

Reference Schematic for RV1126B

RV1126B AI-IPC REF SCH V1.0

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Project:	RV1126B AI-IPC REF				
File:	00.Cover Page				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linxu	Reviewed by:	<Checker>	Sheet:	1 of 45

Table of Content	
Page	Description
Page01	00.Cover Page
Page02	01.Index and Notes
Page03	02.Revision History
Page04	03.Block Diagram
Page05	04.Power Diagram and Sequence
Page06	06.IO Power Domain Map
Page07	07.I2C/UART/SAI Map
Page08	08.USB Map
Page09	09.VI CIF/VO LCDC/MIPI Map
Page10	10.RV1126B-Power/GND
Page11	11.RV1126B-OSC/PLL/RTC/PMU
Page12	12.RV1126B-DRAM Controller
Page13	13.RV1126B-Flash/SDMMC
Page14	14.RV1126B-USB Controller
Page15	15.RV1126B-SARADC
Page16	16.RV1126B-VideoInput
Page17	17.RV1126B-VideoOutput
Page18	18.RV1126B-Audio
Page19	19.RV1126B-FEPHY
Page20	20.Power-DC IN
Page21	23.Power-PMIC RK801 12V
Page22	23.Power-PMIC RK801 5V(opt)
Page23	24.Power-Ext
Page24	25.USB-USB2.0 Device Port
Page25	26.USB-USB2.0 Host Port
Page26	30.DRAM-DDR3 96P 2X16bit
Page27	31.DRAM-LPDDR3 178P 1X32bit
Page28	32.DRAM-DDR4 96P 2X16bit
Page29	33.DRAM-LPDDR4/4x 1X32bit
Page30	40.Flash-eMMC Flash
Page31	42.Flash-Micro-SD Card
Page32	43.Flash-SPI Flash
Page33	45.VI-Camera Motor&IRCUT
Page34	47.VI-Camera MIPI-CSIO
Page35	48.VI-Camera MIPI-CSII
Page36	50.VO-LCM MIPI-DSI
Page37	53.VO-LED BOARD/CDS
Page38	60.WIFI/BT-SDIO IT1R
Page39	65.Ethernet-FEPHY Embed
Page40	66.Ethernet-GEPHY RGMII(opt)
Page41	70.Audio Output
Page42	71.Audio Input
Page43	92.Key Array
Page44	98.UART Debug Port
Page45	99.Mark/Hole

Index and Notes

Note

NOTE 1:
Component parameter description
1. NC stands for component not mounted temporarily
2. If Value or option is NC or 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.

Generate Bill of Materials

Header:
`Item\tRK PN\tValue\tPCB Footprint\tReference\tQuantity\tOption\tTolerance\tVoltage\tDescription`
Combined property string:
`{Item}\t{RK PN}\t{Value}\t{PCB Footprint}\t{Reference}\t{Quantity}\t{Option}\t{Tolerance}\t{Voltage}\t{Description}`


Graphic Description

Note

Option

Description


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Project:	RV1126B AI-IPC REF				
File:	01.Index and Notes				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>	Sheet:	2 of 45

Revision History

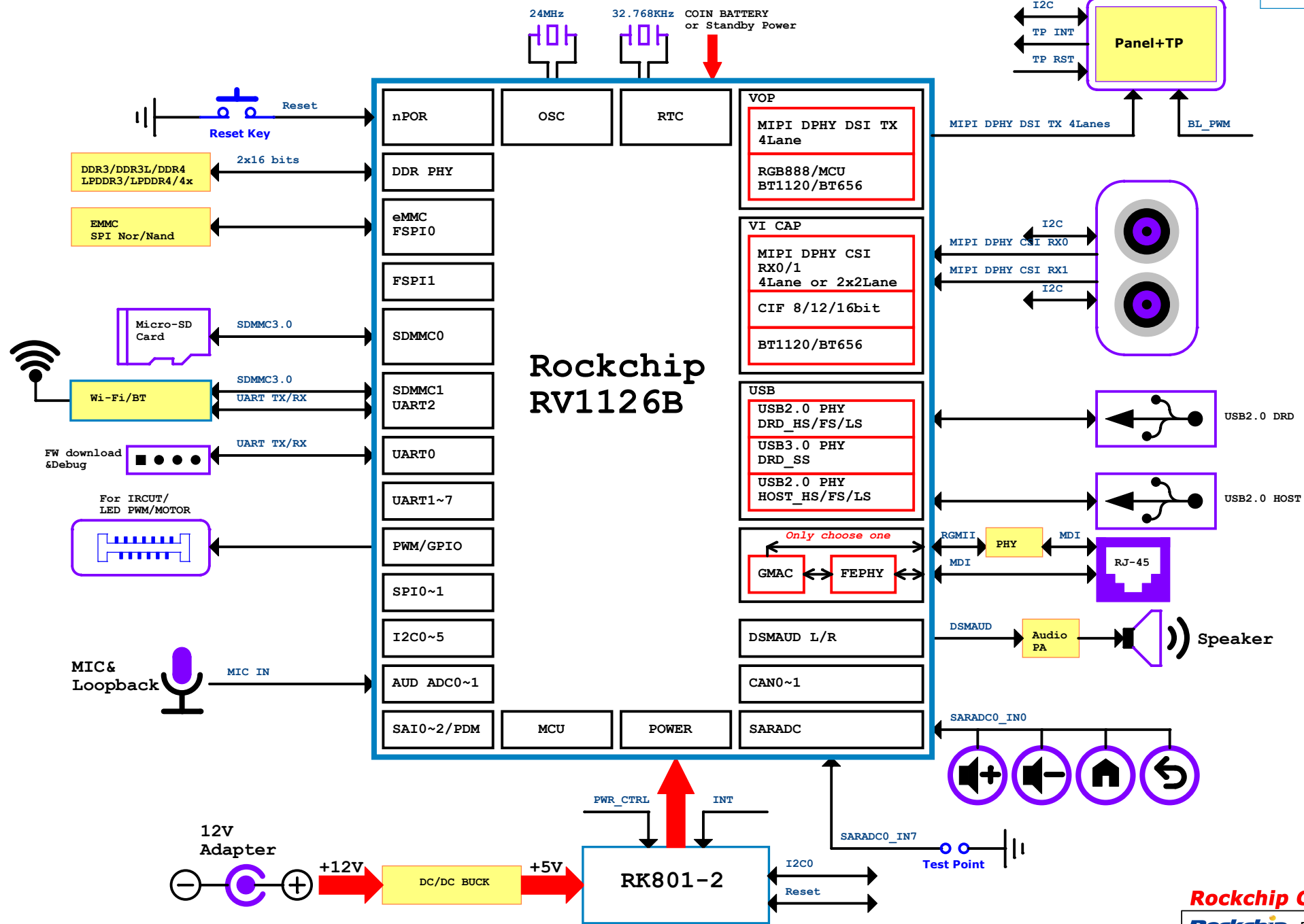
Version	Date	Author	Change Note	Approved
V1.0	2025.06.06	Linxu	First edition;	

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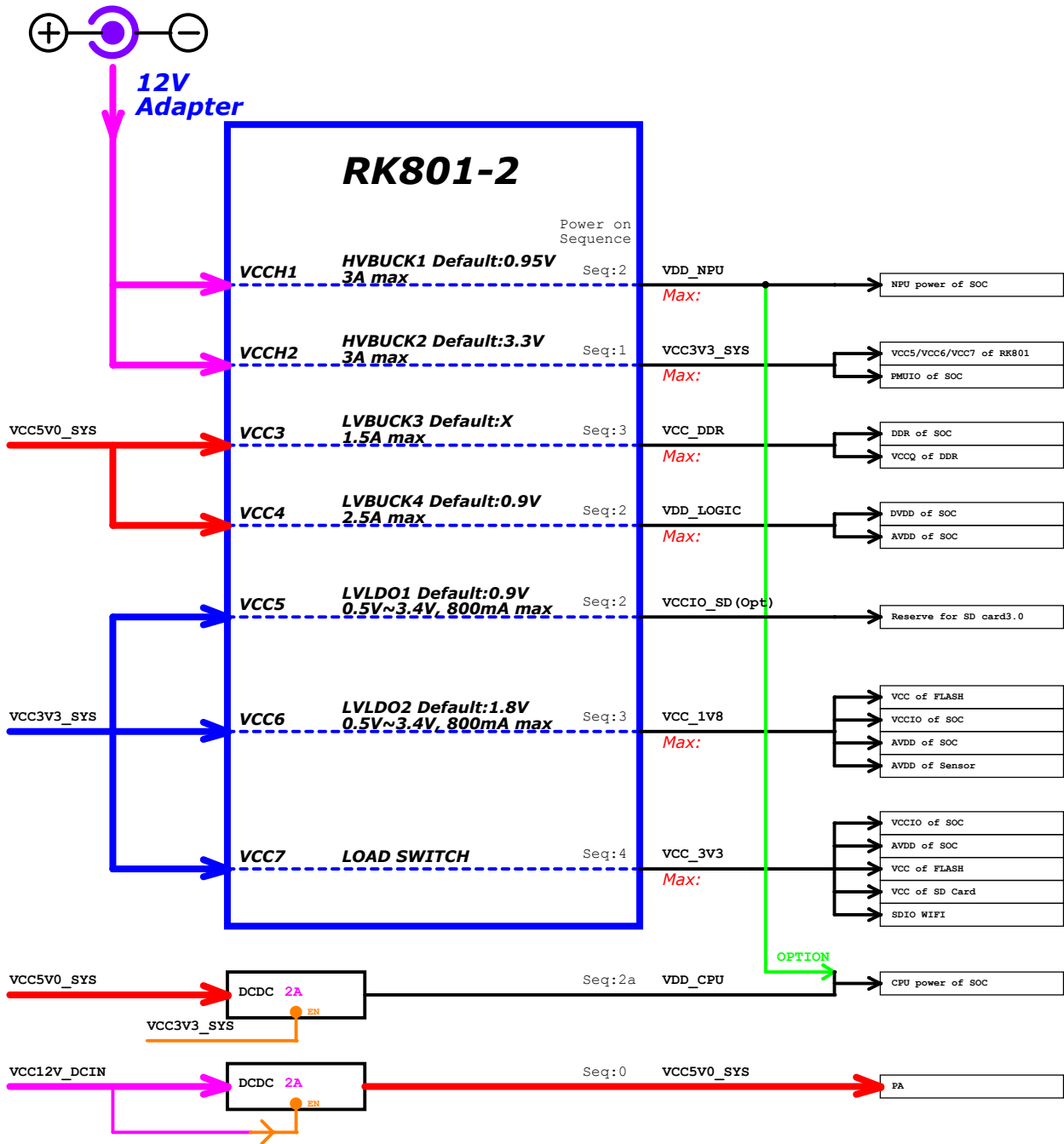
Project:	RV1126B AI-IPC REF			
File:	02.Revision History			
Date:	Friday, June 06, 2025		Rev:	V1.0
Designed by:	Linxu	Reviewed by:	<Checker>	Sheet: 3 of 45

AI-IPC Block Diagram



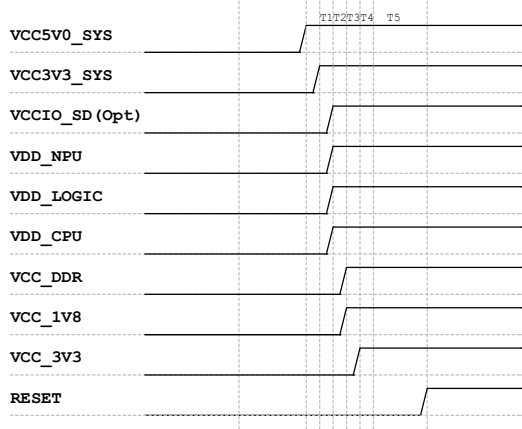
Rockchip IC
Other IC

Power Diagram and Sequence



Power-on Sequence				
Power Name	PMIC Channel	Time Slot	Default voltage	Peak Current
VCC5V0_SYS	EXT BUCK	Slot: 0	5.25V	
VCC3V3_SYS	RK801 HVBUCK2	Slot: 1	3.3V	
VCCIO_SD (Opt)	RK801 LDO1	Slot: 2	0.9V	
VCC_NPU	RK801 HVBUCK1	Slot: 2	0.95V	3A
VDD_LOGIC	RK801 LVBUCK4	Slot: 2	0.9V	1.5A
VDD_CPU	EXT BUCK	Slot: 2a	0.95V	2A
VCC_DDR	RK801 LVBUCK3	Slot: 3	1.35V	
VCC_1V8	RK801 LDO2	Slot: 3	1.8V	
VCC_3V3	RK801 SWITCH	Slot: 4	3.3V	
RESET	nPOR RESET about 16ms after nPOR DET is ready			

Note:
T1、T2、T3、T4 >= 1ms
T5 = 16ms
Trise > 100us



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Project:	RV1126B AI-IPC REF		
File:	04.Power Diagram and Sequence		
Date:	Friday, June 06, 2025	Rev:	V1.0
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IO Power Domain Map

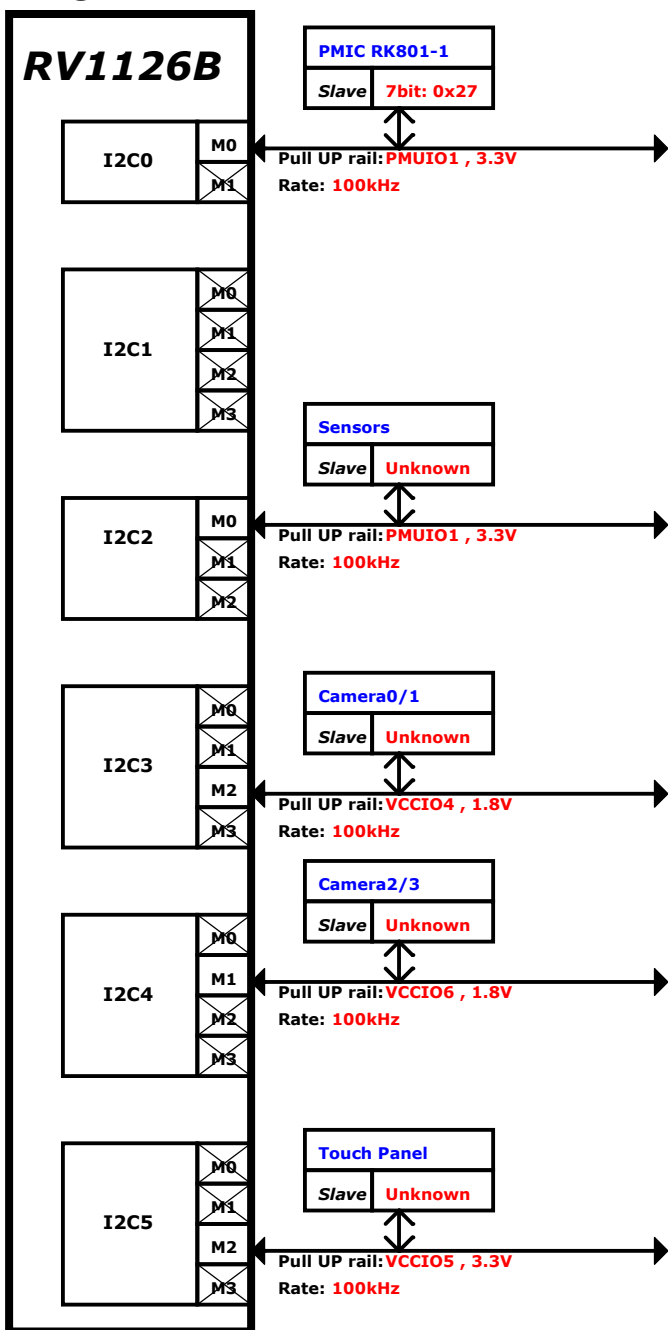
IO Domain	IO Group	Support of IO Voltage		Default Actual assigned IO Domain Voltage			Remark
		1.8V	3.3V	Net Name of Power Supply	Power Source	Voltage	
PMUIO0	Group GPIO0_A/B		✓	VCC3V3_PMUIO0			
PMUIO1	Group GPIO0_C/D	✓	✓	VCC3V3_PMUIO1			
VCCIO1	Group GPIO1	✓	✓	VCCIO_FLASH			
VCCIO2	Group GPIO2	✓	✓	VCCIO_SD			
VCCIO3	Group GPIO3	✓	✓	VCC_VCCIO3			
VCCIO4	Group GPIO4	✓	✓	VCC_VCCIO4			
VCCIO5	Group GPIO5	✓	✓	VCC_VCCIO5			
VCCIO6	Group GPIO6	✓	✓	VCC_VCCIO6			
VCCIO7	Group GPIO7	✓	✓	VCC_VCCIO7			

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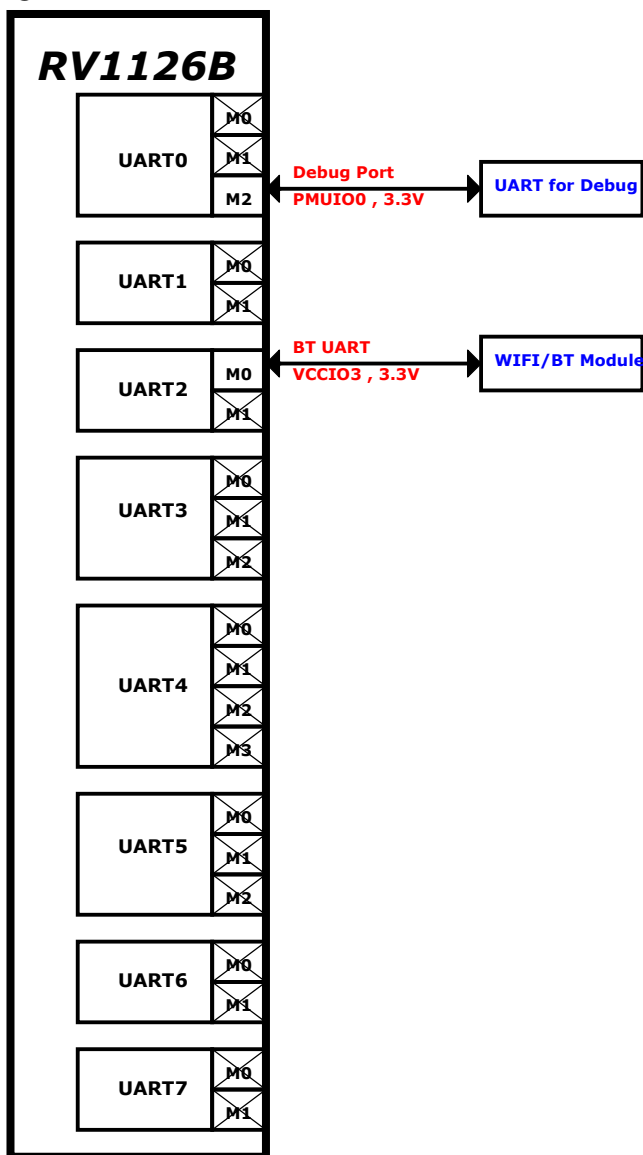
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Project:	RV1126B AI-IPC REF						
File:	06.IO Power Domain Map						
Date:	Friday, June 06, 2025				Rev:	V1.0	
Designed by:	Linxu	Reviewed by:	<Checker>		Sheet:	6 of 45	

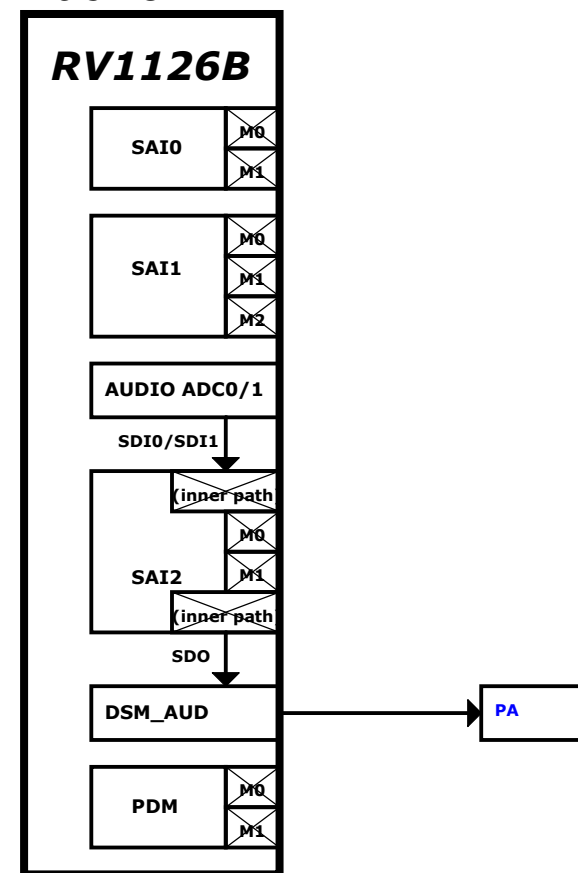
I2C MAP



UART MAP



Audio MAP



Note



Unselected IOMUX path

IOMUX path in use

At the same time, only one path can be selected.

