Tablet Schematics For RK3566

RK_TABLET_RK3566_LP4D200P132SD6_V1.0

Main Functions Introduction

1) PMIC: RK817-5+Charger+DiscretePower
2) RAM: LPDDR4 1x32Bit(Default:2GB)
3) ROM: eMMC5.1(Default:16GB),Option Nand Flash
4) Support: Micro SD Card3.0
5) Support: 1 x USB2.0 OTG
6) Support: 4Lanes MIPI CSI Camera(Max 8M) or 2Lane+2Lane MIPI CSI Camera
7) Support: HDMI2.0 TX
8) Support: 4Lanes MIPI DS Touch Connector
9) Support: a/b/g/n/ac 2X2 WIFI
10) Support: Headphone output and Speaker out(1.3W@8ohm)
11) Support: Gyroscope-sensor G-sensor M-sensor PS-sensor
12) Support: Array Key(VOL+,VOL)

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Generate Bill of Materials

Header:

Item\tPart\tDescription\tPCB Footprint\tReference\tQuantity\tOption

Combined property string:

{Item}\t{Value}\t{Description}\t{PCB Footprint}\t{Reference}\t{Quantity}\t{Option}

Description

Note

Option

Notes

NOTE 1:
Component parameter description
1. DNP stands for component not mounted temporarily
2. If Value or option is DNP, which means the area is reserved without being mounted

NOTE 2:
Please use our recommended components to avoid too many changes.
For more informations about the second source,please refer to our AVL.

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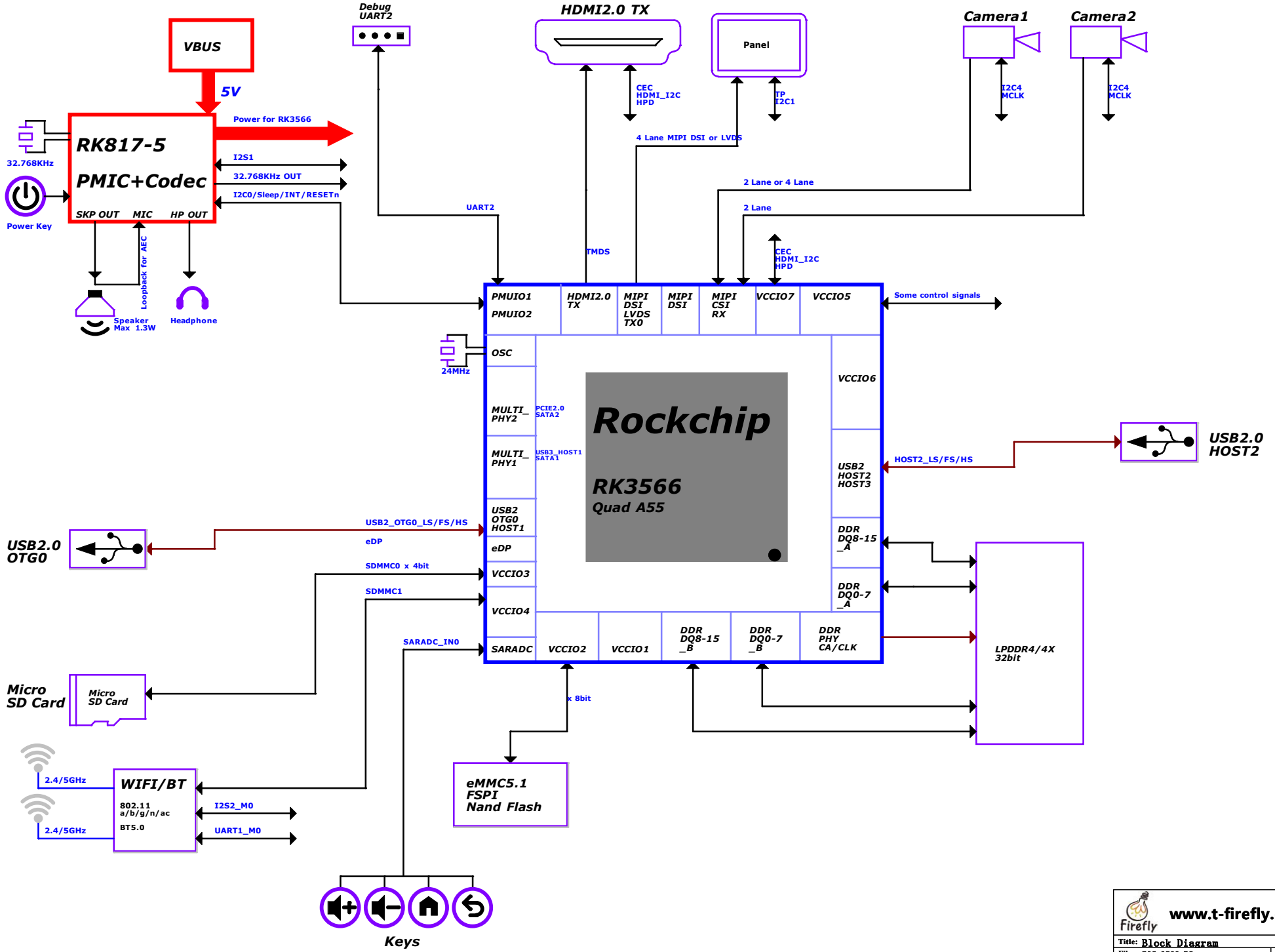
Revision History

Version	Date	By	Change Dsecription	Approved
V0.1	2020-09-17	Mark	1: Revision preliminary version	
V0.2	2020-11-11	Mark	1: U2100 PIN45 delete connect from VCC_SYS	

RK3566 Ref Block Diagram



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Title:	Block Diagram
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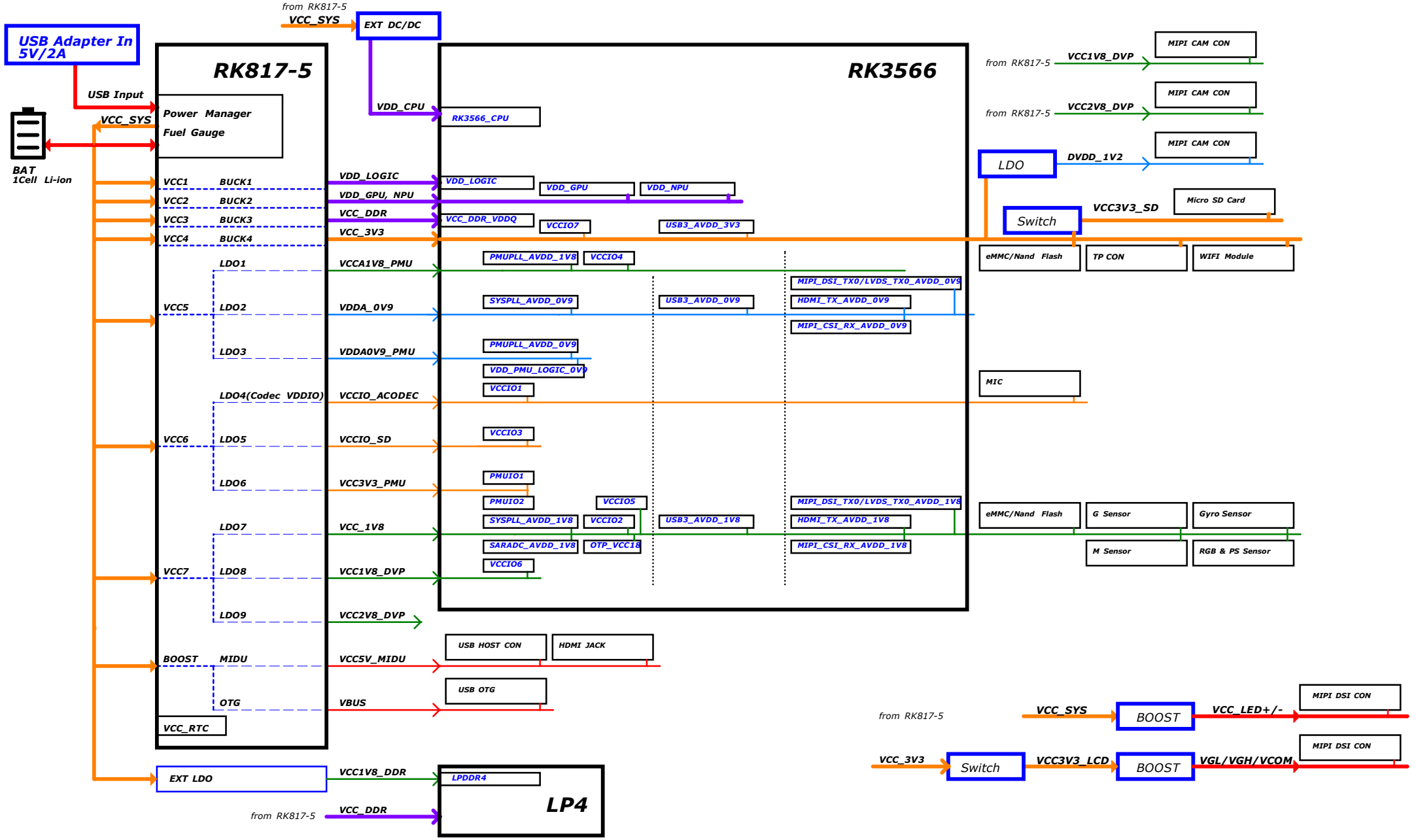
Power Diagram



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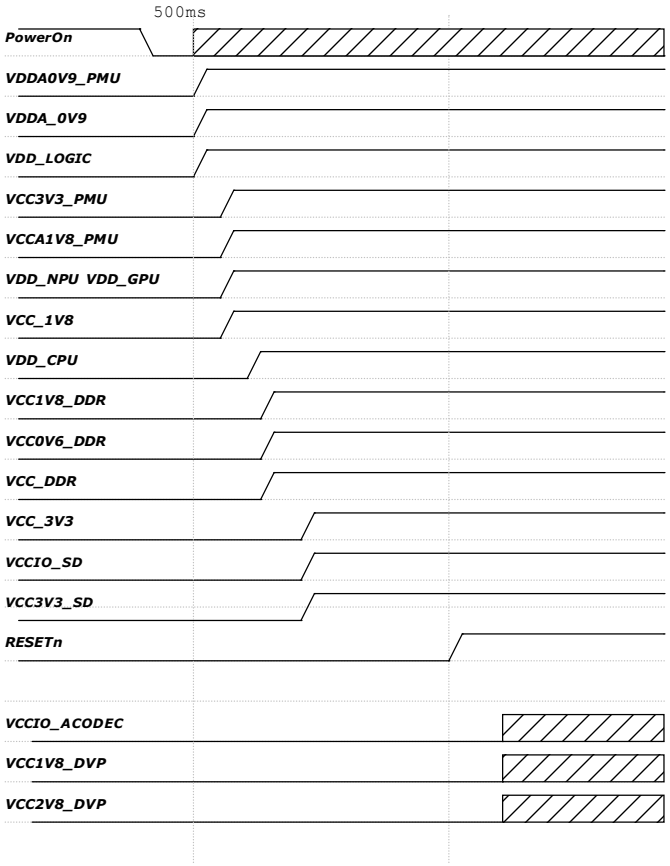
Power Sequence &Power Path assignment



Power Source	PMIC Channel	Supply Limit	Power Supply Name	Time Slot	Default Voltage	Work Status	Sleep Status
VCC_SYS	RK817-5_BUCK1	2.5A	VDD_LOGIC	Slot:1	0.9V	ON	ON
VCC_SYS	RK817-5_BUCK2	2.5A	VDD_NPU,VDD_GPU	Slot:2	0.9V	ON	OFF
VCC_SYS	RK817-5_BUCK3	1.5A	VCC_DDR	Slot:3	ADJ FB=0.8V	ON	ON
VCC_SYS	RK817-5_BUCK4	1.5A	VCC_3V3	Slot:4	3.3V	ON	OFF
VCC_SYS	RK817-5_LDO1	0.4A	VCCA1V8_PMU	Slot:2	1.8V	ON	ON
	RK817-5_LDO2	0.4A	VDDA_0V9	Slot:1	0.9V	ON	OFF
	RK817-5_LDO3	0.1A	VDDA0V9_PMU	Slot:1	0.9V	ON	ON
VCC_SYS	RK817-5_LDO4	0.4A	VCCIO_ACODEC	N/A	1.8V	ON	OFF
	RK817-5_LDO5	0.4A	VCCIO_SD	Slot:4	3.3V	ON	OFF
	RK817-5_LDO6	0.4A	VCC3V3_PMU	Slot:2	3.3V	ON	ON
VCC_SYS	RK817-5_LDO7	0.4A	VCC_1V8	Slot:2	1.8V	ON	OFF
	RK817-5_LDO8	0.4A	VCC1V8_DVP	N/A	1.8V	ON	OFF
	RK817-5_LDO9	0.4A	VCC2V8_DVP	N/A	2.8V	ON	OFF
VCC_BAT	RK817-5_RESETn			Slot:4+5			
VCC_BAT	RK817-5_BOOST RK817-5_OTG	1.5A	VCC5V_MIDU VBUS	N/A	5.0V	ON	OFF
VCC_3V3	Switch		VCC3V3_SD	Slot:4	3.3V	ON	OFF
VCC_SYS	EXT BUCK	6.0A	VDD_CPU	Slot:2A	1.025V	ON	OFF

IO Power Domain Map

Refer to the actual design!

IO Domain	Pin Num	Support IO Voltage		Assignment IO Domain Voltage			Notes
		3.3V	1.8V	Supply Power Net Name	Power Source	Voltage	
PMUIO1	1P16	YES	NO	VCC3V3_PMU	VCC3V3_PMU	3.3V	
PMUIO2	1N15	YES	YES	VCC3V3_PMU	VCC3V3_PMU	3.3V	
VCCIO1	1D13	YES	YES	VCCIO_ACODEC	VCCIO_ACODEC	3.3V	
VCCIO2	1C13	YES	YES	VCCIO_FLASH	VCC_1V8	1.8V	FLASH_VOL_SEL = 1 --> VCCIO_FLASH = 1.8V
VCCIO3	1F17	YES	YES	VCCIO_SD	VCCIO_SD	3.3V	
VCCIO4	1E16	YES	YES	VCCIO4	VCCA1V8_PMU	1.8V	
VCCIO5	1N5 1N6	YES	YES	VCCIO5	VCC_1V8	1.8V	
VCCIO6	1L4 1L5	YES	YES	VCCIO6	VCC1V8_DVP	1.8V	
VCCIO7	1N8	YES	YES	VCCIO7	VCC_3V3	3.3V	

