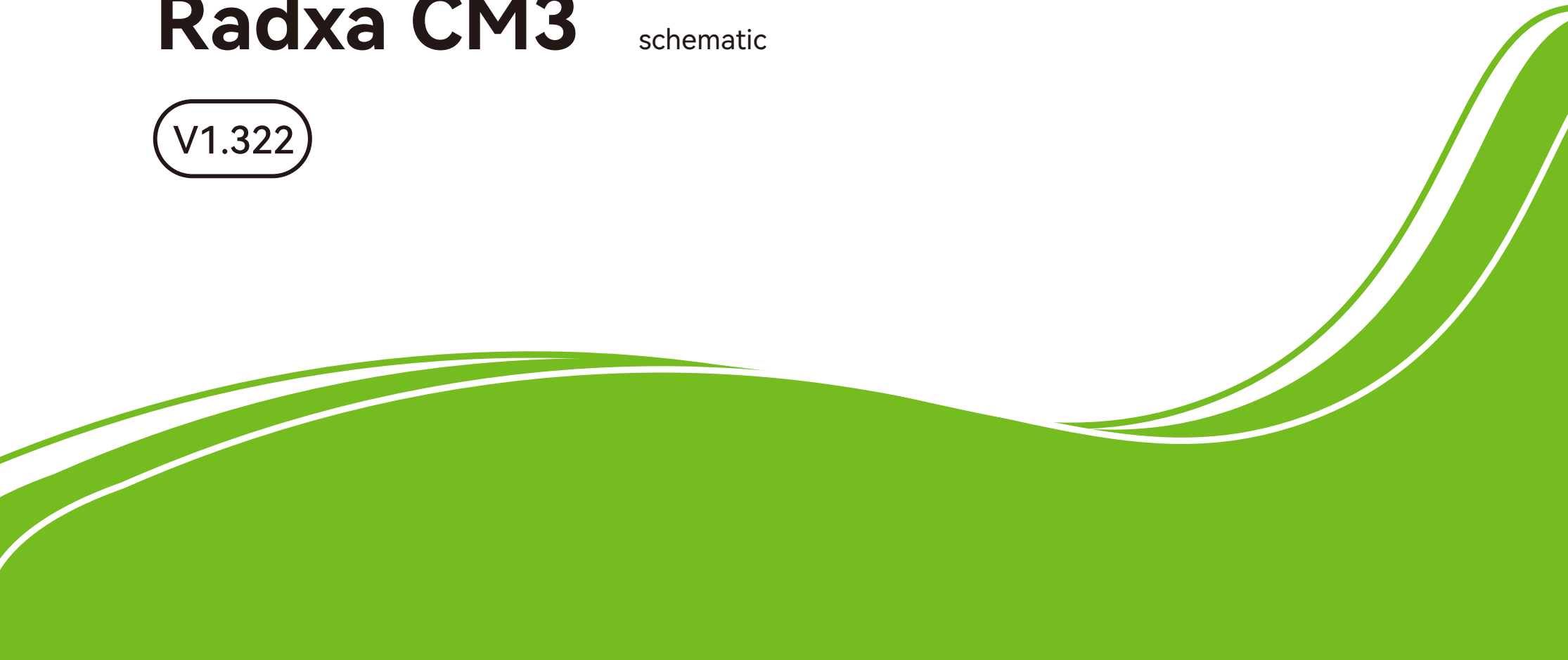




# Radxa CM3

schematic

V1.322



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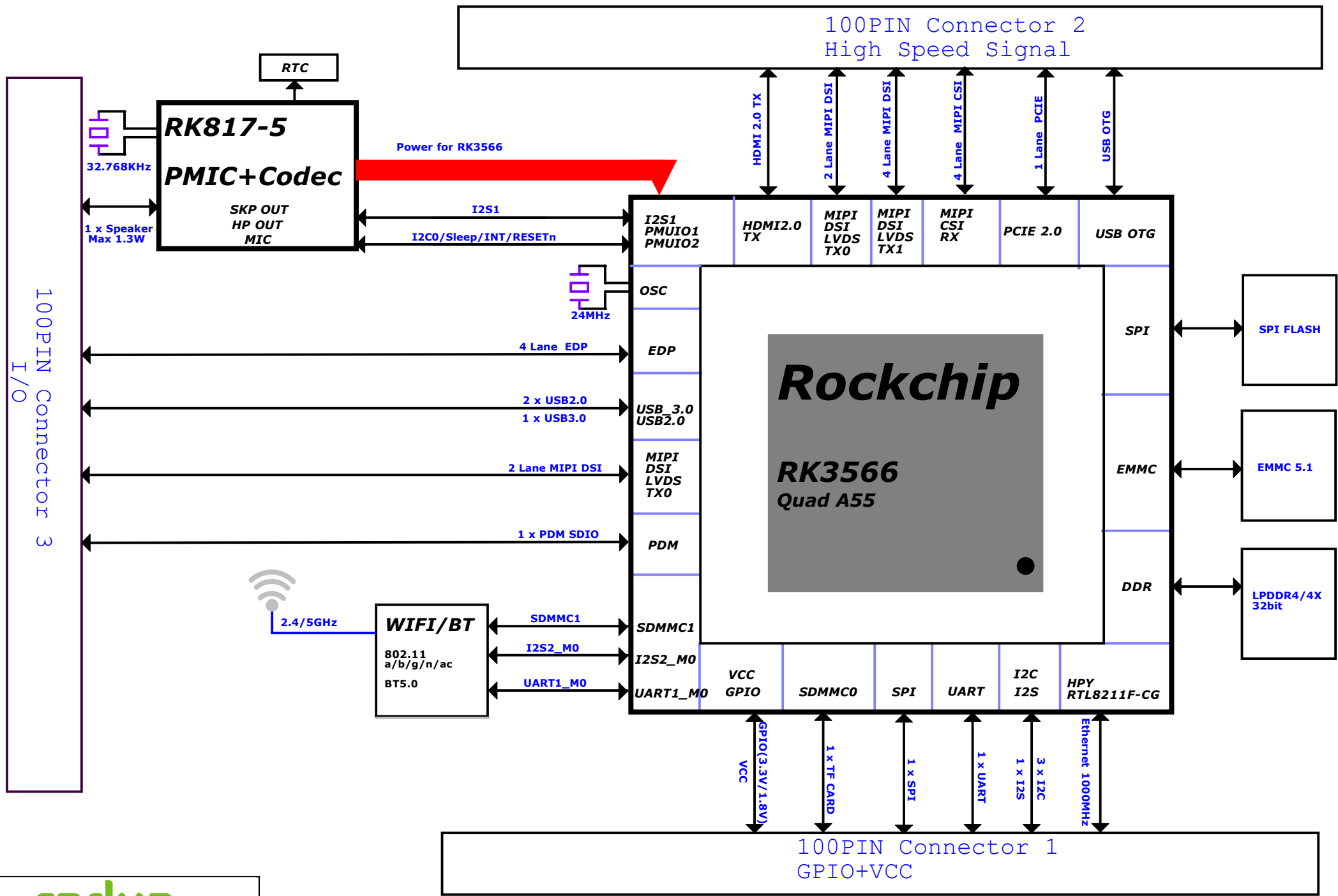
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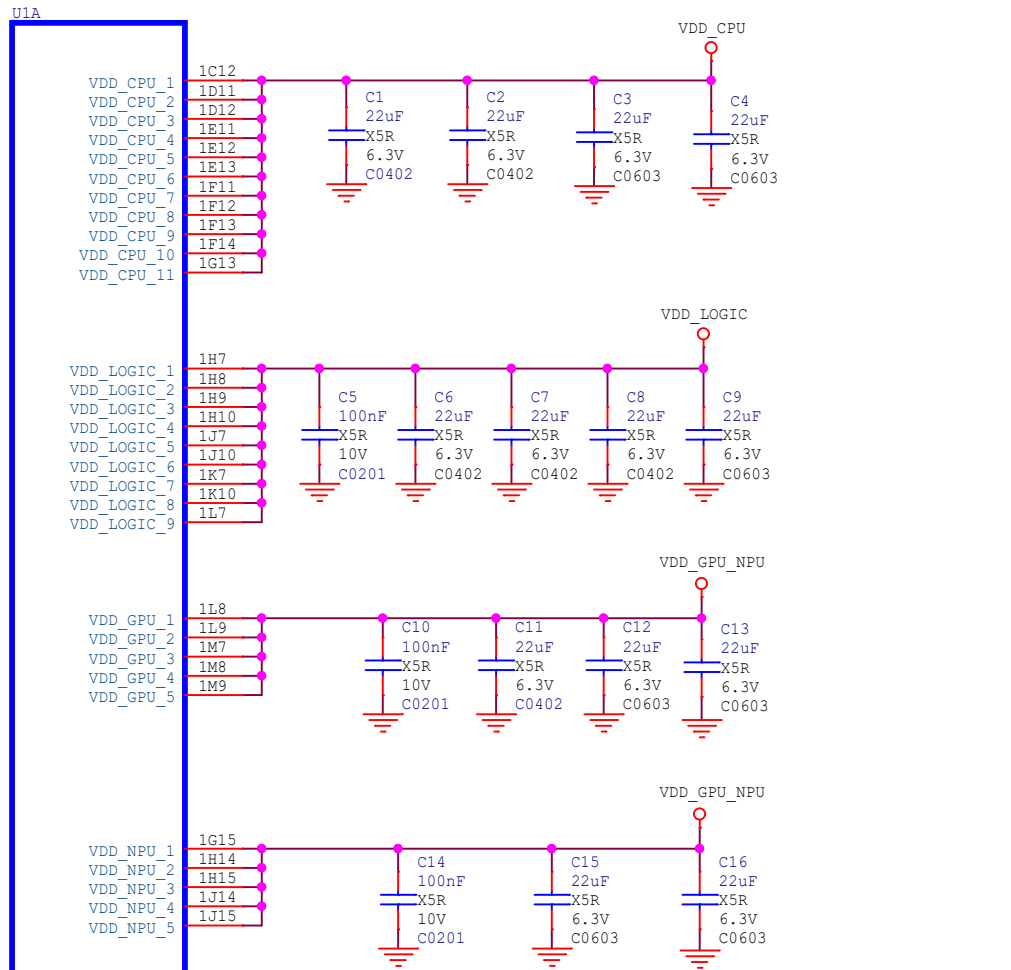
# Revision History