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Project: RV1126B AI-IPC REF

File: 07.I2C/UART/SAI Map

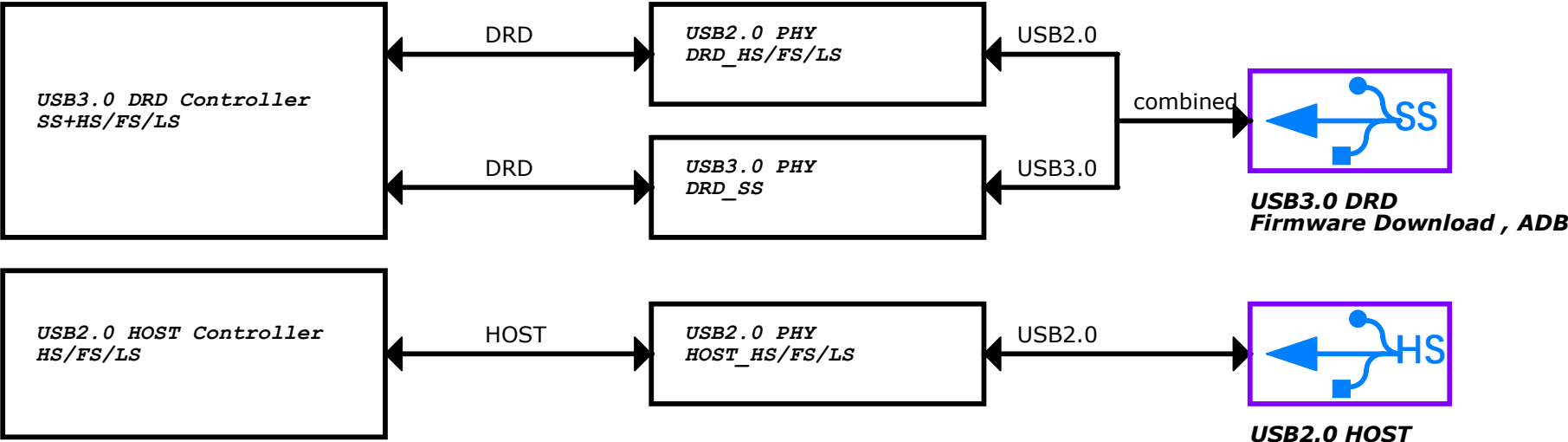
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Designed by: Linux

Reviewed by: <Checker>

Sheet: 7 of 45


USB Map



	Case1 (Recommend)	Case2 (Recommend)	Case3 (Not recommend)
USB 2.0 DRD (FW download Default)	USB2.0 DRD	Combined for USB3.0 DRD	USB2.0 HOST
USB 3.0 DRD	N/A		Combined for USB3.0 HOST
USB 2.0 HOST	USB2.0 HOST	USB2.0 HOST	

NOTE:
Case3 usually used for onboard USB3.0 Host.

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Project:	RV1126B AI-IPC REF		
File:	08.USB Map		
Date:	Friday, June 06, 2025		Rev: V1.0
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		Sheet:	8 of 45

VO_LCDC Map

VO_LCDC							
Mode	RGB parallel			BT656	BT1120	mcu	
	RGB888	RGB666	RGB565	8bit	16bit	8bit	16bit
LCD_D0	B0	--	--	--	--	--	--
LCD_D1	B1	--	--	--	--	--	--
LCD_D2	B2	B2	--	--	--	--	--
LCD_D3	B3	B3	B3	D0	Y0	D0_M0	D0
LCD_D4	B4	B4	B4	D1	Y1	D1_M0	D1
LCD_D5	B5	B5	B5	D2	Y2	D2_M0	D2
LCD_D6	B6	B6	B6	D3	Y3	D3_M0	D3
LCD_D7	B7	B7	B7	D4	Y4	D4_M0	D4
LCD_D8	G0	--	--	--	--	--	--
LCD_D9	G1	--	--	--	--	--	--
LCD_D10	G2	G2	G2	D5	Y5	D5_M0	D5
LCD_D11	G3	G3	G3	D6	Y6	D6_M0	D6
LCD_D12	G4	G4	G4	D7	Y7	D7_M0	D7
LCD_D13	G5	G5	G5	--	C0	D0_M1	D8
LCD_D14	G6	G6	G6	--	C1	D1_M1	D9
LCD_D15	G7	G7	G7	--	C2	D2_M1	D10
LCD_D16	R0	--	--	--	--	--	--
LCD_D17	R1	--	--	--	--	--	--
LCD_D18	R2	R2	--	--	--	--	--
LCD_D19	R3	R3	R3	--	C3	D3_M0	D11
LCD_D20	R4	R4	R4	--	C4	D4_M0	D12
LCD_D21	R5	R5	R5	--	C5	D5_M0	D13
LCD_D22	R6	R6	R6	--	C6	D6_M0	D14
LCD_D23	R7	R7	R7	--	C7	D7_M0	D15
LCD_DEN	DEN	DEN	DEN	--	--	RDN	RDN
LCD_HSYNC	HSYNC	HSYNC	HSYNC	--	--	WRN	WRN
LCD_VSYNC	VSYNC	VSYNC	VSYNC	--	--	CSN	CSN
LCD_DCLK	DCLK	DCLK	DCLK	DCLK	DCLK	RS	RS

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

BT1120 16bit Mode
Default: D0-D7 <--> Y0-Y7 , D8-D15 <--> C0-C7
Swap ON: D0-D7 <--> C0-C7 , D8-D15 <--> Y0-Y7

VI_CIF Map

VI_CIF					
Mode	BT. 601			BT. 656	BT. 1120
	8bit	10bit	12bit	8bit	16bit
VICAP_D0	--	--	--	--	D0
VICAP_D1	--	--	--	--	D1
VICAP_D2	--	--	--	--	D2
VICAP_D3	--	--	--	--	D3
VICAP_D4	--	--	D0	--	D4
VICAP_D5	--	--	D1	--	D5
VICAP_D6	--	D0	D2	--	D6
VICAP_D7	--	D1	D3	--	D7
VICAP_D8	D0	D2	D4	D0	D8
VICAP_D9	D1	D3	D5	D1	D9
VICAP_D10	D2	D4	D6	D2	D10
VICAP_D11	D3	D5	D7	D3	D11
VICAP_D12	D4	D6	D8	D4	D12
VICAP_D13	D5	D7	D9	D5	D13
VICAP_D14	D6	D8	D10	D6	D14
VICAP_D15	D7	D9	D11	D7	D15
VICAP_CLKIN	CLKIN	CLKIN	CLKIN	CLKIN	CLKIN
VICAP_HSYNC	HSYNC	HSYNC	HSYNC	--	--
VICAP_VSYNC	VSYNC	VSYNC	VSYNC	--	--
VICAP_CLKOUT	CLKOUT	CLKOUT	CLKOUT	--	--


Support BT656 YCbCr 422 8bit output
Support BT1120 YCbCr 422 16bit output, single-edge sampling
Support RGB parallel 18bit/16bit output
Support Mcu serial 3x8/4x8 mode output

BT1120 16bit Mode
Default: D0-D7 <--> Y0-Y7 , D8-D15 <--> C0-C7
Swap ON: D0-D7 <--> C0-C7 , D8-D15 <--> Y0-Y7

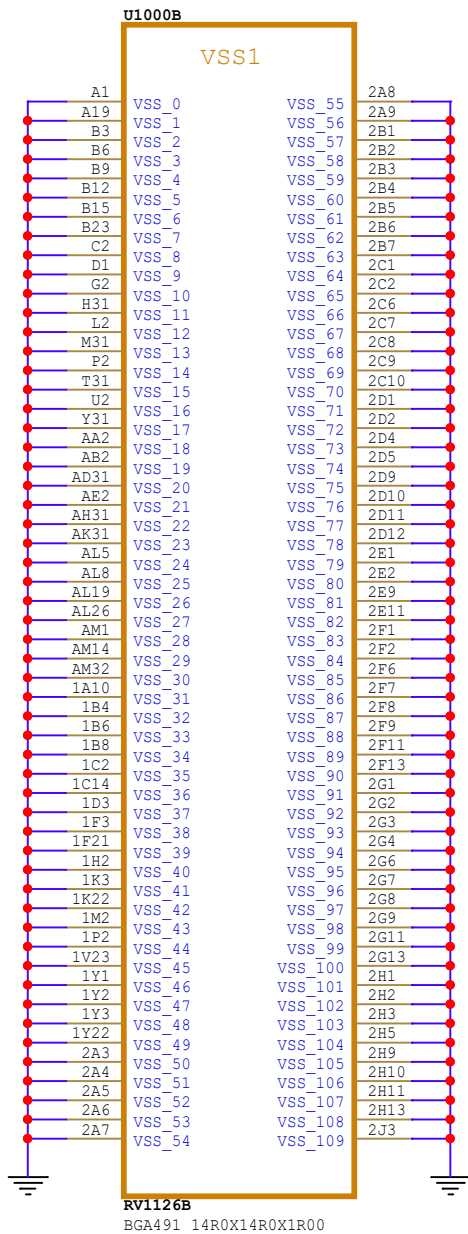
MIPI CSI RX0/1 Map

Mode	1*4lane	2*2lane
MIPI_D0P	MIPI_D0P	MIPI0_D0P
MIPI_D0N	MIPI_D0N	MIPI0_D0N
MIPI_D1P	MIPI_D1P	MIPI0_D1P
MIPI_D1N	MIPI_D1N	MIPI0_D1N
MIPI_D2P	MIPI_D2P	MIPI1_D0P
MIPI_D2N	MIPI_D2N	MIPI1_D0N
MIPI_D3P	MIPI_D3P	MIPI1_D1P
MIPI_D3N	MIPI_D3N	MIPI1_D1N
MIPI_CLK0P	MIPI_CLKP	MIPI0_CLKP
MIPI_CLK0N	MIPI_CLKN	MIPI0_CLKN
MIPI_CLK1P	--	MIPI1_CLKP
MIPI_CLK1N	--	MIPI1_CLKN

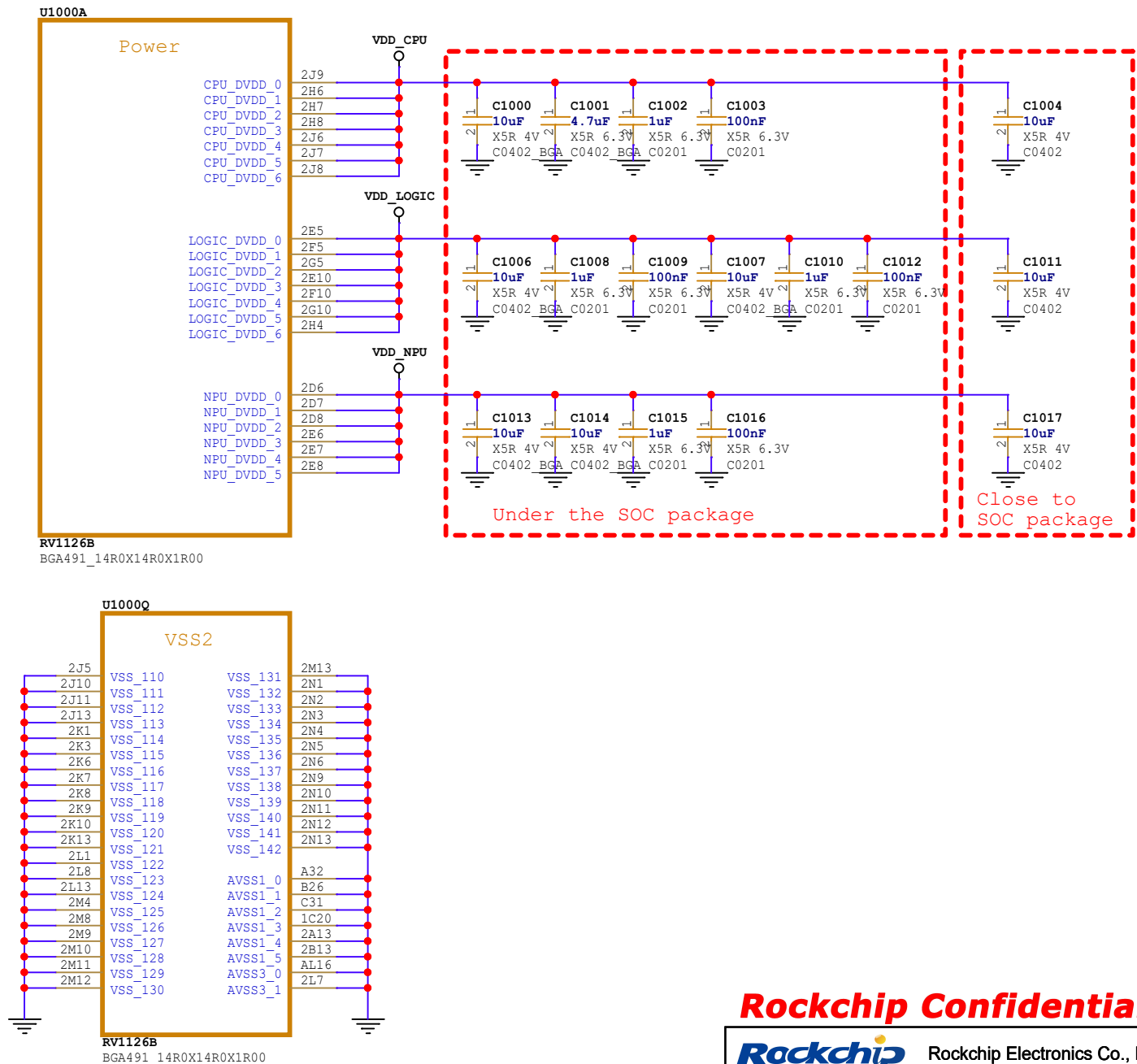
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Project:	RV1126B AI-IPC REF		
File:	09.VI_CIF/VO_LCDC/MIPI Map		
Date:	Friday, June 06, 2025		Rev: V1.0
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GND



Power



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Project:	RV1126B AI-IPC REF		
File:	10.RV1126B-Power/GND		
Date:	Friday, June 06, 2025	Rev:	V1.0
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		Sheet:	10 of 45

