


# RV1126\_RV1109\_USB\_AI\_Camera\_DEMO\_DDR3P216DD4\_V12\_20200820

## Main Functions Introduction

- 01) Power: Discrete power supply
- 02) DRAM: DDR3 4Gb x 2
- 03) ROM: eMMC 8GB/SPI nand 512MB
- 04) Support USB2.0 OTG
- 05) Support MIPI CSI RX
- 06) Support Motor Dricer Control
- 07) Support Option MIC Array
- 08) Support Debug

 瑞芯微电子		Rockchip Electronics Co., Ltd	
Project:	RV1126_RV1109 AI Camera		
File:	00.Cover Page		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 1 of 28

[illegible]

## Note

### 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

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

**Header:**

Item	Part	Description	PCB Footprint	Reference	Quantity	Option
1	100-01	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R1	100	
2	100-02	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R2	100	
3	100-03	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R3	100	
4	100-04	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R4	100	
5	100-05	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R5	100	
6	100-06	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R6	100	
7	100-07	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R7	100	
8	100-08	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R8	100	
9	100-09	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R9	100	
10	100-10	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R10	100	
11	100-11	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R11	100	
12	100-12	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R12	100	
13	100-13	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R13	100	
14	100-14	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R14	100	
15	100-15	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R15	100	
16	100-16	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R16	100	
17	100-17	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R17	100	
18	100-18	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R18	100	
19	100-19	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R19	100	
20	100-20	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R20	100	
21	100-21	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R21	100	
22	100-22	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R22	100	
23	100-23	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R23	100	
24	100-24	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R24	100	
25	100-25	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R25	100	
26	100-26	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R26	100	
27	100-27	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R27	100	
28	100-28	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R28	100	
29	100-29	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R29	100	
30	100-30	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R30	100	
31	100-31	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R31	100	
32	100-32	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R32	100	
33	100-33	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R33	100	
34	100-34	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R34	100	
35	100-35	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R35	100	
36	100-36	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R36	100	
37	100-37	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R37	100	
38	100-38	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R38	100	
39	100-39	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R39	100	
40	100-40	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R40	100	
41	100-41	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R41	100	
42	100-42	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R42	100	
43	100-43	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R43	100	
44	100-44	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R44	100	
45	100-45	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R45	100	
46	100-46	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R46	100	
47	100-47	Resistor, 100 Ohms, 1/4W, 5% Tol	0603	R47	100	
48	100-48	Resistor, 100 Ohms, 1/4W, 5% Tol				

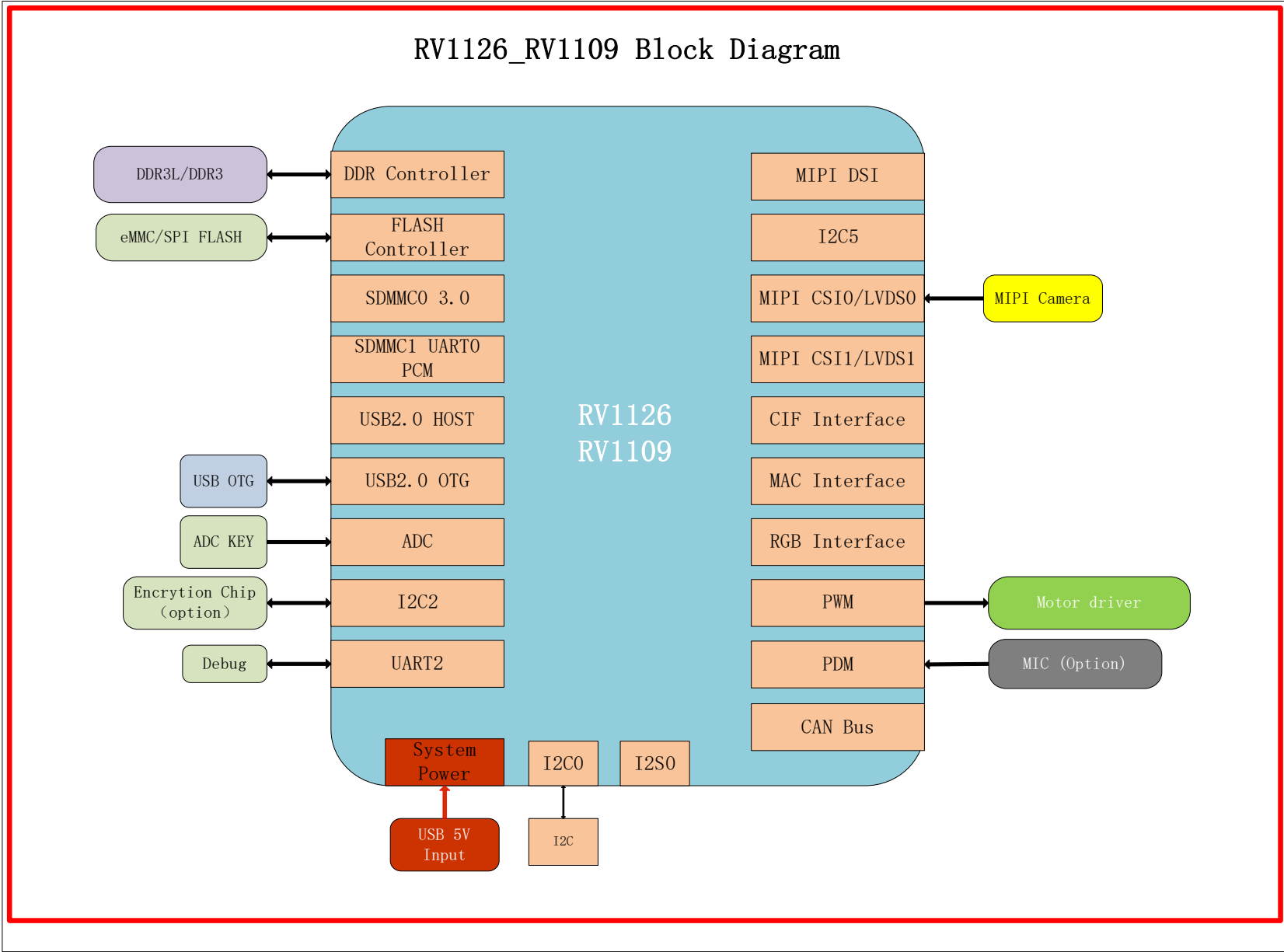
### Combined property string:

Item	Value	Description	PCB Footprint	Reference	Quantity	Option
1	100	Resistor 10k	0603	R10K	100	Standard
2	50	Capacitor 100nF	0603	C100N	50	Standard
3	20	IC: 74VHC00	SOIC8	U1	20	Standard
4	10	IC: 74VHC125	SOIC8	U2	10	Standard
5	5	IC: 74VHC04	SOIC8	U3	5	Standard
6	1	IC: 74VHC00	SOIC8	U4	1	Standard
7	1	IC: 74VHC125	SOIC8	U5	1	Standard
8	1	IC: 74VHC04	SOIC8	U6	1	Standard
9	1	IC: 74VHC00	SOIC8	U7	1	Standard
10	1	IC: 74VHC125	SOIC8	U8	1	Standard
11	1	IC: 74VHC04	SOIC8	U9	1	Standard
12	1	IC: 74VHC00	SOIC8	U10	1	Standard
13	1	IC: 74VHC125	SOIC8	U11	1	Standard
14	1	IC: 74VHC04	SOIC8	U12	1	Standard
15	1	IC: 74VHC00	SOIC8	U13	1	Standard
16	1	IC: 74VHC125	SOIC8	U14	1	Standard
17	1	IC: 74VHC04	SOIC8	U15	1	Standard
18	1	IC: 74VHC00	SOIC8	U16	1	Standard
19	1	IC: 74VHC125	SOIC8	U17	1	Standard
20	1	IC: 74VHC04	SOIC8	U18	1	Standard
21	1	IC: 74VHC00	SOIC8	U19	1	Standard
22	1	IC: 74VHC125	SOIC8	U20	1	Standard
23	1	IC: 74VHC04	SOIC8	U21	1	Standard
24	1	IC: 74VHC00	SOIC8	U22	1	Standard
25	1	IC: 74VHC125	SOIC8	U23	1	Standard
26	1	IC: 74VHC04	SOIC8	U24	1	Standard
27	1	IC: 74VHC00	SOIC8	U25	1	Standard
28	1	IC: 74VHC125	SOIC8	U26	1	Standard
29	1	IC: 74VHC04	SOIC8	U27	1	Standard
30	1	IC: 74VHC00	SOIC8	U28	1	Standard
31	1	IC: 74VHC125	SOIC8	U29	1	Standard
32	1	IC: 74VHC04	SOIC8	U30	1	Standard
33	1	IC: 74VHC00	SOIC8	U31	1	Standard
34	1	IC: 74VHC125	SOIC8	U32	1	Standard
35	1	IC: 74VHC04	SOIC8	U33	1	Standard
36	1	IC: 74VHC00	SOIC8	U34	1	Standard
37	1	IC: 74VHC125	SOIC8	U35	1	Standard
38	1	IC: 74VHC04	SOIC8	U36	1	Standard
39	1	IC: 74VHC00	SOIC8	U37	1	Standard
40	1	IC: 74VHC125	SOIC8	U38	1	Standard
41	1	IC: 74VHC04	SOIC8	U39	1	Standard
42	1	IC: 74VHC00	SOIC8	U40	1	Standard
43	1	IC: 74VHC125	SOIC8	U41	1	Standard
44	1	IC: 74VHC04	SOIC8	U42	1	Standard
45	1	IC: 74VHC00	SOIC8	U43	1	Standard
46	1	IC: 74VHC125	SOIC8	U44	1	Standard
47	1	IC: 74VHC04	SOIC8	U45	1	Standard
48	1	IC: 74VHC00	SOIC8	U46	1	Standard
49	1	IC: 74VHC125	SOIC8	U47	1	Standard
50	1	IC: 74VHC04	SOIC8	U48	1	Standard
51	1	IC: 74VHC00	SOIC8	U49	1	Standard
52	1	IC: 74VHC125	SOIC8	U50	1	Standard
53	1	IC: 74VHC04	SOIC8	U51	1	Standard
54	1	IC: 74VHC00	SOIC8	U52	1	Standard
55	1	IC: 74VHC125	SOIC8	U53	1	Standard
56	1	IC: 74VHC04	SOIC8	U54	1	Standard
57	1	IC: 74VHC00	SOIC8	U55	1	Standard
58	1	IC: 74VHC125	SOIC8	U56	1	Standard
59						

