RV1126_RV1109_USB_AI_Camera_DEMO_DDR3P216DD4_V13_20201030

Main Functions Introduction

01) Power: Discrete power supply 02) DRAM: DDR3 4Gb x 2

eMMC 8GB/SPI nand 512MB USB2.0 OTG 03) ROM:

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 RV1126 RV1109 Al Camera File: 00.Cover Page Thursday, October 29, 2020 1 of 28 Designed by: Reviewed by:

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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

t	Note
	Option
	Description

Rockchip Electronics Co., Ltd 端芯微电子

Project: RV1126_RV1109 Al Camera

File: 01.Index and Notes

Date: Thursday, October 29, 2020 Rev: V1.3

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

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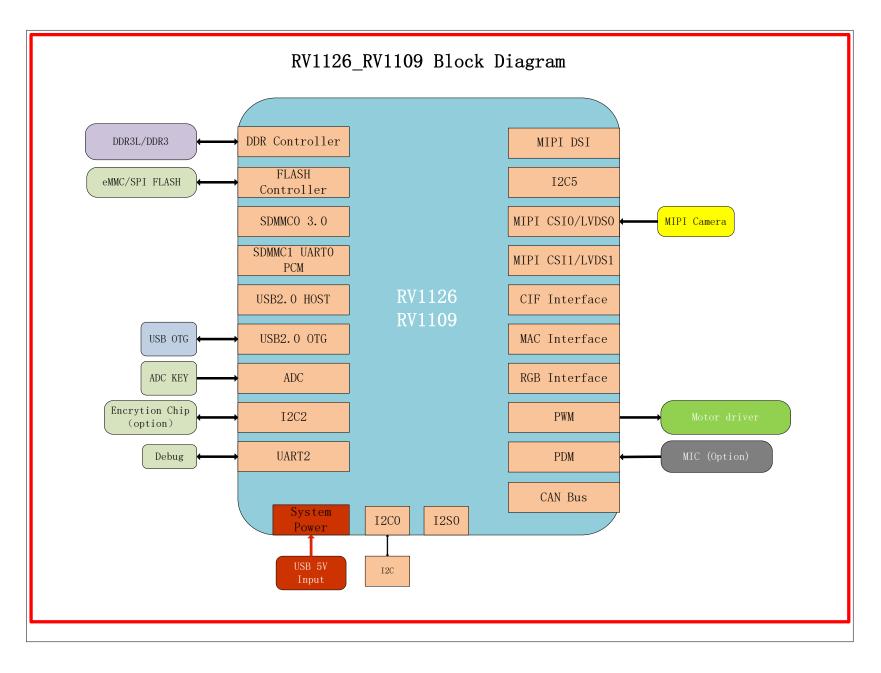
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Revision History

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	

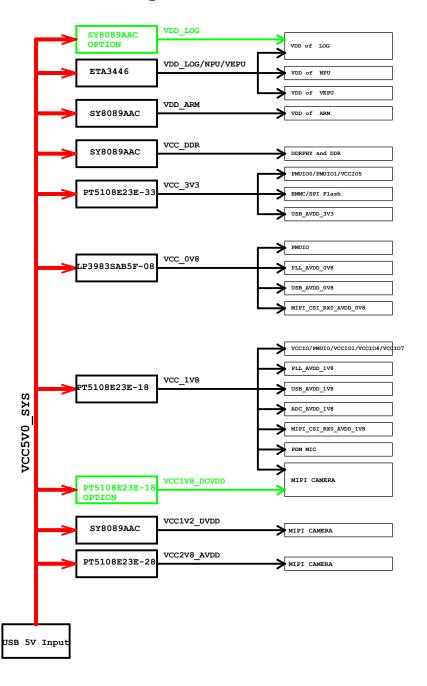
Ro	Rockchip Electronics Co., Ltd 瑞芯徽电子						
Project:	RV1126_	RV1126_RV1109 AI Camera					
File:	02.Revis	02.Revision History					
Date:	Thursday, C	Thursday, October 29, 2020 Rev: V1.3					
Designed by:	whb	Reviewed by:		Sheet:	3 of 28		