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Change Note</b>	<b>Approved</b>
V1.0	20210421	Huang	First edition	
V1.1	20210706	Huang	Replacing the PMU IC	
V1.2	20220107	Huang	Add a power-on automatic working circuit	
V1.3	20220325	Huang	Optimize connector pin definition	
V1.31A	20220527	Huang	Optimize connector pin definition	
V1.32A	20221103	Huang	Increase SMT resistance	
V1.321A	20230216	Huang	Increase SMT resistance	



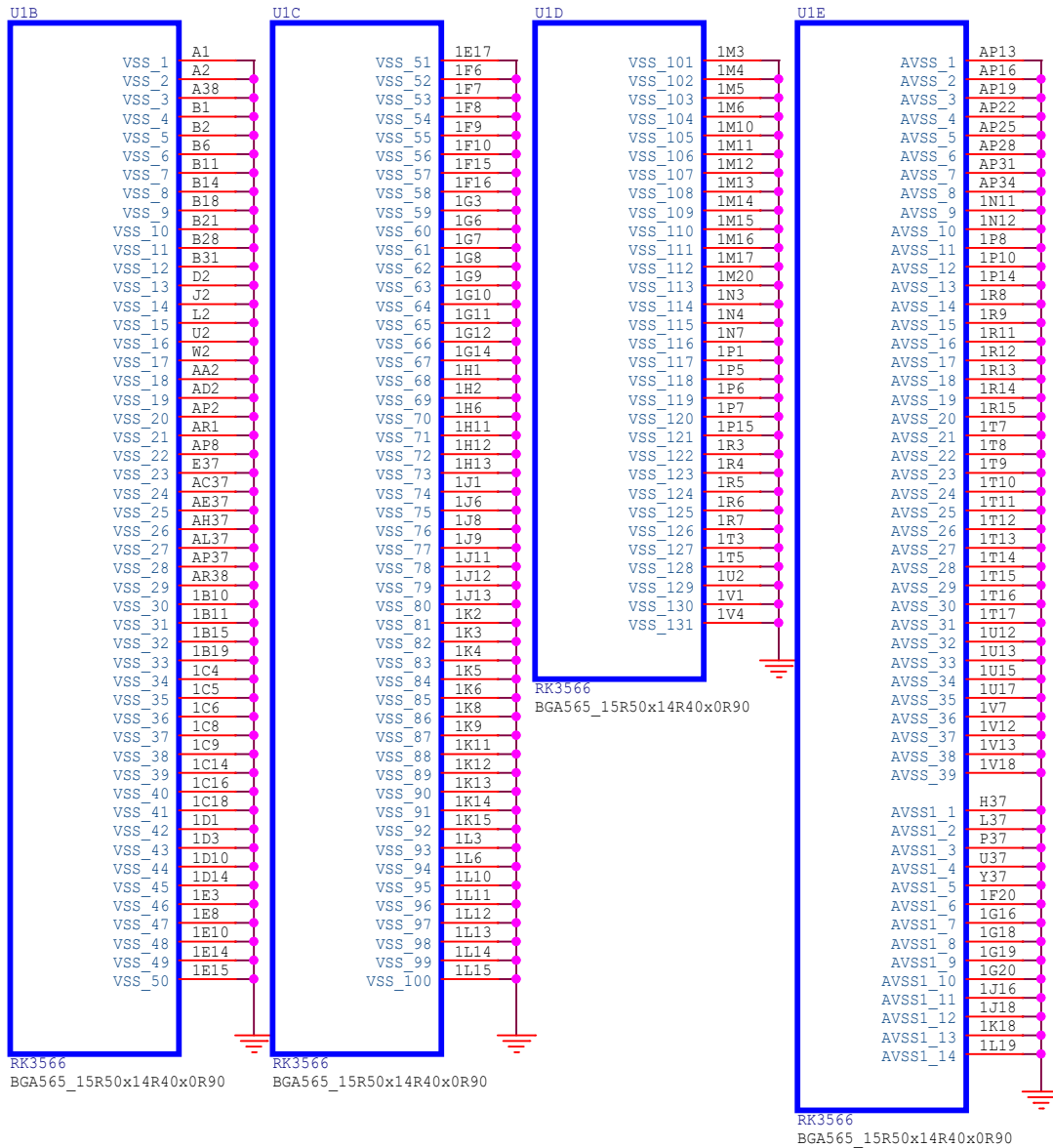


# RK3566\_ABCDE (Power&GND)



Caps should be placed close to the U1000 package

RK3566  
BGA565\_15R50x14R40x0R90



RK3566  
BGA565\_15R50x14R40x0R90

RK3566  
BGA565\_15R50x14R40x0R90

RK3566  
BGA565\_15R50x14R40x0R90

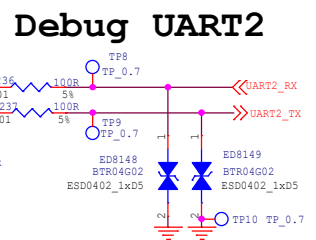
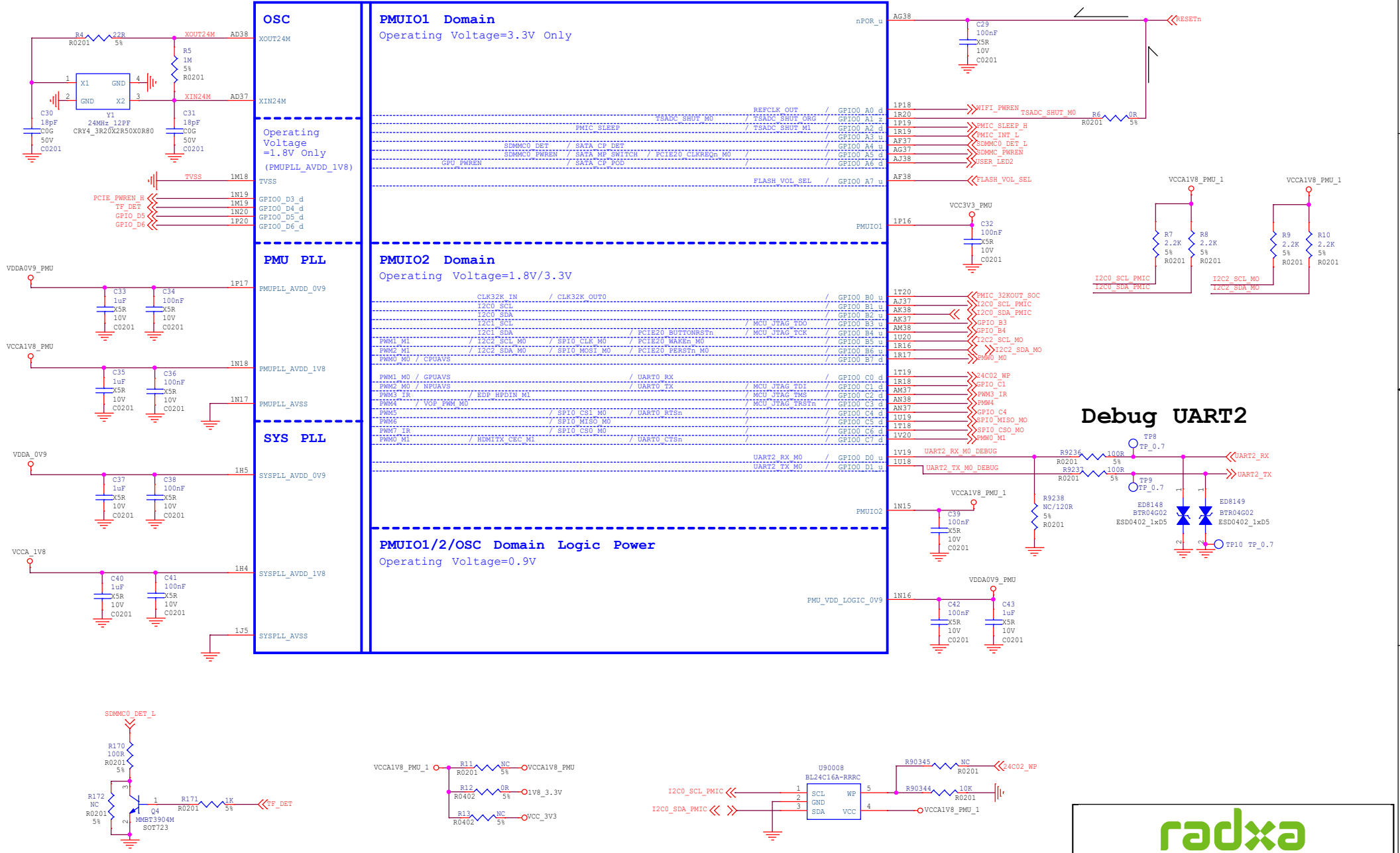


