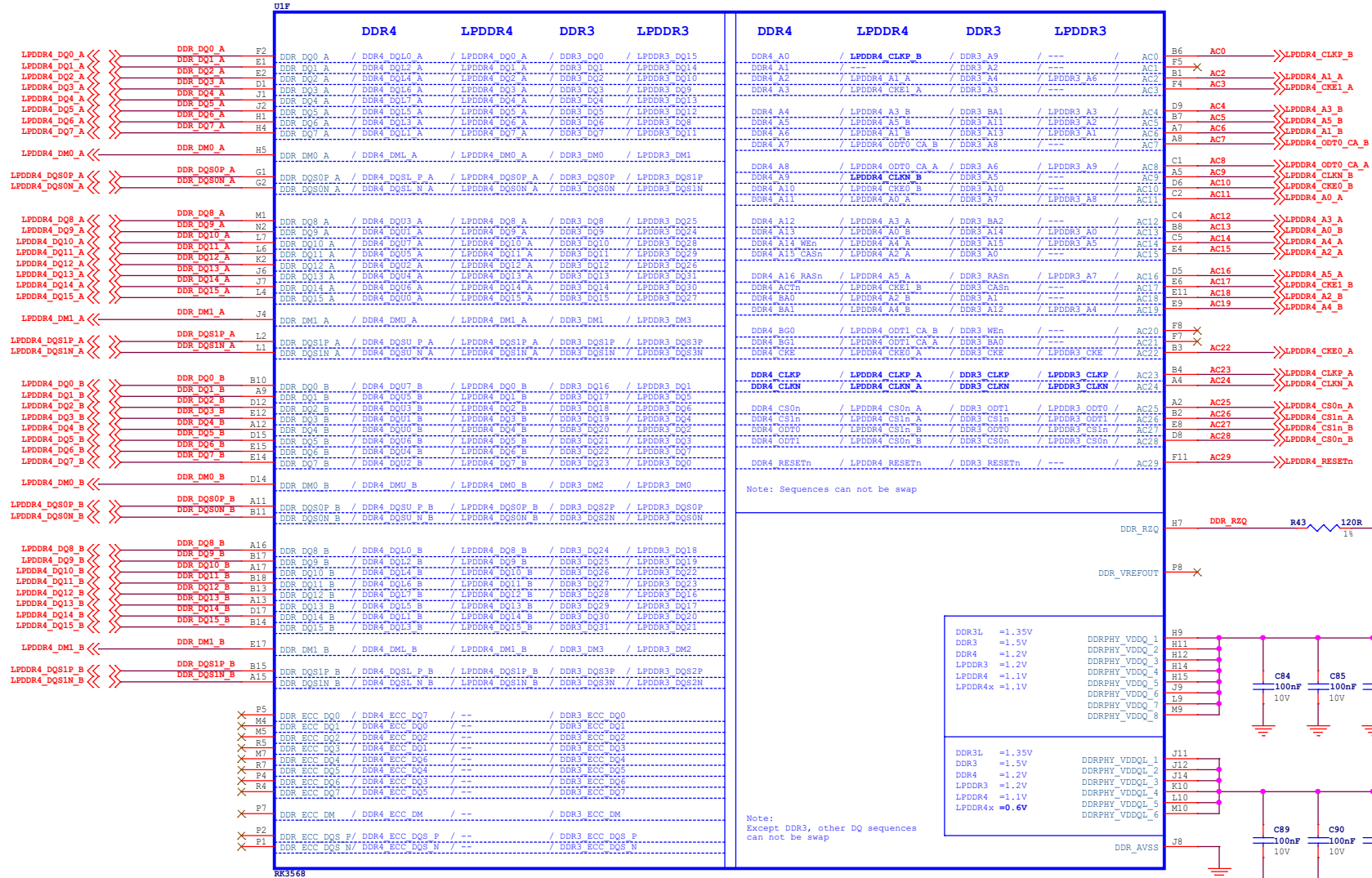


RK3568_I (VCCIO2 Domain)



Size	Title:	Radxa CM3I	REV
A3	Page Name:	RK3568_I2S/EMMC/FSPI/GMAC1	V1.31
Date:	Tuesday, September 26, 2023	Sheet	03 of 22

RK3568_F (DDR PHY)



RK3568_L (VCCIO5 Domain)

U1L

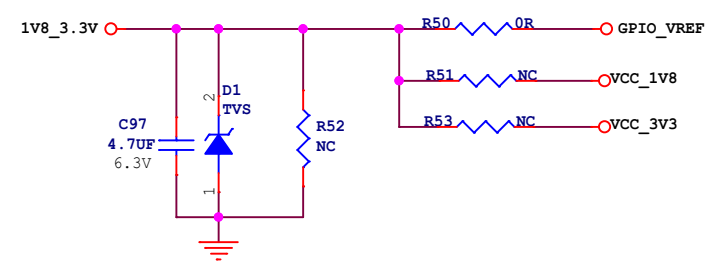
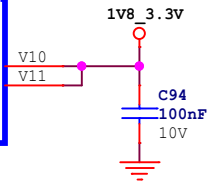
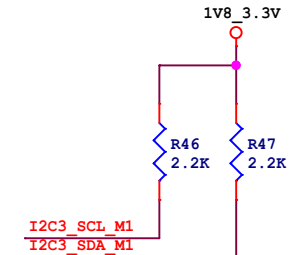
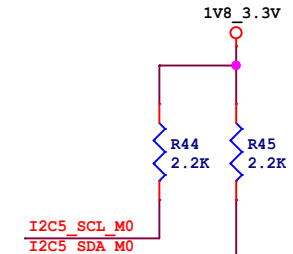
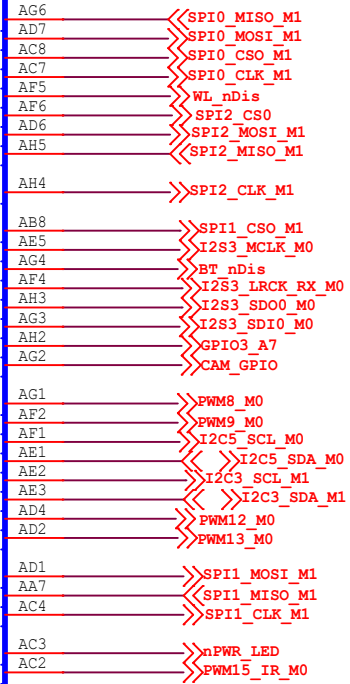
VCCIO5 Domain

