

RK3288 UAV REF V1.0

- 01.Index
- 02.Change List
- 03.Block Diagram
- 05.Power Tree-RK808-B
- 10.RK3288 Power
- 11.RK3288 PMU Controler
- 12.RK3288 DDR Controler
- 13.RK3288 Flash Controler
- 14.RK3288 USB/HSIC Controler
- 15.RK3288 SARADC/Key Board
- 16.RK3288 DVP Interface
- 17.RK3288 Display Interface
- 18.RK3288 GPIO
- 20.USB Port
- 21.Interface Port / DC IN
- 22.Power-RK808-B
- 36.RAM-LPDDR3(178P) (option)
- 40.Memory-eMMC
- 42.10/100/1000M-PHY
- 45.DVP power
- 46.Camera-MIPI CSI
- 47.Camera-CIF (option)
- 49.Sensor
- 63.WIFI/BT/GPS-AP6XXX
- 65.GPS
- 81.TF Card
- 82.HDMI Out

I2C address(7bit):

1.I2C0 Power:

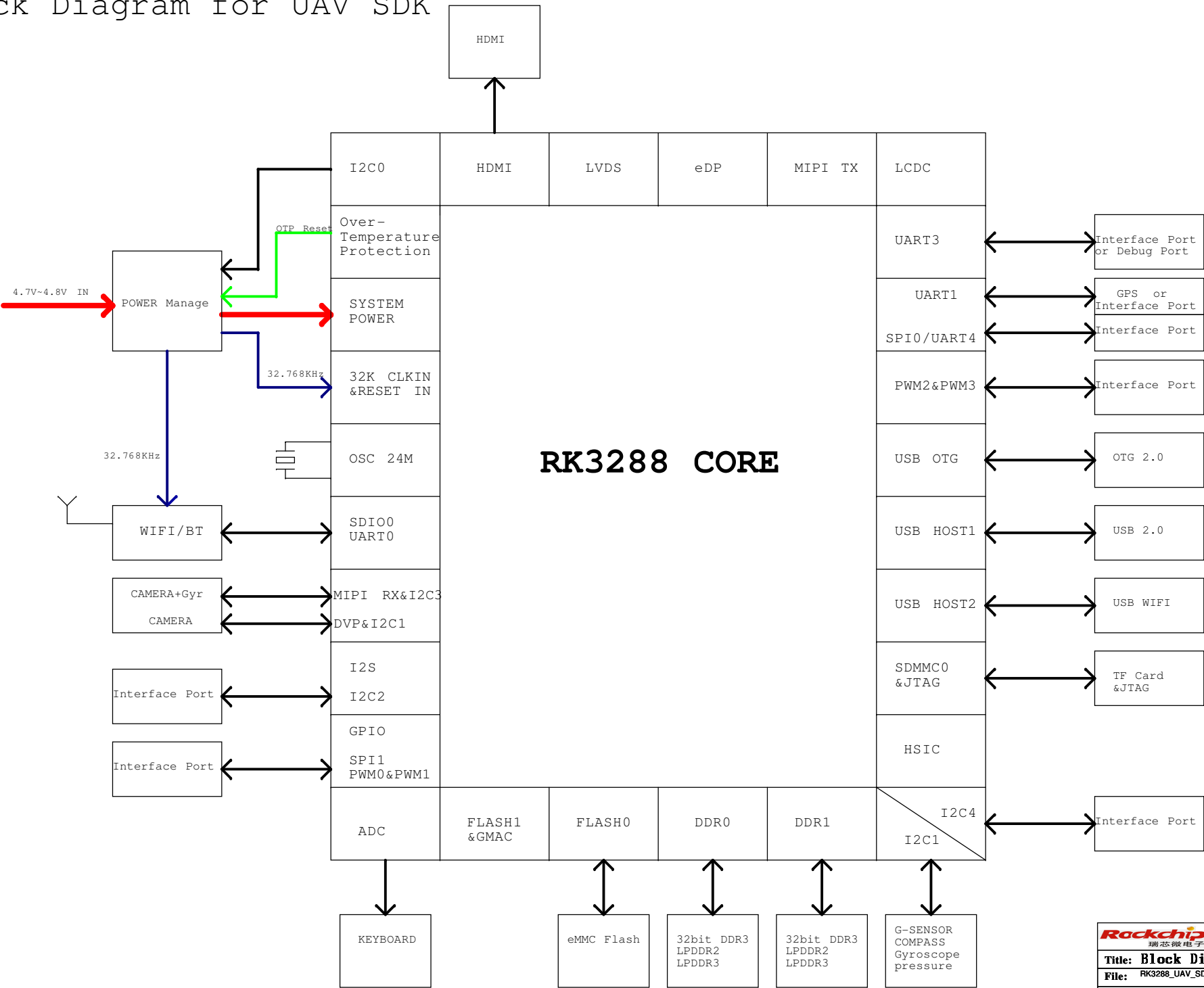
RK808 0x1b
SYR827 0x40

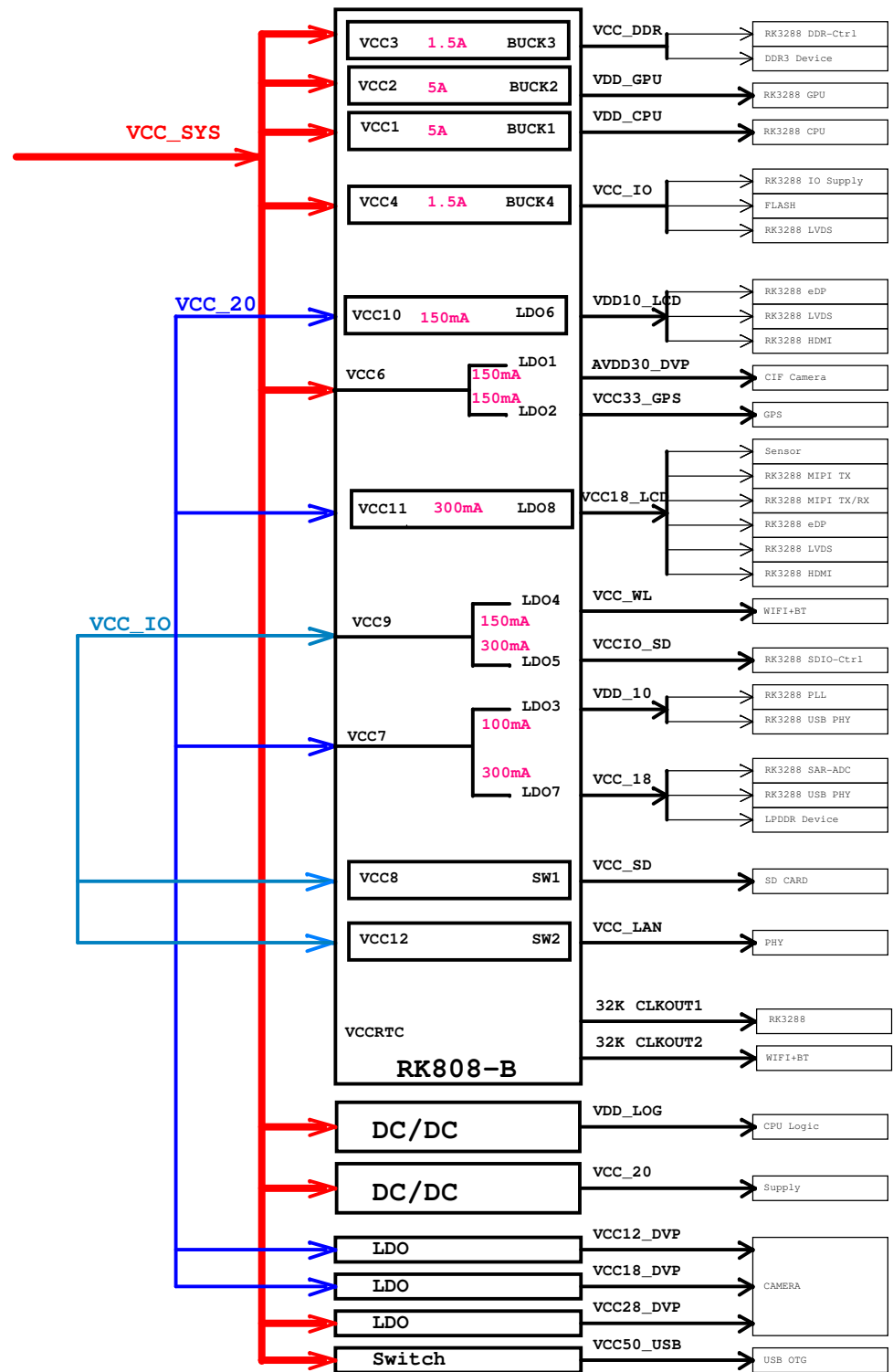
2.I2C1 Sensor:

