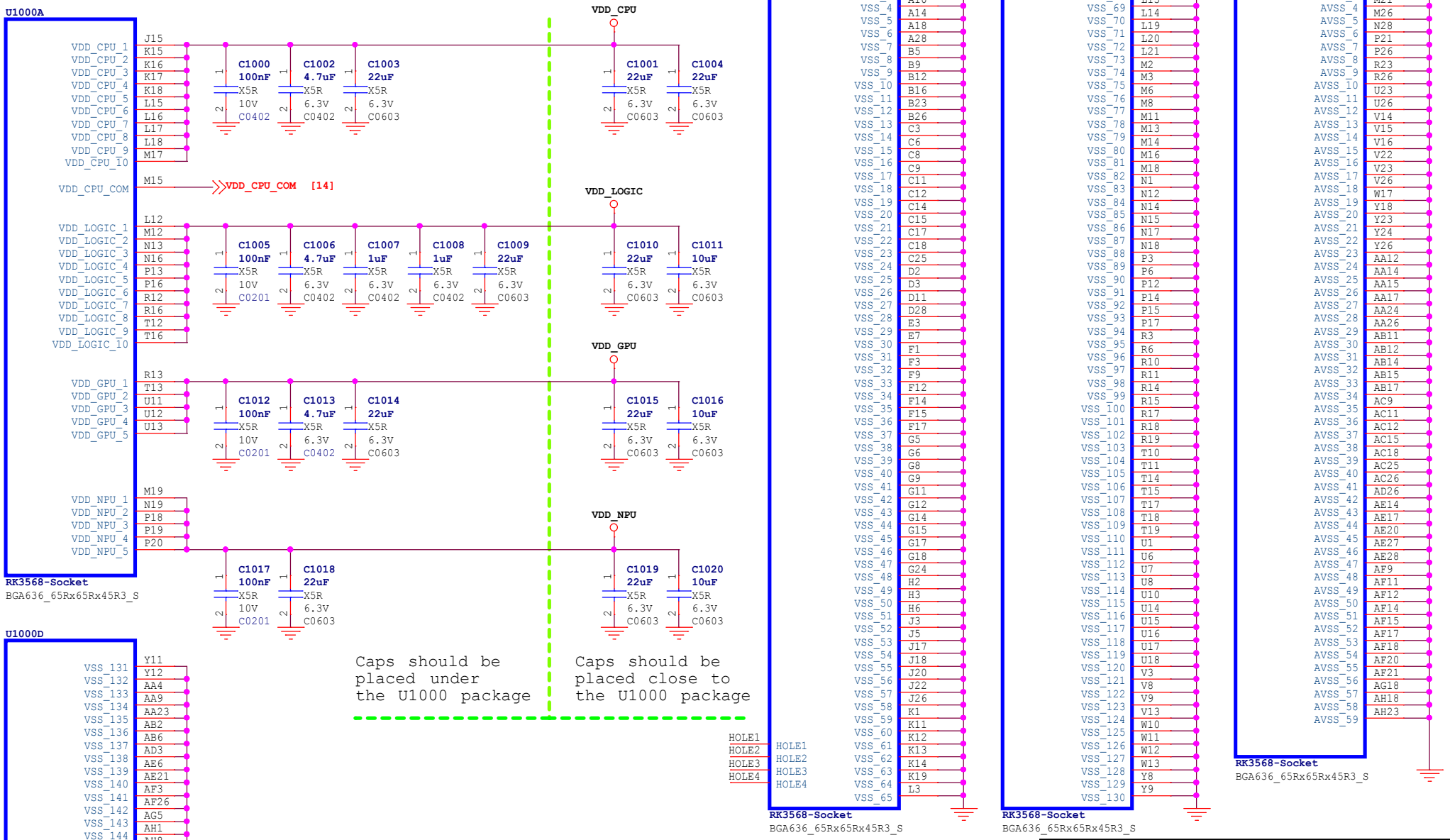
Revision History

Version	Date	By	Change Dsecription	Approved
V1.0	2021-05-19			
V1.1	2021-08-09			

RK3568_ABCDE (Power&Gnd)



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Title: RK3568_Power/GND		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, March 30, 2020	Page Num: 2	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

RK3568_F (DDR PHY)

U1000F

DDR4	LPDDR4	DDR3	LPDDR3
DDR_DQ0_A	DDR_DQL0_A	LPDDR4_DQ0_A	DDR3_DQ0	LPDDR3_DQ15
DDR_DQ1_A	DDR_DQL2_A	LPDDR4_DQ1_A	DDR3_DQ1	LPDDR3_DQ14
DDR_DQ2_A	DDR_DQL4_A	LPDDR4_DQ2_A	DDR3_DQ2	LPDDR3_DQ10
DDR_DQ3_A	DDR_DQL6_A	LPDDR4_DQ3_A	DDR3_DQ3	LPDDR3_DQ9
DDR_DQ4_A	DDR_DQL7_A	LPDDR4_DQ4_A	DDR3_DQ4	LPDDR3_DQ13
DDR_DQ5_A	DDR_DQL5_A	LPDDR4_DQ5_A	DDR3_DQ5	LPDDR3_DQ12
DDR_DQ6_A	DDR_DQL3_A	LPDDR4_DQ6_A	DDR3_DQ6	LPDDR3_DQ8
DDR_DQ7_A	DDR_DQL1_A	LPDDR4_DQ7_A	DDR3_DQ7	LPDDR3_DQ11
DDR_DM0_A	DDR_DML_A	LPDDR4_DM0_A	DDR3_DM0	LPDDR3_DM1
DDR_DQS0P_A	DDR_DQSL_P_A	LPDDR4_DQS0P_A	DDR3_DQS0P	LPDDR3_DQS1P
DDR_DQS0N_A	DDR_DQSL_N_A	LPDDR4_DQS0N_A	DDR3_DQS0N	LPDDR3_DQS1N
DDR_DQ8_A	DDR_DQU3_A	LPDDR4_DQ8_A	DDR3_DQ8	LPDDR3_DQ25
DDR_DQ9_A	DDR_DQU1_A	LPDDR4_DQ9_A	DDR3_DQ9	LPDDR3_DQ24
DDR_DQ10_A	DDR_DQU7_A	LPDDR4_DQ10_A	DDR3_DQ10	LPDDR3_DQ28
DDR_DQ11_A	DDR_DQU5_A	LPDDR4_DQ11_A	DDR3_DQ11	LPDDR3_DQ29
DDR_DQ12_A	DDR_DQU2_A	LPDDR4_DQ12_A	DDR3_DQ12	LPDDR3_DQ26
DDR_DQ13_A	DDR_DQU4_A	LPDDR4_DQ13_A	DDR3_DQ13	LPDDR3_DQ31
DDR_DQ14_A	DDR_DQU6_A	LPDDR4_DQ14_A	DDR3_DQ14	LPDDR3_DQ30
DDR_DQ15_A	DDR_DQU0_A	LPDDR4_DQ15_A	DDR3_DQ15	LPDDR3_DQ27
DDR_DM1_A	DDR_DMU_A	LPDDR4_DM1_A	DDR3_DM1	LPDDR3_DM3
DDR_DQS1P_A	DDR_DQSU_P_A	LPDDR4_DQS1P_A	DDR3_DQS1P	LPDDR3_DQS3P
DDR_DQS1N_A	DDR_DQSU_N_A	LPDDR4_DQS1N_A	DDR3_DQS1N	LPDDR3_DQS3N
DDR_DQ0_B	DDR_DQU7_B	LPDDR4_DQ0_B	DDR3_DQ16	LPDDR3_DQ1
DDR_DQ1_B	DDR_DQU5_B	LPDDR4_DQ1_B	DDR3_DQ17	LPDDR3_DQ5
DDR_DQ2_B	DDR_DQU3_B	LPDDR4_DQ2_B	DDR3_DQ18	LPDDR3_DQ6
DDR_DQ3_B	DDR_DQU1_B	LPDDR4_DQ3_B	DDR3_DQ19	LPDDR3_DQ4
DDR_DQ4_B	DDR_DQU0_B	LPDDR4_DQ4_B	DDR3_DQ20	LPDDR3_DQ2
DDR_DQ5_B	DDR_DQU6_B	LPDDR4_DQ5_B	DDR3_DQ21	LPDDR3_DQ3
DDR_DQ6_B	DDR_DQU4_B	LPDDR4_DQ6_B	DDR3_DQ22	LPDDR3_DQ7
DDR_DQ7_B	DDR_DQU2_B	LPDDR4_DQ7_B	DDR3_DQ23	LPDDR3_DQ0
DDR_DM0_B	DDR_DMU_B	LPDDR4_DM0_B	DDR3_DM2	LPDDR3_DM0
DDR_DQS0P_B	DDR_DQSU_P_B	LPDDR4_DQS0P_B	DDR3_DQS2P	LPDDR3_DQS0P
DDR_DQS0N_B	DDR_DQSU_N_B	LPDDR4_DQS0N_B	DDR3_DQS2N	LPDDR3_DQS0N
DDR_DQ8_B	DDR_DQL0_B	LPDDR4_DQ8_B	DDR3_DQ24	LPDDR3_DQ18
DDR_DQ9_B	DDR_DQL2_B	LPDDR4_DQ9_B	DDR3_DQ25	LPDDR3_DQ19
DDR_DQ10_B	DDR_DQL4_B	LPDDR4_DQ10_B	DDR3_DQ26	LPDDR3_DQ22
DDR_DQ11_B	DDR_DQL6_B	LPDDR4_DQ11_B	DDR3_DQ27	LPDDR3_DQ23
DDR_DQ12_B	DDR_DQL7_B	LPDDR4_DQ12_B	DDR3_DQ28	LPDDR3_DQ16
DDR_DQ13_B	DDR_DQL5_B	LPDDR4_DQ13_B	DDR3_DQ29	LPDDR3_DQ17
DDR_DQ14_B	DDR_DQL1_B	LPDDR4_DQ14_B	DDR3_DQ30	LPDDR3_DQ20
DDR_DQ15_B	DDR_DQL3_B	LPDDR4_DQ15_B	DDR3_DQ31	LPDDR3_DQ21
DDR_DM1_B	DDR_DML_B	LPDDR4_DM1_B	DDR3_DM3	LPDDR3_DM2
DDR_DQS1P_B	DDR_DQSL_P_B	LPDDR4_DQS1P_B	DDR3_DQS3P	LPDDR3_DQS2P
DDR_DQS1N_B	DDR_DQSL_N_B	LPDDR4_DQS1N_B	DDR3_DQS3N	LPDDR3_DQS2N
DDR_ECC_DQ0	DDR_ECC_DQ7	--	DDR3_ECC_DQ0	
DDR_ECC_DQ1	DDR_ECC_DQ0	--	DDR3_ECC_DQ1	
DDR_ECC_DQ2	DDR_ECC_DQ2	--	DDR3_ECC_DQ2	
DDR_ECC_DQ3	DDR_ECC_DQ1	--	DDR3_ECC_DQ3	
DDR_ECC_DQ4	DDR_ECC_DQ6	--	DDR3_ECC_DQ4	
DDR_ECC_DQ5	DDR_ECC_DQ4	--	DDR3_ECC_DQ5	
DDR_ECC_DQ6	DDR_ECC_DQ3	--	DDR3_ECC_DQ6	
DDR_ECC_DQ7	DDR_ECC_DQ5	--	DDR3_ECC_DQ7	
DDR_ECC_DM	DDR_ECC_DM	--	DDR3_ECC_DM	
DDR_ECC_DQS_P	DDR_ECC_DQS_P	--	DDR3_ECC_DQS_P	
DDR_ECC_DQS_N	DDR_ECC_DQS_N	--	DDR3_ECC_DQS_N	

DDR4	LPDDR4	DDR3	LPDDR3
DDR4_A0	LPDDR4_CLKP_B	DDR3_A9	---	AC0
DDR4_A1	---	DDR3_A2	---	AC1
DDR4_A2	LPDDR4_A1_A	DDR3_A4	LPDDR3_A6	AC2
DDR4_A3	LPDDR4_CKE1_A	DDR3_A3	---	AC3
DDR4_A4	LPDDR4_A3_B	DDR3_BA1	LPDDR3_A3	AC4
DDR4_A5	LPDDR4_A5_B	DDR3_A11	LPDDR3_A2	AC5
DDR4_A6	LPDDR4_A1_B	DDR3_A13	LPDDR3_A1	AC6
DDR4_A7	LPDDR4_ODT0_CA_B	DDR3_A8	---	AC7
DDR4_A8	LPDDR4_ODT0_CA_A	DDR3_A6	LPDDR3_A9	AC8
DDR4_A9	LPDDR4_CLKN_B	DDR3_A5	---	AC9
DDR4_A10	LPDDR4_CKE0_B	DDR3_A10	---	AC10
DDR4_A11	LPDDR4_A0_A	DDR3_A7	LPDDR3_A8	AC11
DDR4_A12	LPDDR4_A3_A	DDR3_BA2	---	AC12
DDR4_A13	LPDDR4_A0_B	DDR3_A14	LPDDR3_A0	AC13
DDR4_A14_WEn	LPDDR4_A4_A	DDR3_A15	LPDDR3_A5	AC14
DDR4_A15_CASn	LPDDR4_A2_A	DDR3_A0	---	AC15
DDR4_A16_RASn	LPDDR4_A5_A	DDR3_RASn	LPDDR3_A7	AC16
DDR4_ACTn	LPDDR4_CKE1_B	DDR3_CASn	---	AC17
DDR4_BA0	LPDDR4_A2_B	DDR3_A1	---	AC18
DDR4_BA1	LPDDR4_A4_B	DDR3_A12	LPDDR3_A4	AC19
DDR4_BG0	LPDDR4_ODT1_CA_B	DDR3_WEn	---	AC20
DDR4_BG1	LPDDR4_ODT1_CA_A	DDR3_BA0	---	AC21
DDR4_CKE	LPDDR4_CKE0_A	DDR3_CKE	LPDDR3_CKE	AC22
DDR4_CLKP	LPDDR4_CLKP_A	DDR3_CLKP	LPDDR3_CLKP	AC23
DDR4_CLKN	LPDDR4_CLKN_A	DDR3_CLKN	LPDDR3_CLKN	AC24
DDR4_CS0n	LPDDR4_CS0n_A	DDR3_ODT1	LPDDR3_ODT0	AC25
DDR4_CS1n	LPDDR4_CS1n_A	DDR3_CS1n	LPDDR3_ODT1	AC26
DDR4_ODT0	LPDDR4_CS1n_B	DDR3_ODT0	LPDDR3_CS1n	AC27
DDR4_ODT1	LPDDR4_CS0n_B	DDR3_CS0n	LPDDR3_CS0n	AC28
DDR4_RESETn	LPDDR4_RESETn	DDR3_RESETn	---	AC29

Note: Sequences can not be swap

Note:
Except DDR3, other DQ sequences can not be swap

DDR_RZQ

DDR_VREFOUT

DDR3L	=1.35V
DDR3	=1.5V
DDR4	=1.2V
LPDDR3	=1.2V
LPDDR4	=1.1V
LPDDR4x	=1.1V

DDRPHY_VDDQ_1 … DDRPHY_VDDQ_8

DDR3L	=1.35V
DDR3	=1.5V
DDR4	=1.2V
LPDDR3	=1.2V
LPDDR4	=1.1V
LPDDR4x	=0.6V

DDRPHY_VDDQL_1 … DDRPHY_VDDQL_6

DDR_AVSS

RK3568-Socket
BGA636_65Rx65Rx45R3_S

DDR_RZQ — R1100 1 — 2 120R/1% 1% R0201 — VCC_DDR

For DDR4/DDR3/LPDDR3 mode, a 120 ohm +/-1% tolerance external resistor must be connected between the DDR_RZQ pin and VSS pin

For LPDDR4/LPDDR4x mode, a 120 ohm +/-1% tolerance external resistor must be connected between the DDR_RZQ pin and DDRPHY_VDDQ pin

LPDDR4/LPDDR4x

VCC_DDR: C1100 100nF X5R 10V C0201; C1101 100nF X5R 10V C0201; C1102 4.7uF X5R 6.3V C0402; C1103 4.7uF X5R 6.3V C0402; C1104 10uF X5R 6.3V C0603

VCC0V6_DDR: C1105 100nF X5R 10V C0201; C1106 100nF X5R 10V C0201; C1107 4.7uF X5R 6.3V C0402; C1108 4.7uF X5R 6.3V C0402; C1109 4.7uF X5R 6.3V C0402

Caps should be placed under the U1000 package

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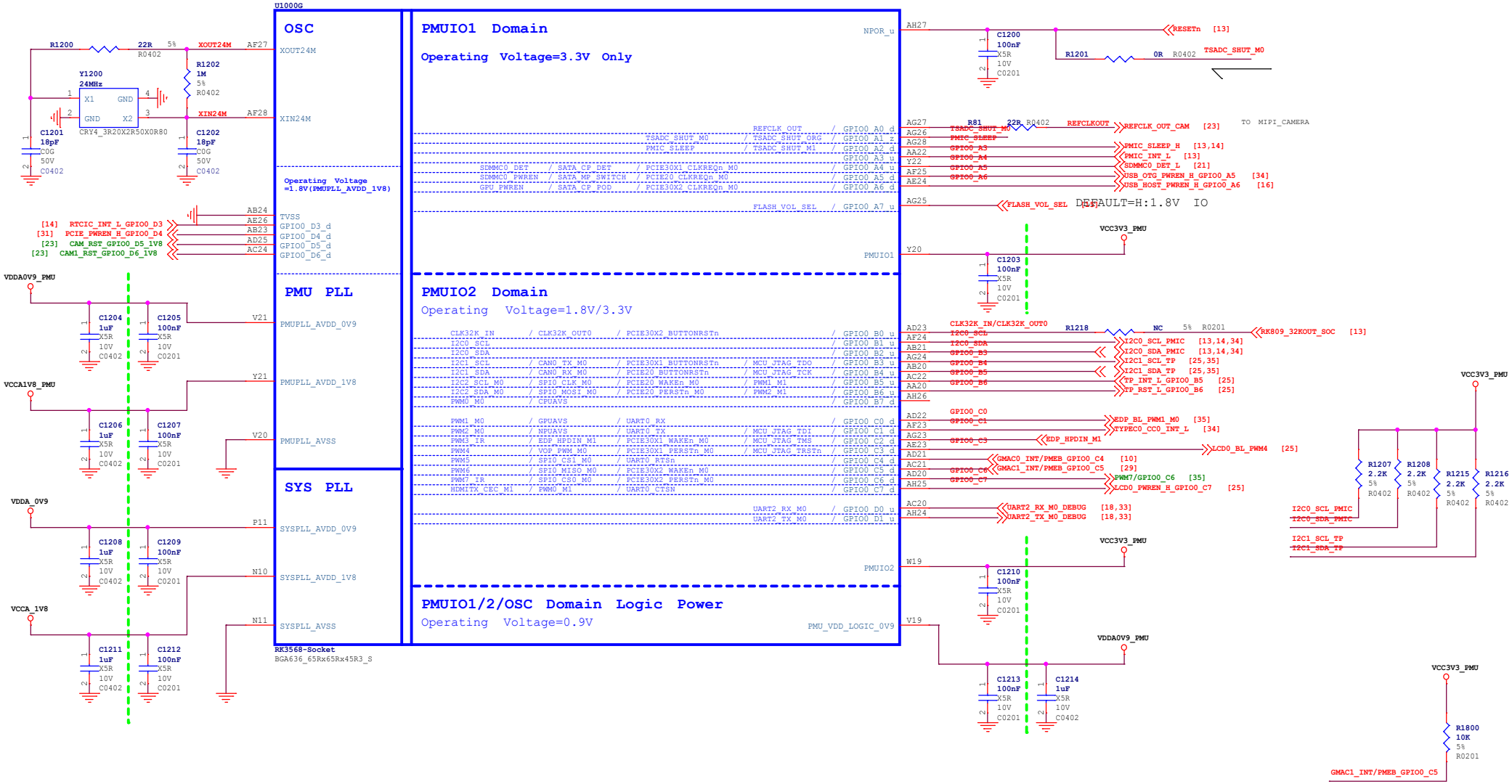
Title: RK3568_DDR_PHY		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, March 30, 2020	Page Num: 3	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

RK3568_G(OSC/PLL/PMUIO1/2)



Note:

Caps of between dashed green lines and U1000 should be placed under the U1000 package.
Other caps should be placed close to the U1000 package

Title:	RK3568_OSC/PLL/PMUIO
File:	ROC-3568-PC
REV:	V1.1
Create Date:	Monday, March 30, 2020
Page Num:	4
Modify Date:	Tuesday, August 09, 2022
Page Total:	36