Title: Power Sequence/IO Domain Map
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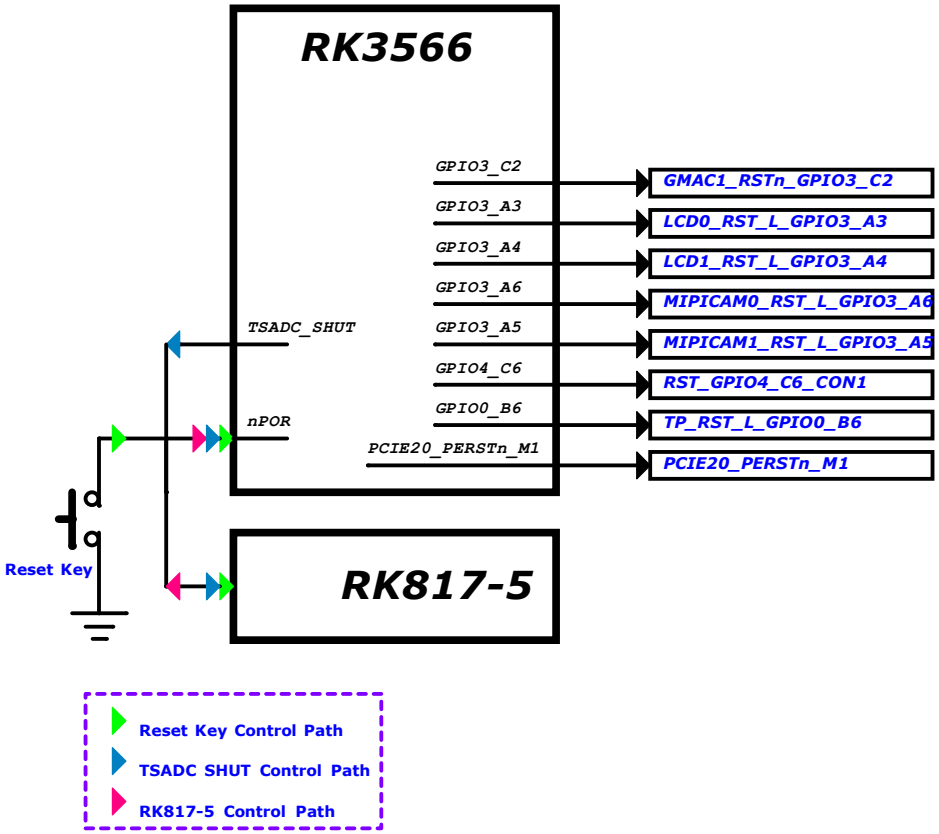
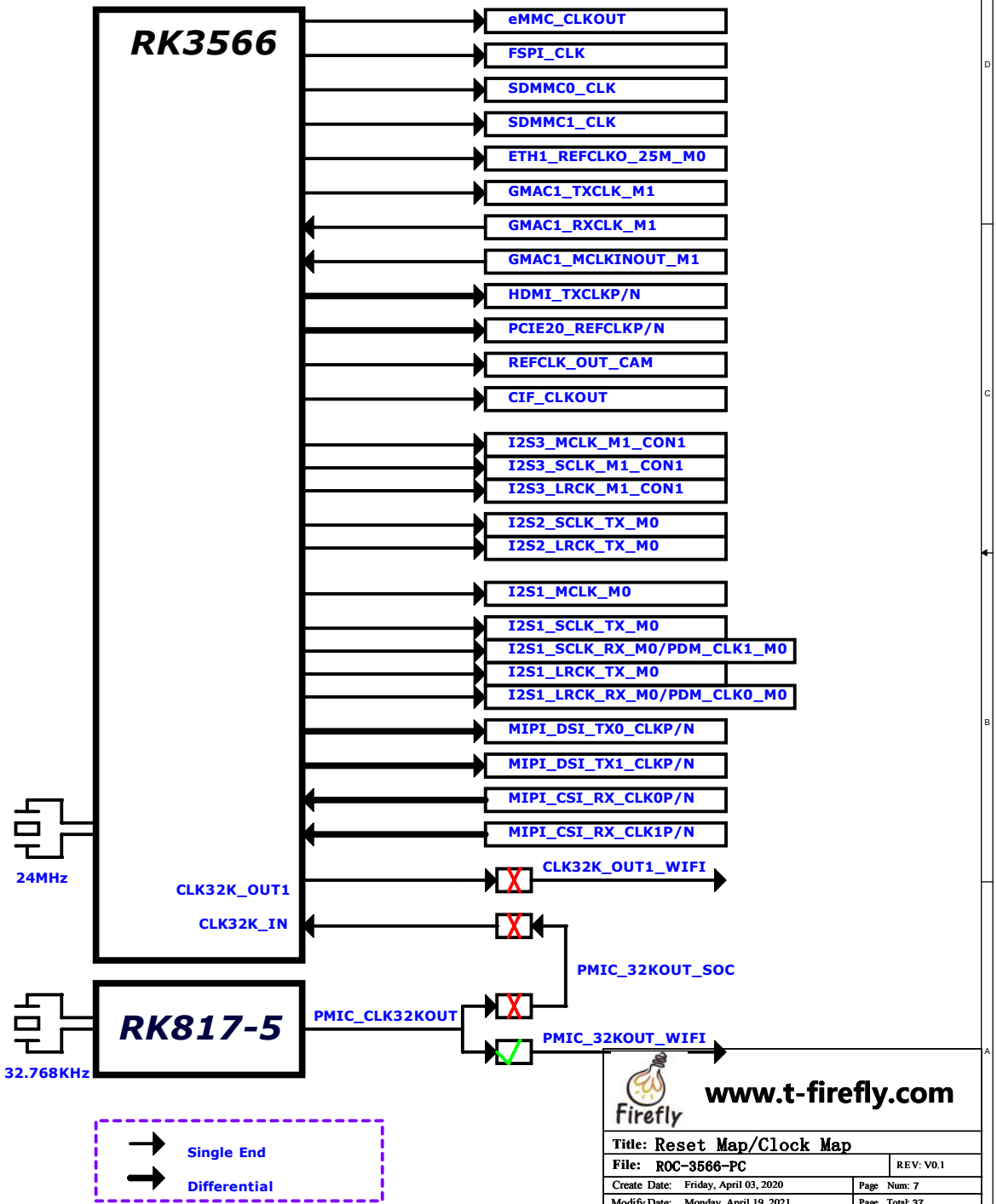
RESET Signal MAP



Clock Map



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Title: Reset Map/Clock Map	
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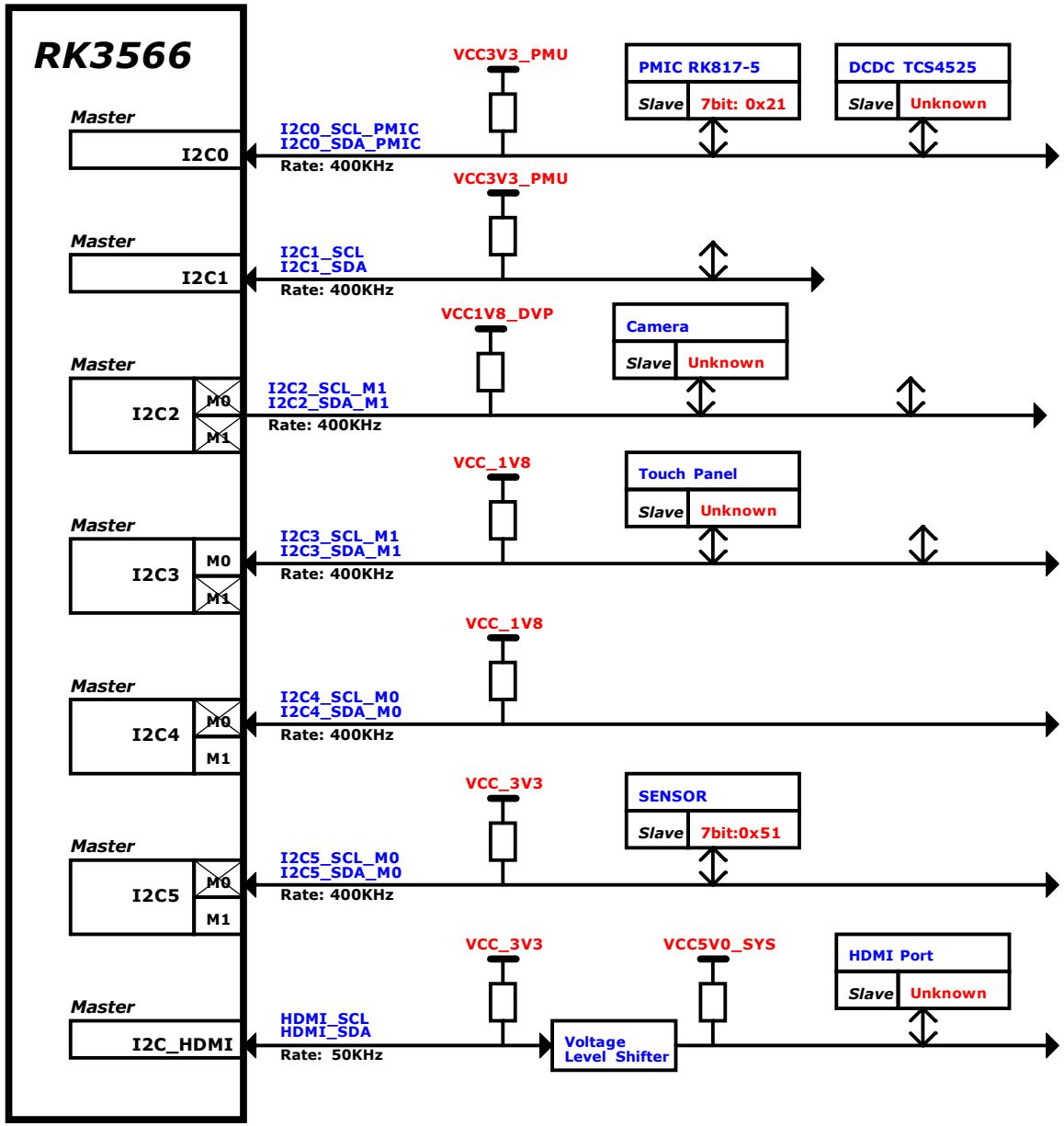
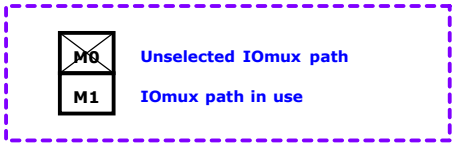
I2C MAP





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Title: I2C Bus Map		
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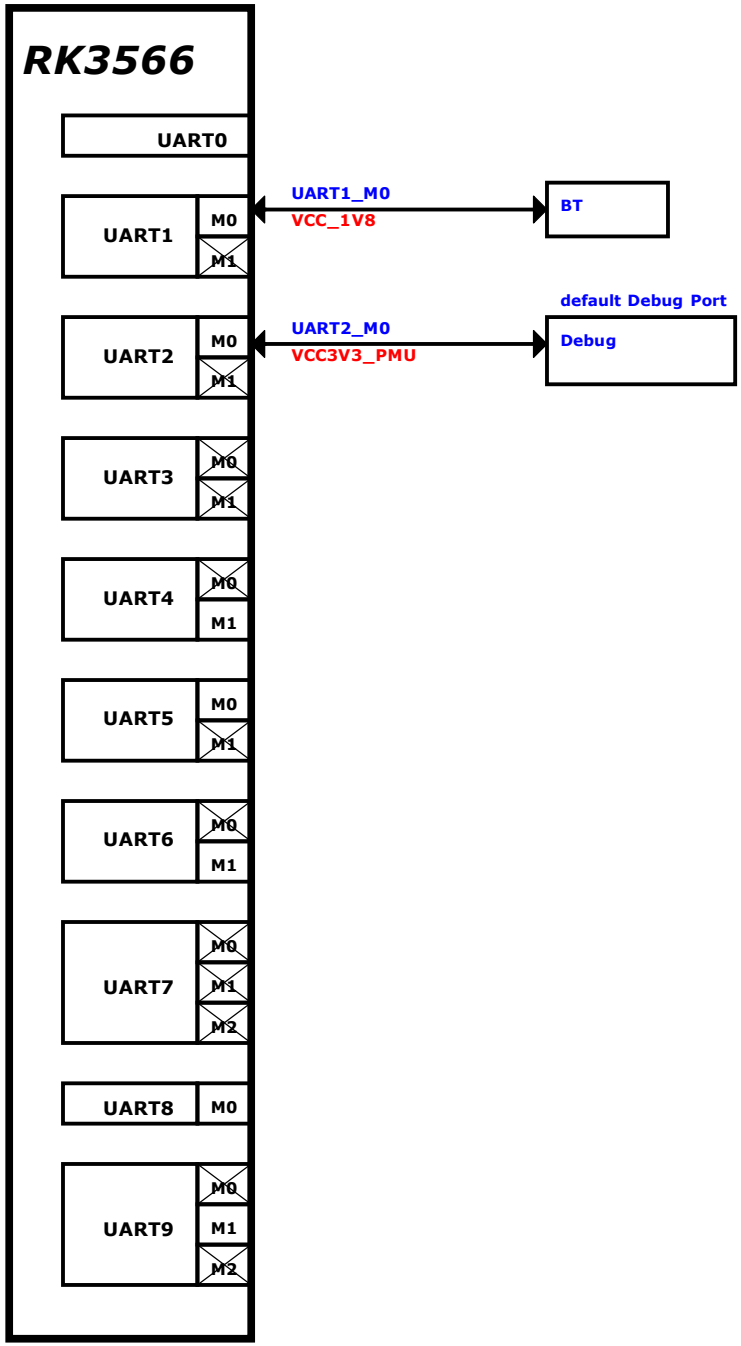
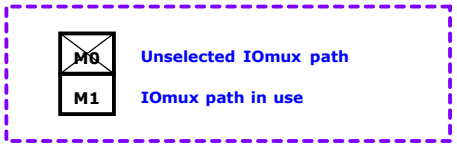
UART MAP





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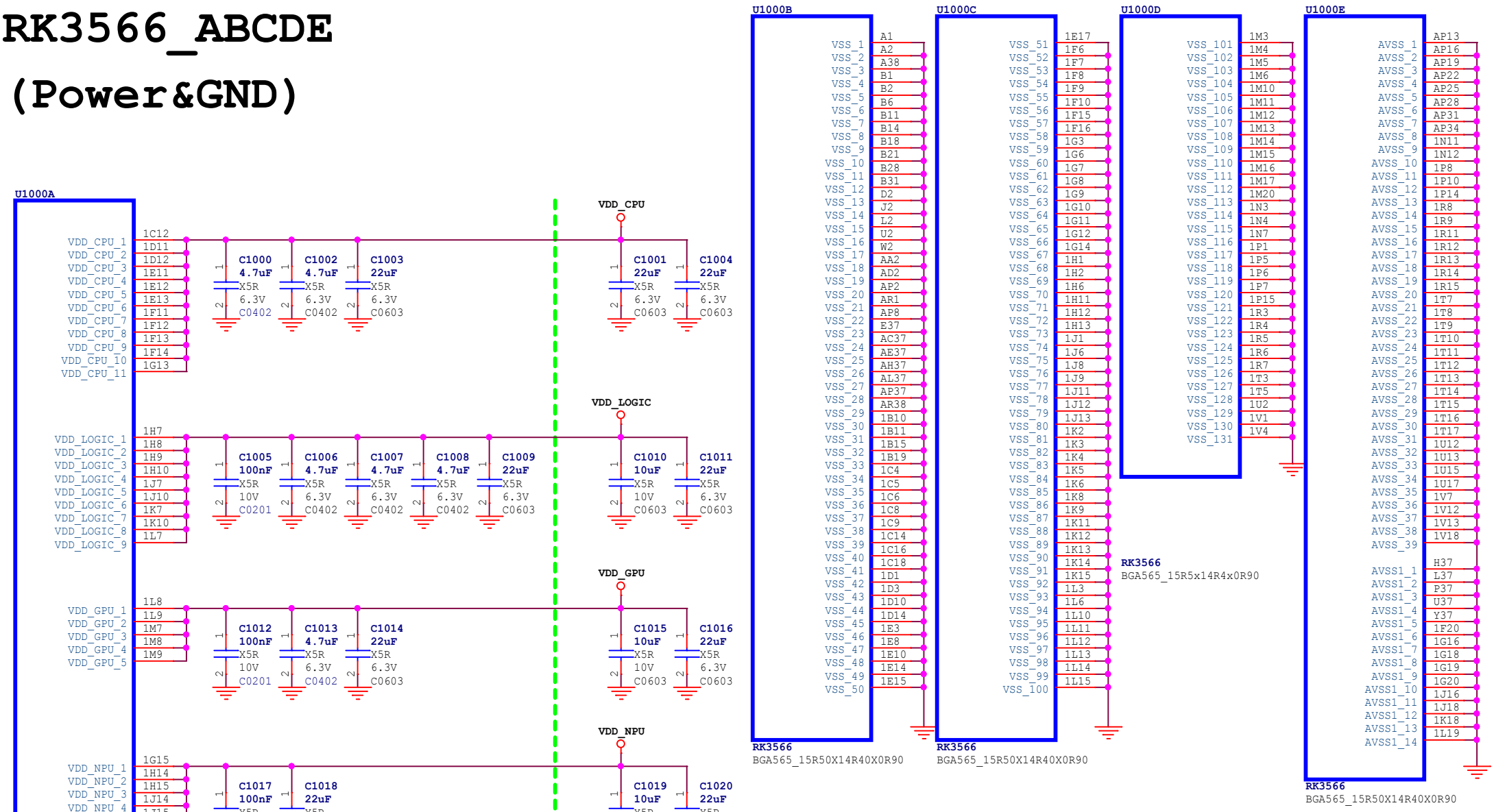
RK3566_ABCDE

(Power&GND)