OSC/PLL/RTC/OTP/PMU

U1000H

OSC/PLL

OSC_XOUT AL14

OSC_XIN AL15

Y1100

X1 GND

X2 GND

24MHz

CRY4_2R50X2R00X0R80

C1102 12pF

C0G 50V

C0402

R1101 22R

R0402

R1103 1M

R0402

C1103 12pF

C0G 50V

C0402

VDD LOGIC

2K4

C1105 1uF

X5R 6.3V

C0201

VCC_1V8

2J4

PLL_AVDD_0V9

PLL_AVDD_1V8

C1106 100nF

X5R 6.3V

C0201

RTC

OSC_RTC_XIN AM8

OSC_RTC_XOUT AM7

Y1101

32.768KHz

CRY2_3R20x1R50x0R90

C1107 18pF

C0G 50V

C0402

C1109 18pF

C0G 50V

C0402

VBAT_RTC

VCC_RTC

R1124 100R

R0402

2M3

RTC_AVDD

Vmax=3.6V

C1110 1uF

X5R 6.3V

C0201

VCC_1V8

2C13

OTP_VCC_1V8

C1111 100nF

X5R 6.3V

C0201

2H12

OTP

TSADC

SARADC1&2

TSADC_SARADC1&2_AVDD_1V8

C1103 12pF

C0G 50V

C0402

C1104 1nF

X5R 25V

C0201

VCC3V3_SYS

R1104 1K

R0402

RESET

AM13

AL11

AL12

AM11

LAB6

AL10

1AA6

1AC4

1AB4

1AA4

1AC2

AM10

AL9

TSADC_SHUT

TSADC_SHUTORG

PWM1_CH1_M0

RTC_32K_OUT

CLK_32K_OUT

SPK_CTRL

SDMMC0_DET

SDMMC0_VOL_CTRL

SENSOR_INT

SDMMC0_PWREN

WIFI_WAKE_HOST_3V3

WIFI_REG_ON_3V3

UART0_TX_DBG

UART0_RX_DBG

PMUIO0_VCC3V3

C1108 100nF

X5R 6.3V

C0201

1AC12

1AC10

1AA12

1AB12

1AC8

1AA10

1AB10

1AB8

1AA8

1AC6

PMIC_INT

PWR_CTRL

I2C0_SCL_PMIC

I2C0_SDA_PMIC

PWM_CPU

LED_PWM_WHITE

LED_PWM_IR

I2C2_SCL_SENSOR

I2C2_SDA_SENSOR

PMUIO1_VCC

C1112 100nF

X5R 6.3V

C0201

VCC3V3_SYS

2M5

R1135 4.7K

R0402

R1136 4.7K

R0402

I2C2_SCL_SENSOR

I2C2_SDA_SENSOR

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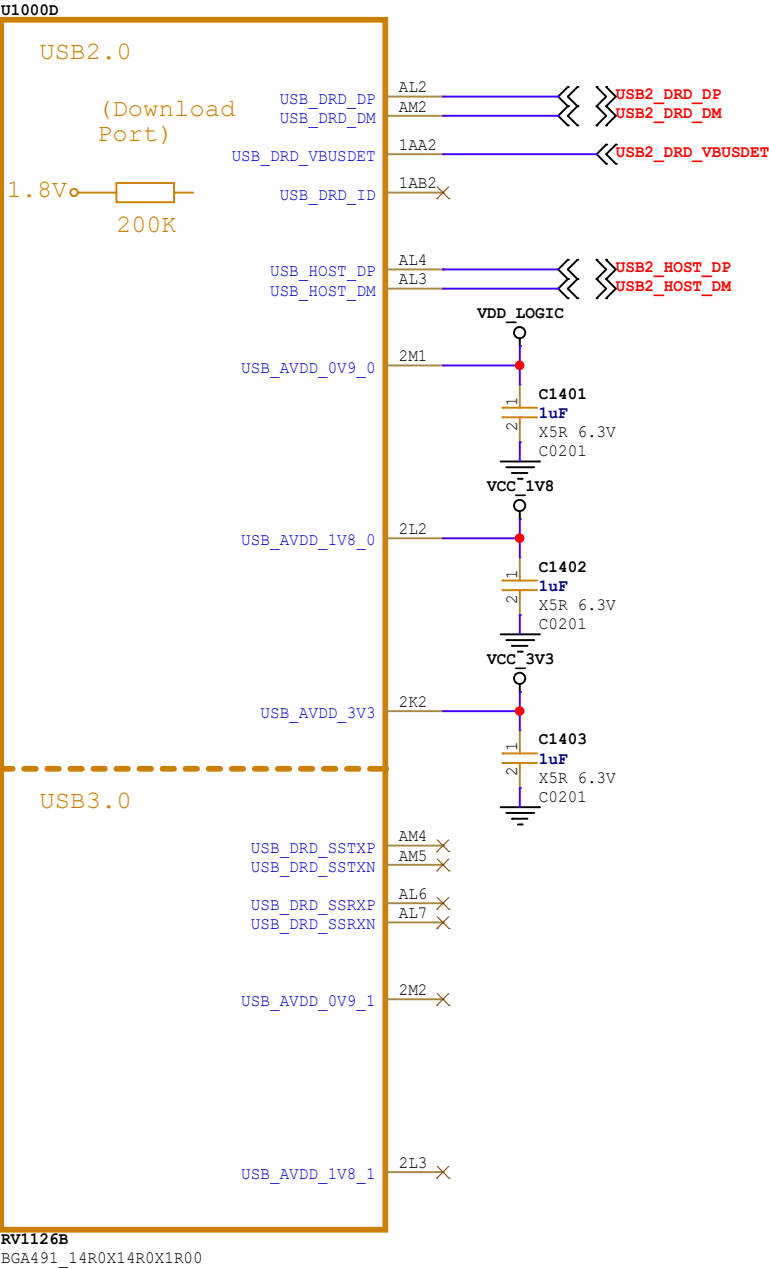
Rockchip Rockchip Electronics Co., Ltd			
Project:	RV1126B AI-IPC REF		
File:	11.RV1126B-OSC/PLL/RTC/PMU		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	11 of 45		

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Project:	RV1126B AI-IPC REF				
File:	11.RV1126B-OSC/PLL/RTC/PMU				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linuxu	Reviewed by:	<Checker>	Sheet:	11 of 45

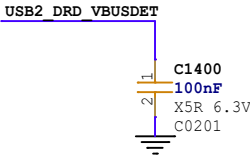
Designed by:	Linxu	Reviewed by:	<Checker>	Sheet:	13 of 45
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USB Controller



Note:

- USB2.0 design rules:
1. Trace impedance 90ohm+/-10%
 2. The distance between other signals follows the 3W rule.



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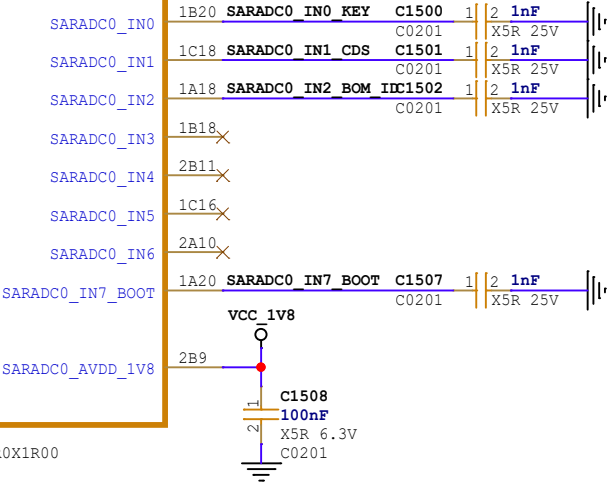
Project:	RV1126B AI-IPC REF			
File:	14.RV1126B-USB Controller			
Date:	Friday, June 06, 2025		Rev:	V1.0
Designed by:	Linxu	Reviewed by:	<Checker>	Sheet: 14 of 45

SARADC0

SARADC0_IN1_CDS>>

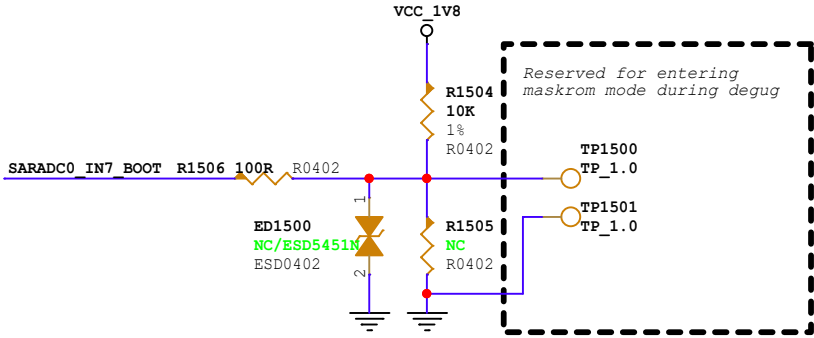
U1000E

SARADC0



RV1126B
BGA491_14R0X14R0X1R00

SARADC0_IN0_KEY>>



BOOT Mode Config of SARADC0_IN7

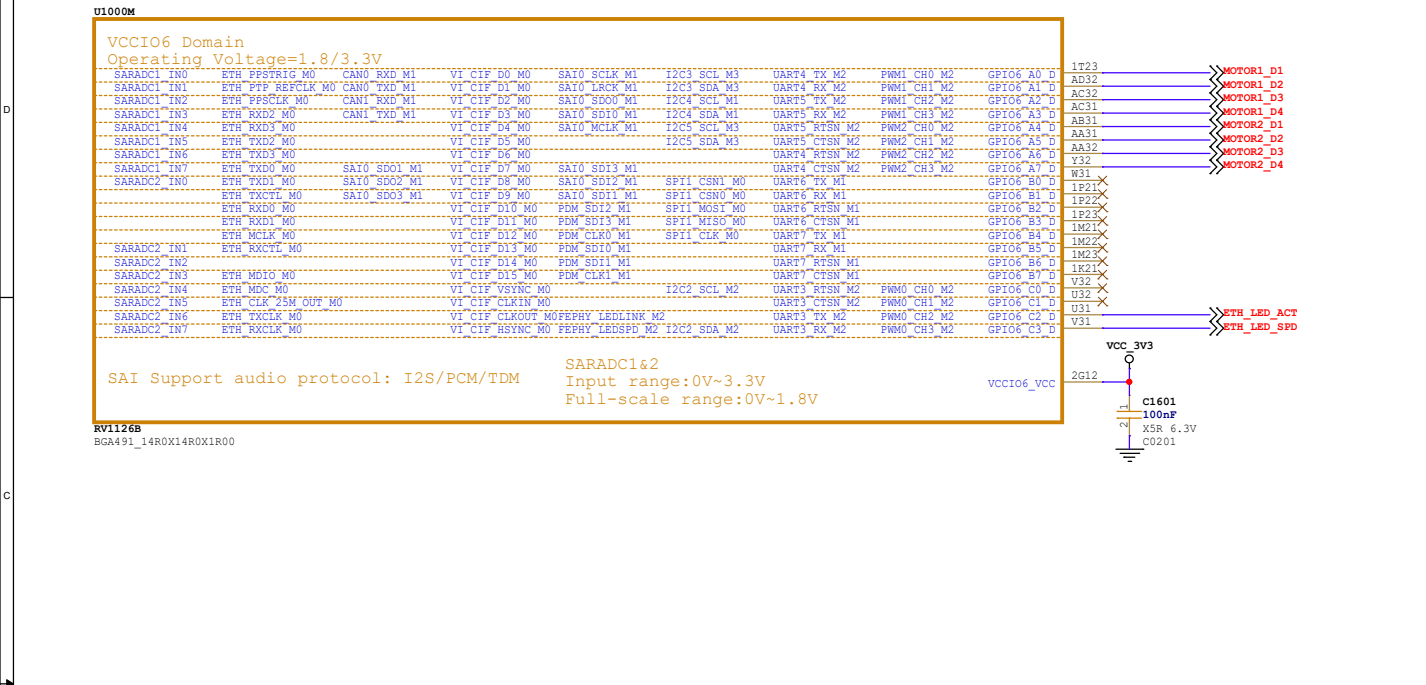
Item	Rup	Rdwon	Boot Mode
Config1	NC	10K	USB/UART0 (Maskrom mode)
Config2	100K	12K/27K	FSPI0--SDMMC0--USB/UART0
Config3	100K	51K/82K	FSPI0--EMMC--USB/UART0
Config4	100K	120K	EMMC--USB/UART0
Config5	100K	200K	EMMC--SDMMC0--USB/UART0
Config6	100K	330K/820K	SDMMC0--USB/UART0
Config7	10K	NC	FSPI0--EMMC--SDMMC0--USB/UART0 (Auto mode)

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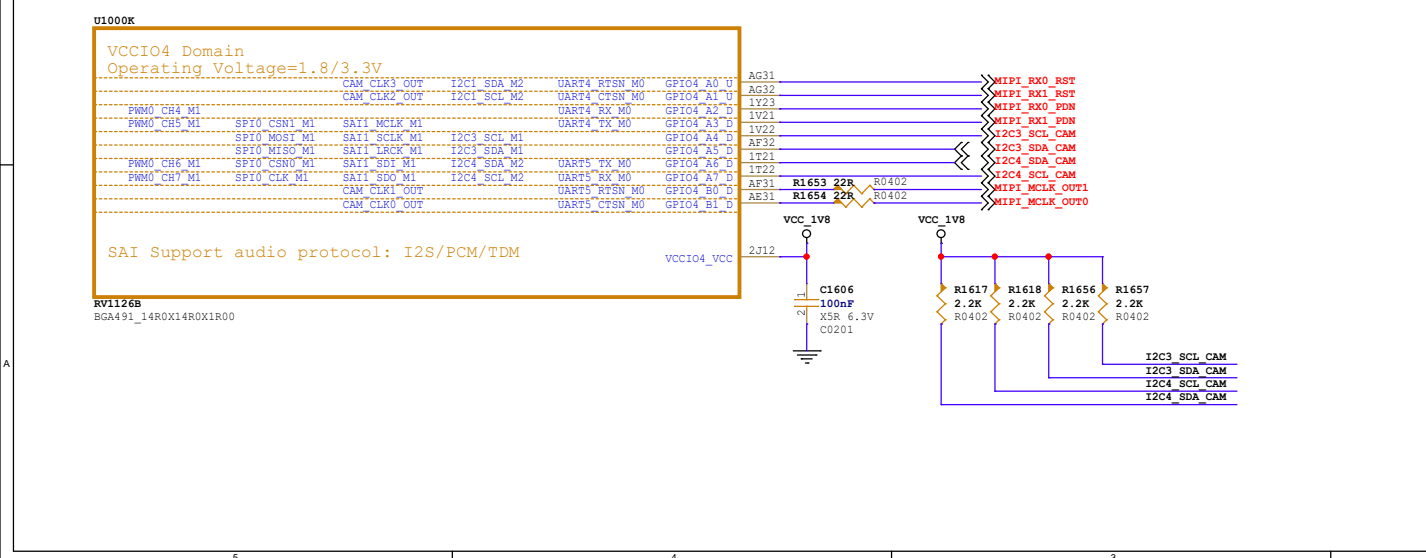
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Project:	RV1126B AI-IPC REF		
File:	15.RV1126B-SARADC		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	15	of	45

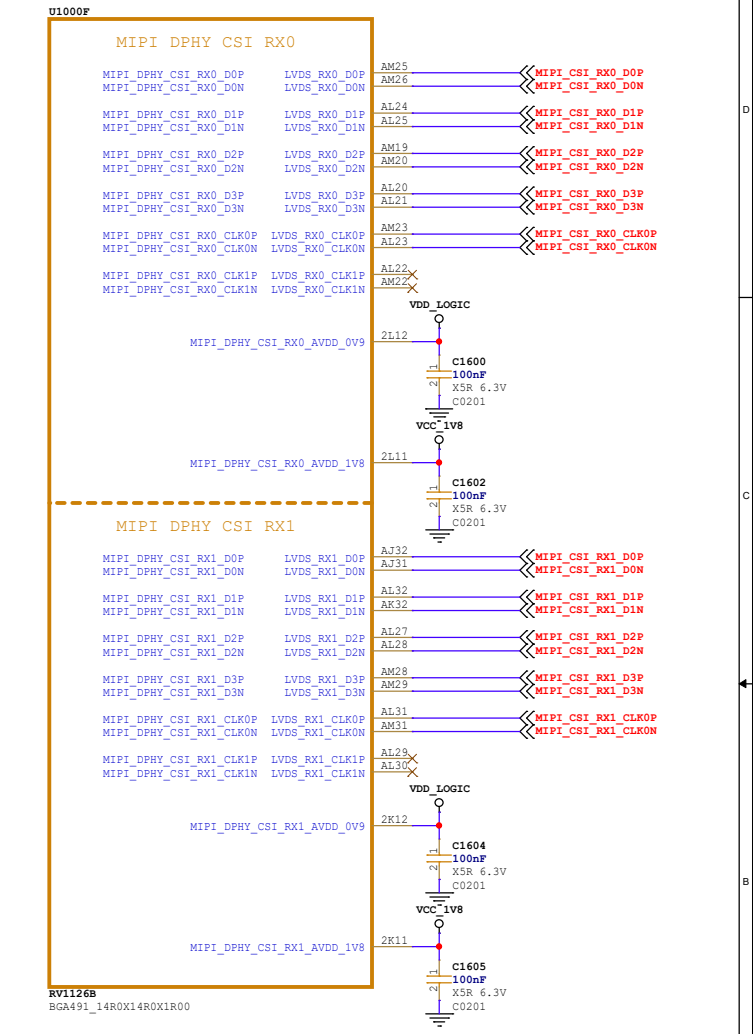
VI_CIF/ETH/SAI/UART/PWM/I2C



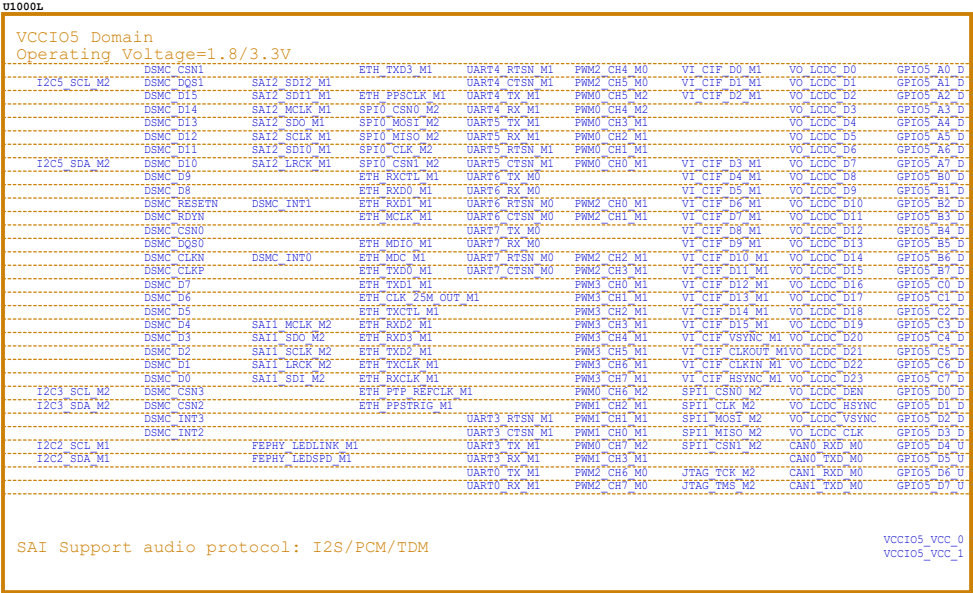
I2C/SPI/MIPI-CLK



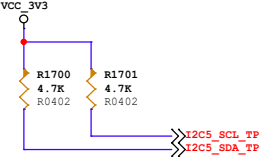
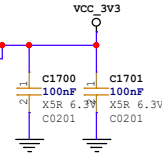
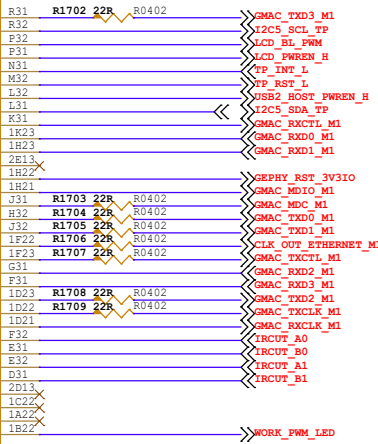
MIPI-CSI



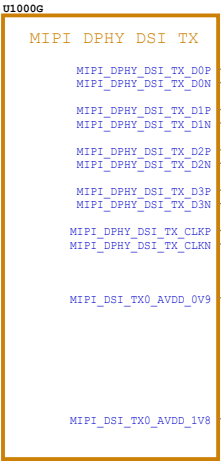
Note:
MIPI CSI RX design rules:
1. Trace impedance 100ohm+/-10%
2. The distance between other signals follows the 3W rule.



