RV1126_RV1109_USB_AI_Camera_DEMO_DDR3P216DD4_V14

Main Functions Introduction

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

Rackchip Rockchip Electronics Co., Ltd Project: RV1126 RV1109 Al Camera File: 00.Cover Page Monday, December 21, 2020 1 of 28 Designed by: Reviewed by:

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rayezo	99.MARK/HOLE

Index and Notes

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:

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}

Graphic Description

Note
Option
 Description

Rockchip Electronics Co., Ltd Broject: RV1126_RV1109 AI Camera

File: 01.Index and Notes

Date: Monday, December 21, 2020 Rev: V1.4

Designed by: Whb Reviewed by: Sheet: 2 of 28

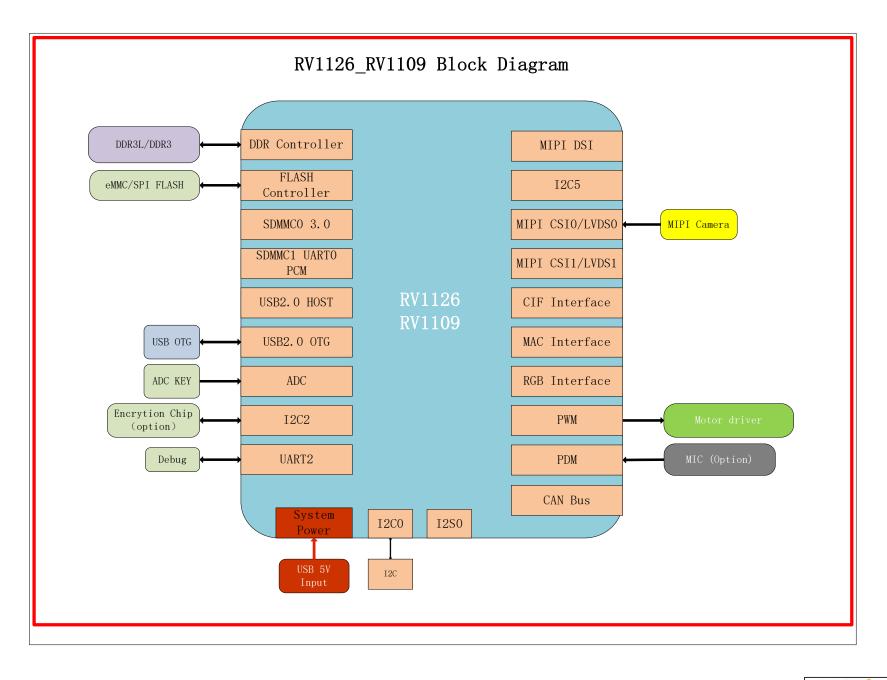
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Revision History

Version	Date	Author	Change Note	Approved
V1.0	2020.03.30	whb	First edition AI Camera for RV1126/1109	
V1.1	2020.07.22	whb	Modify the VCC_1V2 and VCC_3V3 power path	
V1.2	2020.08.20	whb	Add power sleep control signal and other	
V1.3	2020.10.30	whb	Optimize 1.8V power supply	
V1.4	2020.12.21	whb	Modify the VDD_LOG power and improve the USB OTG signal	

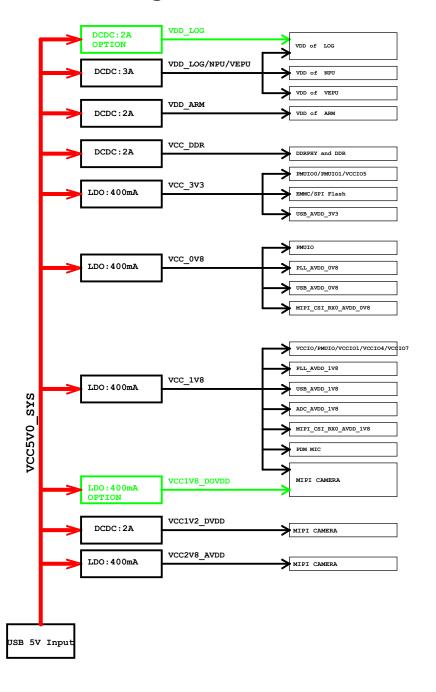
Ro	ckchi 瑞芯微电		ckchip Elec	tronic	s Co., Ltd
Project:	RV1126_	_RV1109 A	I Camera		
File:	02.Revis	ion Histor	у		
Date:	Tuesday, December 22, 2020			Rev:	V1.4
Designed by:	whb	Reviewed by:		Sheet:	3 of 28

