

RV1106G_COREDLOC_SL_V1.2_20220924

Reference Design Main Functions Introduction	
Power	
RAM	SPI FLASH
Interface	SDMMC/SDIO/MIPI_CSI/VICAP/I2S/USB/ADC

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Project:	RV1106G_CoreDLoc_SL
File:	00.Cover Page
Date:	Saturday, September 24, 2022
Designed by:	LLS
Reviewed by:	Default
Rev:	V1.2
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Index and Notes

Catalogue

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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

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

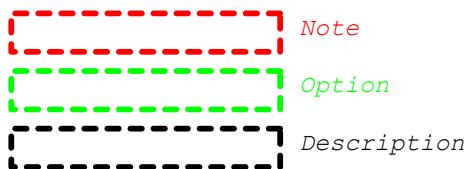
Header:

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Item\tPart\tDescription\tPCB Footprint\tReference\tQuantity\tOption
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Combined property string:

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Graphic Description



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Rockchip	Rockchip Electronics Co., Ltd
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File:	01.Index and Notes
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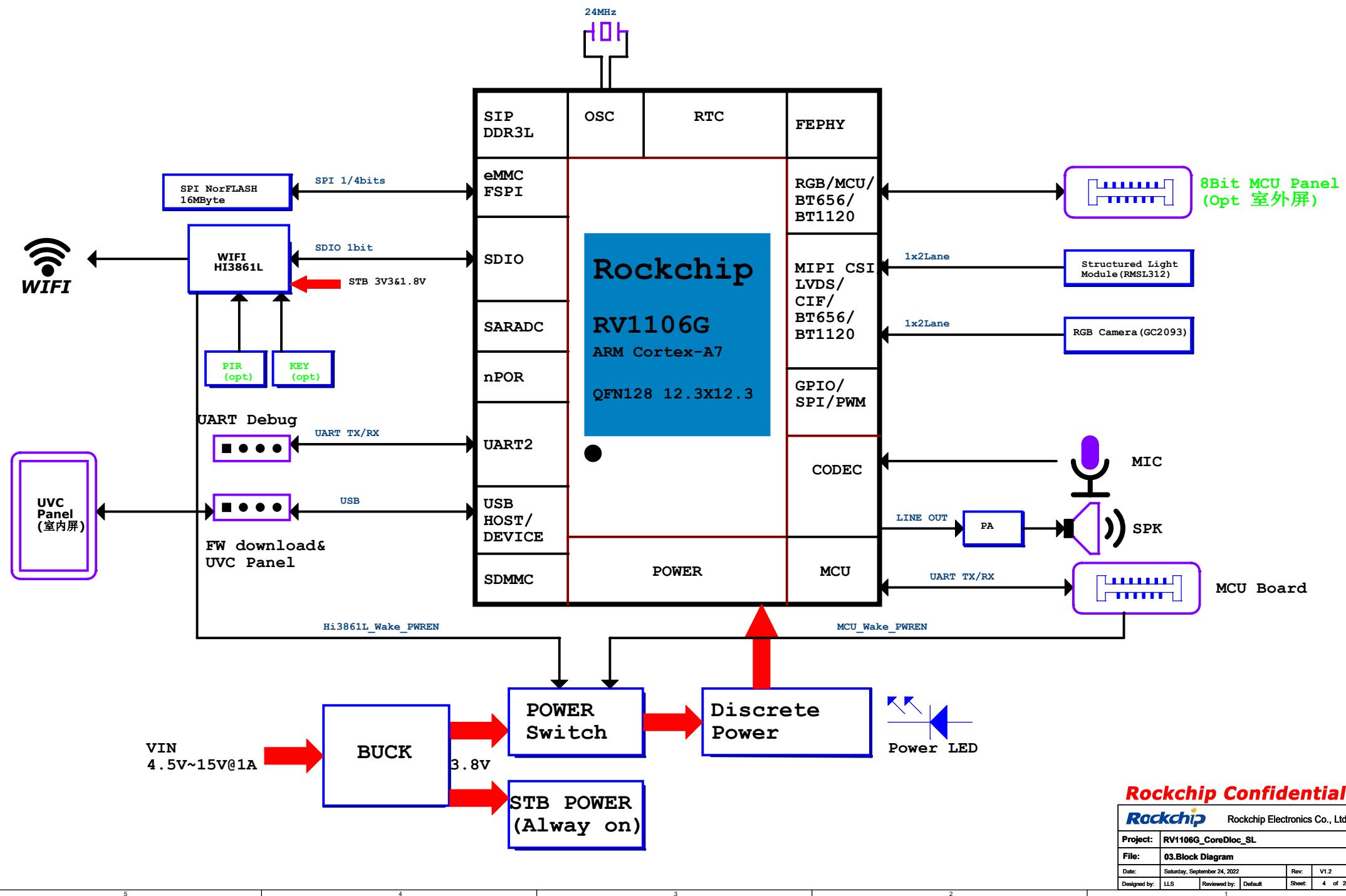
Revision History

Version	Date	Author	Change Note	Approved
V1.0	2022.4.29	LLS	First edition.	
V1.1	2022.7.27	LLS	Refer to <RV1106_COREDLOC_SL_V11_20220727_SCH_Modify_Notes.pdf>	
V1.2	2022.9.24	LLS	Refer to <RV1106_COREDLOC_SL_V12_20220924_SCH_Modify_Notes.pdf>	

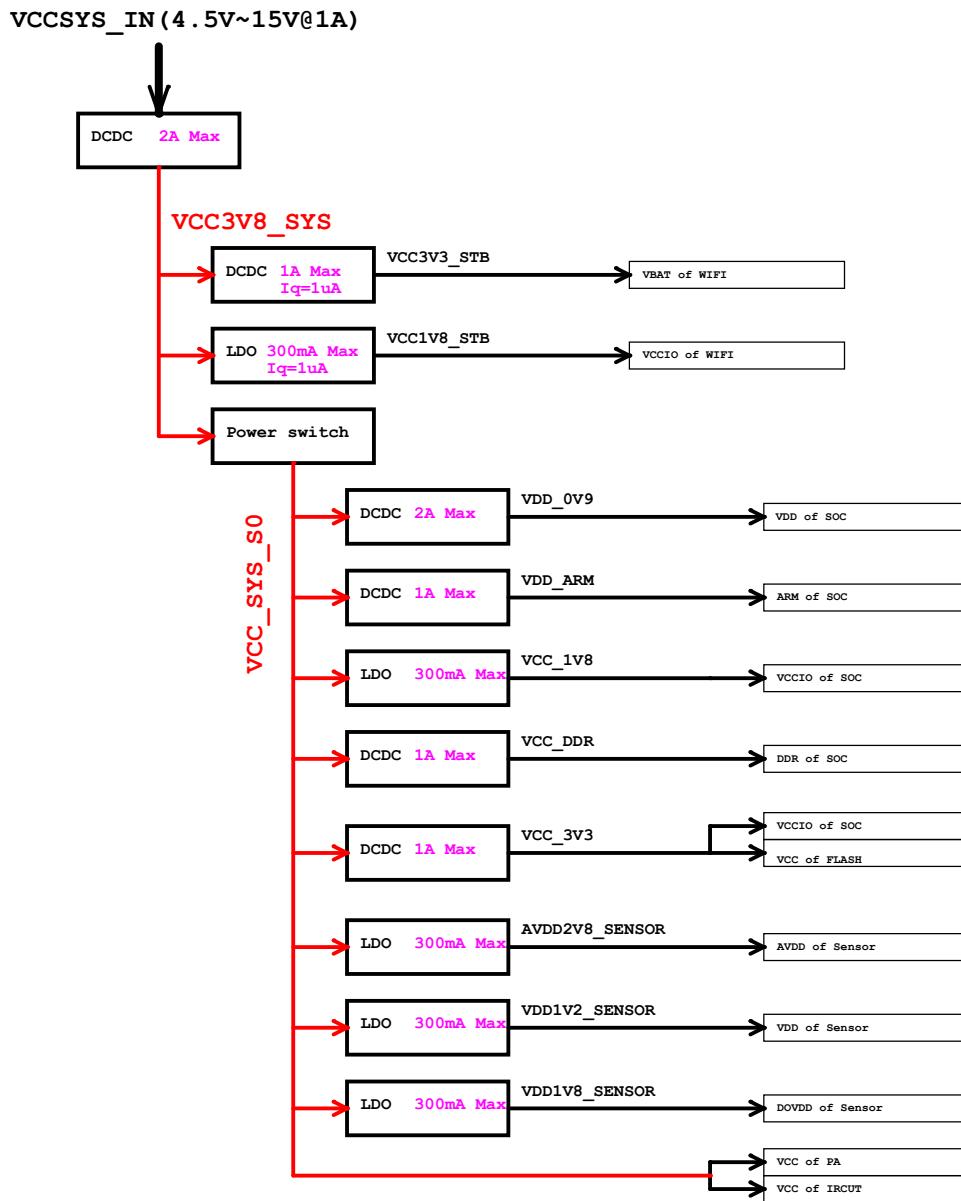
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Project:	RV1106G_CoreDLoc_SL
File:	02.Revision History
Date:	Saturday, September 24, 2022
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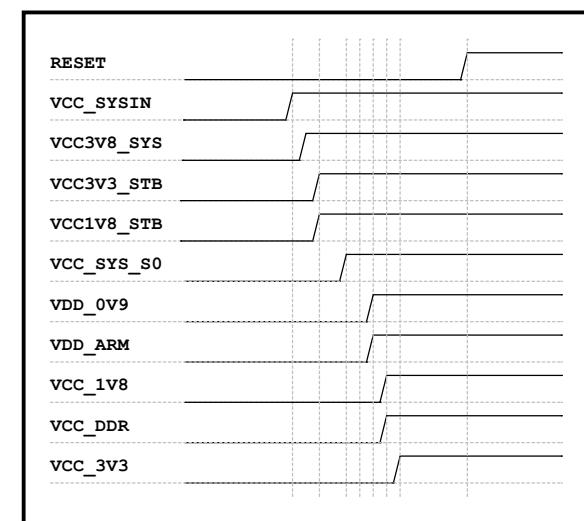
Block Diagram