RV1126B
BGA491_14R0X14R0X1R00



MIPI-DSI Interface



RV1126B
BGA491_14R0X14R0X1R00

Note:

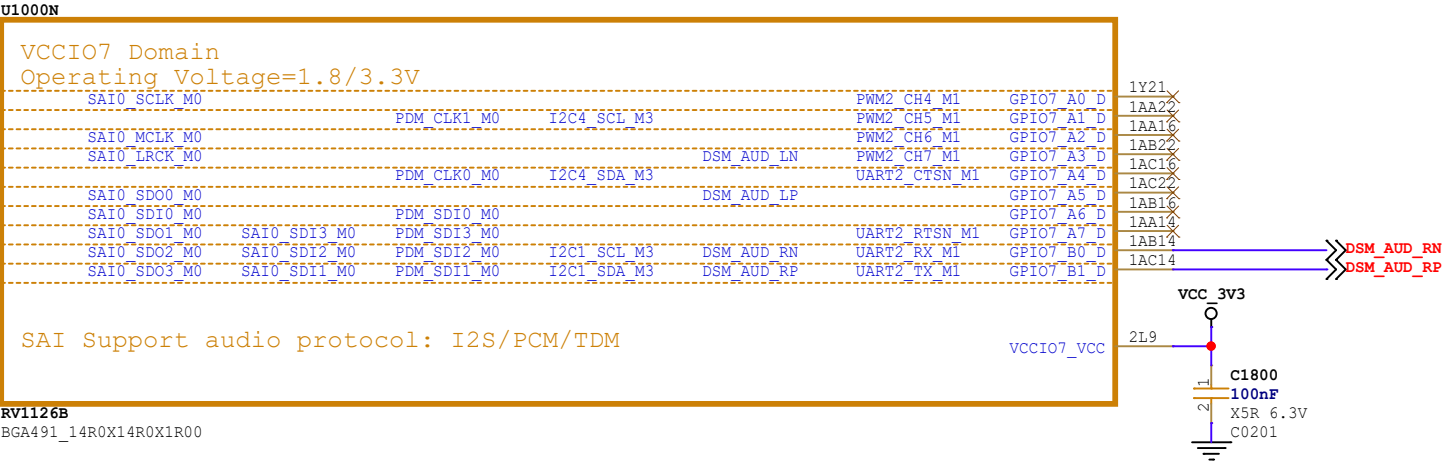
- MIPI DSI RX design rules:
- Trace impedance 100ohm+/-10%
 - The distance between other signals follows the 3W rule.

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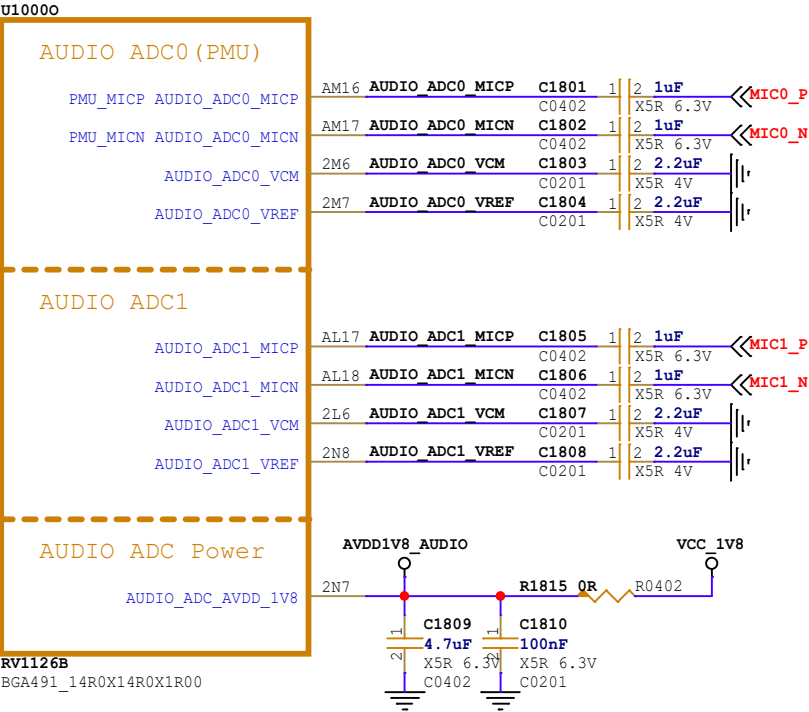
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Project:	RV1126B AI-IPC REF		
File:	17.RV1126B-VideoOutput		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	17	of	45

Audio Interface



Audio ADC



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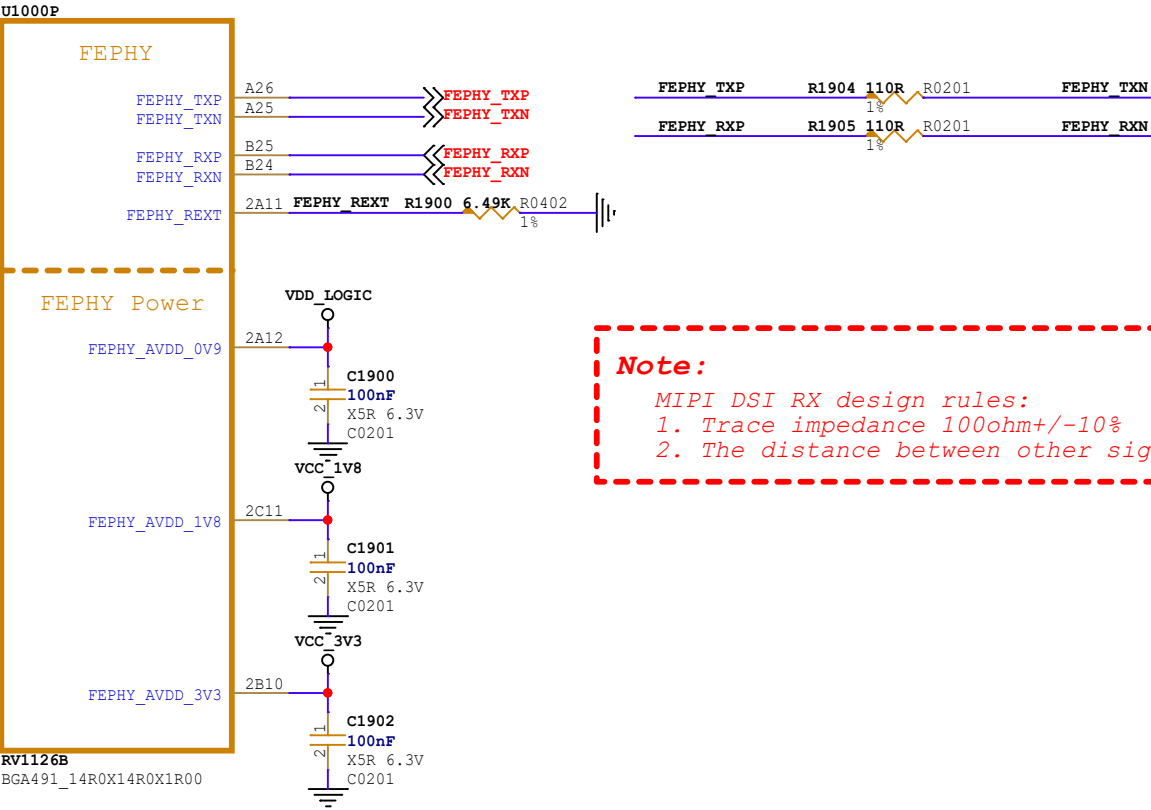
Project: RV1126B AI-IPC REF

File: 18.RV1126B-Audio

Date: Friday, June 06, 2025 Rev: V1.0

Designed by: Linux Reviewed by: <Checker> Sheet: 18 of 45

FEPHY



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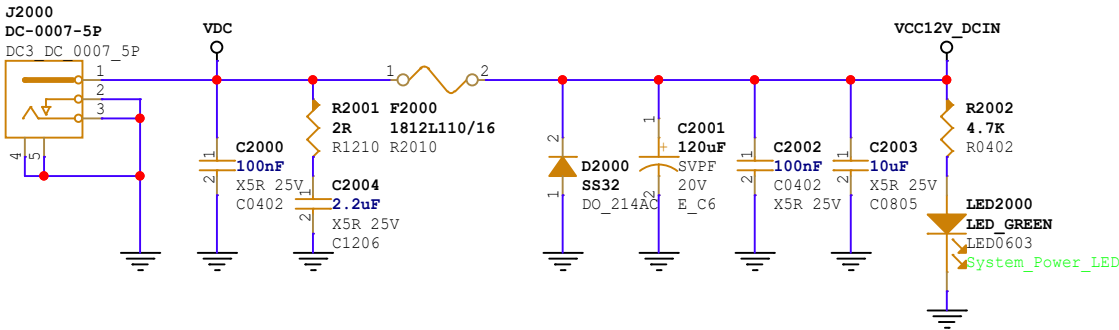
Project: RV1126B AI-IPC REF

File: 19.RV1126B-FEPHY

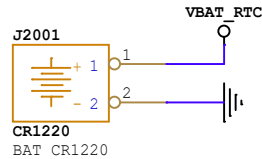
Date: Friday, June 06, 2025 Rev: V1.0

Designed by: Linxu Reviewed by: <Checker> Sheet: 19 of 45

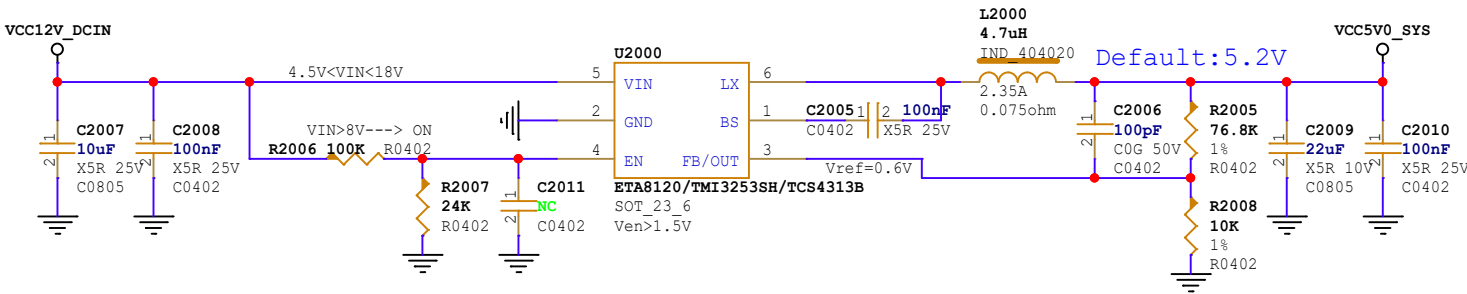
12V DCIN
Setp 0



RTC Power



12V--->VCC5V0_SYS
Setp 1

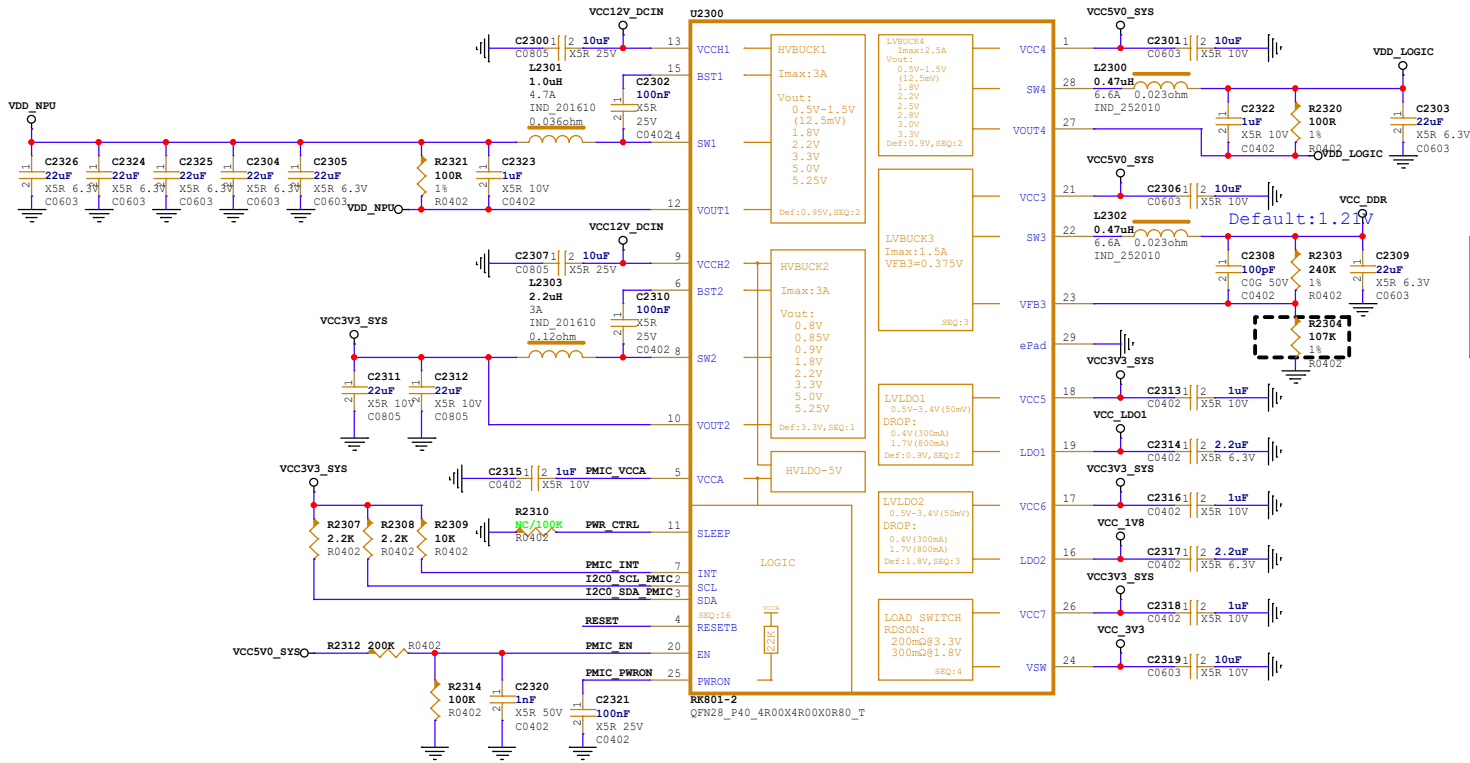
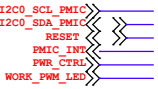


Rockchip Confidential

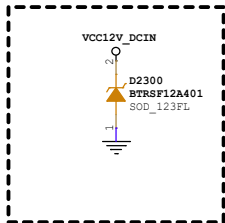
Rockchip Electronics Co., Ltd

Project:	RV1126B AI-IPC REF		
File:	20.Power-DC IN		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	20	of	45

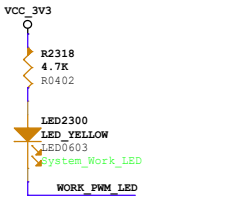
PMIC RK801_12V



Rdown R2304	91K	DDR3L	1.36V
	107K	DDR4/LPDDR3	1.21V
	121K	LPDDR4/4x	1.11V



增加TVS，用于PMIC的浪涌保护
TVS recommend increase for PMIC surge protection



Breathing light IO

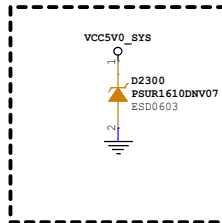
Rockchip Confidential

Rackchip Rockchip Electronics Co., Ltd

Project:	RV1126B AI-IPC REF			
File:	23.Power-PMIC RK801_12V			
Date:	Friday, June 06, 2025	Rev:	V1.0	
Designed by:	Linux	Reviewed by:	<Checker>	Sheet: 21 of 45

Diagram showing the connections for Pin 10:

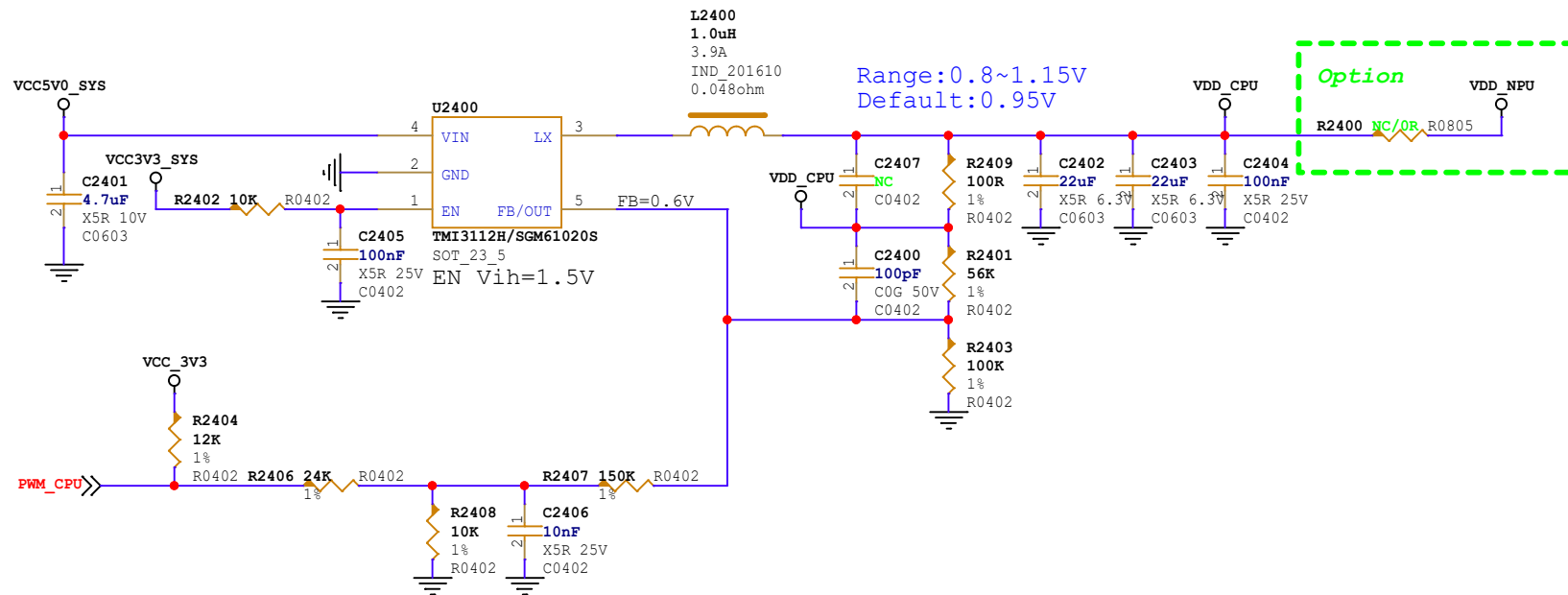
- I2C0_SCL_PMIC
- I2C0_SDA_PMIC
- RESET
- PMIC_INT
- PWR_CTRL
- WORK_PWM_LED



Rdown R2304	91K	DDR3L	1.36V
	107K	DDR4/LPDDR3	1.21V
	121K	LPDDR4/4x	1.11V

Designed by:	Linxu	Reviewed by:	<Checker>	Sheet:	22 of 45
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VCC5V0_SYS--->VDD_CPU
Step 2