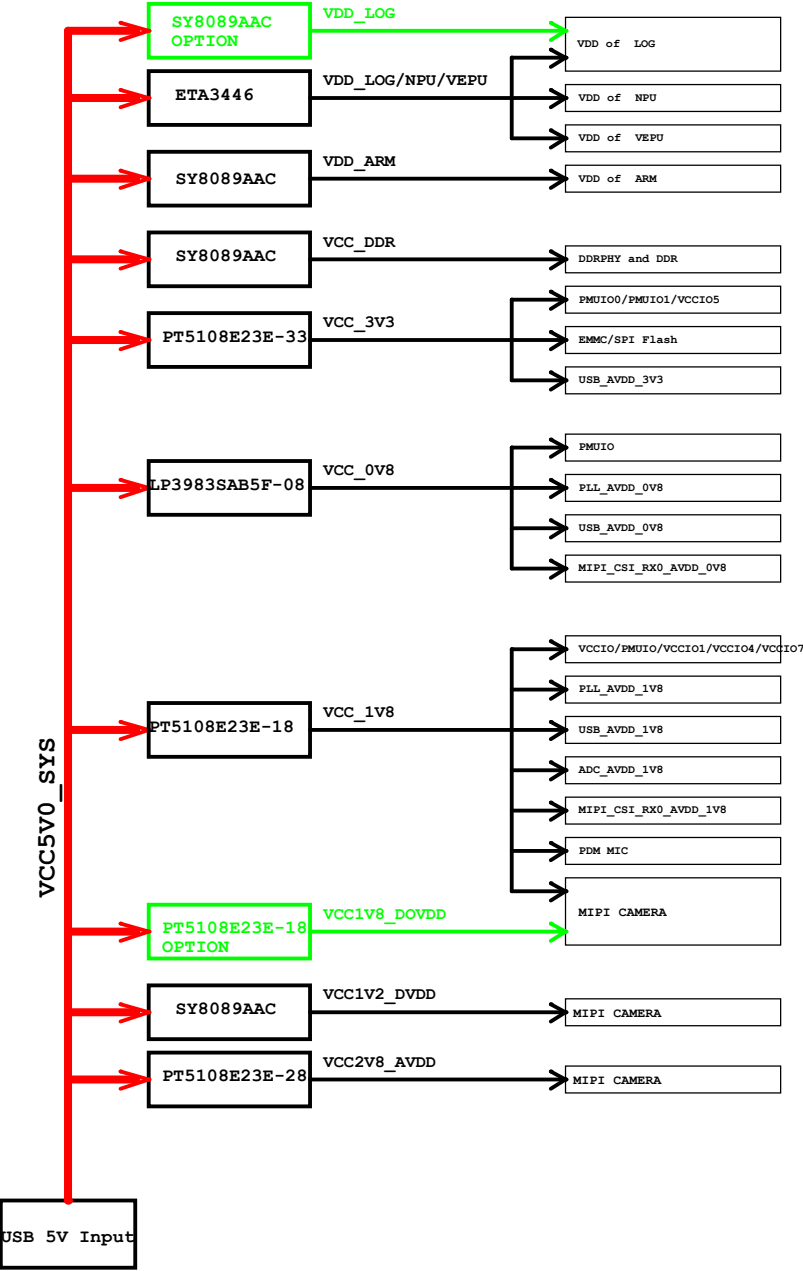
Diagram illustrating the structure of a note:

- Note (Red dashed border)
- Option (Green dashed border)
- Description (Black dashed border)

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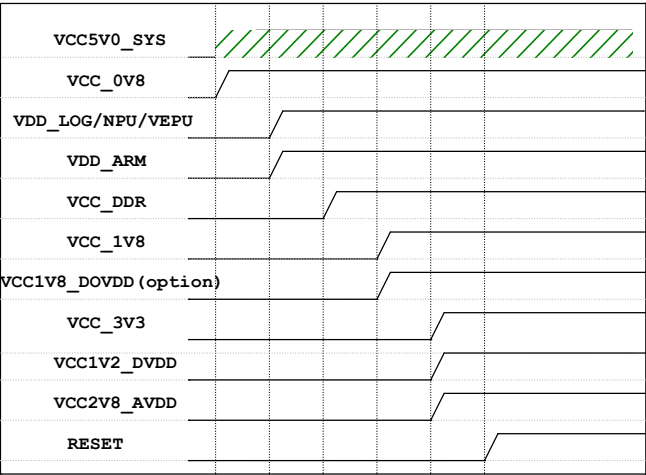


Power Diagram



Power-on Sequence

Power Name	PMIC Channel	Time Slot (step 6ms)	Default voltage	Supply Limit	Default ON/OFF	Sleep ON/OFF	Peak Current	Sleep Current
VCC_0V8	LDO	Slot: 1	0.8V	0.4A	ON	ON		
VDD_LOG/NPU/VEPU	BUCK	Slot: 2	0.825V	3.0A	ON	ON		
VDD_ARM	BUCK	Slot: 2	0.824V	2.0A	ON	ON		
VCC_DDR	BUCK	Slot: 3	1.35V	1.0A	ON	ON		
VCC_1V8	LDO	Slot: 4	1.8V	0.5A	ON	ON		
VCC1V8_D0VDD(option)	LDO	Slot: 4	1.8V	0.5A	ON	ON		
VCC_3V3	LDO	Slot: 5	3.3V	0.5A	ON	ON		
VCC1V2_DVDD	BUCK	Slot: 5	1.2V	1.0A	ON	ON		
VCC2V8_AVDD	LDO	Slot: 5	2.8V	0.5A	ON	ON		



# I2C MAP

**RV1126**  
**RV1109**

I2C0

I2C1

I2C1\_SCL  
I2C1\_SDA

Pull-up voltage:1.8V  
Rate: TBD

MIPI camera  
I2C add = TBD

I2C2

I2C2\_SCL  
I2C2\_SDA

Pull-up voltage:3.3V  
Rate: TBD

Encrytion Chip  
I2C add = TBD

M0

I2C3

M1

M2

M0

I2C4

M1

M0

I2C5\_SCL\_M0  
I2C5\_SDA\_M0

Pull-up voltage:3.3V  
Rate: TBD

MIC Array(Optional)  
I2C add = TBD

I2C5

M1

M2

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Project:	RV1126_RV1109 AI Camera						
File:	05.I2C MAP						
Date:	Thursday, August 20, 2020				Rev:	V1.2	
Designed by:	whb	Reviewed by:		Sheet:	6	of 28	

# IO Power Domain Map

IO Domain	IO Group	Support of IO Voltage		Default Actual assigned IO Domain Voltage			Notes
		1.8V	3.3V	Net Name of Power Supply	Power Source	Voltage	
PMUIO0	<b><i>GPIO0A</i></b>	✓	✓	VCC_3V3		3.3V	
PMUIO1	<b><i>GPIO0BC</i></b>	✓	✓	VCC_3V3		3.3V	
VCCIO1	<b><i>GPIO0CD/GPIO1A</i></b>	✓	✓	VCCIO_FLASH		1.8/3.3V	<i>GPIO0_B3/FLASH_VOL_SEL pin defined as a set pin for VCCIO1 voltage domain after power-on reset.It is pull-up for 1.8V</i>
VCCIO2	<b><i>GPIO1AB</i></b>	✓	✓	NC			
VCCIO3	<b><i>GPIO1BCD</i></b>	✓	✓	NC			
VCCIO4	<b><i>GPIO1D/GPIO2A</i></b>	✓	✓	VCC_1V8		1.8V	
VCCIO5	<b><i>GPIO2ABCD/GPIO3A</i></b>	✓	✓	VCC_3V3		3.3V	
VCCIO6	<b><i>GPIO3ABC</i></b>	✓	✓	NC			
VCCIO7	<b><i>GPIO3D/GPIO4A</i></b>	✓	✓	VCC_1V8		1.8V	

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Project:	RV1126_RV1109 AI Camera		
File:	06.IO Power Domain Map		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 7 of 28

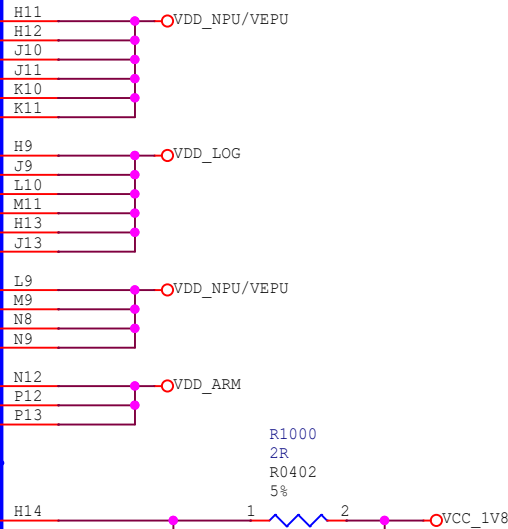
U1000N  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90

### NPU/LOGIC/VEPU/ARM Power

NPU\_VDD\_1 H11  
NPU\_VDD\_2 H12  
NPU\_VDD\_3 J10  
NPU\_VDD\_4 J11  
NPU\_VDD\_5 K10  
NPU\_VDD\_6 K11  
  
LOGIC\_VDD\_1 H9  
LOGIC\_VDD\_2 J9  
LOGIC\_VDD\_3 L10  
LOGIC\_VDD\_4 M11  
LOGIC\_VDD\_5 H13  
LOGIC\_VDD\_6 J13  
  
VEPU\_VDD\_1 L9  
VEPU\_VDD\_2 M9  
VEPU\_VDD\_3 N8  
VEPU\_VDD\_4 N9  
  
ARM\_VDD\_1 N12  
ARM\_VDD\_2 P12  
ARM\_VDD\_3 P13

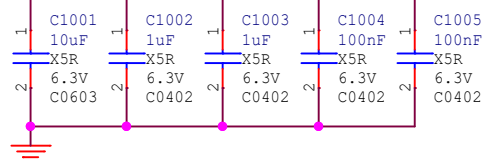
### Supply for VCCIO1~7 Power

VCCIO\_VDD\_1V8



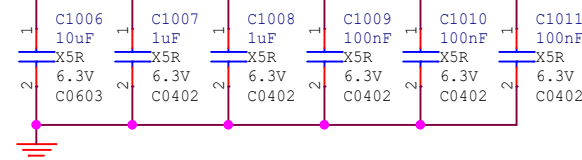
VDD\_LOG

Close to VDD\_LOG



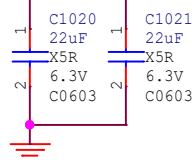
VDD\_NPU/VEPU

Close to VDD\_NPU



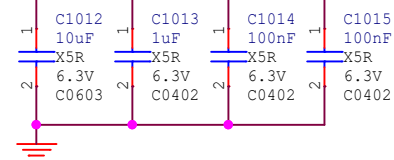
VDD\_NPU/VEPU

Close to SOC



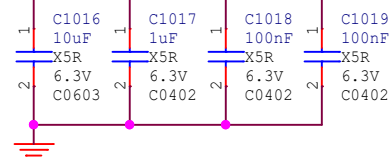
VDD\_ARM

Close to VDD\_ARM



VDD\_NPU/VEPU

Close to VDD\_VEPU

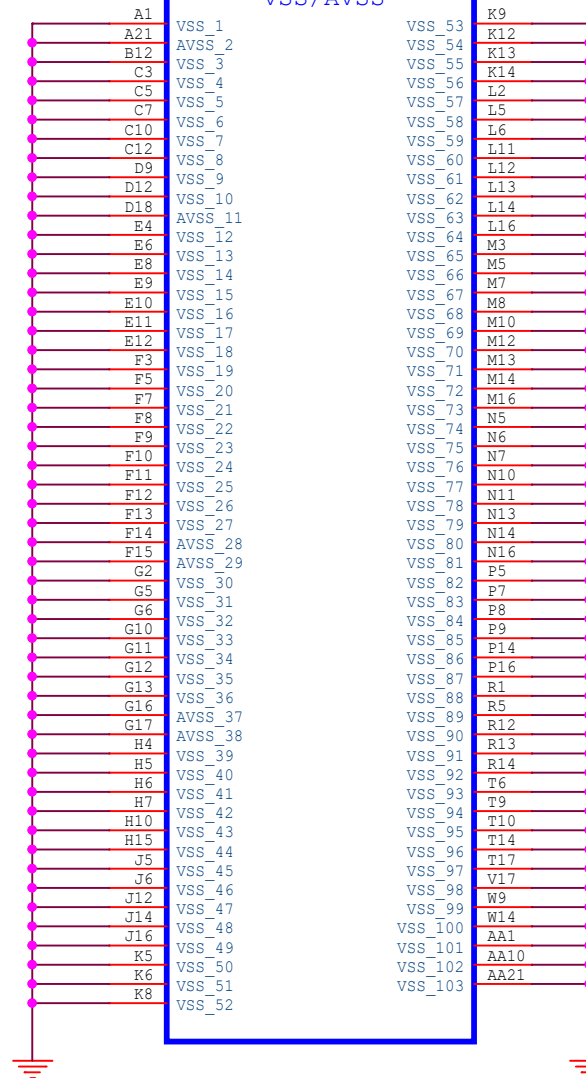


## Power

## GND

U10000  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90

### VSS/AVSS



Rockchip Electronics Co., Ltd

Project:	RV1126_RV1109 AI Camera		
File:	10.RV1126/1109_Power/GND		
Date:	Tuesday, September 08, 2020	Rev:	V1.2
Designed by:	whb	Reviewed by:	
		Sheet:	8 of 28