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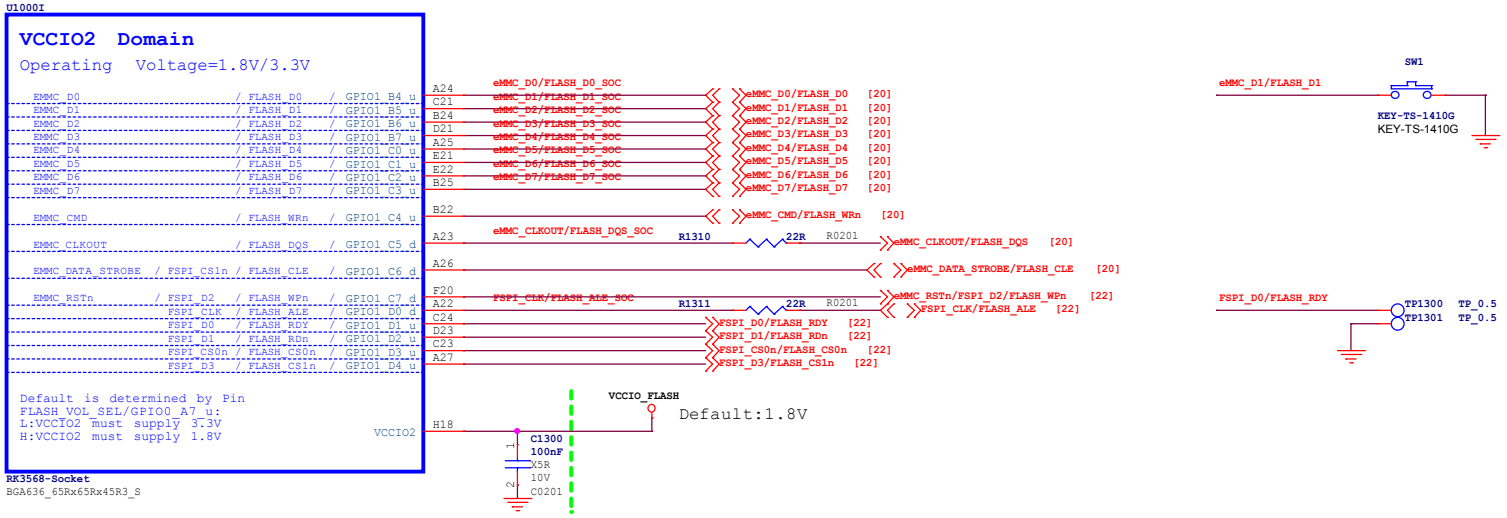
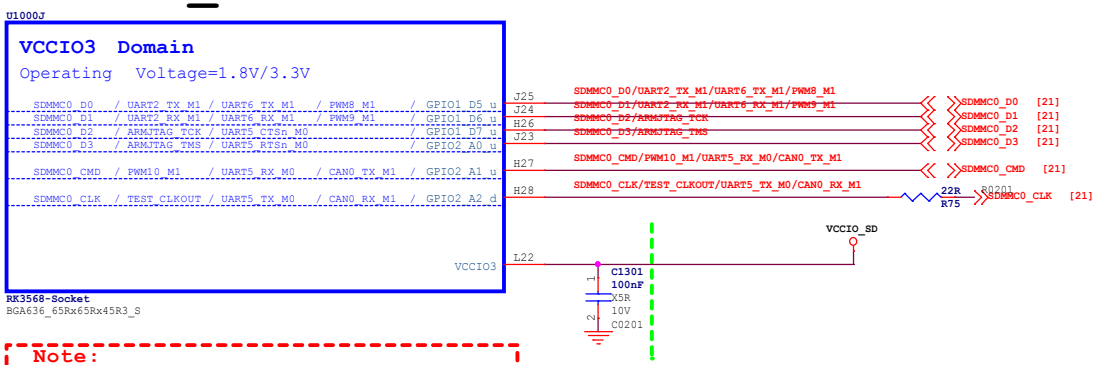
RK3568_I(VCCIO2 Domain)



RK3568_J(VCCIO3 Domain)



Note:

Caps of between dashed green lines and U1000 should be placed under the U1000 package

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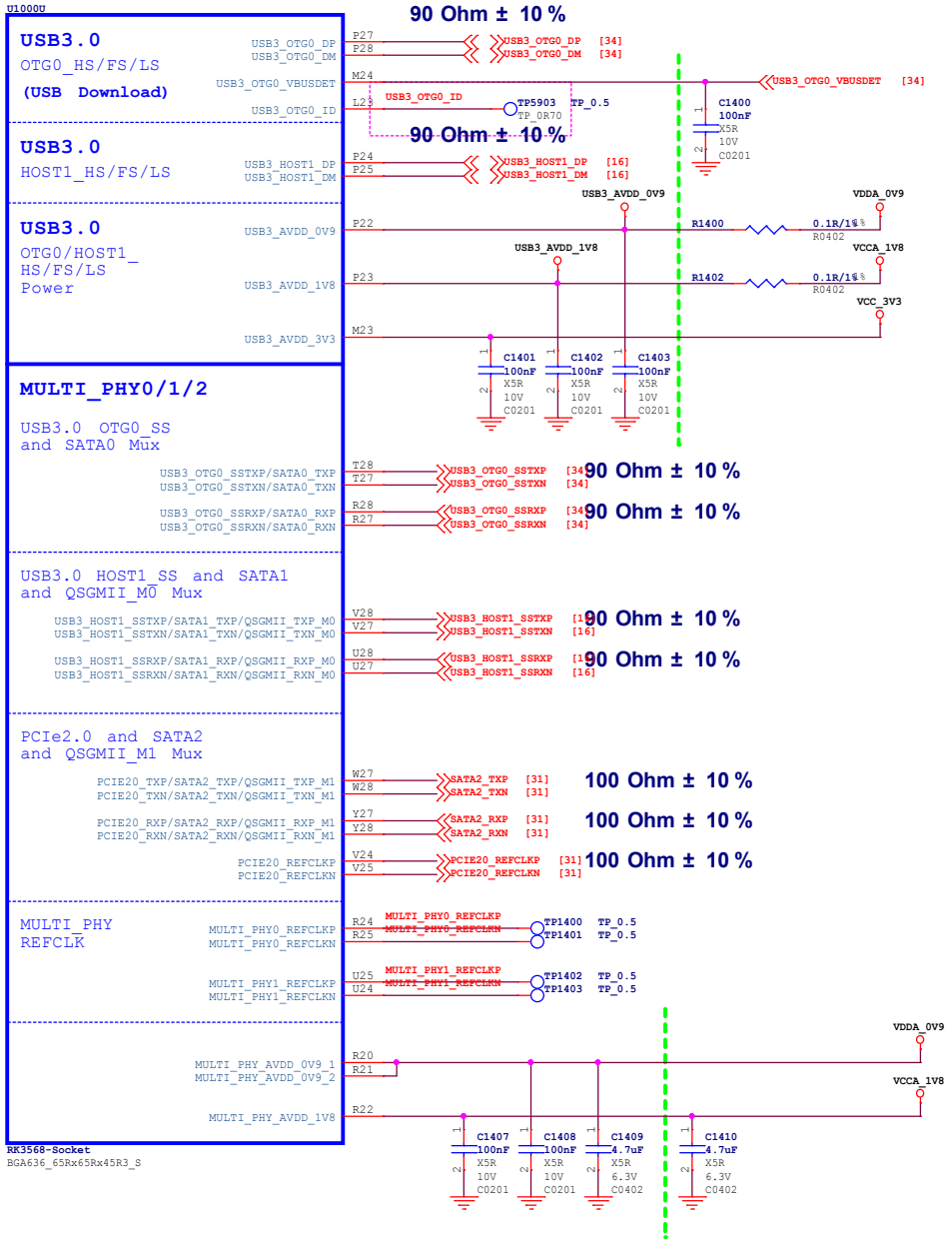
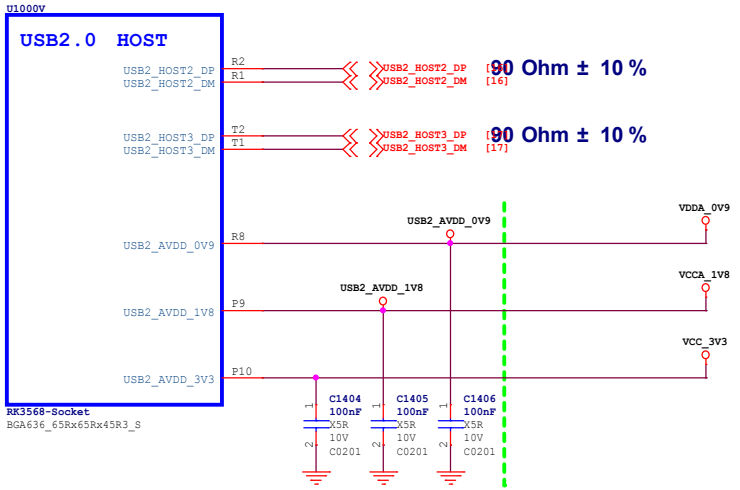
Title: RK3568_Flash/SD Controller	
File: ROC-3568-PC	REV: V1.1
Create Date: Monday, March 30, 2020	Page Num: 5
Modify Date: Tuesday, August 09, 2022	Page Total: 36

RK3568_U(USB3.0/SATA/QSGMII/PCIe2.0 x1)

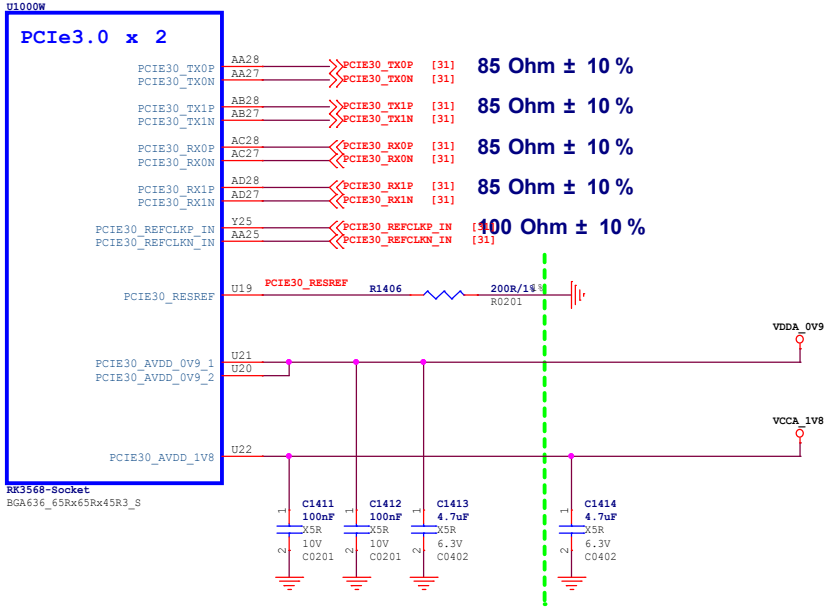


Note:
Caps of between dashed green lines and U1000 should be placed under the U1000 package.
Other caps should be placed close to the U1000 package

RK3568_V(USB2.0 HOST)



RK3568_W(PCIe3.0 x2)



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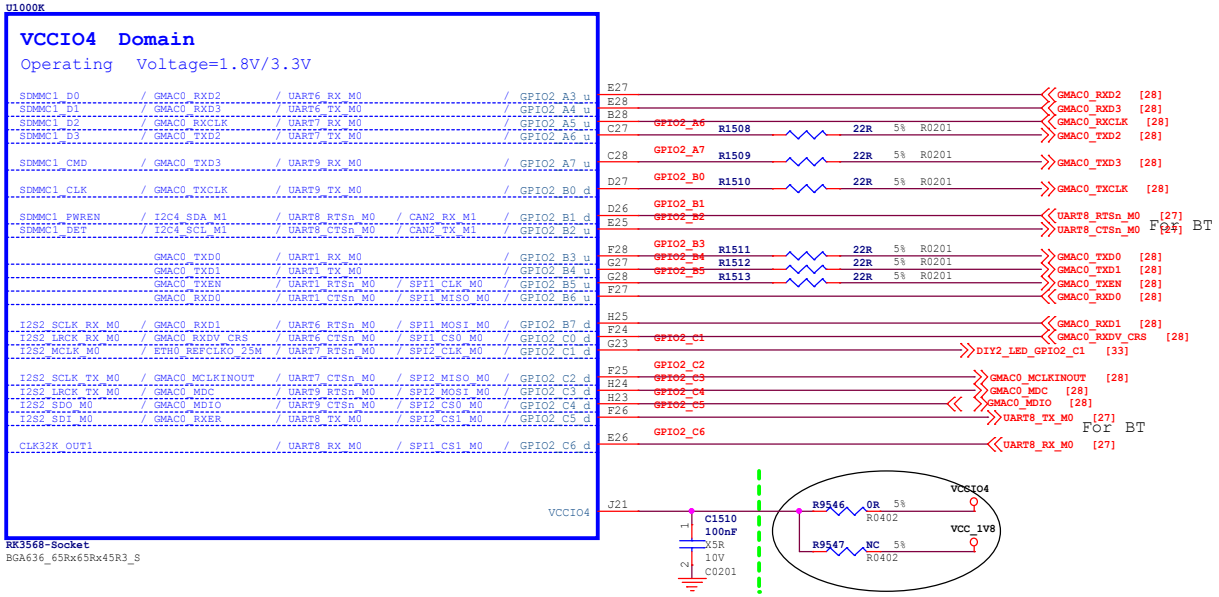
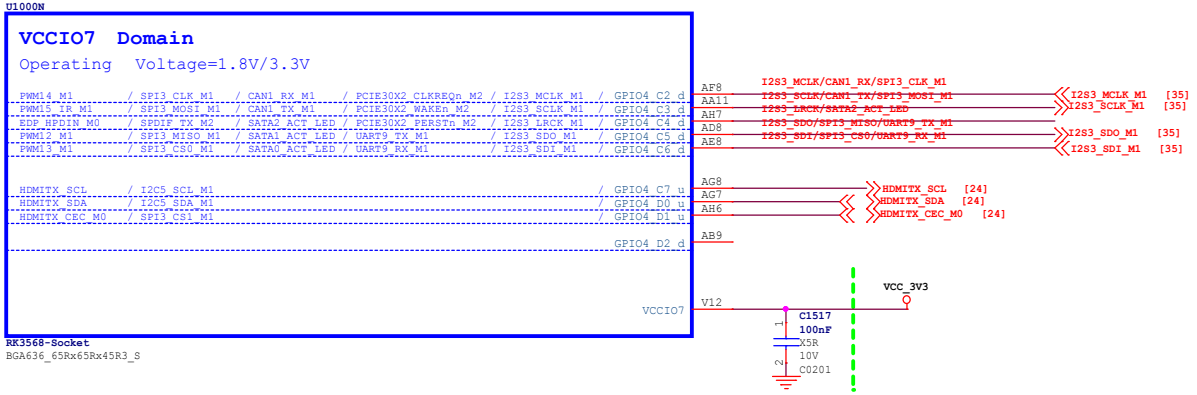
Title:	RK3568_USB/PCIe/SATA_PHY
File:	ROC-3568-PC
REV:	V1.1
Create Date:	Monday, March 30, 2020
Page Num:	6
Modify Date:	Tuesday, August 09, 2022
Page Total:	36

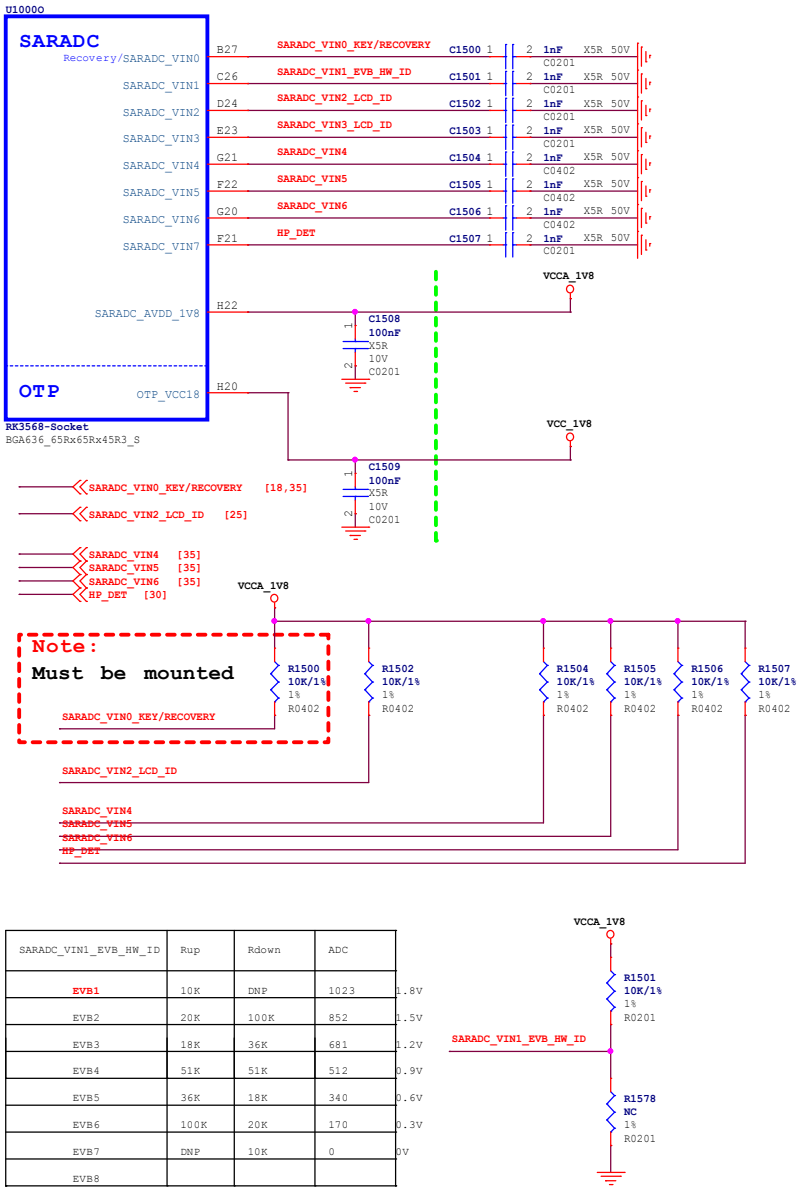
RK3568_K(VCCIO4 Domain)



RK3568_N(VCCIO7 Domain)



RK3568_O(SARADC/OTP)



SARADC_VIN1_EVB_HW_ID	Rup	Rdown	ADC	
EVB1	10K	DNP	1023	1.8V
EVB2	20K	100K	852	1.5V
EVB3	18K	36K	681	1.2V
EVB4	51K	51K	512	0.9V
EVB5	36K	18K	340	0.6V
EVB6	100K	20K	170	0.3V
EVB7	DNP	10K	0	0V
EVB8				

Note:
Caps of between dashed green lines and U1000 should be placed under the U1000 package

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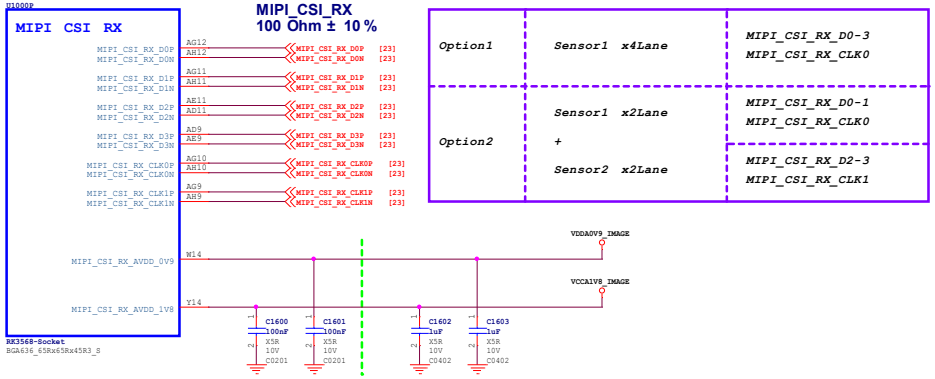
Title: RK3568_SARADC/GPIO		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, March 30, 2020	Page Num: 7	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

RK3568_P(MIPI_CSI_RX)



Option1	Sensor1 x4Lane	MIPI_CSI_RX_D0-3 MIPI_CSI_RX_CLK0
Option2	Sensor1 x2Lane + Sensor2 x2Lane	MIPI_CSI_RX_D0-1 MIPI_CSI_RX_CLK0 MIPI_CSI_RX_D2-3 MIPI_CSI_RX_CLK1

RK3568_M(VCCIO6 Domain)