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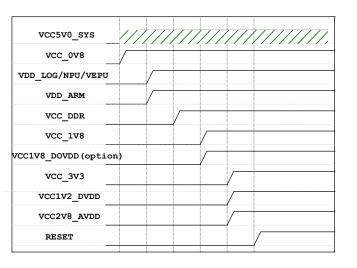
Ro	ckchi 瑞志徽非		Electronics	Co., Ltd
Project:	RV1126_	RV1109 Al Camer	а	
File:	03.Block	Diagram		
Date:	Monday, De	cember 21, 2020	Rev:	V1.4
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Power Diagram

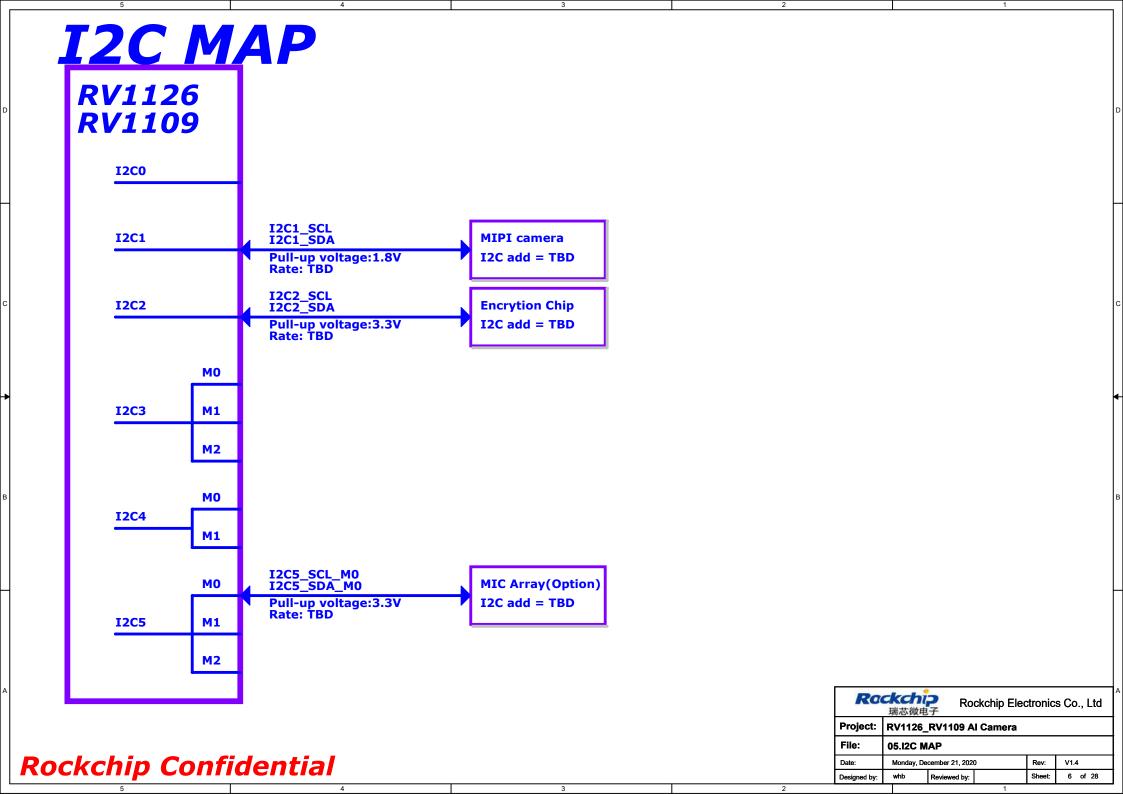


Power-on Sequence

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	0.4A	ON	ON		
VCC1V8_DOVDD(option) LDO	Slot: 4	1.8V	0.4A	ON	ON		
VCC_3V3	LDO	Slot: 5	3.3V	0.4A	ON	ON		
VCC1V2_DVDD	BUCK	Slot: 5	1.2V	1.0A	ON	ON		
VCC2V8 AVDD	LDO	Slot: 5	2.8V	0.4A	ON	ON		