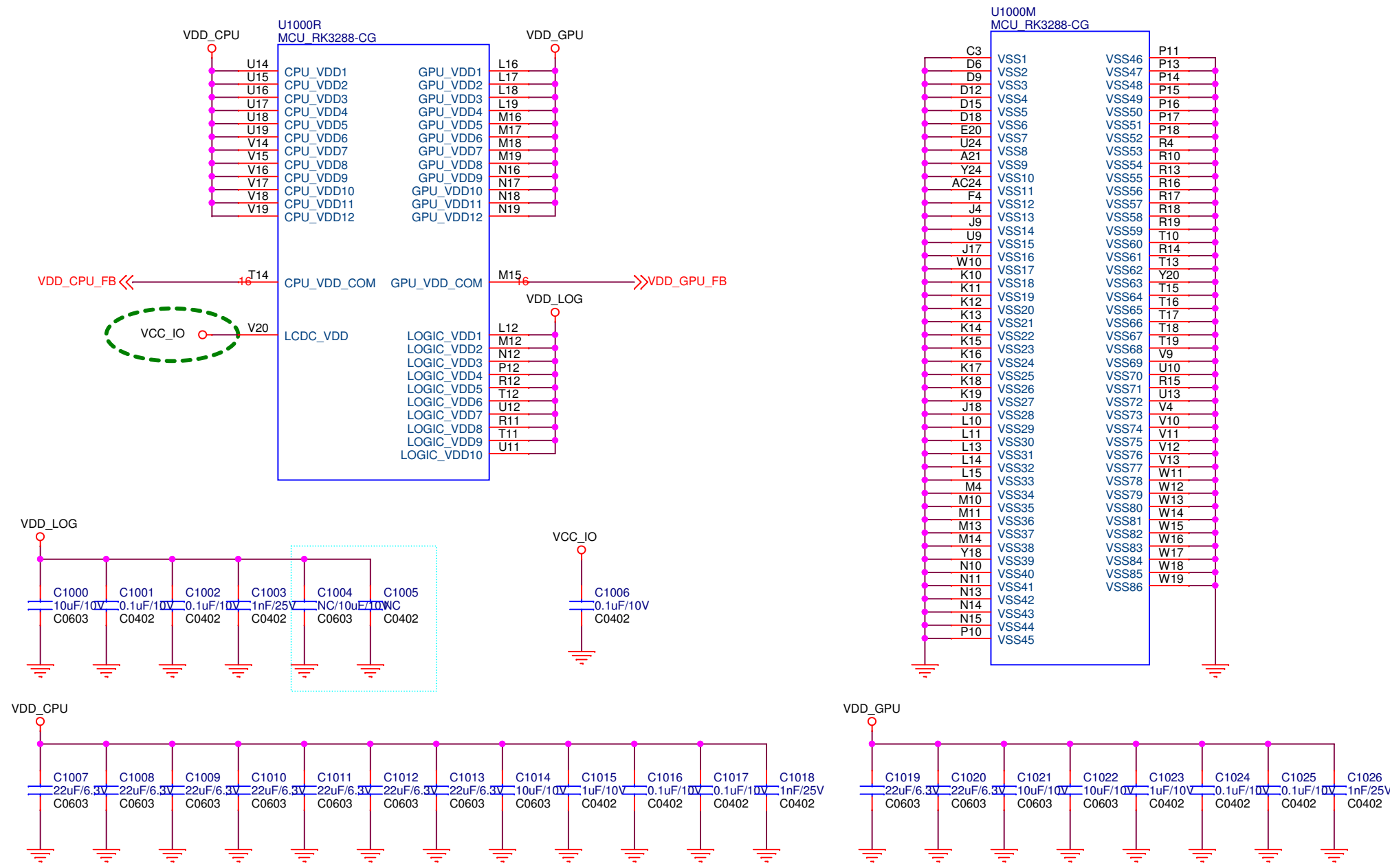
CM3218 0x10,0x0c
LSM330TR G:0x6a A:0x1e
MMA8452Q 0X1d
MPU6500 0x34
LIS3DH 0X19
LSM303D 0X1d