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Title: RK3566_Power/GND		
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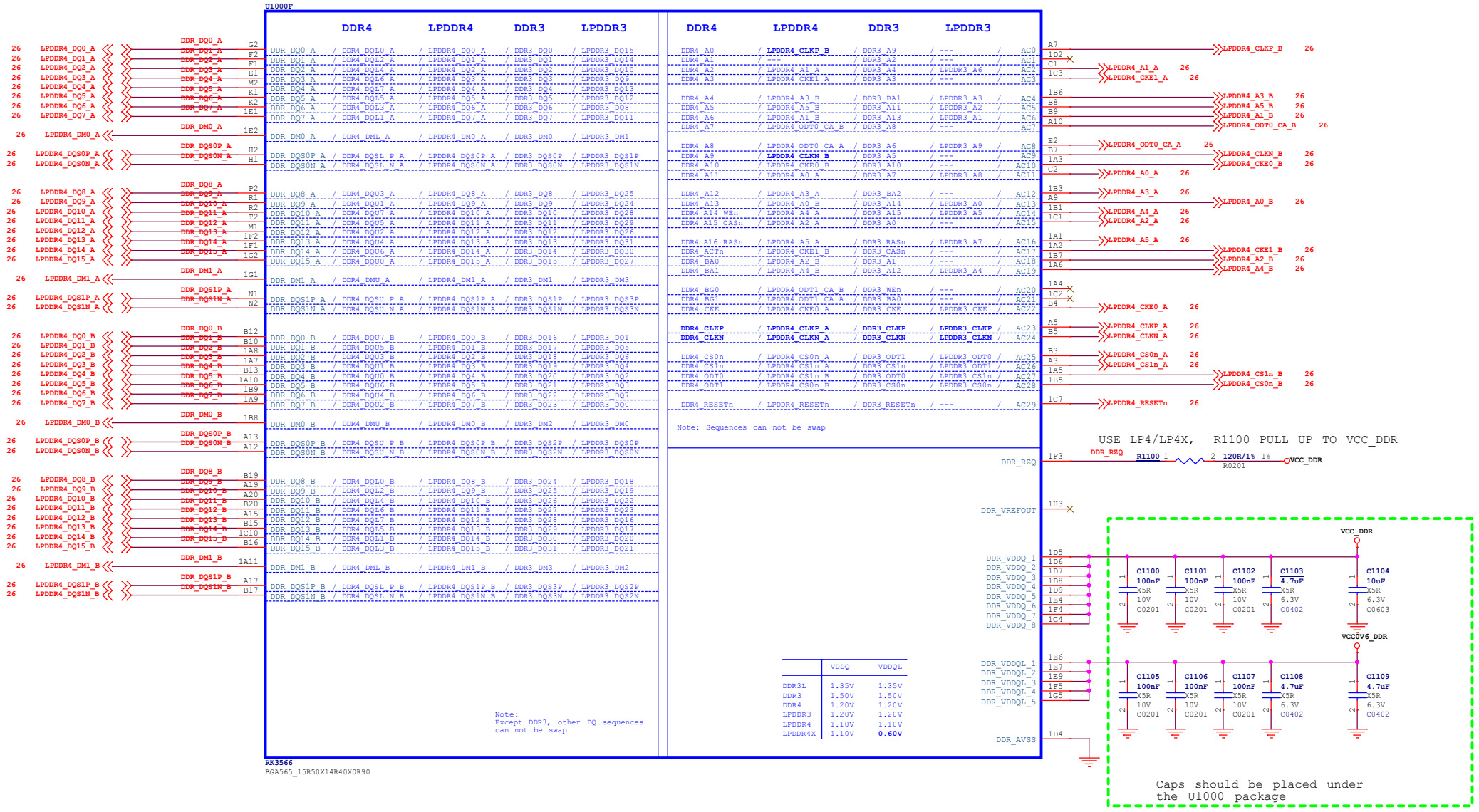
RK3566_F (DDR PHY)



	VDDQ	VDDQL
DDR3L	1.35V	1.35V
DDR3	1.50V	1.50V
DDR4	1.20V	1.20V
LPDDR3	1.20V	1.20V
LPDDR4	1.10V	1.10V
LPDDR4X	1.10V	**0.60V**

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Title:	RK3566_DDR PHY
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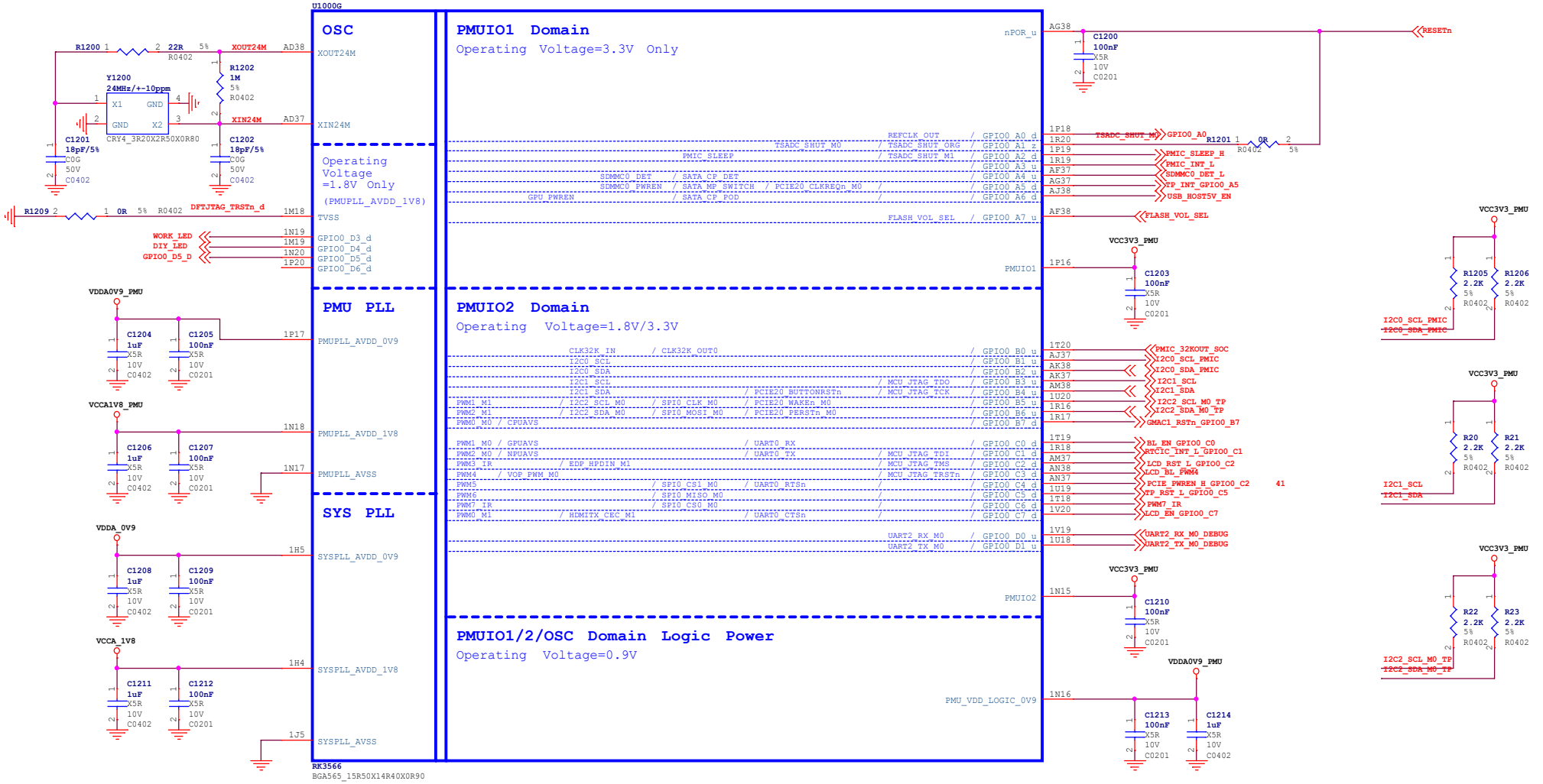
RK3566_G(OSC/PLL/PMUIO1/2)



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

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Title: RK3566_OSC/PLL/PMUIO		
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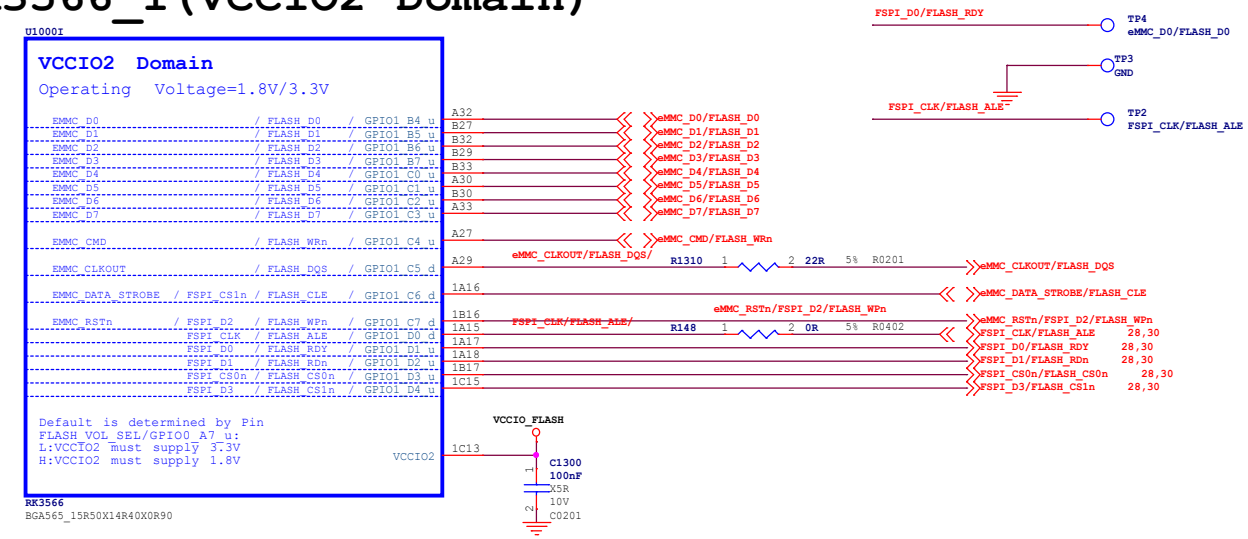
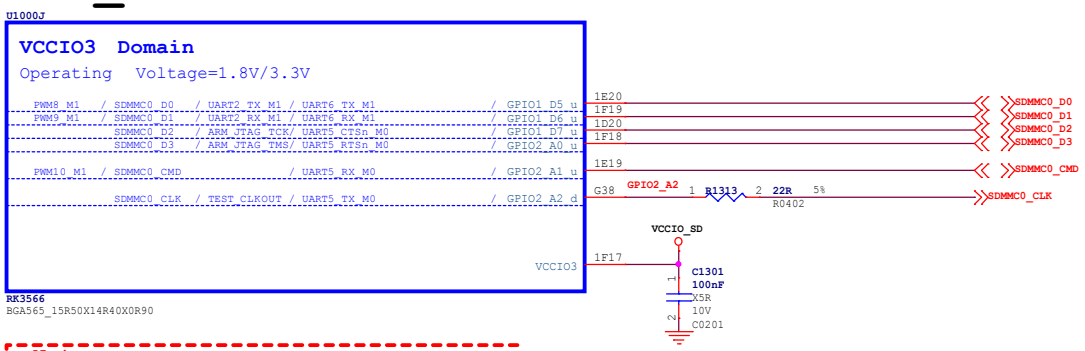
RK3566_I(VCCIO2 Domain)



RK3566_J(VCCIO3 Domain)



Note:

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

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Title: RK3566_Flash/SD Controller		
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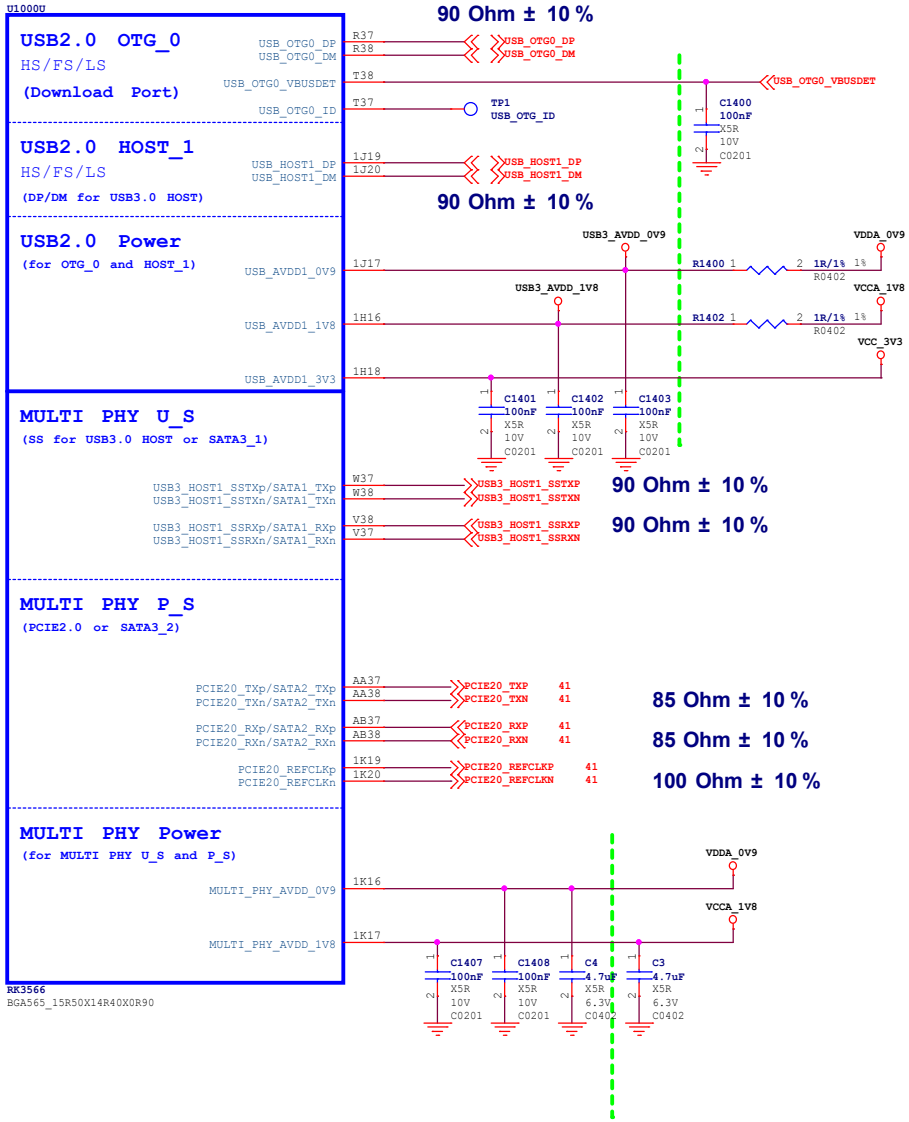
RK3566_U(USB3.0/SATA/QSGMII/PCIe2.0 x1)



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

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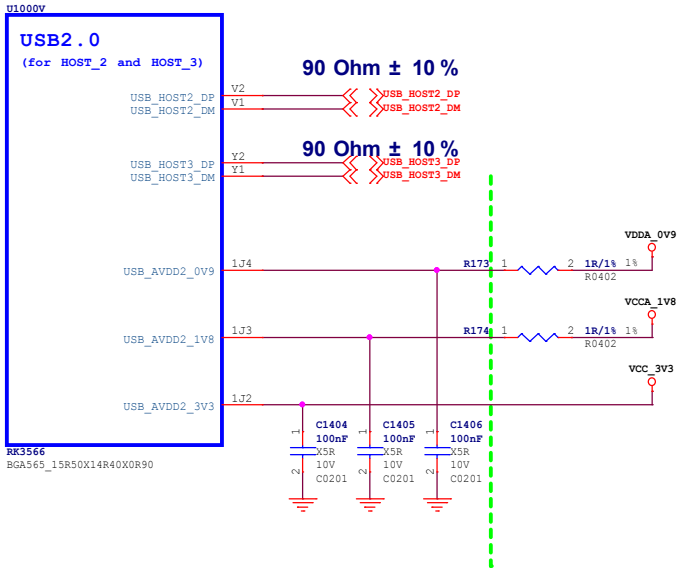
RK3566_V(USB2.0 HOST)



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Title: RK3566_USB/PCIe/SATA PHY		
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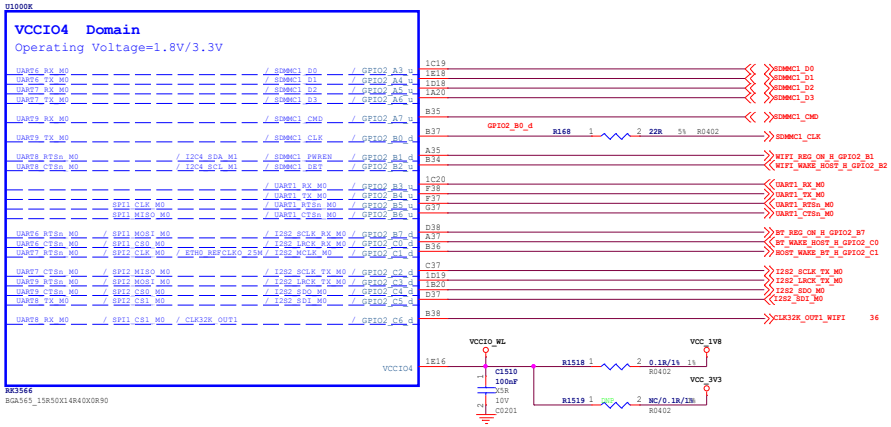
RK3566_K(VCCIO4 Domain)



For WIFI

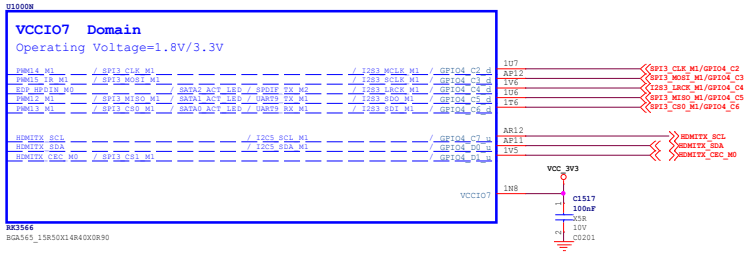
WIFI_WAKE_HOST
WIFI_REG_ON

For BT

BT_REG_ON
BT_WAKE_HOST
HOST_WAKE_BT

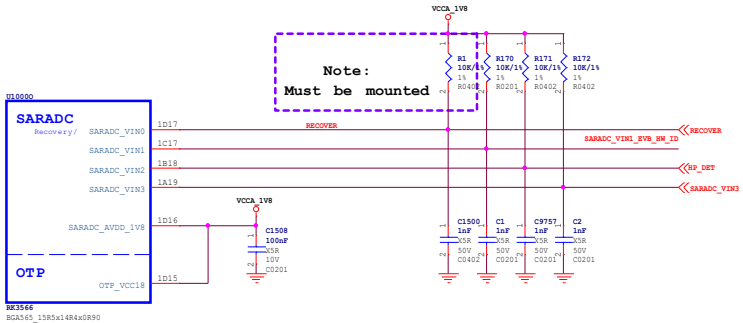
For BT

RK3566_N(VCCIO7 Domain)