Mode	16bit	12bit	10bit	8bit
CIF_D0	D0	--	--	--
CIF_D1	D1	--	--	--
CIF_D2	D2	--	--	--
CIF_D3	D3	--	--	--
CIF_D4	D4	D0	--	--
CIF_D5	D5	D1	--	--
CIF_D6	D6	D2	D0	--
CIF_D7	D7	D3	D1	--
CIF_D8	D8	D4	D2	D0
CIF_D9	D9	D5	D3	D1
CIF_D10	D10	D6	D4	D2
CIF_D11	D11	D7	D5	D3
CIF_D12	D12	D8	D6	D4
CIF_D13	D13	D9	D7	D5
CIF_D14	D14	D10	D8	D6
CIF_D15	D15	D11	D9	D7

Support BT601 YCbCr 422 8bit input
Support BT656 YCbCr 422 8bit input
Support RAW 8/10/12bit input
Support BT1120 YCbCr 422 8/10/12/16bit input, single/dual-edge sampling
Support 2/4 mixed BT656/BT1120 YCbCr 422 8bit input

Note:
Caps of between dashed green lines and U1000 should be placed under the U1000 package.
Other caps should be placed close to the U1000 package

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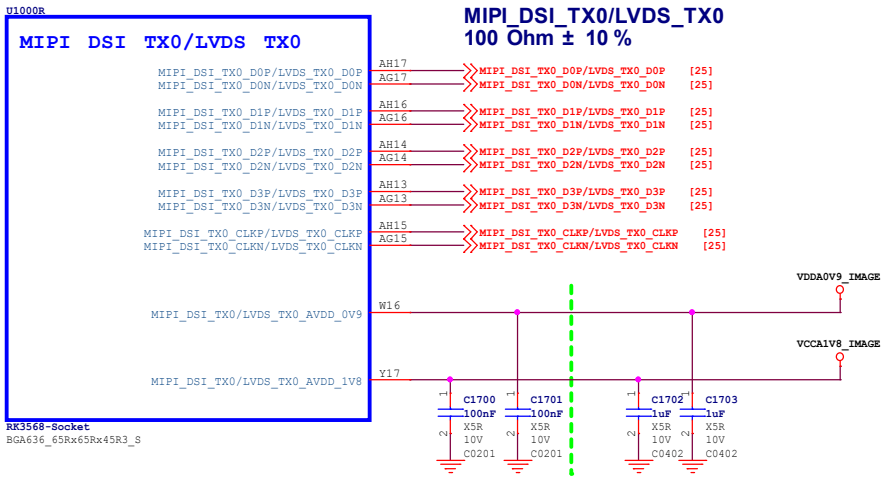
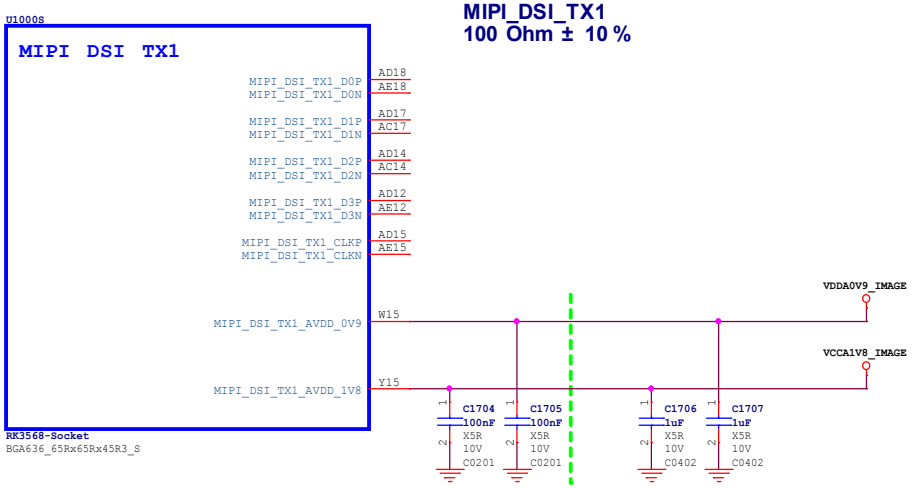
Title:	RK3568_VI_Interface	
File:	ROC-3568-PC	REV: V1.1
Create Date:	Monday, March 30, 2020	Page Num: 8
Modify Date:	Tuesday, August 09, 2022	Page Total: 36

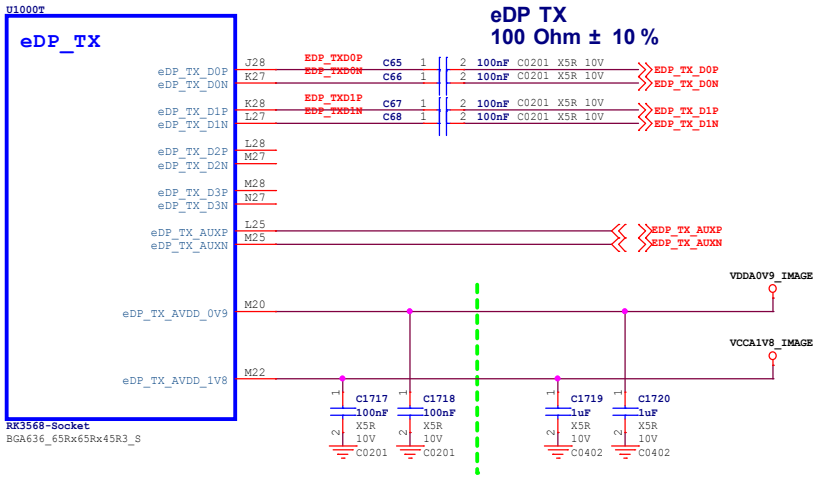
RK3568_R(MIPI_DSI_TX0/LVDS_TX0)



RK3568_S(MIPI_DSI_TX1)



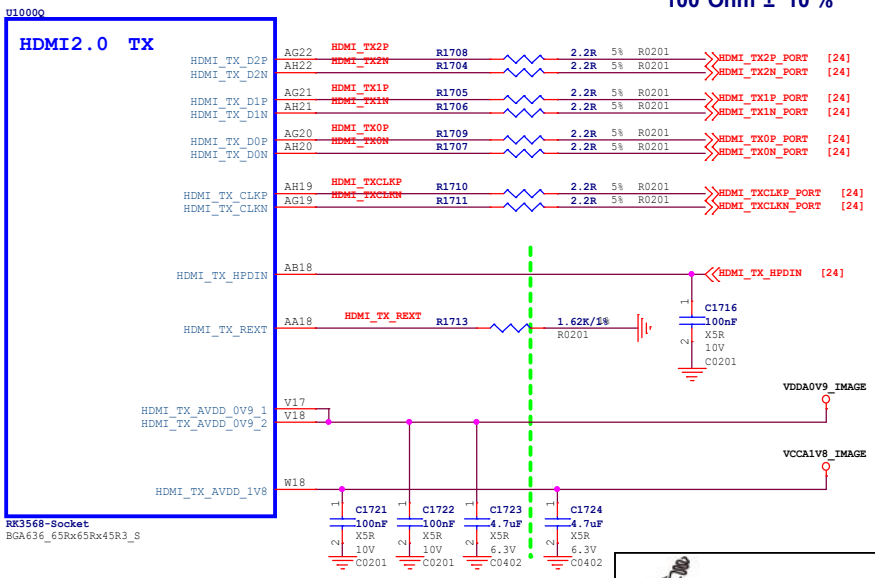
RK3568_T(eDP TX)



Note:

Caps of between dashed green lines and U1000
should be placed under the U1000 package.
Other caps should be placed close to the U1000 package

RK3568_Q(HDMI2.0 TX)



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Title: RK3568_V0 Interface_1		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, March 30, 2020	Page	Num: 9
Modify Date: Tuesday, August 09, 2022	Page	Total: 36

RK3568_L(VCCIO5 Domain)

U1000L

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_SDI0_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_REFCLKO_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	UART3_TX_M1	PDM_SDI2_M2	GPIO3_B7_d
LCDC_D23	PWM13_M0	GMAC1_MCLKINOUT_M0	UART3_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	SPDIF_TX_M1	GMAC1_MDIO_M0	UART7_RX_M1	I2S1_LRCK_RX_M2	GPIO3_C5_d

VCCIO5_1
VCCIO5_2

RK3568-Socket
BGA636_65Rx65Rx45R3_S

AG6 EDP_EN_GPIO2_D0_d [29]
AD7 GMAC1_RSTn_GPIO2_D1 [29]
AC8
AC7 GMAC0_RSTn_GPIO2_D3 [28]
AF5 PCIE30X2_CLKREQn_M1 [31]
AF6 PCIE30X2_WAKEn_M1 [31]
AD6 PCIE30X2_PERSTn_M1 [31]
AH5 TP_INT/GPIO2_D7_d_3V3[31]

AH4 BT_REG_ON_H_GPIO3_A0 [27]

AB8 BT_WAKE_HOST_H_GPIO3_A1 [27]
AE5 HOST_WAKE_BT_H_GPIO3_A2 [27]
AG4 POW_4G_CTL [26]
AF4 Reset_4G_CTL [26]
AH3 TP_RST/GPIO3_A4_d_3V3[31]
AG3 EDP_BL_EN [31]
AH2 PCIECLKIC_OE_H_GPIO3_A7 [31]
AG2 BL_EN0_GPIO3_B0 [25]

for BT

VCC_3V3
R1802 2.2K 5% R0402
R1803 2.2K 5% R0402
I2C5_SCL_M0
I2C5_SDA_M0

AG1 UART4_RX_M1 [33]
AF2 UART4_TX_M1 [33]
AF1 I2C5_SCL_M0 [14,32,35]
AE1 I2C5_SDA_M0 [14,32,35]
AE2 LCD0_RST_GPIO3_B5 [25]
AE3 TP_EN/GPIO3_B6_d_3V3[31]
AD4 UART3_TX_M1 [33]
AD2 UART3_RX_M1 [33]

AD1 GSENSOR_INT_L_GPIO3_C1 [32]
AA7 USB30_SW_GPIO3_C2 [34]
AC4

AC3 UART7_TX_M1/PWM14_M0
AC2 UART7_RX_M1/SPDIF_TX_M1
PWM14_M0 [35]
SPDIF_TX_M1 [35]

VCC_3V3
V10
V11
C1800 100nF X5R 10V C0201
C1801 1uF X5R 6.3V C0402 DNP

Note:
Caps of between dashed green lines and U1000 should be placed under the U1000 package

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Title: RK3568_V0_Interface_2		
File: ROC-3568-PC		REV: V1.1
Create Date: Wednesday, May 06, 2020	Page Num: 10	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

RK3568_H(VCCIO1 Domain)

U1000H

VCCIO1 Domain

Operating Voltage=1.8V/3.3V

I2C3_SDA_M0	/ UART3_RX_M0	/ CAN1_RX_M0	/ AUDIOPWM_LOUT_P	/ ACODEC_ADC_DATA	/ GPIO1_A0_u
I2C3_SCL_M0	/ UART3_TX_M0	/ CAN1_TX_M0	/ AUDIOPWM_LOUT_N	/ ACODEC_ADC_CLK	/ GPIO1_A1_u
I2S1_MCLK_M0	/ UART3_RTSn_M0	/ SCR_CLK	/ PCIE30X1_PERSTn_M2		/ GPIO1_A2_d
I2S1_SCLK_TX_M0	/ UART3_CTSn_M0	/ SCR_IO	/ PCIE30X1_WAKEn_M2	/ ACODEC_DAC_CLK	/ GPIO1_A3_d
I2S1_SCLK_RX_M0	/ UART4_RX_M0	/ PDM_CLK1_M0	/ SPDIF_TX_M0		/ GPIO1_A4_d
I2S1_LRCK_TX_M0	/ UART4_RTSn_M0	/ SCR_RST	/ PCIE30X1_CLKREQn_M2	/ ACODEC_DAC_SYNC	/ GPIO1_A5_d
I2S1_LRCK_RX_M0	/ UART4_TX_M0	/ PDM_CLK0_M0	/ AUDIOPWM_ROUT_P		/ GPIO1_A6_d
I2S1_SDO0_M0	/ UART4_CTSn_M0	/ SCR_DET	/ AUDIOPWM_ROUT_N	/ ACODEC_DAC_DATAL	/ GPIO1_A7_d
I2S1_SDO1_M0	/ I2S1_SDI3_M0	/ PDM_SDI3_M0	/ PCIE20_CLKREQn_M2	/ ACODEC_DAC_DATAR	/ GPIO1_B0_d
I2S1_SDO2_M0	/ I2S1_SDI2_M0	/ PDM_SDI2_M0	/ PCIE20_WAKEn_M2	/ ACODEC_ADC_SYNC	/ GPIO1_B1_d
I2S1_SDO3_M0	/ I2S1_SDI1_M0	/ PDM_SDI1_M0	/ PCIE20_PERSTn_M2		/ GPIO1_B2_d
	I2S1_SDI0_M0	/ PDM_SDI0_M0			/ GPIO1_B3_d

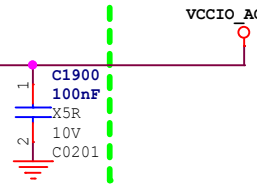
VCCIO1

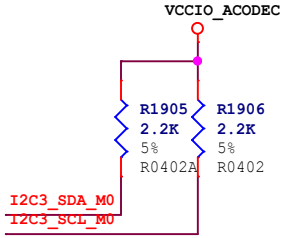
RK3568-Socket

BGA636_65Rx65Rx45R3_S

Default:RK809+PDM MIC

D18	I2C3_SDA	I2C3_SDA_M0 [35]
E18	I2C3_SCL	I2C3_SCL_M0 [35]
A19	I2S1_MCLK_M0	I2S1_MCLK_M0_RK809 [13]
B19	I2S1_SCLK_TX_M0	I2S1_SCLK_TX_M0_RK809 [13]
F18	I2S1_SCLK_RX_M0/PDM_CLK1_M0/GPIO1_A4	HUB_RST_GPIO1_A4_d [17]
A20	I2S1_LRCK_TX_M0	I2S1_LRCK_TX_M0_RK809 [13]
C20	I2S1_LRCK_RX_M0/PDM_CLK0_M0	PDM_CLK0_M0_RK809 [13]
B20	I2S1_SDO0_M0	I2S1_SDO0_M0_RK809 [13]
D20	GPIO1_B0	DIY1_LED_GPIO1_B0 [33]
E20	GPIO1_B1	WORK_LED_GPIO1_B1 [18]
A21	GPIO1_B2	DIY_LED_GPIO1_B2 [18]
B21	I2S1_SDI0_M0/PDM_SDI0_M0	I2S1_SDI0_M0/PDM_SDI0_M0_RK809 [13]





Note:

Caps of between dashed green lines and U1000 should be placed under the U1000 package

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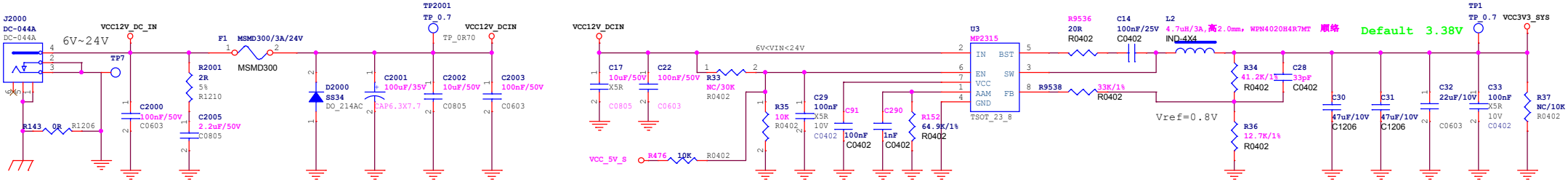
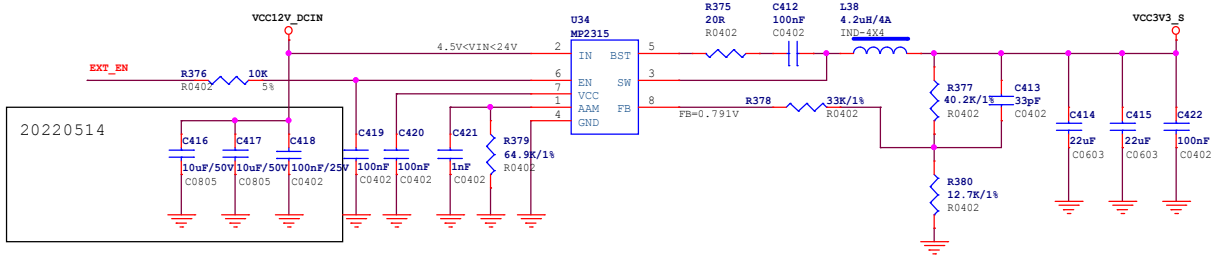
Title: RK3568 Audio Interface		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, March 30, 2020	Page Num: 11	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

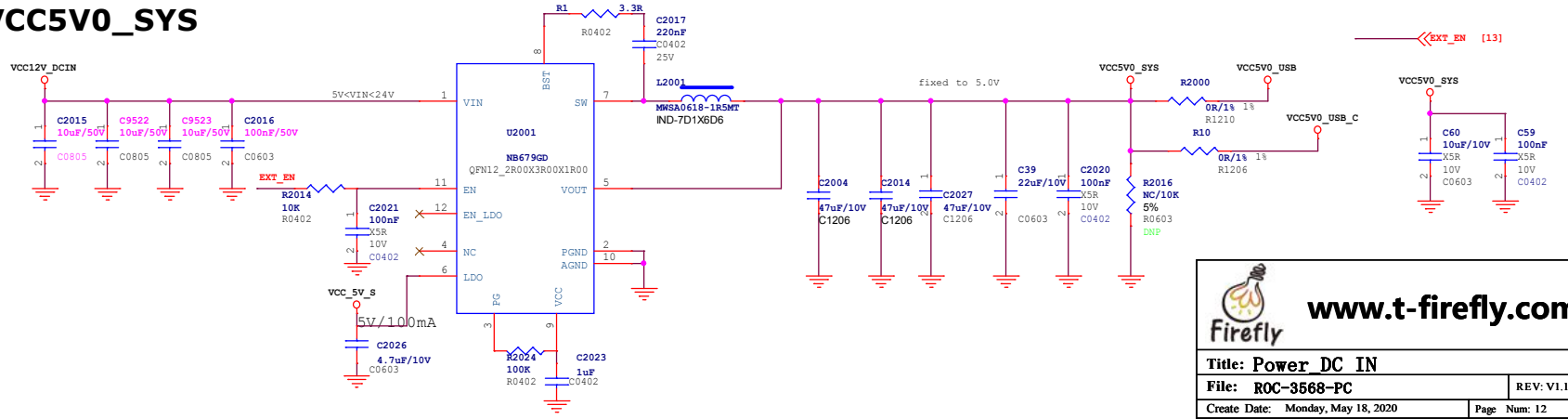
12V/3A DCIN



VCC3V3_SYS

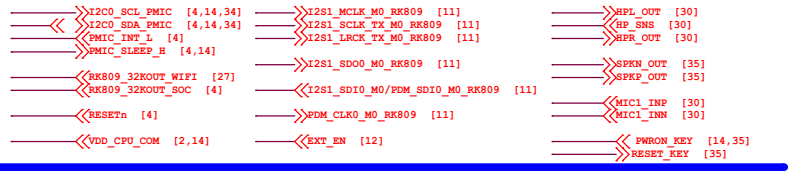


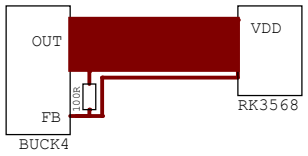
VCC5V0_SYS



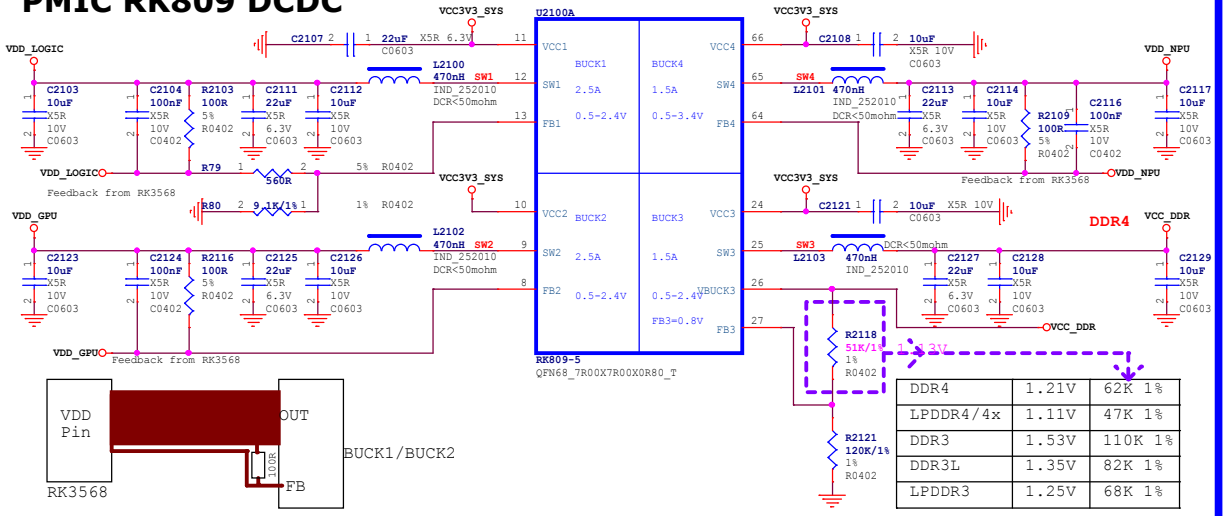
Firefly www.t-firefly.com

Title: Power_DC IN		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, May 18, 2020	Page Num: 12	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	



