Index

Note

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
3. If Flash is compatible, please notice when eMMC is used, the option is that @eMMC is mounted, @Nand is not mounted when Nand is used, the option is that @Nand is mounted, @eMMC is not 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.

Note

Option

Description

Remind

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}

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Version	Date	Author	Change List	Approved
V1.0	*20181025*		*First edition for RK1808 ddr4*	*RZF*
V2.0	20190919		SOEdge Schematic Released	

PINE64	PINE64	
Project:	SOEdge Schematic 20190919 ver 2.0	
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I2C MAP

Port	Pin name	Domain	Bus name	Pull-up voltage	Slave Device	Slave Addr (MS 7Bits)	Note	Slave Bus Capability
I2C0	I2C0_SCL/GPIO0_B0_u I2C0_SDA/GPIO0_B1_u	PMUIO2	I2C0_SCL_PMIC I2C0_SDA_PMIC	VCC_3V3	Rockchip RK809	0x20	PMIC	100kHz,400kHz
					SY837		BUCK	100kHz,400kHz
I2C1	I2C1_SCL/GPIO0_C0_u I2C1_SDA/GPIO0_C1_u	PMUIO2	I2C1_SCL I2C1_SDA	VCC_3V3	GSL1680		Touch IC	100kHz,400kHz
								100kHz,400kHz
I2C2	I2C1_SCL/GPIO1_B4_U I2C1_SDA/GPIO1_B5_U	VCCIO_3V3			NC			100kHz,400kHz
I2C3	GPIO2_D0/I2C3_SCL_U GPIO2_D1/I2C3_SDA_U	VCCA_1V8		VCCA_1V8	MIPI CAMERA			
					CIF CAMERA			
					BT1120			
I2C4	GPIO3_C2/I2C4_SCL_U GPIO3_C3/I2C4_SDA_U	VCCIO_3V3		VCCIO_3V3	DIGITAL MIC			
					RGB LCD			
					PCIEX4			
					SENSOR			

PINE64

PINE64

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File:	**04.I2C MAP**		
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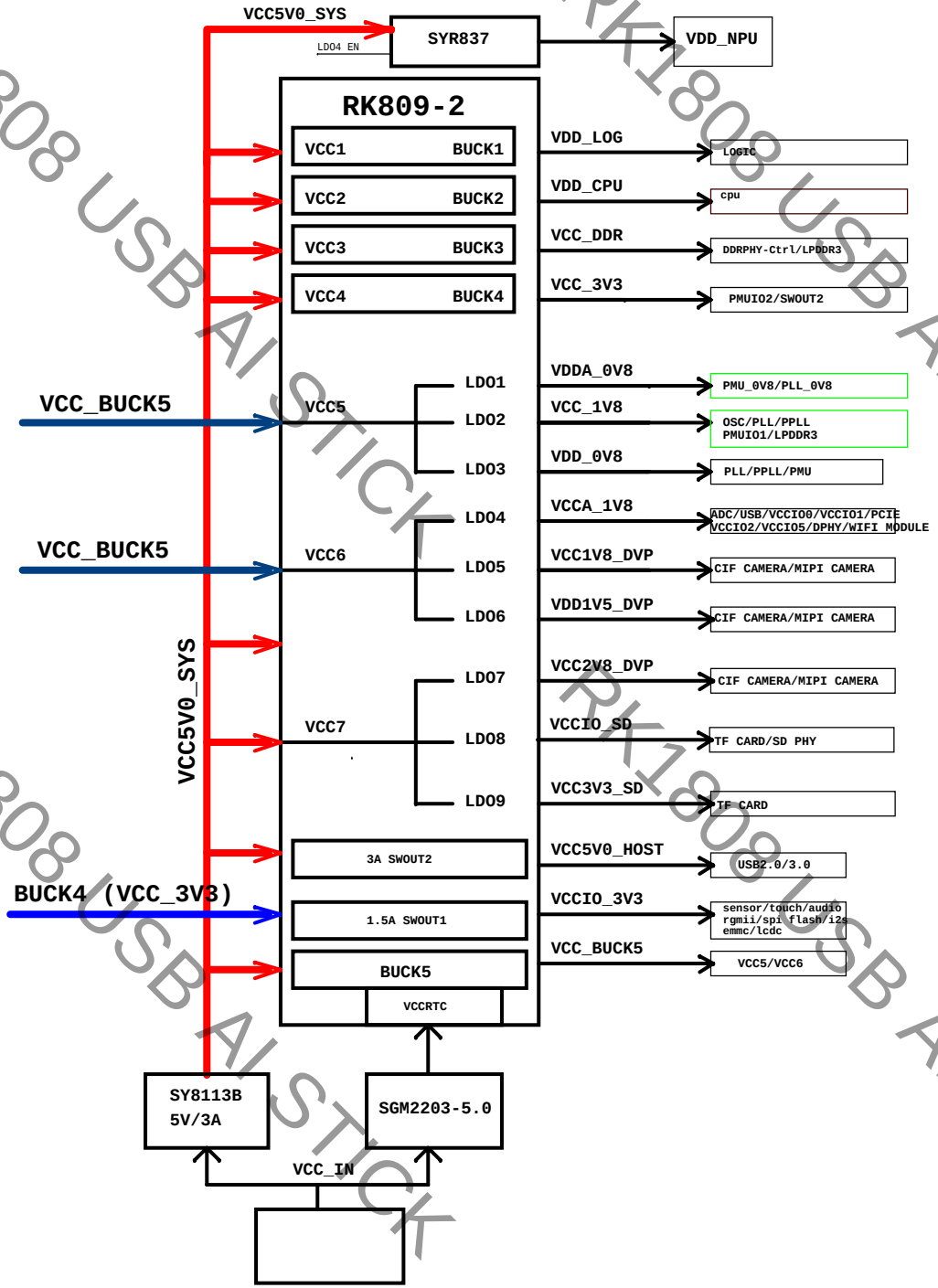
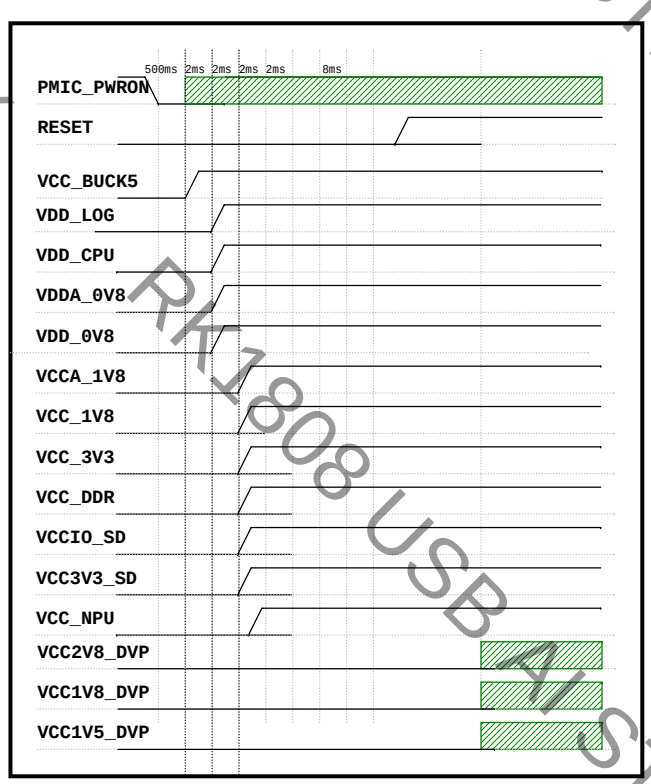
POWER DIAGRAM



RK809-2 Power-on Sequence

PowerName	PMIC Channel	Time Slot (step 2mS)	Default Voltage	Supply Limit	Default ON/OFF	Sleep ON/OFF	Peak Current
VDD_NPU	EXTERNAL(SY837)	Slot:3A	1V	6A	ON	OFF	4A
VDD_LOG	BUCK1	Slot:2	0.85V	2.5A	ON	OFF	1.25A
VDD_CPU	BUCK2	Slot:2	0.85V	2.5A	ON	OFF	750mA
VCC_DDR	BUCK3	Slot:3	FB=0.6V	1.5A	ON	ON	
VCC_3V3	BUCK4	Slot:4	3.3V	1.5A	ON	ON	
VCC_BUCK5	BUCK5	Slot:1	2.5V	2.5A	ON	ON	
VDDA_0V8	LDO1	Slot:2	0.8V	400mA	ON	OFF	
VCC_1V8	LDO2	Slot:3	1.8V	400mA	ON	ON	
VDD_0V8	LDO3	Slot:2	0.8V	100mA	ON	ON	
VCCA_1V8	LDO4	Slot:3	1.8V	400mA	ON	OFF	
VCC1V8_DVP	LDO5		1.8V	400mA	OFF	OFF	
VDD1V5_DVP	LDO6		1.5V	400mA	OFF	OFF	
VCC2V8_DVP	LDO7		2.8V	400mA	OFF	OFF	
VCCIO_SD	LDO8	Slot:4	3.3V	400mA	ON	OFF	
VCC3V3_SD	LDO9	Slot:4	3.3V	400mA	ON	OFF	
VCCIO_3V3	SWOUT2	Slot:4	3.3V	3A	ON	OFF	
VCC5V0_HOST	SWOUT1		5V	1.5A	OFF	OFF	
RESET	RESETB	Slot:10	OD				