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Project:	RV1126B AI-IPC REF
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File:	24.Power-Ext
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Date:	Friday, June 06, 2025
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Rev:	V1.0
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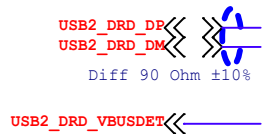
Designed by:	Linus
--------------	-------

Reviewed by:

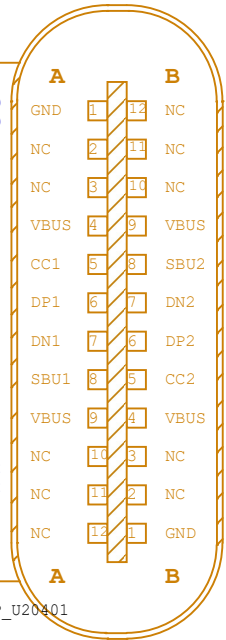
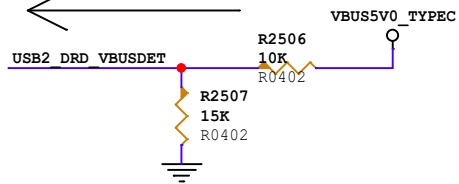
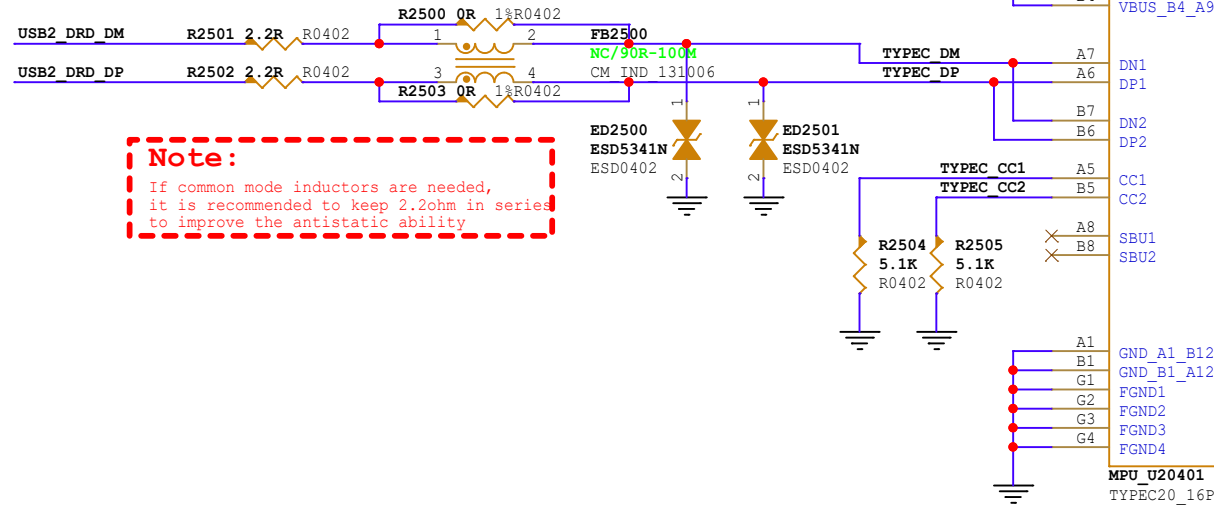
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Sheet:	23 of 45
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USB2.0



Type-C Device



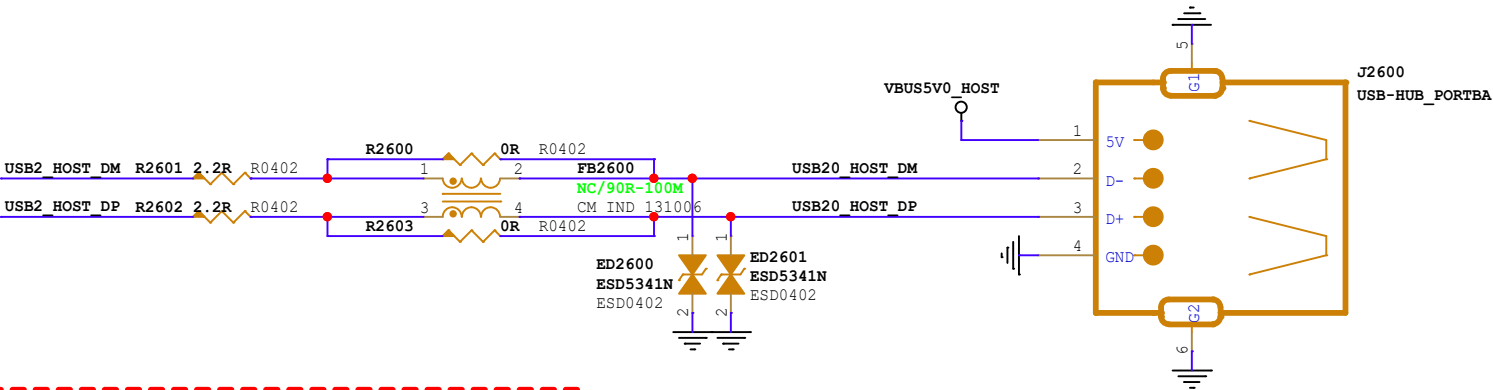
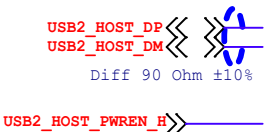
Note:
If common mode inductors are needed,
it is recommended to keep 2.2ohm in series
to improve the antistatic ability

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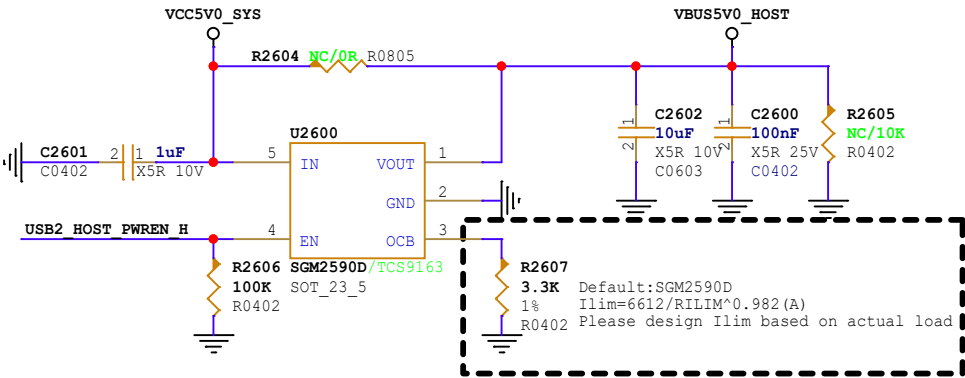
Project:	RV1126B AI-IPC REF				
File:	25.USB-USB2.0 Device Port				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>	Sheet:	24 of 45

USB2.0 Type-A HOST




Note:
If common mode inductors are needed,
it is recommended to keep 2.2ohm in series
to improve the antistatic ability

USB2.0 POWER



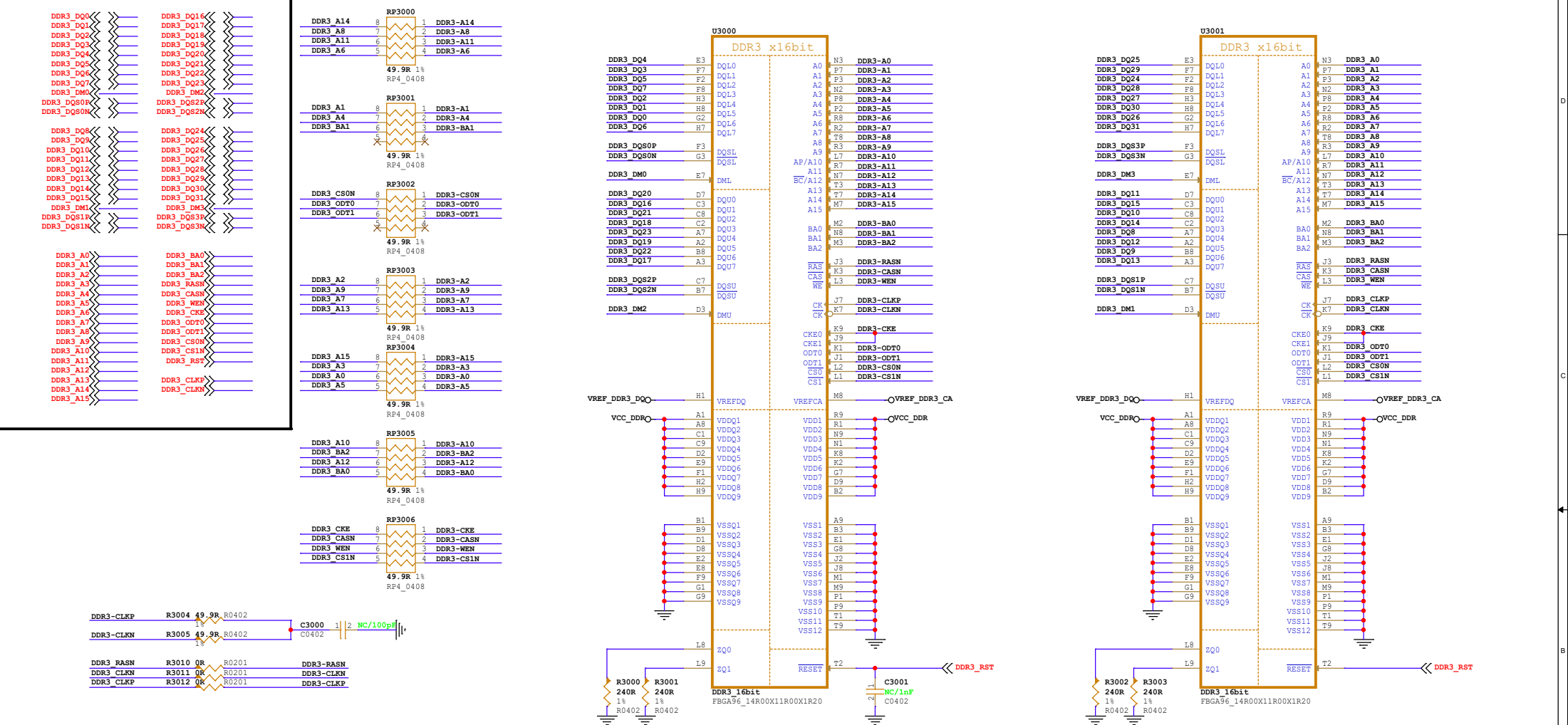
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Rockchip Electronics Co., Ltd

Project:	RV1126B AI-IPC REF		
File:	26.USB-USB2.0 Host Port		
Date:	Friday, June 06, 2025		Rev: V1.0
Designed by:	Linux	Reviewed by:	<Checker>
		Sheet:	25 of 45

DDR3/DDR3L 2x16bit



[illegible]

LPDDR3 1x32bit

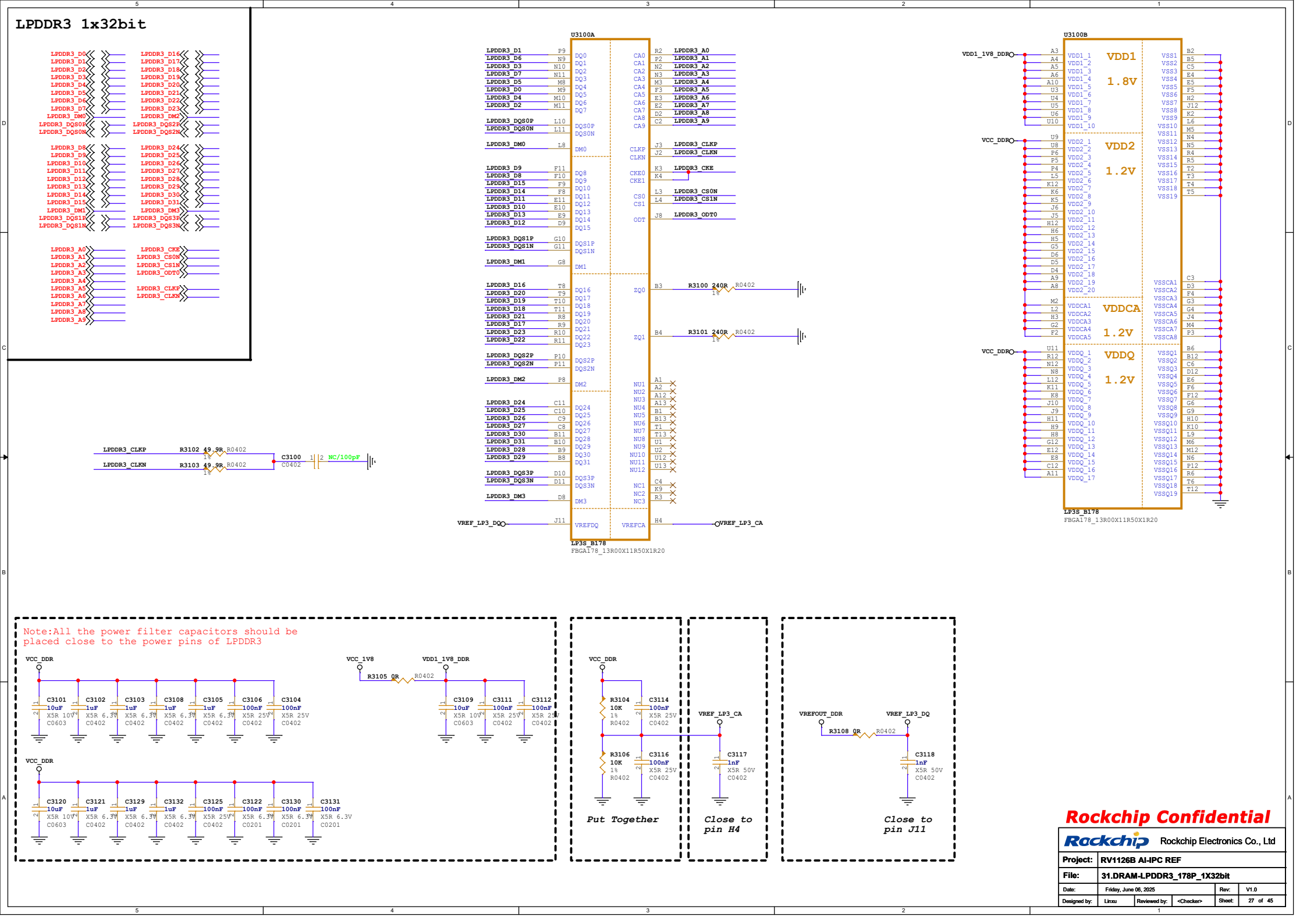
The schematic illustrates the LPDDR3 1x32bit memory interface. It includes three main sections:

- Pin Connections:** Shows the connection of LPDDR3 pins (DQ, DQS, DM, etc.) to the U3100A and U3100B chips. The U3100A chip has pins for DQ, DQS, DM, and VREF. The U3100B chip has pins for VDD1, VDD2, VDDCA, VDDQ, and VREF.
- Power Supply Network:** Details the power supply network for VDD1, VDD2, VDDCA, and VDDQ. It shows the placement of decoupling capacitors (C3101-C3118) and resistors (R3101-R3108) to filter noise and provide stable voltage levels.
- Signal Integrity:** Includes signal traces for DQ, DQS, and DM, with termination resistors (R3101, R3102) and pull-up/pull-down resistors (R3103, R3104).

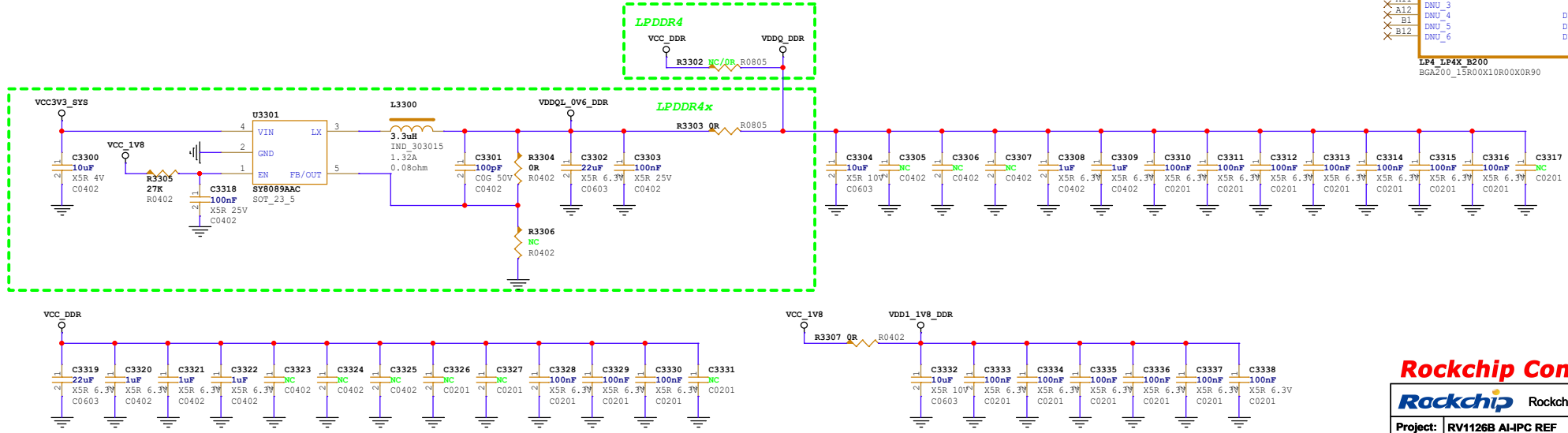
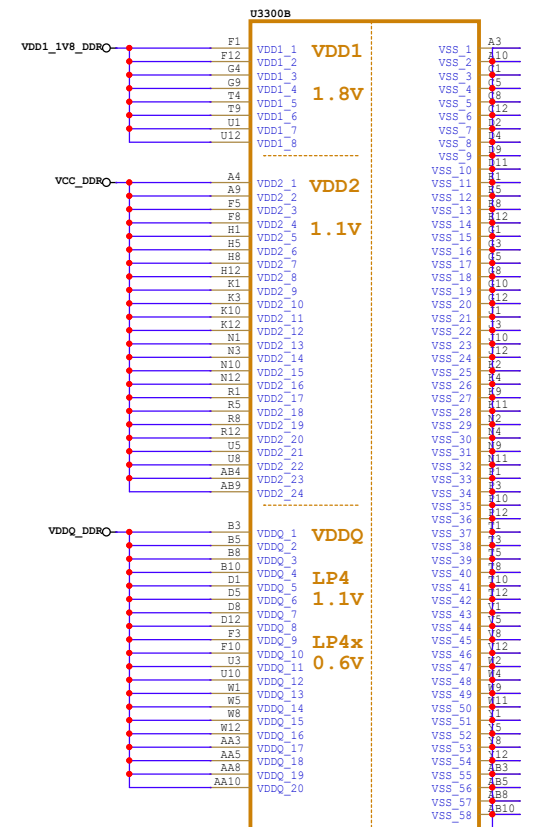
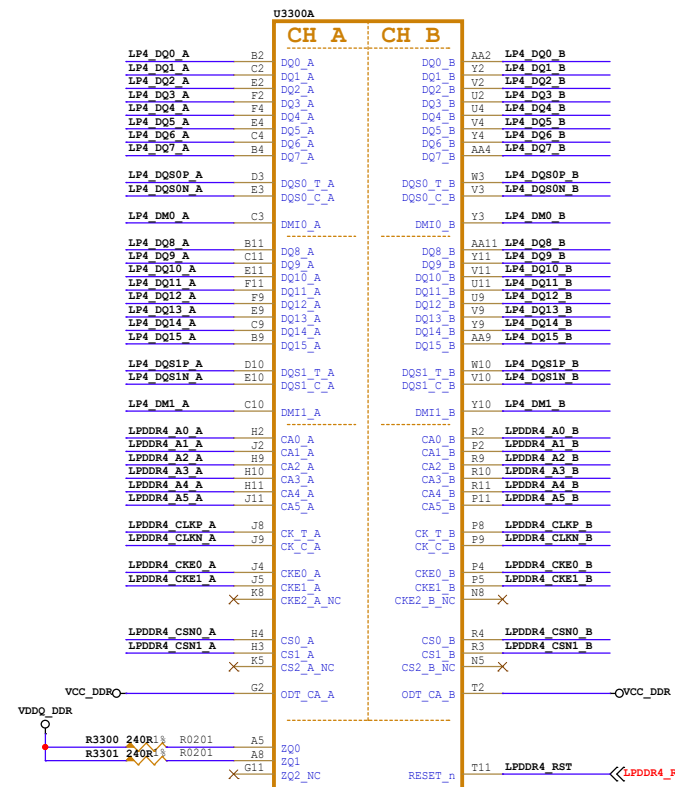
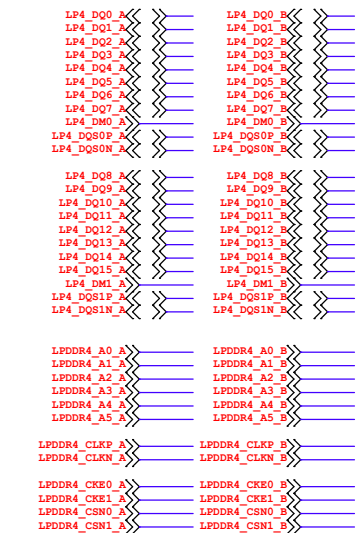
Note:All the power filter capacitors should be placed close to the power pins of LPDDR3