Power Diagram and Sequence



RV1106G Power-on Sequence				
Power Name	PMIC Channel	Time Slot	Default voltage	Peak Current
VCC3V8_SYS	DC-DC BUCK	Slot: 1	3.8V	1.5A
VCC3V3_STB	DC-DC BUCK	Slot: 2	3.3V	1.0A
VCC1V8_STB	LDO	Slot: 2	1.8V	0.3A
VCC_SYS_S0	SWITCH	Slot: 3	3.8V	1.5A
VDD_0V9	DC-DC BUCK	Slot: 4	0.88V	1.6A
VDD_ARM	DC-DC BUCK	Slot: 4	0.805V~1.006V	0.5A
VCC_1V8	LDO	Slot: 5	1.8V	0.1A
VCC_DDR	DC-DC BUCK	Slot: 5	1.35V	0.5A
VCC_3V3	LDO	Slot: 6	3.3V	0.2A
RESET	Finally , nPOR RESET 10ms after VCC_3V3 is ready			



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I2C MAP

Port	Pin name	Domain	Bus name	Pull-up voltage	Slave Device	Slave Addr (MS 7Bits)	Write/Read Address	Note
I2C3	I2C3_SCL_M2 I2C3_SDA_M2	VCCIO7	I2C3_SCL_M2_DLOC I2C3_SDA_M2_DLOC	1.8V	RK803		write address 0xC6 read address 0xC7	
					IR Camera(SC035)		write address 0x60 read address 0x61	
					built-in EEPROM GT24C512-2ZLI-TR		write address 0xA0; read address 0xA1	
I2C4	I2C4_SCL_M2 I2C4_SDA_M2	VCCIO7	I2C3_SCL_M2_RGB I2C3_SDA_M2_RGB	1.8V	RGB Camera(GC2093)		write address 0x6E; read address 0x6F	
					EEPROM		write address 0xA0; read address 0xA1	

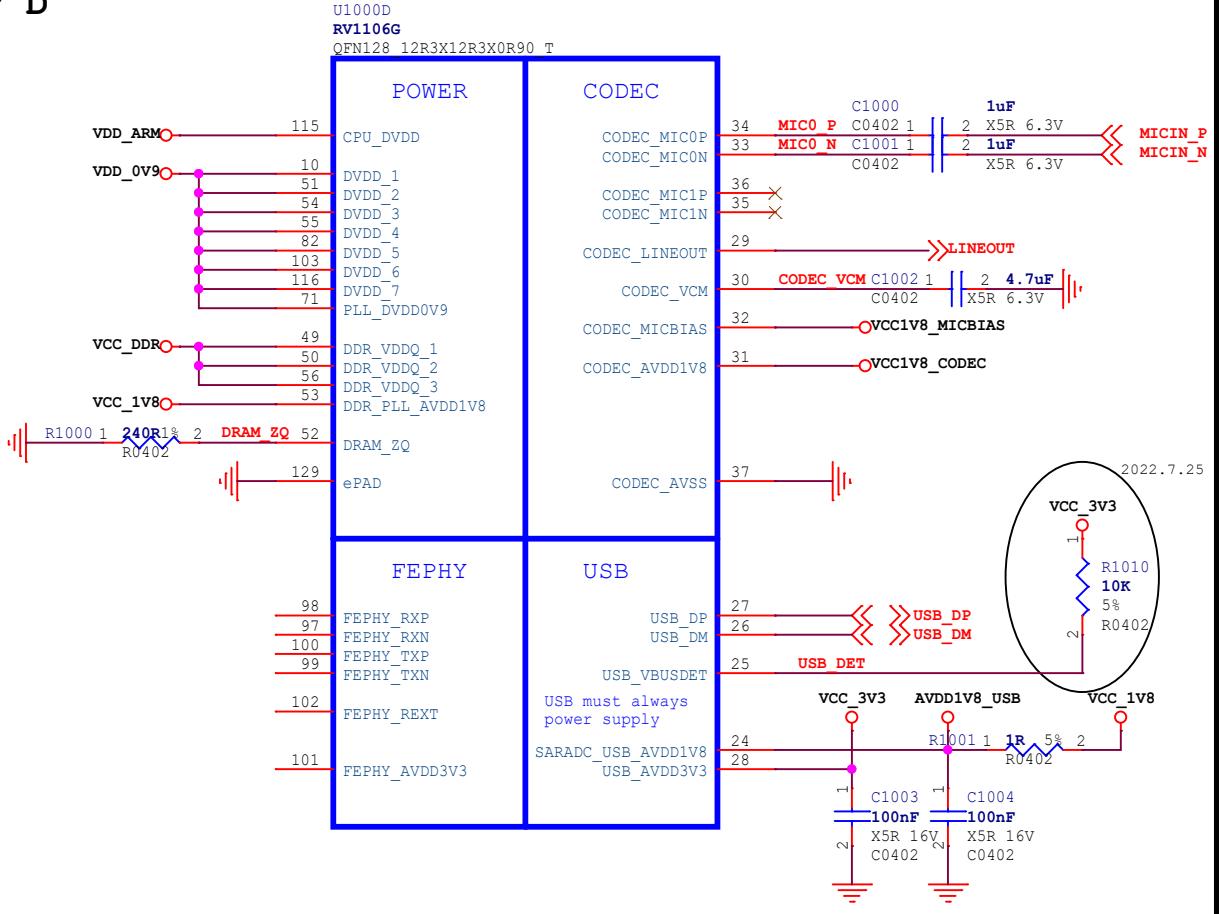
IO Power Domain Map

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	
PMUIO	Group GPIO0_A		✓	VCC_3V3		3.3V	
VCCIO1	Group GPIO1_AB		✓	VCC_3V3		3.3V	
VCCIO2	Group GPIO4_C	✓		VCC_1V8		1.8V	
VCCIO3	Group GPIO4_AB	✓	✓	VCCIO_FLASH		1.8/3.3V	
VCCIO4	Group GPIO3_A	✓	✓	VCC_1V8		1.8/3.3V	
VCCIO5	Group GPIO2_AB	✓	✓	VCC_1V8		3.3V	
VCCIO6	Group GPIO1_CD	✓	✓	VCC_3V3		3.3V	
VCCIO7	Group GPIO3_BCD	✓		VCC_1V8		1.8V	