# OSC/PLL/PMUIO

U1000K  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90

## OSC/PLL

XOUT24M

XIN24M

PLL\_AVDD\_0V8  
PLL\_AVDD\_1V8

## Digital Power of PMUIO0&PMUIO1

PMUIO\_VDD\_0V8  
PMUIO\_VDD\_1V8

## PMUIO0 Domain

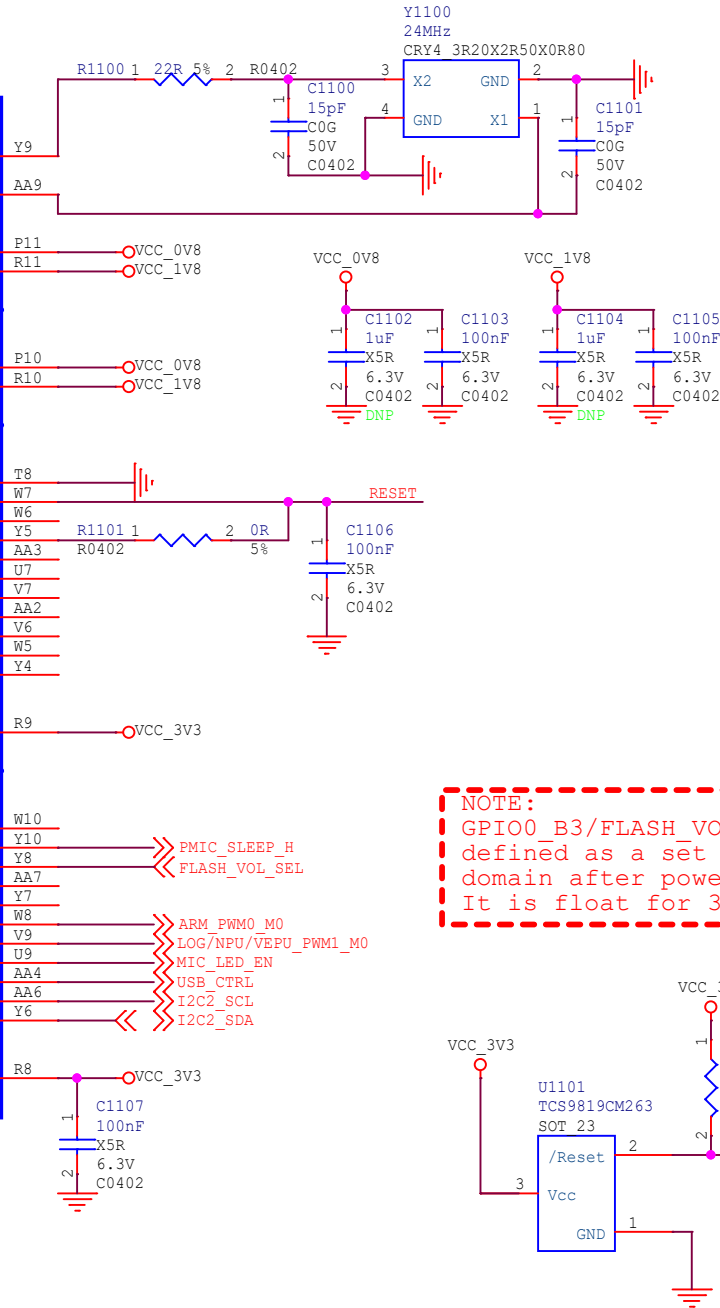
TVSS	T8
nPOR u	W7
CLK REF	GPIO0 A0 d
GPIO0 A1 z	Y5
TSADC SHUT M0	TSADC SHUTORG
CLKI CLK0 32K	GPIO0 A2 z
SDMMC0 DET	GPIO0 A3 u
SPI0 CSIn M0	GPIO0 A4 u
SPI0 CSOn M0	GPIO0 A5 u
SPI0 MOSI M0	GPIO0 A6 d
SPI0 MISO M0	GPIO0 A7 d
SPI0 CLK M0	GPIO0 B0 d

PMUIO0\_VDD

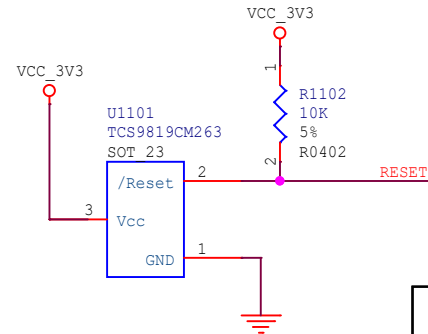
## PMUIO1 Domain

PMIC INT	PWM7 IR M0	GPIO0 B1 d	W10
TSADC SHUT M1	PMIC_SLEEP	GPIO0 B2 d	Y10
FLASH_VOL_SEL	PWM6 M0	GPIO0 B3 d	Y8
I2C0_SCL		GPIO0 B4 d	AA7
I2C0_SDA		GPIO0 B5 d	Y7
UART1 TX M0	PWM0 M0	GPIO0 B6 d	W8
UART1 RX M0	PWM1 M0	GPIO0 B7 d	V9
SDMMC0_PWR	UART1 RTSN M0	GPIO0 C0 d	U9
PMU_DEBUG	UART1 CTSN M0	GPIO0 C1 d	AA4
I2C2_SCL	PWM3 IR M0	GPIO0 C2 d	AA6
I2C2_SDA	PWM4 M0	GPIO0 C3 d	Y6
	PWM5 M0	GPIO0 C3 d	


PMUIO1\_VDD



NOTE:  
GPIO0 B3/FLASH\_VOL\_SEL pin  
defined as a set pin for VCCIO1 voltage  
domain after power-on reset. It is pull-up for 1.8V.  
It is float for 3.3V.

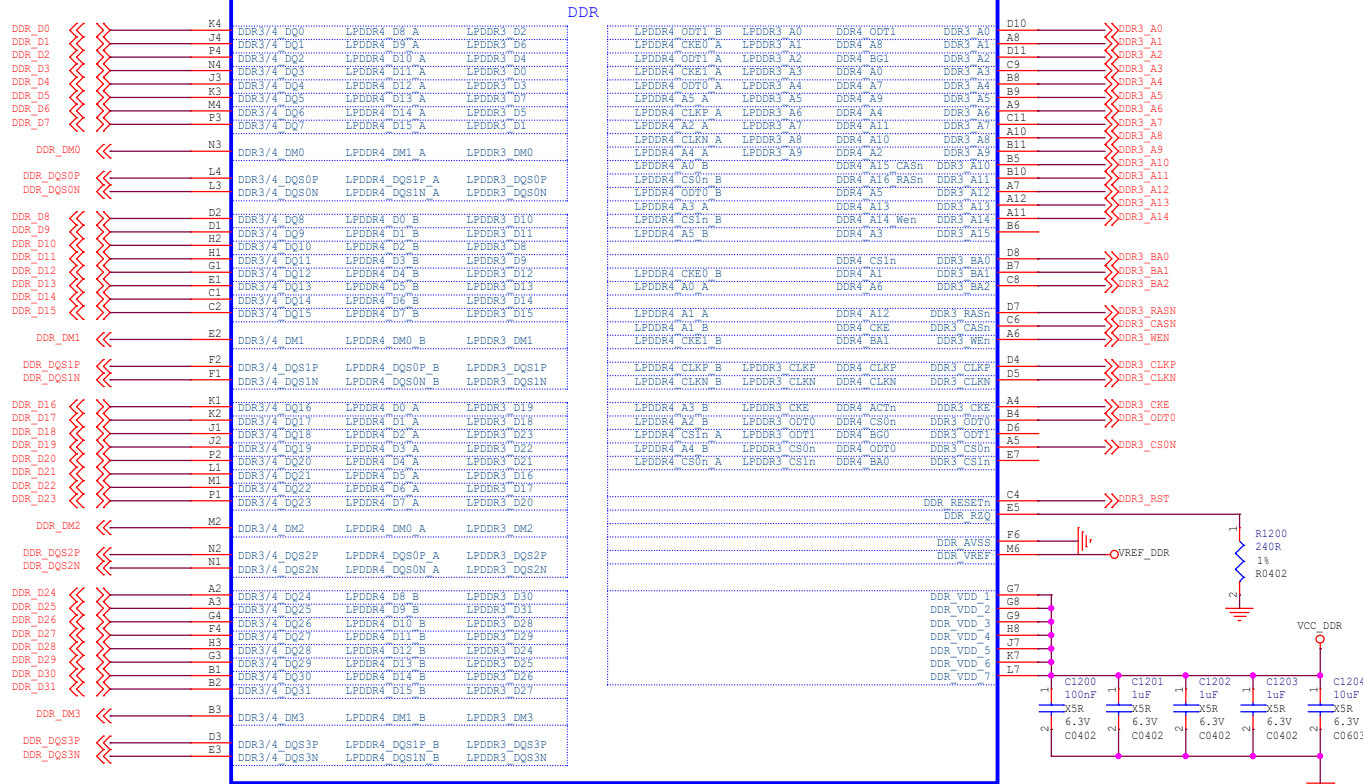


RESET IC

 瑞芯微电子		Rockchip Electronics Co., Ltd	
Project:	RV1126_RV1109 AI Camera		
File:	11.RV1126/1109_OSC/PLL/PMUIO		
Date:	Monday, August 24, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 9 of 28