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Project:	RV1126B AI-IPC REF		
File:	31.DRAM-LPDDR3_178P_1X32bit		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
		Sheet:	27 of 45

[illegible][illegible][illegible]

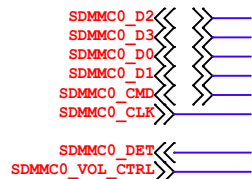
LPDDR4/4x 1x32bit



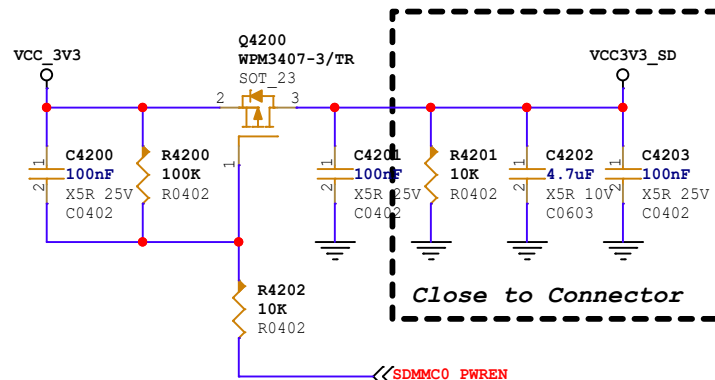
A

Project:	RV1126B AI-IPC REF				
File:	40.Flash-eMMC Flash				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>	Sheet:	30 of 45

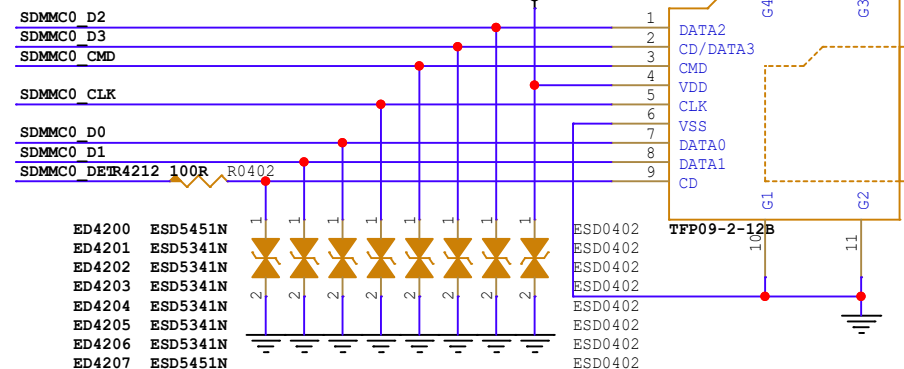
Micro-SD Card



Card Power



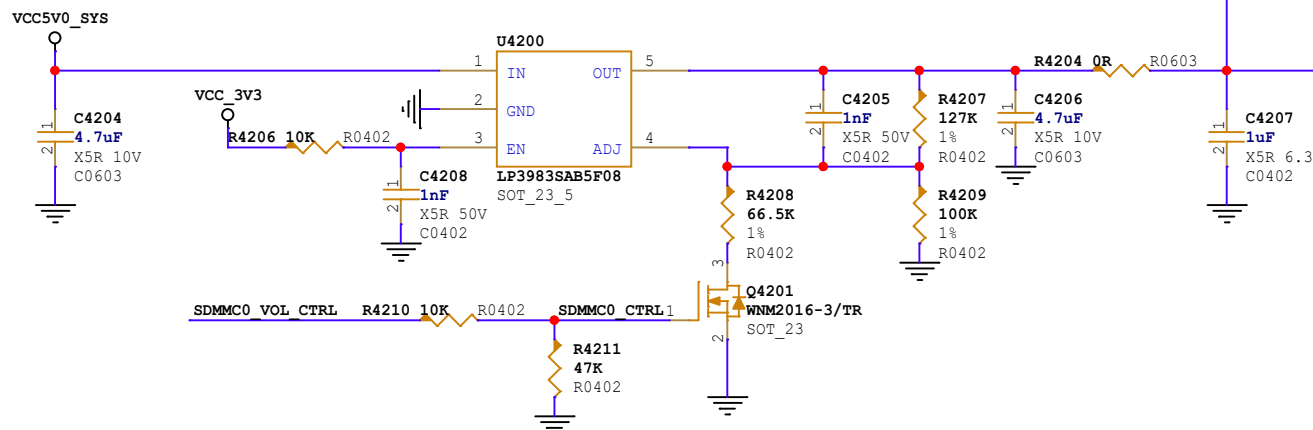
SDMMC0_PWREN=L VCC3V3_SD=3.3V(Default)
SDMMC0_PWREN=H VCC3V3_SD=0V



Card IO Power

OPTION 1
Usually used for SD2.0.

OPTION 3
Usually used for SD3.0.
It can support SD upgrade,
but can't support SD boot.



OPTION 2
Usually used for SD3.0.
It can support SD upgrade and SD boot.
If not used, you can delete it

SDIO2.0 SDMMC0_VOL_CTRL=H VCCIO_SD=3.34V(Default)
SDIO3.0 SDMMC0_VOL_CTRL=L VCCIO_SD=1.816V

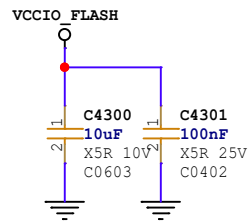
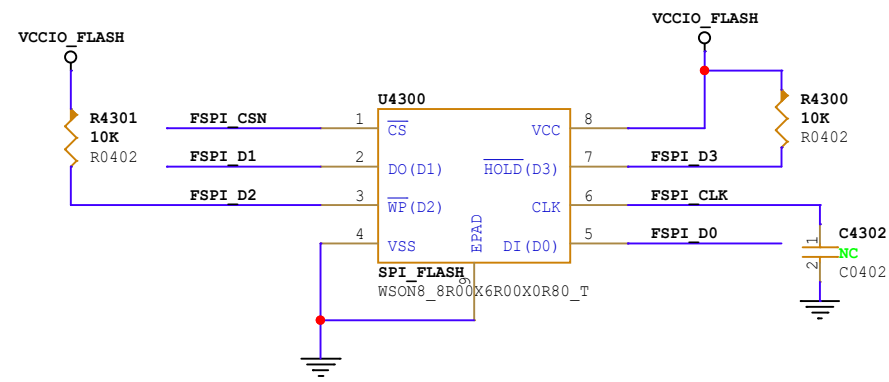
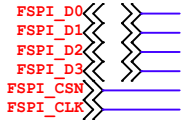
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Project:	RV1126B AI-IPC REF		
File:	42.Flash-Micro-SD Card		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	31 of 45		

SPI Flash

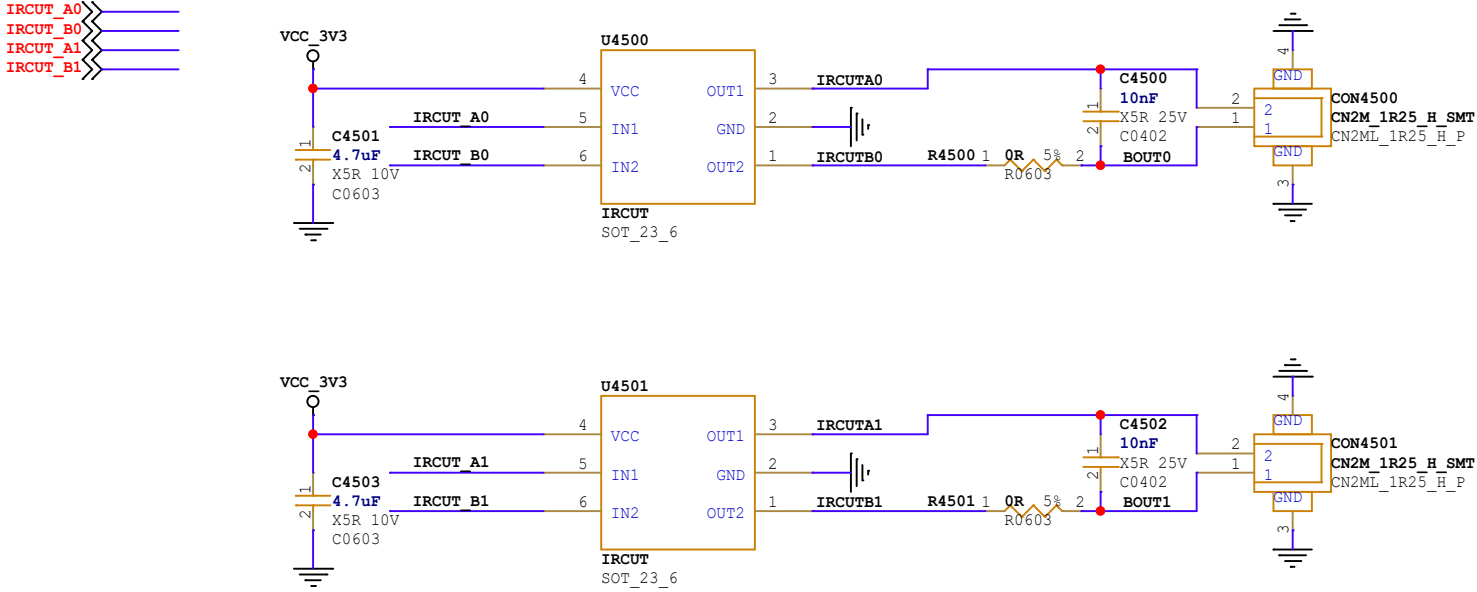
NOTE:
Refer to the latest AVL
for parts selection.



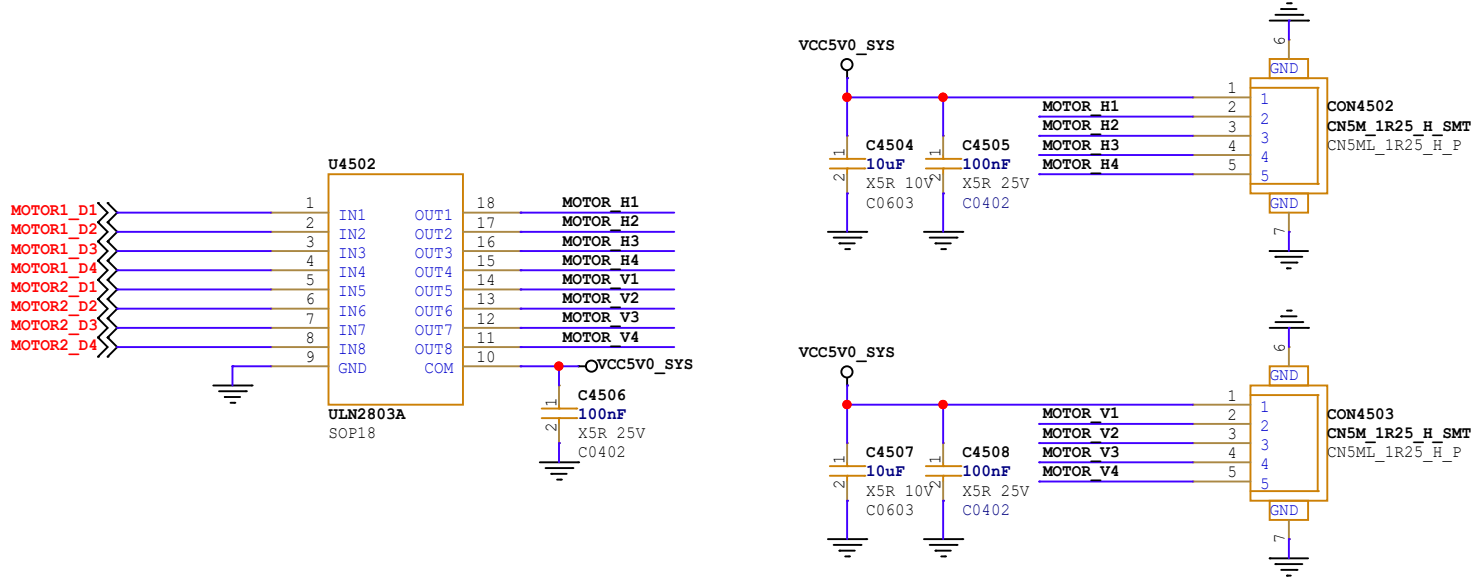
Rockchip Confidential

<div><div>Rockchip</div><div>Rockchip Electronics Co., Ltd</div></div>			
Project:	RV1126B AI-IPC REF		
File:	43.Flash-SPI Flash		
Date:	Friday, June 06, 2025		Rev: V1.0
Designed by:	Linux	Reviewed by:	<Checker>
		Sheet:	32 of 45

IRCUT



Motor



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Project:	RV1126B AI-IPC REF		
File:	45.VI-Camera Motor&IRCUT		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>
Sheet:	33	of	45

MIPI CAM0 Interfae

MIPI_CSI_RX0_D0N
MIPI_CSI_RX0_D0P
MIPI_CSI_RX0_D1N
MIPI_CSI_RX0_D1P
MIPI_CSI_RX0_D2N
MIPI_CSI_RX0_D2P
MIPI_CSI_RX0_D3N
MIPI_CSI_RX0_D3P
MIPI_CSI_RX0_CLK0N
MIPI_CSI_RX0_CLK0P

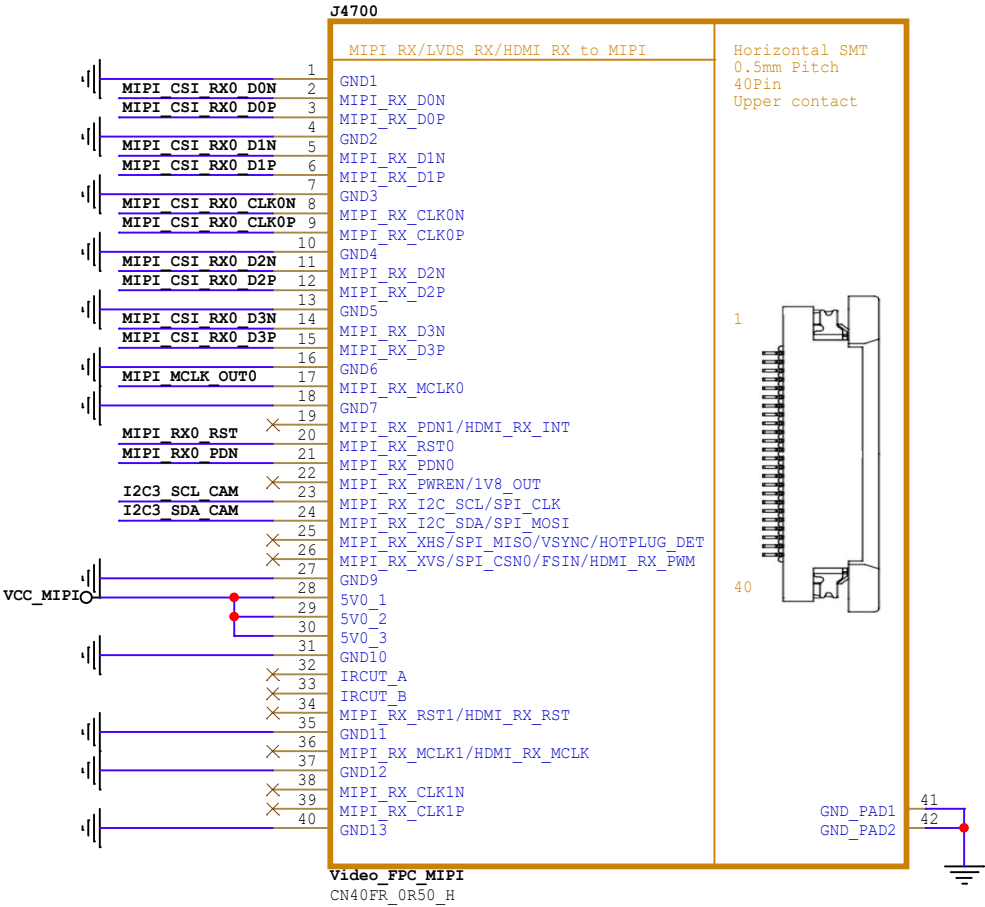
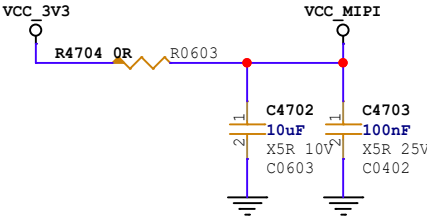
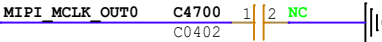
MIPI_MCLK_OUT0