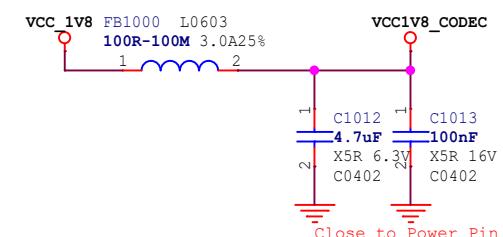
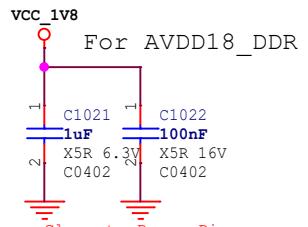
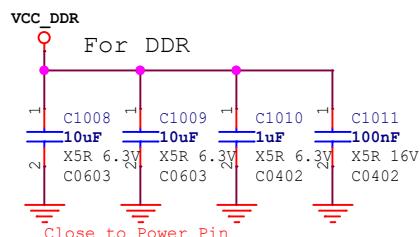
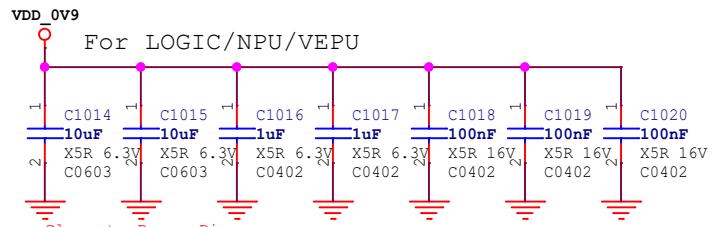
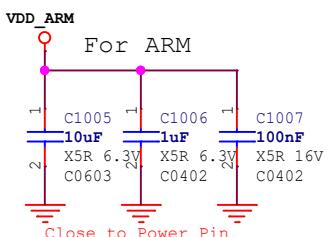
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File:	06.IO Power Domain Map
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PART D

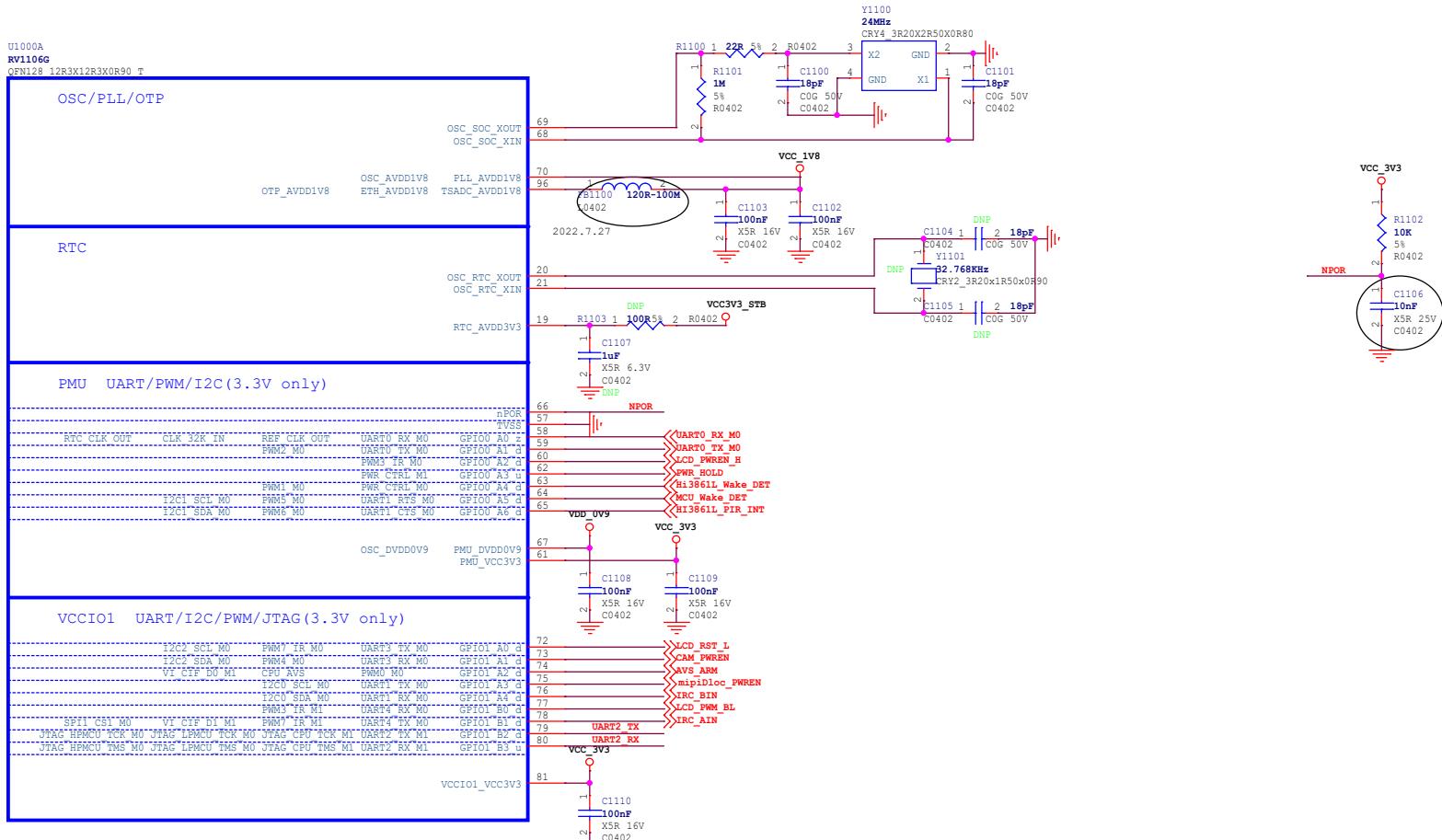


POWER



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Project:	RV1106G_CoreDLoc_SL
File:	10.RV1106G Power/Codec/ETH/USB
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UART Debug