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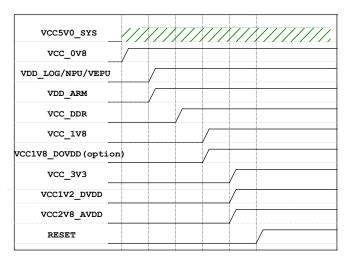
Ra	ckchi 瑞芯微电		ckchip Elect	tronics	Co., Ltd	
Project:	RV1126_	RV1126_RV1109 Al Camera				
File:	03.Block	03.Block Diagram				
Date:	Thursday, O	Thursday, October 29, 2020 Rev: V1.3				
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Power Diagram

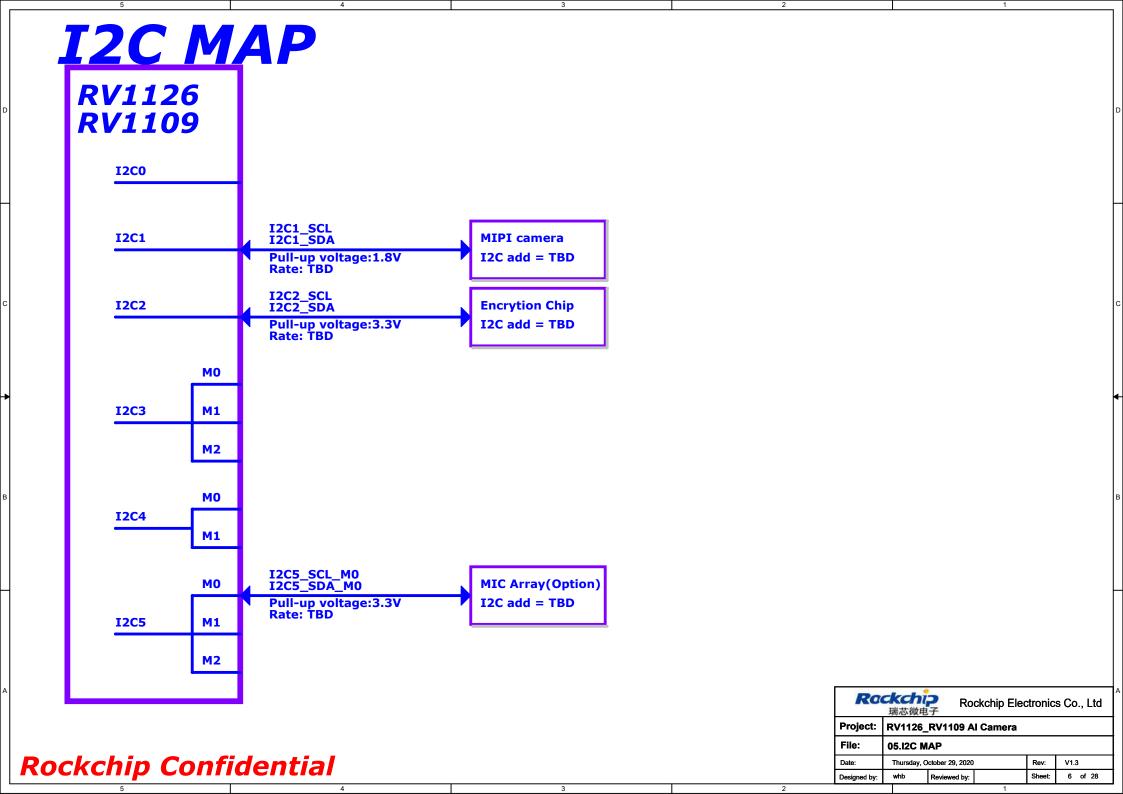


Power-on Sequence

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_DOVDD(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		