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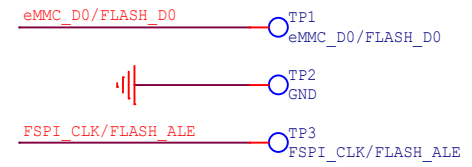
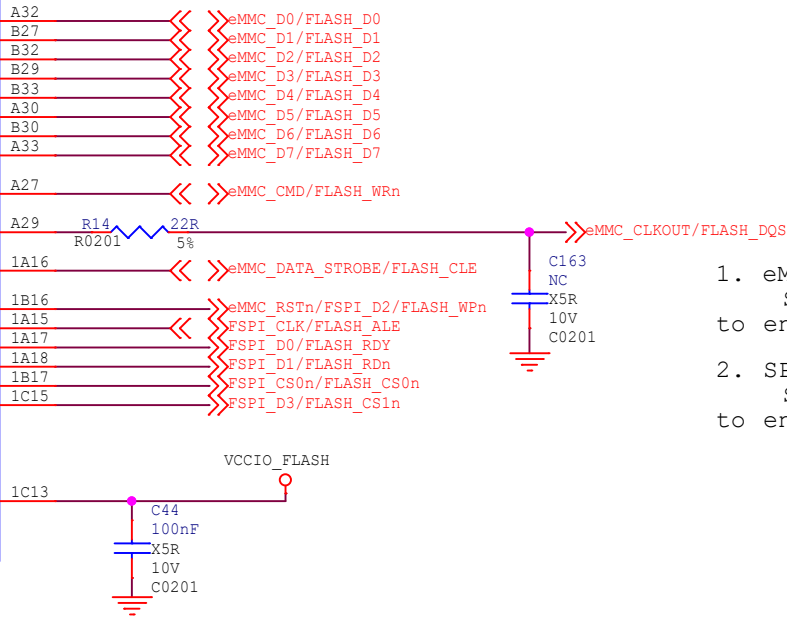
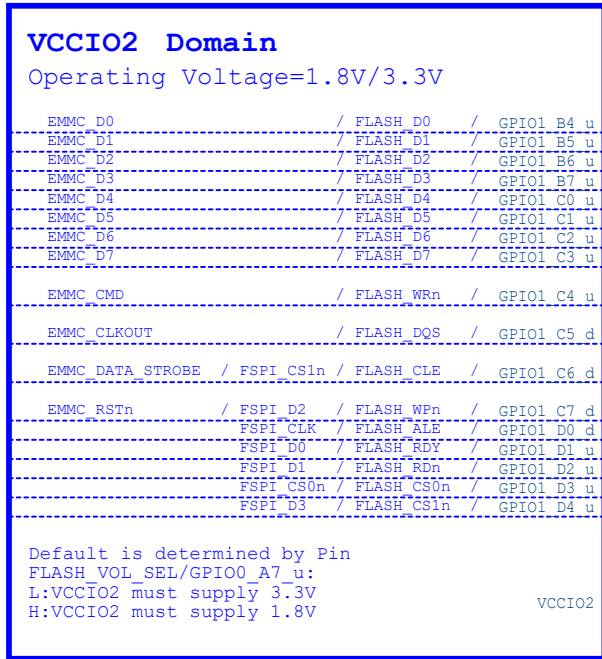
# RK3566\_G (OSC/PLL/PMUIO1/2)

U1G  
RK3566  
BGA565\_15R50x14R40x0R90



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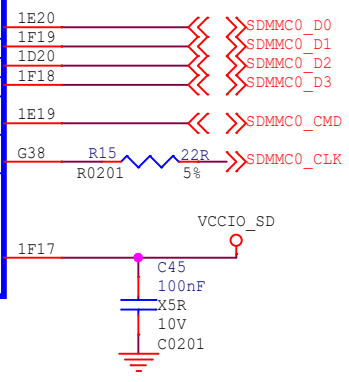
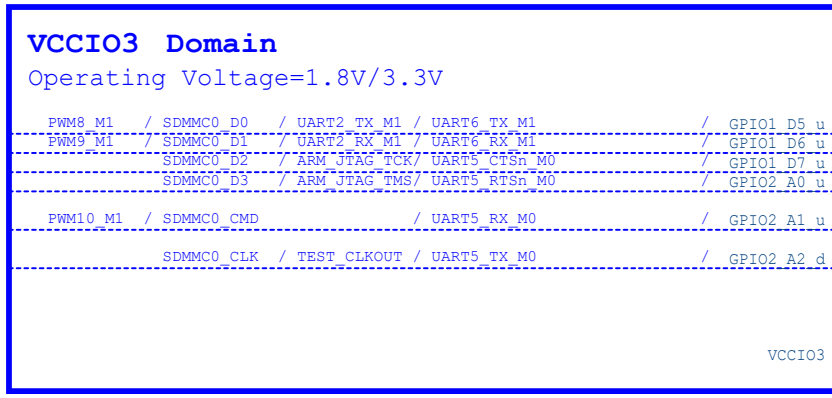
# RK3566\_I (VCCIO2 Domain)



1. eMMC or Nand Flash:  
Short 'eMMC\_D0/FLASH\_D0' and GND to enter Maskrom Mode.
2. SPI Flash:  
Short 'FSPI\_CLK/FLASH\_ALE' and GND to enter Maskrom Mode.

U1I  
RK3566  
BGA565\_15R50x14R40x0R90

# RK3566\_J (VCCIO3 Domain)



U1J  
RK3566  
BGA565\_15R50x14R40x0R90



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# RK3566\_U (USB3.0/PCIe2.0x1/SATA)

**USB2.0 OTG\_0**  
HS/FS/LS  
(Download Port)

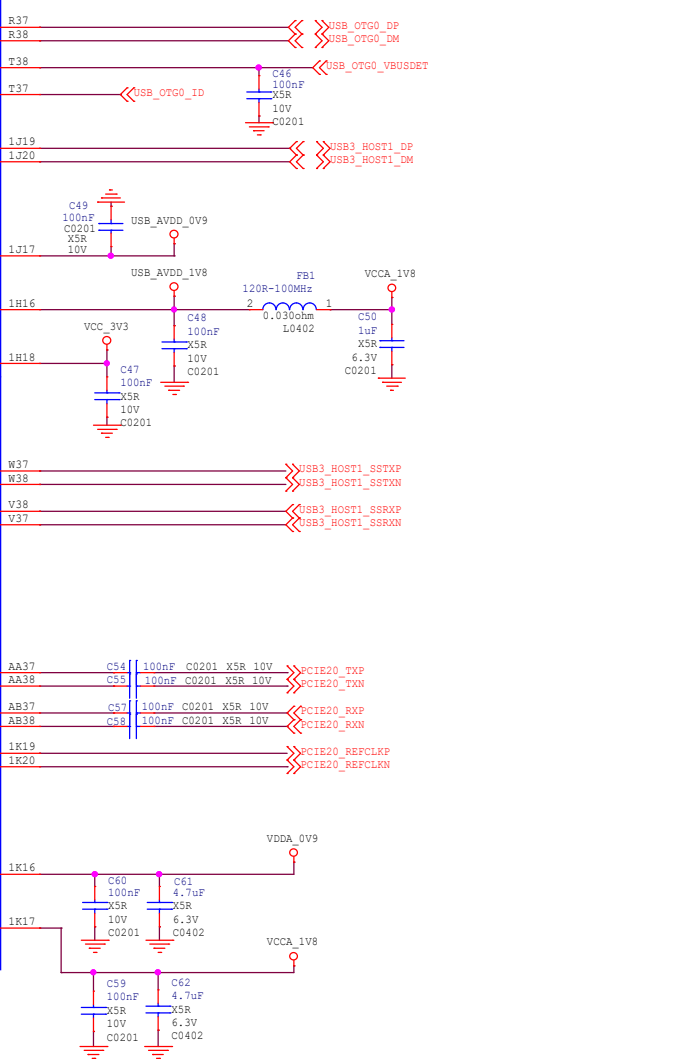
**USB2.0 HOST\_1**  
HS/FS/LS  
(DP/DM for USB3.0 HOST)

**USB2.0 Power**  
(for OTG\_0 and HOST\_1)

**MULTI PHY U\_S**  
(SS for USB3.0 HOST or SATA3\_1)

**MULTI PHY P\_S**  
(PCIe2.0 or SATA3\_2)

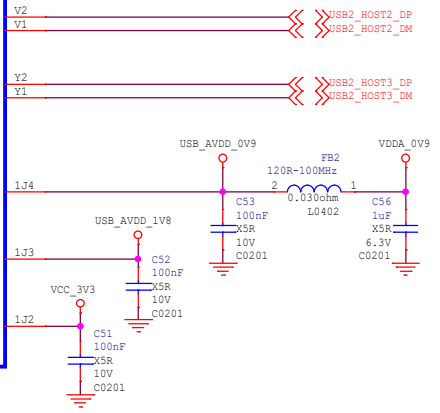
**MULTI PHY Power**  
(for MULTI PHY U\_S and P\_S)



U1U  
RK3566  
BGA565\_15R50x14R40x0R90

# RK3566\_V (USB2.0 HOST)

**USB2.0**  
(for HOST\_2 and HOST\_3)



U1V  
RK3566  
BGA565\_15R50x14R40x0R90





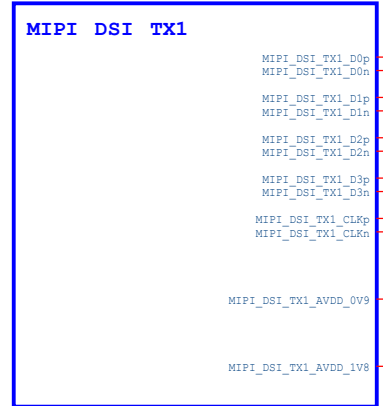


# RK3566\_R (MIPI\_DSI\_TX0/LVDS\_TX0)



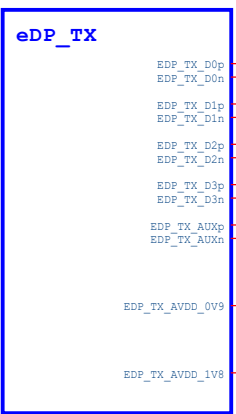
U1R  
 RK3566  
 BGA565\_15R50x14R40x0R90