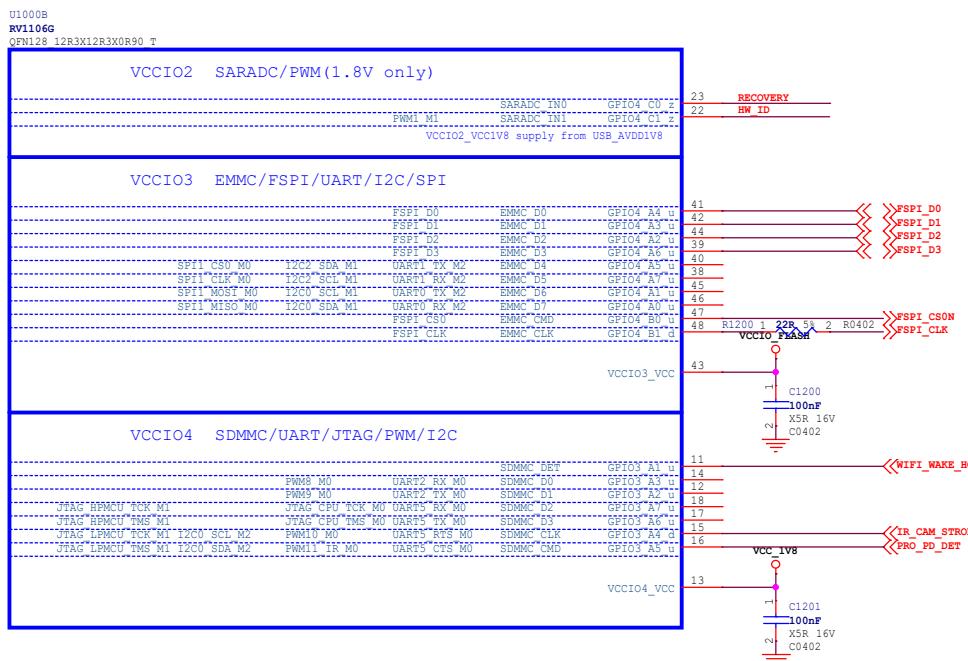


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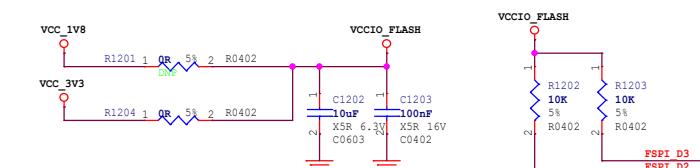
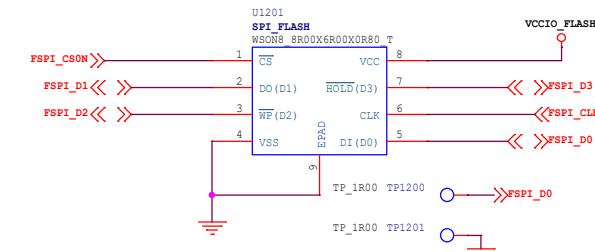


Beckebin Electronics Co., Ltd

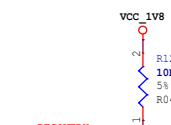
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Date:	Saturday, September 24, 2024	Rev:	V1.2
Designed by:	LLS	Reviewed by:	Default
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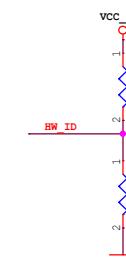
NOTE:
Refer to the latest AVL for parts selection.



RECOVERY Key



HW_ID	Rup (R1206)	Rdown (R1207)	ADC
Demo-v1.0	DNP	100K	0
Demo-v1.2	100K	DNP	1023



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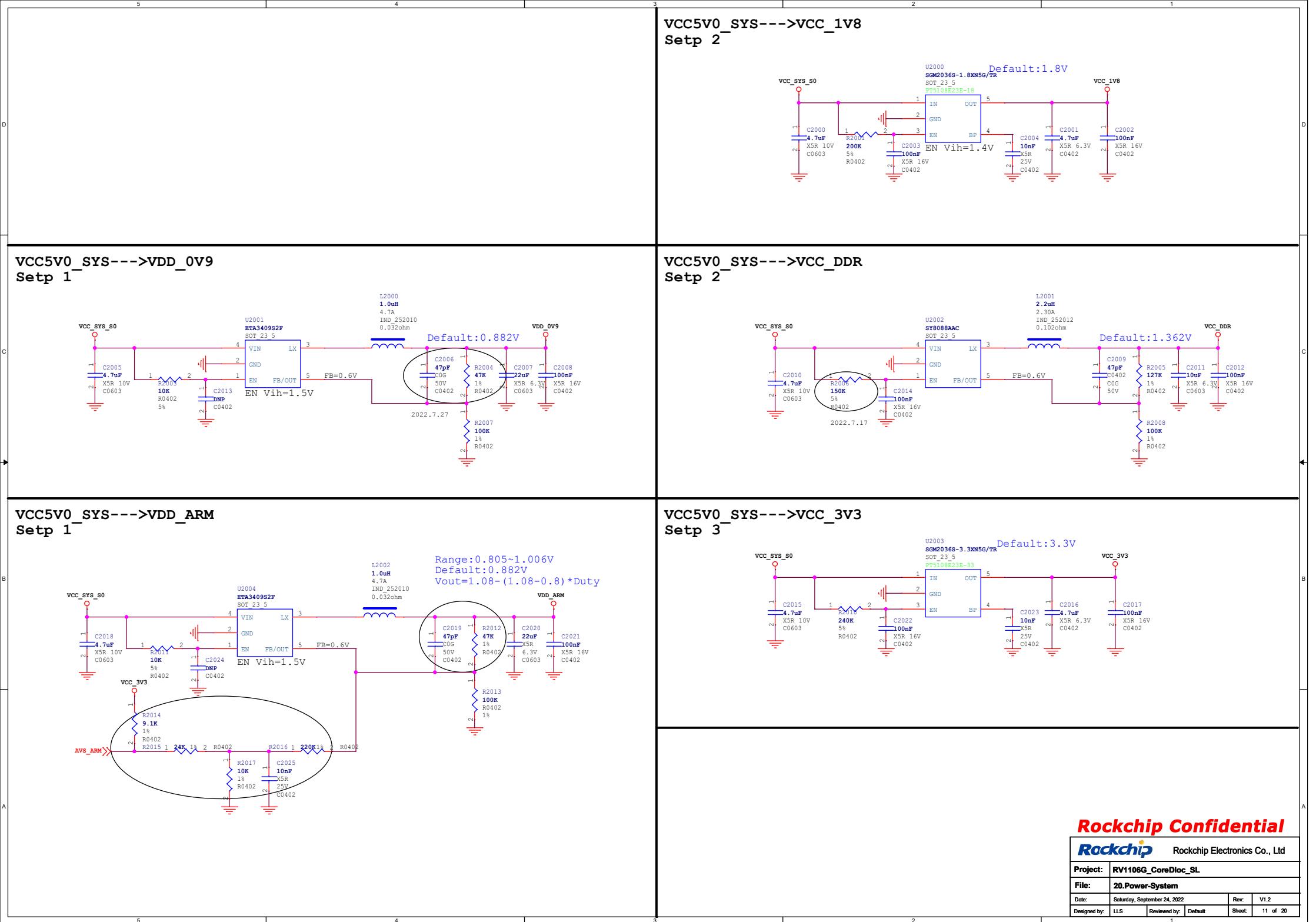
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File:	12.RV1106G_ADC/FLASH/SDMMC
Date:	Saturday, September 24, 2022
Designed by:	LLS
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U1000C
RV1106G
QFN128 12R3K12R3X0R90 T