PINE64	PINE64
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File:	05.Power diagram and Sequence
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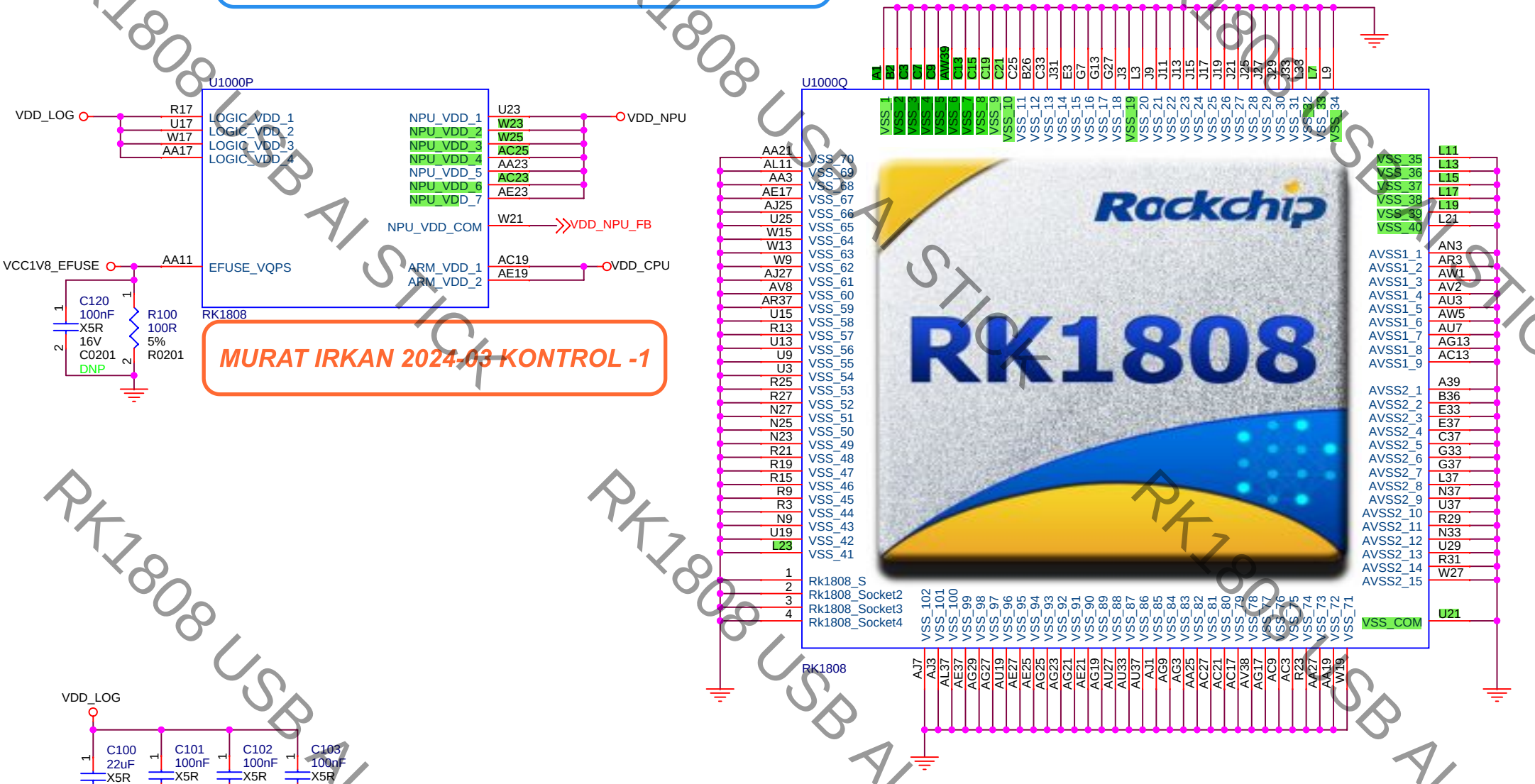
RK1808_Power

RK1808 YAPAY ZEKA STICK

02/22/2024 03:11 AM

YAPAY ZEKA -USB STICK GÜÇ SİSTEMİ



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Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**10.RK1808 Power**		
Date:	Thursday, September 19, 2019	Rev:	
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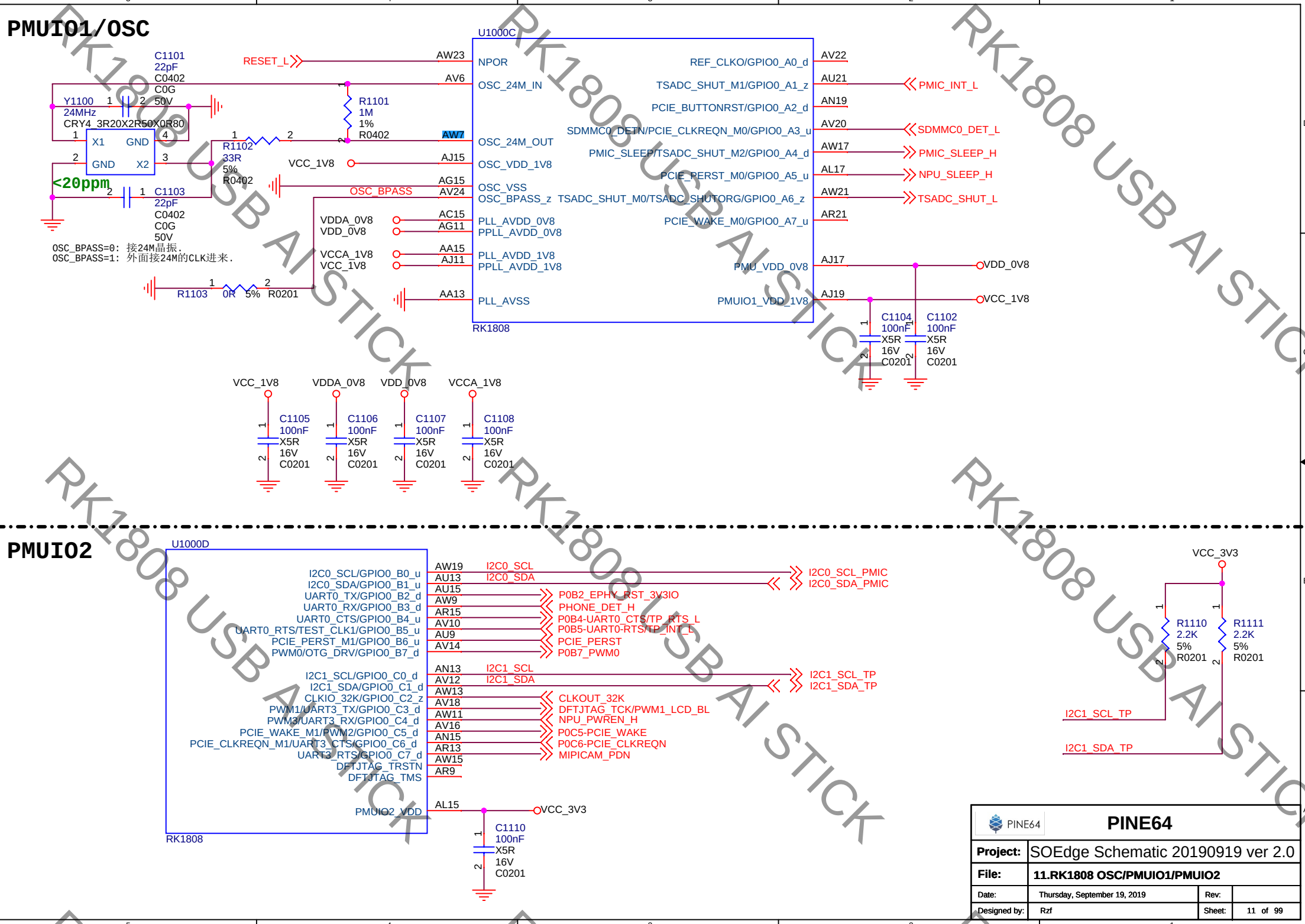
PMUIO1/OSC
U1000C
RESET_L
AW23
NPOR
AV6
OSC_24M_IN
AW7
OSC_24M_OUT
AJ15
OSC_VDD_1V8
AG15
OSC_VSS
AV24
OSC_BPASS_z
AC15
PLL_AVDD_0V8
PPLL_AVDD_0V8
AA15
PLL_AVDD_1V8
PPLL_AVDD_1V8
AA13
PLL_AVSS
RK1808
REF_CLKO/GPIO0_A0_d
AV22
TSADC_SHUT_M1/GPIO0_A1_z
AU21
PMIC_INT_L
PCIE_BUTTONRST/GPIO0_A2_d
AN19
SDMMC0_DETN/PCIE_CLKREQN_M0/GPIO0_A3_u
AV20
SDMMC0_DET_L
PMIC_SLEEP/TSADC_SHUT_M2/GPIO0_A4_d
AW17
PMIC_SLEEP_H
PCIE_PERST_M0/GPIO0_A5_u
AL17
NPU_SLEEP_H
TSADC_SHUT_M0/TSADC_SHUTORG/GPIO0_A6_z
AW21
TSADC_SHUT_L
PCIE_WAKE_M0/GPIO0_A7_u
AR21
PMU_VDD_0V8
AJ17
VDD_0V8
PMUIO1_VDD_1V8
AJ19
VCC_1V8
C1101 22pF C0402 C0G 50V
Y1100 24MHz CRY4_3R20X2R50X0R80
C1103 22pF C0402 C0G 50V
<20ppm
R1101 1M 1% R0402
R1102 33R 5% R0402
R1103 0R 5% R0201
OSC_BPASS
VCC_1V8
VDDA_0V8
VDD_0V8
VCCA_1V8
OSC_BPASS=0: 接24M晶振.
OSC_BPASS=1: 外面接24M的CLK进来.
C1104 100nF X5R 16V C0201
C1102 100nF X5R 16V C0201
C1105 100nF X5R 16V C0201
C1106 100nF X5R 16V C0201
C1107 100nF X5R 16V C0201
C1108 100nF X5R 16V C0201
PMUIO2
U1000D
I2C0_SCL/GPIO0_B0_u
I2C0_SDA/GPIO0_B1_u
UART0_TX/GPIO0_B2_d
UART0_RX/GPIO0_B3_d
UART0_CTS/GPIO0_B4_u
UART0_RTS/TEST_CLK1/GPIO0_B5_u
PCIE_PERST_M1/GPIO0_B6_u
PWM0/OTG_DRV/GPIO0_B7_d
I2C1_SCL/GPIO0_C0_d
I2C1_SDA/GPIO0_C1_d
CLKIO_32K/GPIO0_C2_z
PWM1/UART3_TX/GPIO0_C3_d
PWM3/UART3_RX/GPIO0_C4_d
PCIE_WAKE_M1/PWM2/GPIO0_C5_d
PCIE_CLKREQN_M1/UART3_CTS/GPIO0_C6_d
UART3_RTS/GPIO0_C7_d
DFTJTAG_TRSTN
DFTJTAG_TMS
PMUIO2_VDD
AL15
VCC_3V3
AW19
AU13
AU15
AW9
AR15
AV10
AU9
AV14
AN13
AV12
AW13
AV18
AW11
AV16
AN15
AR13
AW15
AR9
I2C0_SCL
I2C0_SDA
I2C0_SCL_PMIC
I2C0_SDA_PMIC
P0B2_EPHY_RST_3V3IO
PHONE_DET_H
P0B4-UART0_CTS/TP_RTS_L
P0B5-UART0-RTS/TP_INT_L
PCIE_PERST
P0B7_PWM0
I2C1_SCL
I2C1_SDA
I2C1_SCL_TP
I2C1_SDA_TP
CLKOUT_32K
DFTJTAG_TCK/PWM1_LCD_BL
NPU_PWREN_H
P0C5-PCIE_WAKE
P0C6-PCIE_CLKREQN
MIPICAM_PDN
C1110 100nF X5R 16V C0201
R1110 2.2K 5% R0201
R1111 2.2K 5% R0201
PINE64
Project: SOEdge Schematic 20190919 ver 2.0
File: 11.RK1808 OSC/PMUIO1/PMUIO2
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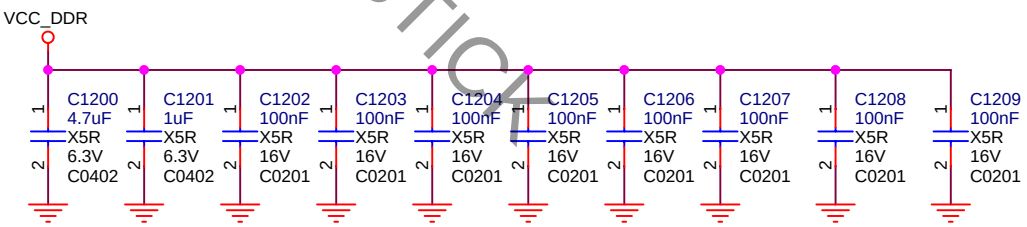
DDR Controller