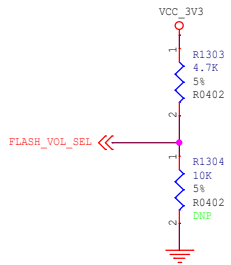
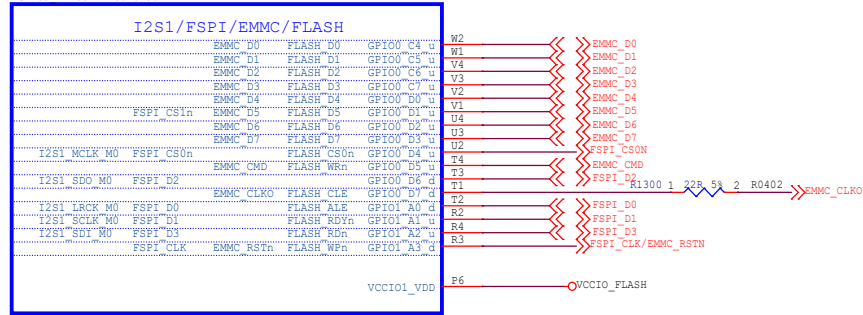
# DDR Controller

U1000A  
RV1126 RV1109  
BGA409 14R00X14R00X0R90



## EMMC/FLASH

U1000L  
RV1126 RV1109  
BGA409 14R00X14R00X0R90

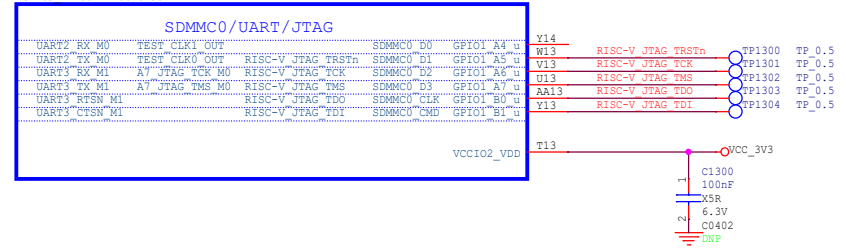


**NOTE:**  
FLASH(VCCIO1) power domain IO supply configuration pin:

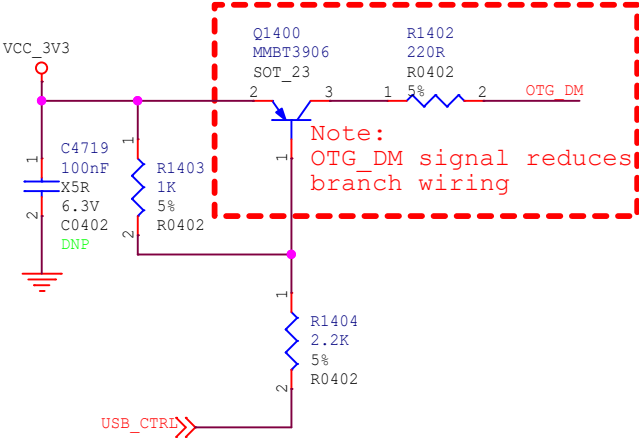
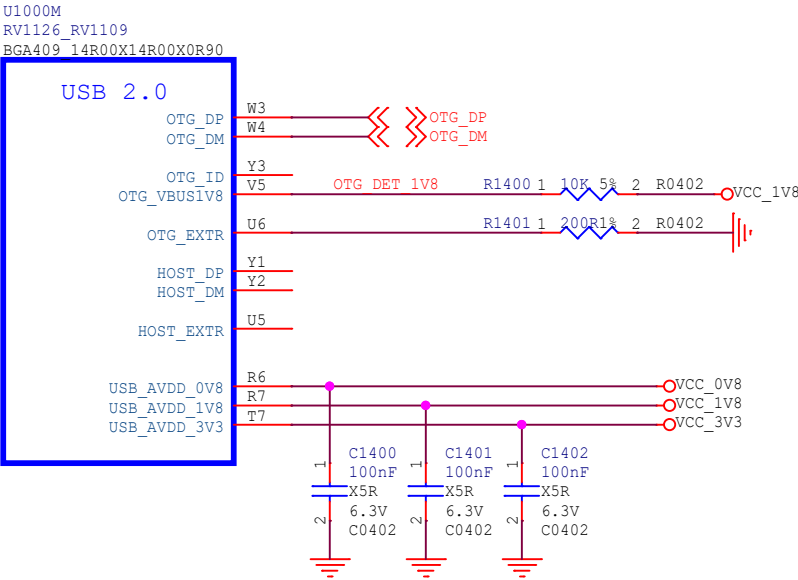
Condition	VCCIO1 (VCCIO_FLASH)
FLASH_VOL_SEL=0	3.3V
FLASH_VOL_SEL=1	1.8V Default


## SDMMC0/JTAG

U1000I  
RV1126 RV1109  
BGA409 14R00X14R00X0R90



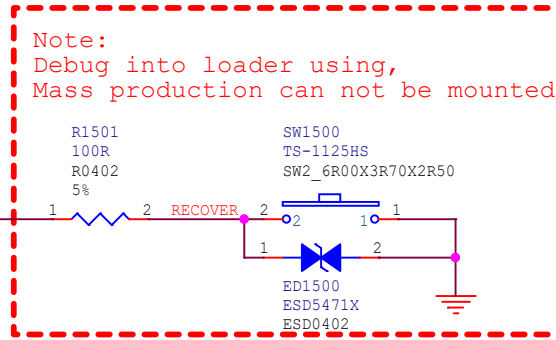
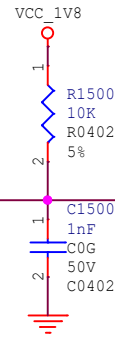
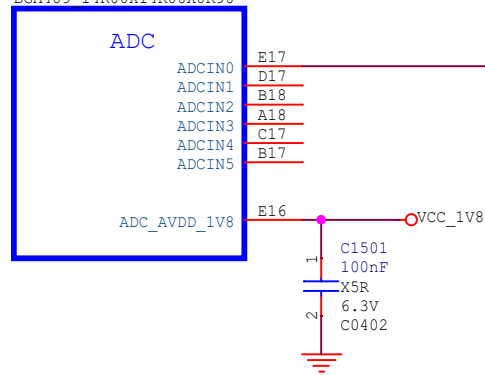
# USB Controller




 瑞芯微电子		Rockchip Electronics Co., Ltd	
Project:	RV1126_RV1109 AI Camera		
File:	14.RV1126/1109_USB Controller		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 12 of 28

# SARADC

U1000C  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90



 瑞芯微电子		Rockchip Electronics Co., Ltd	
Project:	RV1126_RV1109 AI Camera		
File:	15.RV1126/1109_SARADC		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 13 of 28

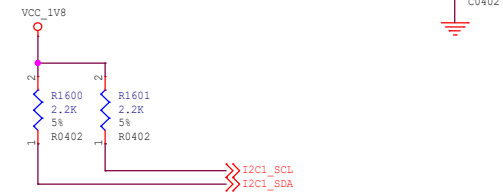
U1000F  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90

CIF/RGMII/12S/PDM/UART/SP1/12C								
CIF_D0_M0		RGMI1 CRS_M0	12S0_SCLK_TX_M1	UART4_TX_M0	12C3_SCL_M0	PWM5_M0	GPIO3_A4_M0	R17
CIF_D1_M0		RGMI1 CRS_M0	12S0_LRCK_TX_M1	UART4_RX_M0	12C3_SDA_M0	PWM5_M0	GPIO3_A5_M0	T18
CIF_D2_M0		RGMI1 COL_M0	12S0_SDO0_M1	UART5_TX_M0	CAN_RXD_M1	PWM17_M0	GPIO3_A6_M0	R18
CIF_D3_M0		RGMI1 RXD0_M0	12S0_SDIO_M1	UART5_RX_M0	CAN_TXD_M1	PWM11_IR_M0	GPIO3_A7_M0	T19
CIF_D4_M0		RGMI1 RXD0_M0	12S0_MCLK_M1	UART5_RTSN_M0	12C5_SCL_M1		GPIO3_B0_M0	R20
CIF_D5_M0		RGMI1 TXD0_M0	12S0_SCLK_RX_M1	UART5_CTSN_M0	12C5_SDA_M1		GPIO3_B1_M0	N17
CIF_D6_M0		RGMI1 TXD0_M0	12S0_LRCK_RX_M1	UART4_RXSN_M0			GPIO3_B2_M0	R19
CIF_D7_M0		RGMI1 TXD0_M0	12S0_SDO1_SDI2_M1	UART4_CTSN_M0			GPIO3_B3_M0	T21
CIF_D8_M0		RGMI1 TXD0_M0	12S0_SDO2_SDI2_M1		SP11_CS1N_M0		GPIO3_B4_M0	R20
CIF_D9_M0		RGMI1 TXEN_M0	12S0_SDO3_SDI1_M1		SP11_CS0N_M0		GPIO3_B5_M0	R21
CIF_D10_M0		RGMI1 RXD0_M0	PDM_SDI2_M1		SP11_MOSI_M0		GPIO3_B6_M0	R21
CIF_D11_M0		RGMI1 RXD0_M0	PDM_SDI3_M1		SP11_MISO_M0		GPIO3_B7_M0	N19
CIF_D12_M0		RGMI1 CLK_M0	PDM_CLK0_M1		SP11_CLK_M0		GPIO3_C1_M0	M17
CIF_D13_M0		RGMI1 RXD0_M0	PDM_SDI0_M1				GPIO3_C2_M0	N20
CIF_D14_M0		RGMI1 RXER_M0	PDM_SDI1_M1				GPIO3_C3_M0	C20
CIF_D15_M0		RGMI1 MDIO_M0	PDM_CLK1_M1				GPIO3_C4_M0	N21
CIF_VSYNC_M0		RGMI1 MDC_M0		UART3_RTSN_M0			GPIO3_C5_M0	M19
CIF_CLKRM_M0		CLK_OUT ETHERNET_M0		UART3_CTSN_M0			GPIO3_C6_M0	P19
CIF_CLKOUT_M0		RGMI1 RXCLK_M0		UART3_TX_M0			GPIO3_C6_M0	P20
CIF_VSYNC_M0		RGMI1 RXCLK_M0		UART3_RX_M0			GPIO3_C7_M0	
								M15
								VCCIO6_VDD

## I2C/SPI/MIPI-CLK

U1000G  
RV1126 RV1109  
BGA409 14R00X14R00X0R90

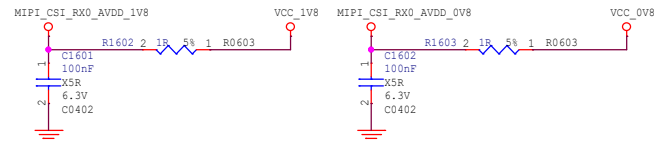
SPI/I2C/I2S/UART/MIPI CLK									
		I2C1_SCK	UART4_RTSN M2	GPIO1_D2_0	W19				
		I2C1_SCL	UART4_CTSN M2	GPIO1_D3_0	Y21			I2C1_SDA	
			UART4_RX M2	GPIO1_D4_0	W20			I2C1_SCL	
			UART4_TX M2	GPIO1_D5_0	Y20			MIPI_RX0_PDN	
SP10_CS1A M1	I2S1_CLK M1			GPIO1_D6_0	W19			CAMERA_RST	
SP10_MOSI M1	I2S1_SCK M1	I2C3_SCL M2		GPIO1_D7_0	U18				
SP10_MISO M1	I2S1_LRCK M1	I2C3_SDA M2		GPIO1_D7_0	U19				
SP10_CS0A M1	I2S1_SDI M1		UART5_TX M2	GPIO2_A0_0	U20				
SP10_CLK M1	I2S1_SDO M1		UART5_RX M2	GPIO2_A1_0	W21				
			MIPI_CSI_CLK1	UART5_RTSN M2	GPIO2_A2_0	W21			
			MIPI_CSI_CLK0	UART5_CTSN M2	GPIO2_A3_0	Y21			MIPI_CSI_CLK0