Operating Voltage=1.8V/3.3V

LCDC_D0	/ VOP_BT656_D0_M0	/ SPI0_MISO_M1	/ PCIE20_CLKREQn_M1	/ I2S1_MCLK_M2	/ GPIO2_D0_d
LCDC_D1	/ VOP_BT656_D1_M0	/ SPI0_MOSI_M1	/ PCIE20_WAKEN_M1	/ I2S1_SCLK_TX_M2	/ GPIO2_D1_d
LCDC_D2	/ VOP_BT656_D2_M0	/ SPI0_CS0_M1	/ PCIE30X1_CLKREQn_M1	/ I2S1_LRCK_TX_M2	/ GPIO2_D2_d
LCDC_D3	/ VOP_BT656_D3_M0	/ SPI0_CLK_M1	/ PCIE30X1_WAKEN_M1	/ I2S1_SDIO_M2	/ GPIO2_D3_d
LCDC_D4	/ VOP_BT656_D4_M0	/ SPI2_CS1_M1	/ PCIE30X2_CLKREQn_M1	/ I2S1_SDI1_M2	/ GPIO2_D4_d
LCDC_D5	/ VOP_BT656_D5_M0	/ SPI2_CS0_M1	/ PCIE30X2_WAKEN_M1	/ I2S1_SDI2_M2	/ GPIO2_D5_d
LCDC_D6	/ VOP_BT656_D6_M0	/ SPI2_MOSI_M1	/ PCIE30X2_PERSTn_M1	/ I2S1_SDI3_M2	/ GPIO2_D6_d
LCDC_D7	/ VOP_BT656_D7_M0	/ SPI2_MISO_M1	/ UART8_TX_M1	/ I2S1_SDO0_M2	/ GPIO2_D7_d
LCDC_CLK	/ VOP_BT656_CLK_M0	/ SPI2_CLK_M1	/ UART8_RX_M1	/ I2S1_SDO1_M2	/ GPIO3_A0_d
LCDC_D8	/ VOP_BT1120_D0	/ SPI1_CS0_M1	/ PCIE30X1_PERSTn_M1	/ SDMMC2_D0_M1	/ GPIO3_A1_d
LCDC_D9	/ VOP_BT1120_D1	/ GMAC1_TXD2_M0	/ I2S3_MCLK_M0	/ SDMMC2_D1_M1	/ GPIO3_A2_d
LCDC_D10	/ VOP_BT1120_D2	/ GMAC1_TXD3_M0	/ I2S3_SCLK_M0	/ SDMMC2_D2_M1	/ GPIO3_A3_d
LCDC_D11	/ VOP_BT1120_D3	/ GMAC1_RXD2_M0	/ I2S3_LRCK_M0	/ SDMMC2_D3_M1	/ GPIO3_A4_d
LCDC_D12	/ VOP_BT1120_D4	/ GMAC1_RXD3_M0	/ I2S3_SDO_M0	/ SDMMC2_CMD_M1	/ GPIO3_A5_d
LCDC_D13	/ VOP_BT1120_CLK	/ GMAC1_TXCLK_M0	/ I2S3_SDI_M0	/ SDMMC2_CLK_M1	/ GPIO3_A6_d
LCDC_D14	/ VOP_BT1120_D5	/ GMAC1_RXCLK_M0	/ SDMMC2_DET_M1	/ GPIO3_A7_d	
LCDC_D15	/ VOP_BT1120_D6	/ ETH1_REFCLK0_25M_M0	/ SDMMC2_PWREN_M1	/ GPIO3_B0_d	
LCDC_D16	/ VOP_BT1120_D7	/ GMAC1_RXD0_M0	/ UART4_RX_M1	/ PWM8_M0	/ GPIO3_B1_d
LCDC_D17	/ VOP_BT1120_D8	/ GMAC1_RXD1_M0	/ UART4_TX_M1	/ PWM9_M0	/ GPIO3_B2_d
LCDC_D18	/ VOP_BT1120_D9	/ GMAC1_RXDV_CRS_M0	/ I2C5_SCL_M0	/ PDM_SDI0_M2	/ GPIO3_B3_d
LCDC_D19	/ VOP_BT1120_D10	/ GMAC1_RXER_M0	/ I2C5_SDA_M0	/ PDM_SDI1_M2	/ GPIO3_B4_d
LCDC_D20	/ VOP_BT1120_D11	/ GMAC1_TXD0_M0	/ I2C3_SCL_M1	/ PWM10_M0	/ GPIO3_B5_d
LCDC_D21	/ VOP_BT1120_D12	/ GMAC1_TXD1_M0	/ I2C3_SDA_M1	/ PWM11_IR_M0	/ GPIO3_B6_d
LCDC_D22	/ PWM12_M0	/ GMAC1_TXEN_M0	/ UART5_TX_M1	/ PDM_SDI2_M2	/ GPIO3_B7_d
LCDC_D23	/ PWM13_M0	/ GMAC1_MCLKINOUT_M0	/ UART5_RX_M1	/ PDM_SDI3_M2	/ GPIO3_C0_d
LCDC_HSYNC	/ VOP_BT1120_D13	/ SPI1_MOSI_M1	/ PCIE20_PERSTn_M1	/ I2S1_SDO2_M2	/ GPIO3_C1_d
LCDC_VSYNC	/ VOP_BT1120_D14	/ SPI1_MISO_M1	/ UART5_TX_M1	/ I2S1_SDO3_M2	/ GPIO3_C2_d
LCDC_DEN	/ VOP_BT1120_D15	/ SPI1_CLK_M1	/ UART5_RX_M1	/ I2S1_SCLK_RX_M2	/ GPIO3_C3_d
PWM14_M0	/ VOP_PWM_M1	/ GMAC1_MDC_M0	/ UART7_TX_M1	/ PDM_CLK1_M2	/ GPIO3_C4_d
PWM15_IR_M0	/ SPBDF_TX_M1	/ GMAC1_MBI0_M0	/ UART7_RX_M1	/ I2S1_LRCK_RX_M2	/ GPIO3_C5_d

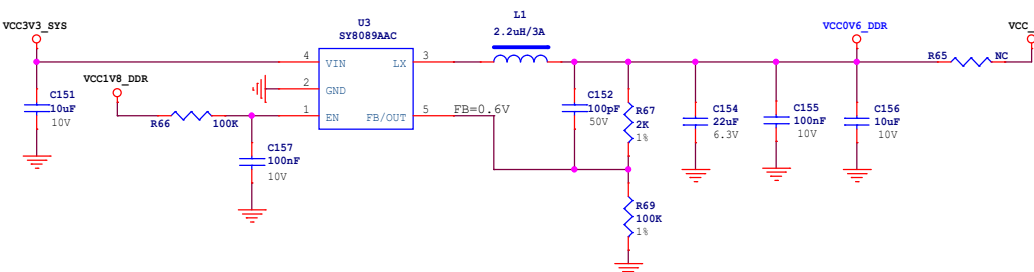
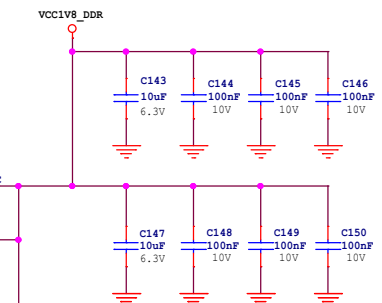
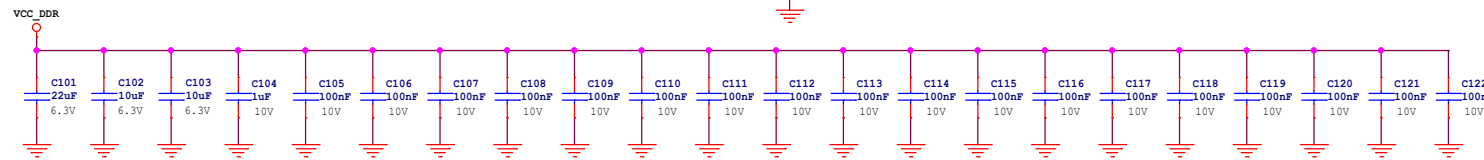
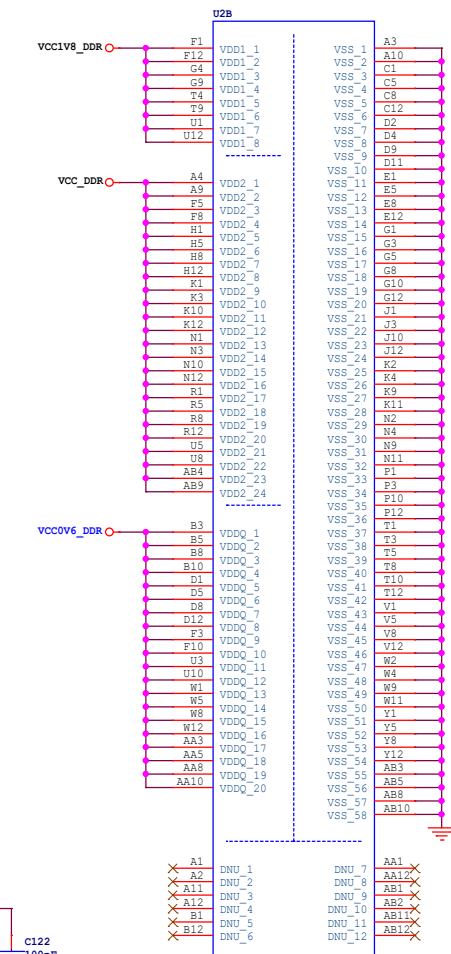
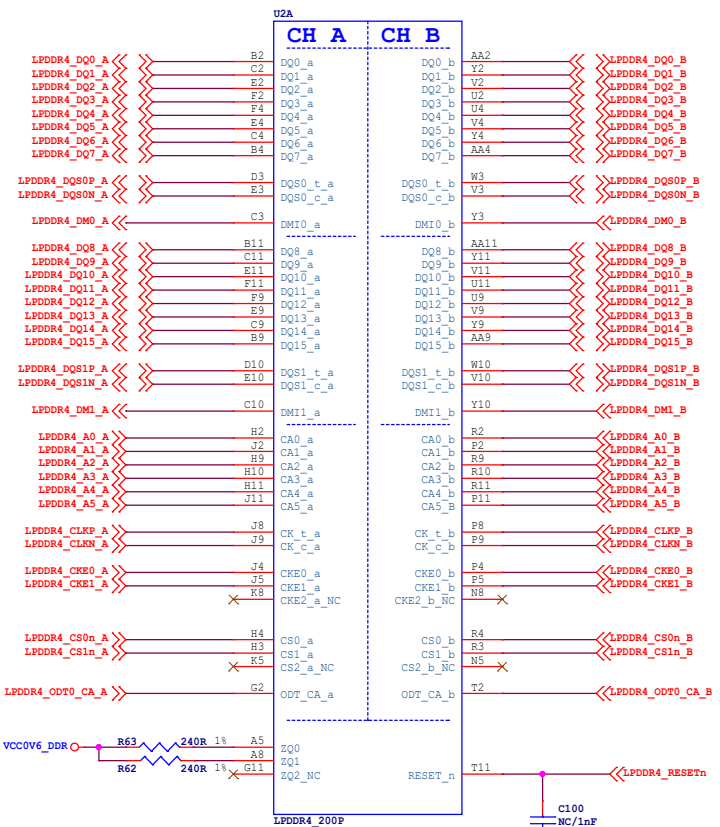
VCCIO5_1
VCCIO5_2