LPDDR3/LPDDR2	DDR3
A0	A9
A1	A14
A2	A13
A3	A11
A4	A2
A5	A4
A6	A3
A7	A6
A8	A5
A9	A1
	A0
	A7
	CASB
	A8
	ODT0
	BA1
	RASB
	CSB0
	BA2
	A12
	BA0
	WEB
CK	CK
CKB	CKB
CKE	CKE
CSB0	A10
CSB1	CSB1
ODT0	A15
ODT1	ODT1
	RESETN

PINE64	**PINE64**
Project:	SOEdge Schematic 20190919 ver 2.0
File:	**12.RK1808 DDR Controller**
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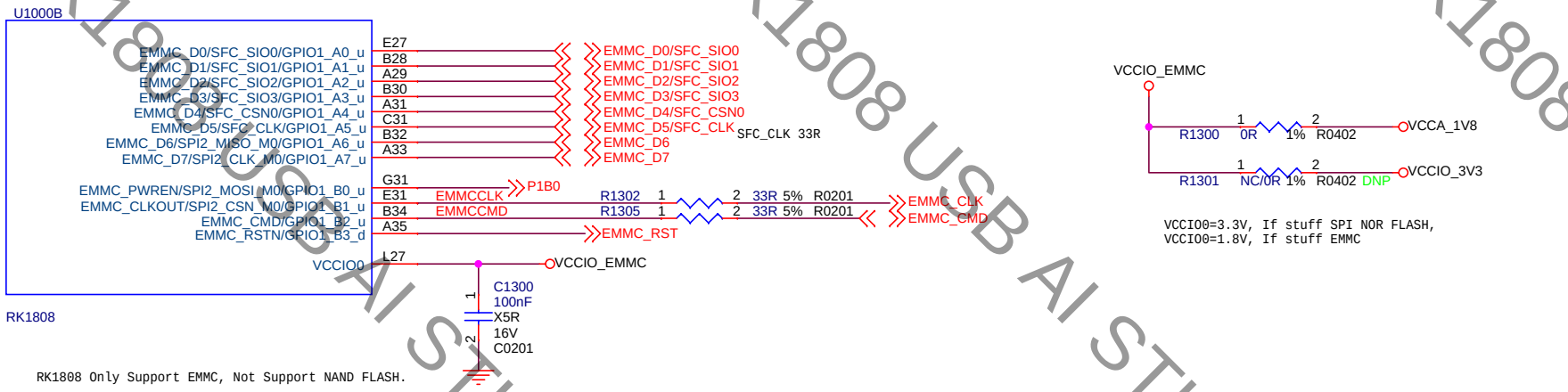
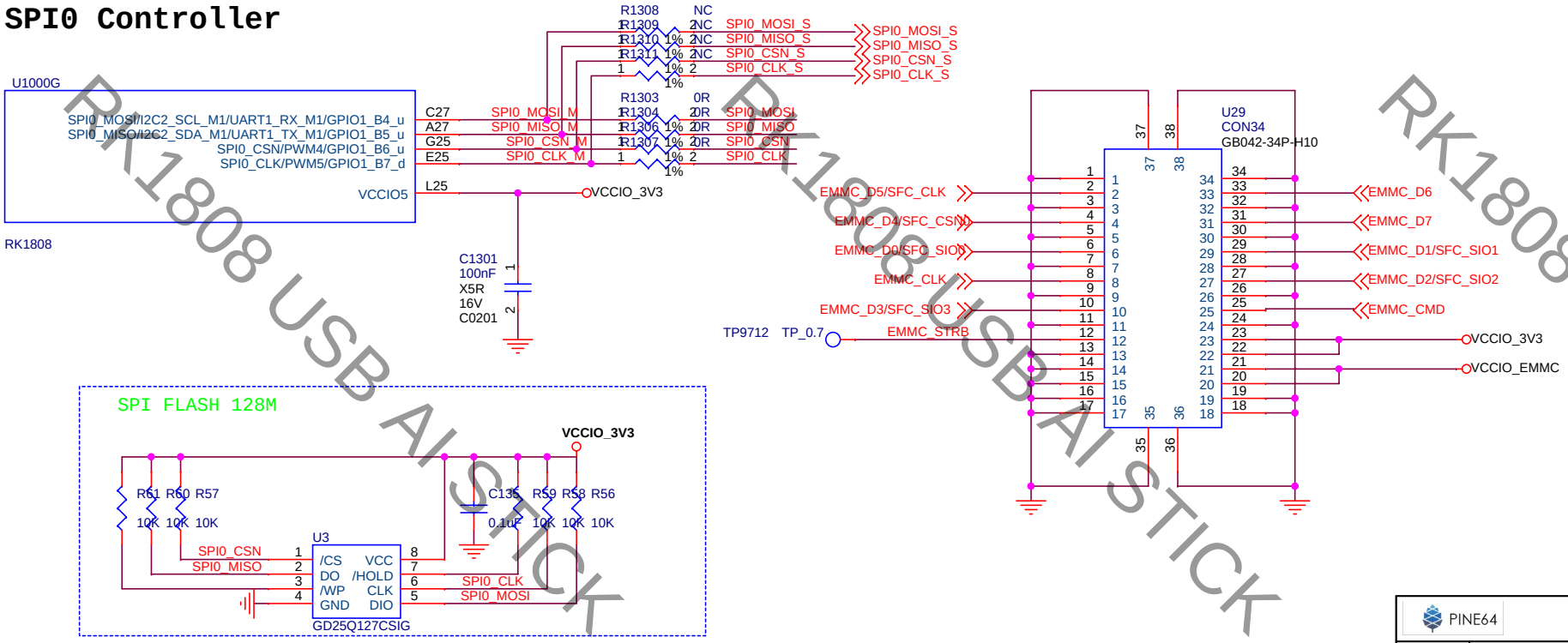
EMMC/SFC Controller