## MIPI-CSI Interface

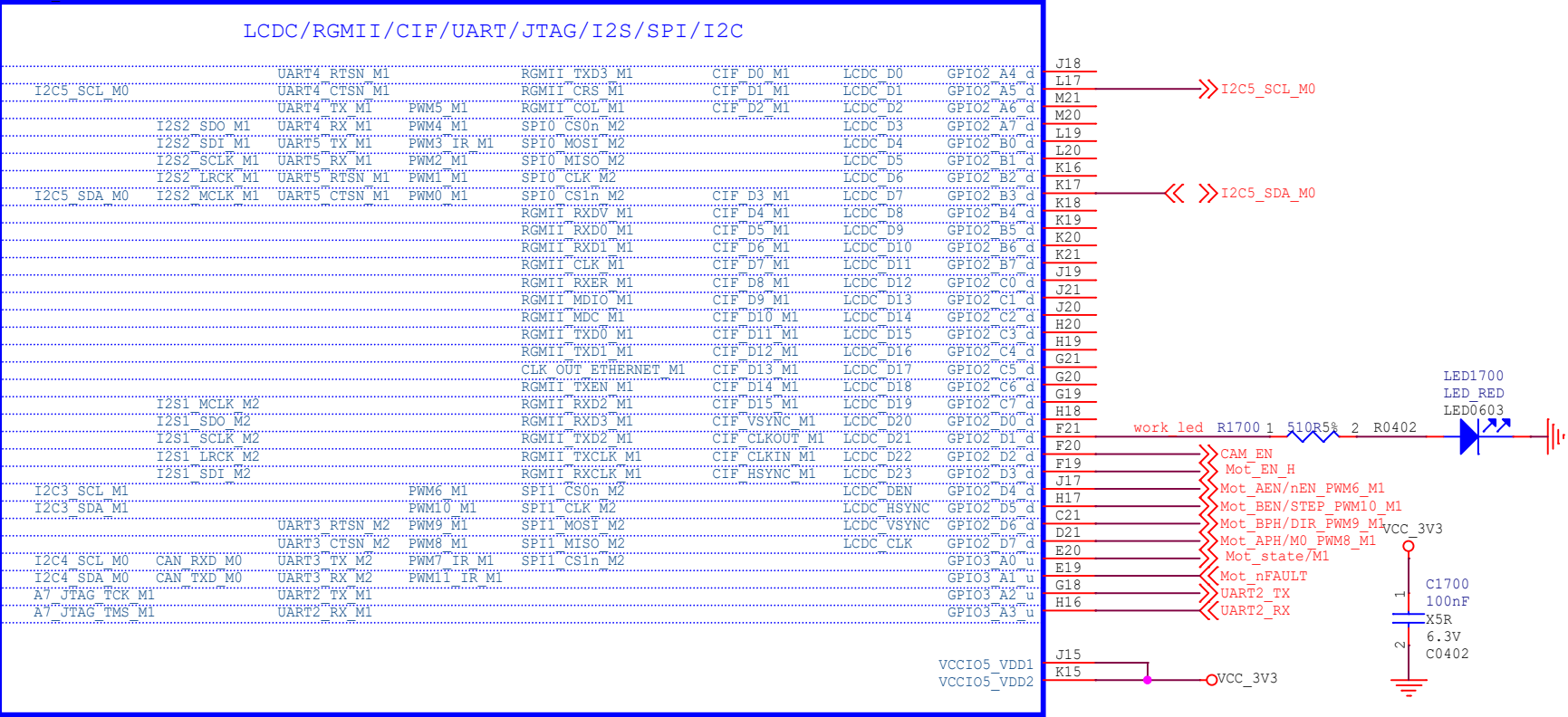
U1000H  
RV1126\_RV1109  
BGA409\_14R00X14R00X0R90

MIPI CSI RX1			
MIPI_CSI_RX1_D0P	LVDS1_RX0P	AA10	
MIPI_CSI_RX1_D0N	LVDS1_RX0N	Y20	
MIPI_CSI_RX1_D1P	LVDS1_RX1P	AA19	
MIPI_CSI_RX1_D1N	LVDS1_RX1N	Y19	
MIPI_CSI_RX1_D2P	LVDS1_RX2P	AA18	
MIPI_CSI_RX1_D2N	LVDS1_RX2N	Y18	
MIPI_CSI_RX1_D3P	LVDS1_RX3P	Y17	
MIPI_CSI_RX1_D3N	LVDS1_RX3N	W17	
MIPI_CSI_RX1_CLKP	LVDS1_CLKP	V18	
MIPI_CSI_RX1_CLKN	LVDS1_CLKN	W18	
MIPI_CSI_RX1_AVDD_0V8		R15	MIPI_CSI_RX0_AVDD_0V8
MIPI_CSI_RX1_AVDD_1V8		R16	MIPI_CSI_RX0_AVDD_1V8
MIPI CSI RX0			
MIPI_CSI_RX0_D0P	LVDS0_RX0P	V16	MIPI_CSI_RX0_D0P
MIPI_CSI_RX0_D0N	LVDS0_RX0N	U16	MIPI_CSI_RX0_D0N
MIPI_CSI_RX0_D1P	LVDS0_RX1P	Y16	MIPI_CSI_RX0_D1P
MIPI_CSI_RX0_D1N	LVDS0_RX1N	W16	MIPI_CSI_RX0_D1N
MIPI_CSI_RX0_D2P	LVDS0_RX2P	W15	MIPI_CSI_RX0_D2P
MIPI_CSI_RX0_D2N	LVDS0_RX2N	Y15	MIPI_CSI_RX0_D2N
MIPI_CSI_RX0_D3P	LVDS0_RX3P	AA15	MIPI_CSI_RX0_D3P
MIPI_CSI_RX0_D3N	LVDS0_RX3N	AA16	MIPI_CSI_RX0_D3N
MIPI_CSI_RX0_CLKP	LVDS0_CLKP	U15	MIPI_CSI_RX0_CLKP
MIPI_CSI_RX0_CLKN	LVDS0_CLKN	V15	MIPI_CSI_RX0_CLKN
MIPI_CSI_RX0_AVDD_0V8		T15	MIPI_CSI_RX0_AVDD_0V8
MIPI_CSI_RX0_AVDD_1V8		T16	MIPI_CSI_RX0_AVDD_1V8



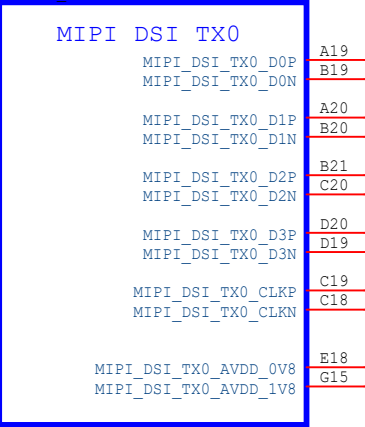
LCDC/RGMII/PWM

U1000E  
RV1126\_RV1109  
BGA409 14R00X14R00X0R90



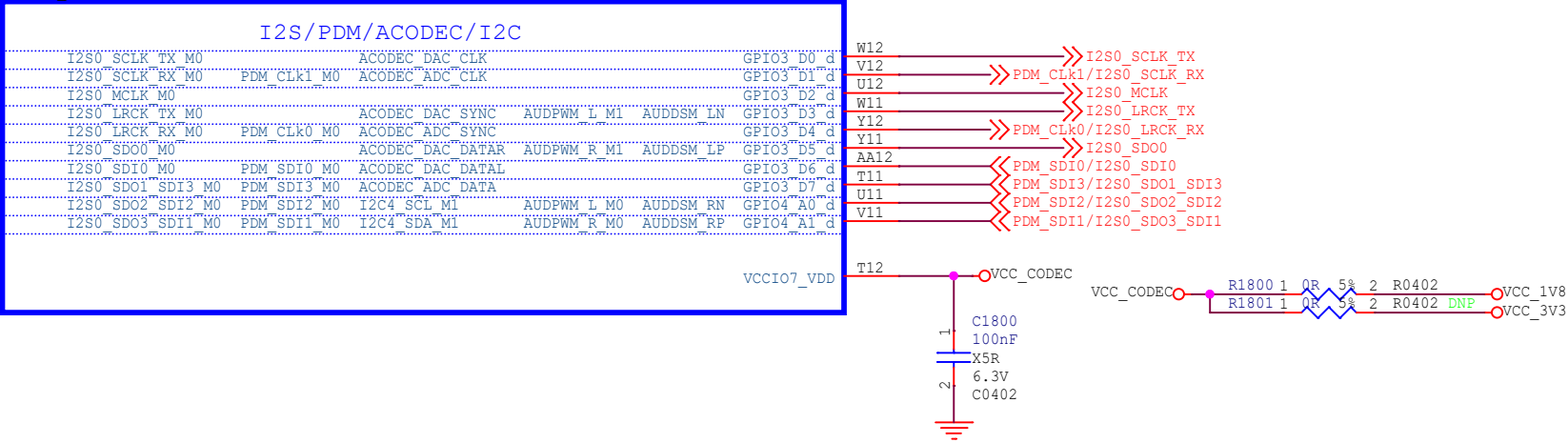
MIPI-DSI Interface

U1000D  
RV1126\_RV1109  
BGA409 14R00X14R00X0R90



# Audio Interface

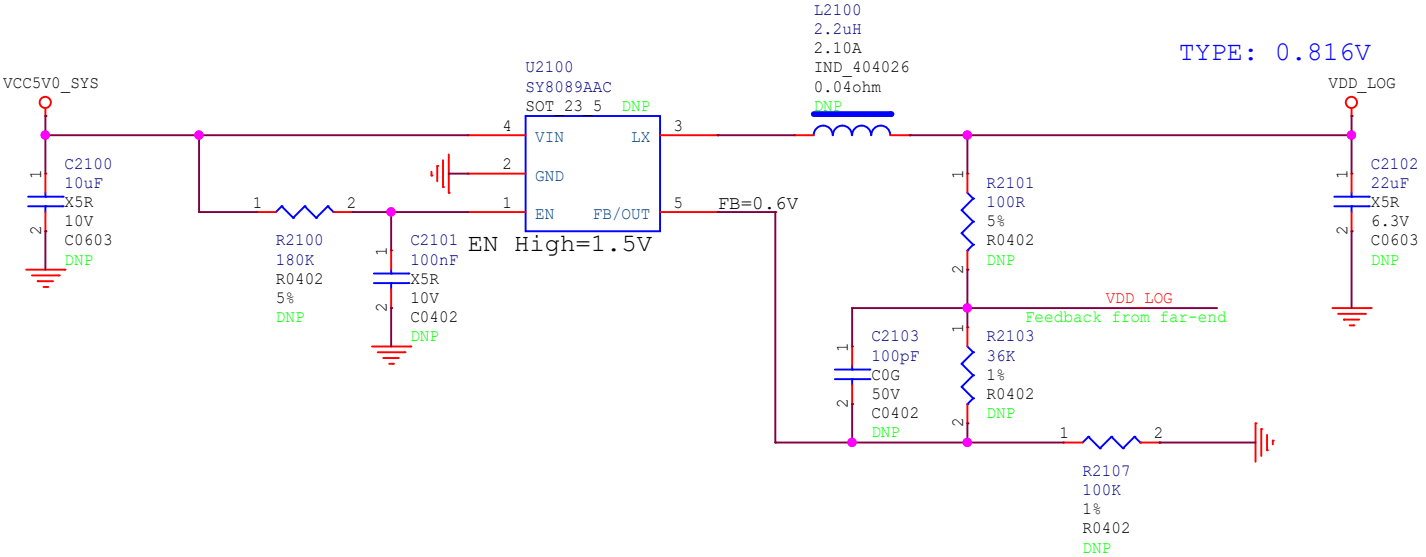
U1000J  
RV1126 RV1109  
BGA409\_14R00X14R00X0R90