RK3568



Size	Title:	Radxa CM3I	REV
A4	Page Name:	RK3568_GPIO2_GPIO3	V1.31
Date:		Tuesday, September 26, 2023	Sheet 11 of 22

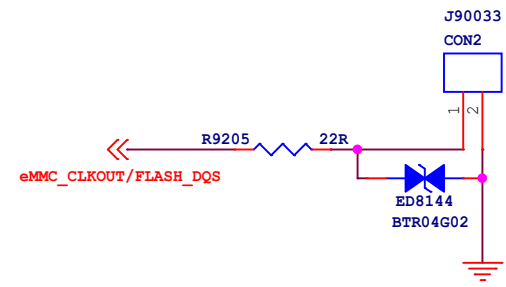
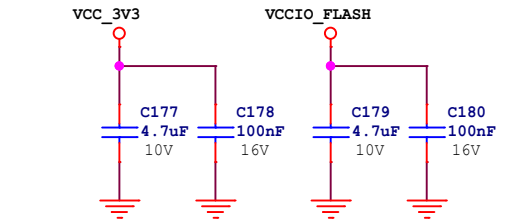
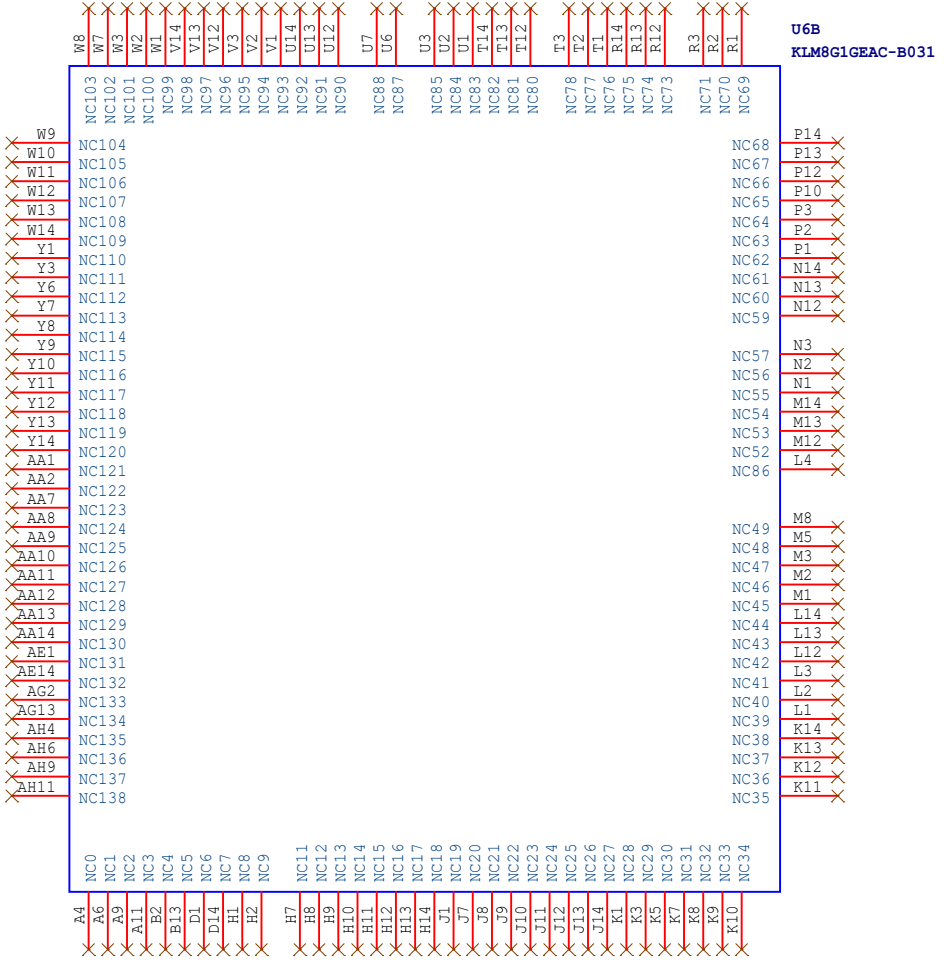
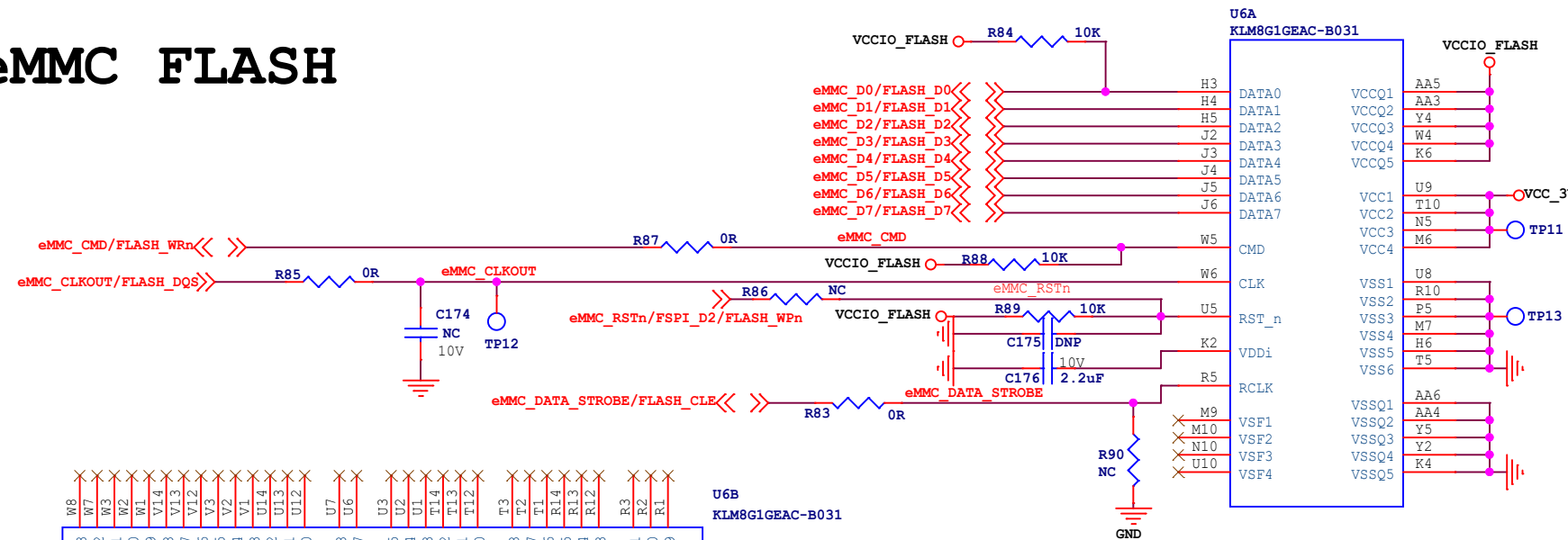
LPDDR4