MIPI_RX0_PDN


MIPI_RX0_RST

I2C3_SCL_CAM

I2C3_SDA_CAM



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 Rockchip Electronics Co., Ltd			
Project:	RV1126B AI-IPC REF		
File:	47.VI-Camera_MIPI-CSIO		
Date:	Friday, June 06, 2025		Rev: V1.0
Designed by:	Linux	Reviewed by:	<Checker> Sheet: 34 of 45

MIPI CAM1 Interfae

MIPI_CSI_RX1_D0N
MIPI_CSI_RX1_D0P
MIPI_CSI_RX1_D1N
MIPI_CSI_RX1_D1P
MIPI_CSI_RX1_D2N
MIPI_CSI_RX1_D2P
MIPI_CSI_RX1_D3N
MIPI_CSI_RX1_D3P
MIPI_CSI_RX1_CLK0N
MIPI_CSI_RX1_CLK0P

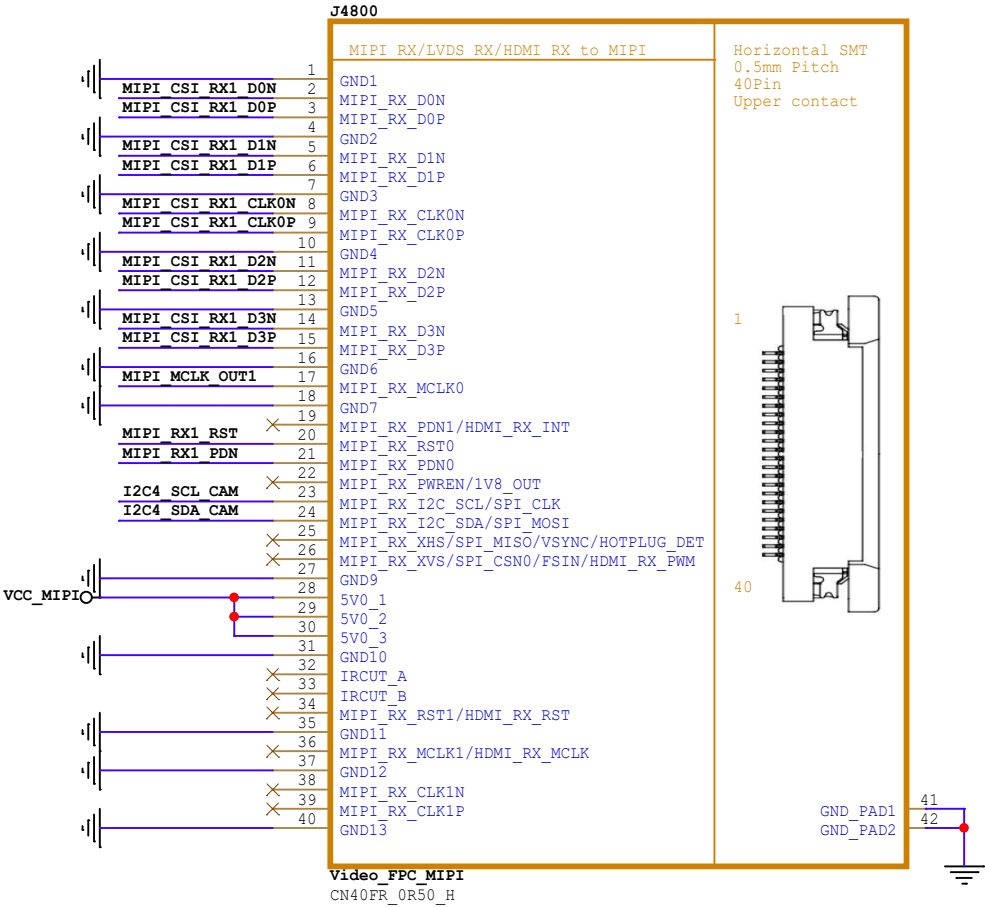
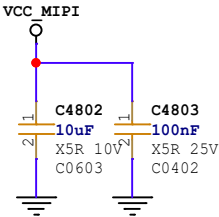
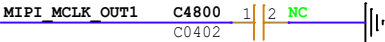
MIPI_MCLK_OUT1

MIPI_RX1_PDN


MIPI_RX1_RST

I2C4_SCL_CAM

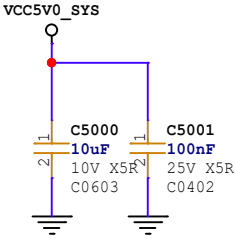
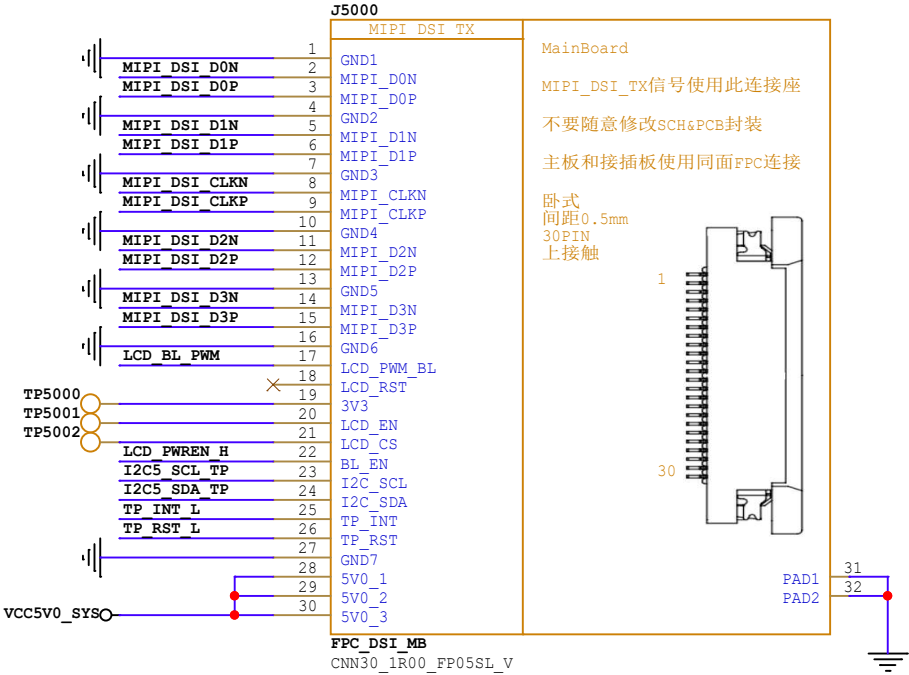
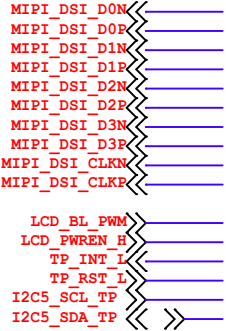
I2C4_SDA_CAM



Rockchip Confidential

		Rockchip Electronics Co., Ltd		
Project:	RV1126B AI-IPC REF			
File:	48.VI-Camera_MIPI-CS11			
Date:	Friday, June 06, 2025		Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>	Sheet: 35 of 45

MIPI-DSI Interface

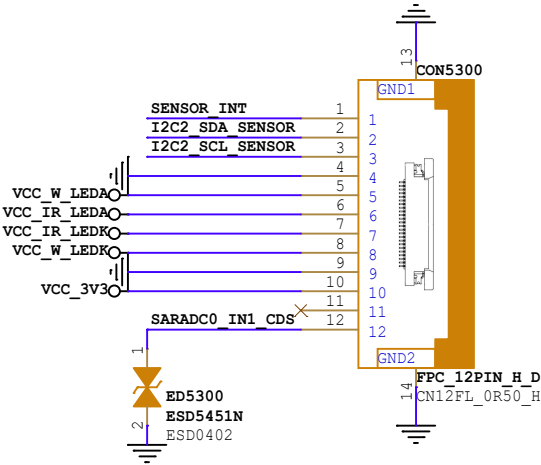
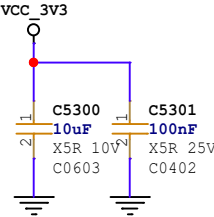
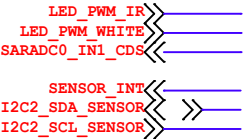


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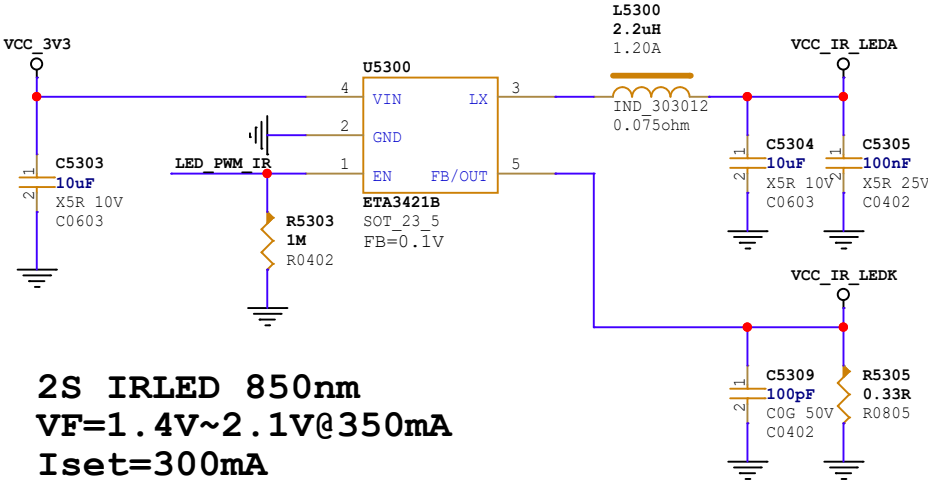
Rockchip Electronics Co., Ltd

Project:	RV1126B AI-IPC REF			
File:	50.VO-LCM MIPI-DSI			
Date:	Friday, June 06, 2025		Rev:	V1.0
Designed by:	Linxu	Reviewed by:	<Checker>	Sheet: 36 of 45

LED Board Interfae

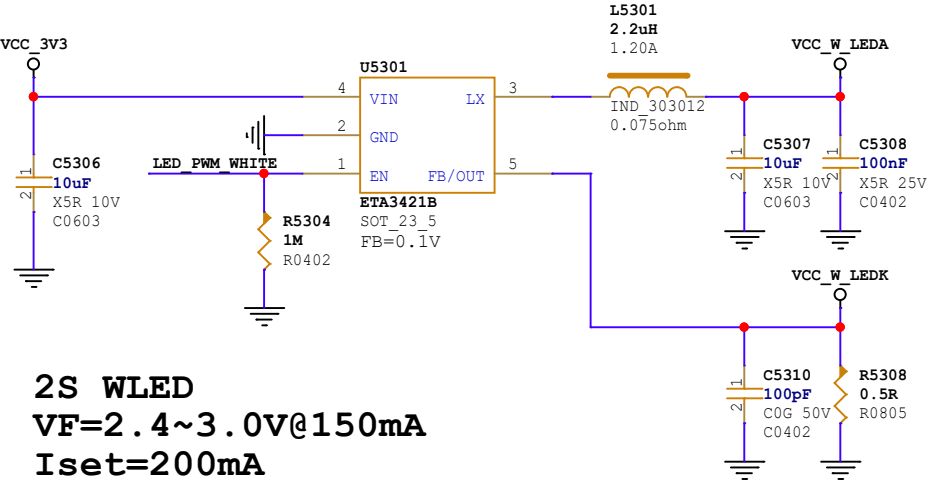


IR LED



2S IRLED 850nm
VF=1.4V~2.1V@350mA
Iset=300mA

White LED



2S WLED
VF=2.4~3.0V@150mA
Iset=200mA

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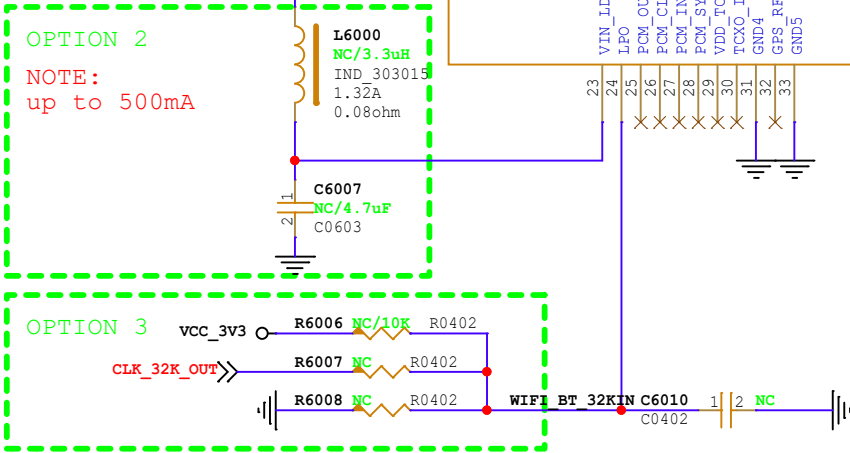
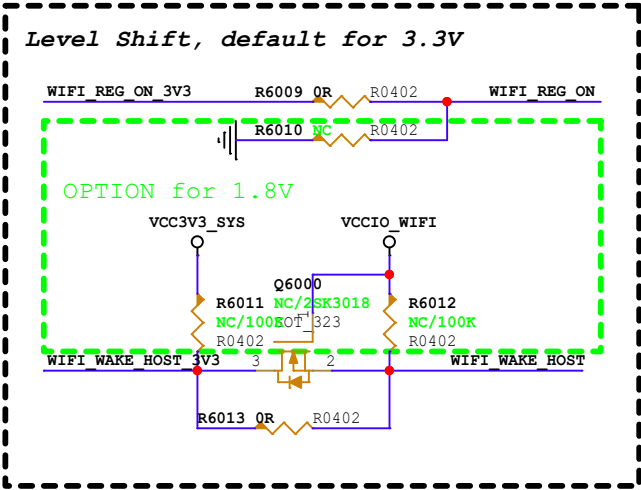
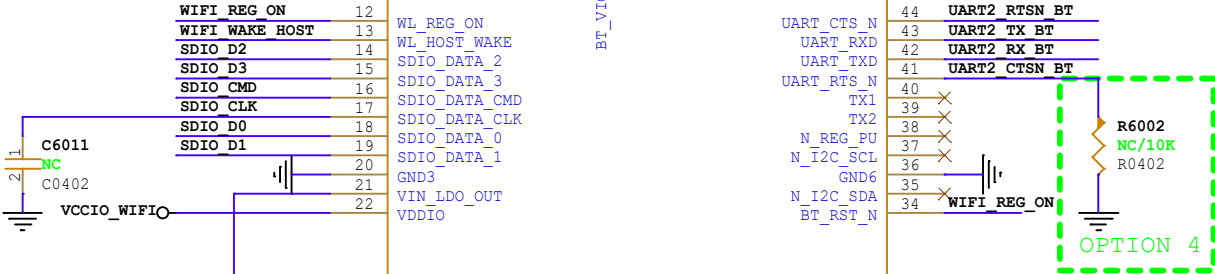
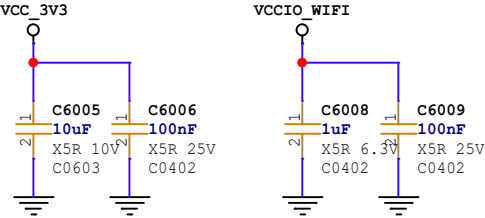
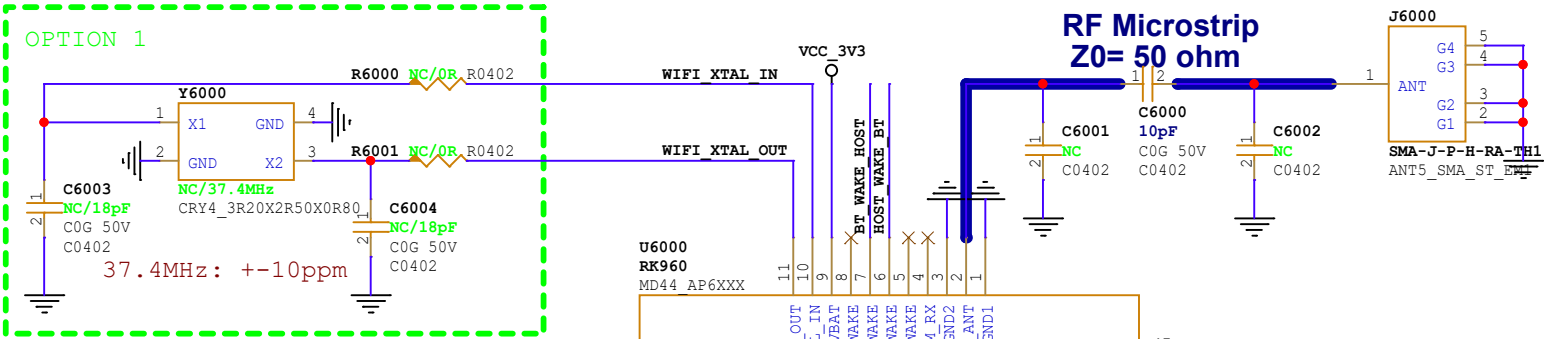
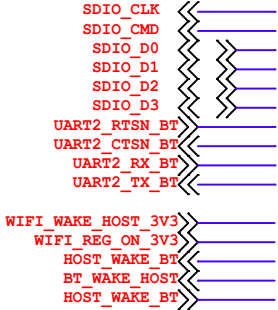
Project: RV1126B AI-IPC REF

File: 53.VO-LED BOARD/CDS

Date: Friday, June 06, 2025

Designed by: Linux Reviewed by: <Checker> Sheet: 37 of 45

WIFI/BT Module



TYPE	WIFI				BT	Crystals	VCCIO_SDIO	OPTION			
	a	b/g/n	ac	5GHz				1	2	3	4
RK960 Module RK960-V12	N	Y	N	N	BT5.3	Integrated	1.8V/3.3V	N	N	Y	N
RTL8821CS Module 6221A-SRC	Y	Y	Y	Y	BLE4.2	Integrated	1.8V/3.3V	N	N	Y	N