Rockchip 瑞芯微电子			ckchip Elect	tronics	Co., Ltd	
Project:	RV1126_	RV1109 AI	Camera			
File:	04.Power	04.Power Diagram and Sequence				
Date:	Monday, De	Monday, December 21, 2020			V1.4	
Designed by:	whb	whb Reviewed by:			5 of 28	

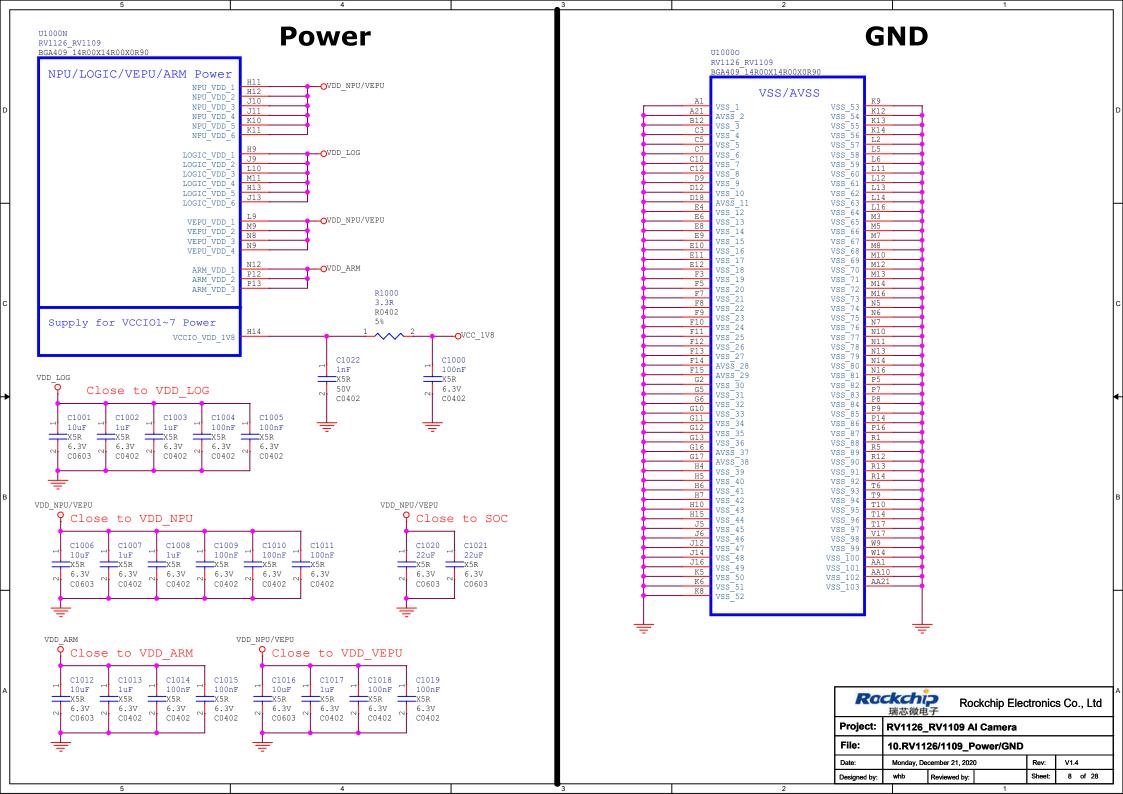


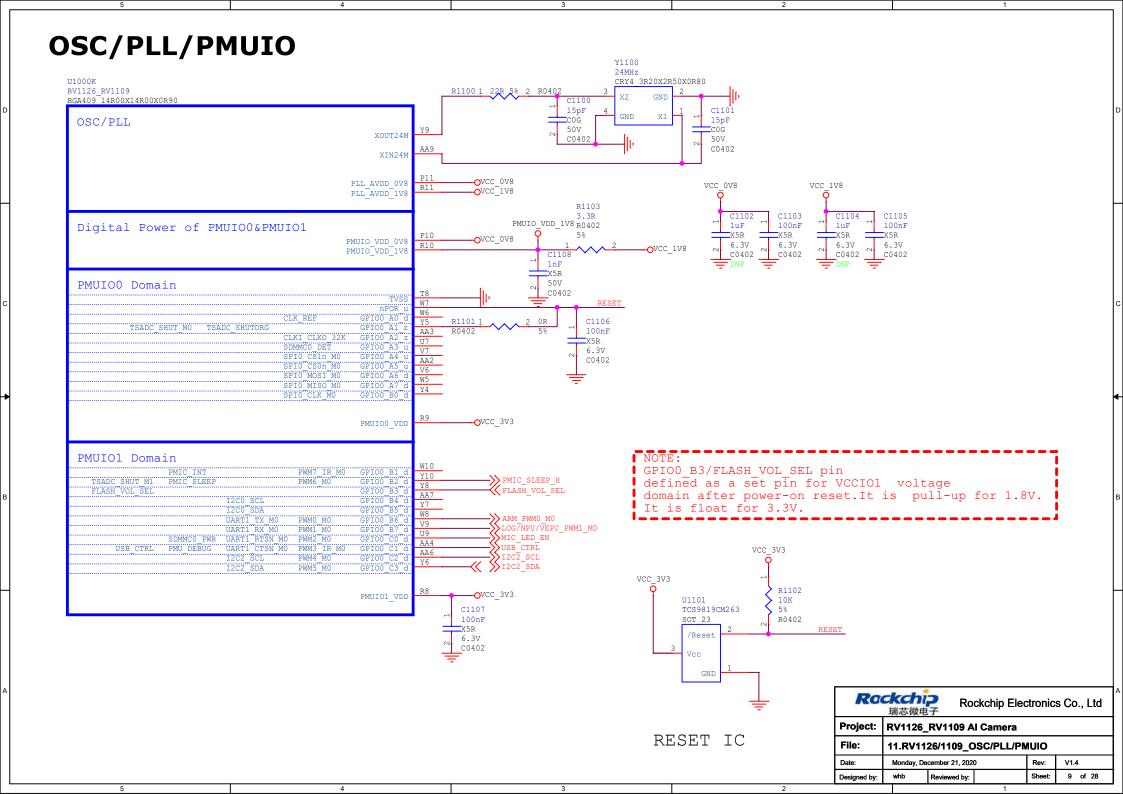
IO Power Domain Map

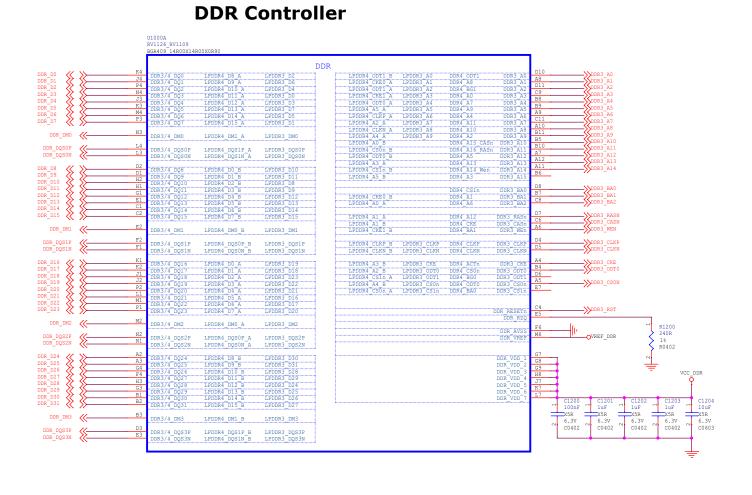
10		Support of IO Voltage		Defau IO Do	ılt Actual assig omain Voltage	Notes	
Domain	IO Group	1.8V	3.3V	Net Name of Power Supply	Power Source	Voltage	Notes
PMUIO0	GPIO0A	~	~	VCC_3V3		3.3V	
PMUIO1	GPIO0BC	~	~	VCC_3V3		3.3V	
VCCIO1	GPIO0CD/GPIO1A	~	~	VCCIO_FLASH		1.8/3.3V	GPIOO_B3/FLASH_VOL_SEL pin defined as a set pin for VCCIO1 voltage domain after power-on reset.It is pull-up for 1.8V
VCCIO2	GPIO1AB	~	~	NC			
VCCIO3	GPIO1BCD	~	~	NC			
VCCIO4	GPIO1D/GPIO2A	~	~	VCC_1V8		1.8V	
VCCIO5	GPIO2ABCD/GPIO3A	~	~	VCC_3V3		3.3V	
VCCIO6	<i>GPIO3ABC</i>	~	~	NC			
VCCIO7	GPIO3D/GPIO4A	~	~	VCC_1V8		1.8V	