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

RK3566_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				

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Title:	RK3566_SARADC/GPIO	
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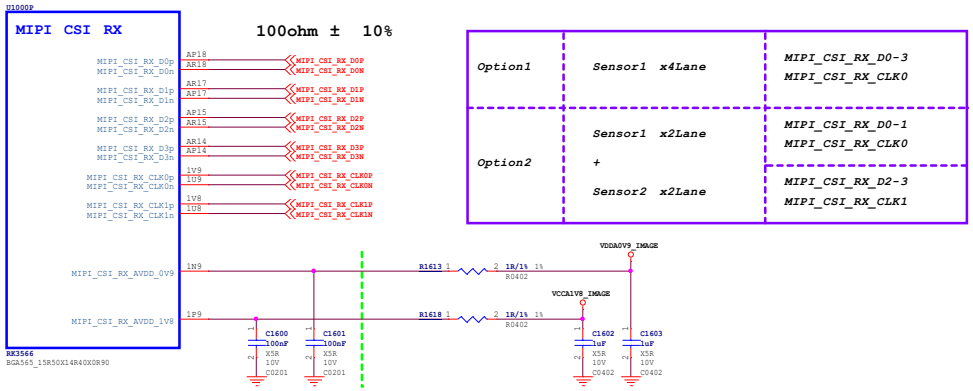
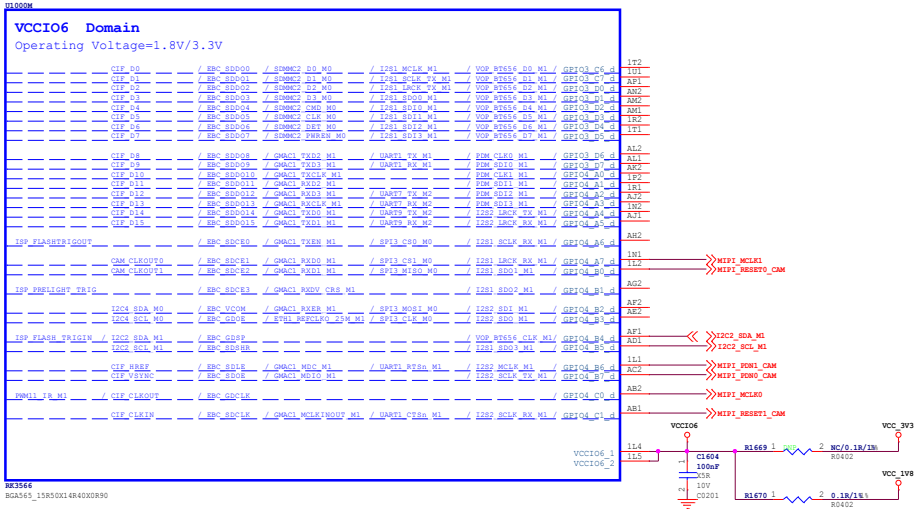
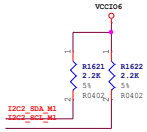
RK3566_P(MIPI_CSI_RX)



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

RK3566_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: RK3566 VI Interface
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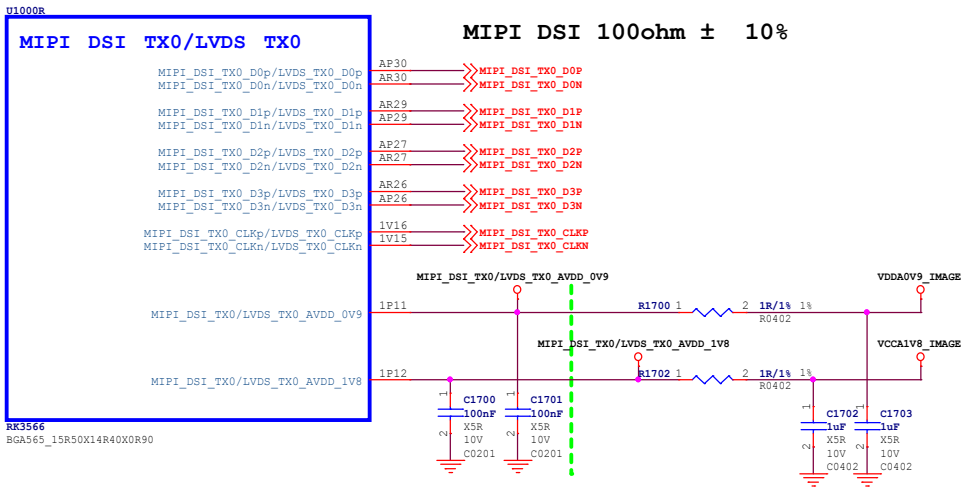
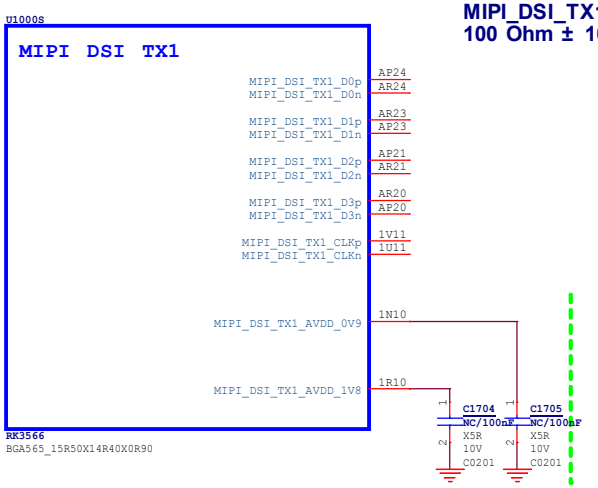
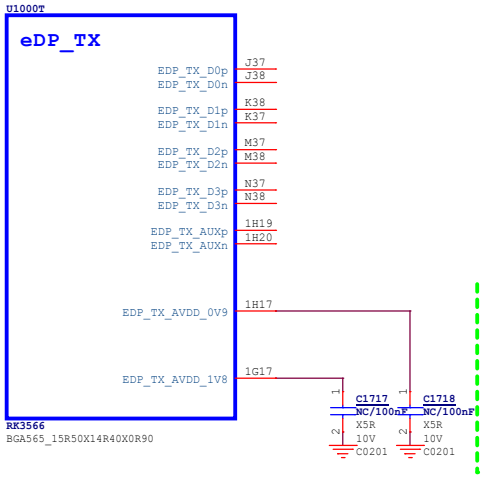
RK3566_R(MIPI_DSI_TX0/LVDS_TX0)



RK3566_S(MIPI_DSI_TX1)



RK3566_T(eDP/DP TX)



Boxed capacitors should be placed under the U1000 package.
Other caps should be placed close to the U1000 package

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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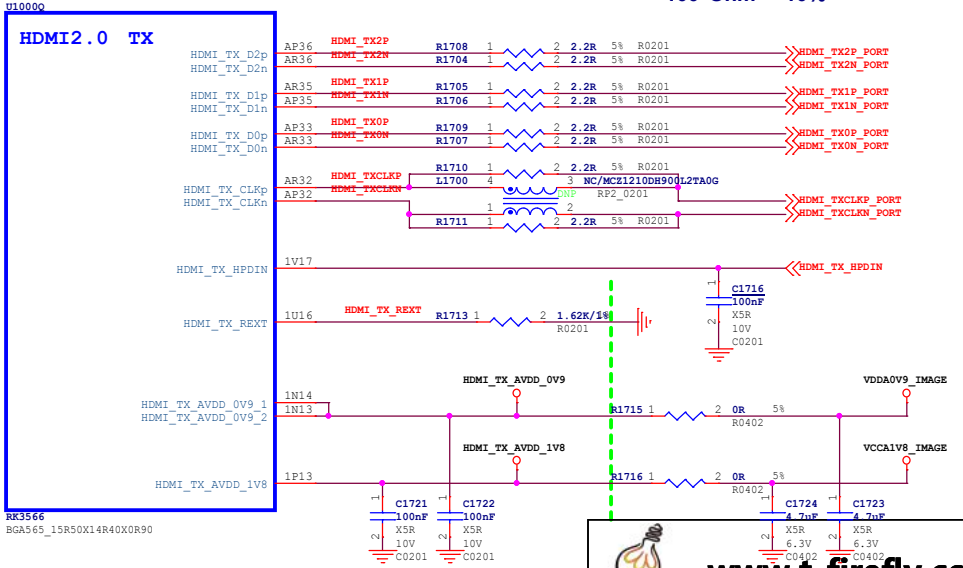
RK3566_Q(HDMI2.0 TX)



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Title: RK3566_V0 Interface_1		
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RK3566_L(VCCIO5 Domain)

U1000L

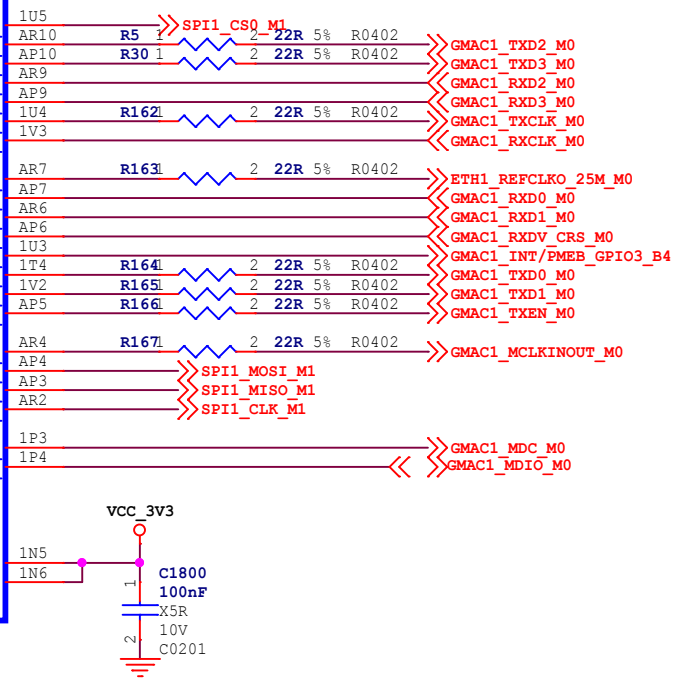
VCCIO5 Domain

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_REFCLKO_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

RK3566
BGA565_15R50X14R40X0R90



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

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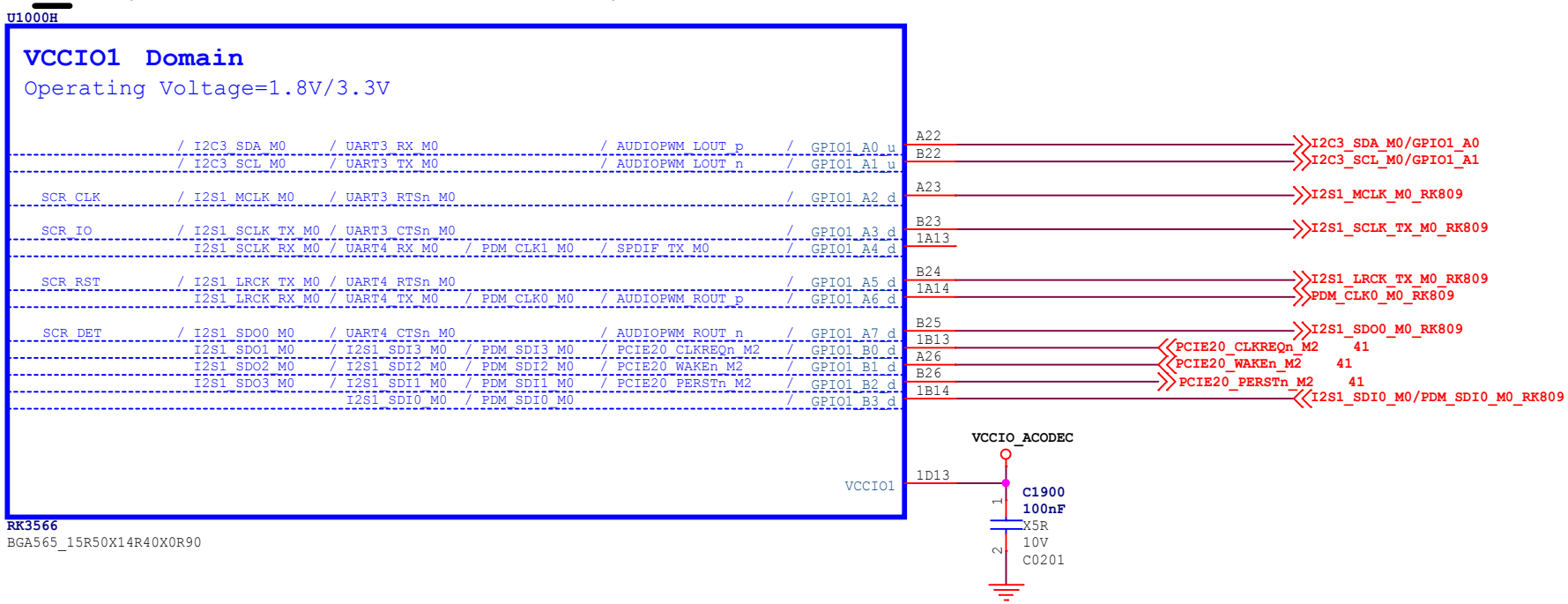
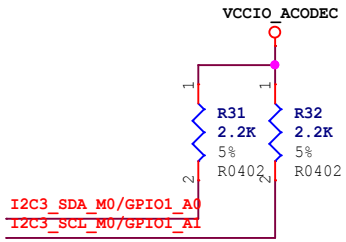
Title: RK3566_V0_Interface_2		
File: ROC-3566-PC		REV: V0.1
Create Date: Wednesday, May 06, 2020	Page Num: 18	
Modify Date: Monday, April 19, 2021	Page Total: 37	

RK3566_H(VCCIO1 Domain)



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



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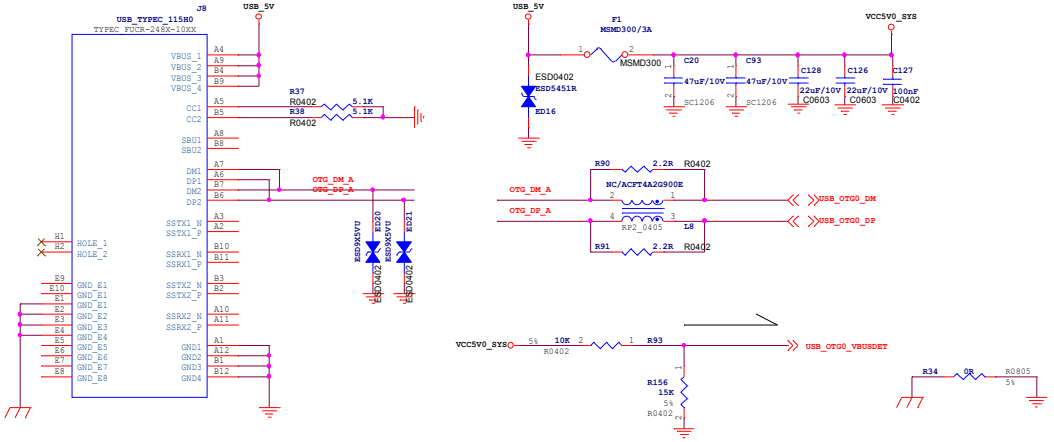
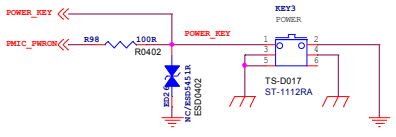
Title: RK3566 Audio Interface		
File: ROC-3566-PC		REV: V0.1
Create Date: Monday, March 30, 2020	Page Num: 19	
Modify Date: Monday, April 19, 2021	Page Total: 37	