SPI0 Controller



PINE64	**PINE64**		
Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**13.RK1808 EMMC /SPI Controller**		
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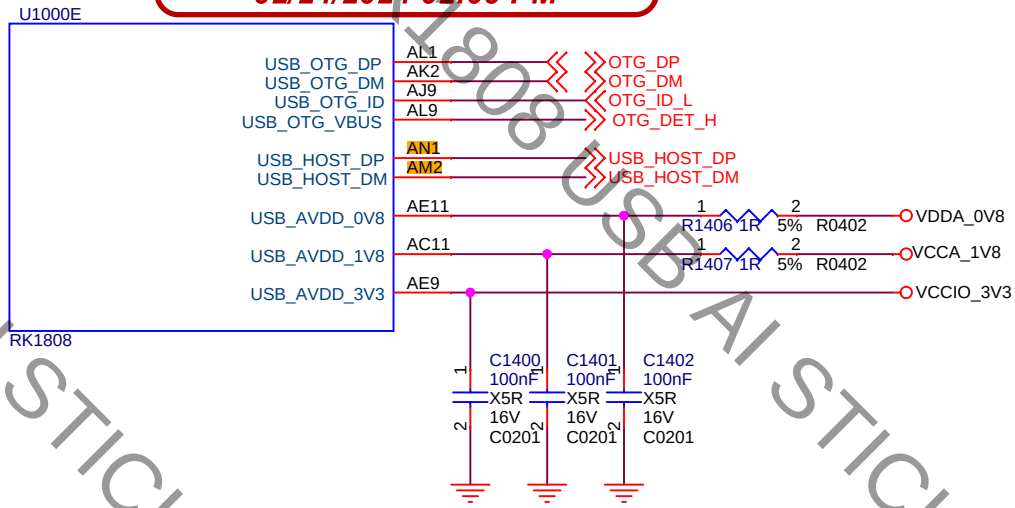
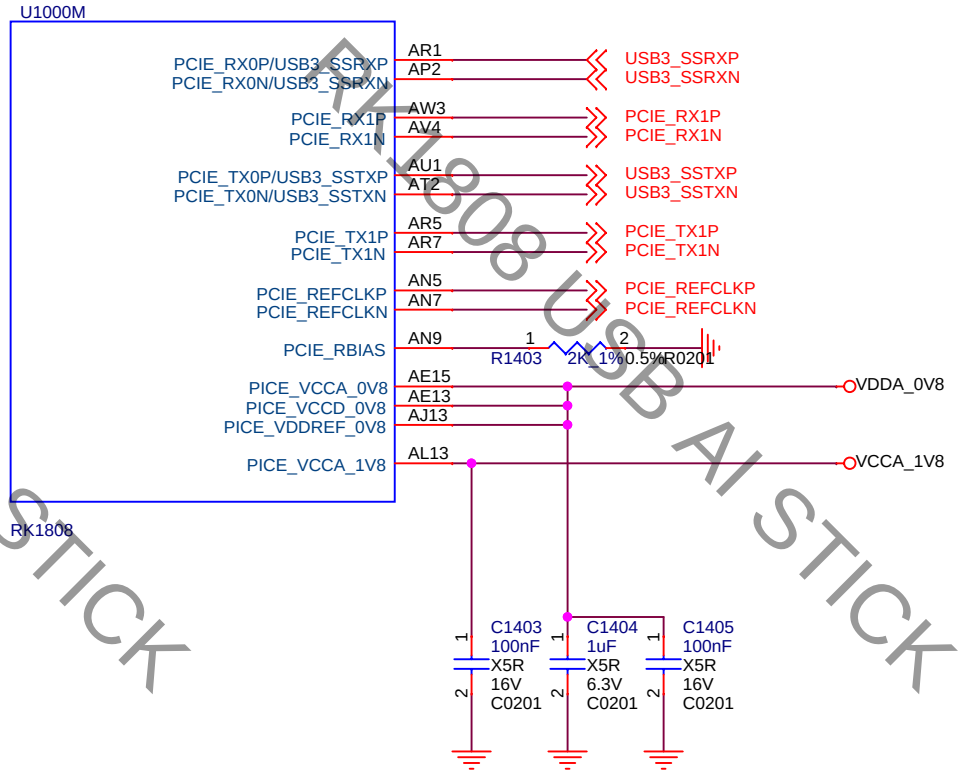
USB Controller

TOYBRICK YAPAZ ZEKA İŞLEME MODULU USB SİSTEM

02/24/2024 02:09 PM



PCIE Controller



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Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**14.RK1808 USB/PCIE Controller**		
Date:	Thursday, September 19, 2019	Rev:	
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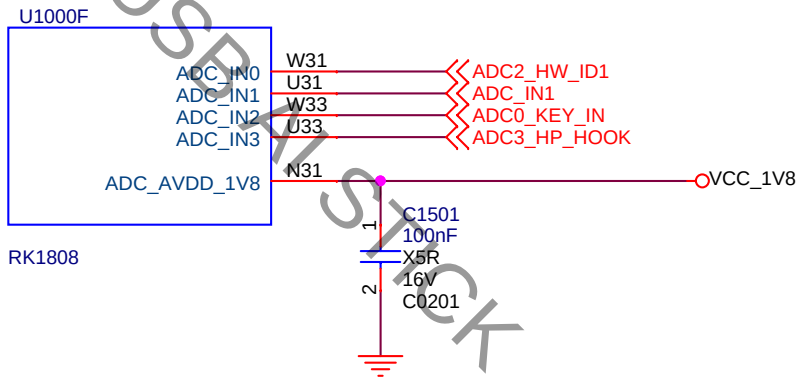
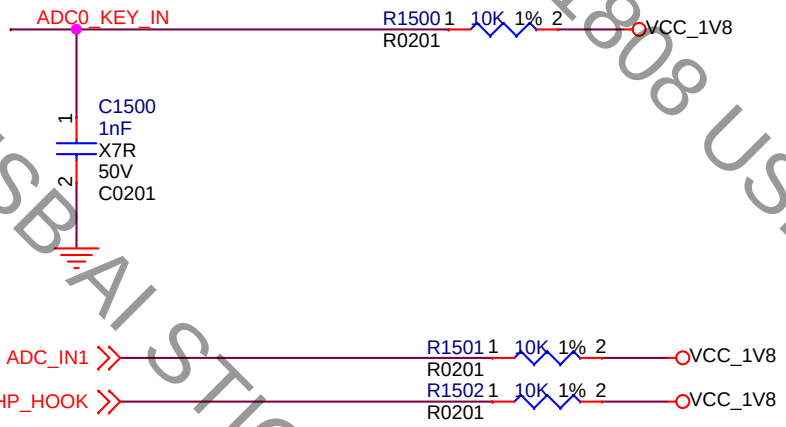
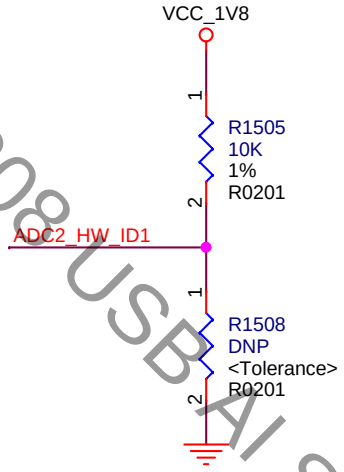
SARADC/KEY