Version	Date	Author	Change Note	Approved
V1.0	20160615	ZGY	First edictor	

Block Diagram for UAV SDK








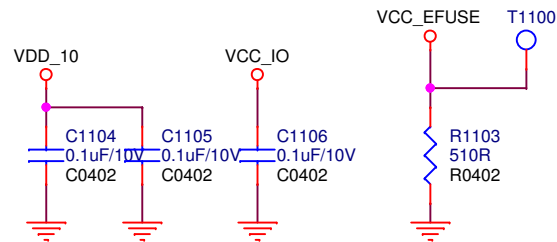
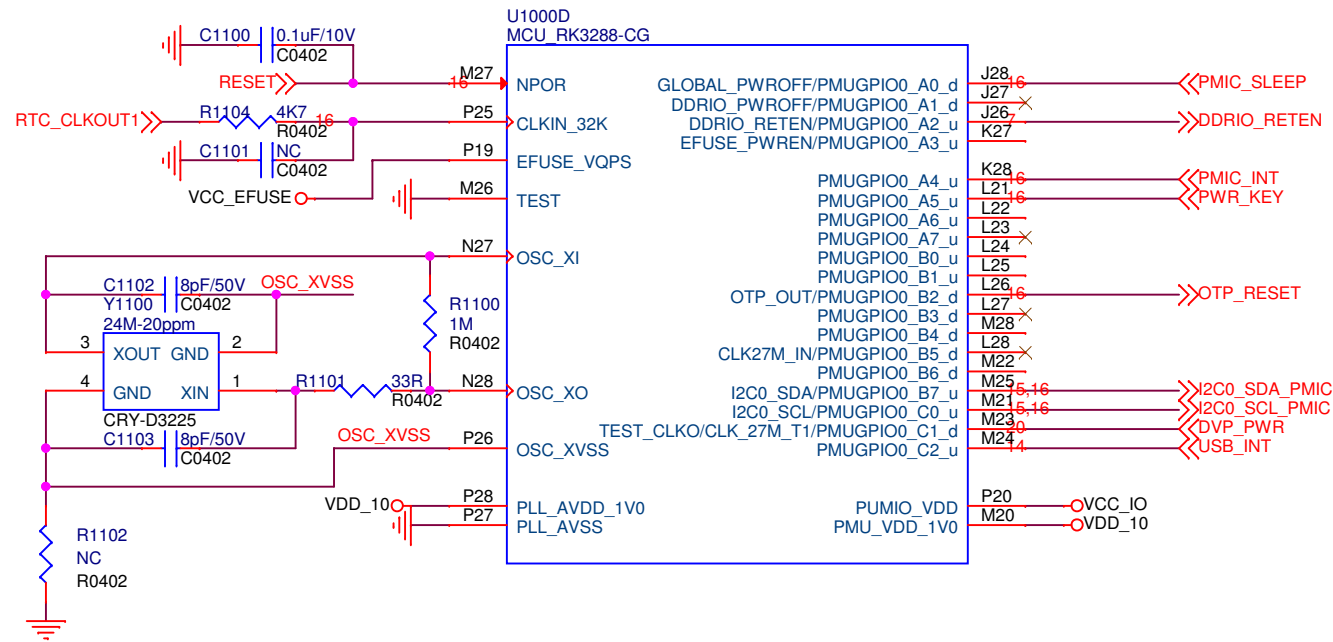
RK3288 Power Filter

Note: All the capacitor should be place close to the power pin of RK3288



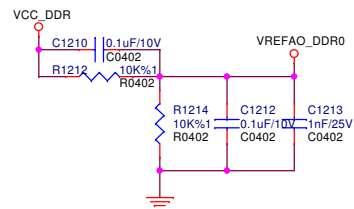
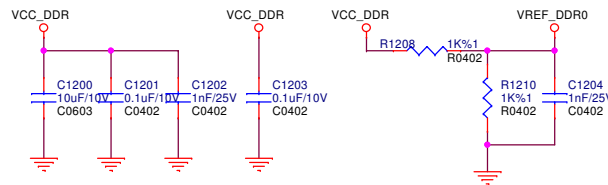
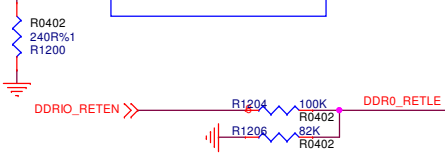
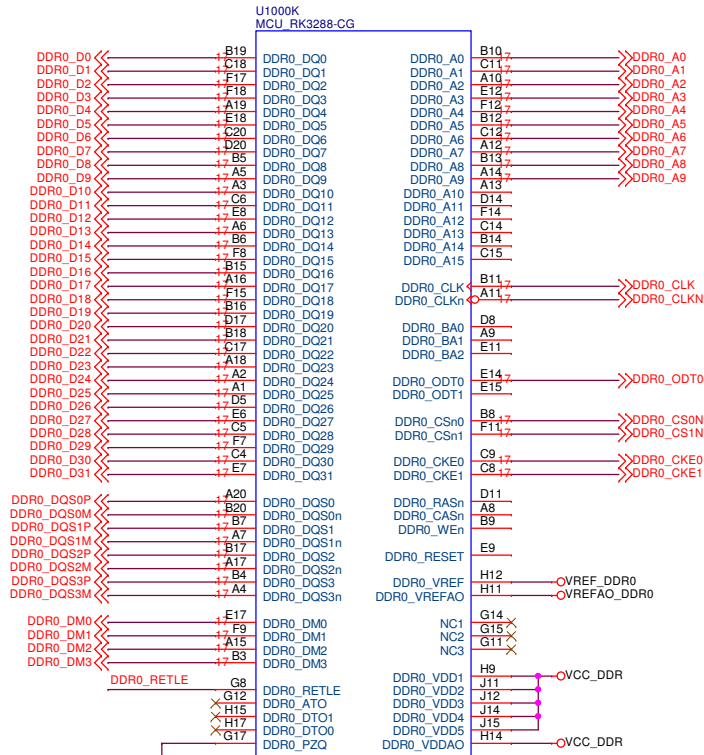
福州瑞芯微电子