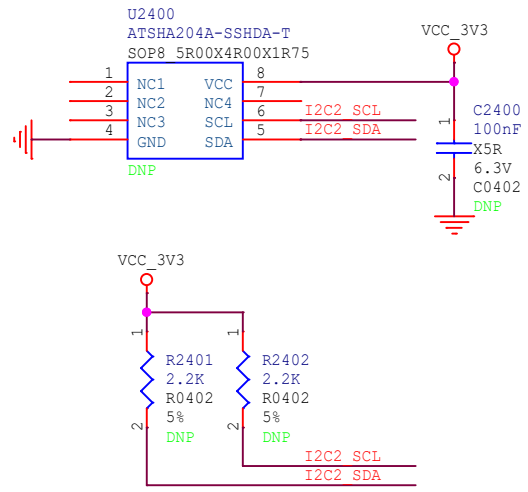






VDD\_LOG

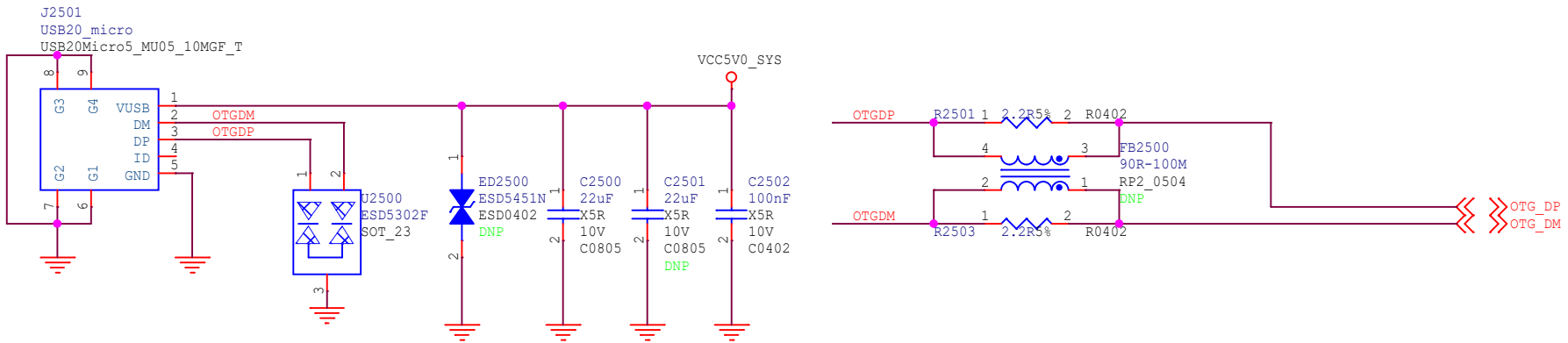




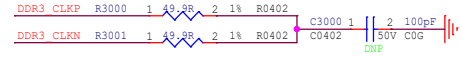
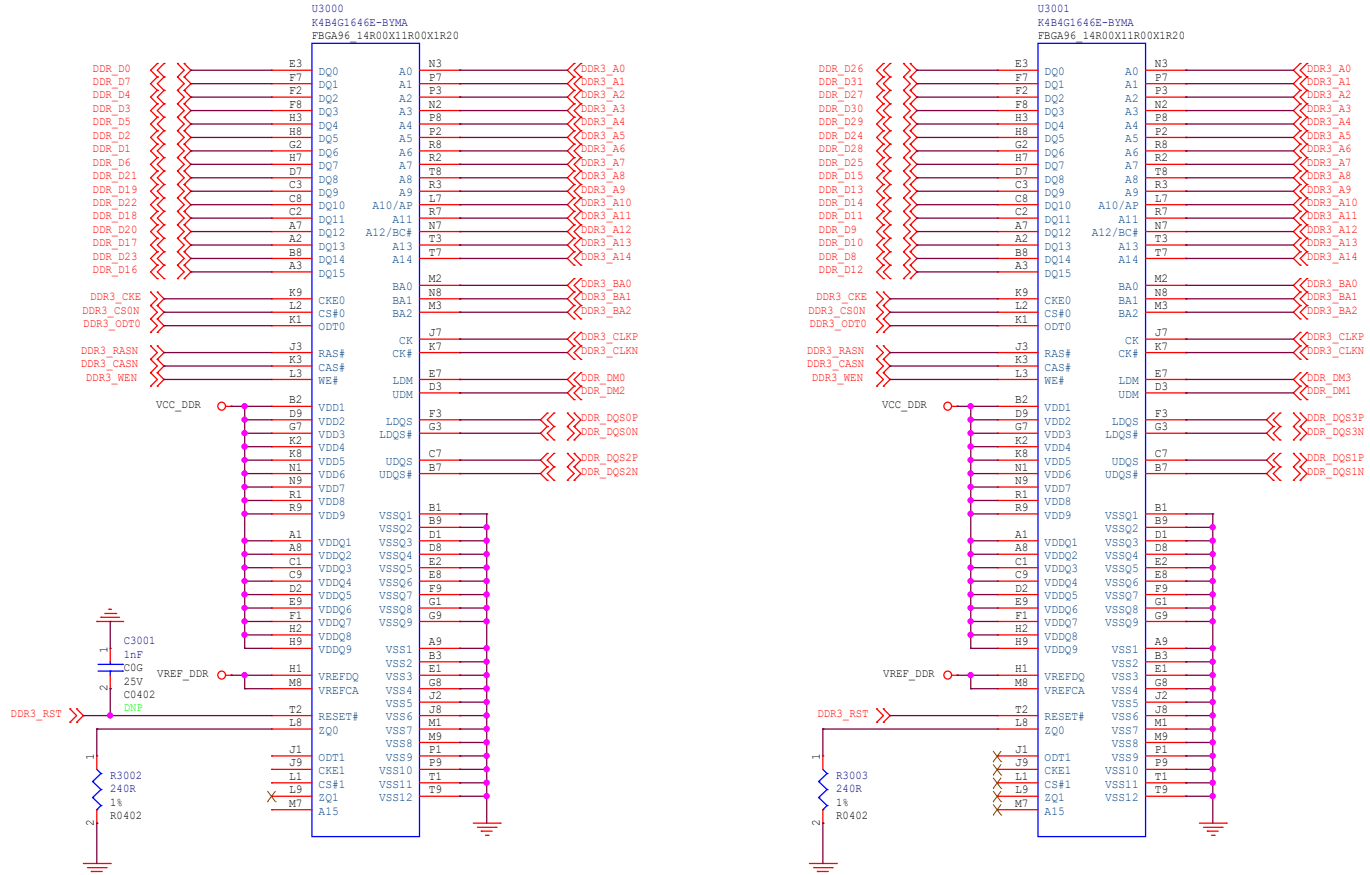
I2C2\_SDA << >>  
I2C2\_SCL << >>

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Project:	RV1126_RV1109 AI Camera		
File:	24.Encrytion Chip		
Date:	Thursday, August 20, 2020	Rev:	V1.2
Designed by:	whb	Reviewed by:	19 of 28

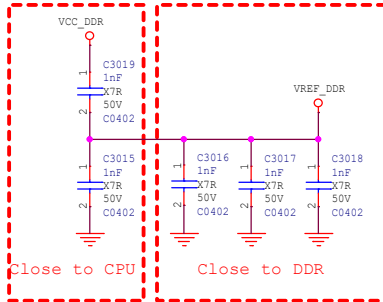
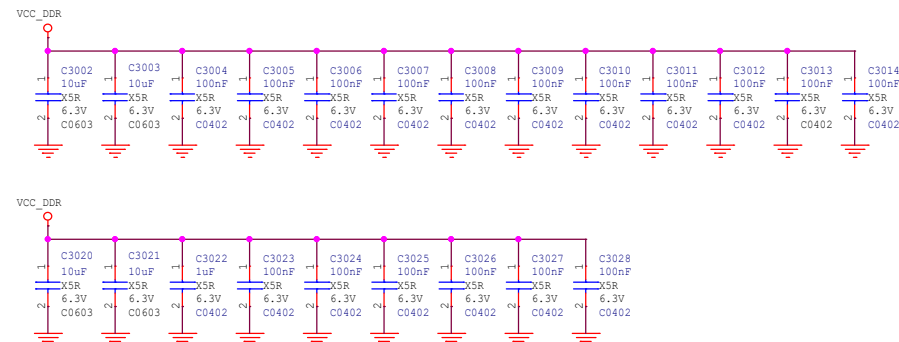
J2501  
USB20\_micro  
USB20Micro5\_MU05\_10MGF\_T




DDR3/DDR3L 2x16bit



Note: All the Power filter capacitors should be placed close to the power pins of DDR3

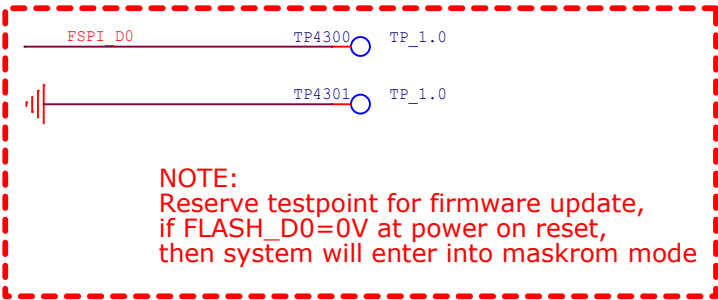
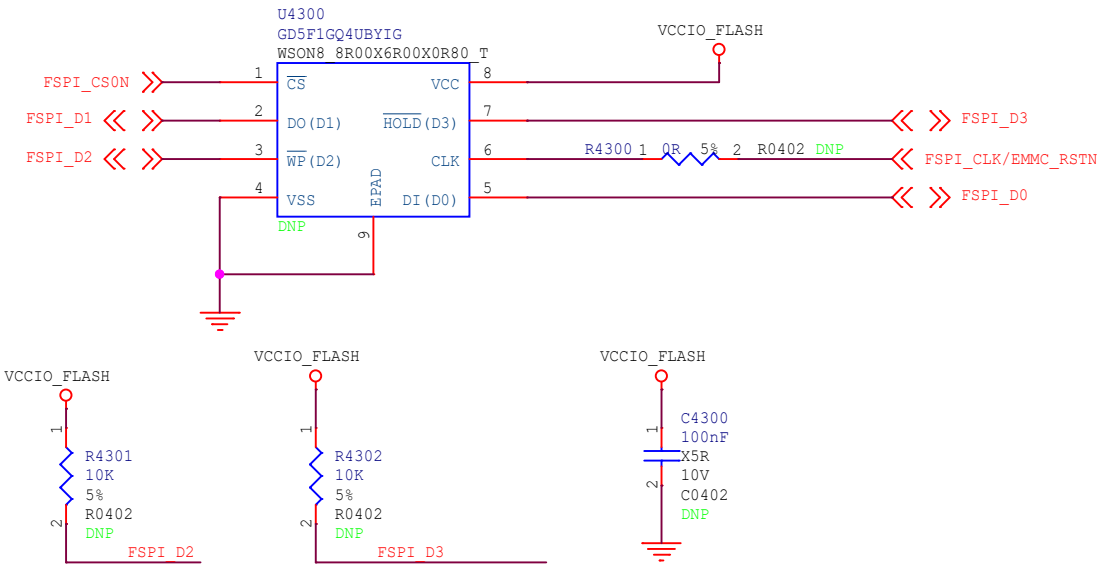