# RK3566\_S (MIPI\_DSI\_TX1)



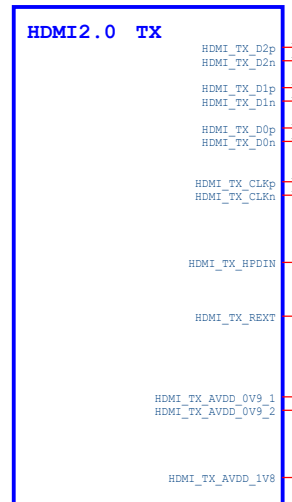
U1S  
 RK3566  
 BGA565\_15R50x14R40x0R90

# RK3566\_T (eDP TX)



U1T  
 RK3566  
 BGA565\_15R50x14R40x0R90

# RK3566\_Q (HDMI2.0 TX)



U1Q  
 RK3566  
 BGA565\_15R50x14R40x0R90



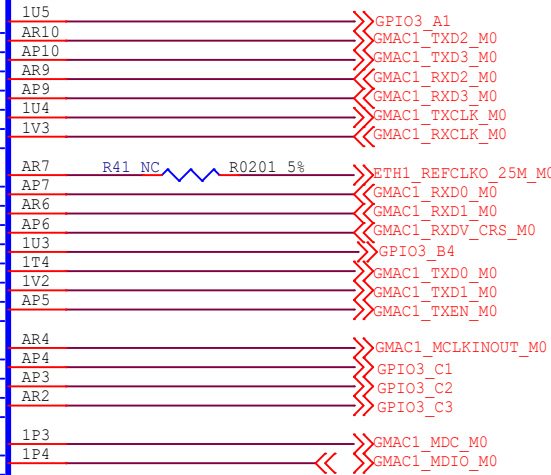
Size	Title:	ROCK3 Compute Module	REV
A3	Page Name:	RK3566_VO_Interface_1	1.321A
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# RK3566\_L (VCCIO5 Domain)

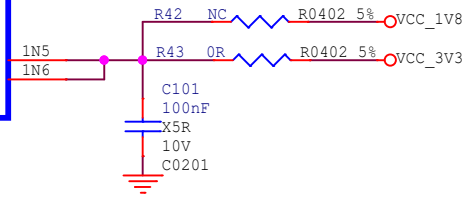
## VCCIO5 Domain

Operating Voltage=1.8V/3.3V

VOP_BT1120_D0	/ SPI1_CS0_M1			/ SDMMC2_D0_M1	/ GPIO3_A1_d
VOP_BT1120_D1		/ GMAC1_TXD2_M0	/ I2S3_MCLK_M0	/ SDMMC2_D1_M1	/ GPIO3_A2_d
VOP_BT1120_D2		/ GMAC1_TXD3_M0	/ I2S3_SCLK_M0	/ SDMMC2_D2_M1	/ GPIO3_A3_d
VOP_BT1120_D3		/ GMAC1_RXD2_M0	/ I2S3_LRCK_M0	/ SDMMC2_D3_M1	/ GPIO3_A4_d
VOP_BT1120_D4		/ GMAC1_RXD3_M0	/ I2S3_SDO_M0	/ SDMMC2_CMD_M1	/ GPIO3_A5_d
VOP_BT1120_CLK		/ GMAC1_TXCLK_M0	/ I2S3_SDI_M0	/ SDMMC2_CLK_M1	/ GPIO3_A6_d
VOP_BT1120_D5		/ GMAC1_RXCLK_M0		/ SDMMC2_DET_M1	/ GPIO3_A7_d
VOP_BT1120_D6		/ ETH1_REFCLK0_25M_M0		/ SDMMC2_PWREN_M1	/ GPIO3_B0_d
PWM8_M0	/ VOP_BT1120_D7	/ GMAC1_RXD0_M0	/ UART4_RX_M1		/ GPIO3_B1_d
PWM9_M0	/ VOP_BT1120_D8	/ GMAC1_RXD1_M0	/ UART4_TX_M1		/ GPIO3_B2_d
VOP_BT1120_D9	/ I2C5_SCL_M0	/ GMAC1_RXDV_CRS_M0		/ PDM_SDI0_M2	/ GPIO3_B3_d
VOP_BT1120_D10	/ I2C5_SDA_M0	/ GMAC1_RXER_M0		/ PDM_SDI1_M2	/ GPIO3_B4_d
PWM10_M0	/ VOP_BT1120_D11	/ I2C3_SCL_M1	/ GMAC1_TXD0_M0		/ GPIO3_B5_d
PWM11_IR_M0	/ VOP_BT1120_D12	/ I2C3_SDA_M1	/ GMAC1_TXD1_M0		/ GPIO3_B6_d
PWM12_M0		/ GMAC1_TXEN_M0	/ UART3_TX_M1	/ PDM_SDI2_M2	/ GPIO3_B7_d
PWM13_M0		/ GMAC1_MCLKINOUT_M0	/ UART3_RX_M1	/ PDM_SDI3_M2	/ GPIO3_C0_d
VOP_BT1120_D13	/ SPI1_MOSI_M1		/ PCIE20_PERSTn_M1	/ I2S1_SDO2_M2	/ GPIO3_C1_d
VOP_BT1120_D14	/ SPI1_MISO_M1		/ UART5_TX_M1	/ I2S1_SDO3_M2	/ GPIO3_C2_d
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	/ SPDIF_TX_M1	/ GMAC1_MDIO_M0	/ UART7_RX_M1	/ I2S1_LRCK_RX_M2	/ GPIO3_C5_d



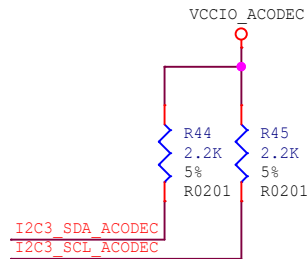
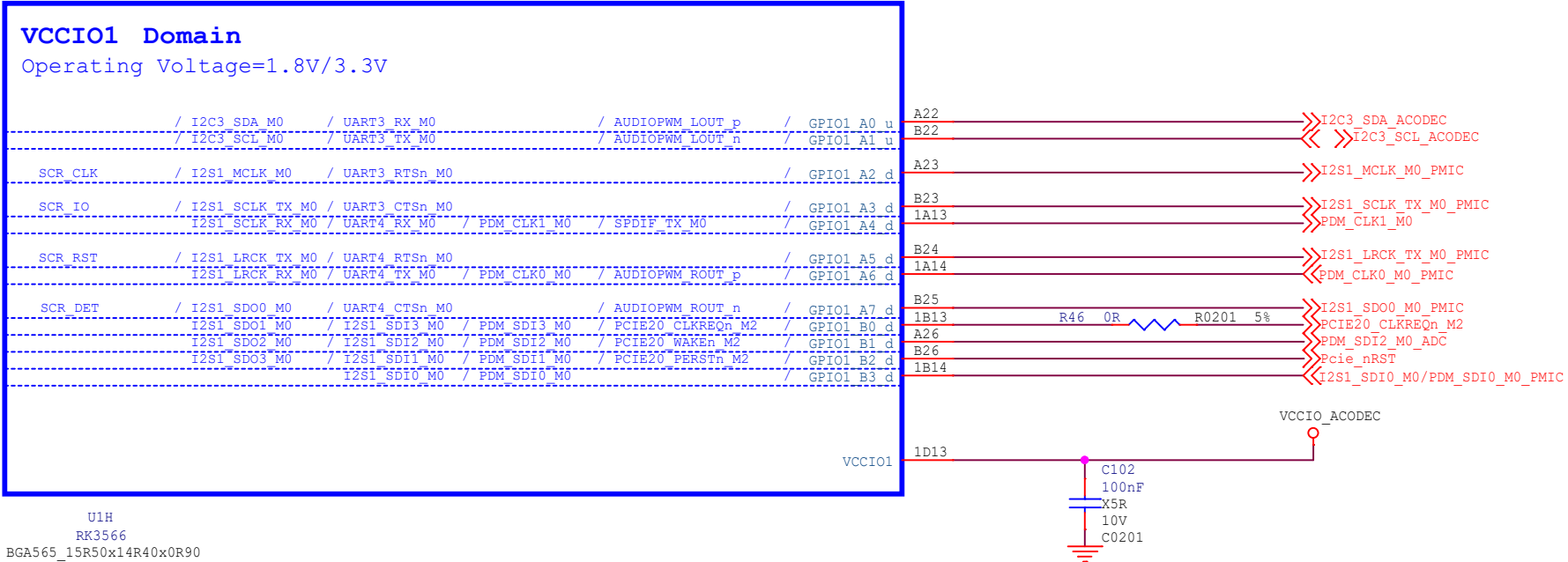
VCCIO5\_1  
VCCIO5\_2