Key Name	SARADC
VOL+/RECOVERY	10
VOL-	170



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Project:	SOEdge Schematic 20190919 ver 2.0
File:	**15.RK1808 SARADC/KEY**
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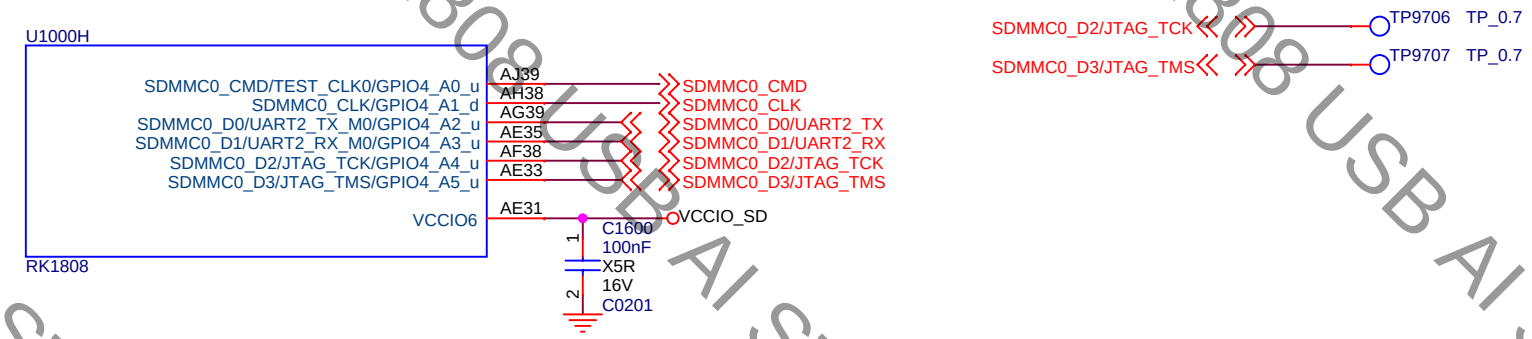
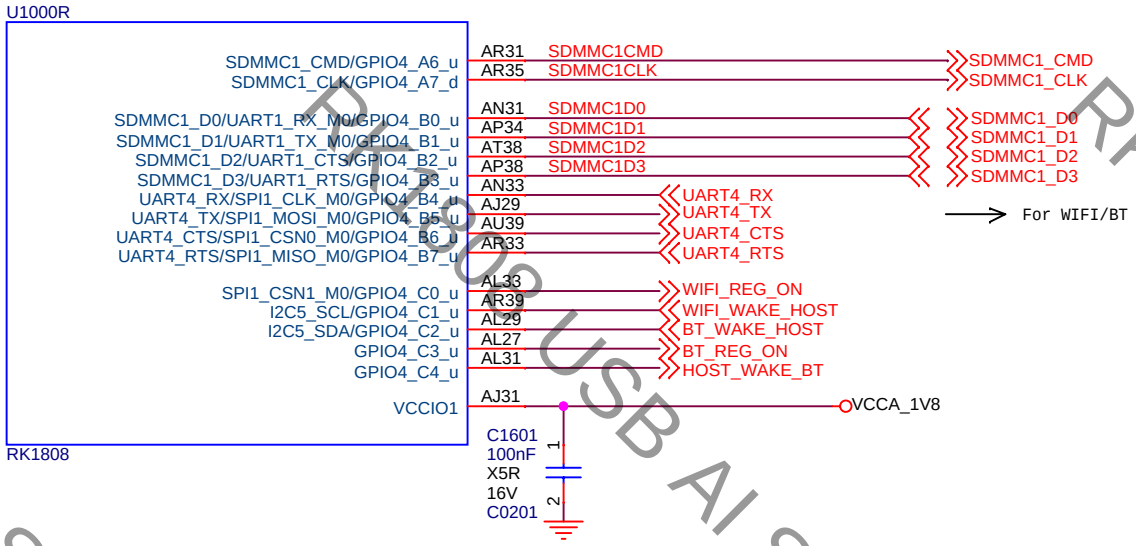
SDMMC0 Controller



SDMMC1 Controller



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Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**16.RK1808 SDMMC0/SDMMC1**		
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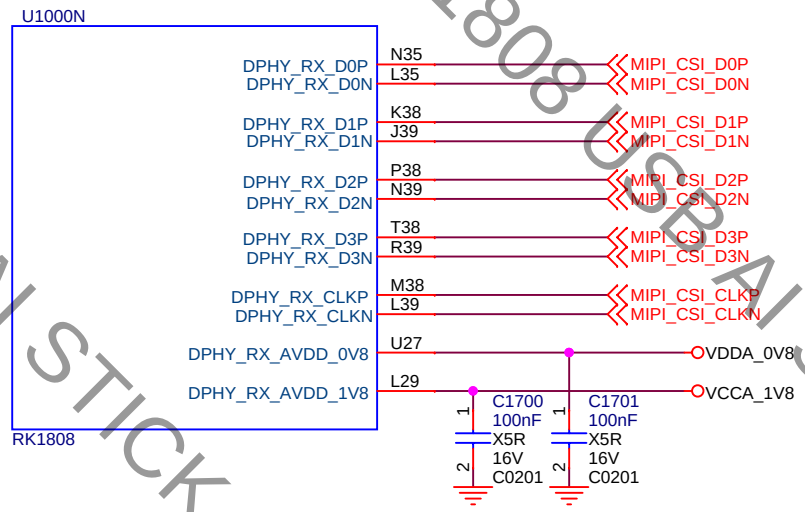
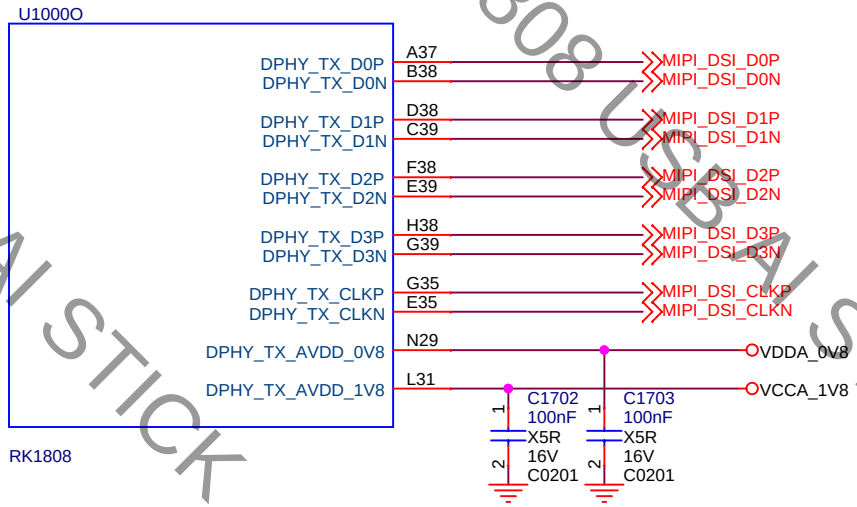
MIPI CSI Controller



MIPI DSI Controller



PINE64	PINE64		
Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**17.RK1808 MIPI DSI/CSI**		
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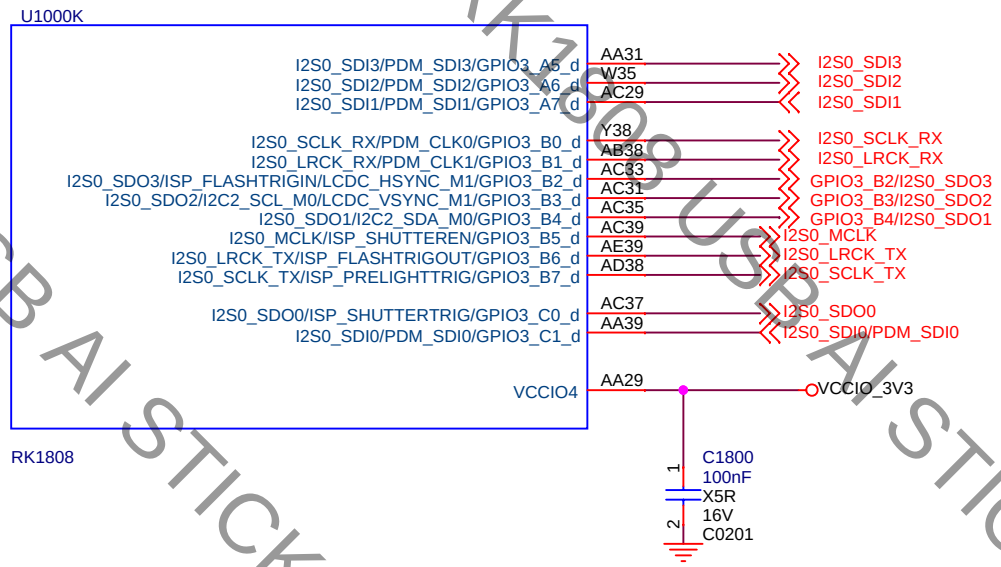
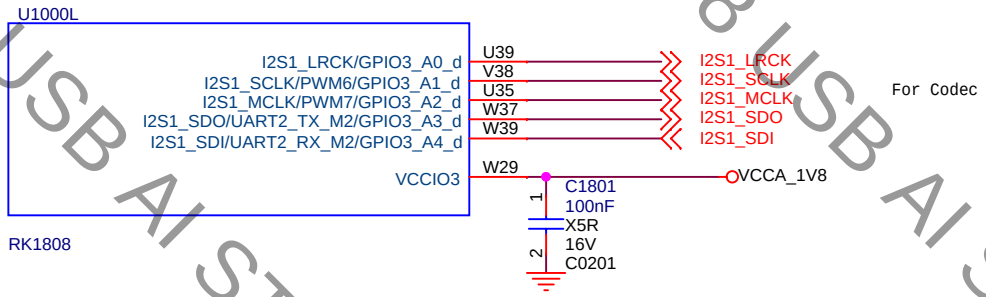
I2S0 Controller