Title: RK3288 Power	
File: RK3288_UAV_SDK	REV: V1.0
Create Date: Wednesday, February 12, 2014	Page Num: 5
Modify Date: Friday, November 11, 2016	Page Total: 27



Note: All the capacitor should be place close to the power pin of RK3288.

RK3288 DDR Channel-0

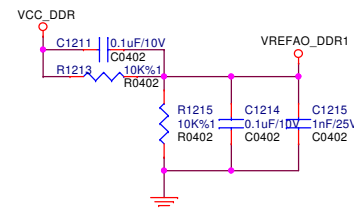
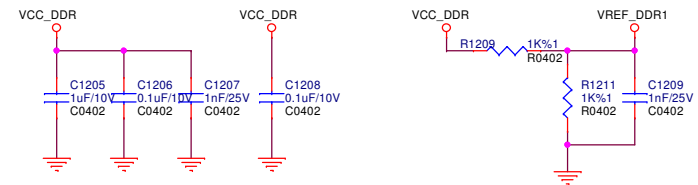
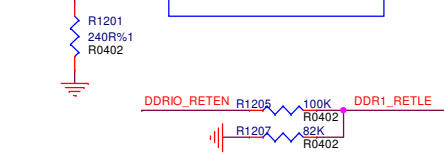
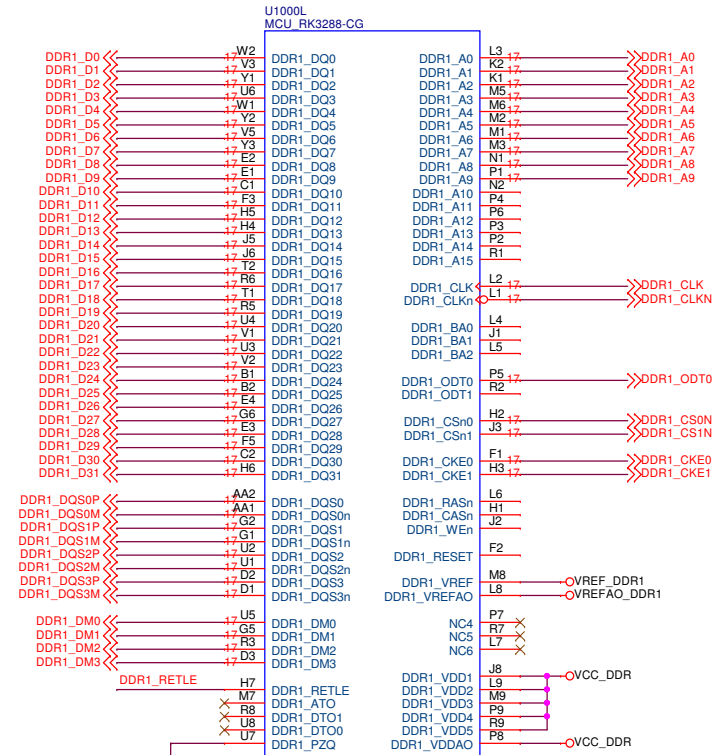


	R1204 R1205	R1206 R1207
DDR3	120K	120K
LPDDR2/3	100K	82K

RK3288_K

Note: All the capacitor should be place close to the power pin of RK3288.

RK3288 DDR Channel-1



RK3288_L

Note: All the capacitor should be place close to the power pin of RK3288.