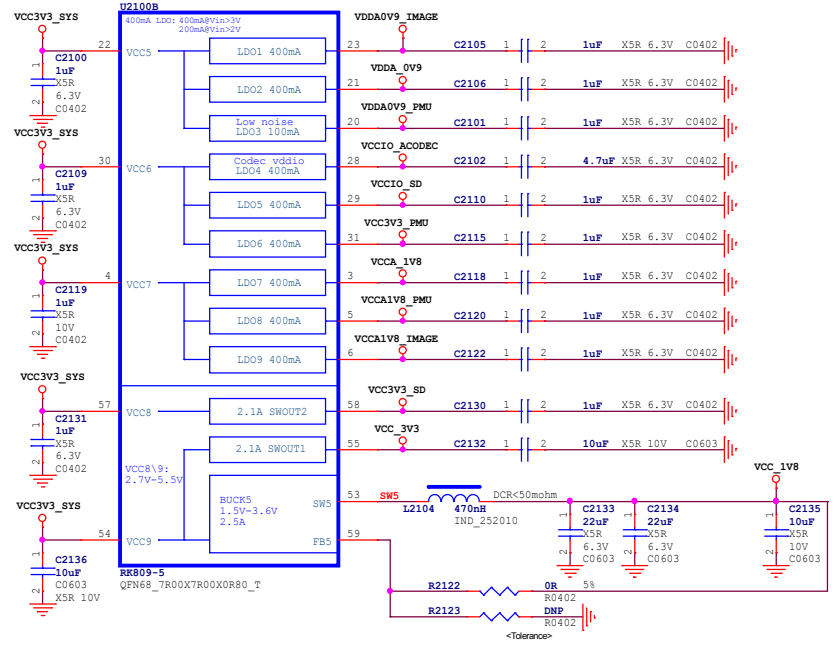


PMIC RK809 DCDC

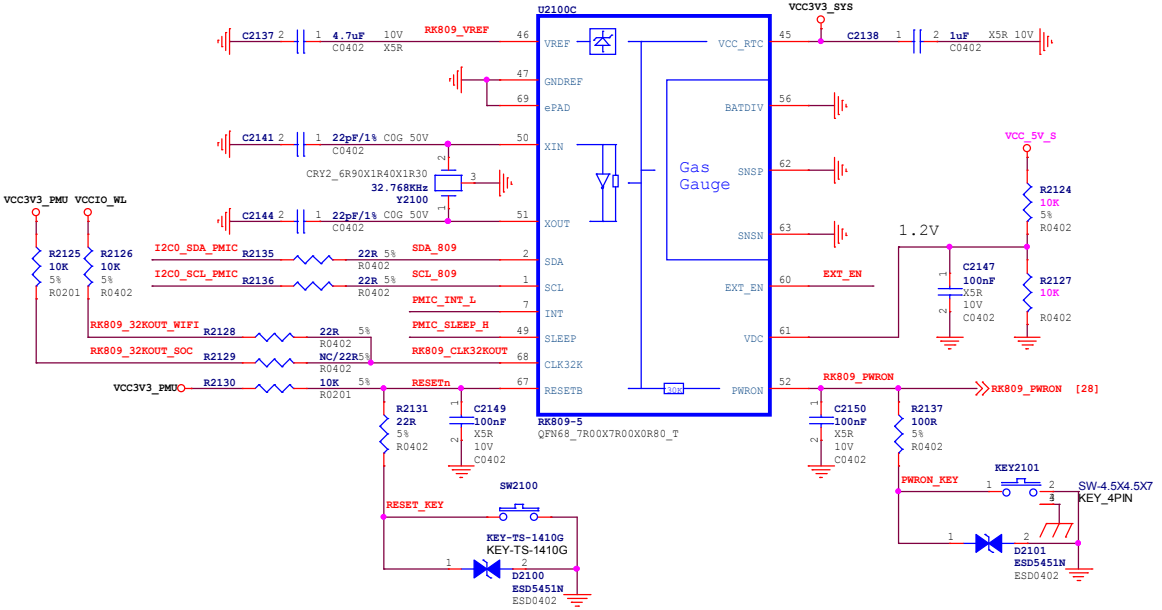


DDR4	1.21V	62K 1%
LPDDR4/4x	1.11V	47K 1%
DDR3	1.53V	110K 1%
DDR3L	1.35V	82K 1%
LPDDR3	1.25V	68K 1%

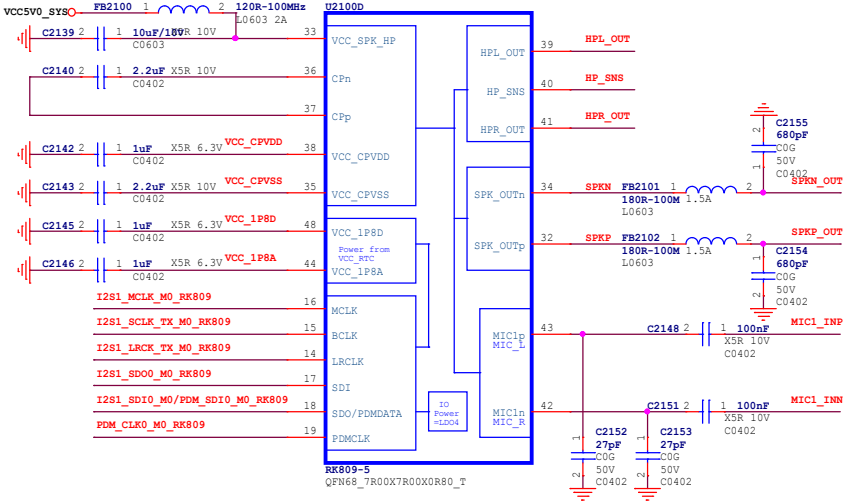
PMIC RK809 LDO



PMIC RK809 Managerment



PMIC RK809 CODEC



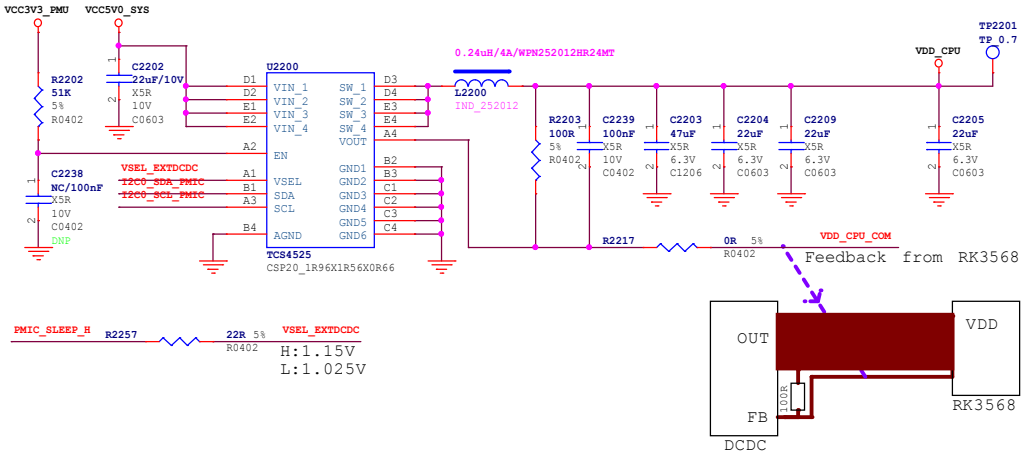
Title: Power_PMIC		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, May 18, 2020	Page Num: 13	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

PWRON_KEY [13,35] RTCIC_INT_L_GPIO0_D3 [4]

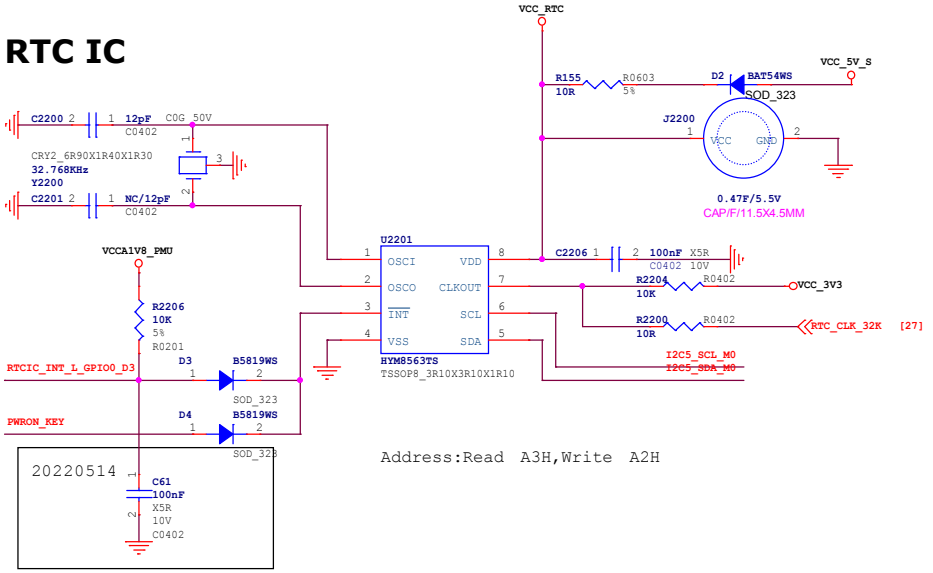
PMIC_SLEEP_H [4,13] I2C0_SCL_PMIC [4,13,34] I2C5_SCL_M0 [10,32,35]

VDD_CPU_COM [2] I2C0_SDA_PMIC [4,13,34] I2C5_SDA_M0 [10,32,35]

VDD_CPU



RTC IC



Address:Read A3H,Write A2H

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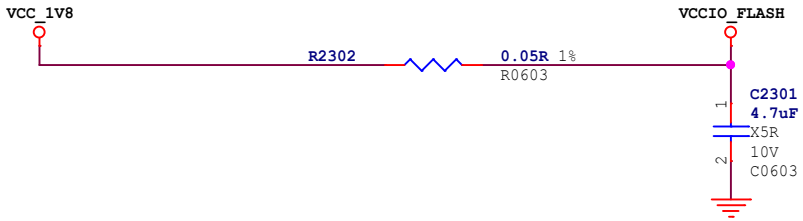
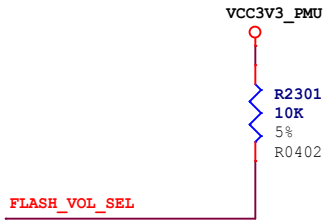
Title: Power_other		
File: ROC-3568-PC		REV: V1.1
Create Date: Monday, May 18, 2020	Page Num: 14	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

FLASH_VOL_SEL [4]

Flash Power Manage

	VCCIO2 domain voltage: Recommend voltage value (VCCIO_FLASH)	FLASH_VOL_SEL state decided to VCCIO2 domain IO driven by default
eMMC	1.8V	FLASH_VOL_SEL --> Logic=H
Nand flash	Default 3.3V, Adjust according to demand 1.8V	FLASH_VOL_SEL --> Logic=L(Default)
SPI flash	Default 3.3V, Adjust according to demand 1.8V	FLASH_VOL_SEL --> Logic=L(Default)





Note:
FLASH_VOL_SEL state decided
to VCCIO2 domain IO driven by default
Logic=L:3.3V IO driven
Logic=H:1.8V IO driven

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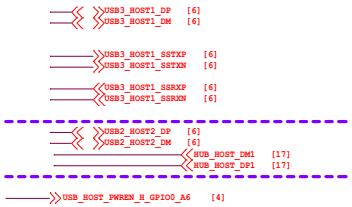
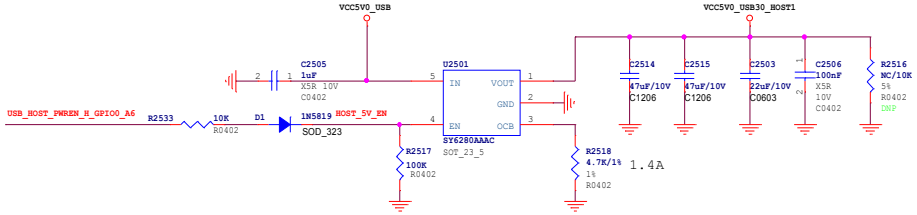
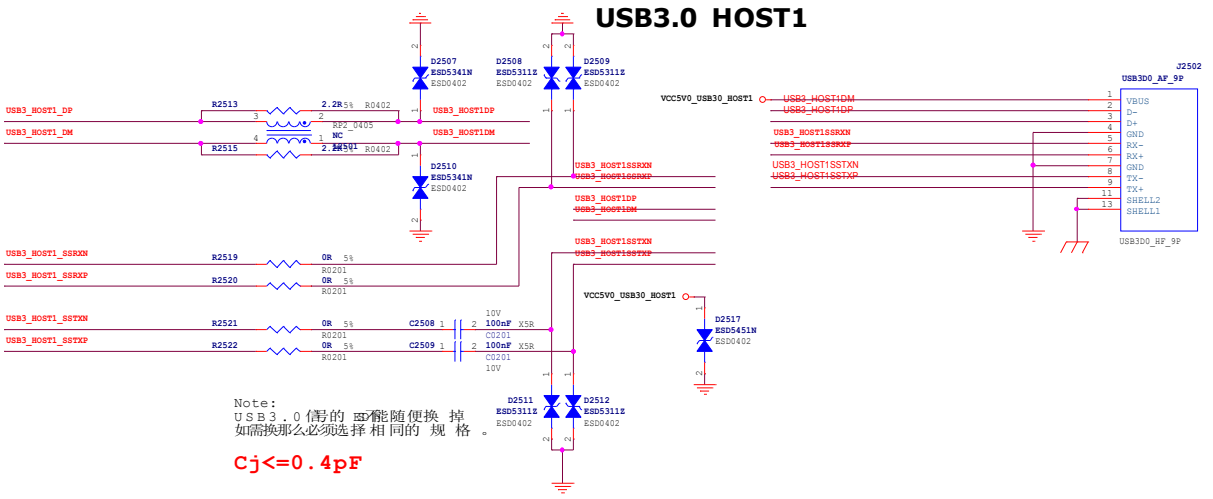
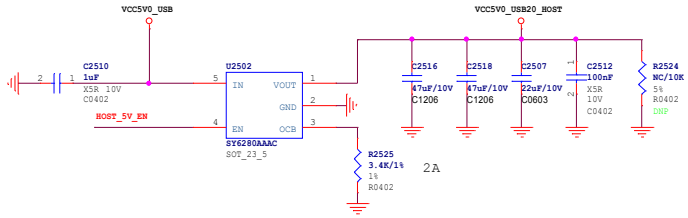
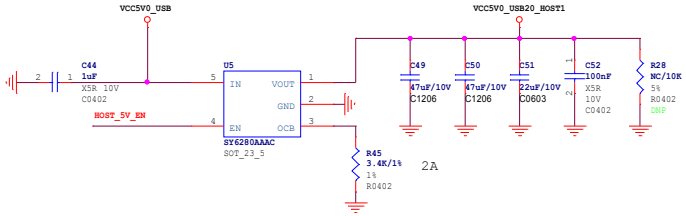
Title: Power_Flash Power Manage	
File: ROC-3568-PC	REV: V1.1
Create Date: Tuesday, May 19, 2020	Page Num: 15
Modify Date: Tuesday, August 09, 2022	Page Total: 36

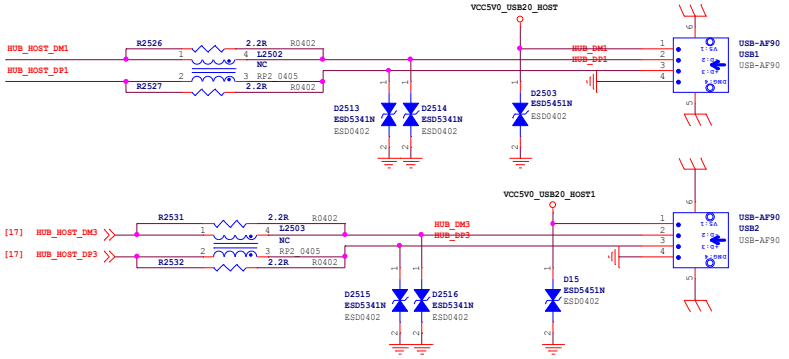












USB2.0 HOST2

USB2.0 HOST3

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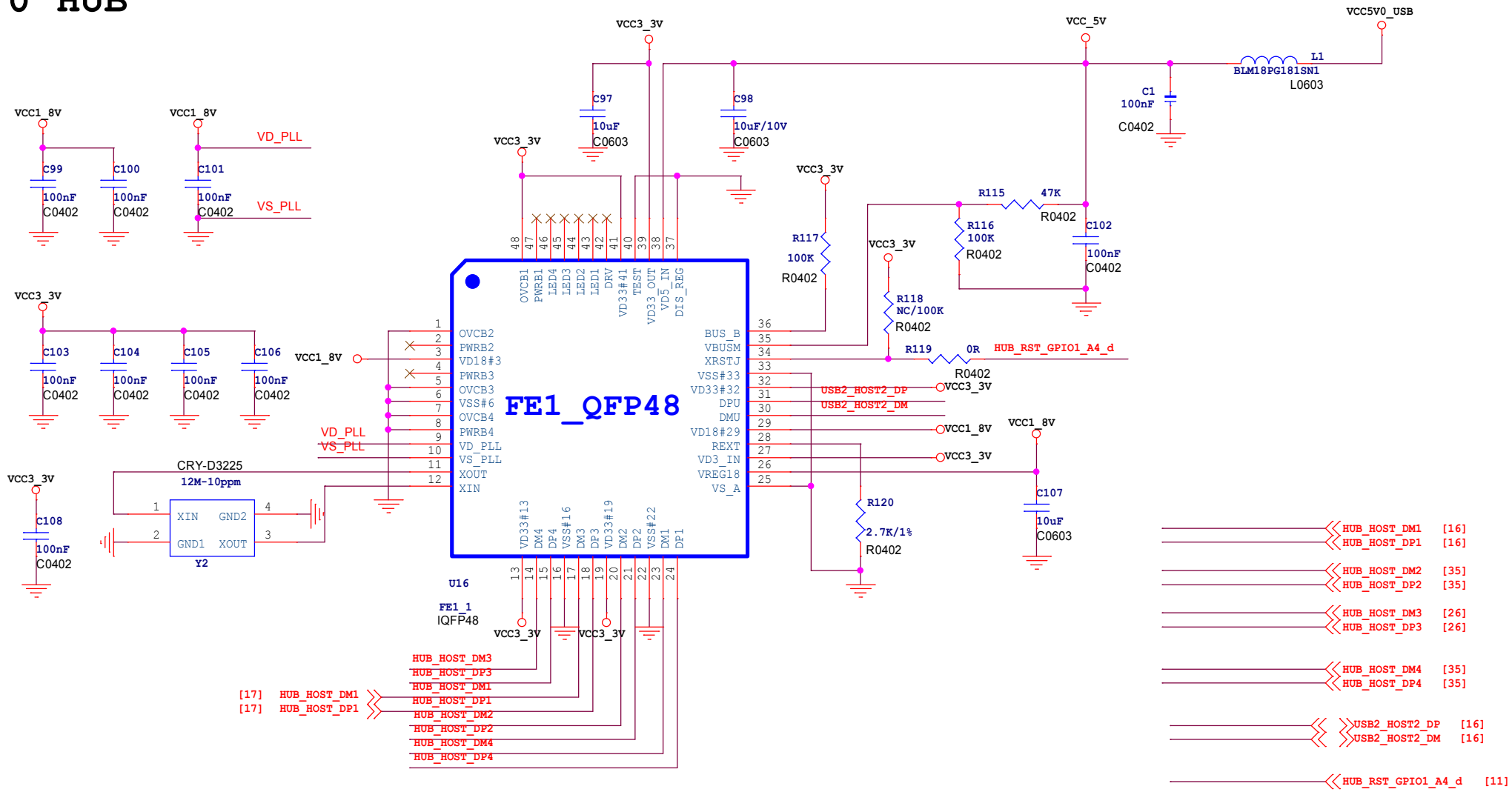
Title: USB2/USB3 Port		
File: ROC-3568-PC		REV: V1.1
Create Date: Tuesday, March 31, 2020	Page Num: 16	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