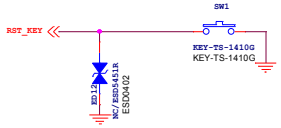
POWER CONTROL



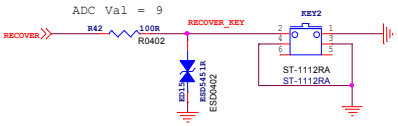
POWER



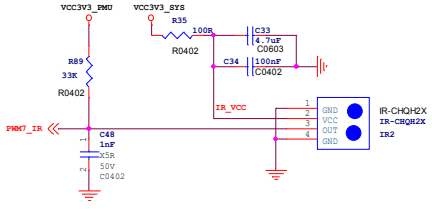
RESET



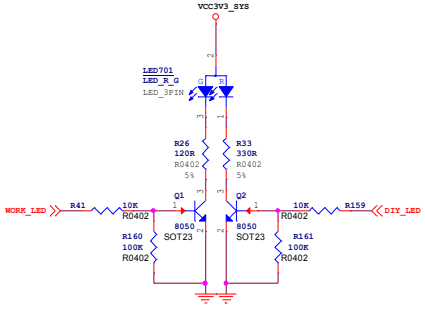
RECOVER



IR



LED DISPLAY



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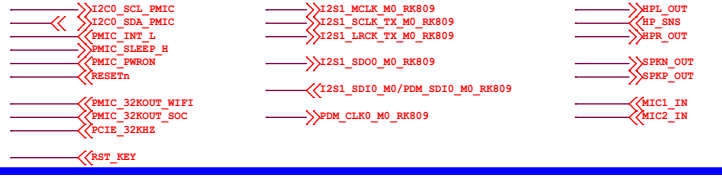
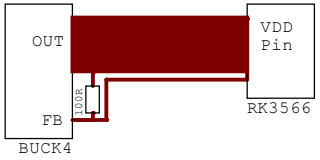
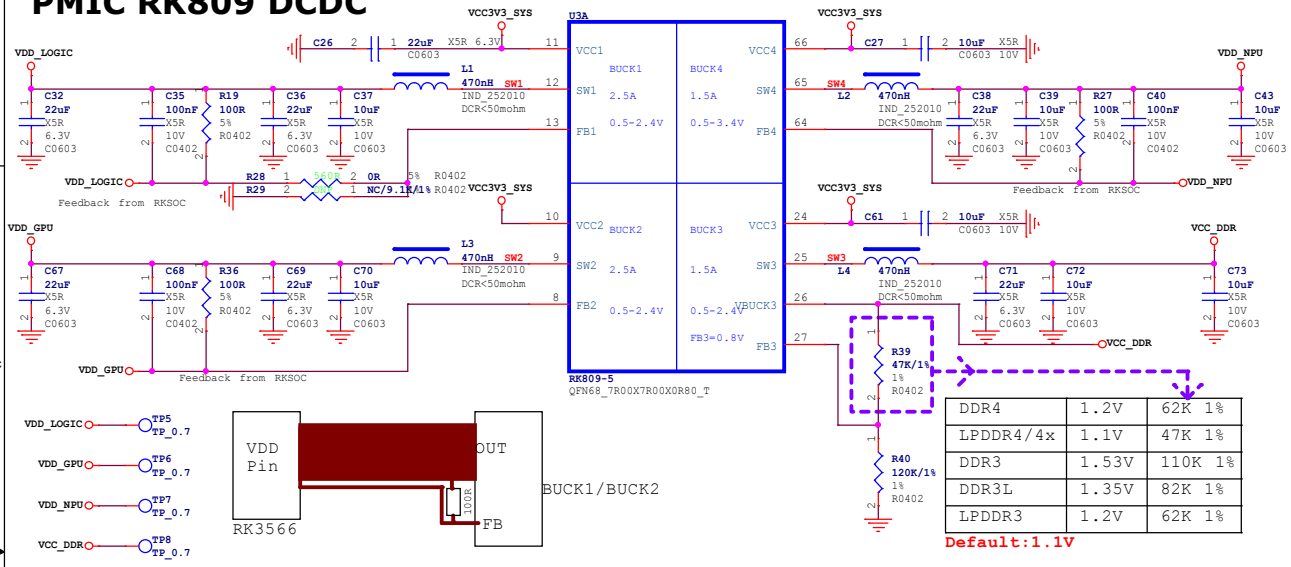
Title: TYPEC-OTG/KEY/IR		
File: ROC-3566-PC		REV: V0.1
Create Date: Wednesday, January 06, 2021	Page Num: 20	
Modify Date: Monday, April 19, 2021	Page Total: 37	





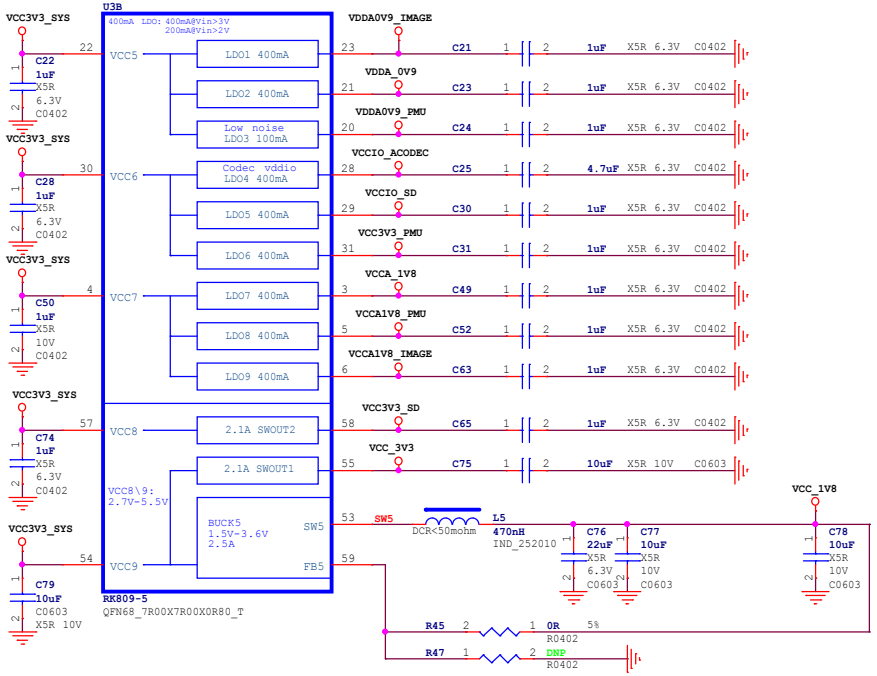
PMIC RK809 DCDC



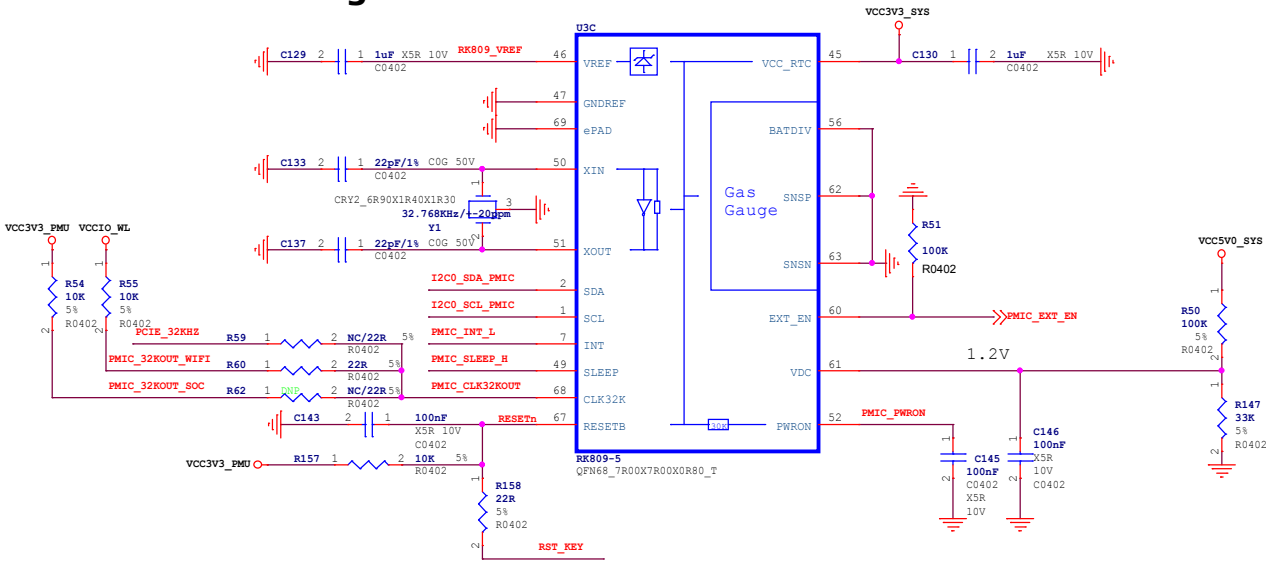
DDR4	1.2V	62K 1%
LPDDR4/4x	1.1V	47K 1%
DDR3	1.53V	110K 1%
DDR3L	1.35V	82K 1%
LPDDR3	1.2V	62K 1%

Default:1.1V

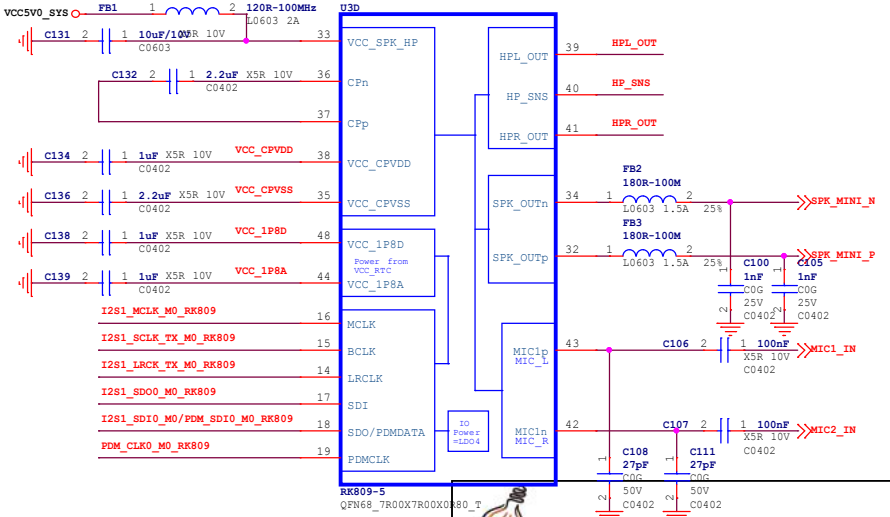
PMIC RK809 LDO



PMIC RK809 Management



PMIC RK809 CODEC



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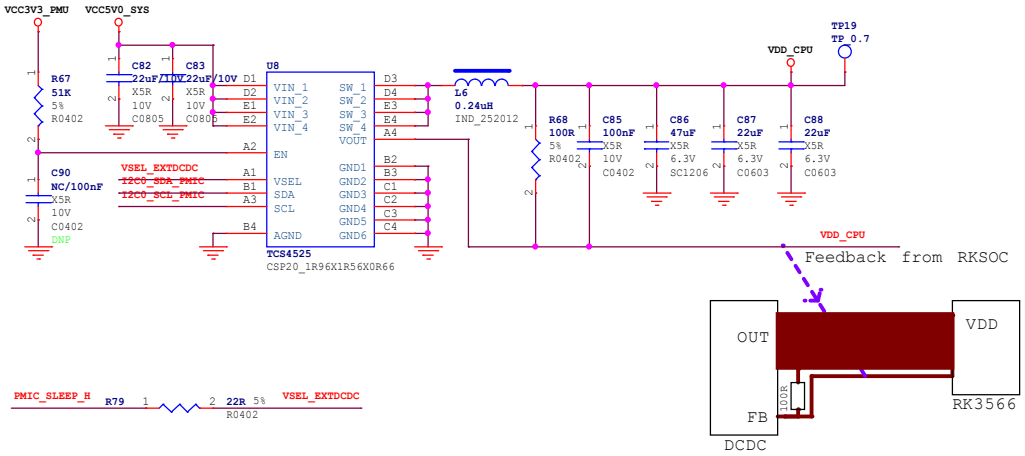
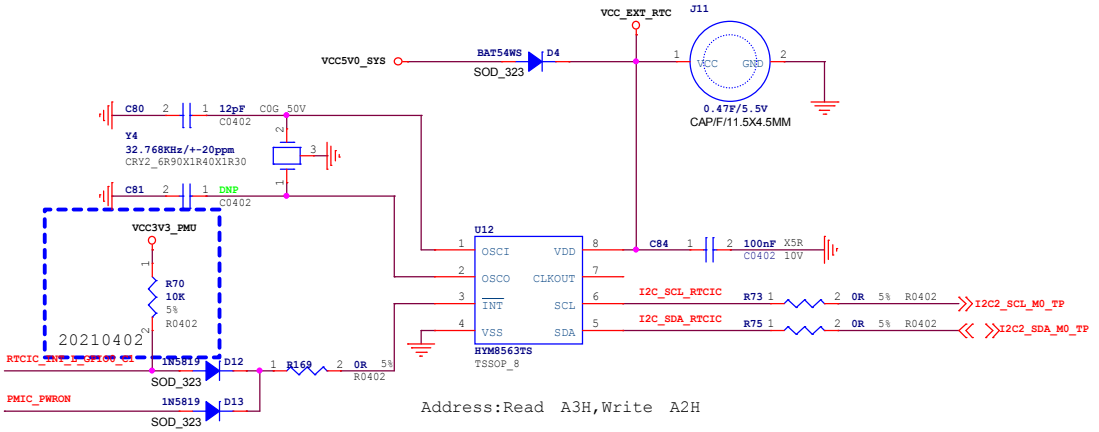
Title: Power_PMIC		
File: ROC-3566-PC		REV: V0.1
Create Date: Monday, November 30, 2020	Page Num: 21	
Modify Date: Monday, April 19, 2021	Page Total: 37	

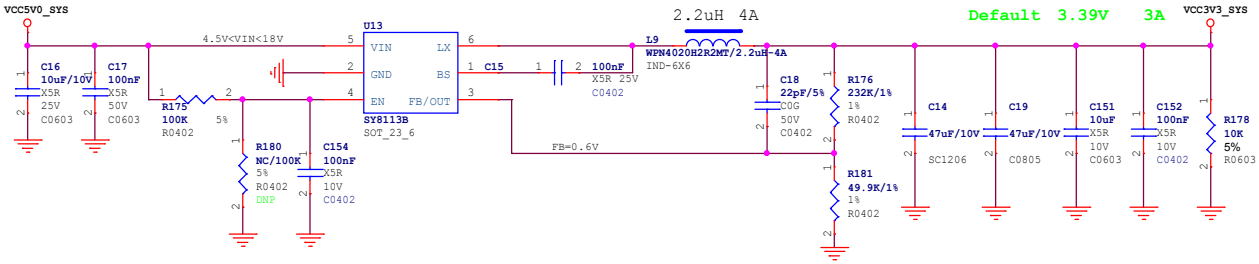
VDD_CPU_EXT

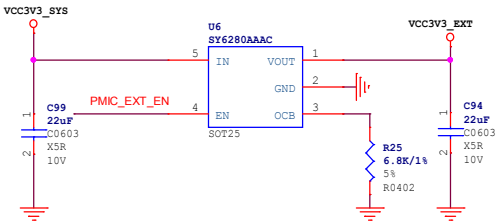


RTC IC



VCC3V3_SYS





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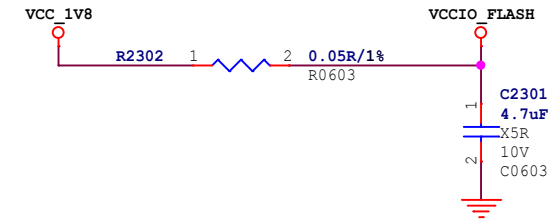
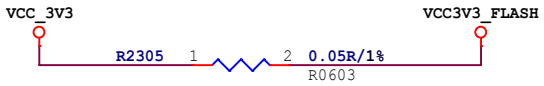
Title: Power_other		
File: ROC-3566-PC		REV: V0.1
Create Date: Monday, November 30, 2020	Page:	Num: 22
Modify Date: Monday, April 19, 2021	Page:	Total: 37