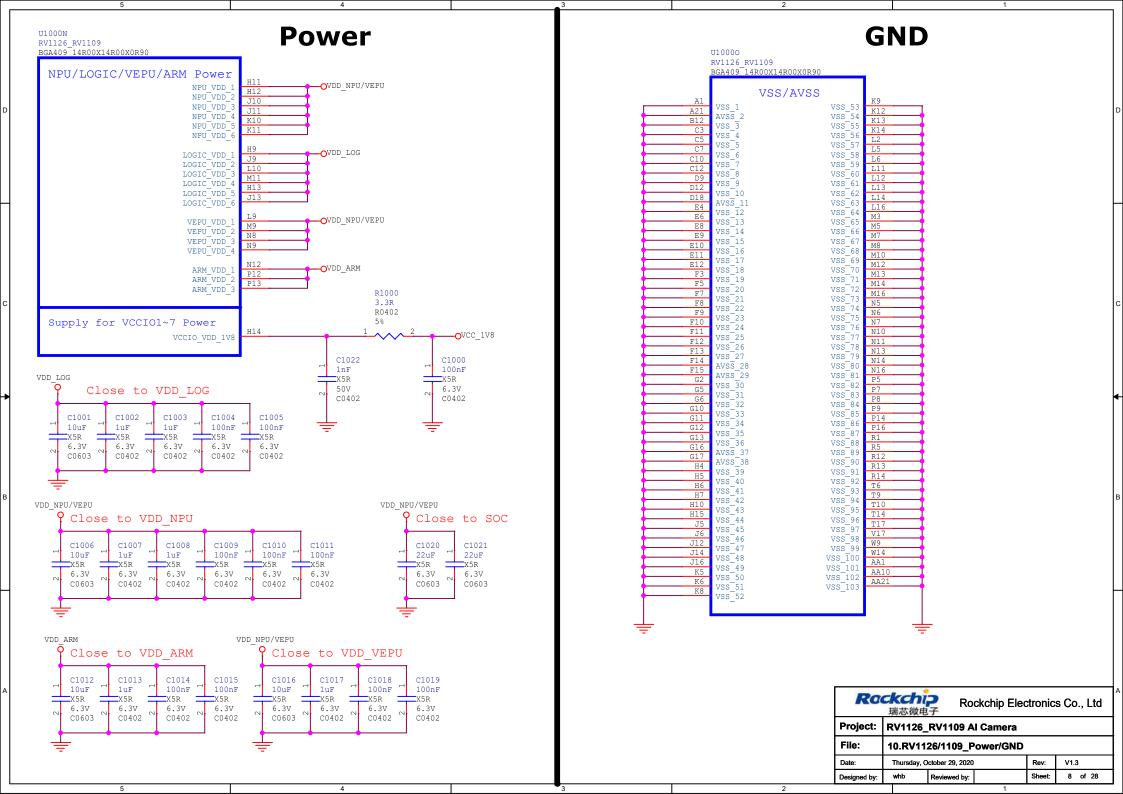
Ra	ckchi 瑞芯微电		ckchip Elect	tronics	Co., Ltd		
Project:	RV1126_	RV1109 AI	Camera				
File:	04.Power	04.Power Diagram and Sequence					
Date:	Thursday, O	ctober 29, 2020		Rev:	V1.3		
Designed by:	whb	Reviewed by:		Sheet:	5 of 28		