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Project:	RV1126	_RV1109 A	I Camera		
File:	06.IO Po	ower Doma	in Map		
Date:	Monday, December 21, 2020			Rev:	V1.4
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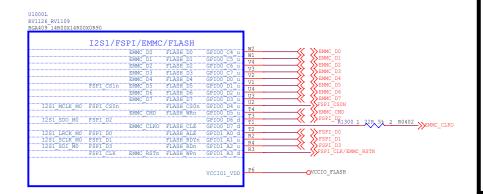


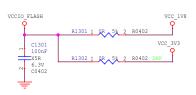


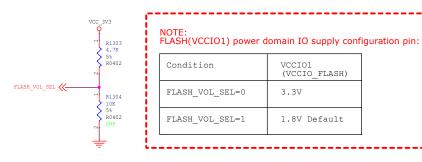


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Project:	RV1126_	RV1109 AI	Camera		
File:	12.RV11	26/1109_DI	RAM Control	ler	
Date:	Monday, De	ecember 21, 2020		Rev:	V1.4
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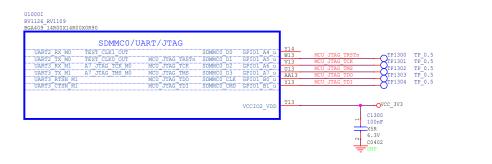
EMMC/FLASH