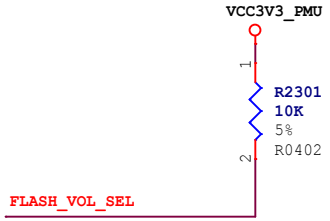
Flash Power Manage

FLASH_VOL_SEL

	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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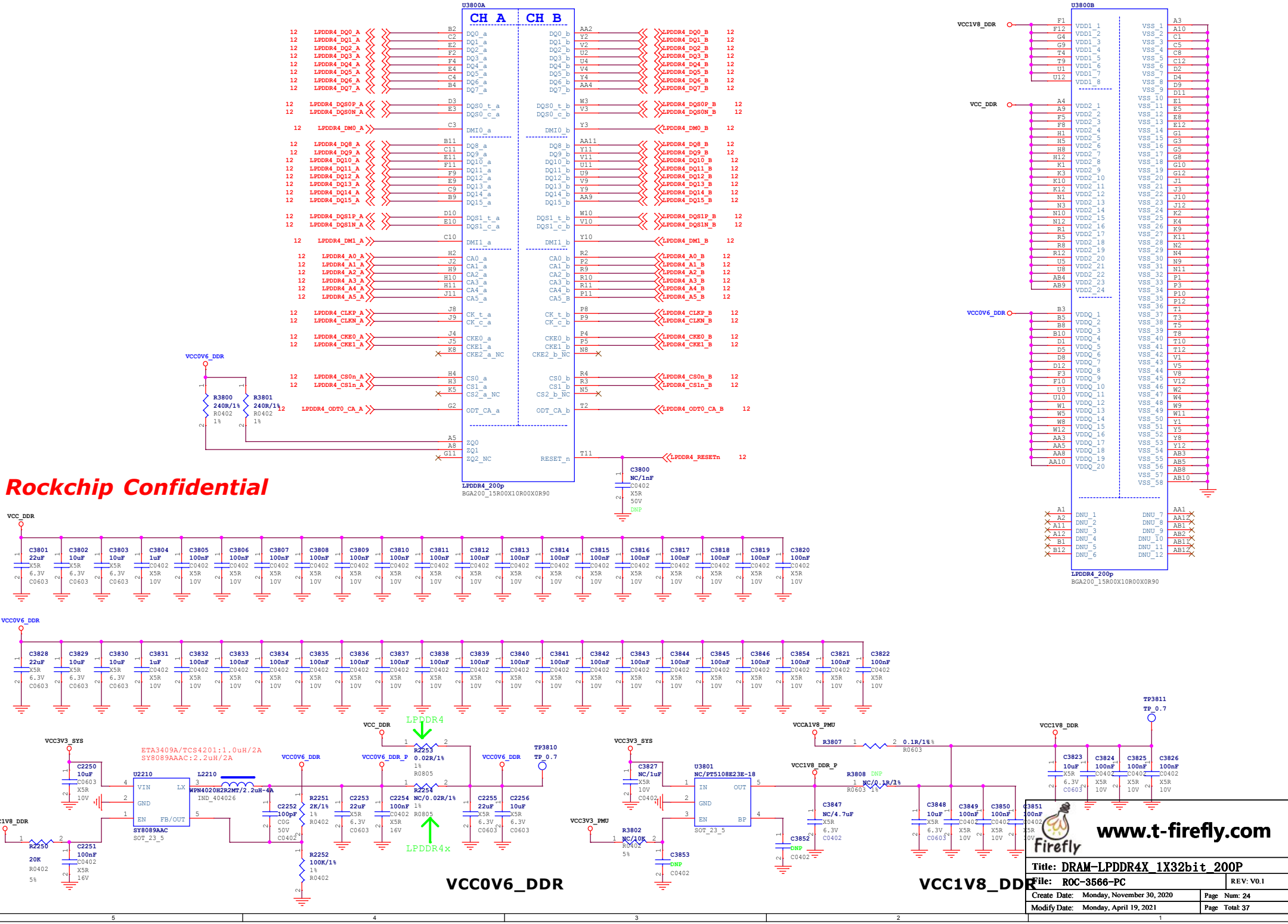
Title: Power_Flash Power Manage	
File: ROC-3566-PC	REV: V0.1
Create Date: Tuesday, May 19, 2020	Page Num: 23
Modify Date: Monday, April 19, 2021	Page Total: 37


U3800A
CH A
CH B
LPDDR4_200p
BGA200_15R00X10R00X0R90
U3800B
LPDDR4_200p
BGA200_15R00X10R00X0R90
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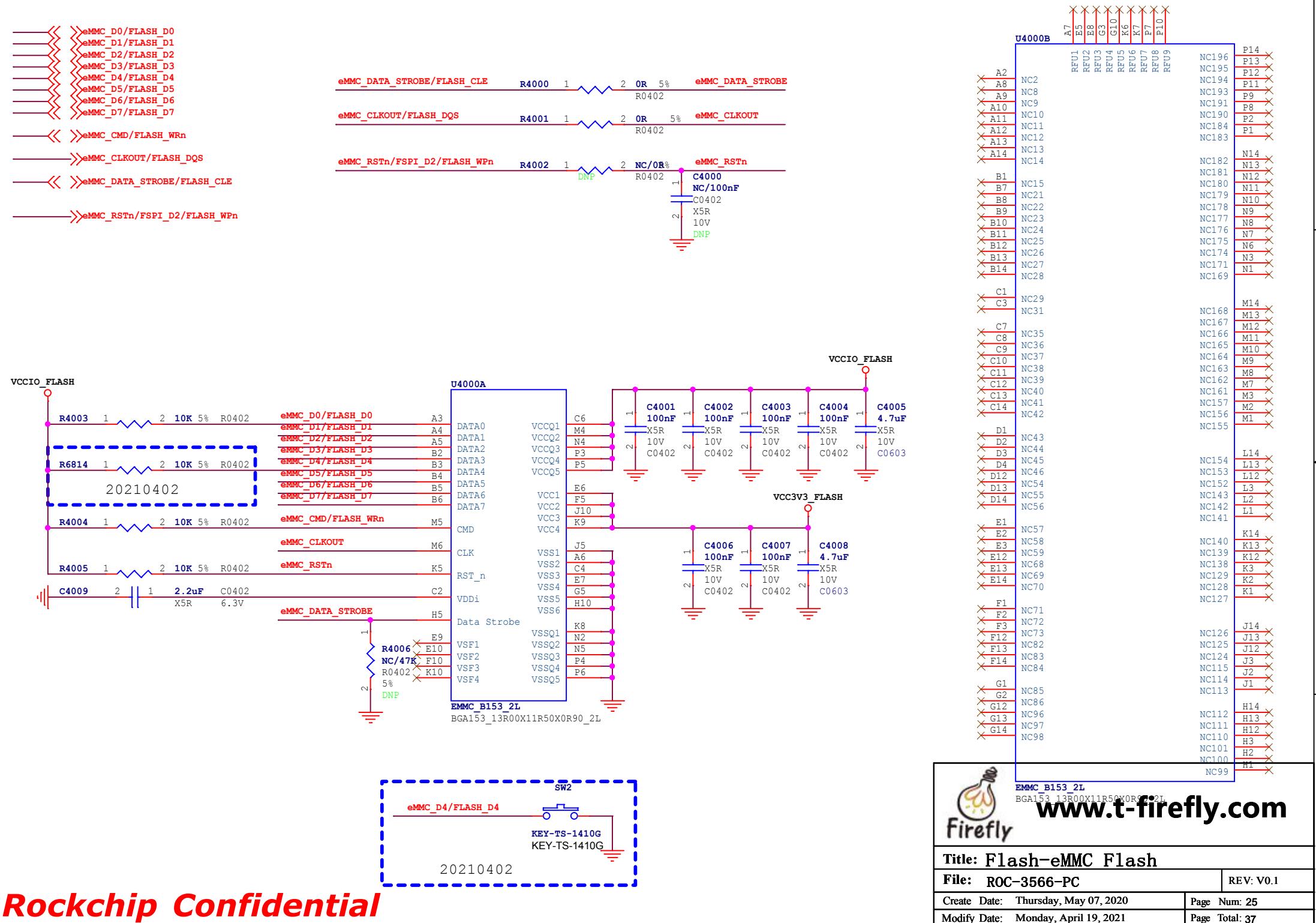
VCC_DDR
VCC0V6_DDR
VCC1V8_DDR
VCC3V3_SYS
VCC3V3_PMU
VCCA1V8_PMU
LPDDR4
LPDDR4x
ETA3409A/TCS4201:1.0uH/2A
SY8089AAC:2.2uH/2A
VCC0V6_DDR
VCC1V8_DDR
www.t-firefly.com
Title: DRAM-LPDDR4X_1X32bit_200P
File: ROC-3566-PC
REV: V0.1
Create Date: Monday, November 30, 2020
Page Num: 24
Modify Date: Monday, April 19, 2021
Page Total: 37


eMMC_D0/FLASH_D0
eMMC_D1/FLASH_D1
eMMC_D2/FLASH_D2
eMMC_D3/FLASH_D3
eMMC_D4/FLASH_D4
eMMC_D5/FLASH_D5
eMMC_D6/FLASH_D6
eMMC_D7/FLASH_D7
eMMC_CMD/FLASH_WRn
eMMC_CLKOUT/FLASH_DQS
eMMC_DATA_STROBE/FLASH_CLE
eMMC_RSTn/FSPI_D2/FLASH_WPn
R4000 0R 5% R0402
R4001 0R 5% R0402
R4002 NC/0R DNP R0402
C4000 NC/100nF C0402 X5R 10V DNP
U4000B
EMMC_B153_2L
BGA153_13R00X11R50X0R90_2L
U4000A
EMMC_B153_2L
BGA153_13R00X11R50X0R90_2L
VCCIO_FLASH
VCC3V3_FLASH
R4003 10K 5% R0402
R6814 10K 5% R0402
20210402
R4004 10K 5% R0402
R4005 10K 5% R0402
C4009 2.2uF X5R 6.3V C0402
R4006 NC/47K R0402 5% DNP
C4001 100nF X5R 10V C0402
C4002 100nF X5R 10V C0402
C4003 100nF X5R 10V C0402
C4004 100nF X5R 10V C0402
C4005 4.7uF X5R 10V C0603
C4006 100nF X5R 10V C0402
C4007 100nF X5R 10V C0402
C4008 4.7uF X5R 10V C0603
SW2
KEY-TS-1410G
20210402
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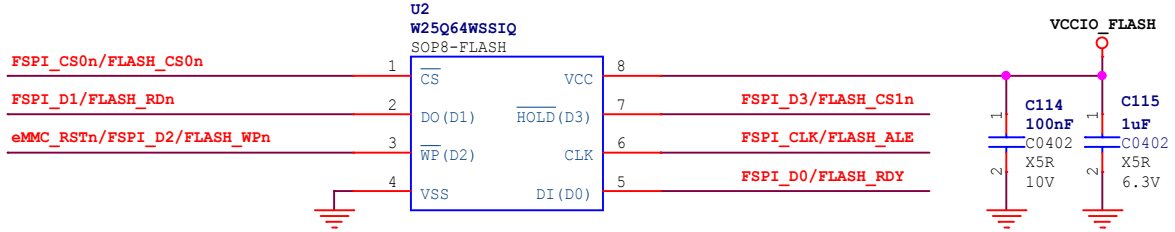
Title: Flash-eMMC Flash
File: ROC-3566-PC
REV: V0.1
Create Date: Thursday, May 07, 2020
Modify Date: Monday, April 19, 2021
Page Num: 25
Page Total: 37

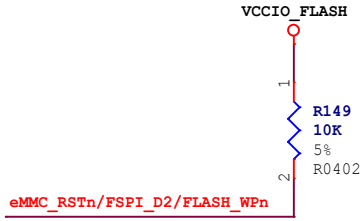
FSPI_CLK/FLASH_ALE 14,28

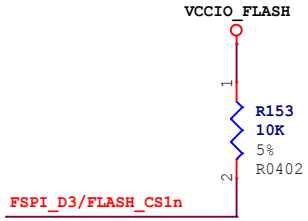
FSPI_D0/FLASH_RDY 14,28
FSPI_D1/FLASH_RDn 14,28
eMMC_RSTn/FSPI_D2/FLASH_WPn 14,27,28
FSPI_D3/FLASH_CS1n 14,28

FSPI_CS0n/FLASH_CS0n 14,28

default VCC = 1.8V







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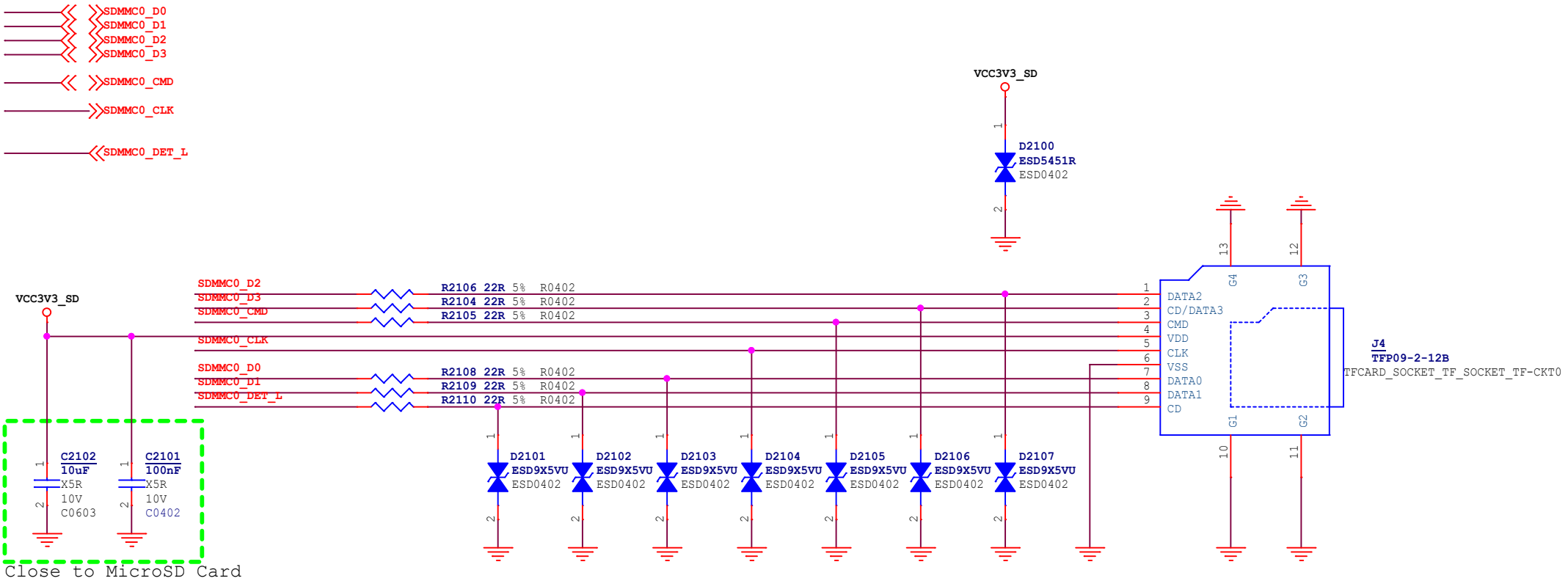
Title: Flash-SPI FLASH		
File: ROC-3566-PC		REV: V0.1
Create Date: Saturday, January 09, 2021	Page Num: 26	
Modify Date: Monday, April 19, 2021	Page Total: 37	



MicroSD Card

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Title: Flash-MicroSD Card		
File: ROC-3566-PC		REV: V0.1
Create Date: Thursday, January 07, 2021	Page Num: 27	
Modify Date: Monday, April 19, 2021	Page Total: 37	