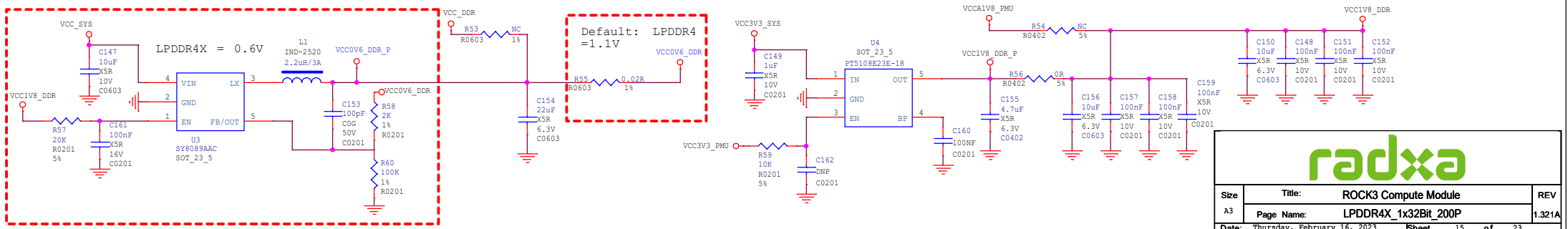
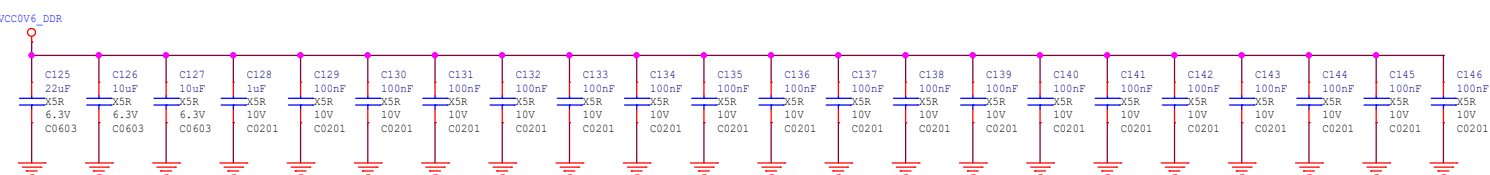
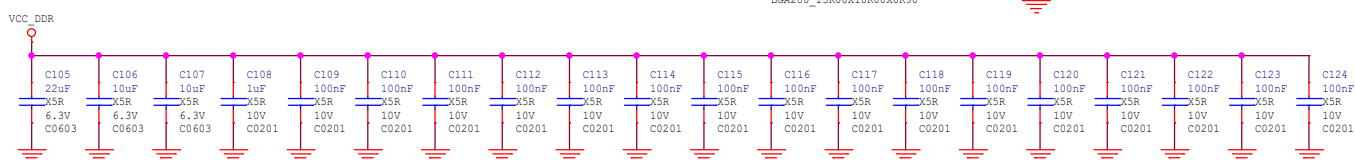
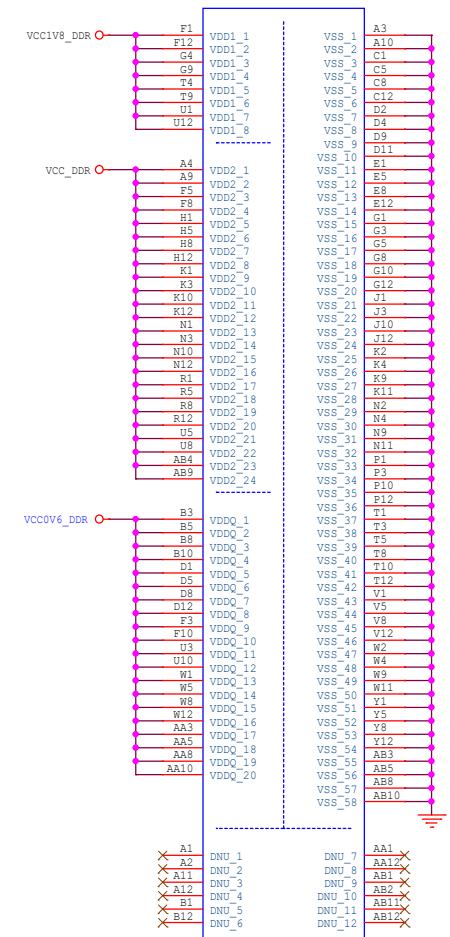
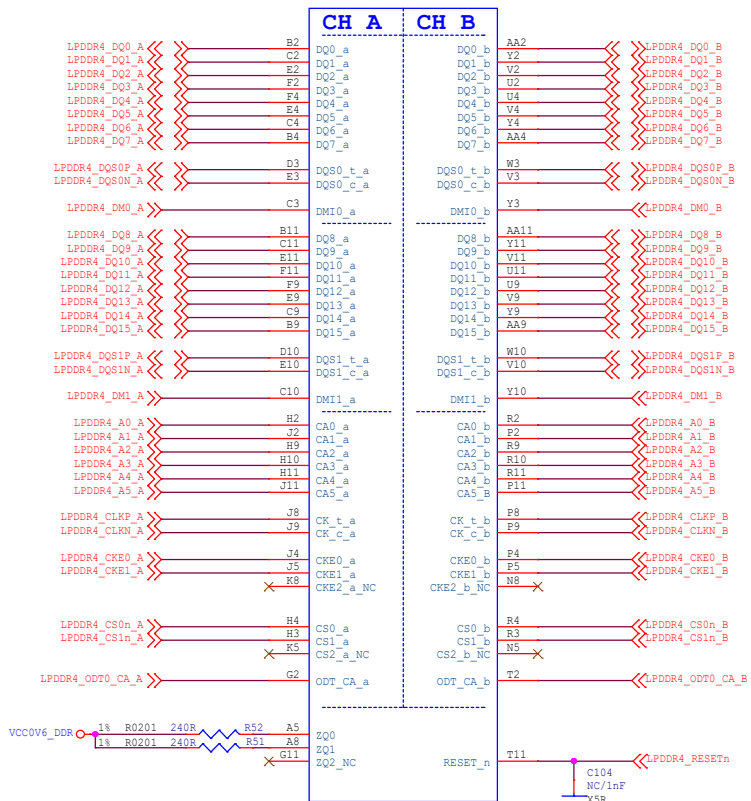
U1L  
RK3566  
BGA565\_15R50x14R40x0R90



# RK3566\_H (VCCIO1 Domain)



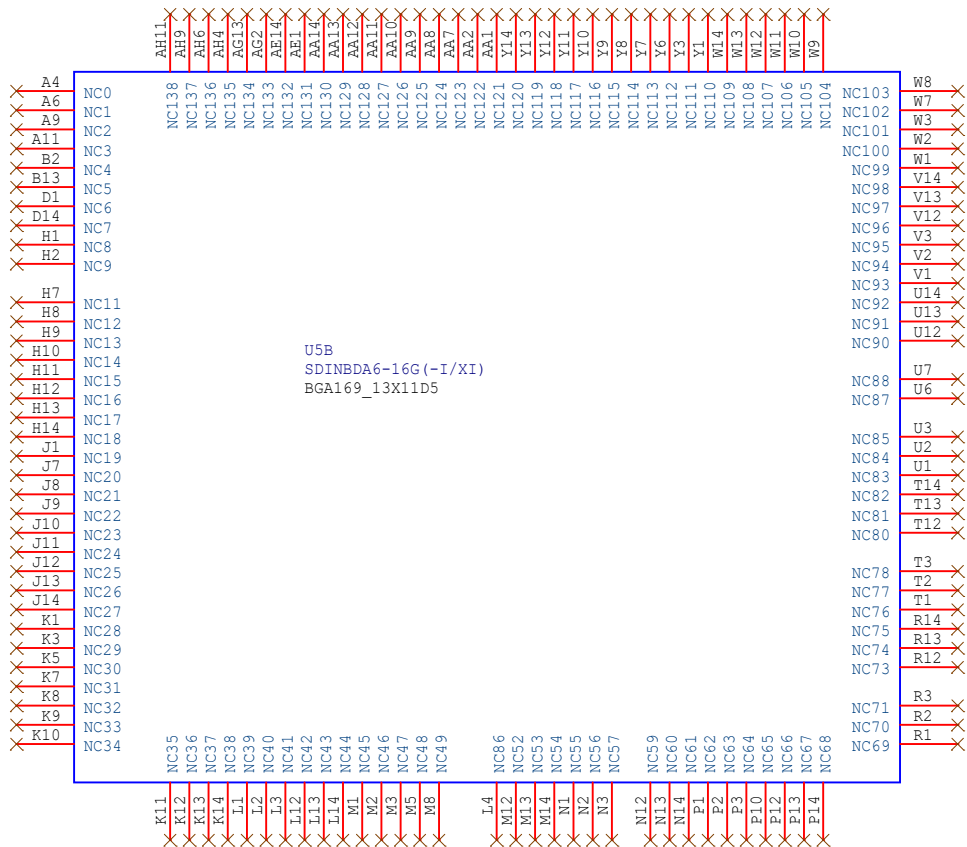
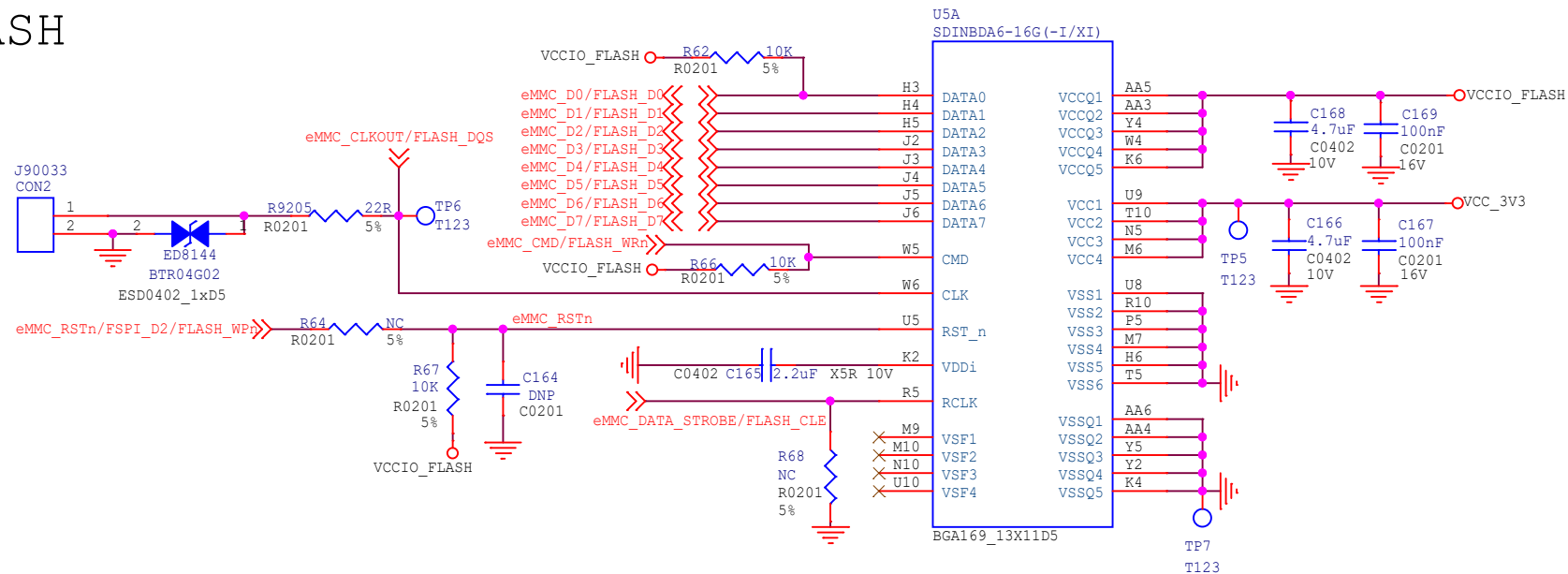