Rockchip 瑞芯微电子		
Title: RK3288 DDR Controller		
File: RK3288_UAV_SDK		REV: V1.0
Create Date: Saturday, January 11, 2014	Page Num: 7	
Modify Date: Friday, November 11, 2016	Page Total: 27	

U1000Q
MCU_RK3288-CG

HOST_D0/MAC_TXD2/SDIO1_D0/FLASH1_D0/GPIO3_D0_u
HOST_D1/MAC_TXD3/SDIO1_D1/FLASH1_D1/GPIO3_D1_u
HOST_D2/MAC_RXD2/SDIO1_D2/FLASH1_D2/GPIO3_D2_u
HOST_D3/MAC_RXD3/SDIO1_D3/FLASH1_D3/GPIO3_D3_u
HOST_D4/MAC_TXD0/SDIO1_DET/FLASH1_D4/GPIO3_D4_u
HOST_D5/MAC_TXD1/SDIO1_WRPRT/FLASH1_D5/GPIO3_D5_u
HOST_D6/MAC_RXD0/SDIO1_BKPWR/FLASH1_D6/GPIO3_D6_u
HOST_D7/MAC_RXD1/SDIO1_INTn/FLASH1_D7/GPIO3_D7_u

HOST_CKOUTP/MAC_MDC/FLASH1_RDY/GPIO4_A0_u
HOST_CKOUTN/MAC_RXDV/FLASH0_CSn4/FLASH1_WP/GPIO4_A1_u
HOST_D8/MAC_RXER/FLASH0_CSn5/FLASH1_RDN/GPIO4_A2_u
HOST_D9/MAC_CLK/FLASH0_CSn6/FLASH1_ALE/GPIO4_A3_u
HOST_D10/MAC_TXEN/FLASH0_CSn7/FLASH1_CLE/GPIO4_A4_u
HOST_D11/MAC_MDIO/FLASH1_WRN/GPIO4_A5_u
HOST_D12/MAC_RXCLK/SDIO1_CMD/FLASH1_CSn0/GPIO4_A6_u
HOST_D13/MAC_CRS/SDIO1_CLKOUT/FLASH1_CSn1/GPIO4_A7_u
HOST_D14/MAC_COL/FLASH1_DQS/FLASH1_CSn3/GPIO4_B0_u
HOST_D15/MAC_TXCLK/SDIO1_PWREN/FLASH1_CSn2/GPIO4_B1_u

FLASH1_VDD

Y4
V6
AB1
AC1
AD1
AB2
AA3
AA4

AC3
AC2
AE1
AE2
AD2
Y5
AB5
AA6
AA5
V7

VCC_LAN

V8

C1301
0.1uF
C0402

RK3288_Q

U1000P
MCU_RK3288-CG

FLASH0_D0/EMMC_D0/GPIO3_A0_u
FLASH0_D1/EMMC_D1/GPIO3_A1_u
FLASH0_D2/EMMC_D2/GPIO3_A2_u
FLASH0_D3/EMMC_D3/GPIO3_A3_u
FLASH0_D4/EMMC_D4/GPIO3_A4_u
FLASH0_D5/EMMC_D5/GPIO3_A5_u
FLASH0_D6/EMMC_D6/GPIO3_A6_u
FLASH0_D7/EMMC_D7/GPIO3_A7_u

FLASH0_RDY/GPIO3_B0_u
FLASH0_WP/EMMC_PWREN/GPIO3_B1_d
FLASH0_RDN/GPIO3_B2_u
FLASH0_ALE/GPIO3_B3_d
FLASH0_CLE/GPIO3_B4_d
FLASH0_WRN/GPIO3_B5_u
FLASH0_CSn0/GPIO3_B6_u
FLASH0_CSn1/GPIO3_B7_u
FLASH0_CSn2/EMMC_CMD/GPIO3_C0_u
FLASH0_CSn3/EMMC_RSTNOUT/GPIO3_C1_u
FLASH0_DQS/EMMC_CLKOUT/GPIO3_C2_d
FLASH0_VOLTAGE_SEL/GPIO3_C3_d

FLASH0_VDD

AE3
AD3
AF3
AF1
AF2
AG3
AG1
AG2

AH2
AH1
Y6
AF4
AH3
AG4
AC5
AD4
AC4

Y7
AB6
Y8

Y9

FLASH0_D0
FLASH0_D1
FLASH0_D2
FLASH0_D3
FLASH0_D4
FLASH0_D5
FLASH0_D6
FLASH0_D7

FLASH0_WP/EMMC_PWREN

FLASH0_CS2/EMMC_CMD

FLASH0_DQS/EMMC_CLKO


VCCIO_FLASH

C1300
0.1uF/10V
C0402

Note: All the capacitor should be place close to the power pin of RK3288.