radxa

Size	Title: Radxa CM3I	REV
A3	Page Name: DRAM-LPDDR4_1X32bit	V1.31
Date: Tuesday, September 26, 2023	Sheet 12	of 22

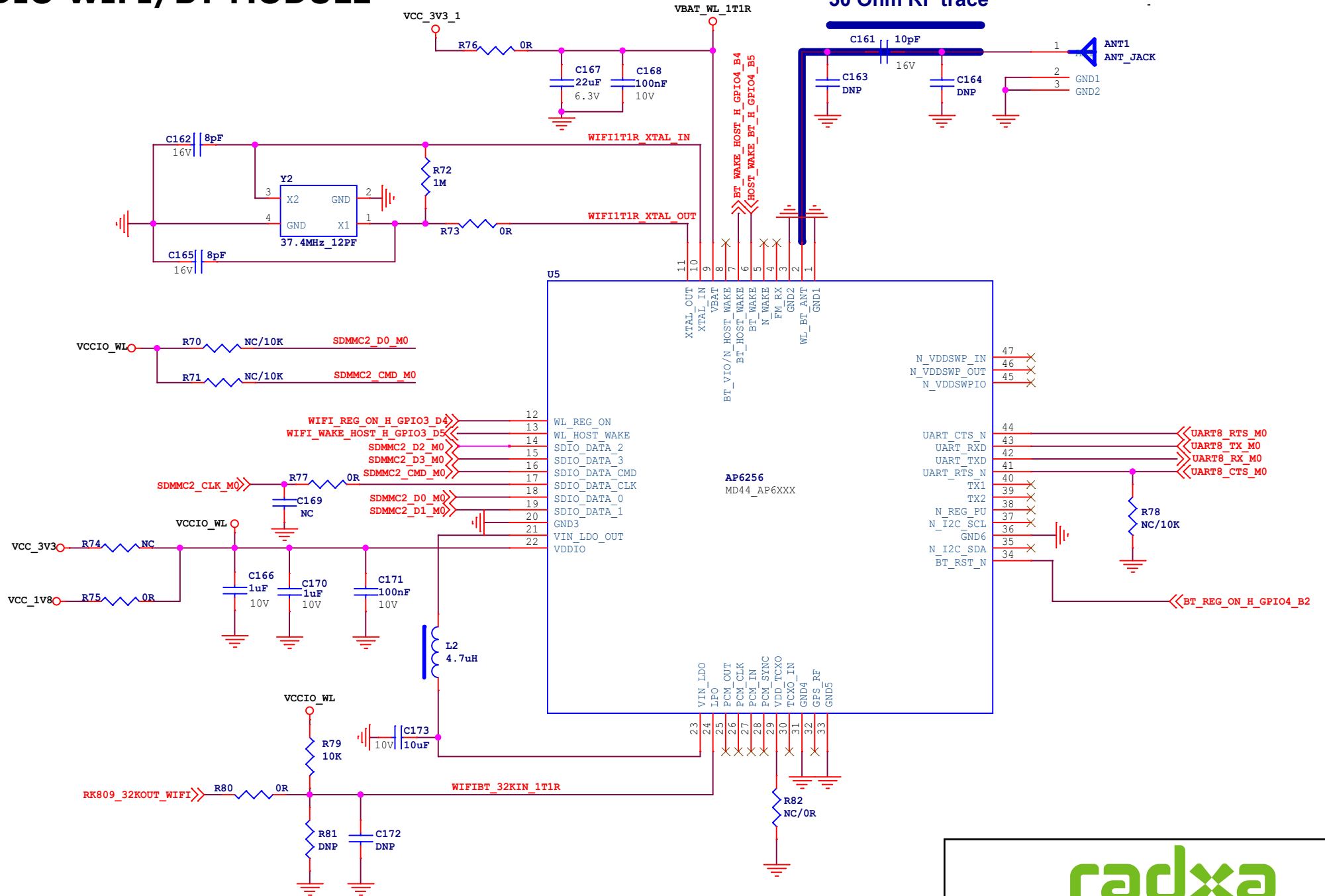
eMMC FLASH





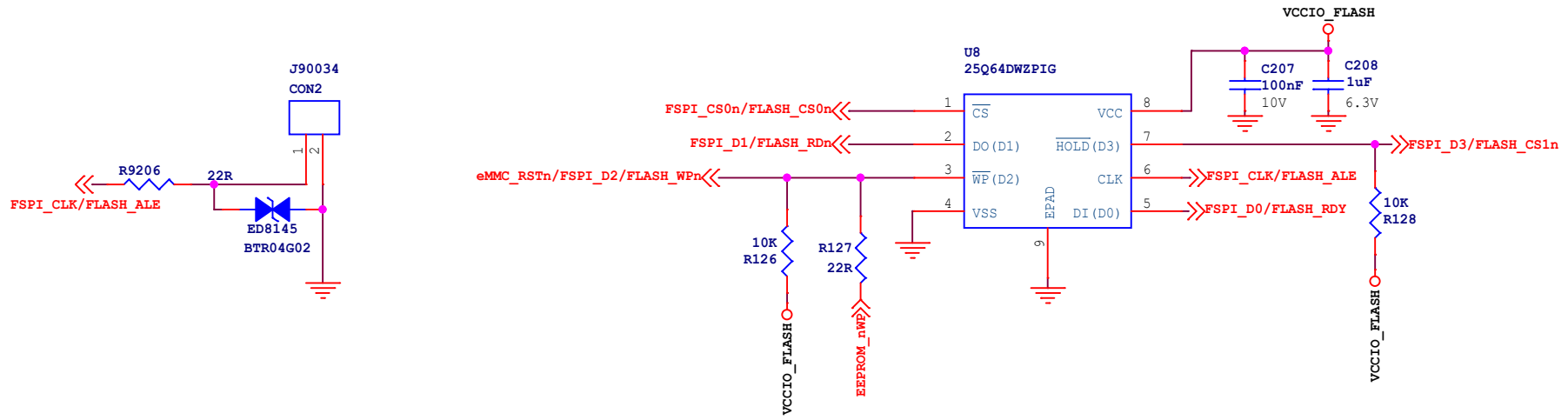
Size	Title: Radxa CM31	REV
A4	Page Name: Memory-eMMC	V1.31
Date: Tuesday, September 26, 2023		
Sheet		13 of 22