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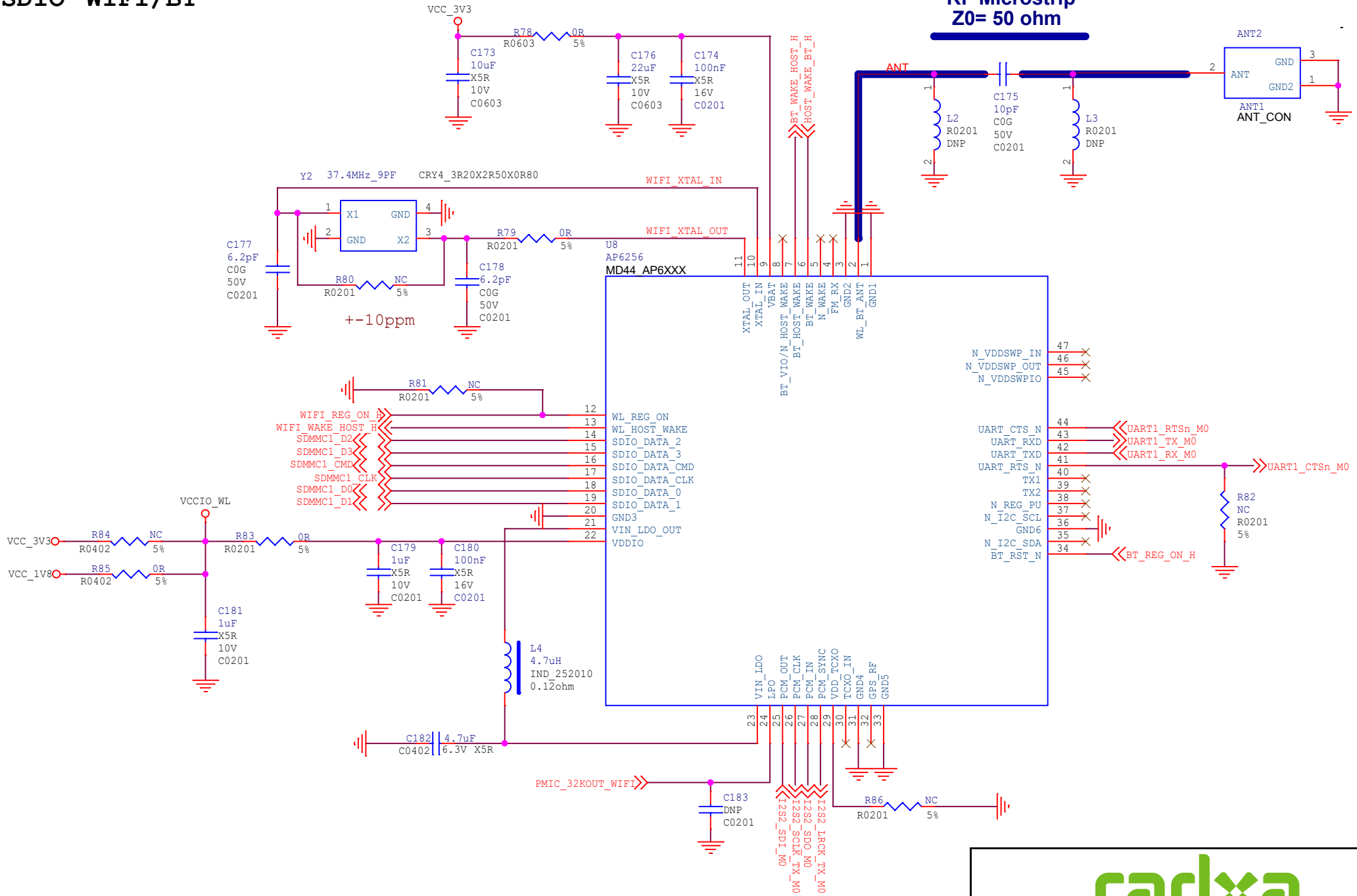
# eMMC FLASH



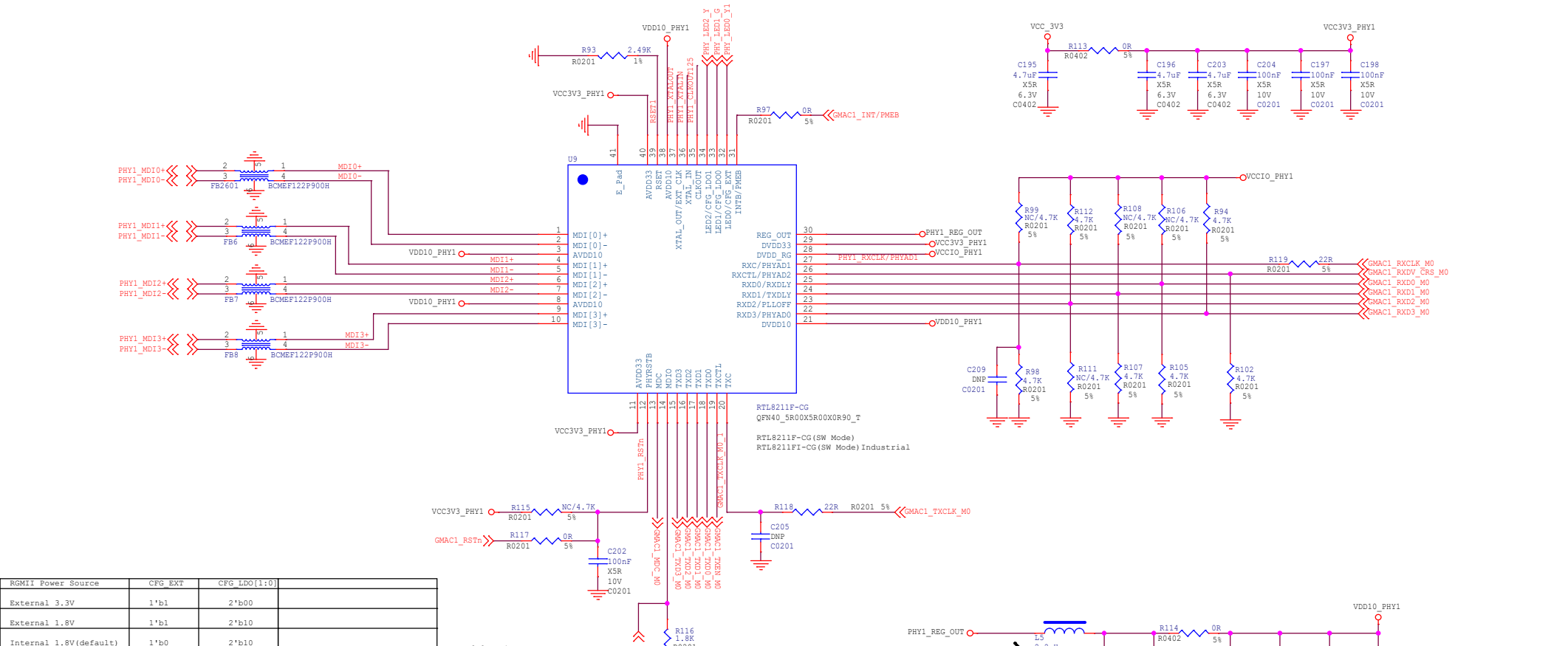
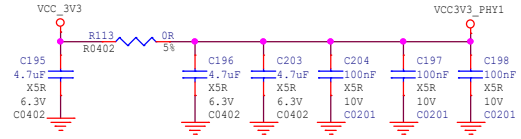
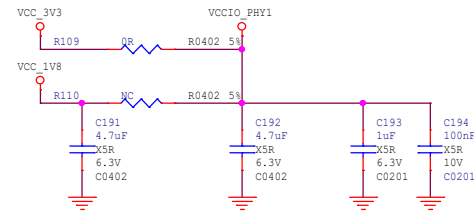
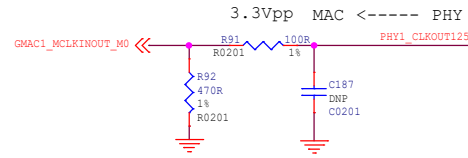
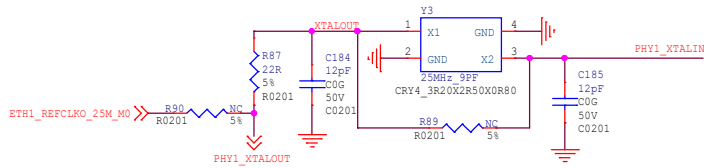
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A4	Page Name: Memory-eMMC	1.321A
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# SDIO WIFI/BT