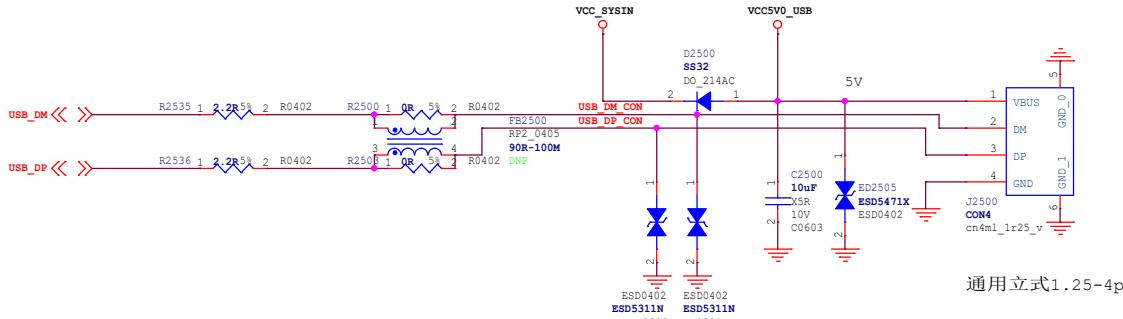


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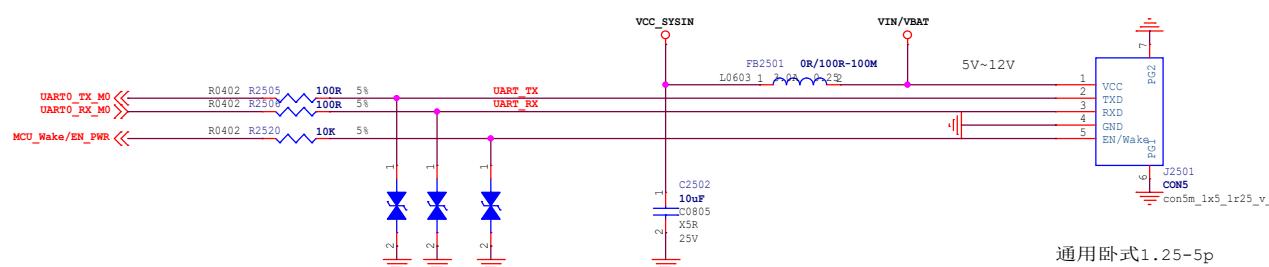
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File:	13.RV1106G_SDIO/LCD/VICAP/MIPI
Date:	Saturday, September 24, 2022
Designed by:	LLS
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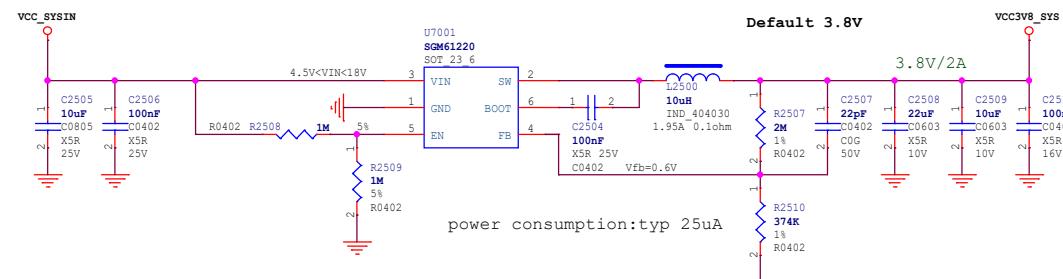
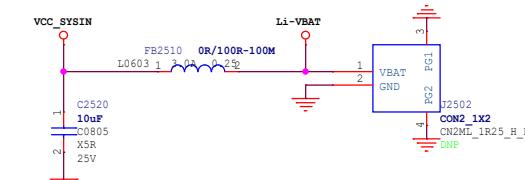
USB for Download Firmware & UVC panel



UART_CON Connect MCU Board



LI-BAT VIN (Option)

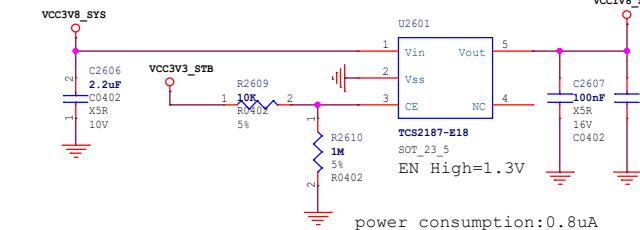
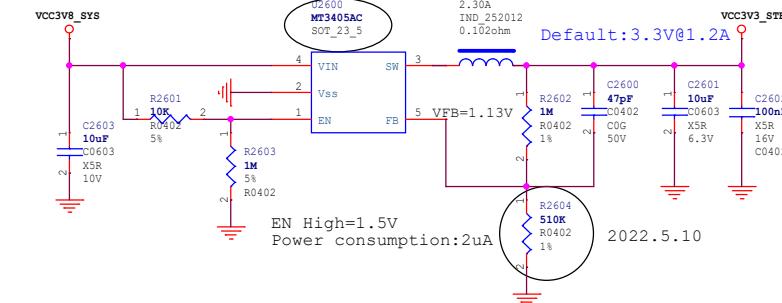
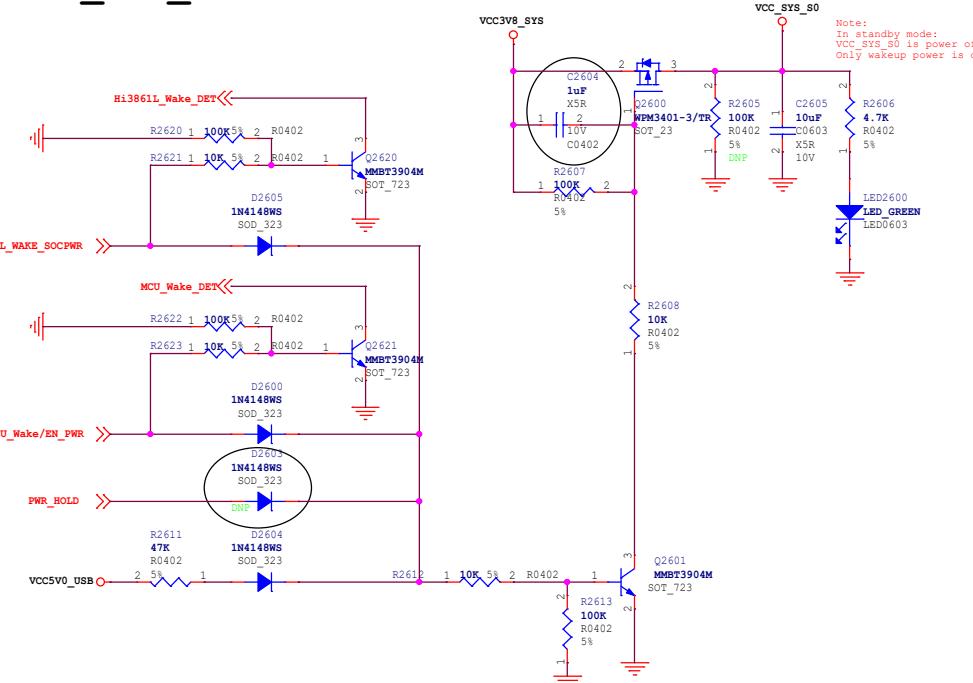


VCC_SYSIN=4.5V~15V ---2cell 7.4V Battery&6/8节干电池

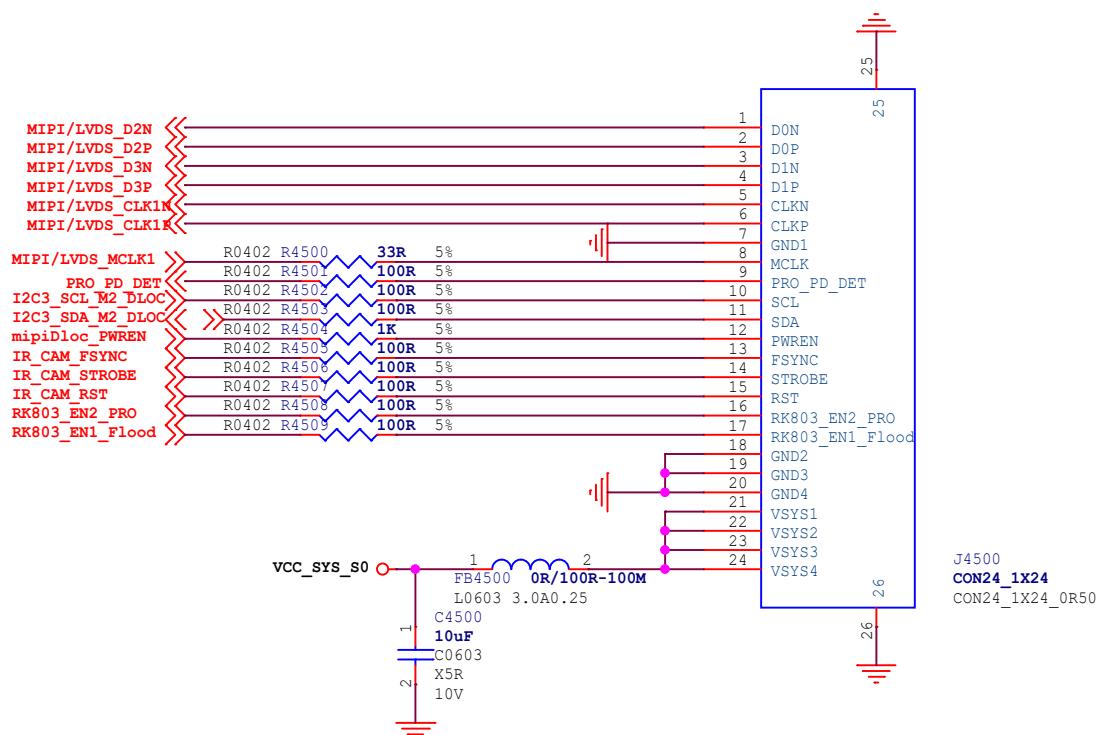
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File:	25.USB_PORT&UART_CON	
Date:	Saturday, September 24, 2022	Rev. V1.2
Designed by:	L.S	Reviewed by:
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Standby Power (Always on)