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Project: RV1126B AI-IPC REF

File: 60.WIFI/BT-SDIO_1T1R

Date: Friday, June 06, 2025

Designed by: Linux

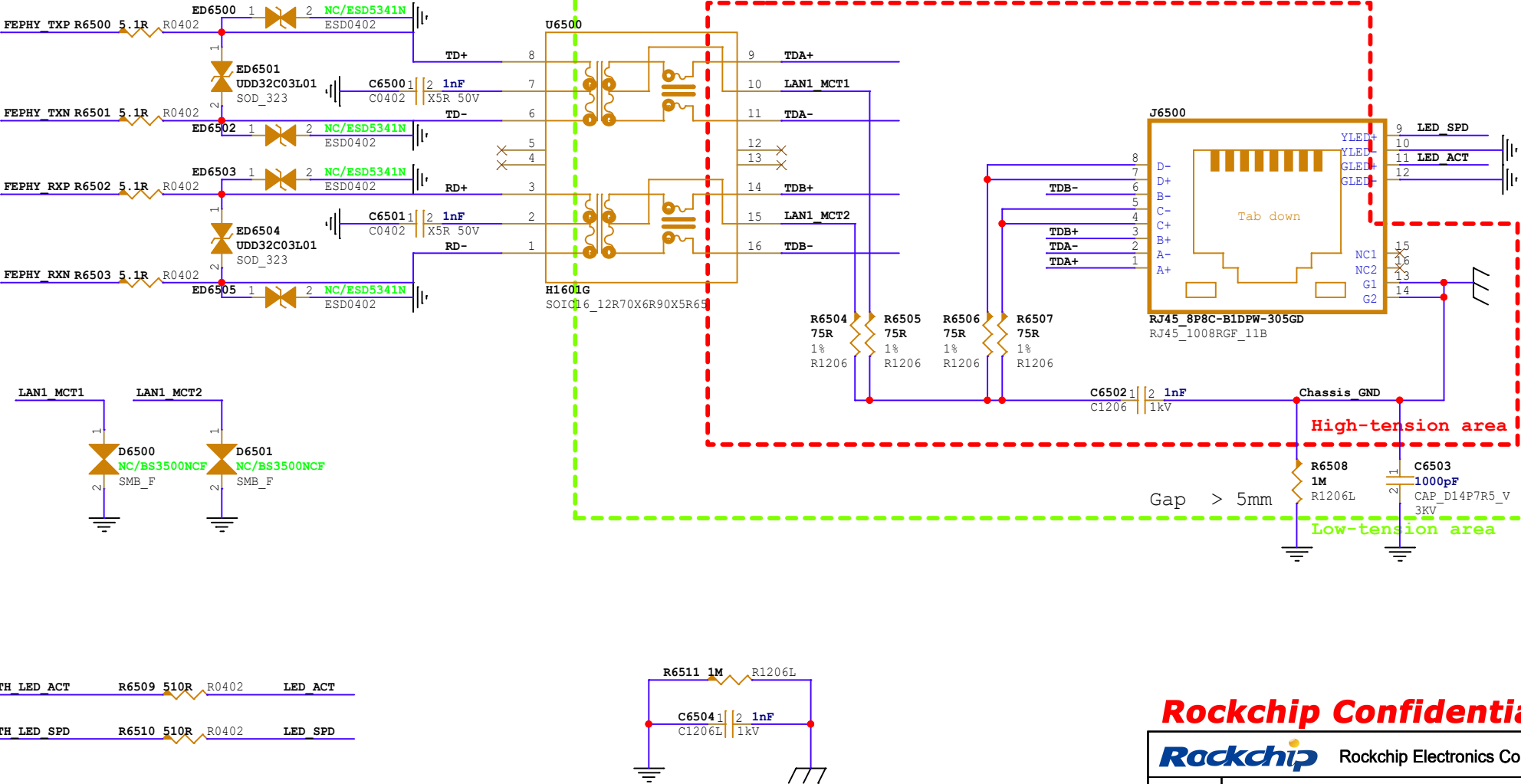
Reviewed by: <Checker>

Rev: V1.0


Sheet: 38 of 45

Ethernet Embed

Note: It can only choose
between FEPHY and GEPHY



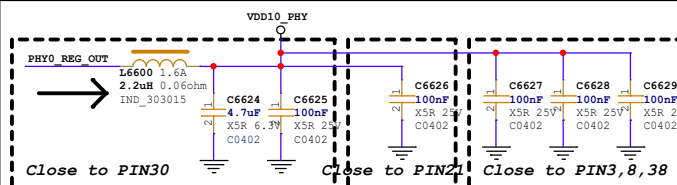
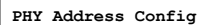
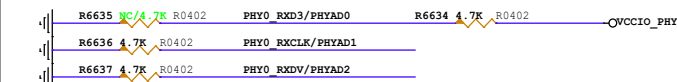
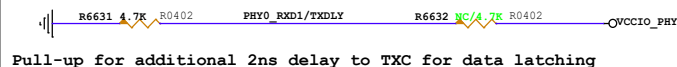
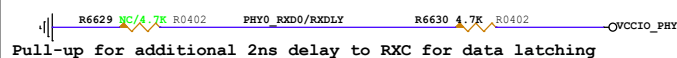
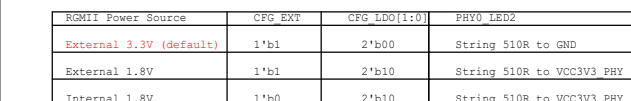
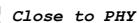
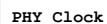
Rockchip Confidential



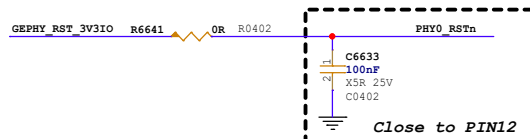
Rockchip Electronics Co., Ltd

Project:	RV1126B AI-IPC REF				
File:	65.Ethernet-FEPHY_Embed				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linux	Reviewed by:	<Checker>	Sheet:	39 of 45

Note: It can only choose between *FEPHY* and *GEPHY*



PHYRSTB is 3.3V IO

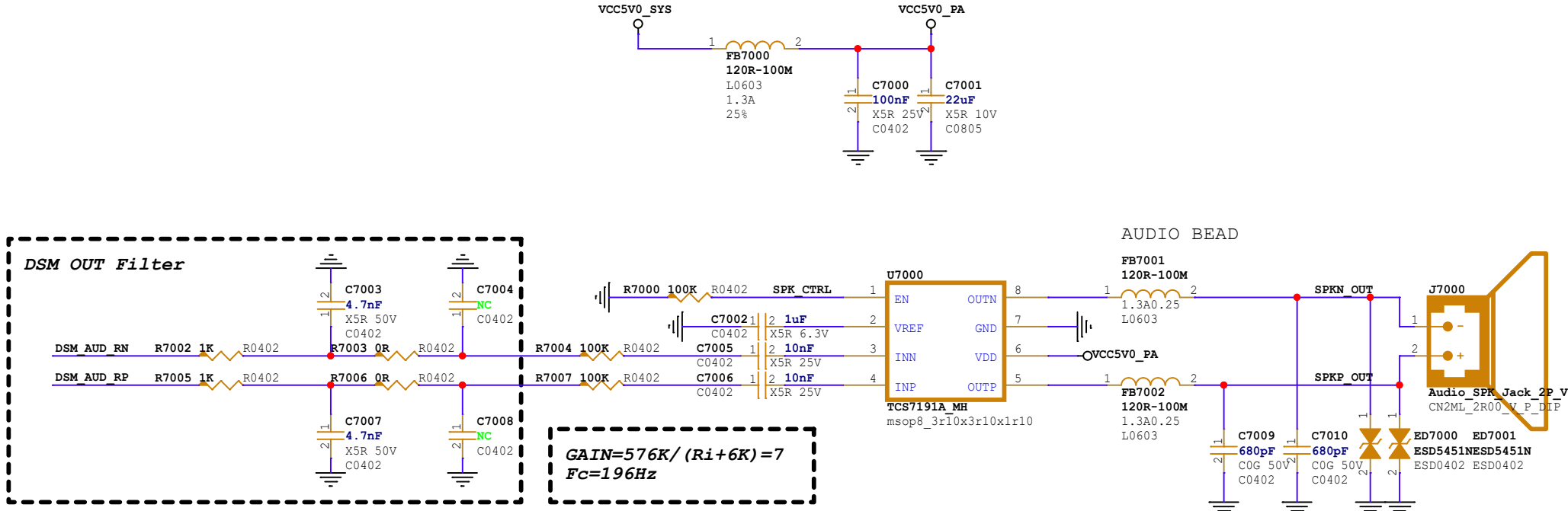


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Project:	RV1126B AI-IPC REF				
File:	66.Ethernet-GEPHY_RGMII(opt)				
Date:	Friday, June 06, 2025			Rev:	V1.0
Designed by:	Linzu	Reviewed by:	<Checker>	Sheet:	40 of 45

Audio Output


DSM_AUD_RN
DSM_AUD_RP
SPK_CTRL
SPKP_OUT
SPKN_OUT



Note

Differential/Balanced Audio Signals!
Layout must be routing by differential

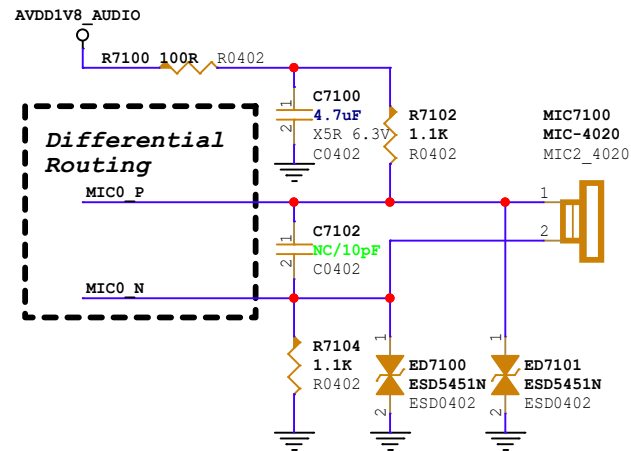
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 Rockchip Electronics Co., Ltd			
Project:	RV1126B AI-IPC REF		
File:	70.Audio Output		
Date:	Friday, June 06, 2025		Rev: V1.0
Designed by:	Linux	Reviewed by:	<Checker> Sheet: 41 of 45

Audio Input

MIC0_P
MIC0_N
MIC1_P
MIC1_N
SPKP_OUT
SPKN_OUT

ECM

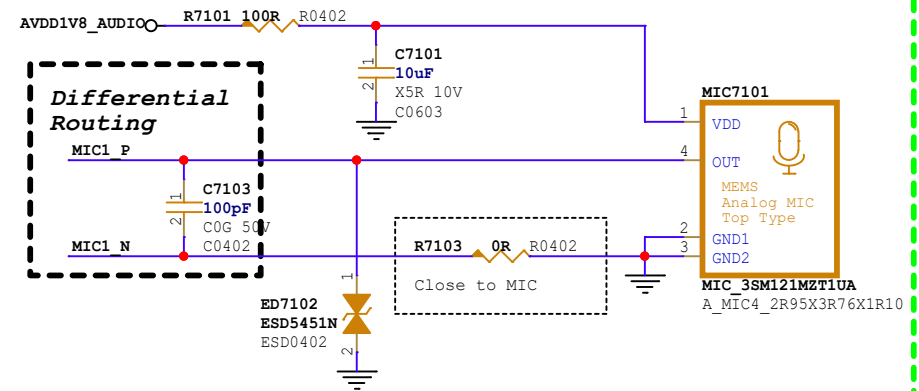


Note

Differential/Balanced Audio Signals!
Layout must be routing by differential

Analog MEMS

Option1

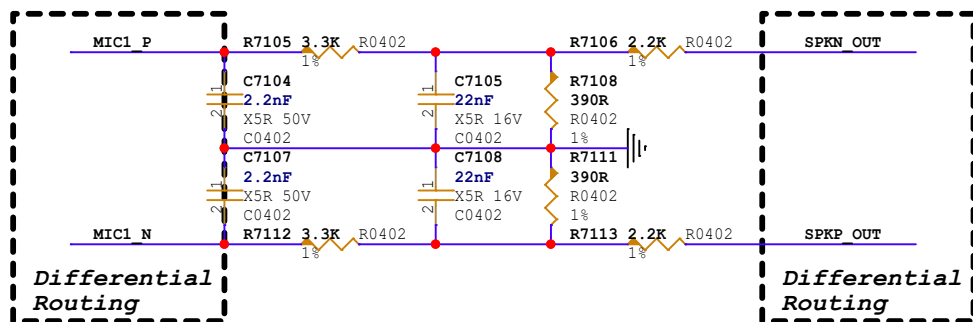


Note

Differential/Balanced Audio Signals!
Layout must be routing by differential

Loopback

Option2

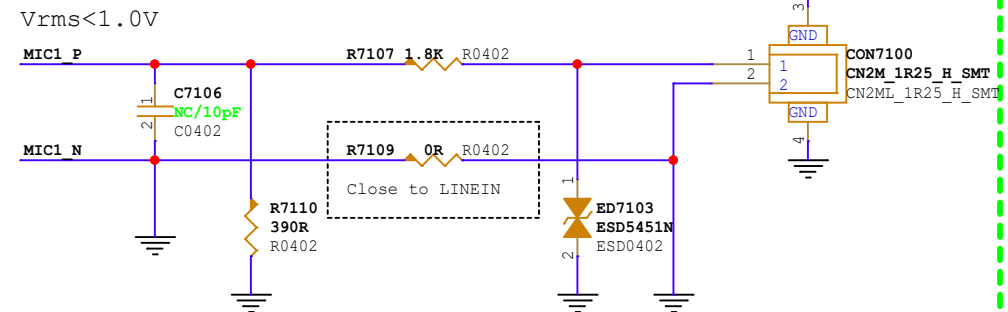


Note

Differential/Balanced Audio Signals!
Layout must be routing by differential

Line In

Option3



Note

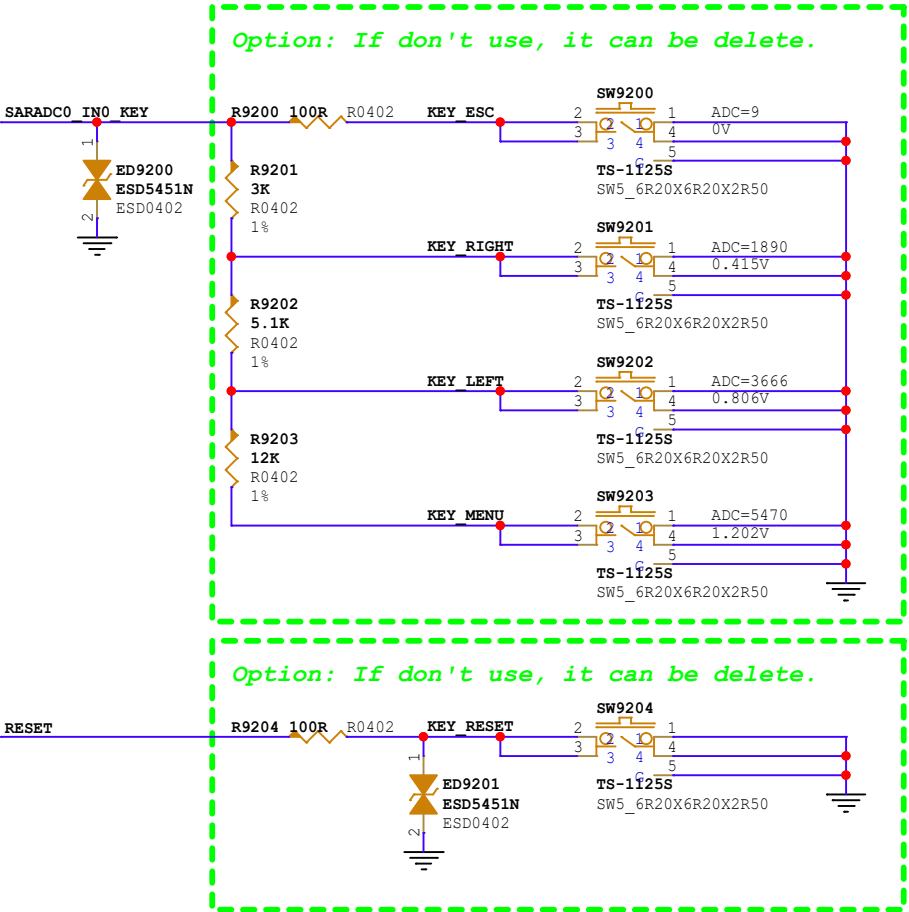
Differential/Balanced Audio Signals!
Layout must be routing by differential

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Project:	RV1126B AI-IPC REF
File:	71.Audio Input
Date:	Friday, June 06, 2025
Designed by:	Linux
Reviewed by:	<Checker>
Rev:	V1.0
Sheet:	42 of 45

Key Array

SARADC0_IN0_KEY<<—
RESET<<—



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Project: RV1126B AI-IPC REF

File: 92.Key Array

Date: Friday, June 06, 2025

Designed by: Linxu

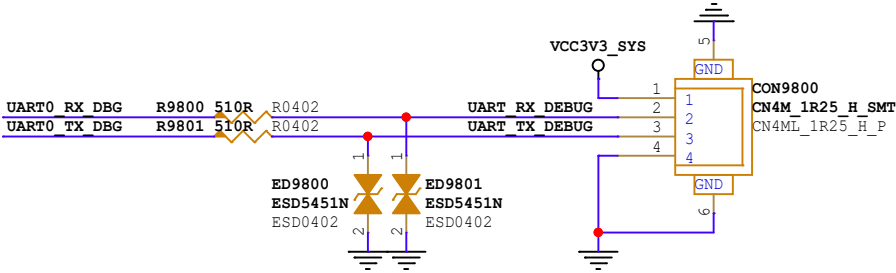
Reviewed by: <Checker>

Rev: V1.0

Sheet: 43 of 45

Debug UART

UART0_RX_DBG
UART0_TX_DBG

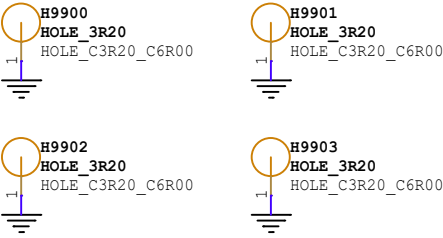


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Project:	RV1126B AI-IPC REF		
File:	98.UART Debug Port		
Date:	Friday, June 06, 2025	Rev:	V1.0
Designed by:	Linxu	Reviewed by:	<Checker>
Sheet:	44	of	45


HOLE



MARK



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		Rockchip Electronics Co., Ltd	
Project:	RV1126B AI-IPC REF		
File:	99.Mark/Hole		
Date:	Friday, June 06, 2025		Rev: V1.0
Designed by:	Linux	Reviewed by:	<Checker> Sheet: 45 of 45