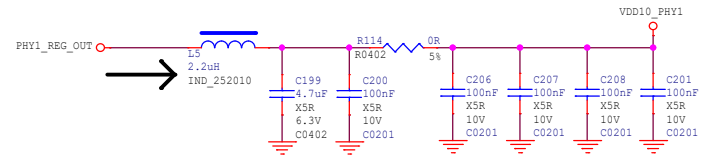
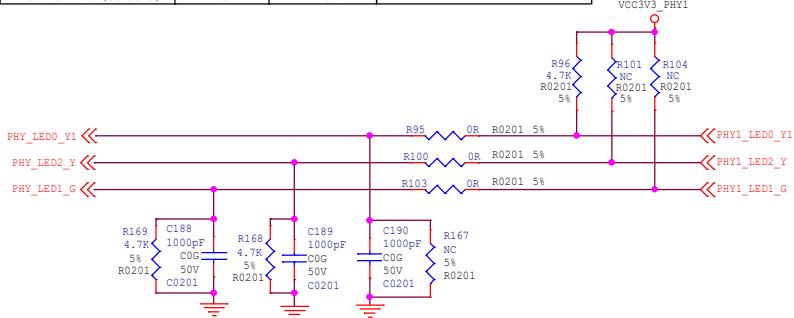
**RF Microstrip**  
Z0= 50 ohm



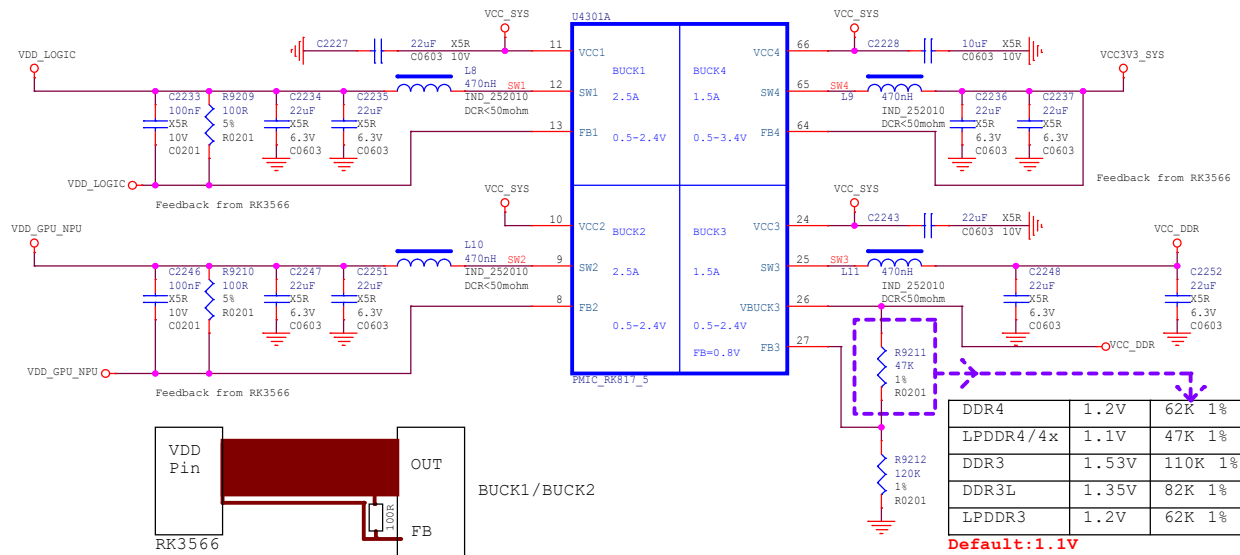
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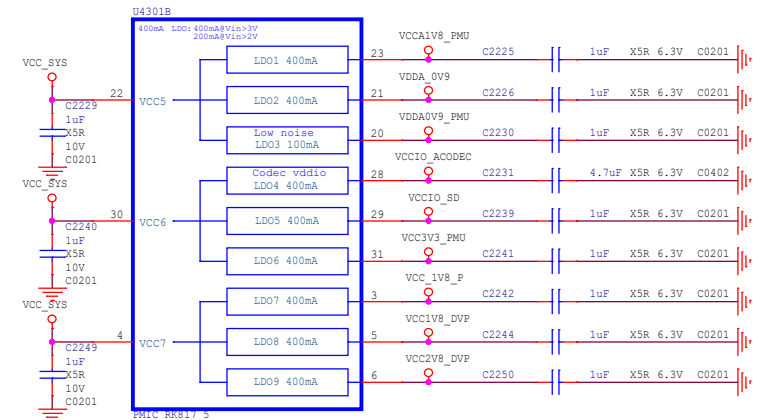
RGMI Power Source	CFG EXT	CFG LDO[1:0]
External 3.3V	1'b1	2'b00
External 1.8V	1'b1	2'b10
Internal 1.8V(default)	1'b0	2'b10