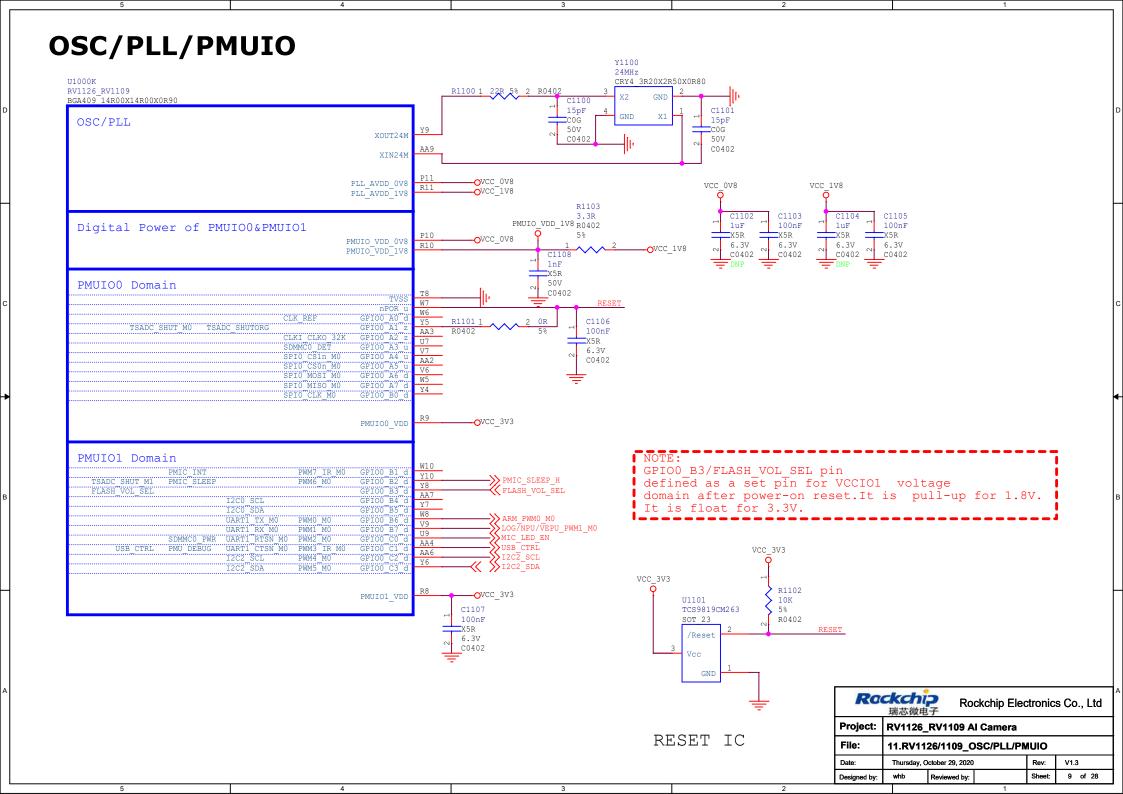


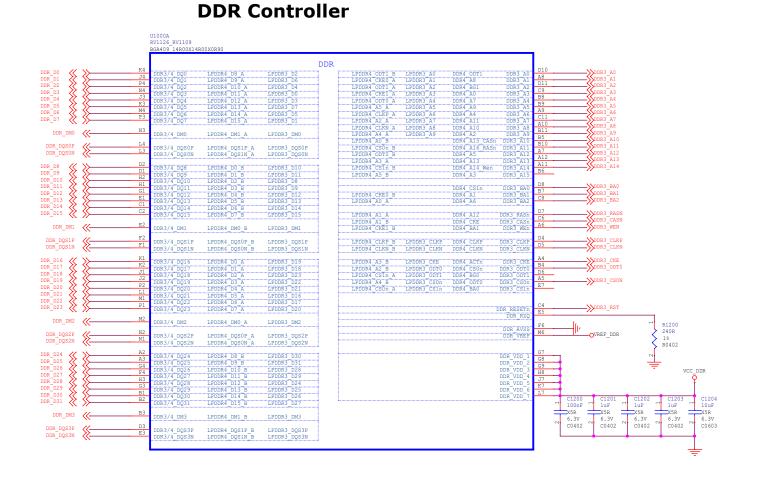
IO Power Domain Map

10		Support of IO Voltage		Default Actual assigned IO Domain Voltage			Makaa
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	GPIOOCD/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 AI C	amera	
File:	06.IO P	ower Domain	Мар	
Date:	Thursday,	October 29, 2020	Rev	: V1.3
Designed by:	whb	Reviewed by:	She	et: 7 of 28