SDIO WIFI/BT MODULE

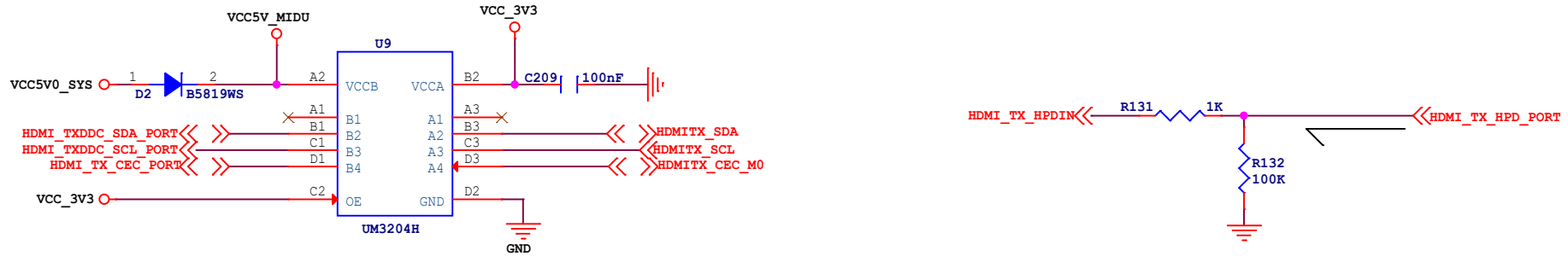


Size	Title:	Radxa CM31
A4	Page Name:	WIFI/BT
Date:	Tuesday, September 26, 2023	Sheet 14 of 22
	REV	V1.31

SPI FLASH

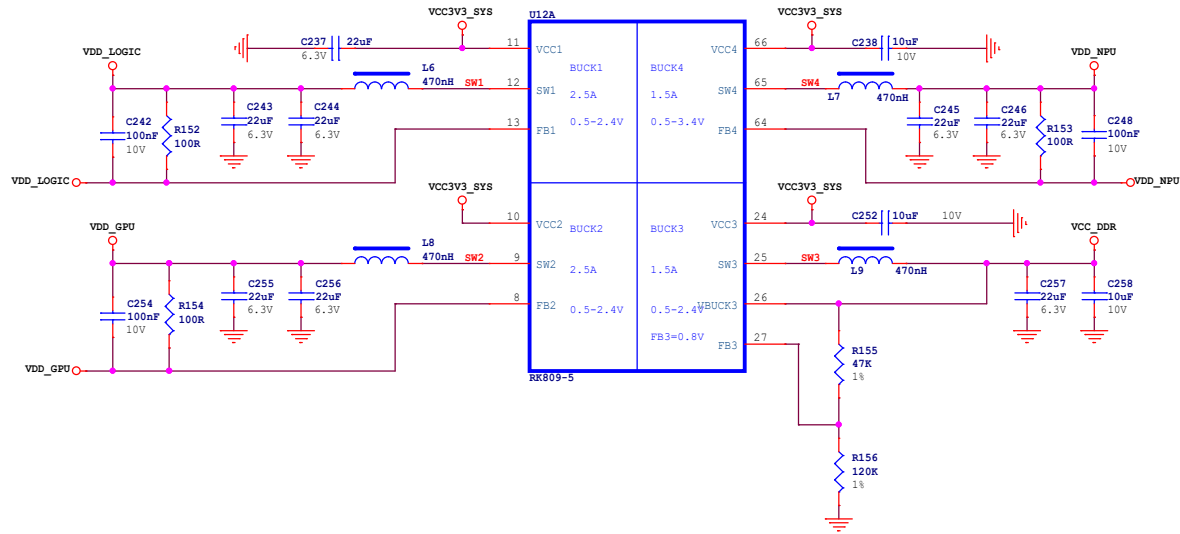


HDMI

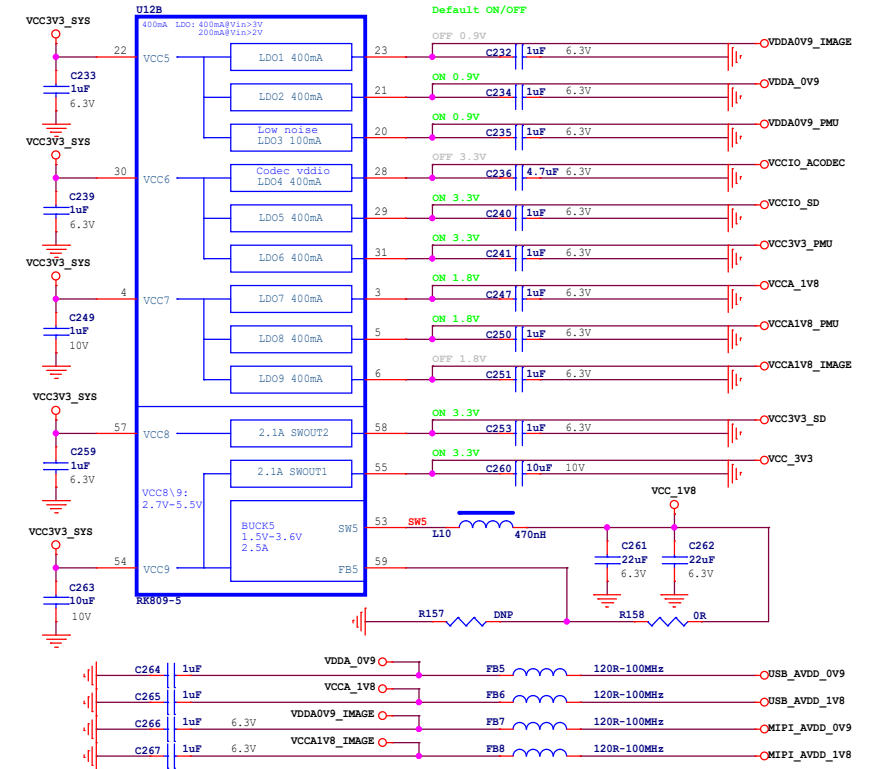


Size	Title: Radxa CM3I	REV
A4	Page Name: Flash-SPI/HDMI	V1.31
Date: Tuesday, September 26, 2023 Sheet 16 of 22		