I2S1 Controller



PINE64	**PINE64**		
Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**18.RK1808 I2S0/I2S1**		
Date:	Thursday, September 19, 2019	Rev:	
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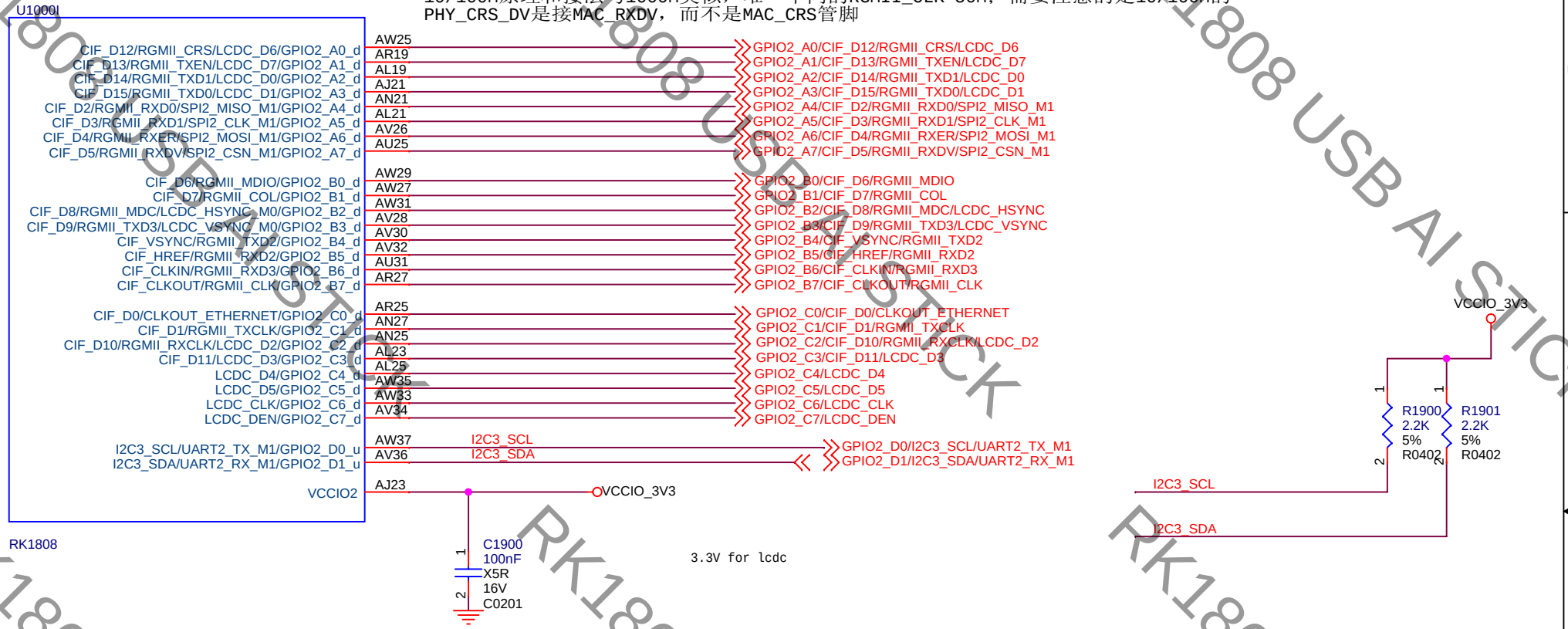
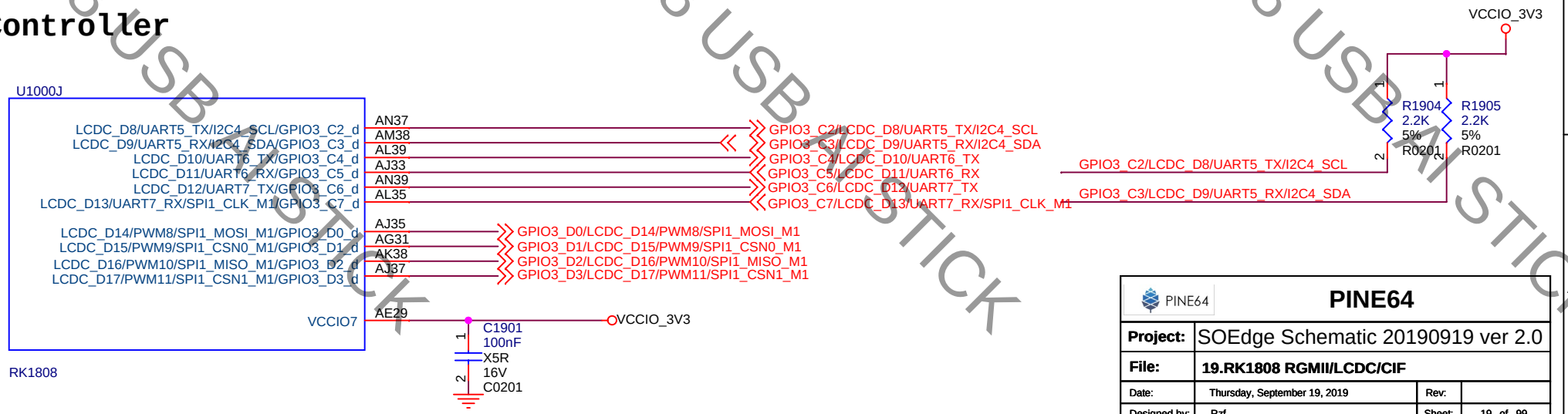
CIF/RGMII/LCDC Controller

10/100M原理和接法与1000M类似，唯一不同的RGMII_CLK=50M；需要注意的是10/100M的PHY_CRS_DV是接MAC_RXDV，而不是MAC_CRS管脚



LCDC Controller



PINE64	**PINE64**		
Project:	SOEdge Schematic 20190919 ver 2.0		
File:	**19.RK1808 RGMII/LCDC/CIF**		
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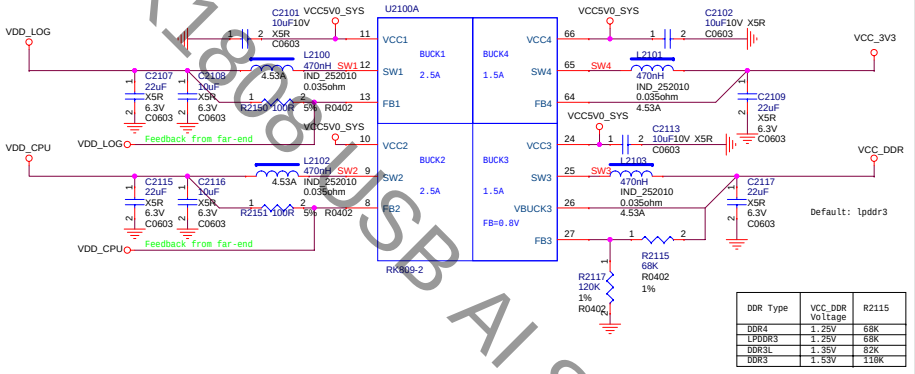
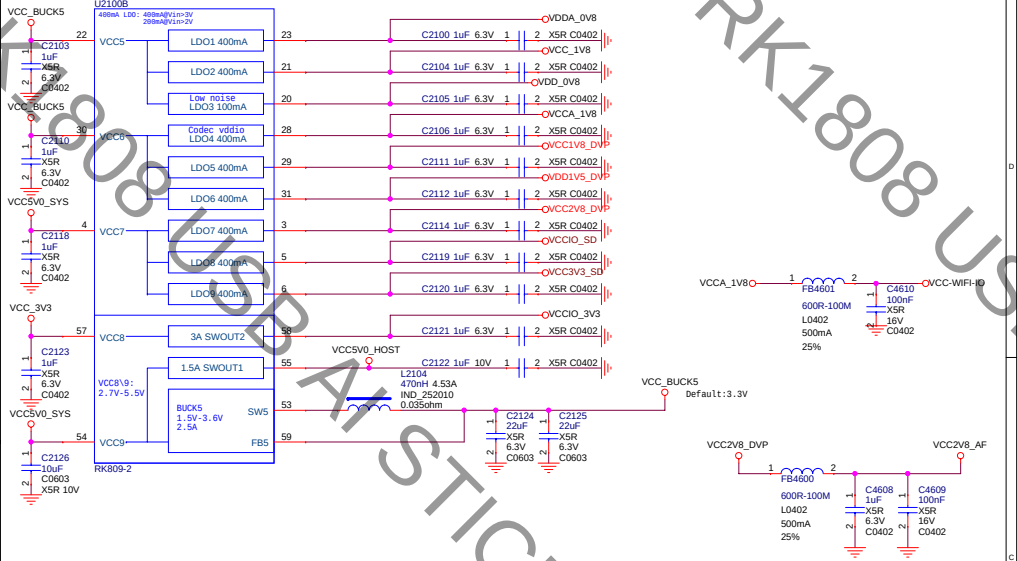
PMIC RK809-1 DCDC