PCIE20_TXP 15
PCIE20_TXN 15

PCIE20_RXP 15
PCIE20_RXN 15

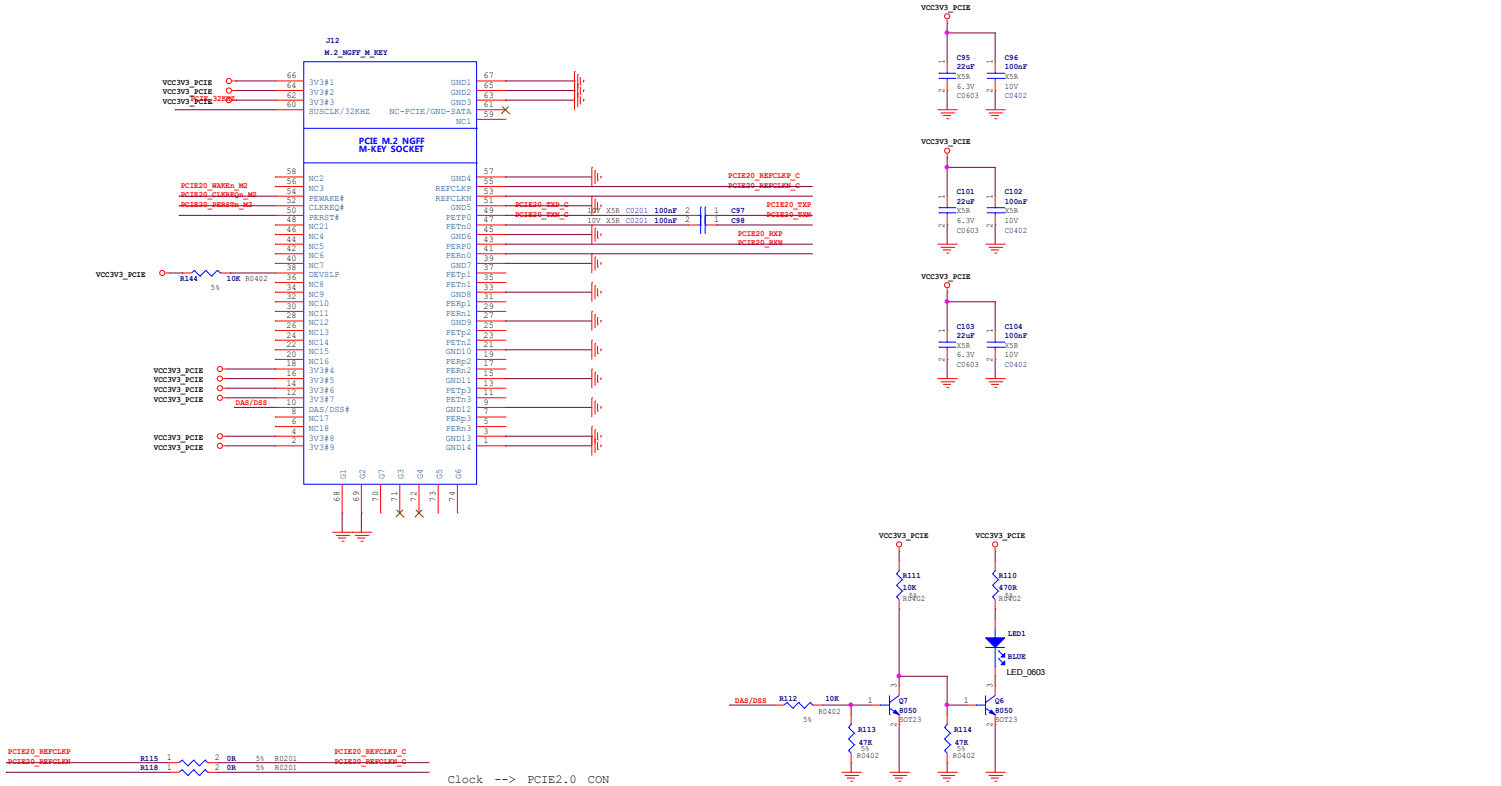
PCIE20_REFCLKP 15
PCIE20_REFCLKN 15

PCIE20_CLKREQn_M2 20
PCIE20_WAKEn_M2 20
PCIE20_PERSTn_M2 20

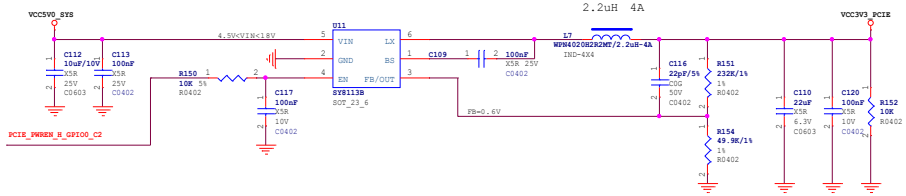
PCIE_PWREN_H_GPIO0_C2 13

PCIE_32KHZ

PCIe2.0 x 1



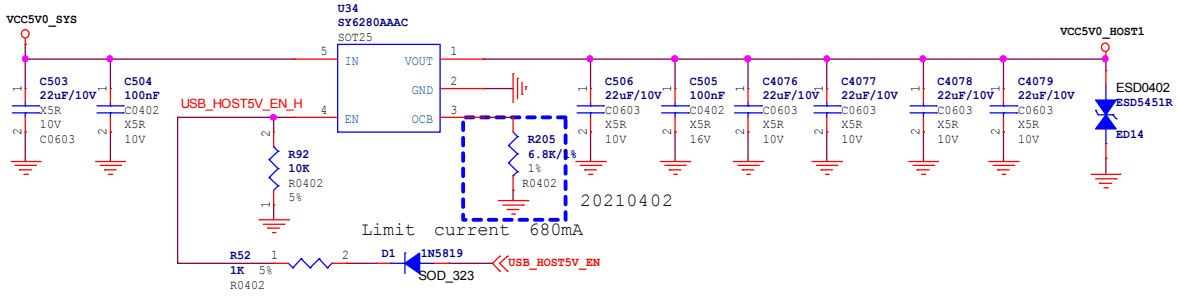
Clock --> PCIE2.0 CON

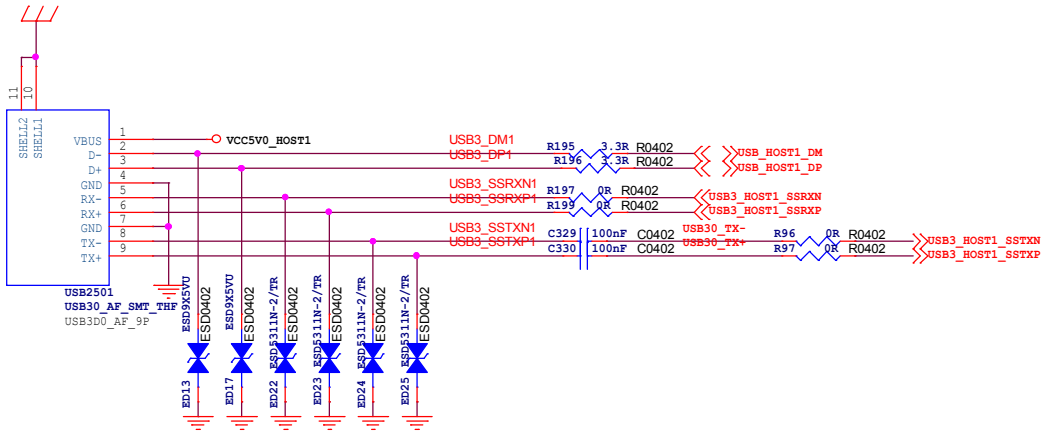


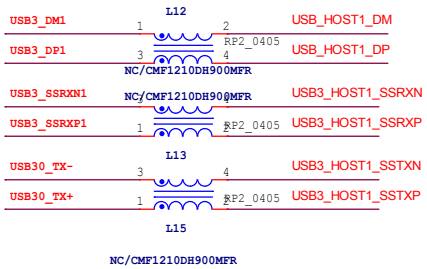
www.t-firefly.com

Title: PCIE-PCIE2.0_x1		
File: ROC-3566-PC		REV: V0.1
Create Date: Friday, January 08, 2021	Page Num: 28	
Modify Date: Monday, April 19, 2021	Page Total: 37	

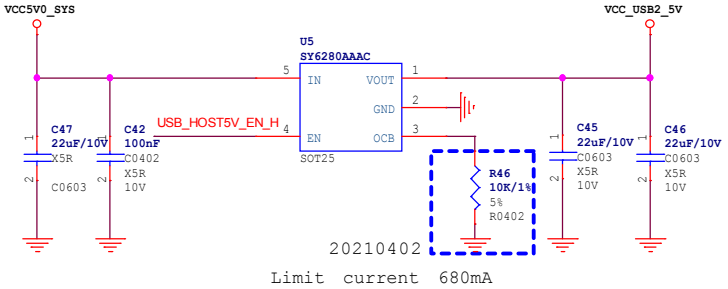
USB3.0

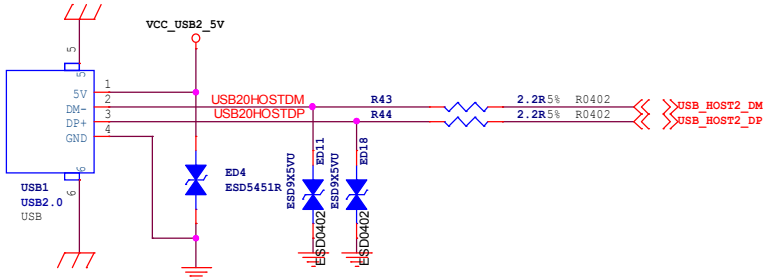


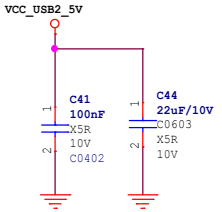


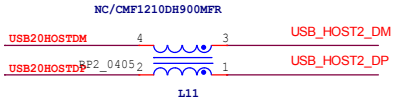


USB2.0









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Title:	USB3.0/USB2.0	
File:	ROC-3566-PC	REV: V0.1
Create Date:	Wednesday, January 06, 2021	Page Num: 29
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HDMI_TX2P_PORT
HDMI_TX2N_PORT
HDMI_TX1P_PORT
HDMI_TX1N_PORT
HDMI_TX0P_PORT
HDMI_TX0N_PORT
HDMI_TXCLKP_PORT
HDMI_TXCLKN_PORT
HDMITX_SCL
HDMITX_SDA
HDMITX_CEC_M0
HDMI_TX_HPDIN

3.3V
3.3V
3.3V

VCC5V0_SYS
D8 1 2 1N5819 SOD_323
C89 1uF X5R 10V C0402
VCC5V_HDMI_TX
ESD0402 ESD5451R ED19

Cj<=0.4pF

U2600 ESD5304D SLP2510P8
U2601 ESD5304D SLP2510P8
U2602 ESD5304D SLP2510P8
IO1 IO2 GND IO3 IO4 NC_6 NC_7 NC_9 NC_10

HDMI_TX2P_PORT HDMI_TX2N_PORT HDMI_TX1P_PORT HDMI_TX1N_PORT
HDMI_TX0P_PORT HDMI_TX0N_PORT HDMI_TXCLKP_PORT HDMI_TXCLKN_PORT
HDMI_TX_CEC_PORT HDMI_TXDDC_SCL_PORT HDMI_TXDDC_SDA_PORT HDMI_TX_HPD_PORT

VCC5V_HDMI_TX
C91 1uF X5R 10V C0402
J5 Type A
D2P D2_G D2N D1P D1_G D1N D0P D0_G D0N CLKP CLK_G CLKN CEC Utility SCL SDA GND +5V HPD
G1 G2 G3 G4
HDMI_TYPE_A_PHD

HDMI_A_4_HDMI_A_PHD_HDMI_A_PHD

HDMI TX DDC

VCC5V0_SYS
D9 1N5819 SOD_323
VCC_3V3
R66 10K 5% R0402
Q3 2SK3018 SOT-323
R69 1.8K 5% R0402
HDMITX_SCL
HDMI_TXDDC_SCL_PORT
R71 10K 5% R0402
Q4 2SK3018 SOT-323
R72 1.8K 5% R0402
HDMITX_SDA
HDMI_TXDDC_SDA_PORT

HDMI TX CEC

VCC_3V3
BAT60BE6327
Cj=30pF max
D10 NC/1N5819 SOD_323 DNP
Cj=120pF max
VCC_3V3 VCC5V0_SYS
R77 27K 5% R0402
Q5 2SK3018 SOT-323
R78 NC/27K 5% R0402 DNP
HDMITX_CEC_M0
HDMI_TX_CEC_PORT
R81 DNP NC/0R 5% R0402

HDMI TX HPD

HDMI_TX_HPDIN
R74 1K 5% R0402
HDMI_TX_HPD_PORT
R80 100K 5% R0402

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Title: HDMI2.0 TX		
File: ROC-3566-PC		REV: V0.1
Create Date: Wednesday, January 06, 2021	Page Num: 30	
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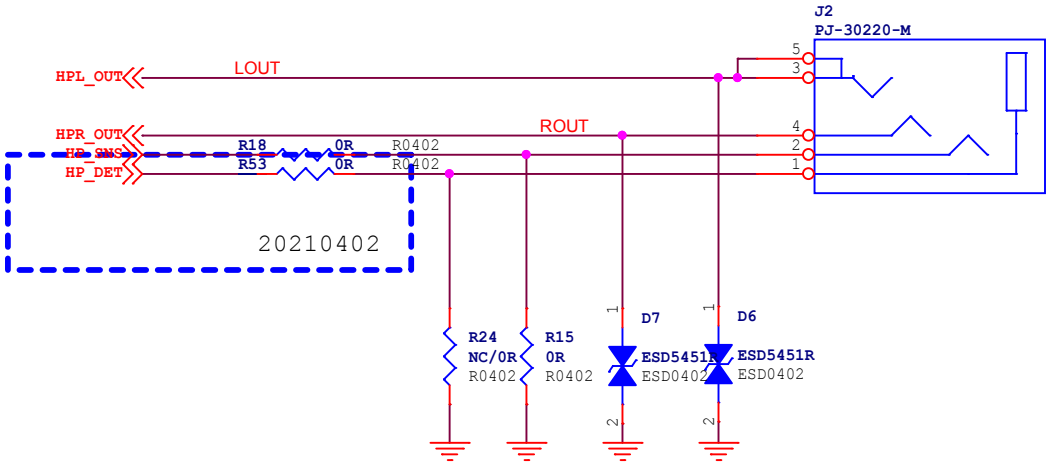