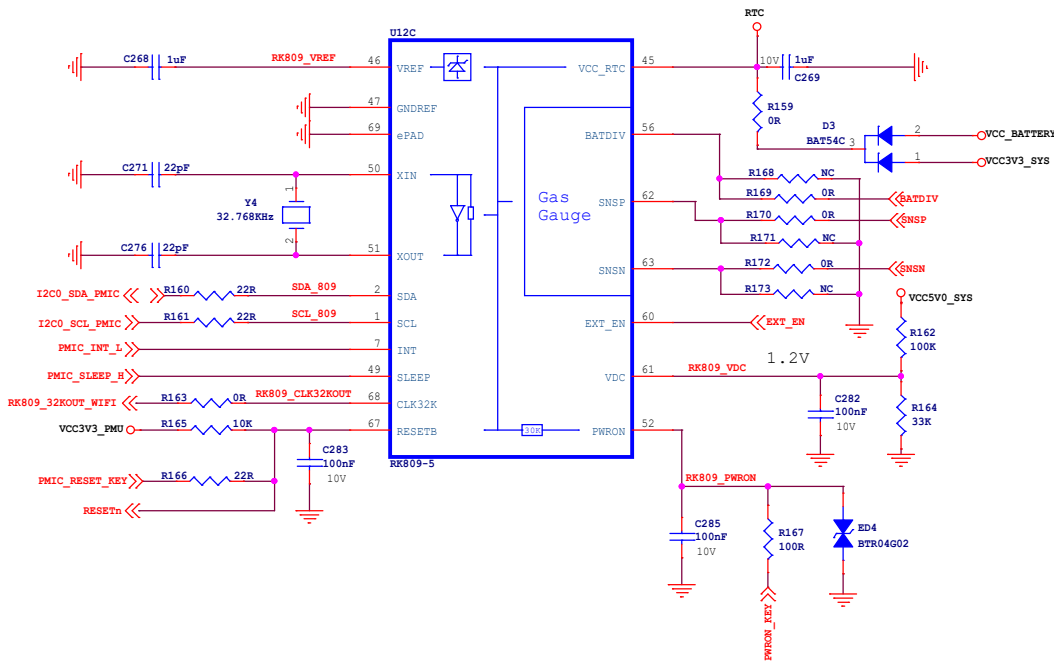
PMIC RK809 DCDC



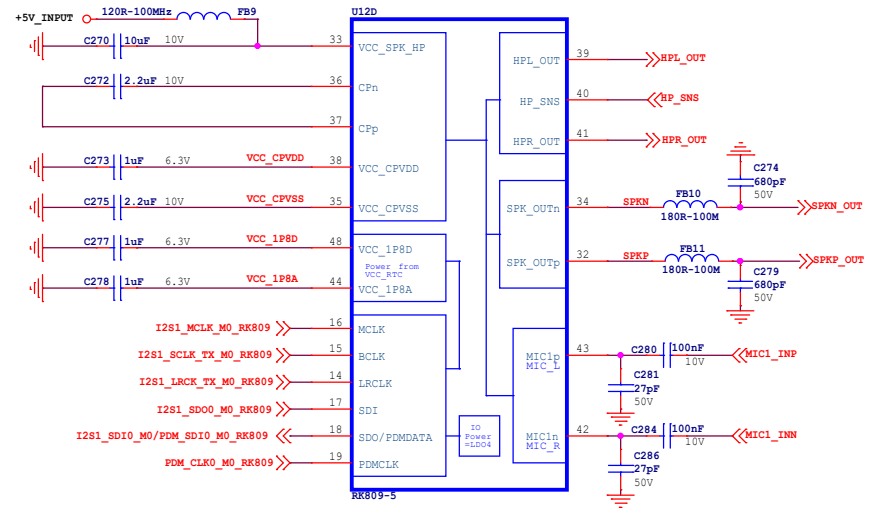
PMIC RK809 LDO



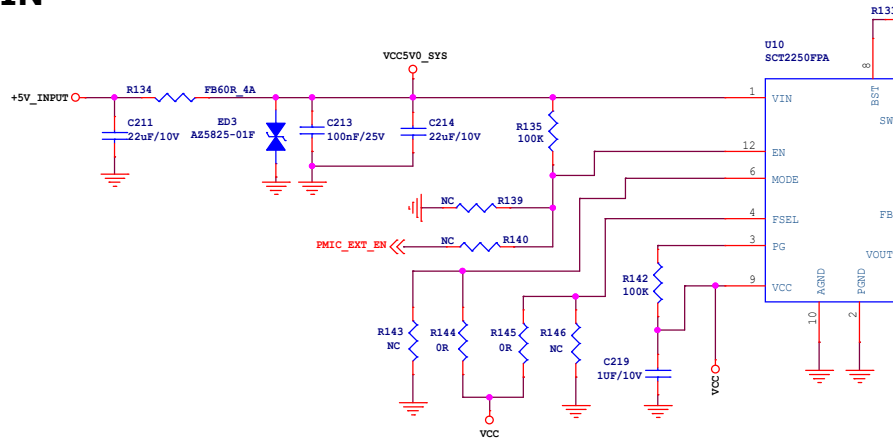
PMIC RK809 Management



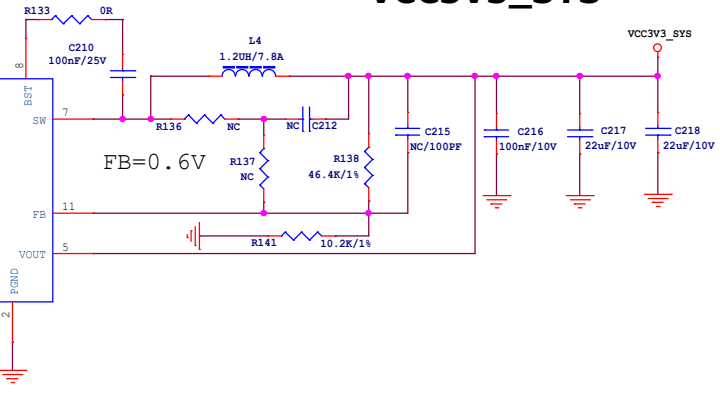
PMIC RK809 CODEC



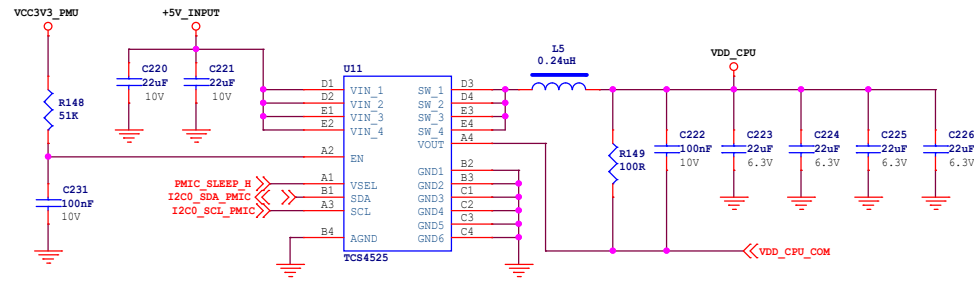
5V/3A DCIN



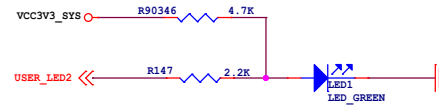
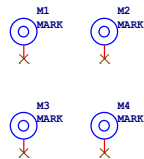
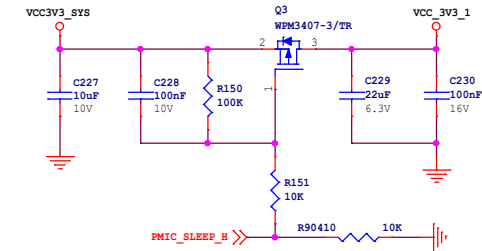
VCC3V3_SYS