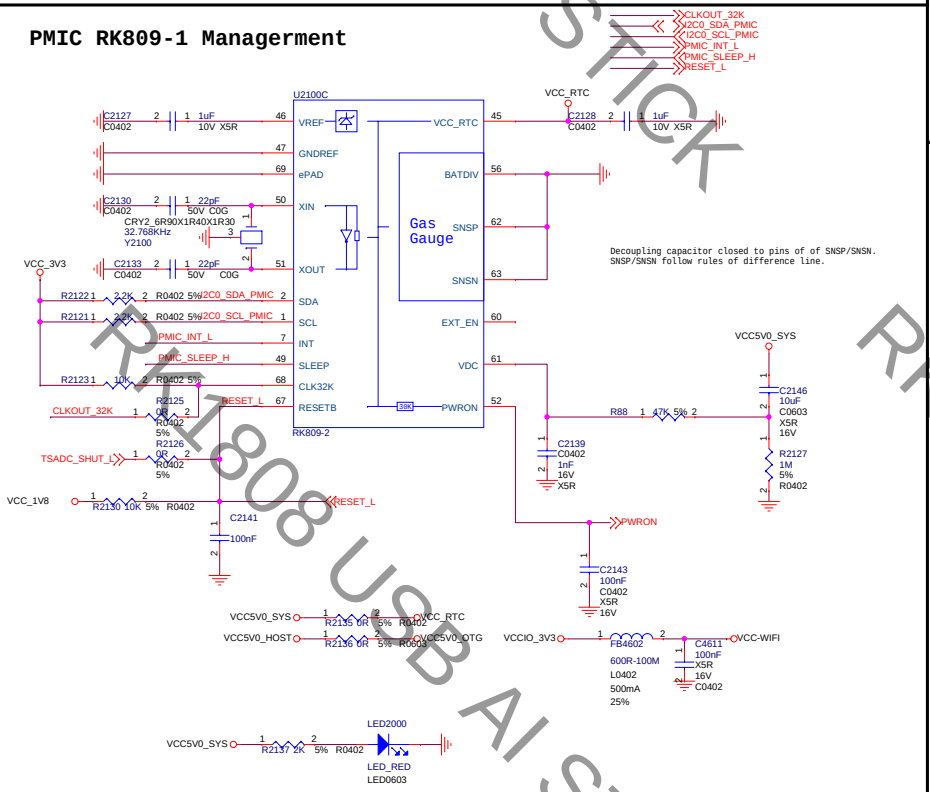


DDR Type	VCC_DDR Voltage	R2115
DDR4	1.25V	68K
LPDDR3	1.25V	68K
DDR3L	1.35V	82K
DDR3	1.53V	118K

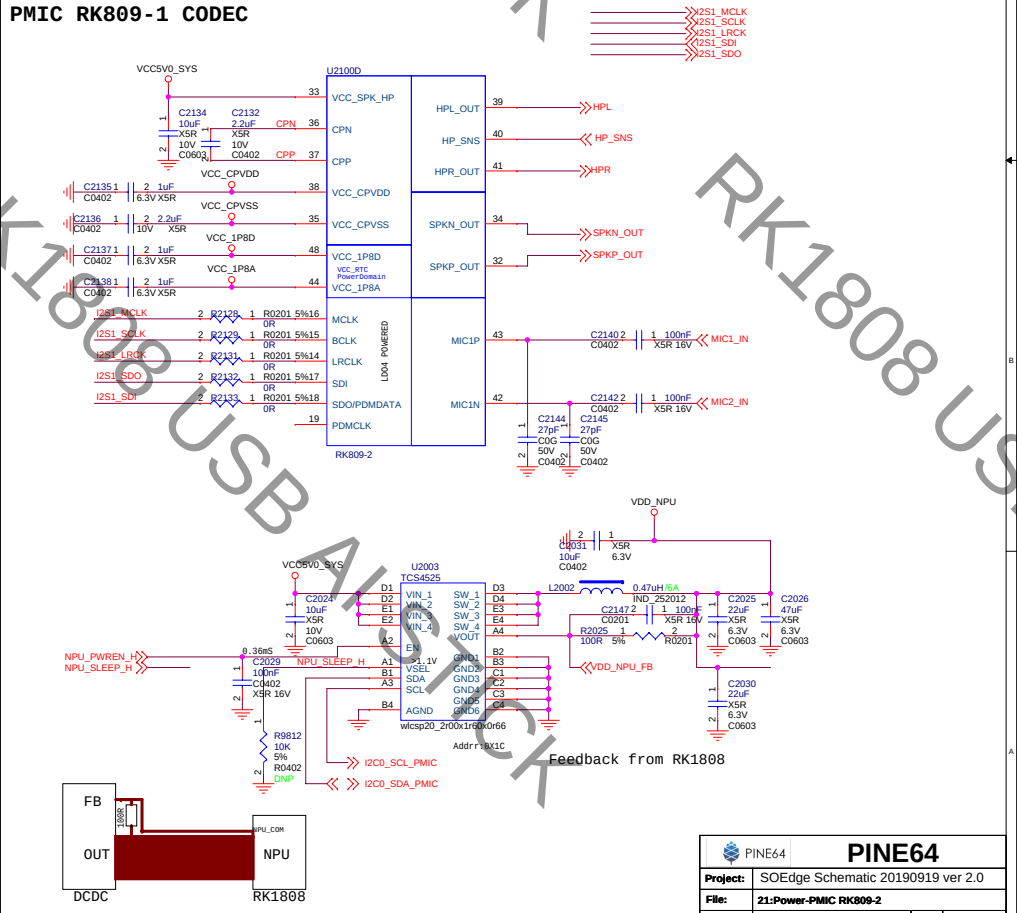
PMIC RK809-1 LDO



PMIC RK809-1 Managerment



PMIC RK809-1 CODEC



Project:	SOEdge Schematic 20190919 ver 2.0
File:	21:Power-PMIC RK809-2
Date:	Thursday, September 19, 2019
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Designed by:	Rzf
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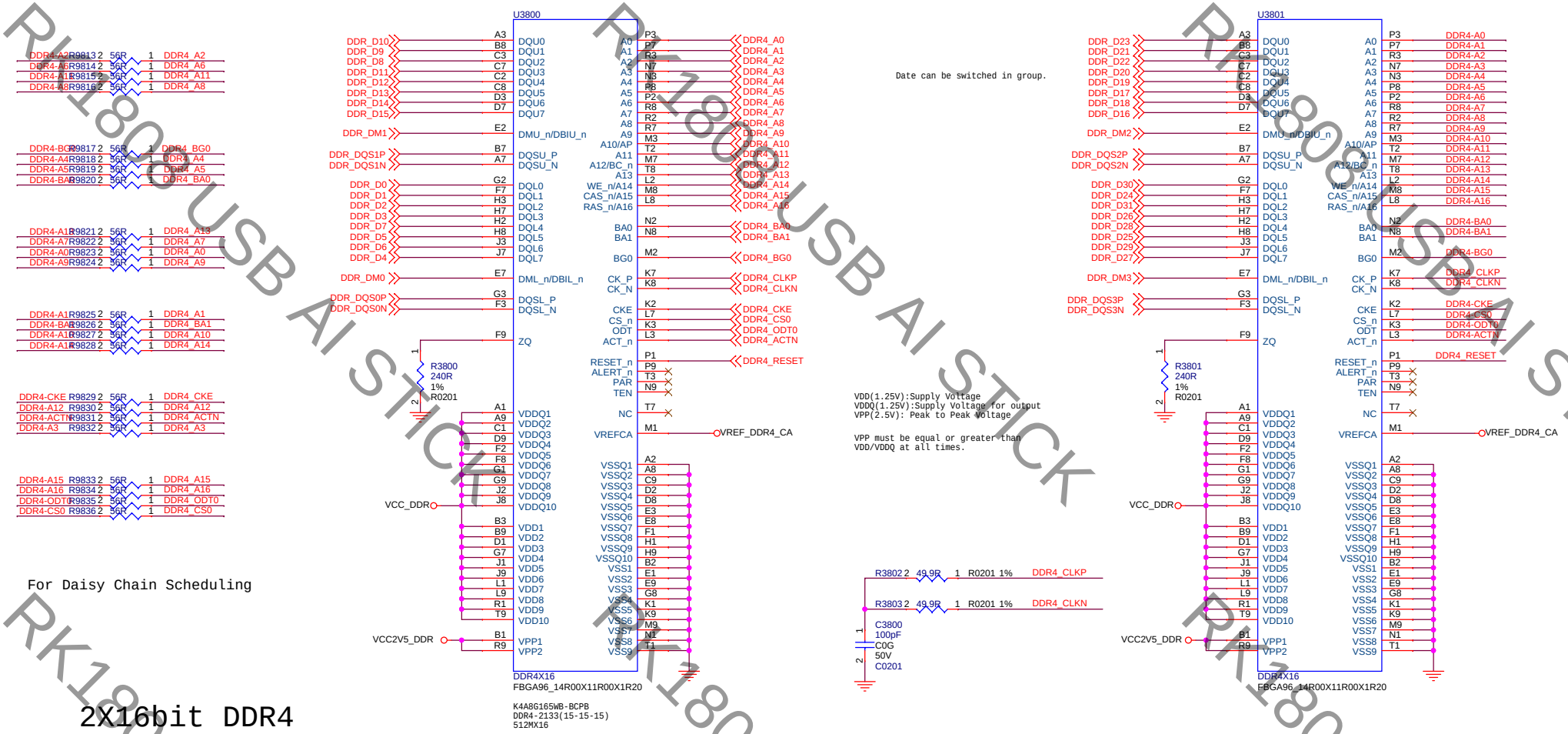
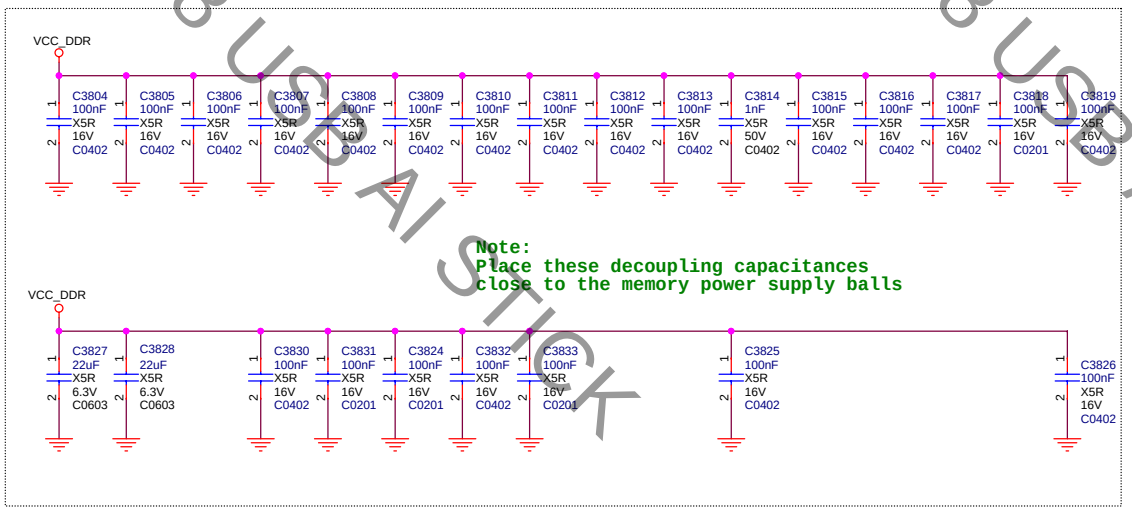
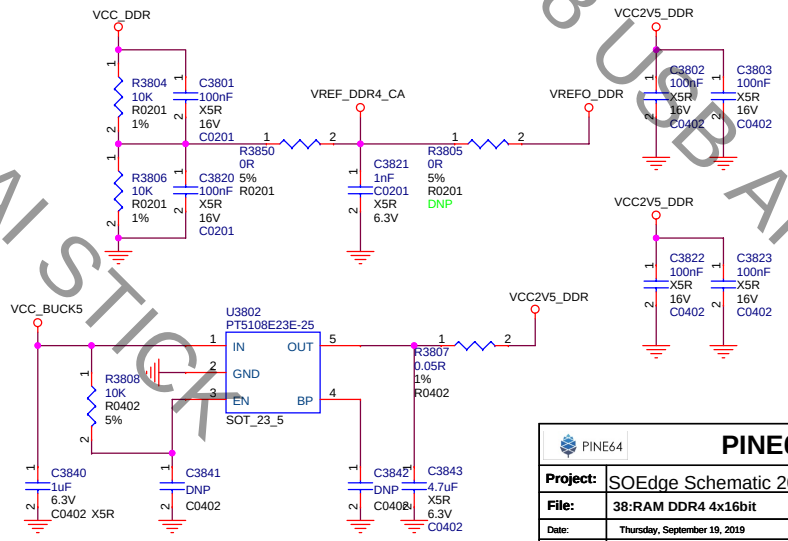
PINE64 **PINE64**