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Project:	RV1126_RV1109 AI Camera		
File:	3D.DRAM_DDR3_96P_2X16bit		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 21 of 28



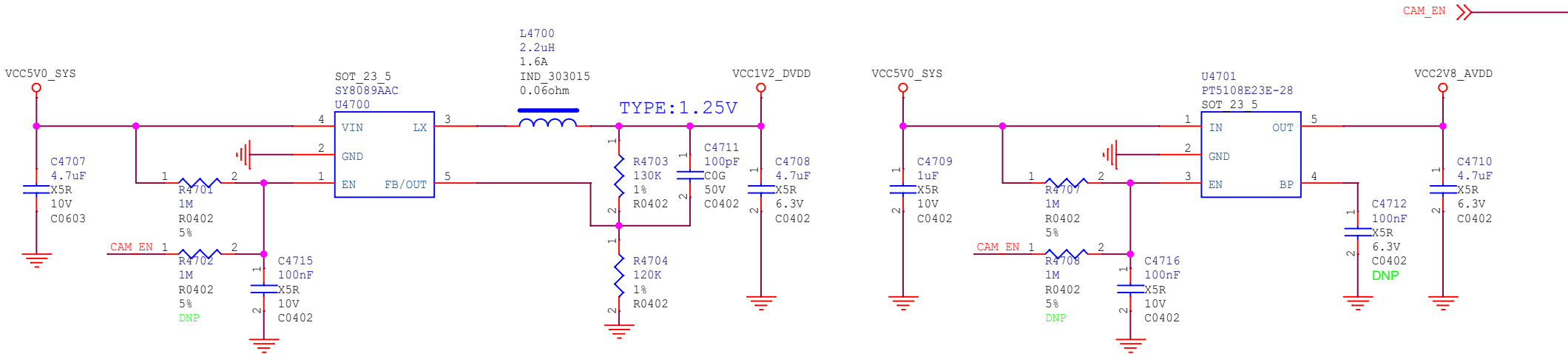
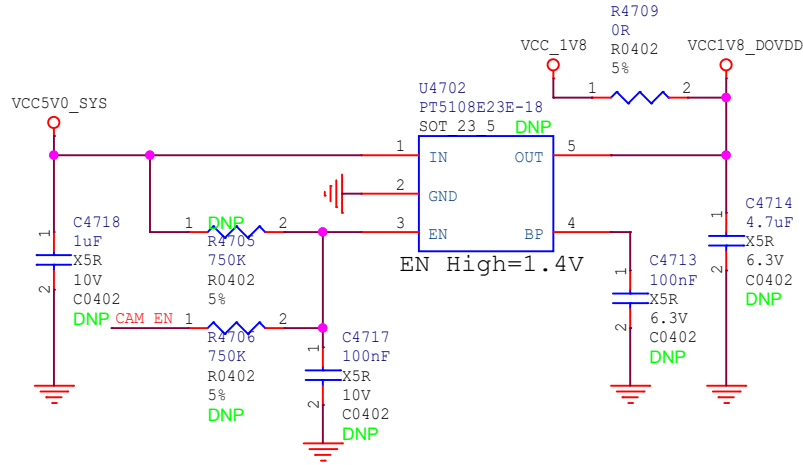
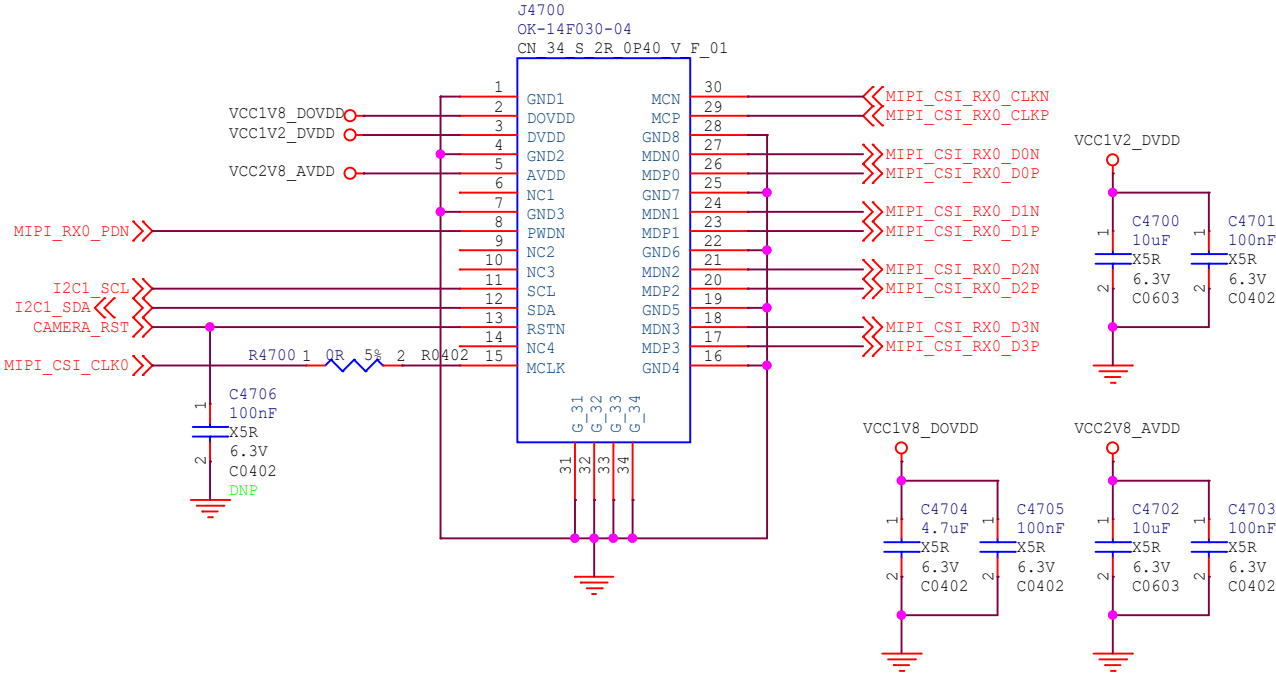
# SPI Flash

NOTE:  
Refer to the latest AVL for parts selection.




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Project:	RV1126_RV1109 AI Camera		
File:	43.Flash-SPI Flash(option)		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 23 of 28

MIPI-CSI\_RX0 Interface

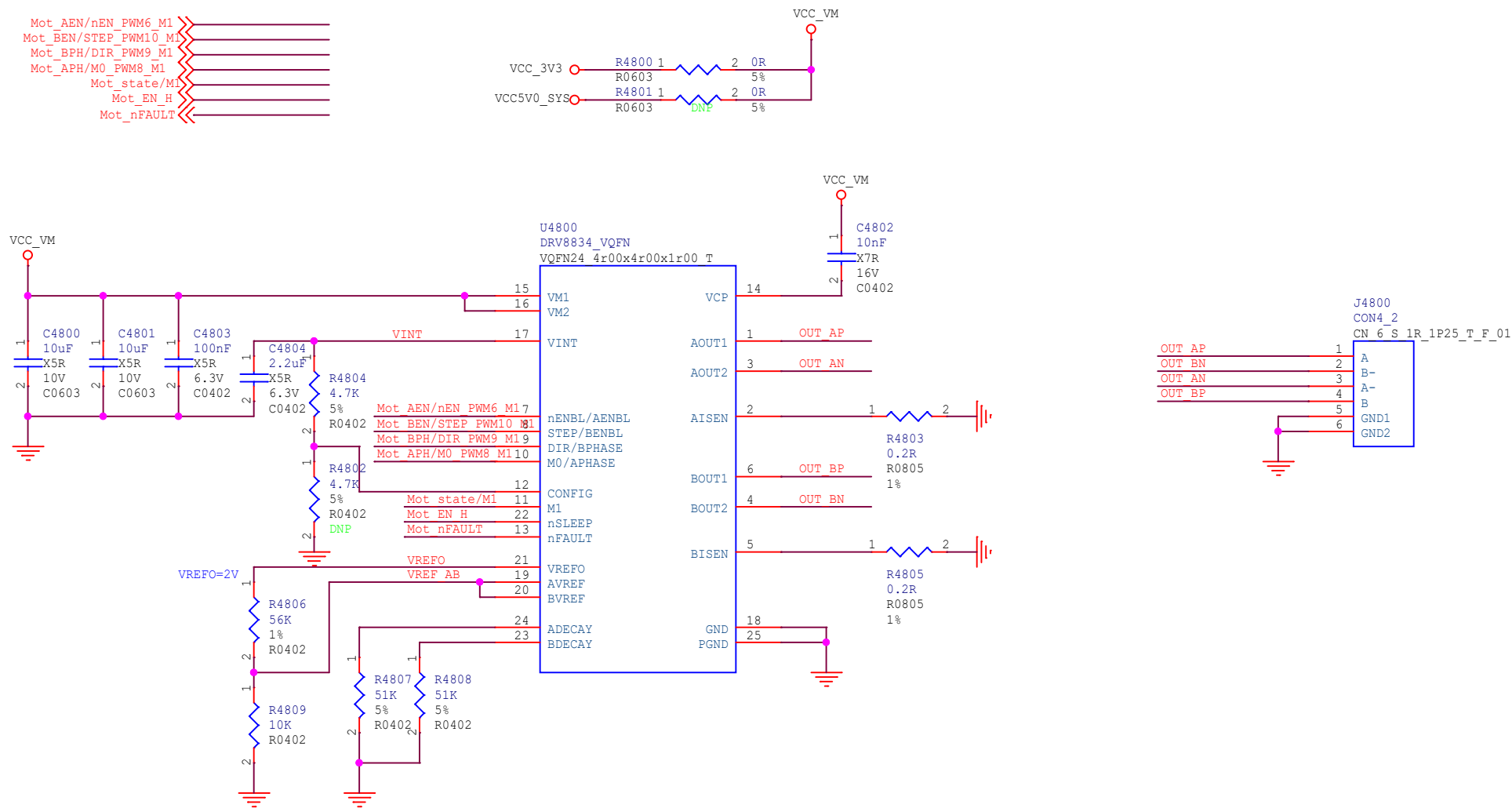


Note:  
The power-on timing needs to be adjusted according to the actual camera module used  
Default power-on timing:  
VCC1V8\_D0VDD-->VCC1V2\_DVDD/VCC2V8\_AVDD