VCC_SYS_S0



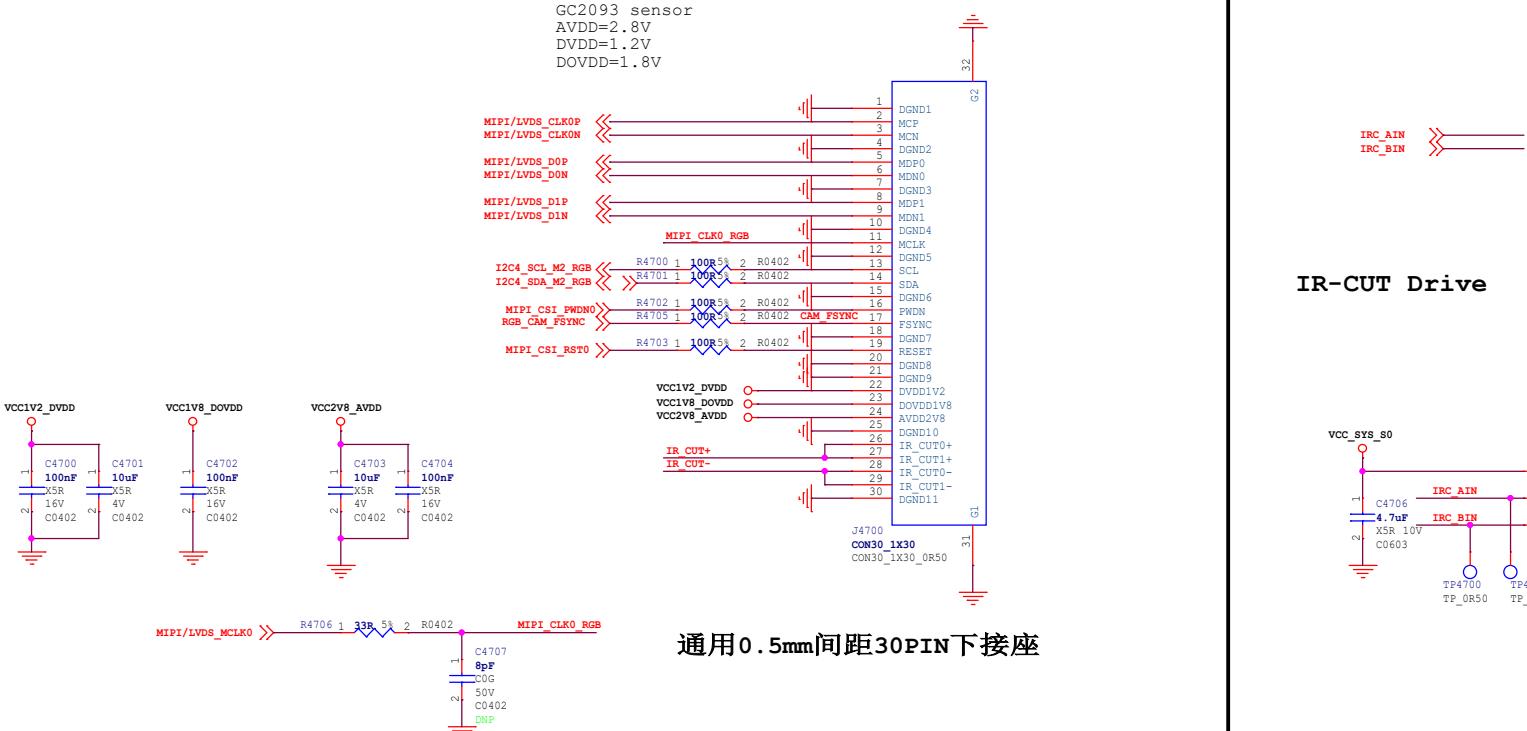
MIPI Structured Light Module (RMSL312)



通用0.5mm间距24PIN下接座

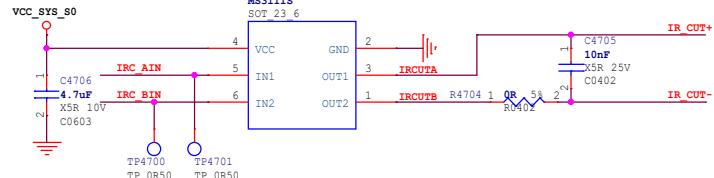
Rockchip		Fuzhou Rockchip Electronics	
Project:	RV1106G_CoreDloc_SL		
File:	45.VI-MIPI_SL_Module-RMSL312		
Date:	Saturday, September 24, 2022	Rev:	V1.2
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RGB Camera