Remind: Refer to the latest AVL for parts selection.

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File:	38:RAM DDR4 4x16bit
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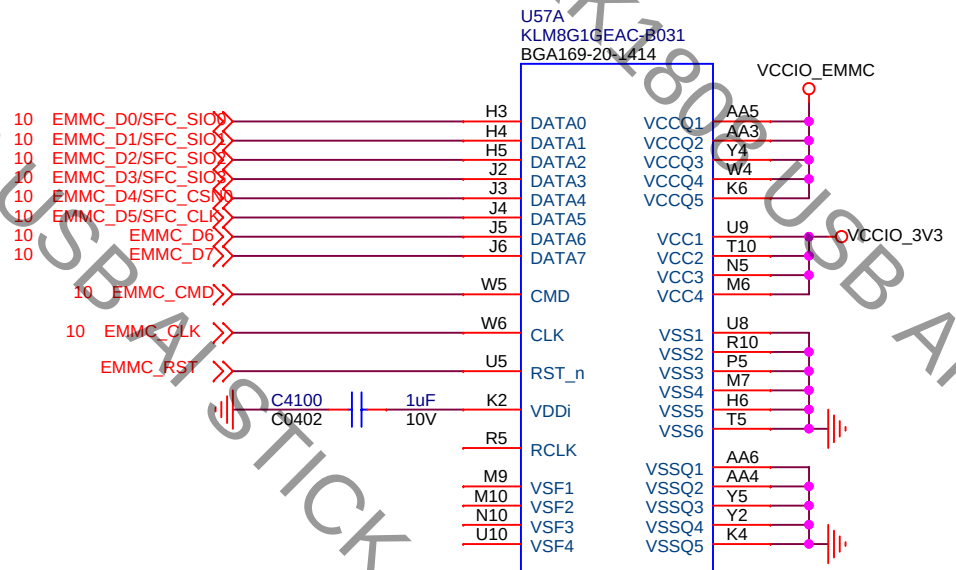
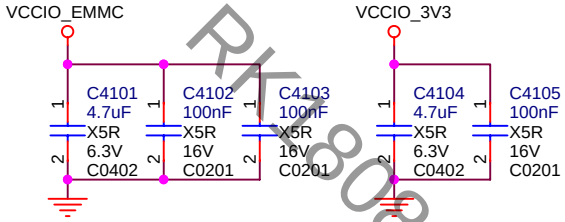
eMMC





Remind: Refer to the latest AVL for parts selection.

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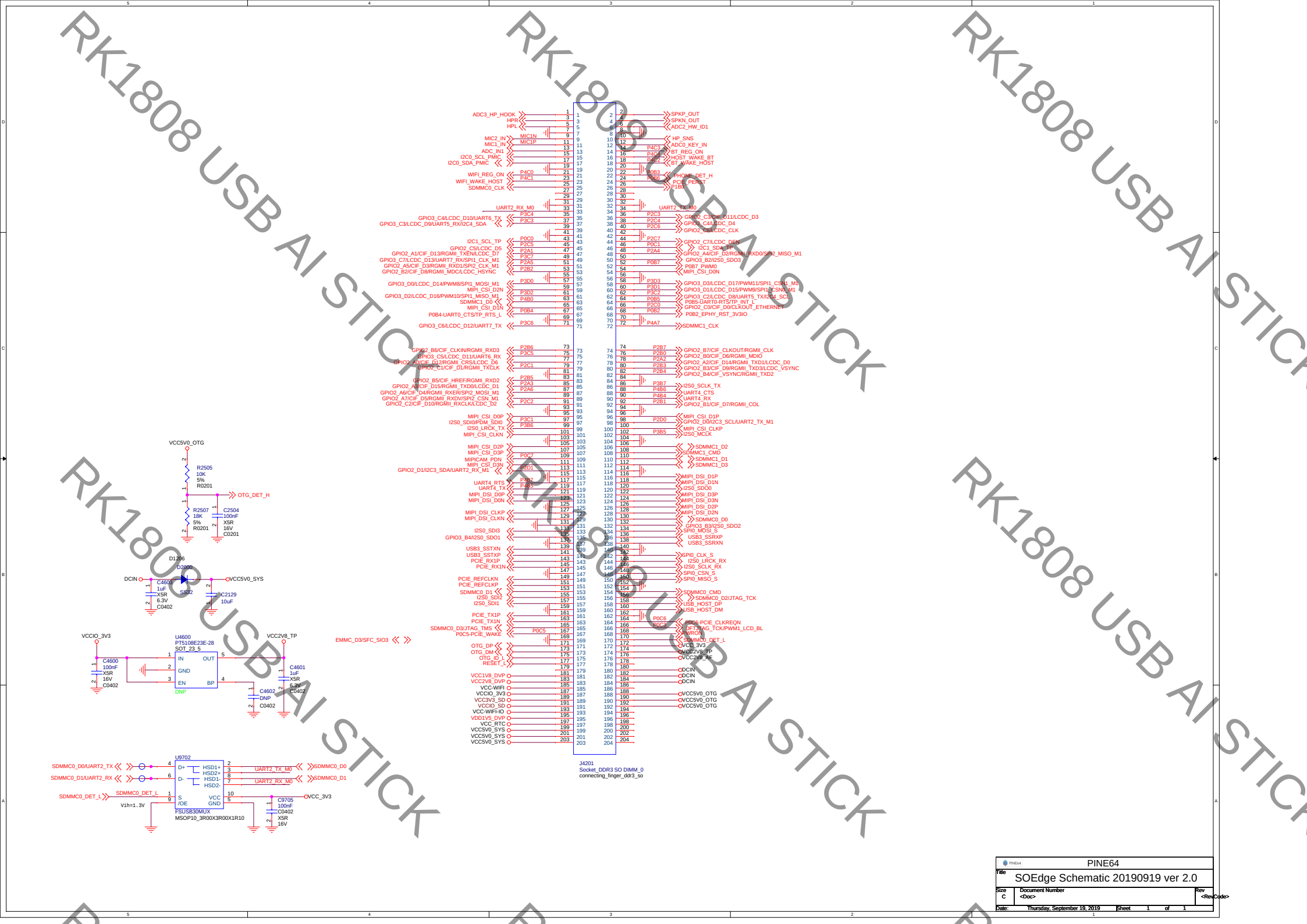

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