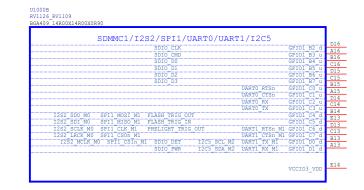




SDMMC0/JTAG

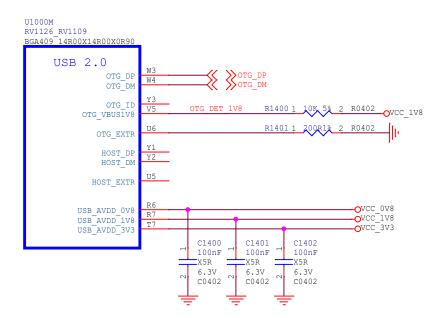


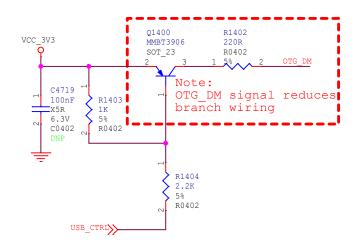
SDMMC1/UART/I2S2



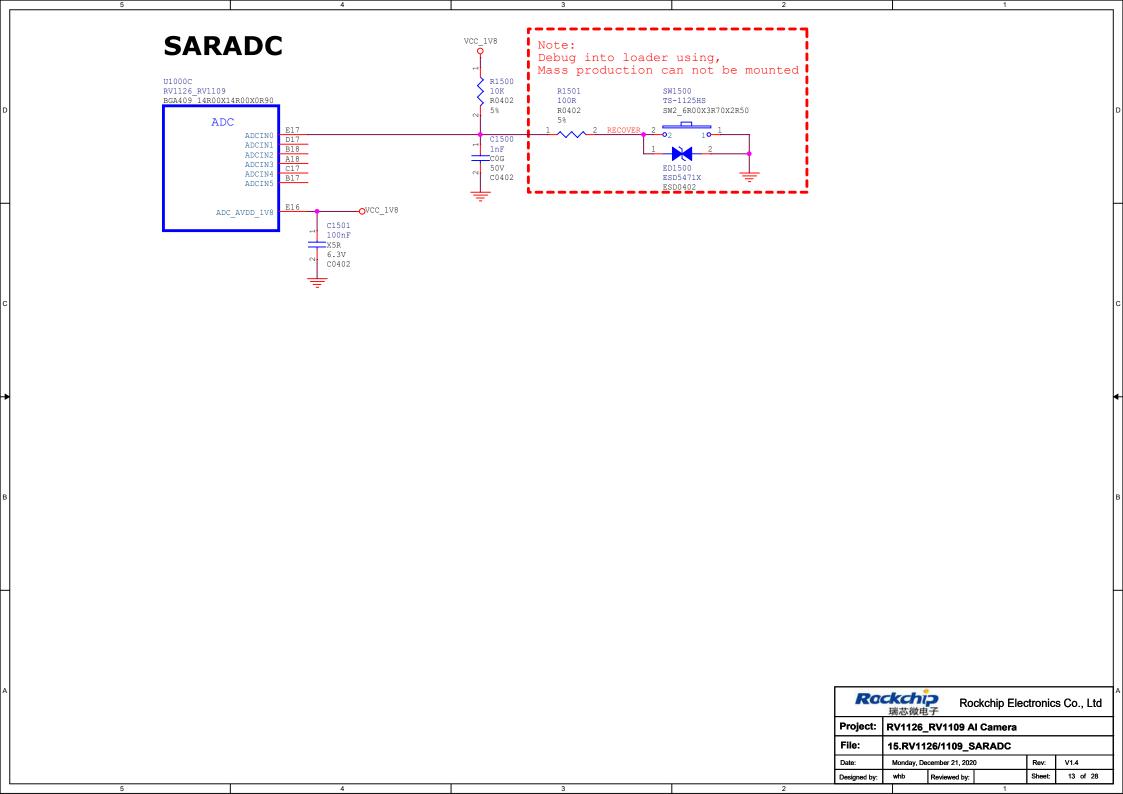
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Project:	RV1126_RV1109 Al Camera						
File:	13.RV1126/1109_Flash/SD						
Date:	Monday, December 21, 2020			Rev:	V1.4		
Designed by:	whb	Reviewed by:		Sheet:	11 of 28		