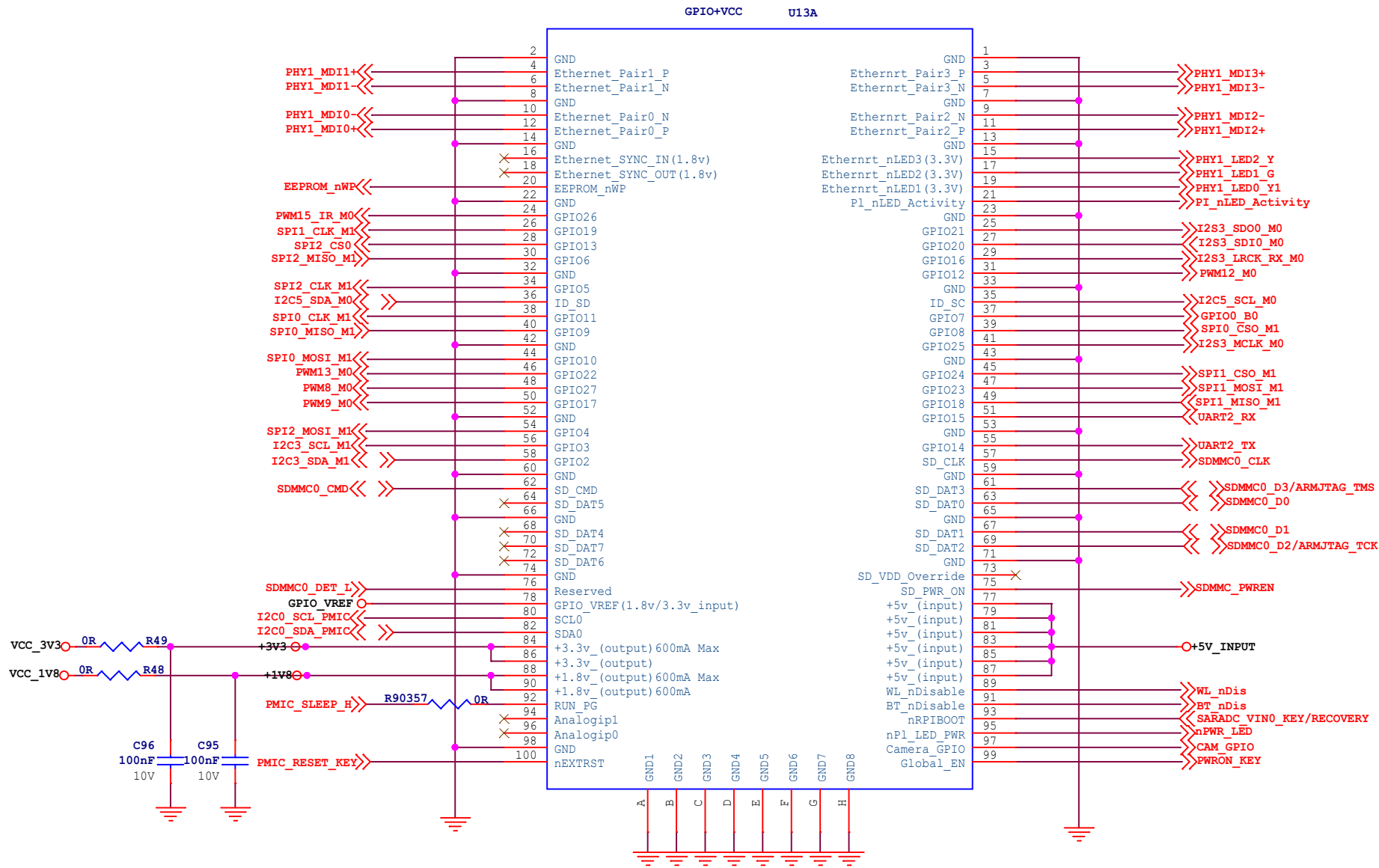


VDD_CPU



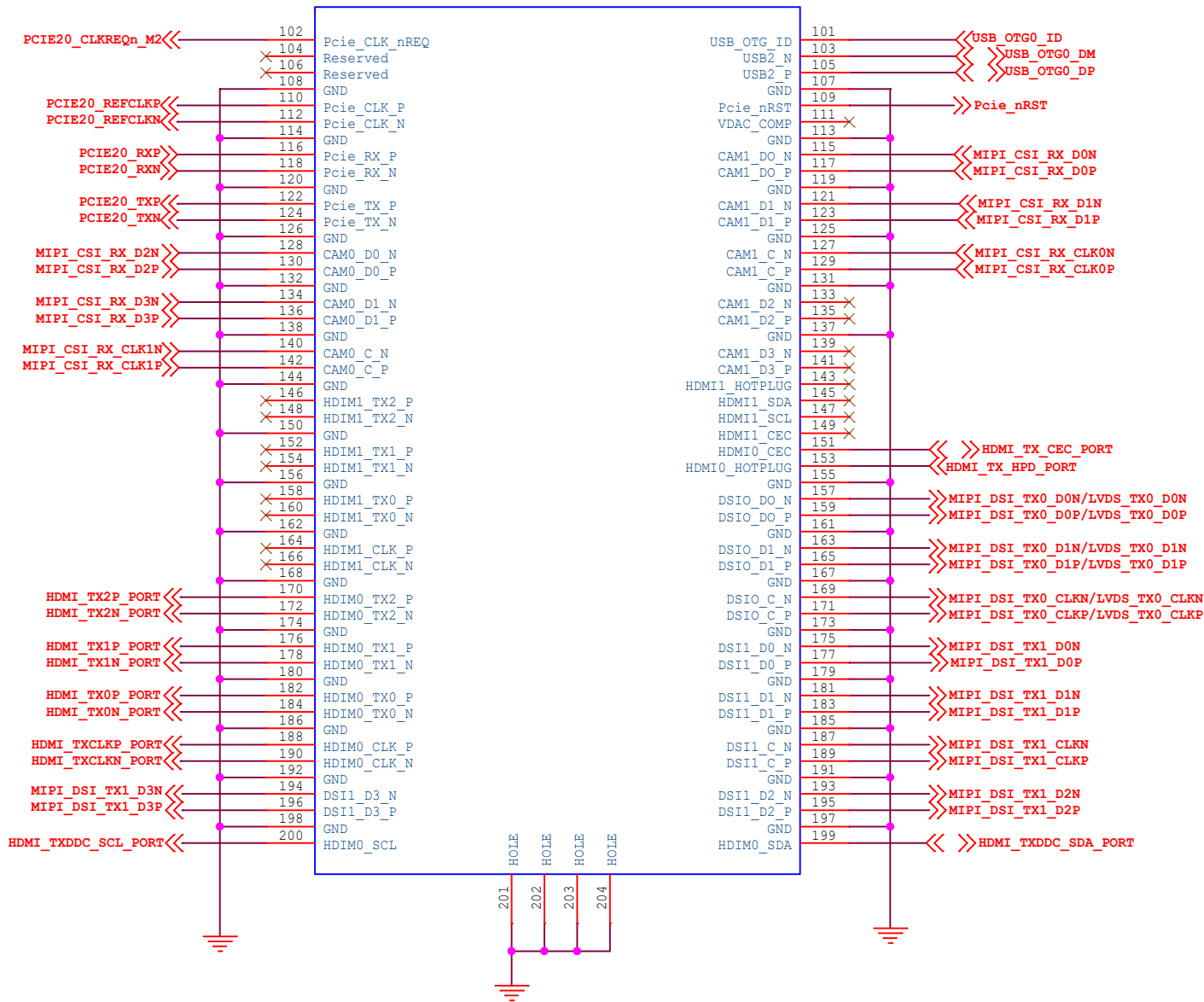
VCC_3V3 (Power OFF under SLEEP)