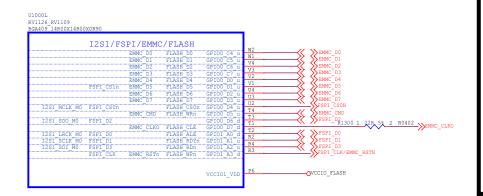


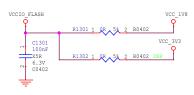


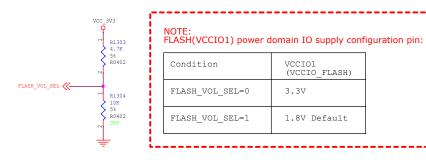


Ro	ckchi 瑞芯微电		ckchip Elect	tronics	Co., Ltd		
Project:	RV1126_I	RV1126_RV1109 Al Camera					
File:	12.RV112	12.RV1126/1109_DRAM Controller					
Date:	Thursday, October 29, 2020 Rev: V1.3						
Designed by:	whb	Reviewed by:		Sheet:	10 of 28		

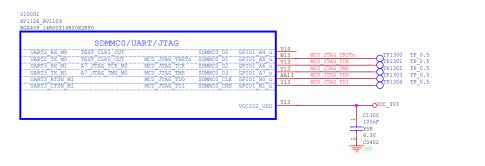
EMMC/FLASH



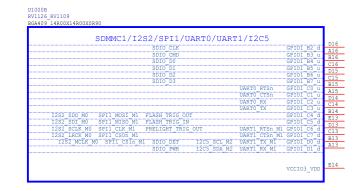




SDMMC0/JTAG

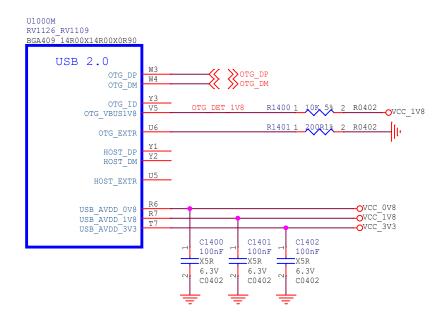


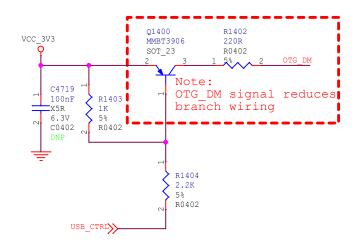
SDMMC1/UART/I2S2



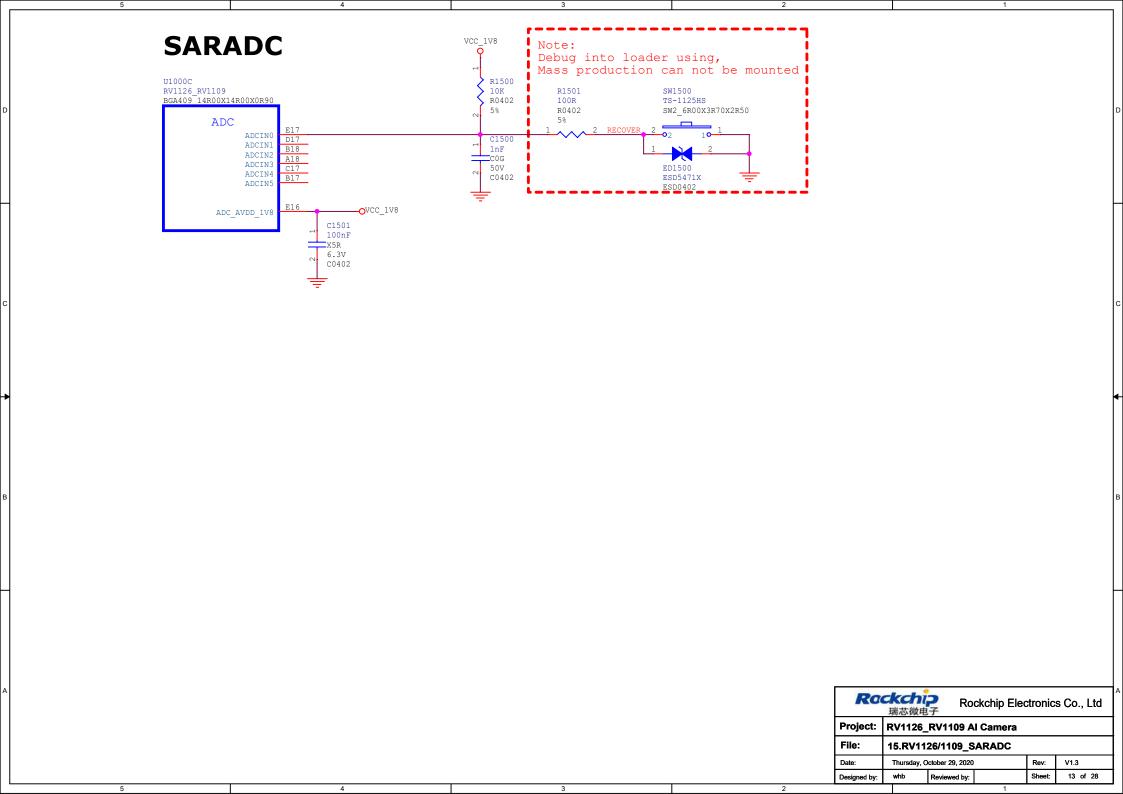
Rockchip Electronics Co., Ltd							
Project: RV1126_RV1109 Al Camera							
File:	File: 13.RV1126/1109_Flash/SD						
Date:	Thursday, October 29, 2020			Rev:	V1.3		
Designed by:	whb	Reviewed by:		Sheet:	11 of 28		