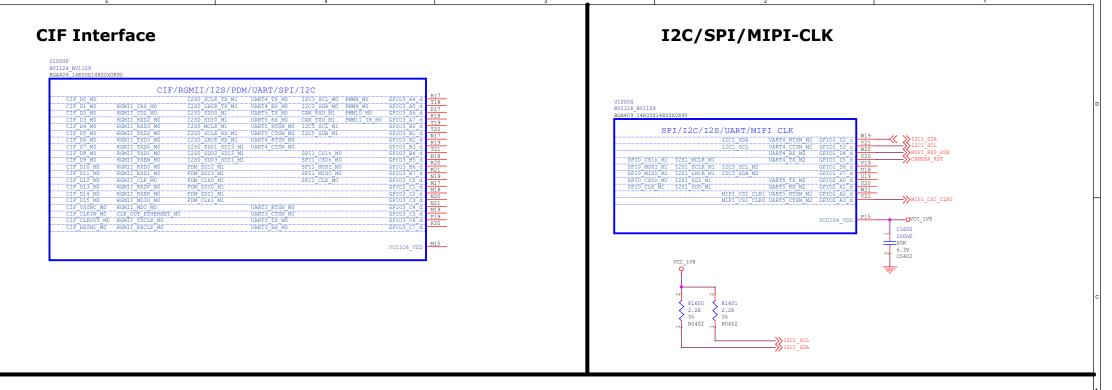
USB Controller



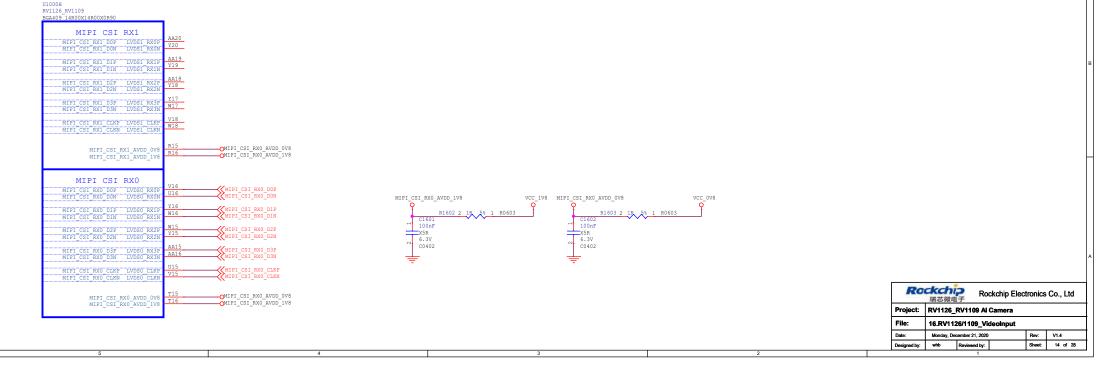


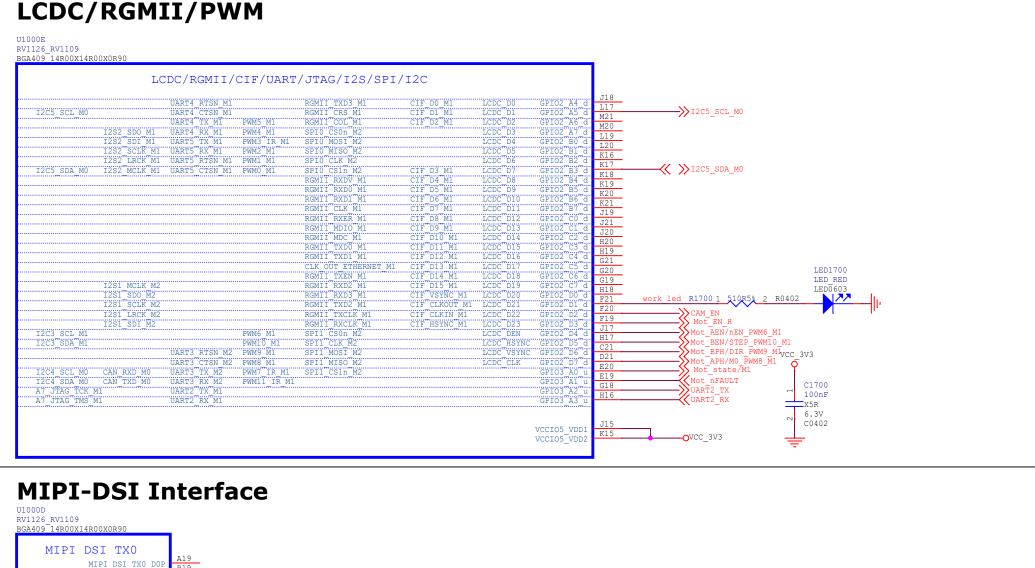
Ro	Rockchip Electronics Co., Ltd 瑞芯微电子					
Project:	RV1126_RV1109 AI Camera					
File:	14.RV1126/1109_USB Controller					
Date:	Monday, De	cember 21, 202	0	Rev:	V1.4	
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MIPI-CSI Interface





MIPI DSI TXO DOF B19 MIPI DSI TXO DON MIPI DSI TXO D1F MIPI DSI TXO D1N MIPI DSI TXO D2P C20 MIPI_DSI_TX0_D2N MIPI DSI TXO D3F D19 MIPI DSI TXO D3N MIPI DSI TXO CLKP MIPI DSI TXO CLKN MIPI DSI TXO AVDD 0V8 G15 MIPI DSI TXO AVDD 1V8

Rockchip							
Project:	RV1126_RV1109 Al Camera						
File:	17.RV1126/1109_VideoOutput						
Date:	Monday, December 21, 2020			Rev:	V1.4		
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