USB2.0 HUB



Title:	USB2.0 HUB GL850G
File:	ROC-3568-PC
REV:	V1.1
Create Date:	Wednesday, November 04, 2020
Page Num:	17
Modify Date:	Tuesday, August 09, 2022
Page Total:	36

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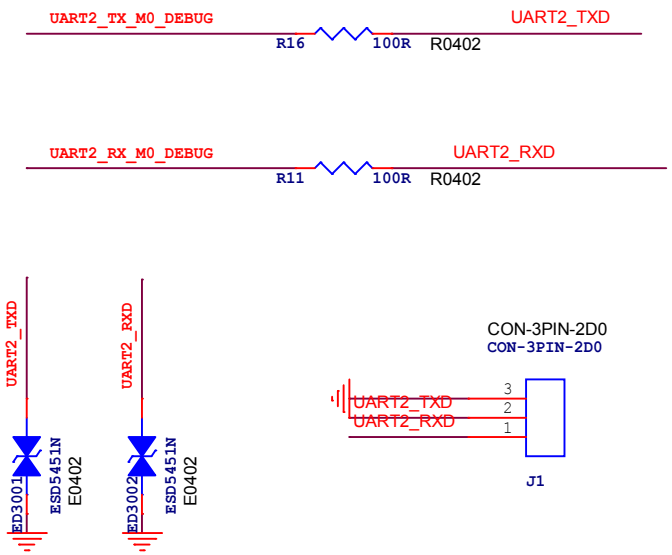
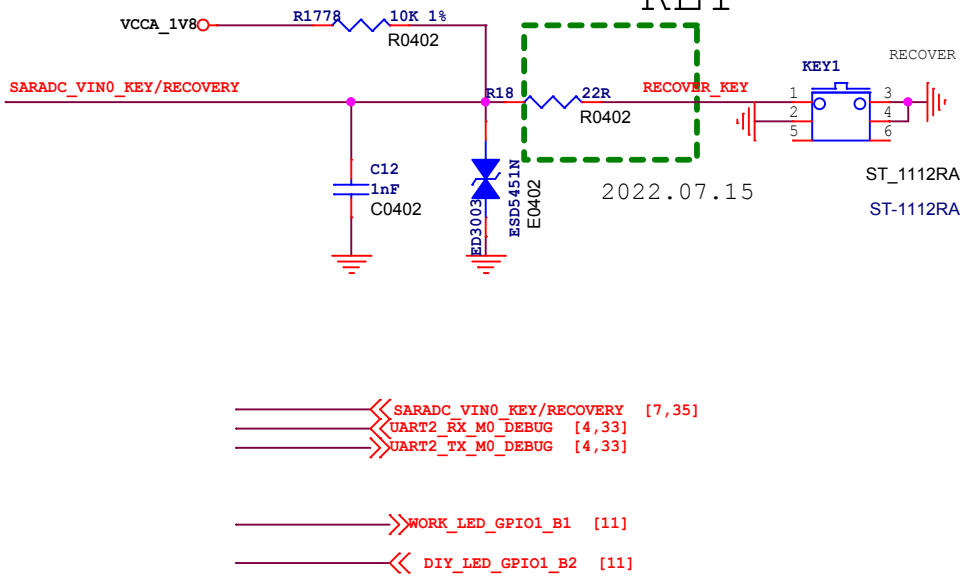
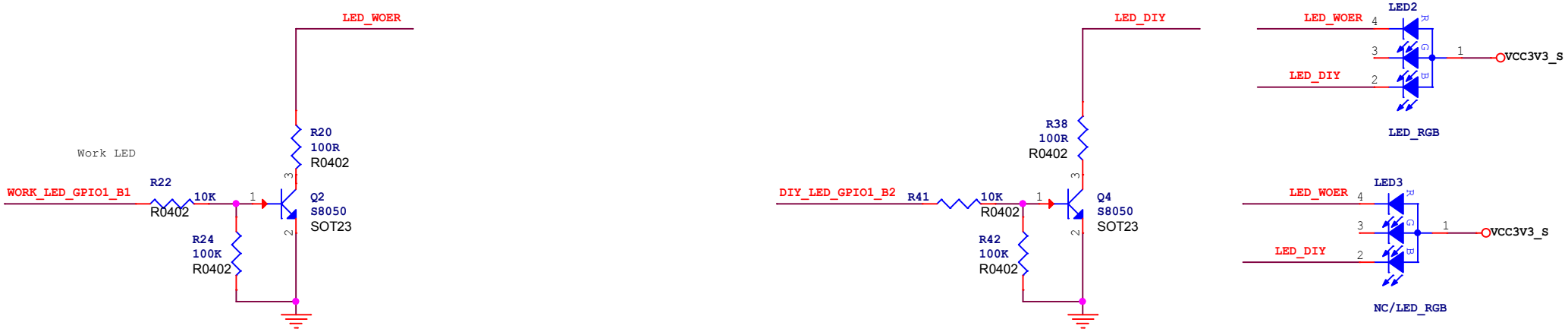
DEBUG



KEY



LED



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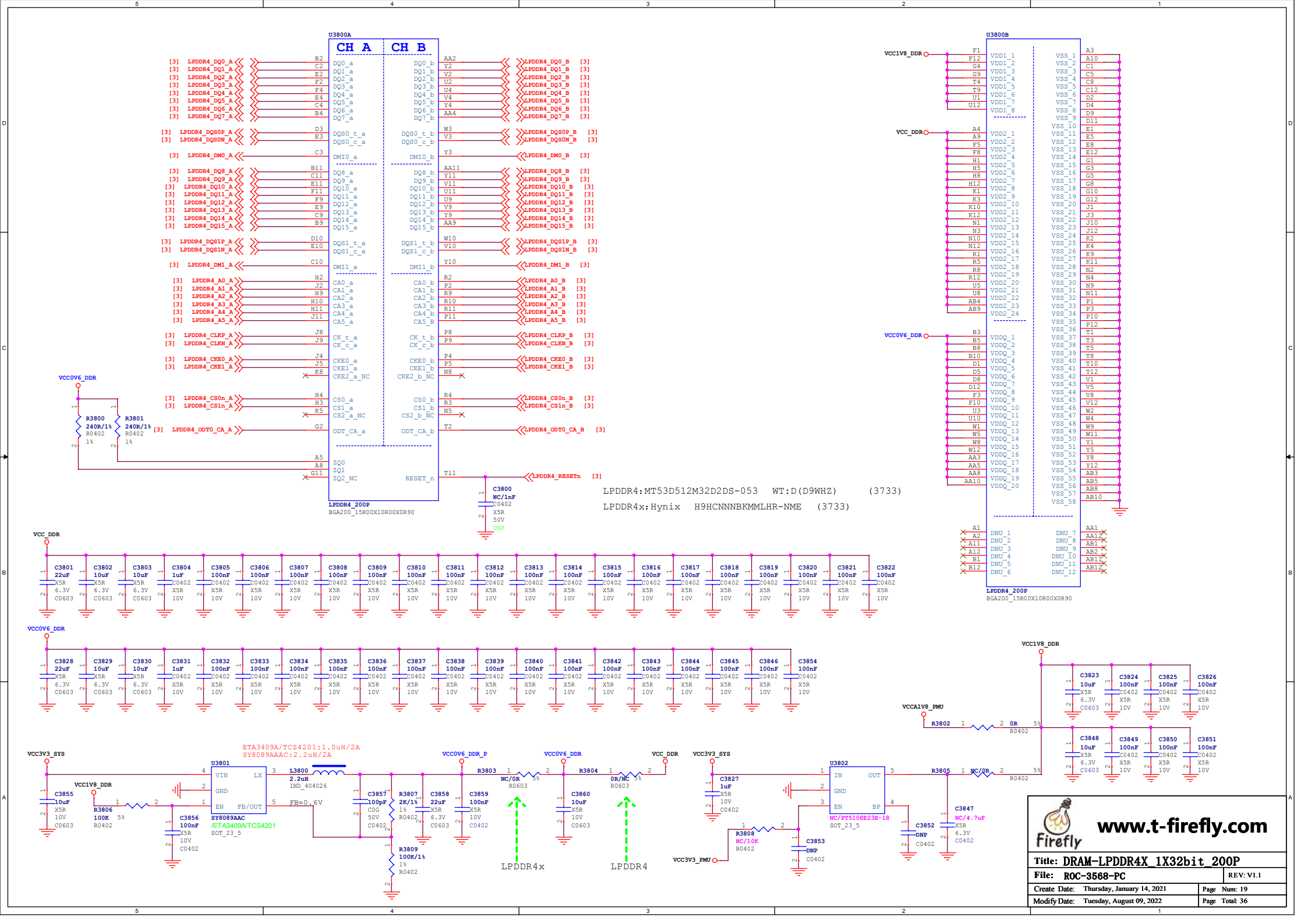
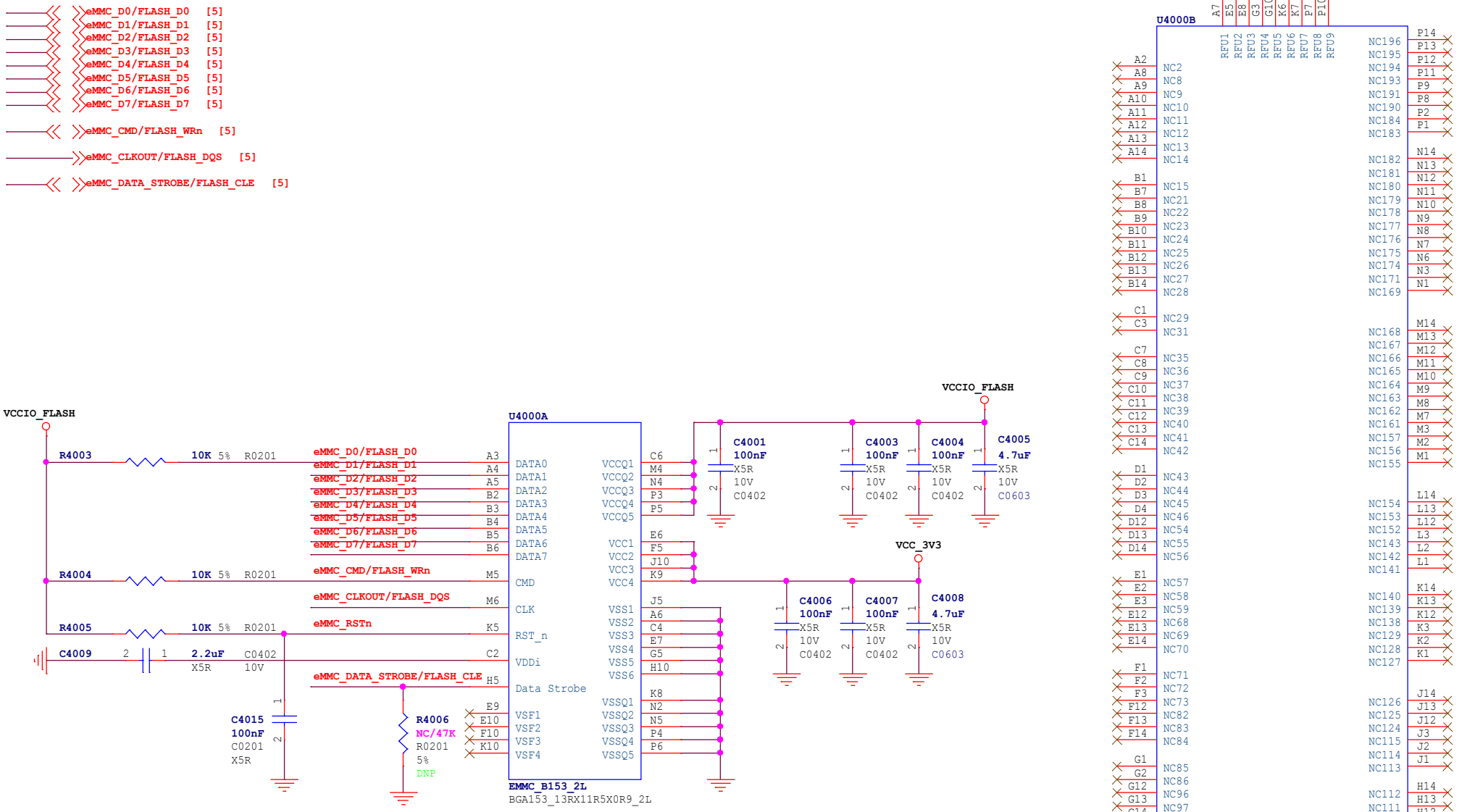
Title: KEY/LED/DEBUG		
File: ROC-3568-PC		REV: V1.1
Create Date: Wednesday, November 04, 2020		Page Num: 18
Modify Date: Tuesday, August 09, 2022		Page Total: 36


U3800A
CH A
CH B
LPDDR4_200P
BGA200_15R00X10R00X0R90
U3800B
LPDDR4_200P
BGA200_15R00X10R00X0R90
LPDDR4:MT53D512M32D2DS-053 WT:D(D9WHZ) (3733)
LPDDR4x:Hynix H9HCNNNBKMMLHR-NME (3733)
VCC_DDR
VCC0V6_DDR
VCC1V8_DDR
VCCA1V8_PMU
VCC3V3_SYS
VCC3V3_PMU
VCC0V6_DDR_P
ETA3409A/TCS4201:1.0uH/2A
SY8089AAAC:2.2uH/2A
SY8089AAC
/ETA3409/TCS4201
SOT_23_5
NC/PT5108E23E-18
LPDDR4x
LPDDR4
www.t-firefly.com
Title: DRAM-LPDDR4X_1X32bit_200P
File: ROC-3568-PC
REV: V1.1
Create Date: Thursday, January 14, 2021
Page Num: 19
Modify Date: Tuesday, August 09, 2022
Page Total: 36



KLMBG2JETD-B041

SDINBDA6-32G-XI1

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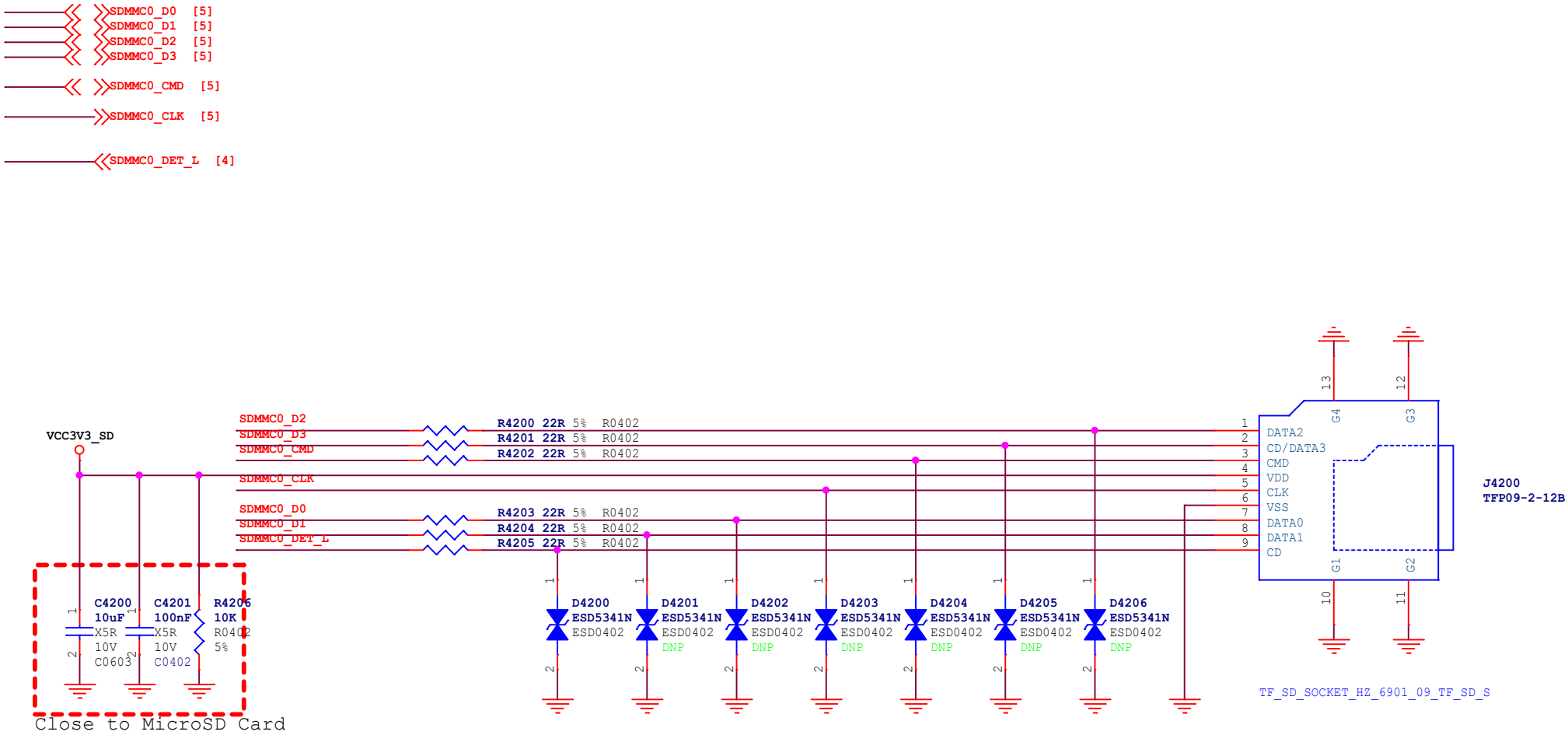
Title: Flash-eMMC Flash		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 20	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	



MicroSD Card

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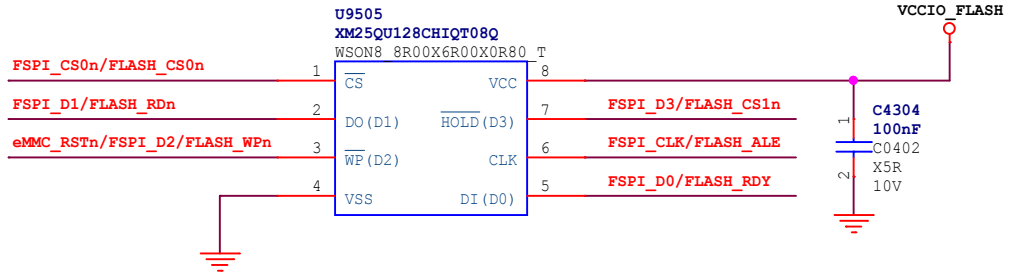
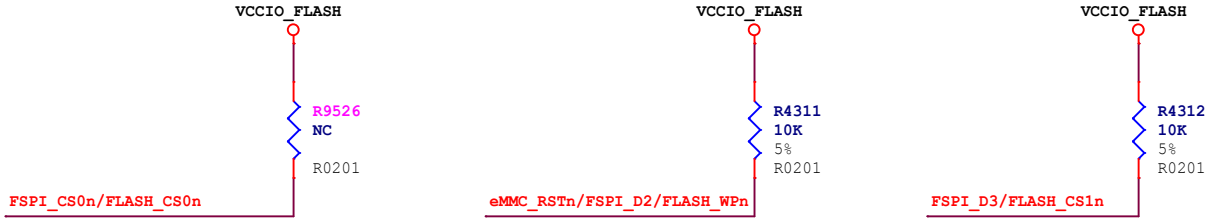
Title: Flash-MicroSD Card		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 21	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

FSPI_CLK/FLASH_ALE [5]

FSPI_D0/FLASH_RDY [5]
FSPI_D1/FLASH_RDn [5]
eMMC_RSTn/FSPI_D2/FLASH_WPn [5]
FSPI_D3/FLASH_CS1n [5]

FSPI_CS0n/FLASH_CS0n [5]





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Title: Flash-SPI FLASH		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 22	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