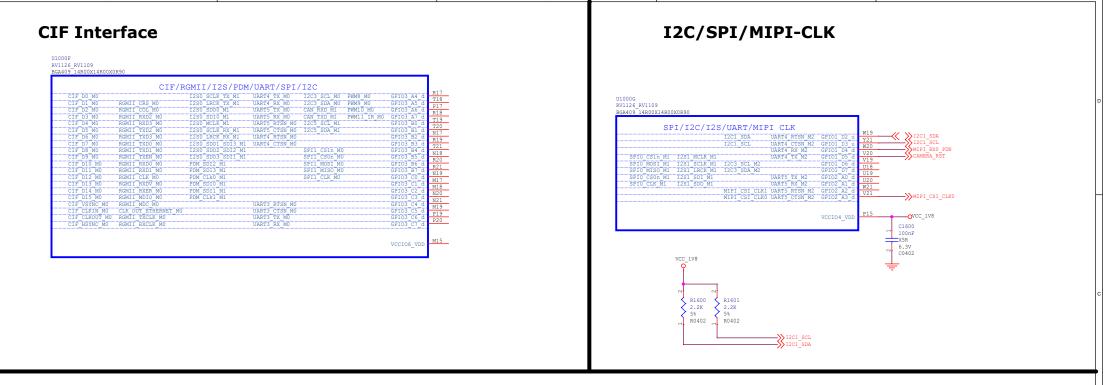
USB Controller



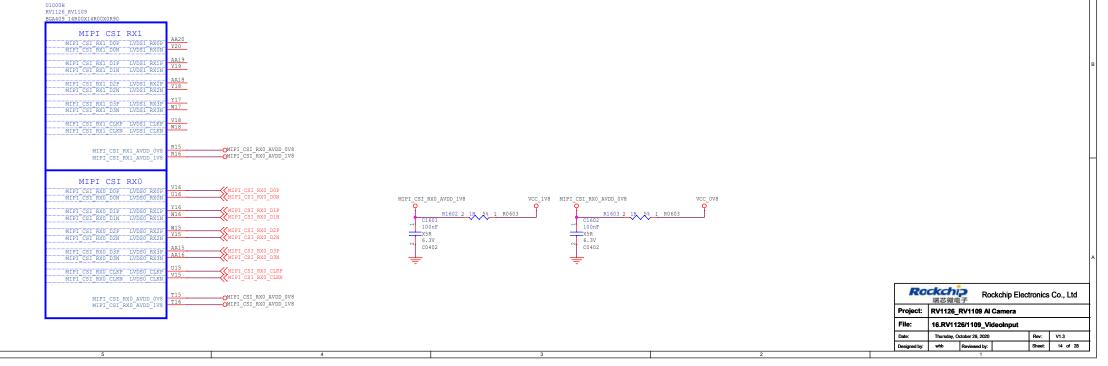


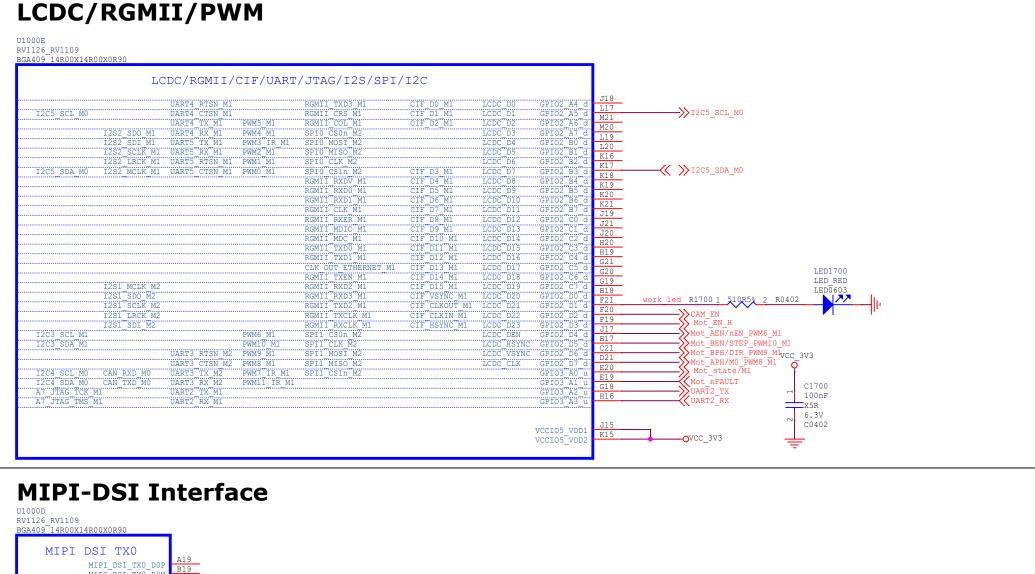
	Ro	ckchi 瑞芯微电	PRo	Rockchip Electronics Co., Ltd			
	Project:	RV1126_	l Camera				
File: 14.RV1126/1109_USB Controller							
	Date: Thursday, October 29		ctober 29, 2020	29, 2020		V1.3	
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MIPI-CSI Interface





RV1126_RV1109
BGA409_14R00X14R00X0R90

MIPI_DSI_TXO

MIPI_DSI_TXO_DOP
MIPI_DSI_TXO_DON

MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_DIP
MIPI_DSI_TXO_CLKP
MIPI_DSI_TXO_CLKP
MIPI_DSI_TXO_CLKP
MIPI_DSI_TXO_CLKP
MIPI_DSI_TXO_AVDD_0V8
MIPI_DSI_TXO_AVDD_1V8

E18
G15

Ro	Rockchip Electronics Co., Ltd 瑞芯微电子					
Project:	: RV1126_RV1109 AI Camera					
File:	17.RV1	126/1109_V	deoOutput			
Date:	Thursday, October 29, 2020			Rev:	V1.3	
Designed by:	whb	Reviewed by:		Sheet:	15 of 28	

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