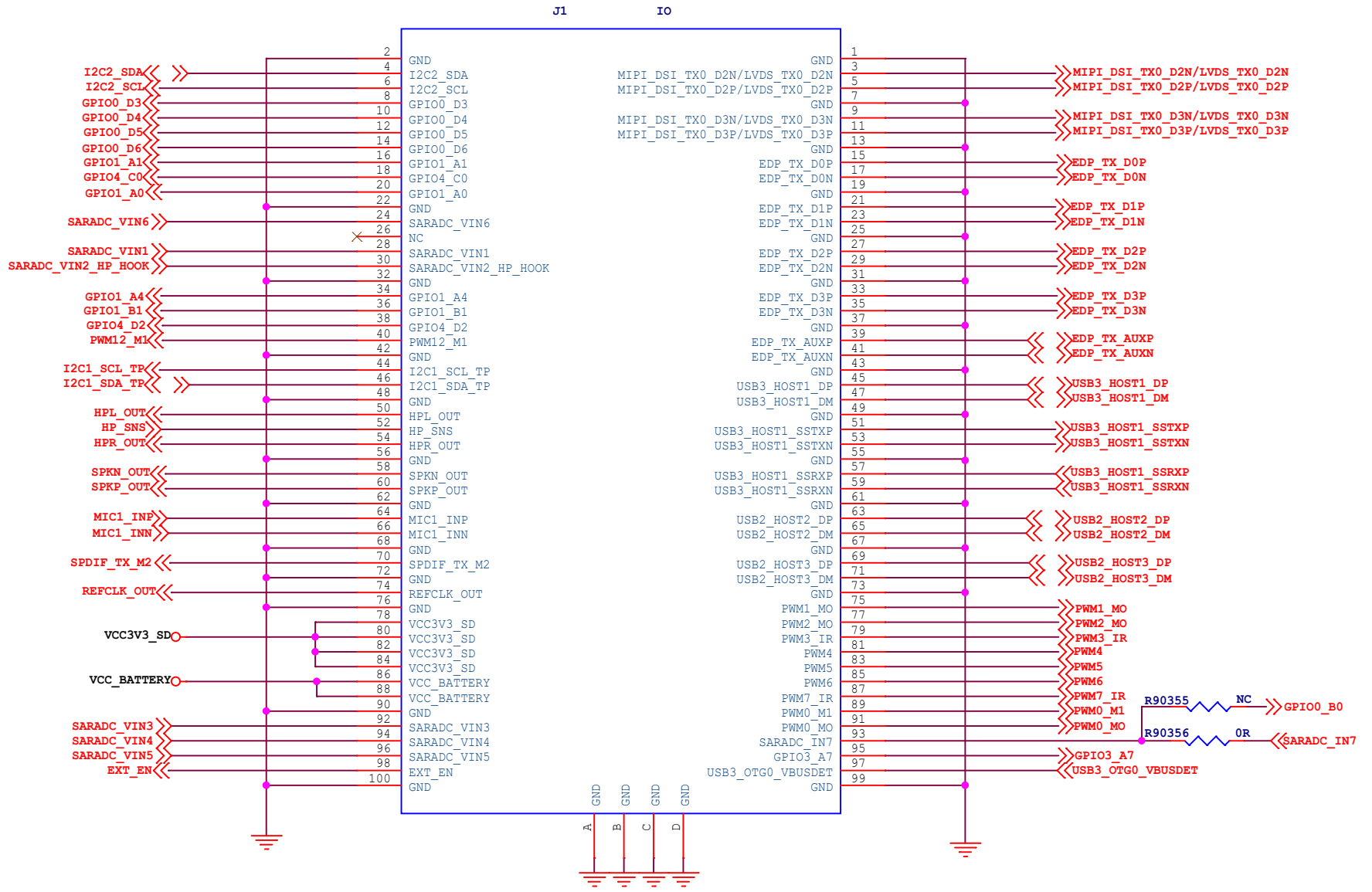


Size	Title: Radxa CM3I	REV
A4	Page Name: GPIO+VCC_Connector	V1.31
Date: Tuesday, September 26, 2023	Sheet	19 of 22

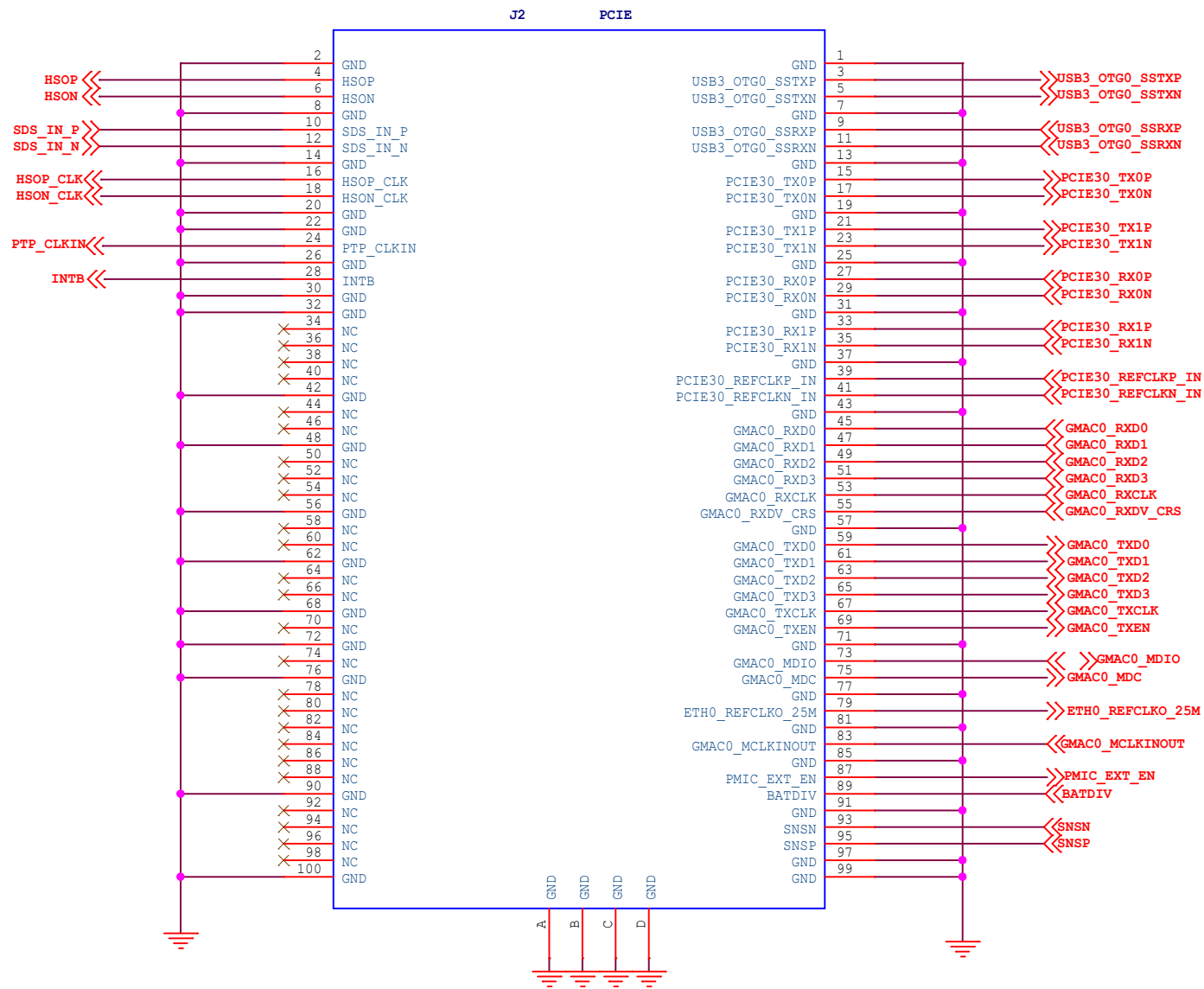
High Speed Serial U13B



Size	Title: Radxa CM3I	REV
A4	Page Name: High Speed Serial Connector	V1.31
Date: Tuesday, September 26, 2023	Sheet 20 of 22	



Size	Title: Radxa CM3I	REV
A4	Page Name: EDP/USB3.0 Connector	V1.31
Date: Tuesday, September 26, 2023	Sheet 21 of 22	



Size	Title: Radxa CM3I	REV
A4	Page Name: PCIE/GMAC0_Connector	V1.31
Date: Tuesday, September 26, 2023 Sheet 22 of 22		