MIPI-CSI_RX CON

MIPI_CSI_RX_D0P [8,23]
MIPI_CSI_RX_D0N [8,23]
MIPI_CSI_RX_D1P [8,23]
MIPI_CSI_RX_D1N [8,23]
MIPI_CSI_RX_D2P [8,23]
MIPI_CSI_RX_D2N [8,23]
MIPI_CSI_RX_D3P [8,23]
MIPI_CSI_RX_D3N [8,23]
MIPI_CSI_RX_CLK0P [8,23]
MIPI_CSI_RX_CLK0N [8,23]
MIPI_CSI_RX_CLK1P [8,23]
MIPI_CSI_RX_CLK1N [8,23]
CIF_CLKOUT [8]
REFCLK_OUT_CAM [4]
I2C4_SDA_M0 [8,23]
I2C4_SCL_M0 [8,23]

REFCLK_OUT_CAM
3.3V R4719 100R R0402
R4720 120R R0402

1x4Lane-Camera

CAMERA0_PDN_L_GPIO4_B4 [8]
CAMERA1_PDN_L_GPIO4_B5 [8]
D21 ESD5341N ESD0402
D22 ESD5341N ESD0402

2x2Lane-Camera

CAM_RST_GPIO0_D5_1V8 [4]
CAM1_RST_GPIO0_D6_1V8 [4]
D19 ESD5341N ESD0402
D20 ESD5341N ESD0402

2022.07.09

CIF_CLKOUT C4704 1 C0402 2 NC/8pF C0G 50V
MIPI_MCLK1 C4705 1 C0402 2 NC/8pF C0G 50V

VCC5V0_SYS
C4702 10uF/10V X5R 10V C0603
C4703 100nF X5R 10V C0402

[8,23] I2C4_SDA_M0 SDA_CAM0 1.8V
[8,23] I2C4_SCL_M0 SCL_CAM0 1.8V
CAMERA0_PDN_L_GPIO4_B4 MIPI_PDN0_CAM 1.8V
CAM_RST_GPIO0_D5_1V8 MIPI_RESET0_CAM 1.8V
CIF_CLKOUT MIPI_MCLK0 1.8V
CAMERA1_PDN_L_GPIO4_B5 MIPI_PDN1_CAM 1.8V
CAM1_RST_GPIO0_D6_1V8 MIPI_RESET1_CAM 1.8V
MIPI_MCLK1 1.8V

[8,23] MIPI_CSI_RX_D0P
[8,23] MIPI_CSI_RX_D0N
[8,23] MIPI_CSI_RX_D1P
[8,23] MIPI_CSI_RX_D1N
[8,23] MIPI_CSI_RX_CLK0P
[8,23] MIPI_CSI_RX_CLK0N
[8,23] MIPI_CSI_RX_D2P
[8,23] MIPI_CSI_RX_D2N
[8,23] MIPI_CSI_RX_D3P
[8,23] MIPI_CSI_RX_D3N
[8,23] MIPI_CSI_RX_CLK1P
[8,23] MIPI_CSI_RX_CLK1N

VCC5V0_SYS

J4701
FPC_30PIN_0D5
FPC_30PIN_0D5

1	SDA	16	GND
2	SCL	17	CLK0+
3	PWDN0	18	CLK0-
4	RESET0	19	GND
5	GND	20	D2+
6	CLK0	21	D2-
7	PWDN1	22	GND
8	RESET1	23	D3+
9	CLK1	24	D3-
10	GND	25	GND
11	D0+	26	CLK1+
12	D0-	27	CLK1-
13	GND	28	GND
14	D1+	29	VCC5V
15	D1-	30	VCC5V
		31	GND
		32	GND

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Title: VI-Camera MIPI-CSI		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 23	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

HDMI_TX2P_PORT [9]
HDMI_TX2N_PORT [9]
HDMI_TX1P_PORT [9]
HDMI_TX1N_PORT [9]
HDMI_TX0P_PORT [9]
HDMI_TX0N_PORT [9]
HDMI_TXCLKP_PORT [9]
HDMI_TXCLKN_PORT [9]
HDMITX_SCL [7]
HDMITX_SDA [7]
HDMITX_CEC_M0 [7]
HDMI_TX_HPDIN [9]

VCC5V0_SYS
C5001
1uF
C0402
X5R
10V

VCC5V_HDMI
C5000
1uF
X5R
10V
C0402

Cj<=0.4pF

HDMI TX DDC

VCC5V0_SYS
D5000
B5819WS
SOD_323
VCC_3V3
VCC5V_HDMI
R5000 10K 5% R0402
Q5000 2SK3018 SOT_323
R5001 1.8K 5% R0402
HDMITX_SCL
HDMI_TXDDC_SCL_PORT
R5002 10K 5% R0402
Q5001 2SK3018 SOT_323
R5003 1.8K 5% R0402
HDMITX_SDA
HDMI_TXDDC_SDA_PORT

U5000 ESD5304D
U5001 ESD5304D
U5002 ESD5304D
SON10_2R50X1R00X0R50

J7003
HDMI_TYPE_A
Type A
ED5005
ESD5341N
ESD0402
HDMIA19_HDMI_9.2MM

HDMI TX CEC

VCC_3V3
VCC5V_HDMI
R5006 27K 5% R0402
Q5002 2SK3018 SOT_323
HDMITX_CEC_M0
HDMI_TX_CEC_PORT

HDMI TX HPD

HDMI_TX_HPDIN
R5005 1K 5% R0402
HDMI_TX_HPD_PORT
R5008 100K 5% R0402

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Title: VO-HDMI2.0 TX		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 24	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

MIPI_DSI_TX0_D0P/LVDS_TX0_D0P [9]
MIPI_DSI_TX0_D0N/LVDS_TX0_D0N [9]

MIPI_DSI_TX0_D1P/LVDS_TX0_D1P [9]
MIPI_DSI_TX0_D1N/LVDS_TX0_D1N [9]

MIPI_DSI_TX0_D2P/LVDS_TX0_D2P [9]
MIPI_DSI_TX0_D2N/LVDS_TX0_D2N [9]

MIPI_DSI_TX0_D3P/LVDS_TX0_D3P [9]
MIPI_DSI_TX0_D3N/LVDS_TX0_D3N [9]

MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP [9]
MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN [9]

I2C1_SCL_TP [4,35]
I2C1_SDA_TP [4,35]
TP_INT_L_GPIO0_B5 [4]
TP_RST_L_GPIO0_B6 [4]

LCD0_BL_PWM4 [4]
LCD0_PWREN_H_GPIO0_C7 [4]

BL_EN0_GPIO3_B0 [10]
LCD0_RST_GPIO3_B5 [10]

SARADC_VIN2_LCD_ID [7]

SARADC_VIN2_LCD_ID R5202 0R R0402 I2C_ID1

VCC5V0_SYS

C5204 10uF/10V C0603

C5203 100nF C0402

VCC3V3_S

C5205 10uF/10V C0603

C5206 100nF C0402

20210519

VCC5V0_SYS

J5200

R0402

R26 NC/10K

I2C_ID1

VCC3V3_S

I2C1_SDA_TP
I2C1_SCL_TP
LCD0_PWREN_H_GPIO0_C7
TP_INT_L_GPIO0_B5
BL_EN0_GPIO3_B0
LCD0_BL_PWM4
LCD0_RST_GPIO3_B5
TP_RST_L_GPIO0_B6

3.3V

3.3V

1	5V	16	D0+
2	5V	17	D0-
3	5V	18	GND
4	GND	19	D1+
5	I2C_ID	20	D1-
6	VCC	21	GND
7	SDA	22	CLK+
8	SCL	23	CLK-
9	EN	24	GND
10	TP_INT	25	D2+
11	BL_EN	26	D2-
12	PWM	27	GND
13	RST	28	D3+
14	TP_RST	29	D3-
15	GND	30	GND
31	GND	32	GND

MIPI_DSI_TX0_D0P/LVDS_TX0_D0P
MIPI_DSI_TX0_D0N/LVDS_TX0_D0N
MIPI_DSI_TX0_D1P/LVDS_TX0_D1P
MIPI_DSI_TX0_D1N/LVDS_TX0_D1N
MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP
MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN
MIPI_DSI_TX0_D2P/LVDS_TX0_D2P
MIPI_DSI_TX0_D2N/LVDS_TX0_D2N
MIPI_DSI_TX0_D3P/LVDS_TX0_D3P
MIPI_DSI_TX0_D3N/LVDS_TX0_D3N

FPC-30PIN-0D5
FPC_30PIN_0D5

20220709

LCD0_PWREN_H_GPIO0_C7

TP_INT_L_GPIO0_B5

D27 ESD5341N ESD0402

D26 ESD5341N ESD0402

U7
SON10_2R50X1R00X0R50

BL_EN0_GPIO3_B0	10	NC_10	IO1	1	BL_EN0_GPIO3_B0
LCD0_BL_PWM4	9	NC_9	IO2	2	LCD0_BL_PWM4
	8	GND	GND	3	
LCD0_RST_GPIO3_B5	7	NC_7	IO3	4	LCD0_RST_GPIO3_B5
TP_RST_L_GPIO0_B6	6	NC_6	IO4	5	TP_RST_L_GPIO0_B6

ESD5304D

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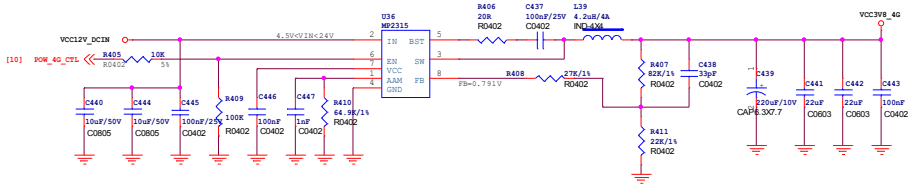
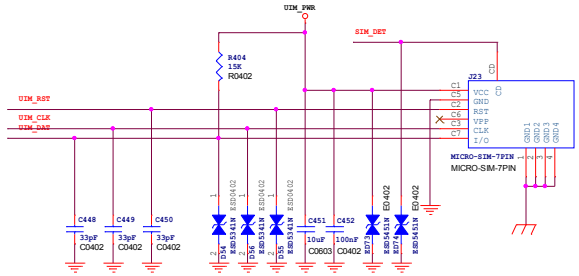
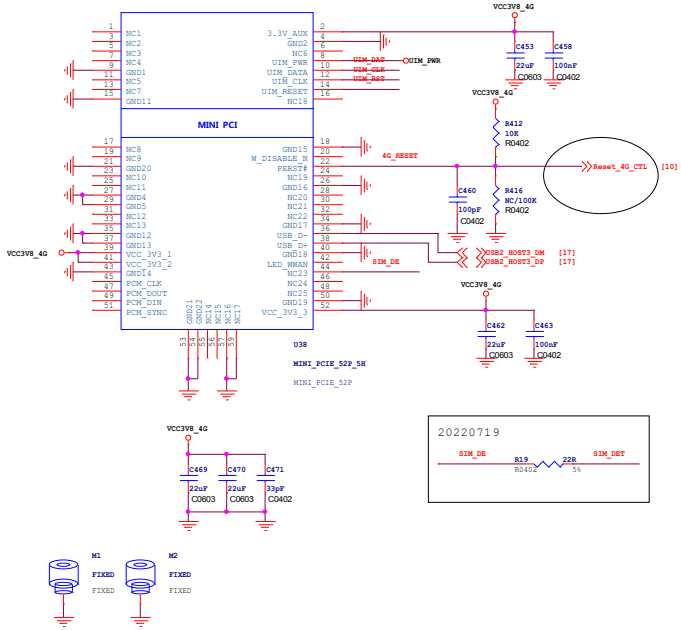
Title: VO-LCM_MIPI-DSI_TX0/LVDS_TX0		
File: ROC-3568-PC		REV: V1.1
Create Date: Tuesday, May 19, 2020	Page Num: 25	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	



4G/5G SIM CARD



MINI PCIE-4G



Title: G-4G-MODULE			
File: MB-JD4-RK3568		REV: V0.1	
Create Date: Thursday, March 31, 2022		Page Num: 26	
Modify Date: Tuesday, August 09, 2022		Page Total: 28	

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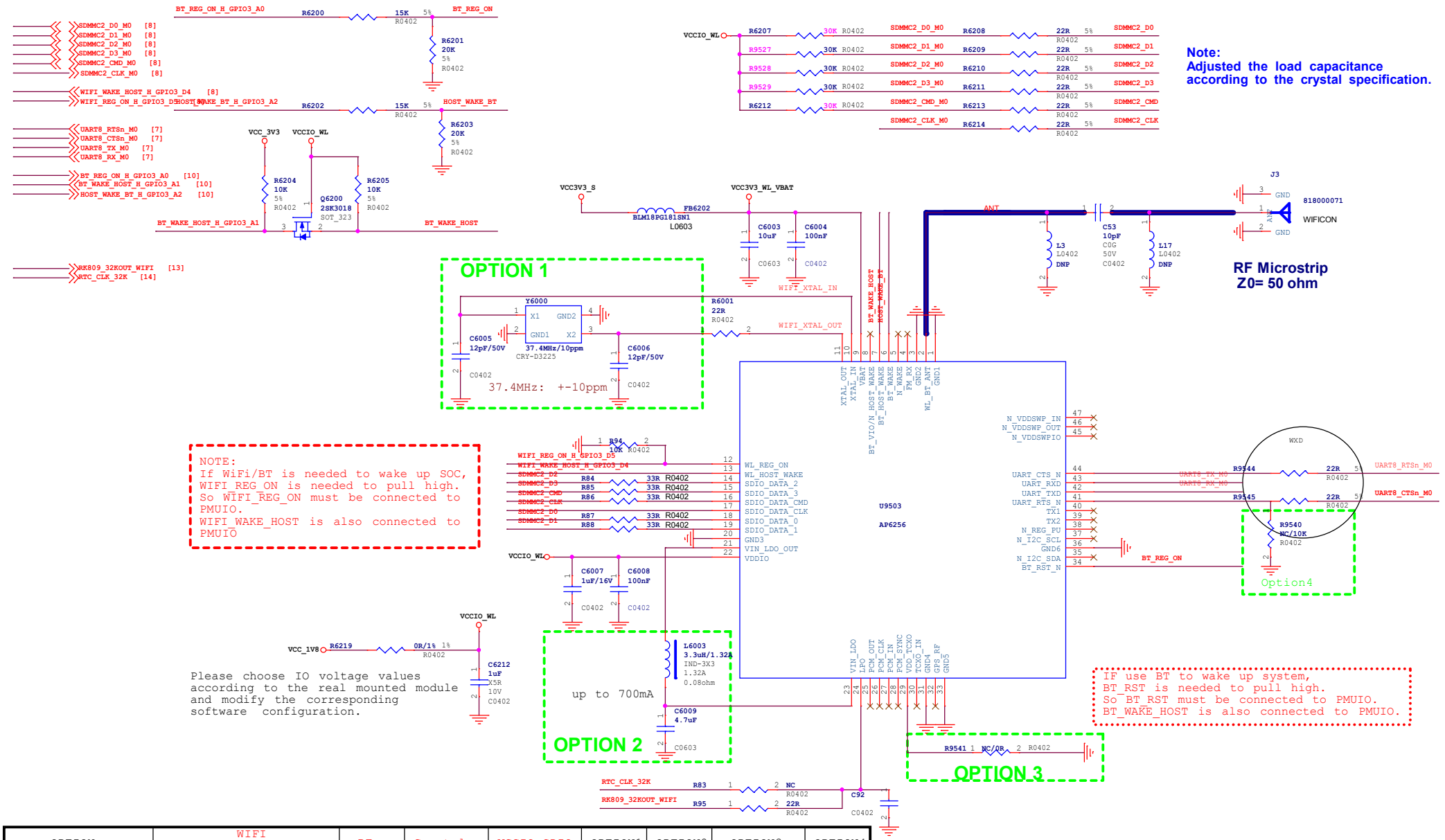

OPTION	WIFI				BT	Crystals	VCCIO_SDIO	OPTION1	OPTION2	OPTION3	OPTION4
	a	b/g/n	ac	5GHz							
AP6236/AP6212	No	Yes	No	No	4.2/4.0	26MHz	1.71-3.63V	Yes	Yes	No	No
AP6256/AP6255	Yes	Yes	Yes	Yes	5.0/4.2	37.4MHz	1.62-3.63V	Yes	Yes	Yes@SDIO2.0 No@SDIO3.0	No
RTL8189FTV Module F89FTSM12-W3	No	Yes	No	No	No	Module Integrated	1.8-3.3V	No	No	No	No
RTL8723DS Module 6223A-SRD	No	Yes	No	No	4.2	Module Integrated	1.62-3.63V	No	No	No	Yes
QCA9377 Module 8223A-SR	Yes	Yes	Yes	Yes	4.2	Module Integrated	1.7-3.45V	No	No	No	No
RTL8821CS Module 6221A-SRC	Yes	Yes	Yes	Yes	4.2	Module Integrated	1.7-3.45V	No	No	No	No

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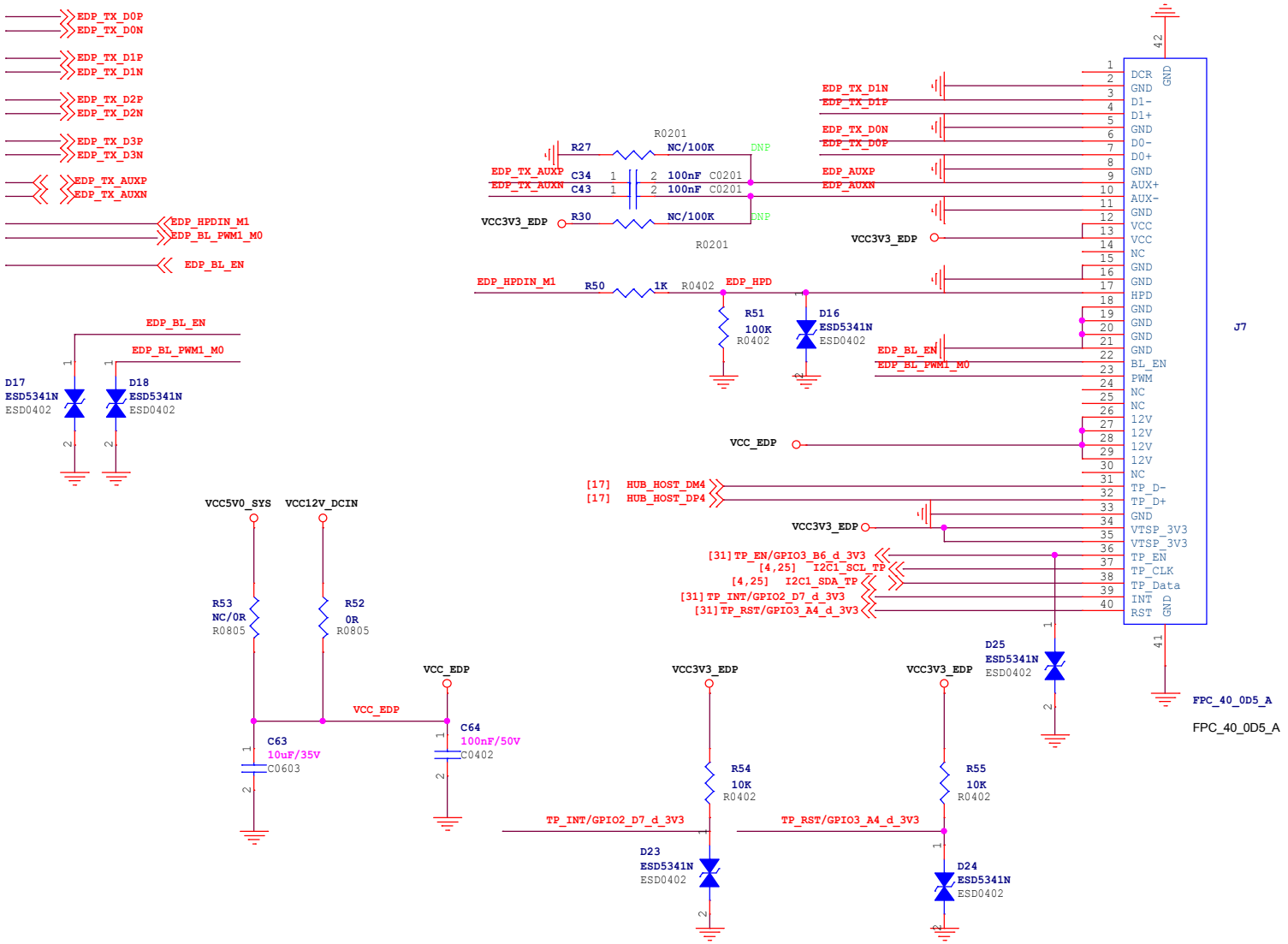
Title:	WIFI/BT-SDIO 2T2R + UART
File:	ROC-3568-PC
REV:	V1.1
Create Date:	Tuesday, June 23, 2020
Page Num:	27
Modify Date:	Tuesday, August 09, 2022
Page Total:	36