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Title: Audio Port		
File: ROC-3566-PC		REV: V0.1
Create Date: Wednesday, January 06, 2021	Page Num: 31	
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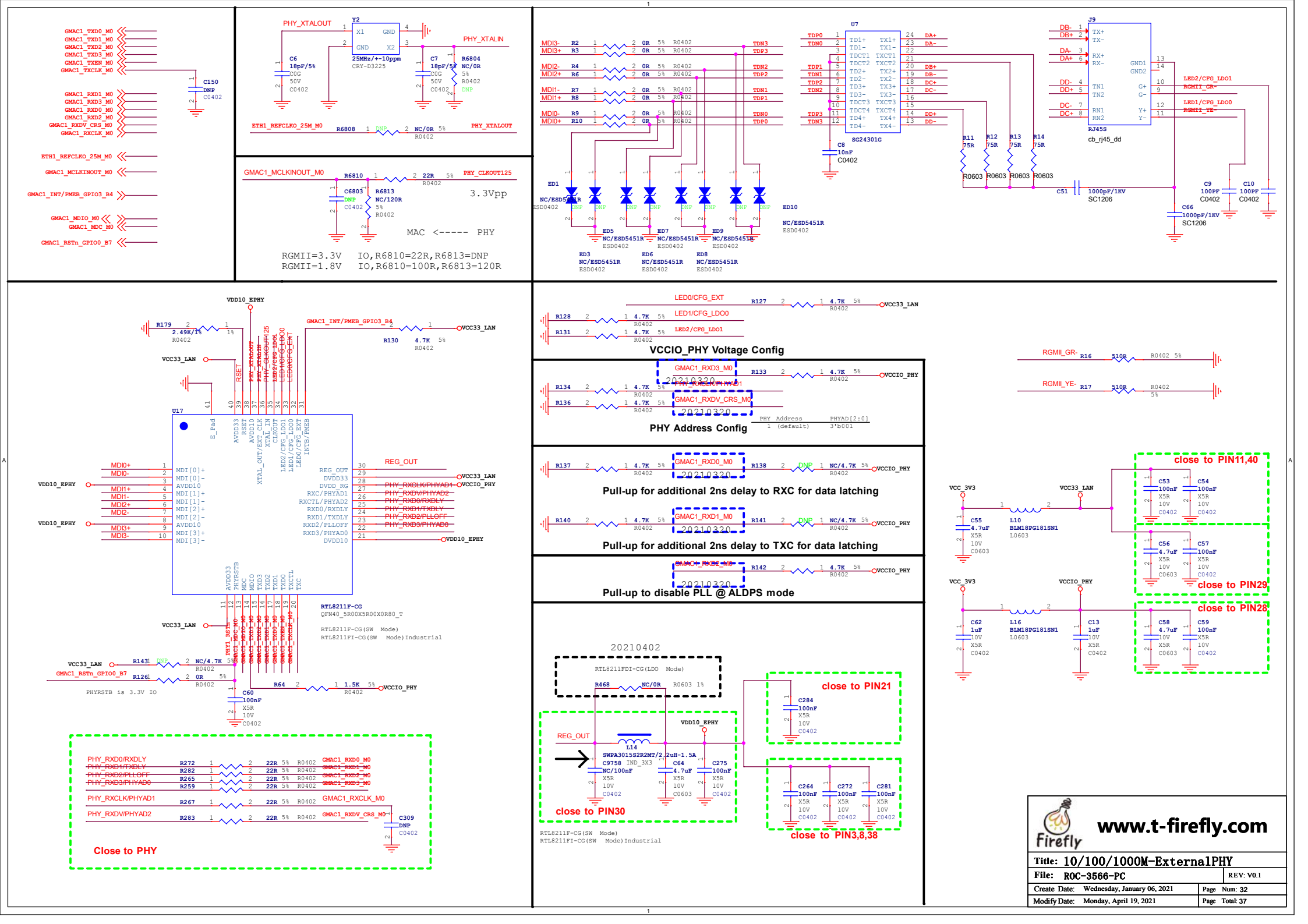
GMAC1_TXD0_M0
GMAC1_TXD1_M0
GMAC1_TXD2_M0
GMAC1_TXD3_M0
GMAC1_TXEN_M0
GMAC1_TXCLK_M0
C150
DNP
C0402
GMAC1_RXD1_M0
GMAC1_RXD3_M0
GMAC1_RXD0_M0
GMAC1_RXD2_M0
GMAC1_RXDV_CRS_M0
GMAC1_RXCLK_M0
ETH1_REFCLKO_25M_M0
GMAC1_MCLKINOUT_M0
GMAC1_INT/PMEB_GPIO3_B4
GMAC1_MDIO_M0
GMAC1_MDC_M0
GMAC1_RSTn_GPIO0_B7
PHY_XTALOUT
Y2
X1
GND
X2
25MHz/+-10ppm
CRY-D3225
PHY_XTALIN
C6
18pF/5%
C0G
50V
C0402
C7
18pF/5%
R6804
NC/0R
5%
R0402
DNP
ETH1_REFCLKO_25M_M0
R6808
NC/0R
PHY_XTALOUT
GMAC1_MCLKINOUT_M0
R6810
22R
PHY_CLKOUT125
C6803
DNP
R6813
NC/120R
3.3Vpp
MAC <----- PHY
RGMII=3.3V IO,R6810=22R,R6813=DNP
RGMII=1.8V IO,R6810=100R,R6813=120R
MDI3-
MDI3+
MDI2-
MDI2+
MDI1-
MDI1+
MDI0-
MDI0+
TDN3
TDP3
TDN2
TDP2
TDN1
TDP1
TDN0
TDP0
ED1
NC/ESD5451R
ESD0402
ED10
ED5
ED7
ED9
ED3
ED6
ED8
U7
SG24301G
C8
10nF
C0402
R11
R12
R13
R14
75R
R0603
C51
1000pF/1KV
SC1206
J9
RJ45S
cb_rj45_dd
LED2/CFG_LDO1
RGMII_GR
LED1/CFG_LDO0
RGMII_YE
C9
100PF
C10
C66
VDD10_EPHY
R179
2.49K/1%
R0402
VCC33_LAN
RSET
PHY_XTALOUT
PHY_XTALIN
PHY_CLKOUT125
LED2/CFG_LDO1
LED1/CFG_LDO0
LED0/CFG_EXT
R130
4.7K
U17
E_Pad
AVDD33
AVDD10
XTAL_IN
CLKOUT
INTB/PMEB
MDI0+
MDI0-
MDI1+
MDI1-
MDI2+
MDI2-
MDI3+
MDI3-
MDI[0]+
MDI[0]-
MDI[1]+
MDI[1]-
MDI[2]+
MDI[2]-
MDI[3]+
MDI[3]-
REG_OUT
DVDD33
DVDD_RG
RXC/PHYAD1
RXCTL/PHYAD2
RXD0/RXDLY
RXD1/TXDLY
RXD2/PLLOFF
RXD3/PHYAD0
PHY_RXCLK/PHYAD1
PHY_RXDV/PHYAD2
PHY_RXD0/RXDLY
PHY_RXD1/TXDLY
PHY_RXD2/PLLOFF
PHY_RXD3/PHYAD0
MDC
MDIO
TXD3
TXD2
TXD1
TXD0
TXCTL
TXC
RTL8211F-CG
QFN40_5R00X5R00X0R80_T
RTL8211F-CG(SW Mode)
RTL8211FI-CG(SW Mode)Industrial
R143
R126
PHYRSTB is 3.3V IO
C60
100nF
R64
1.5K
VCCIO_PHY
PHY_RXD0/RXDLY
PHY_RXD1/TXDLY
PHY_RXD2/PLLOFF
PHY_RXD3/PHYAD0
PHY_RXCLK/PHYAD1
PHY_RXDV/PHYAD2
R272
R282
R265
R259
R267
R283
22R
GMAC1_RXD0_M0
GMAC1_RXD1_M0
GMAC1_RXD2_M0
GMAC1_RXD3_M0
GMAC1_RXCLK_M0
GMAC1_RXDV_CRS_M0
C309
DNP
Close to PHY
LED0/CFG_EXT
LED1/CFG_LDO0
LED2/CFG_LDO1
R127
R128
R131
VCCIO_PHY Voltage Config
R133
R134
R136
PHY Address Configuration
PHY Address
PHYAD[2:0]
1 (default)
3'b001
R137
R138
Pull-up for additional 2ns delay to RXC for data latching
R140
R141
Pull-up for additional 2ns delay to TXC for data latching
R142
Pull-up to disable PLL @ALDPS mode
20210320
20210402
RTL8211FDI-CG(LDO Mode)
R468
NC/0R
L14
SWPA3015S2R2MT/2.2uH-1.5A
C9758
IND_3X3
C284
C264
C272
C281
close to PIN21
close to PIN30
close to PIN3,8,38
RGMII_GR
RGMII_YE
R16
R17
510R
close to PIN11,40
close to PIN29
close to PIN28
VCC_3V3
L10
BLM18PG181SN1
L16
C53
C54
C55
C56
C57
C58
C59
C62
C13
4.7uF
100nF
1uF
X5R
10V
C0402
C0603
L0603
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Title: 10/100/1000M-ExternalPHY
File: ROC-3566-PC
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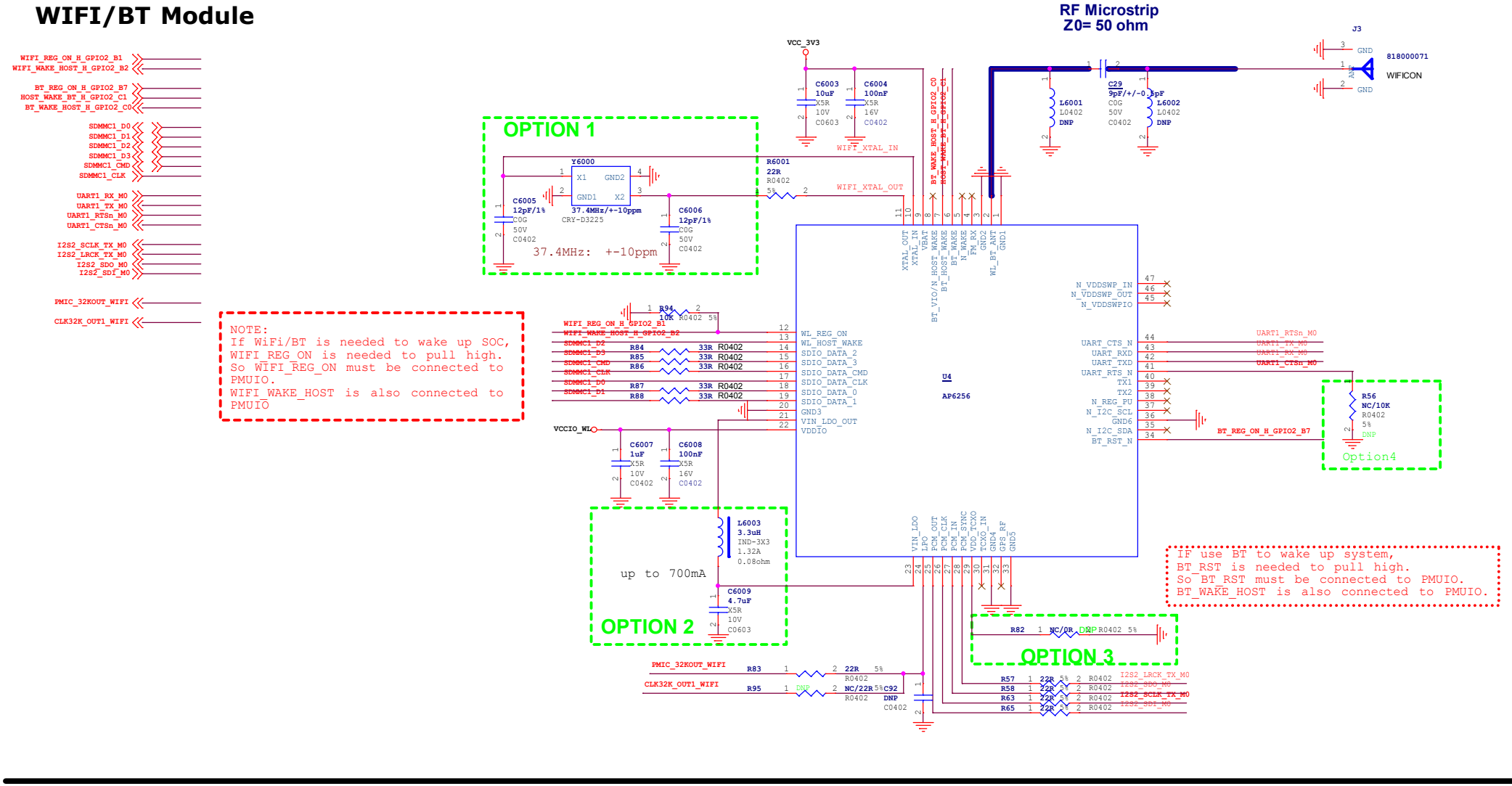
WIFI/BT Module



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_1T1R+UART		
File: ROC-3566-PC		REV: V0.1
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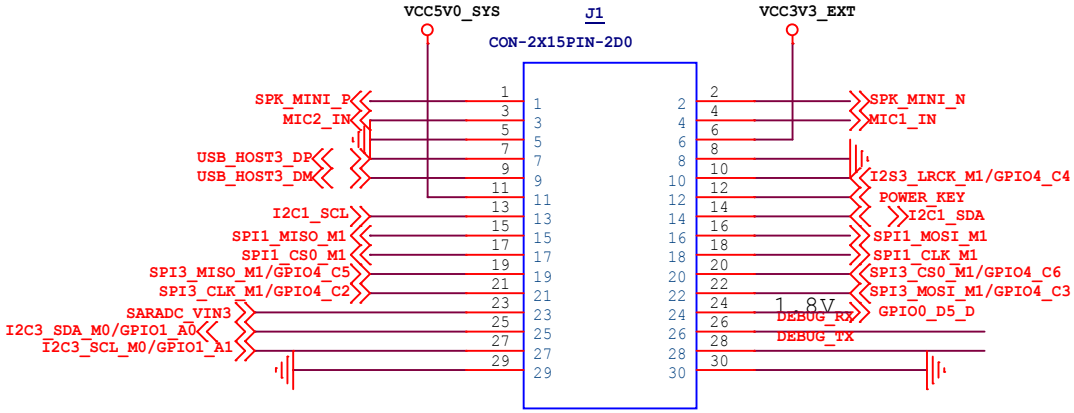

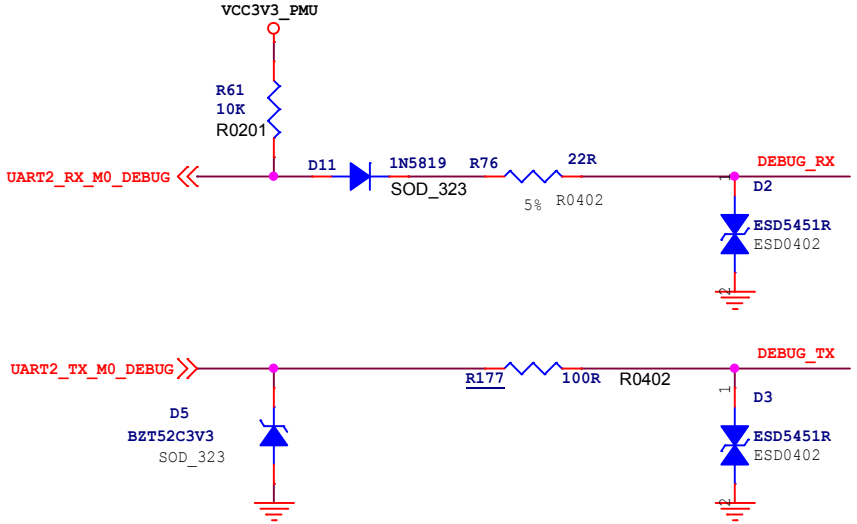

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Title: Connector		
File: ROC-3566-PC		REV: V0.1
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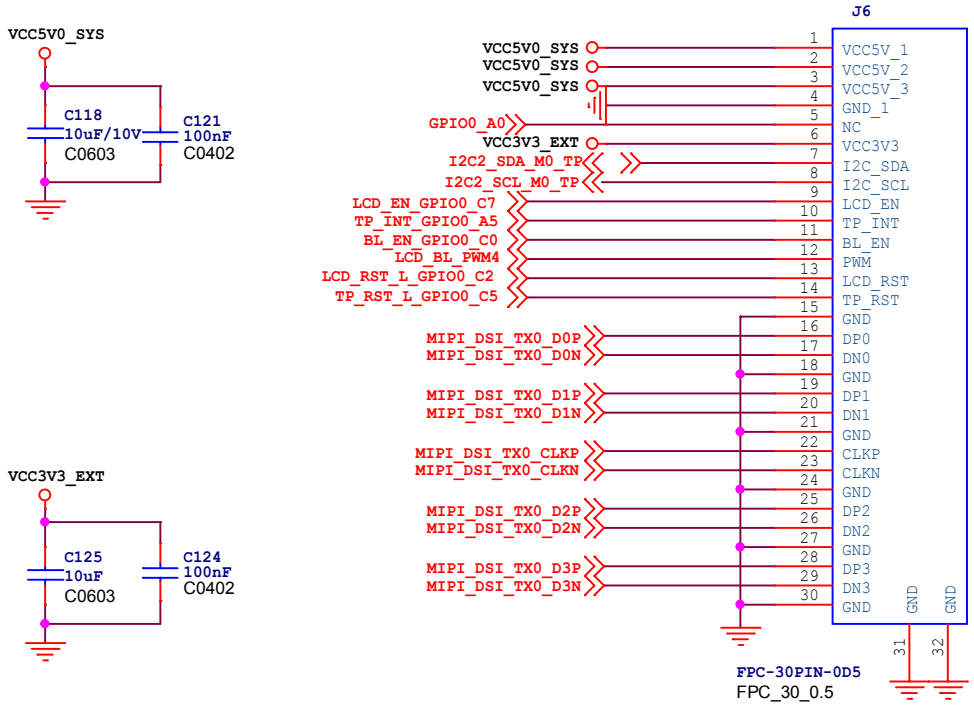
MIP Display Interface



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Title: MIPI-DSI		
File: ROC-3566-PC		REV: V0.1
Create Date: Saturday, January 09, 2021	Page Num: 35	
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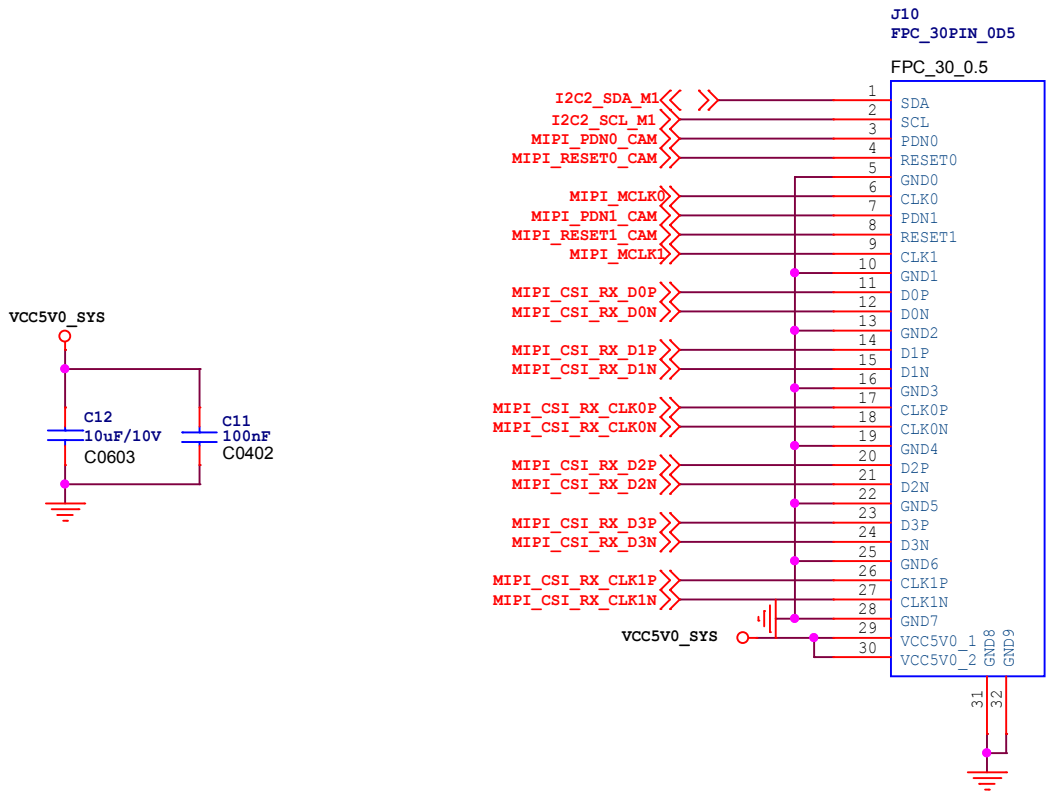

Title: MIPI-CSI	
File: ROC-3566-PC	REV: V0.1
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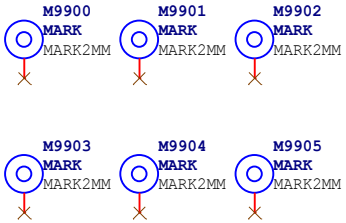
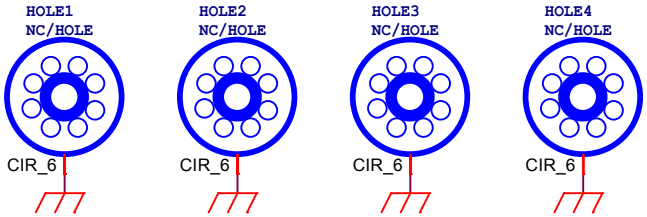
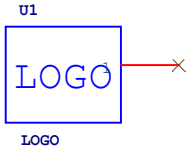
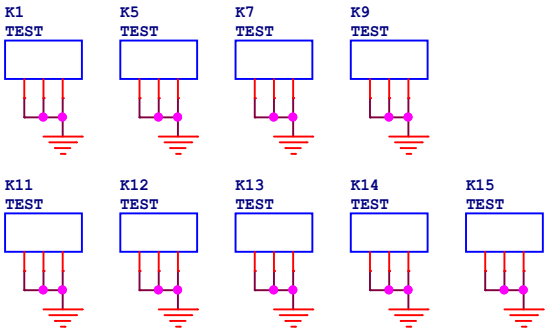
Page of Accessories

PCB Mark Point









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Title: Mark/Hole/Heatsink		
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