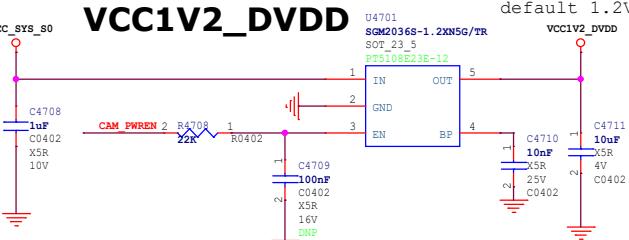
通用0.5mm间距30PIN下接座

IR-CUT Drive

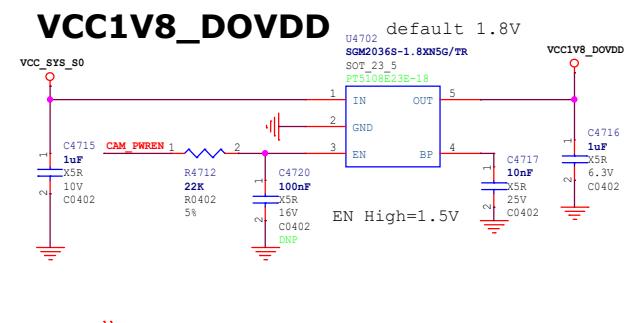


Power for Camera

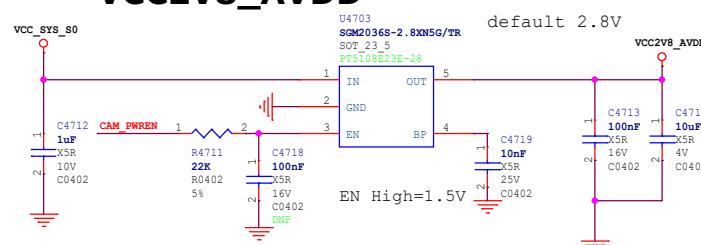
VCC1V2_DVDD



VCC1V8_DOVDD

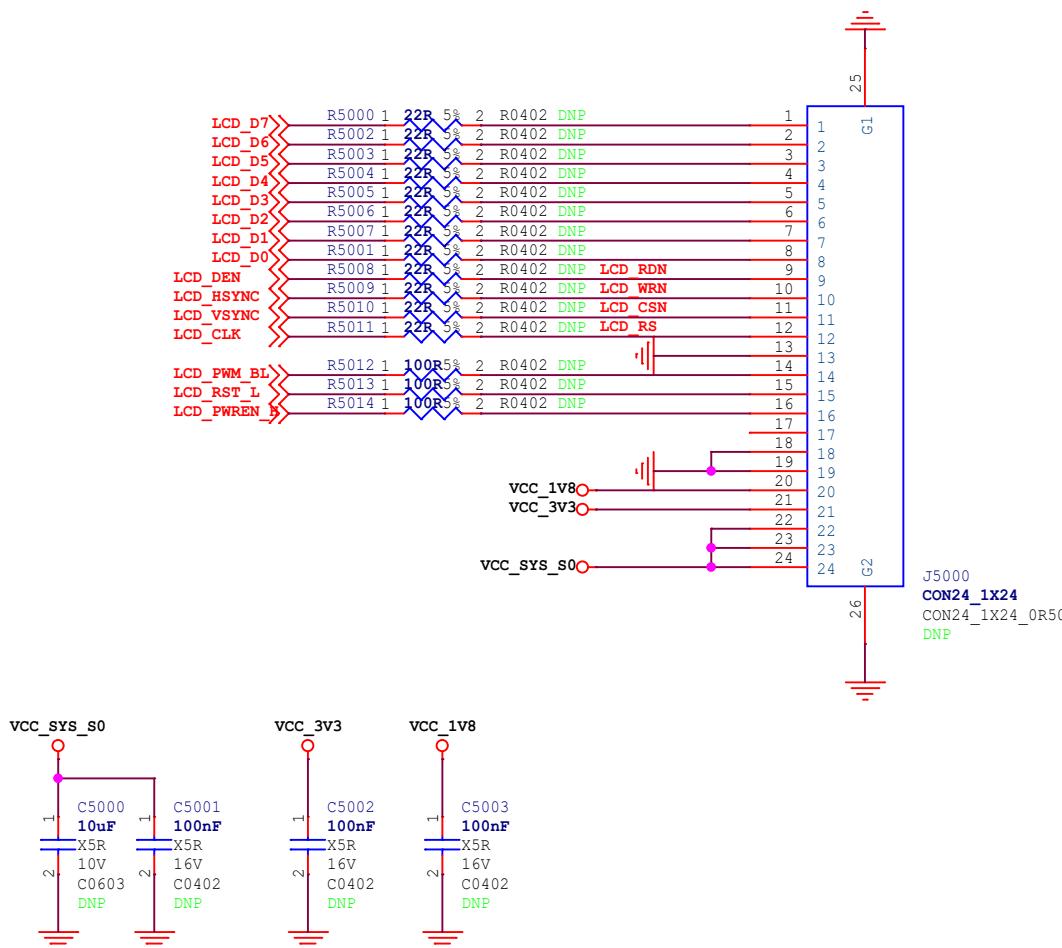


VCC2V8_AVDD

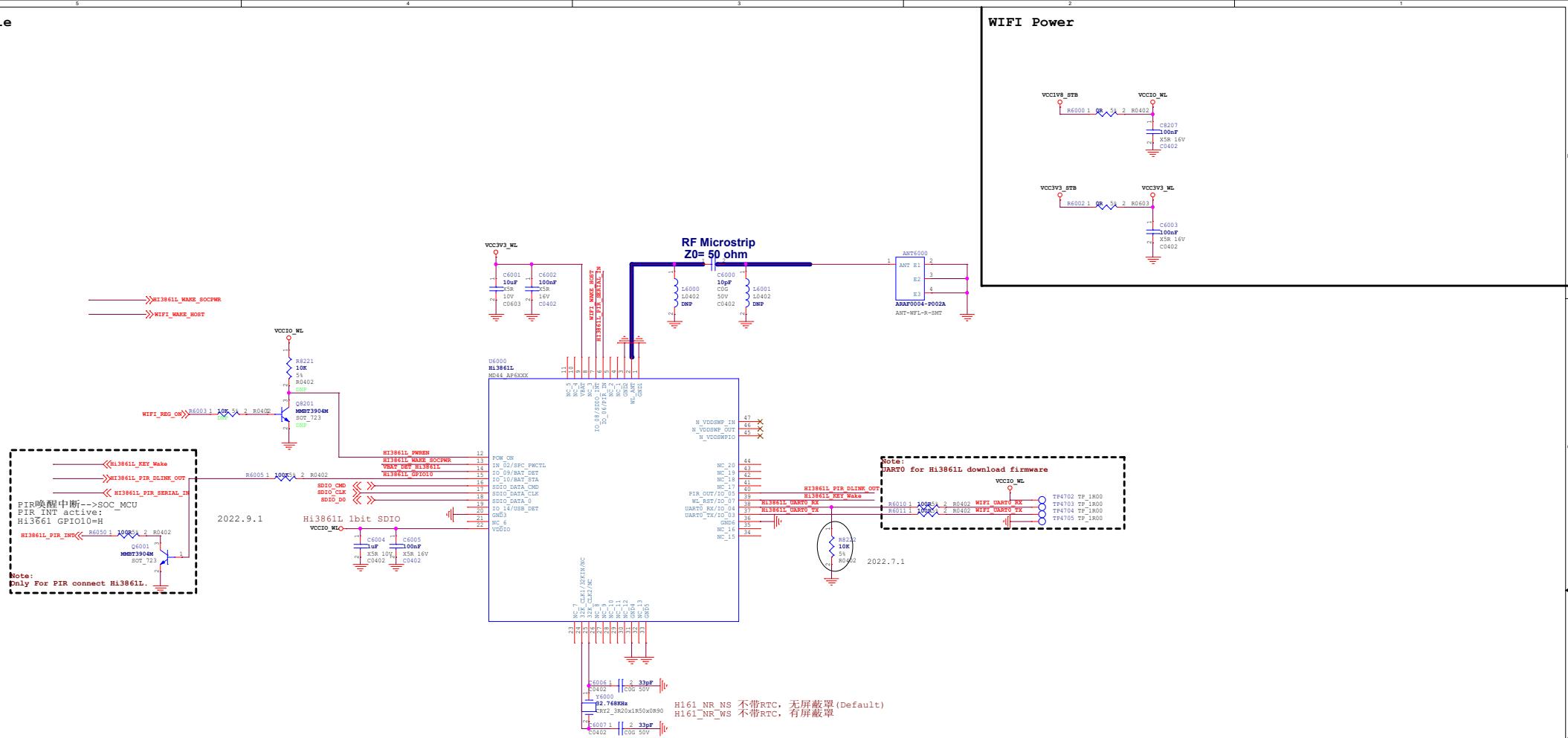


50.VO-8Bit MCU Panel(Option)

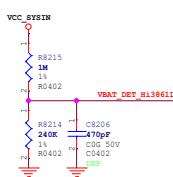
预留门锁室外屏 (8bit MCU Panel)



	mcu	BT656	RGB serial
Mode	8bit	8bit	3x8/4x8
LCD_D0	D0	D0	D0
LCD_D1	D1	D1	D1
LCD_D2	D2	D2	D2
LCD_D3	D3	D3	D3
LCD_D4	D4	D4	D4
LCD_D5	D5	D5	D5
LCD_D6	D6	D6	D6
LCD_D7	D7	D7	D7
LCD_DEN	RDN	--	DEN
LCD_HSYNC	WRN	--	Hsync
LCD_VSYNC	CSN	--	Vsync
LCD_CLK	RS	DCLK	DCLK