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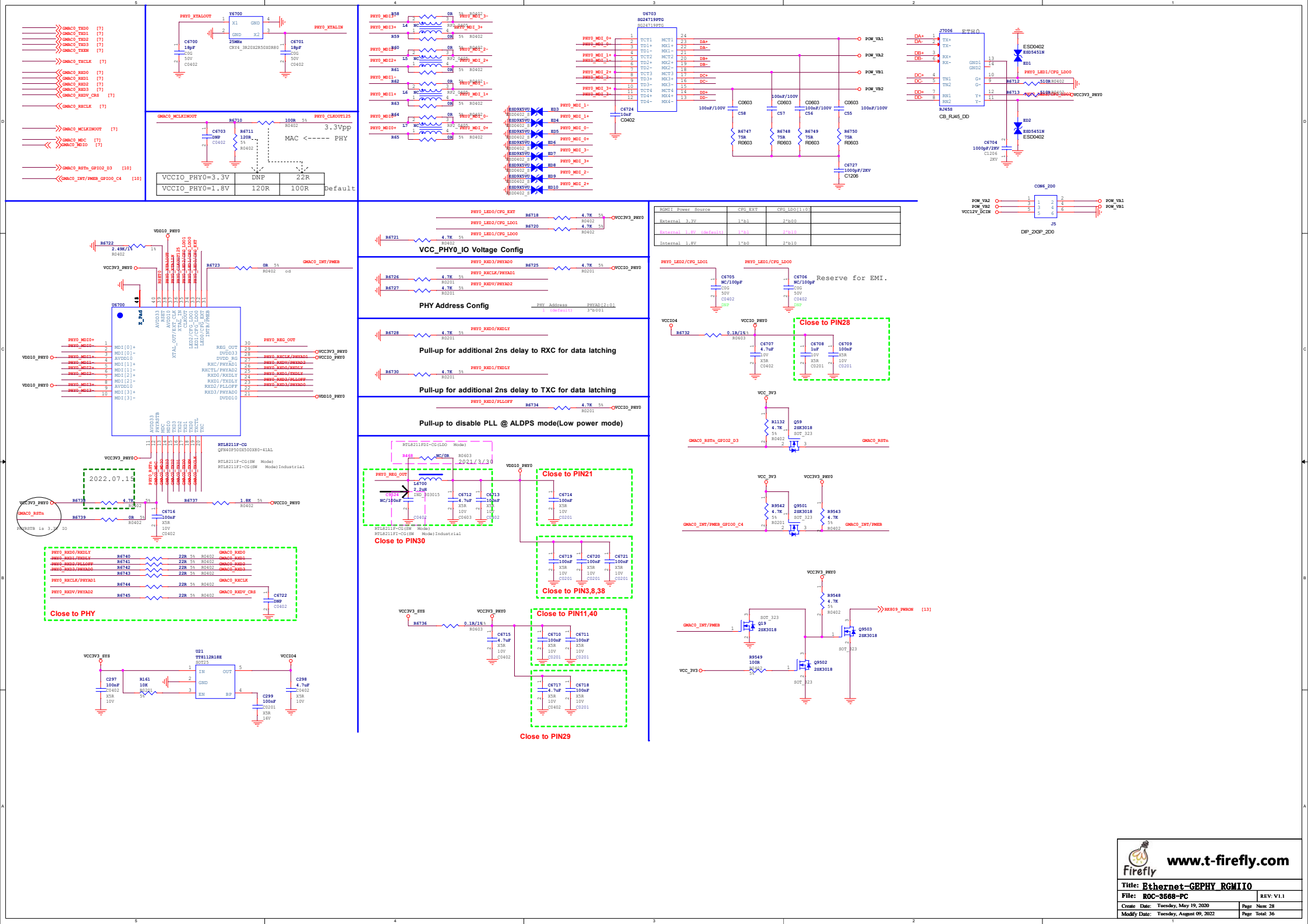
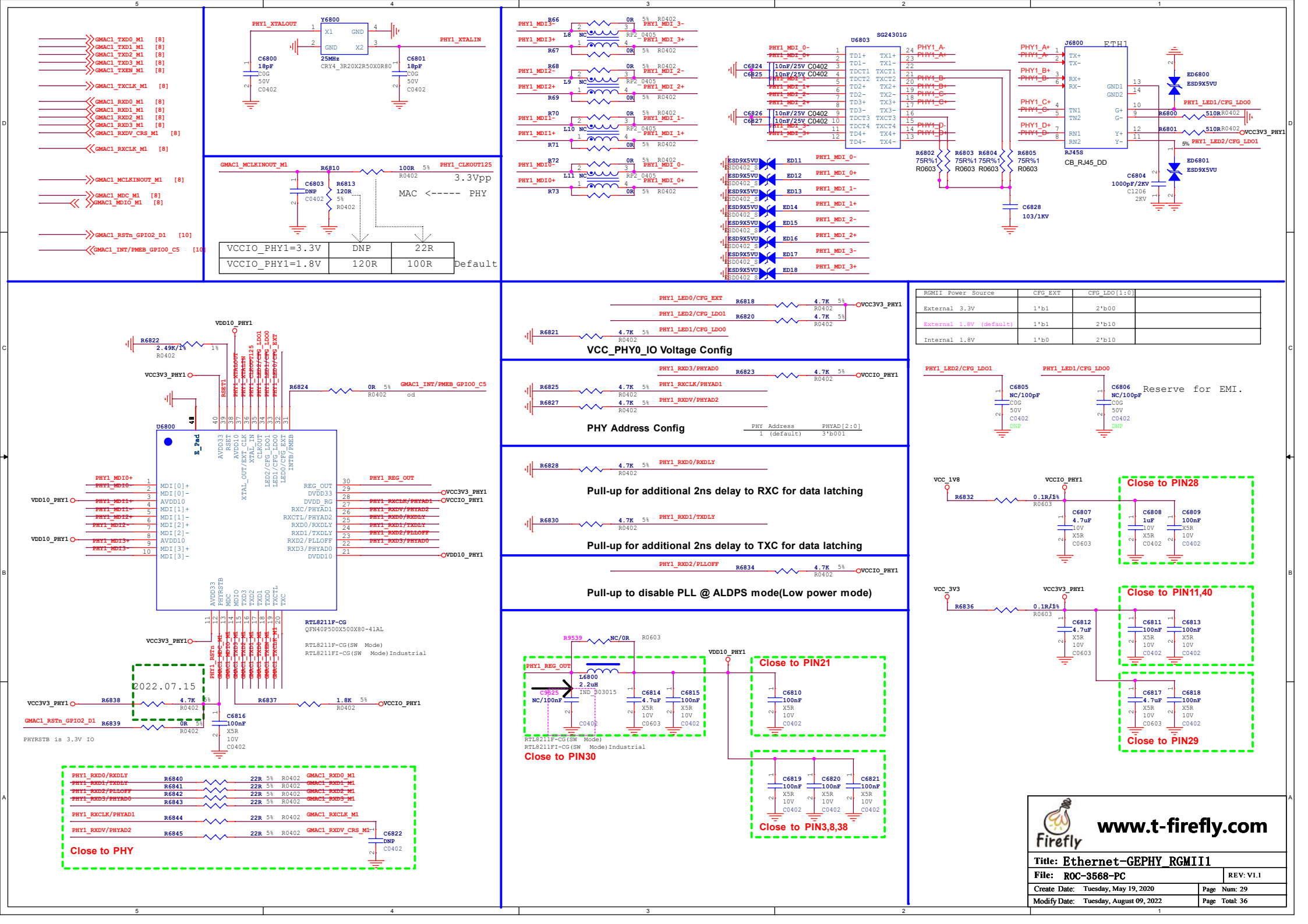
Title: VO-LCM_eDP		
File: ROC-3568-PC		REV: V1.1
Create Date: Friday, July 08, 2022	Page Num: 27	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	



Firefly	www.t-firefly.com		
Title:	Ethernet-GEPHY_RGMII0		
File:	ROC-3568-PC		REV: V1.1
Create Date:	Tuesday, May 19, 2020	Page Num:	28
Modify Date:	Tuesday, August 09, 2022	Page Total:	36


GMAC1_TXD0_M1 [8]
GMAC1_TXD1_M1 [8]
GMAC1_TXD2_M1 [8]
GMAC1_TXD3_M1 [8]
GMAC1_TXEN_M1 [8]
GMAC1_TXCLK_M1 [8]
GMAC1_RXD0_M1 [8]
GMAC1_RXD1_M1 [8]
GMAC1_RXD2_M1 [8]
GMAC1_RXD3_M1 [8]
GMAC1_RXDV_CRS_M1 [8]
GMAC1_RXCLK_M1 [8]
GMAC1_MCLKINOUT_M1 [8]
GMAC1_MDC_M1 [8]
GMAC1_MDIO_M1 [8]
GMAC1_RSTn_GPIO2_D1 [10]
GMAC1_INT/PMEB_GPIO0_C5 [10]
PHY1_XTALOUT
Y6800
25MHz
CRY4_3R20X2R50X0R80
PHY1_XTALIN
C6800 18pF C0G 50V C0402
C6801 18pF C0G 50V C0402
GMAC1_MCLKINOUT_M1
R6810 100R 5% R0402
PHY1_CLKOUT125
3.3Vpp
MAC <----- PHY
C6803 DNP C0402
R6813 120R 5% R0402
VCCIO_PHY1=3.3V | DNP | 22R
VCCIO_PHY1=1.8V | 120R | 100R Default
PHY1_MDI3+ PHY1_MDI3- PHY1_MDI2+ PHY1_MDI2- PHY1_MDI1+ PHY1_MDI1- PHY1_MDI0+ PHY1_MDI0-
R66 R67 R68 R69 R70 R71 R72 R73 0R 5% R0402
L8 L9 L10 L11 NC
RP2_0405
U6803 SG24301G
TD1+ TD1- TDCT1 TD2+ TD2- TD3+ TD3- TDCT3 TD4+ TD4-
TX1+ TX1- TXCT1 TX2+ TX2- TX3+ TX3- TXCT3 TX4+ TX4-
C6824 C6825 C6826 C6827 10nF/25V C0402
R6802 R6803 R6804 75R%1 R0603
R6805 75R%1 R0603
C6828 103/1KV
J6800 ETH1
RJ45S CB_RJ45_DD
TX+ TX- RX+ RX- TN1 TN2 RN1 RN2 GND1 GND2 G+ G- Y+ Y-
ED6800 ESD9X5VU
ED6801 ESD9X5VU
R6800 510R R0402
R6801 510R R0402
C6804 1000pF/2KV C1206 2KV
PHY1_LED1/CFG_LDO0
PHY1_LED2/CFG_LDO1
VCC3V3_PHY1
ESD9X5VU SD0402_S
ED11 ED12 ED13 ED14 ED15 ED16 ED17 ED18
PHY1_MDI_0- PHY1_MDI_0+ PHY1_MDI_1- PHY1_MDI_1+ PHY1_MDI_2- PHY1_MDI_2+ PHY1_MDI_3- PHY1_MDI_3+
VDD10_PHY1
R6822 2.49K/1% R0402
VCC3V3_PHY1
R6824 0R 5% R0402 od
GMAC1_INT/PMEB_GPIO0_C5
U6800
E_Pad 49
AVDD33 RSTB AVDD10 XTAL_OUT/EXT_CLK XTAL_IN CLKOUT LED2/CFG_LDO1 LED1/CFG_LDO0 LED0/CFG_EXT INTB/PMEB
MDI[0]+ MDI[0]- AVDD10 MDI[1]+ MDI[1]- MDI[2]+ MDI[2]- AVDD10 MDI[3]+ MDI[3]-
REG_OUT DVDD33 DVDD_RG RXC/PHYAD1 RXCTL/PHYAD2 RXD0/RXDLY RXD1/TXDLY RXD2/PLLOFF RXD3/PHYAD0 DVDD10
PHY1_REG_OUT
VCC3V3_PHY1 VCCIO_PHY1 VDD10_PHY1
AVDD33 PHYRSTB MDC MDIO RXD3 RXD2 TXD1 TXD0 TXCTL TXC
RTL8211F-CG
QFN40P500X500X80-41AL
RTL8211F-CG(SW Mode)
RTL8211FI-CG(SW Mode)Industrial
2022.07.15
R6838 4.7K 5% R0402
R6837 1.8K 5% R0402
R6839 0R 5% R0402
C6816 100nF X5R 10V C0402
PHYRSTB is 3.3V IO
PHY1_RXD0/RXDLY R6840 22R 5% R0402 GMAC1_RXD0_M1
PHY1_RXD1/TXDLY R6841 22R 5% R0402 GMAC1_RXD1_M1
PHY1_RXD2/PLLOFF R6842 22R 5% R0402 GMAC1_RXD2_M1
PHY1_RXD3/PHYAD0 R6843 22R 5% R0402 GMAC1_RXD3_M1
PHY1_RXCLK/PHYAD1 R6844 22R 5% R0402 GMAC1_RXCLK_M1
PHY1_RXDV/PHYAD2 R6845 22R 5% R0402 GMAC1_RXDV_CRS_M1
C6822 DNP C0402
Close to PHY
PHY1_LED0/CFG_EXT R6818 4.7K 5% R0402 VCC3V3_PHY1
PHY1_LED2/CFG_LDO1 R6820 4.7K 5% R0402
R6821 4.7K 5% R0402 PHY1_LED1/CFG_LDO0
VCC_PHY0_IO Voltage Config
PHY1_RXD3/PHYAD0 R6823 4.7K 5% R0402 VCCIO_PHY1
R6825 4.7K 5% R0402 PHY1_RXCLK/PHYAD1
R6827 4.7K 5% R0402 PHY1_RXDV/PHYAD2
PHY Address Configuration
PHY Address | PHYAD[2:0]
1 (default) | 3'b001
R6828 4.7K 5% R0402 PHY1_RXD0/RXDLY
Pull-up for additional 2ns delay to RXC for data latching
R6830 4.7K 5% R0402 PHY1_RXD1/TXDLY
Pull-up for additional 2ns delay to TXC for data latching
PHY1_RXD2/PLLOFF R6834 4.7K 5% R0402 VCCIO_PHY1
Pull-up to disable PLL @ ALDPS mode(Low power mode)
R9539 NC/0R R0603
VDD10_PHY1
PHY1_REG_OUT
L6800 2.2uH IND_303015
C6825 NC/100nF C0402
C6814 4.7uF X5R 10V C0603
C6815 100nF X5R 10V C0402
RTL8211F-CG(SW Mode)
RTL8211FI-CG(SW Mode)Industrial
Close to PIN30
Close to PIN21
C6810 100nF X5R 10V C0402
C6819 100nF X5R 10V C0402
C6820 100nF X5R 10V C0402
C6821 100nF X5R 10V C0402
Close to PIN3,8,38
RGMII Power Source | CFG_EXT | CFG_LDO[1:0]
External 3.3V | 1'b1 | 2'b00
External 1.8V (default) | 1'b1 | 2'b10
Internal 1.8V | 1'b0 | 2'b10
PHY1_LED2/CFG_LDO1
PHY1_LED1/CFG_LDO0
C6805 NC/100pF C0G 50V C0402 DNP
C6806 NC/100pF C0G 50V C0402 DNP
Reserve for EMI.
VCC_1V8
VCCIO_PHY1
R6832 0.1R/1% R0603
C6807 4.7uF 10V X5R C0603
C6808 1uF 10V X5R C0402
C6809 100nF X5R 10V C0402
Close to PIN28
VCC_3V3
VCC3V3_PHY1
R6836 0.1R/1% R0603
C6812 4.7uF X5R 10V C0603
C6811 100nF X5R 10V C0402
C6813 100nF X5R 10V C0402
Close to PIN11,40
C6817 4.7uF X5R 10V C0603
C6818 100nF X5R 10V C0402
Close to PIN29
Firefly
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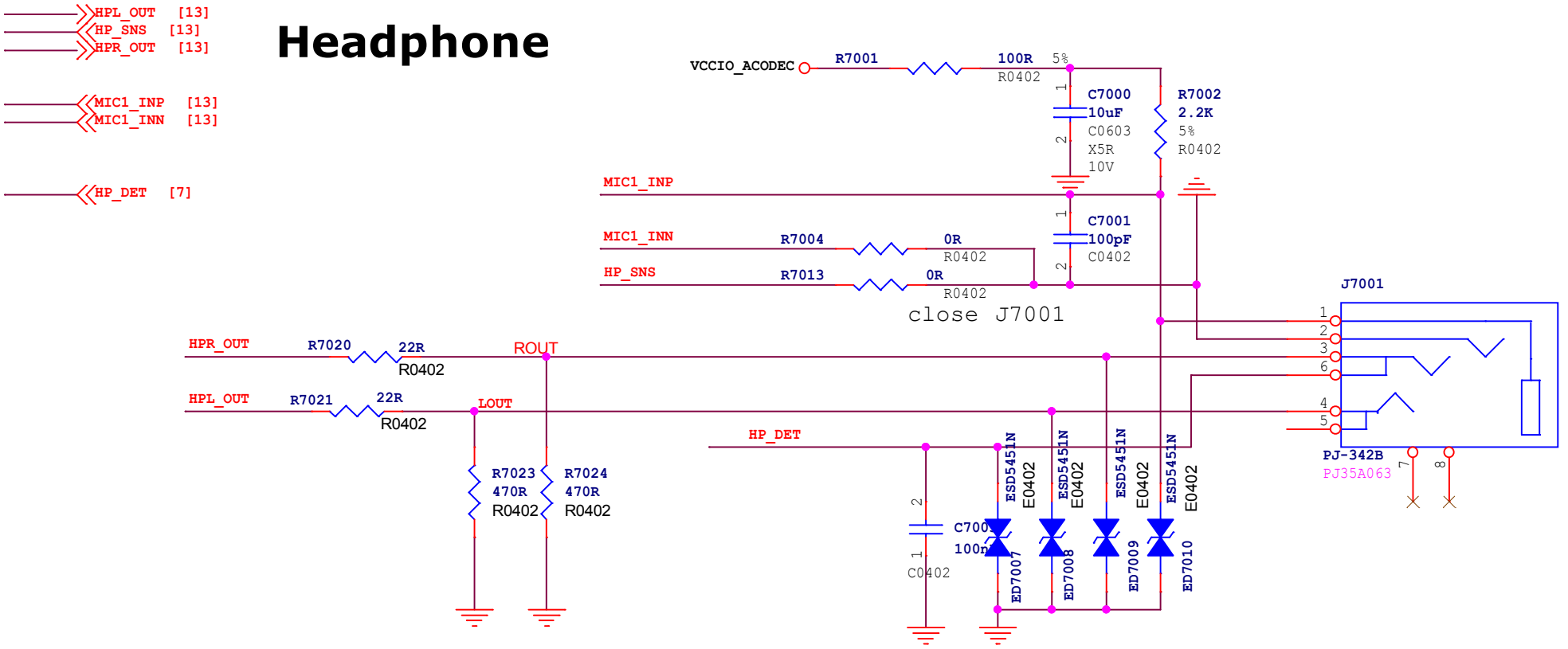
Title: Ethernet-GEPHY_RGMII1
File: ROC-3568-PC
REV: V1.1
Create Date: Tuesday, May 19, 2020
Page Num: 29
Modify Date: Tuesday, August 09, 2022
Page Total: 36