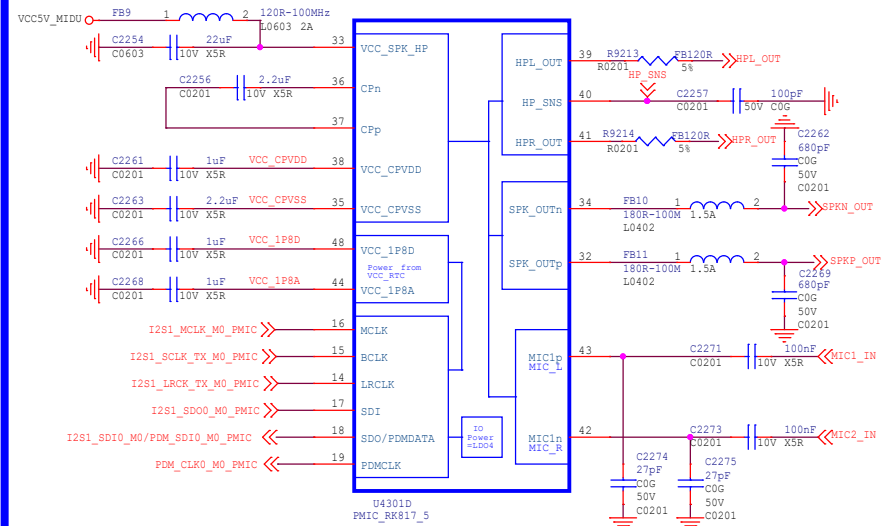
# PMIC RK817 DCDC



# PMIC RK817 LDO

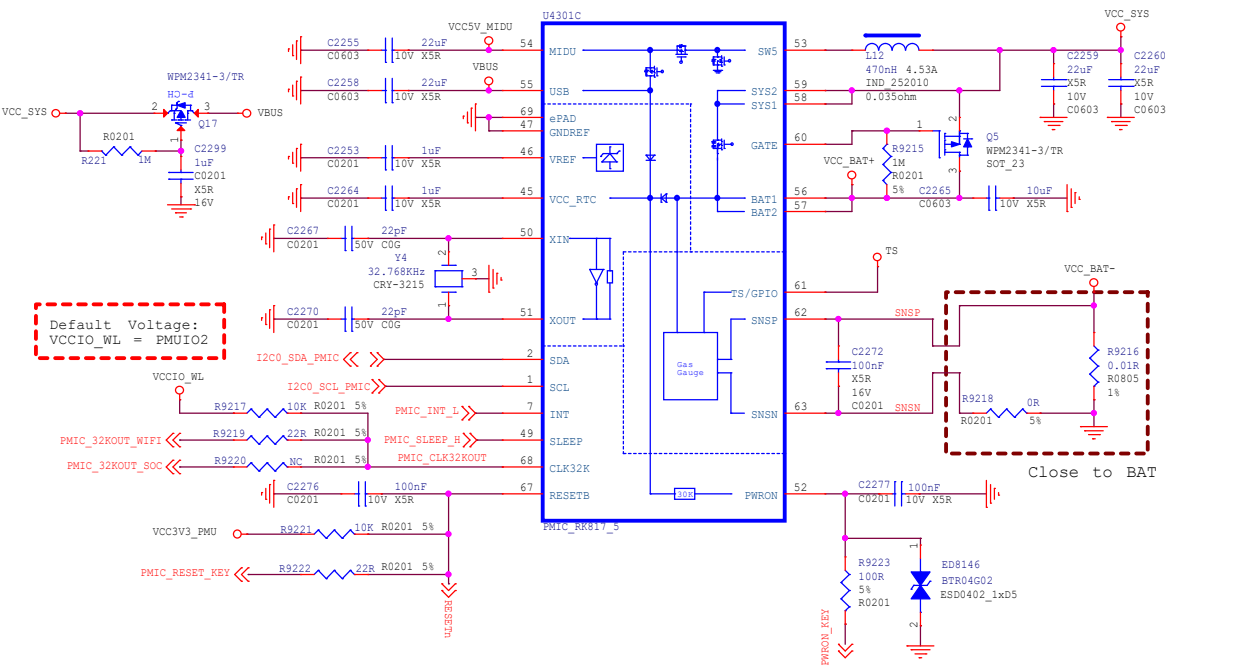


# PMIC RK817 CODEC



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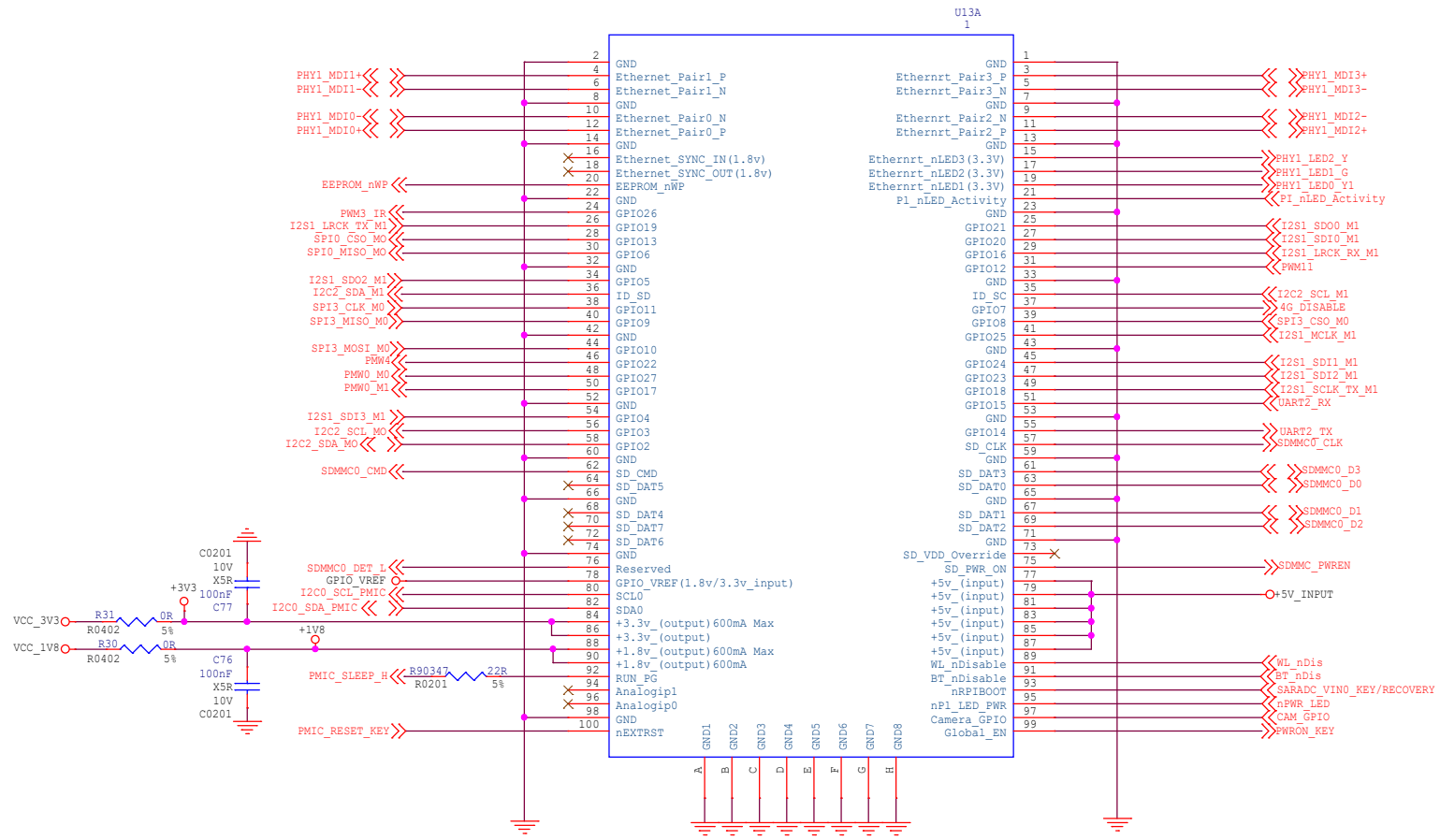
# PMIC RK817 Management

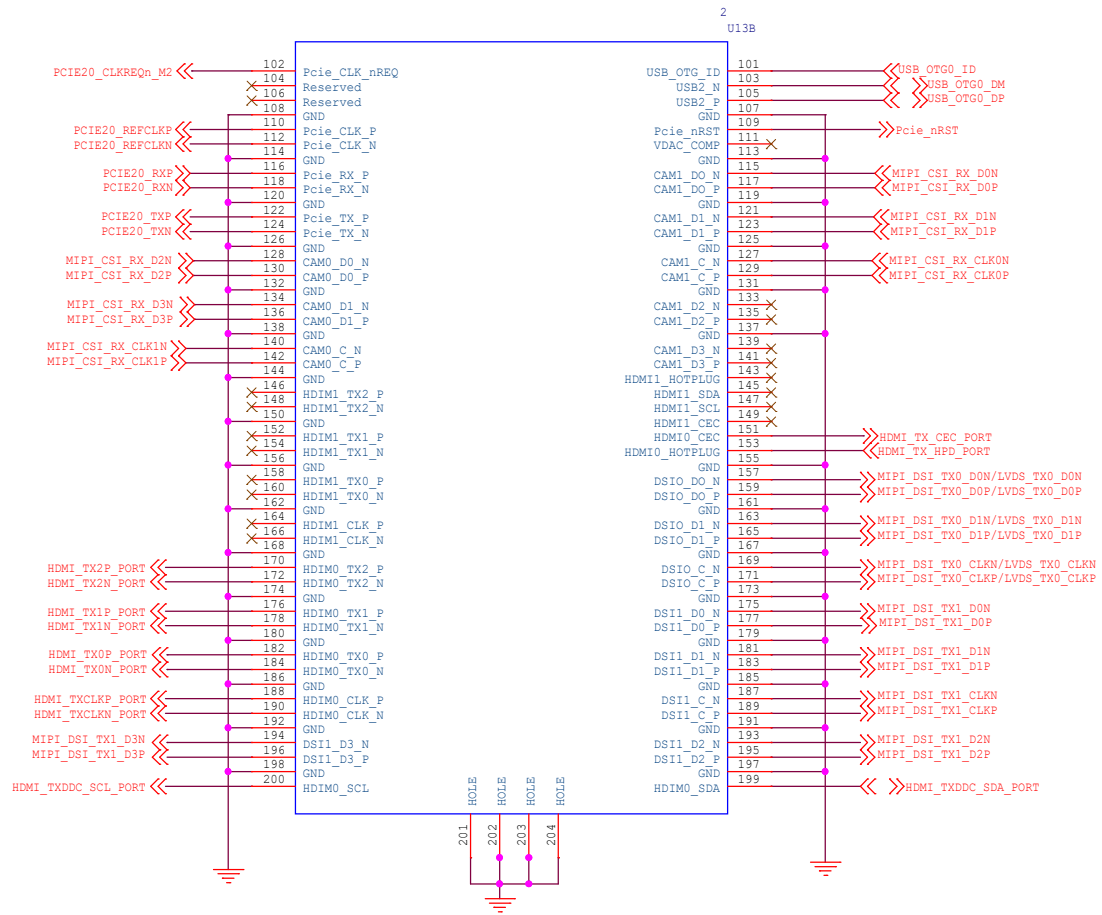





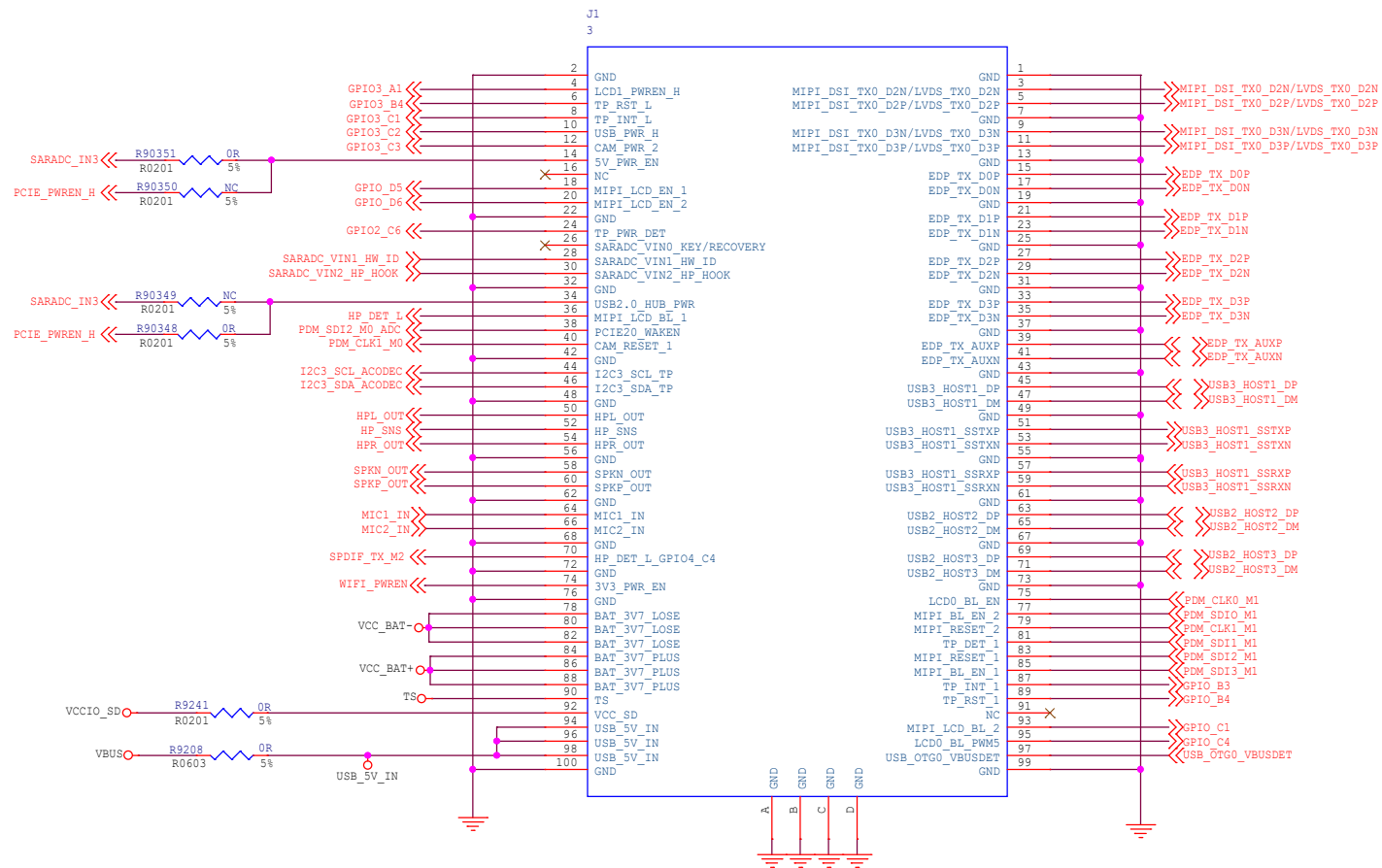



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Size	Title: ROCK3 Compute Module	REV
B	Page Name: High Speed Serial Connector	1.321A
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Size	Title: ROCK3 Compute Module	REV
B	Page Name: IO_Connector	1.321A
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