电池电压检测 (VBAT 2cell/9V) opt



WIFI MODULE TYPE	WIFI				BT	Crystals	VCCIO_SDIO			
	a	b/g/n	ac	5GHz						
Hi3861L H161_NR_NS Default	No	Yes	No	No	No	Module Integrated	1.8V/3.3V			

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Project: RV1106G_CoreDioc_SL

File: 60_SDIO_WIFI-HI3861L

Date: Saturday, September 24, 2022

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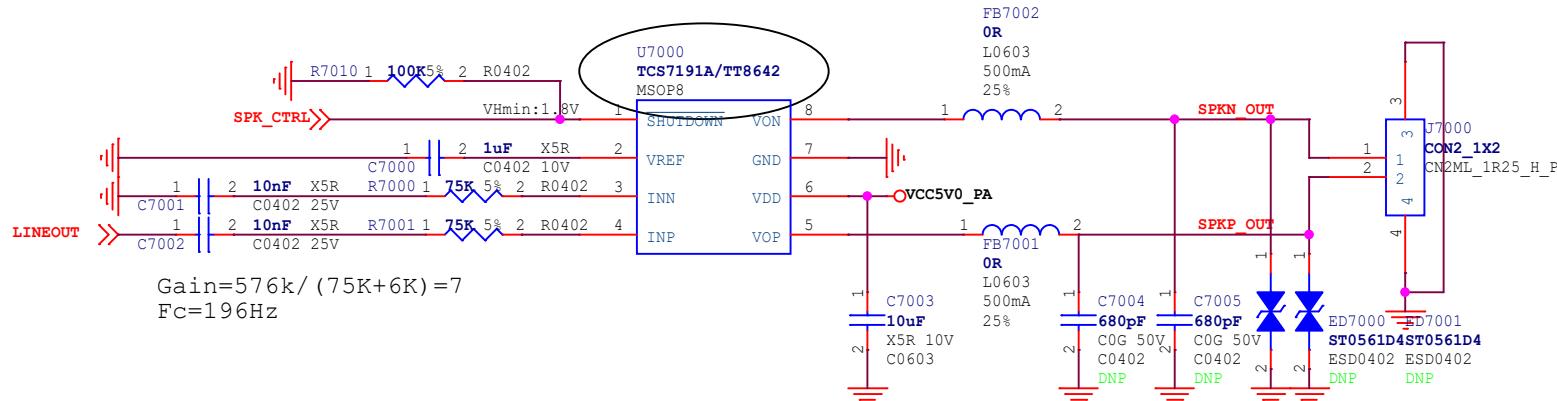
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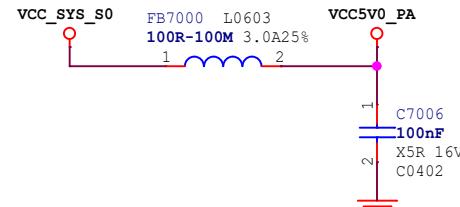
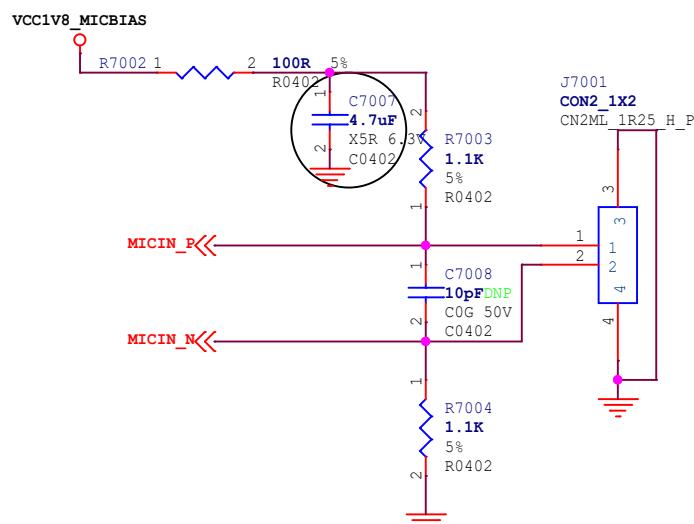
Sheet: 17 of 20

Speaker Out

NOTE: If there is no EMI problem, the ferrite beads can be replaced by 0ohm resistors;



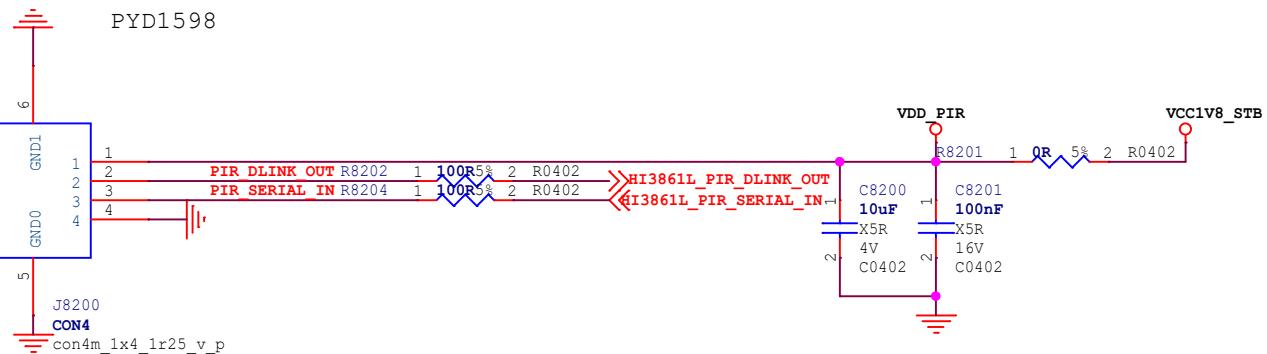
MIC IN



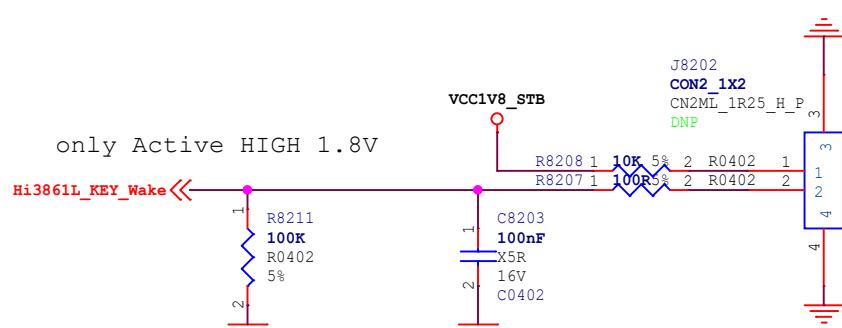
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Project:	RV1106G_CoreDioC_SL
File:	70.Audio Port
Date:	Saturday, September 24, 2022
Designed by:	LLS
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PIR board

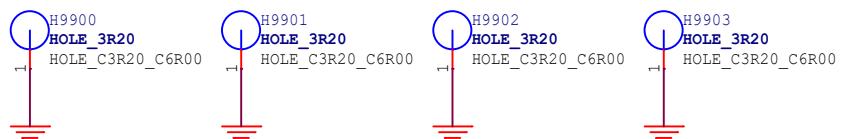
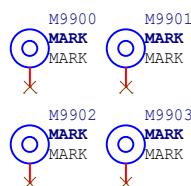


Wake Key/Function Key (option)



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Rockchip		Rockchip Electronics Co., Ltd	
Project:	RV1106G_CoreDLoc_SL		
File:	82.PIR/Wake KEY(Option)		
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HOLE**MARK****Rockchip Confidential**

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File:	99.MARK/HOLE
Date:	Saturday, September 24, 2022
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