	VCCIO_FLASH=1.8V	VCCIO_FLASH=3.3V
FLASH0_VOLTAGE_SEL pin connect to	VCCIO_FLASH	Floating (Default)

RK3288_P



福州瑞芯微电子

Title: RK3288 Flash/MAC Controller

File: RK3288_UAV_SDK

REV: V1.0

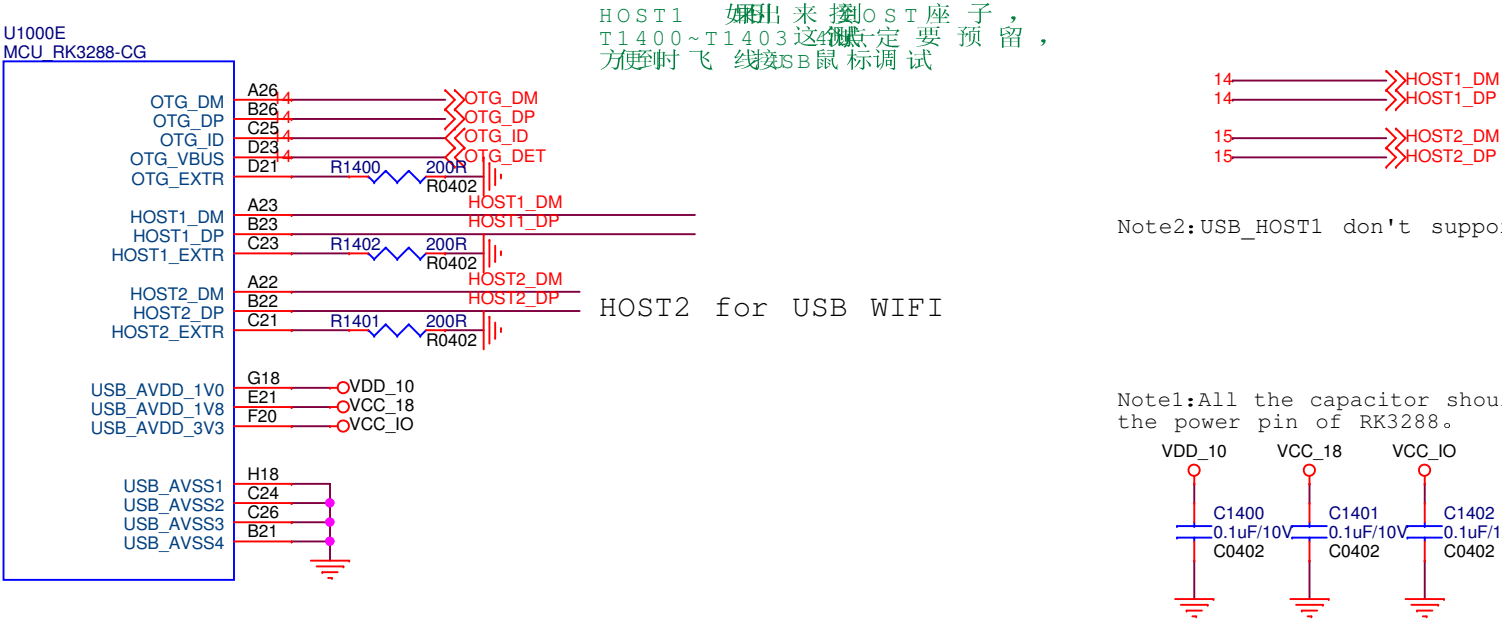
Create Date: Tuesday, November 29, 2011

Page Num: 8

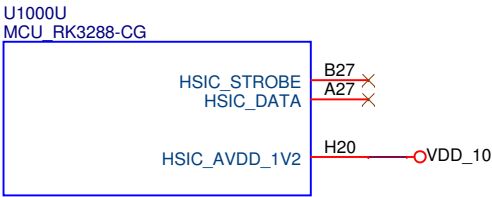
Modify Date: Friday, November 11, 2016

Page Total: 27

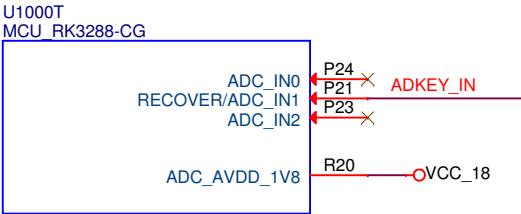
RK3288_E



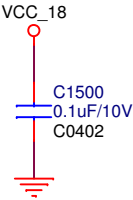
RK3288_U



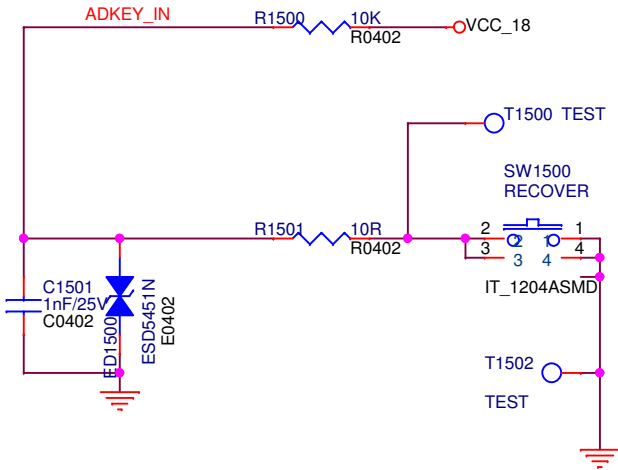
RK3288_T