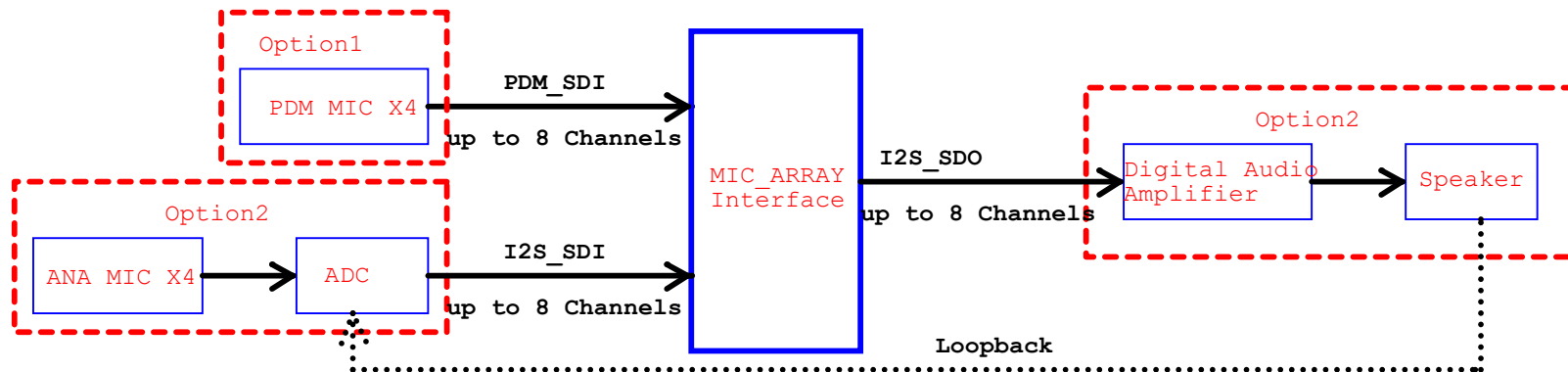
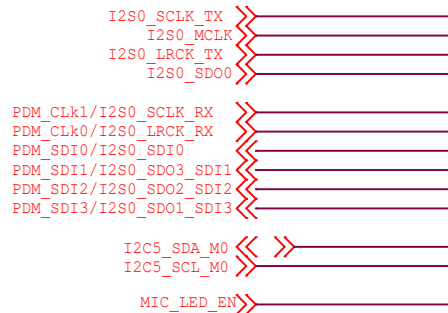
 瑞芯微电子		Rockchip Electronics Co., Ltd	
Project:	RV1126_RV1109 AI Camera		
File:	47.VI-Camera_MIPI-CSI		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 24 of 28



## Iris Zoom Focus driver

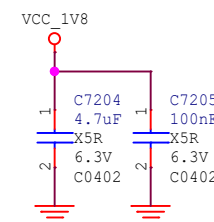
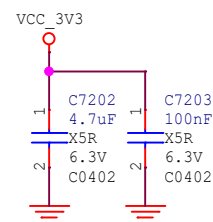
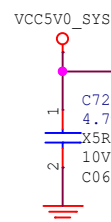
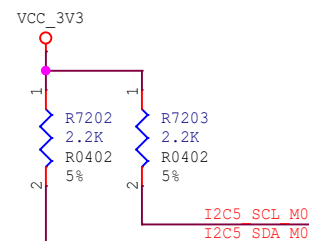
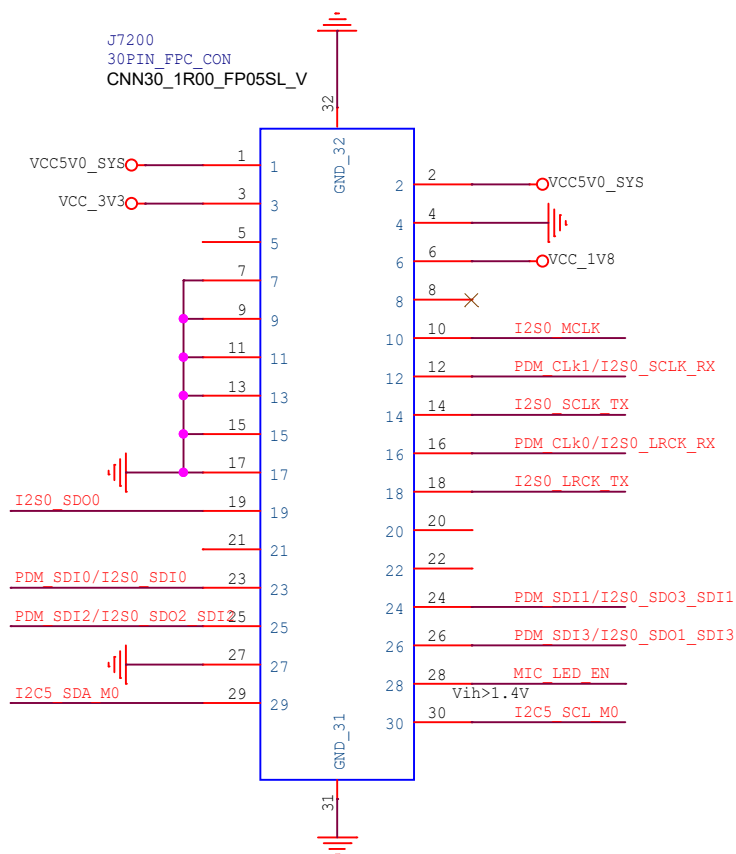



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Project:	RV1126_RV1109 AI Camera
File:	48.Motor driver
Date:	Thursday, August 20, 2020
Rev:	V1.2
Designed by:	whb
Reviewed by:	
Sheet:	25 of 28



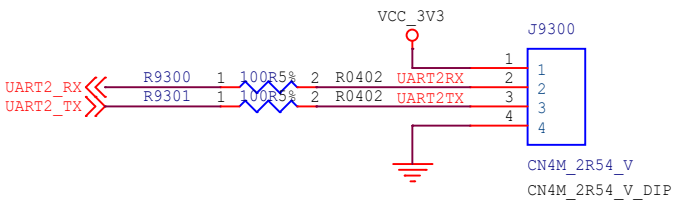
NOTE:  
MIC support mode PDM or I2S


## MIC\_ARRAY Interface

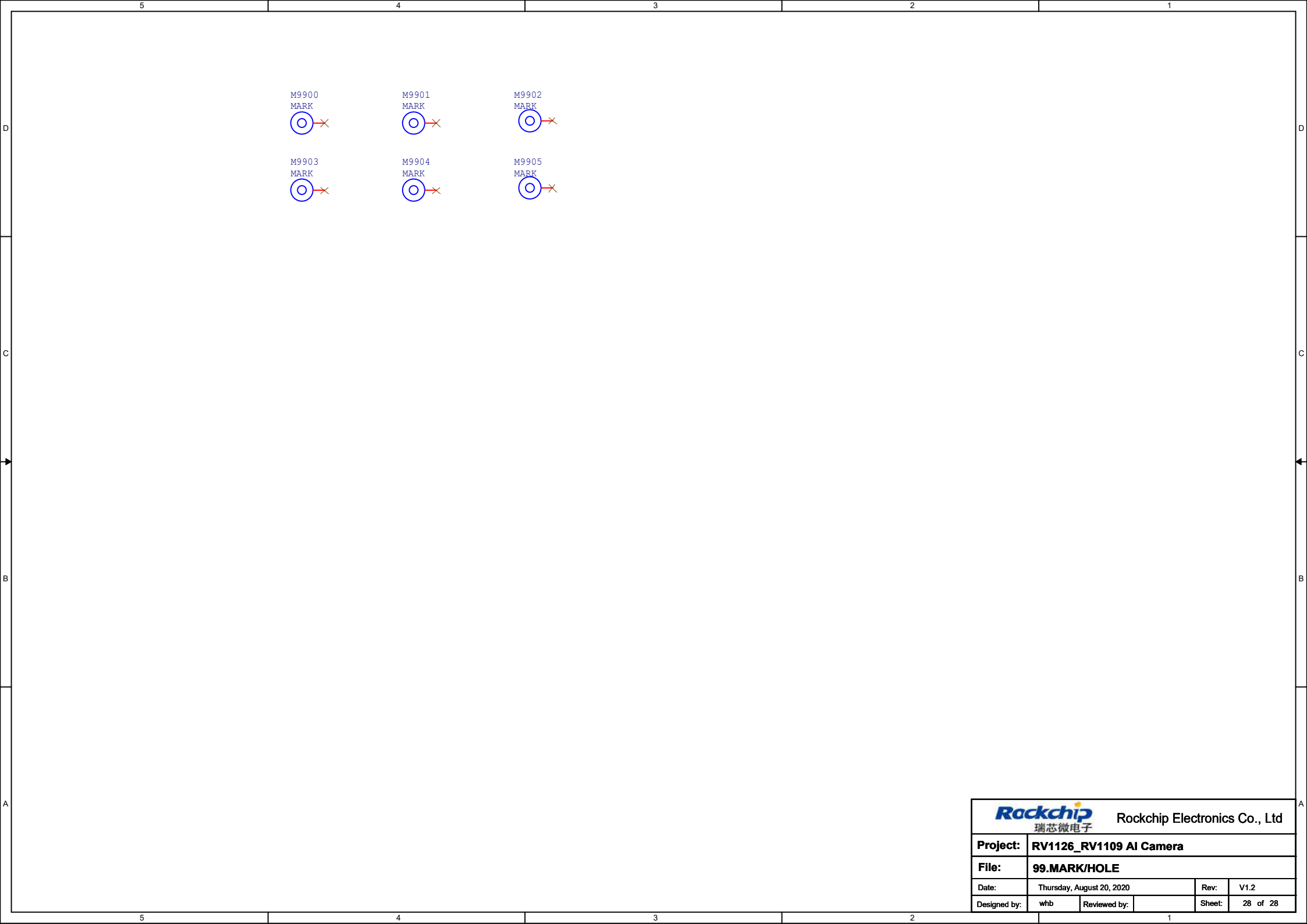


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Project:	RV1126_RV1109 AI Camera		
File:	72.MIC Array Interface(option)		
Date:	Thursday, August 20, 2020		Rev: V1.2
Designed by:	whb	Reviewed by:	Sheet: 26 of 28

# Debug UART2



<div><div><div>瑞芯微电子</div></div><div>Rockchip Electronics Co., Ltd</div></div>			
Project:	RV1126_RV1109 AI Camera		
File:	93.Debug		
Date:	Thursday, August 20, 2020	Rev:	V1.2
Designed by:	whb	Reviewed by:	Sheet: 27 of 28



<div><div><div>Rockchip</div><div>瑞芯微电子</div></div><div>Rockchip Electronics Co., Ltd</div></div>				
Project:	RV1126_RV1109 AI Camera			
File:	99.MARK/HOLE			
Date:	Thursday, August 20, 2020		Rev:	V1.2
Designed by:	whb	Reviewed by:		Sheet: 28 of 28