Headphone



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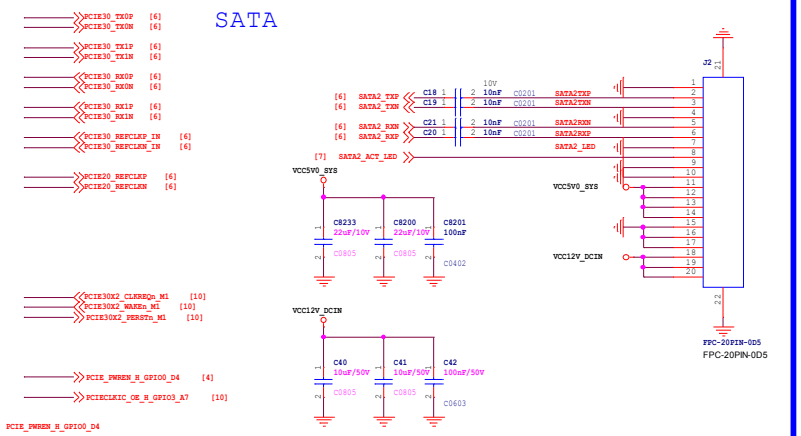
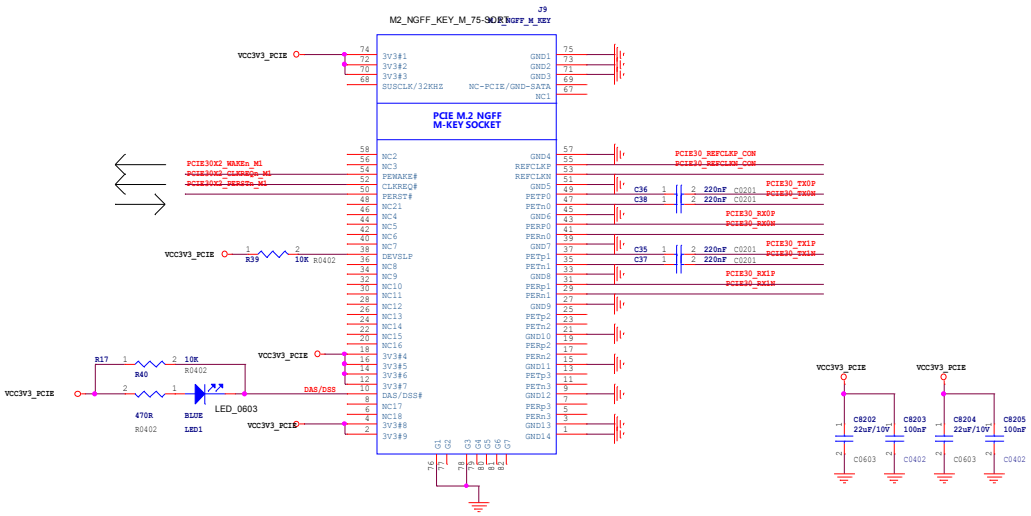
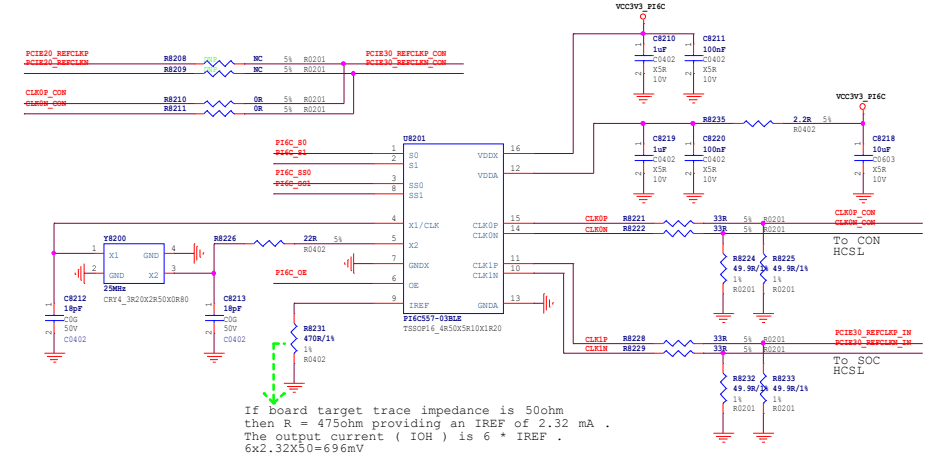
Title: Audio Port		
File: ROC-3568-PC		REV: V1.1
Create Date: Tuesday, May 19, 2020	Page Num: 30	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

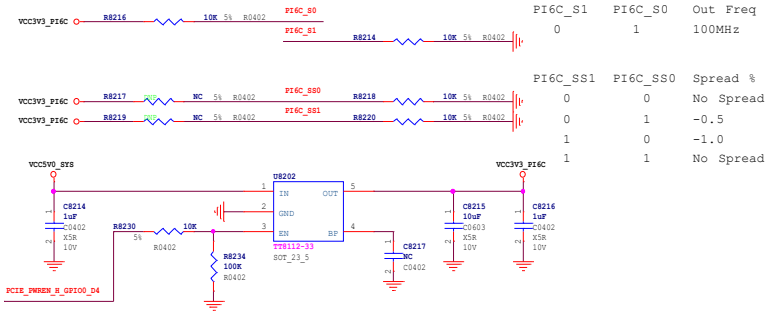
SATA

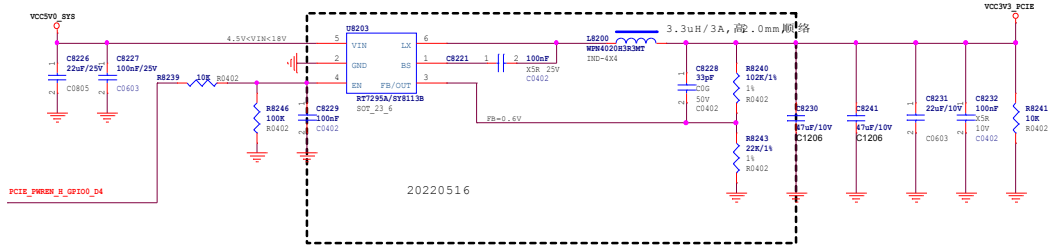


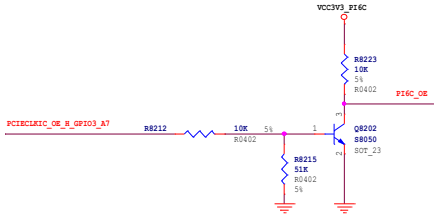
PCIe3.0 x 2Lanes (X 4Slot)











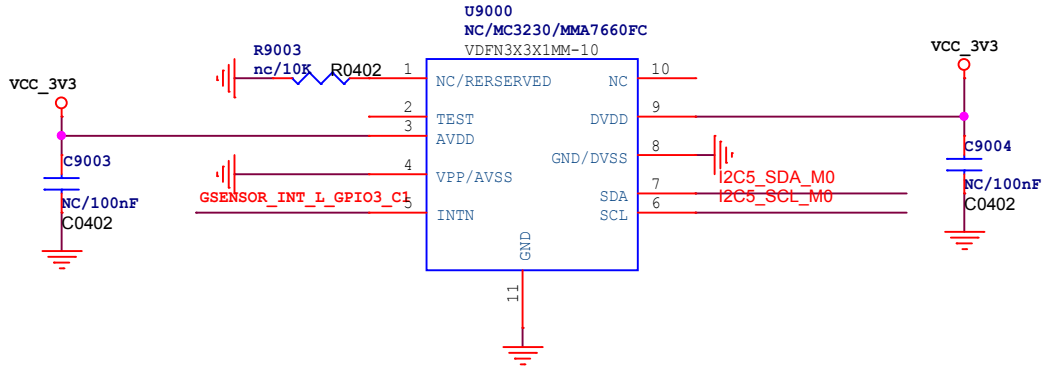
Firefly www.t-firefly.com

Title: PCIE-PCIE3.0 Slot/SATA		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, May 07, 2020	Page Num: 31	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

I2C5_SCL_M0 [10,14,35]
I2C5_SDA_M0 [10,14,35]

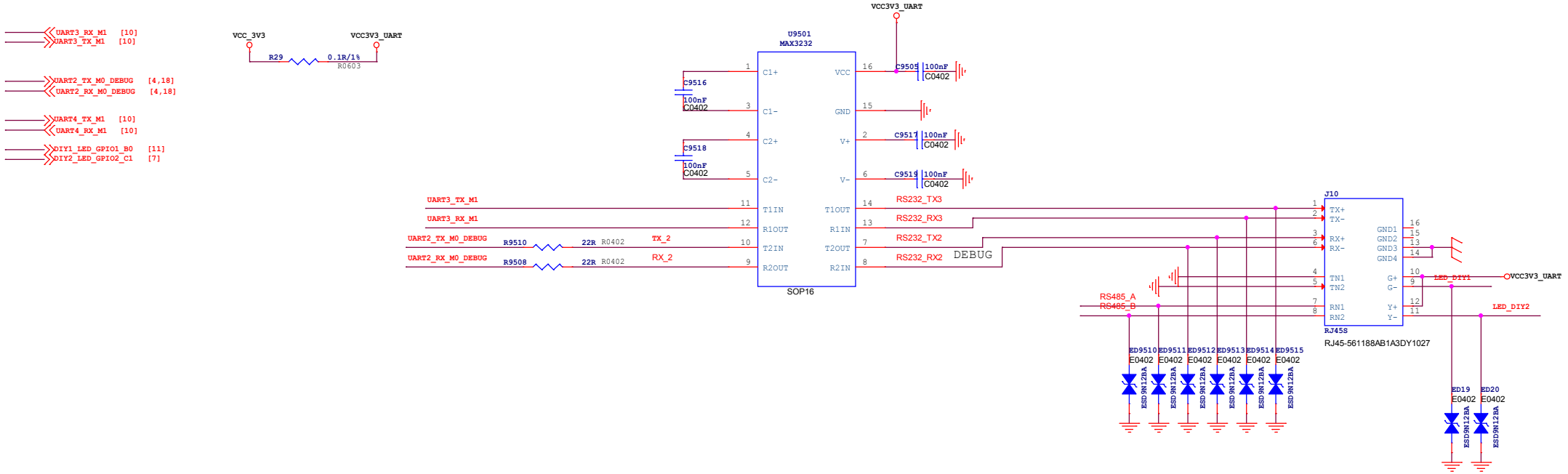
GSENSOR_INT_L_GPIO3_C1 [10]

Gyroscope+G-sensor

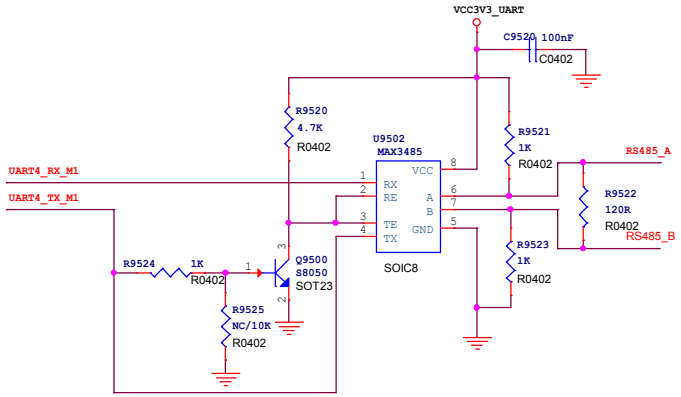


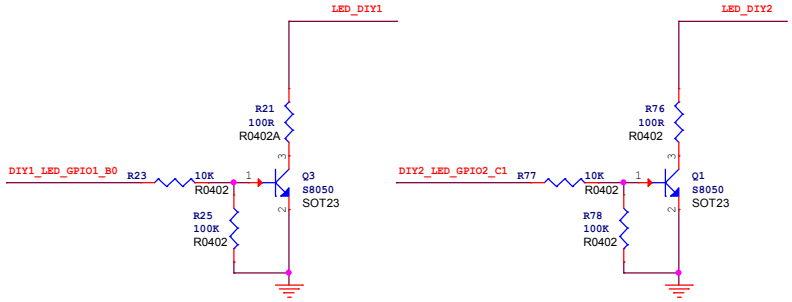
Firefly www.t-firefly.com

Title: Sensor		
File: ROC-3568-PC		REV: V1.1
Create Date: Tuesday, May 19, 2020		Page Num: 32
Modify Date: Tuesday, August 09, 2022		Page Total: 36



RS485





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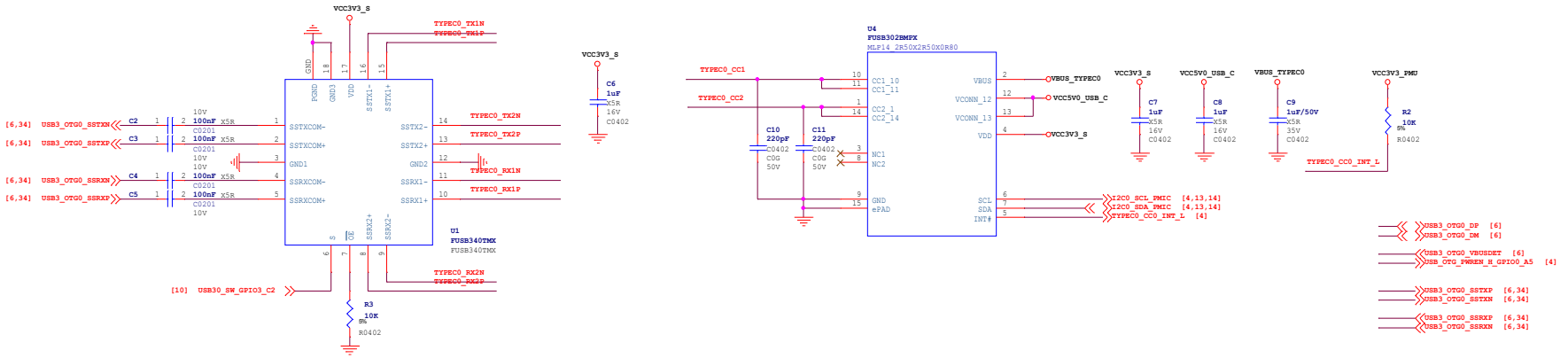
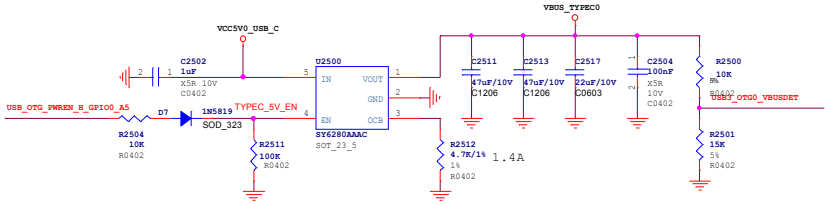
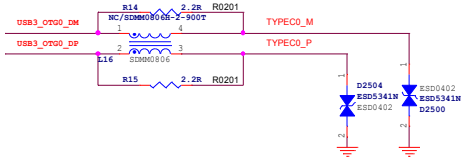
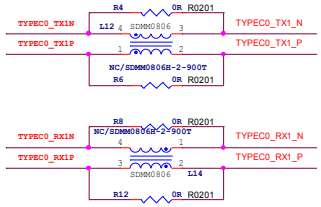
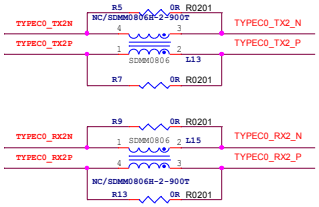
Title:	RS232/RS485	
File:	ROC-3568-PC	REV: V1.1
Create Date:	Friday, July 10, 2020	Page Num: 33
Modify Date:	Tuesday, August 09, 2022	Page Total: 36

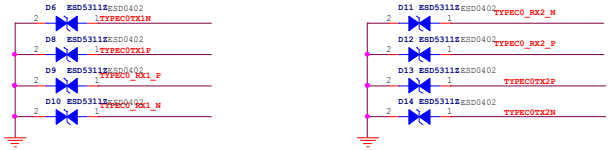


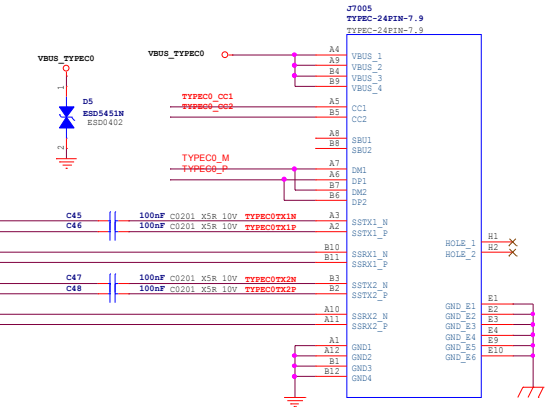










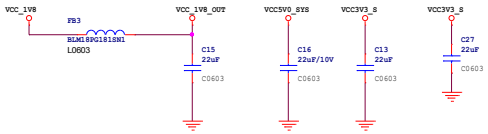


USB3.0 OTG

Cj<=0.4pF

Note:
USB3.0信号的EMC能随便换掉
如需换那么必须选择相同的规格。

Title: TYPE-C		
File: ROC-3568-PC		REV: V1.1
Create Date: Thursday, April 08, 2021	Page Num: 34	
Modify Date: Tuesday, August 09, 2022	Page Total: 36	

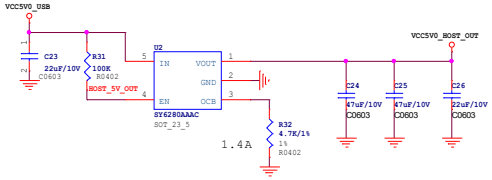


1. GND
3. GND
5. GND
7. 3.3V
9. GND
11. 1.8V
13. 5.0V
15. GND
17. SARADC_VIN4
19. SARADC_VIN5
21. I2C3_SDA_M0/UART3_RX_M0/CAN1_RX_M0/AUDIOPWM_LOUT_P/ACODEC_ADC_DATA/GPIO1_A0_u
23. GND
25. EDP_BL_PWM1_M0/PWM1_M0/GPUAVS/UART0_RX/GPIO0_C0_d
27. GND
29. I2C1_SDA/CAN0_RX_M0/PCIE20_BUTTONRSTn/MCU_JTAG_TCK/GPIO0_B4_u

2. 12V
4. 12V
6. 12V
8. 3.3V
10. GND
12. 1.8V
14. 5.0V
16. GND
18. SARADC_VIN0_KEY/RECOVERY
20. SARADC_VIN6
22. I2C3_SCL_M0/UART3_TX_M0/CAN1_TX_M0/AUDIOPWM_LOUT_N/ACODEC_ADC_CLK/GPIO1_A1_u
24. GND
26. PWM7_IR/SPI0_CS0_M0/PCIE30X2_PERSTn_M0/GPIO0_C6_d
28. GND
30. I2C1_SCL/CAN0_TX_M0/PCIE30X1_BUTTONRSTn/MCU_JTAG_TDO/GPIO0_B3_u

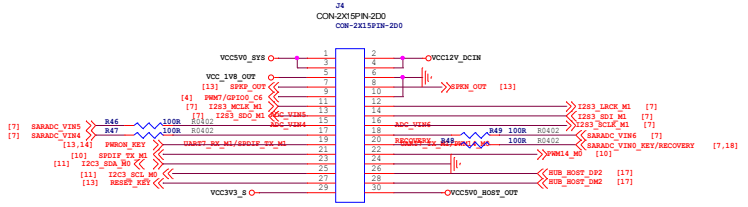
SPK

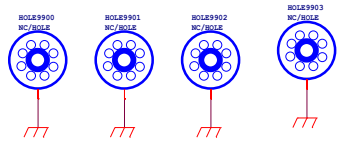
Note:8ohm/1.3W
Speaker Output

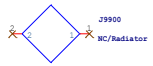


1. GND
3. SPKP_OUT
5. SPKN_OUT
7. GND
9. GND
11. I2S3_MCLK_M1/PWM14_M1/SPI3_CLK_M1/CAN1_RX_M1/PCIE30X2_CLKREQn_M2/GPIO4_C2_d
13. I2S3_LRCK_M1/EDP_HPDIN_M0/SPDIF_TX_M2/SATA2_ACT_LED/PCIE30X2_PERSTn_M2/GPIO4_C4_d
15. I2S3_SDO_M1/PWM12_M1/SPI3_MISO_M1/SATA1_ACT_LED/UART9_TX_M1/GPIO4_C5_d
17. GND
19. HUB_HOST_DP4
21. HUB_HOST_DM4
23. GND
25. HUB_HOST_DP3
27. HUB_HOST_DM3
29. 5V

2. PWRON_KEY
4. RESET_KEY
6. PWM14_M0/VOP_PWM_M1/GMAC1_MDC_M0/UART7_TX_M1/PDM_CLK1_M2/GPIO3_C4_d
8. SPDIF_TX_M1/PWM15_IR_M0/GMAC1_MDIO_M0/UART7_RX_M1/I2S1_LRCK_RX_M2/GPIO3_C5_d
10. 3.3V
12. I2C5_SDA_M0/LCDC_D19/VOP_BT1120_D10/GMAC1_RXER_M0/PDM_SDI1_M2/GPIO3_B4_d
14. I2C5_SCL_M0/LCDC_D18/VOP_BT1120_D9/GMAC1_RXDV_CRS_M0/PDM_SDI0_M2/GPIO3_B3_d
16. I2S3_SCLK_M1/PWM15_IR_M1/SPI3_MOSI_M1/CAN1_TX_M1/PCIE30X2_WAKEn_M2/GPIO4_C3_d
18. I2S3_SDI_M1/PWM13_M1/SPI3_CS0_M1/SATA0_ACT_LED/UART9_RX_M1/GPIO4_C6_d
20. GND
22. 5V
24. GND
26. HUB_HOST_DP2
28. HUB_HOST_DM2
30. 5V







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Title:	Extension Interface	
File:	ROC-3568-PC	REV: V1.1
Create Date:	Thursday, November 05, 2020	Page Num: 35
Modify Date:	Tuesday, August 09, 2022	Page Total: 36