Note:All the capacitor should be place close to the power pin of RK3288.



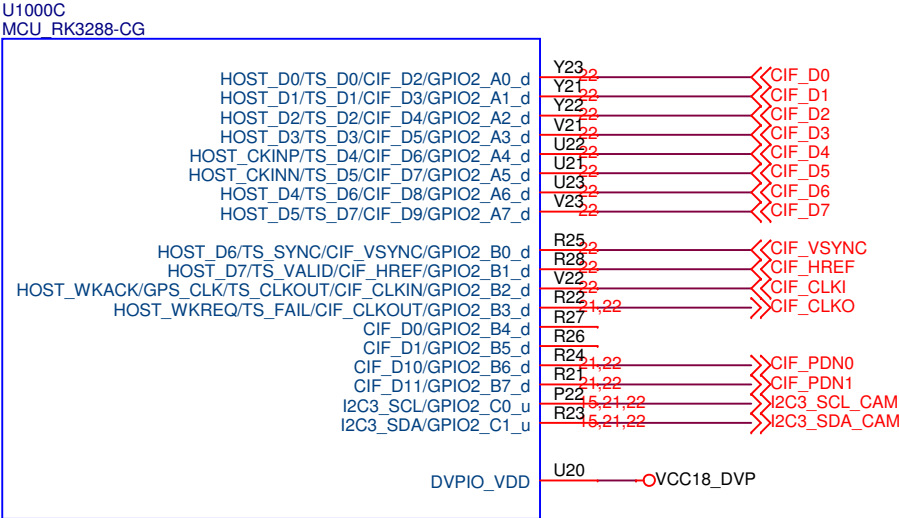
15,25 ———>>ADKEY_IN



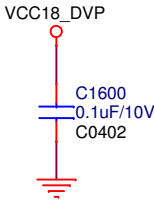
KEY BAORD

 瑞芯微电子		福州瑞芯微电子有限公司	
Title: RK3288 SARADC/Key Board			
File: RK3288_UAV_SDK			REV: V1.0
Create Date: Wednesday, February 12, 2014		Page Num: 10	
Modify Date: Friday, November 11, 2016		Page Total: 27	

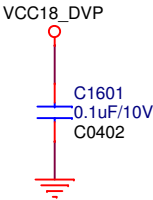
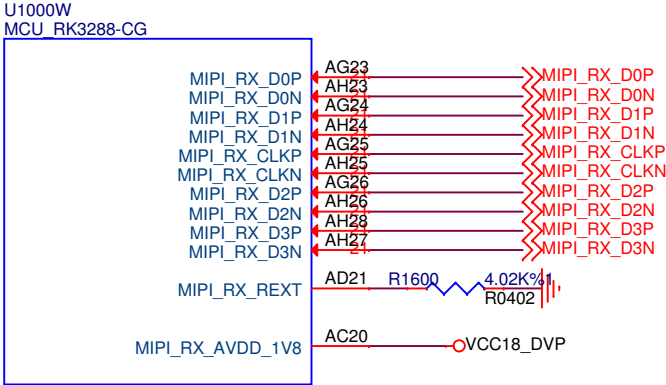
RK3288_C



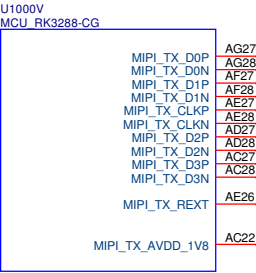
Note: All the capacitor should be place close to the power pin of RK3288.



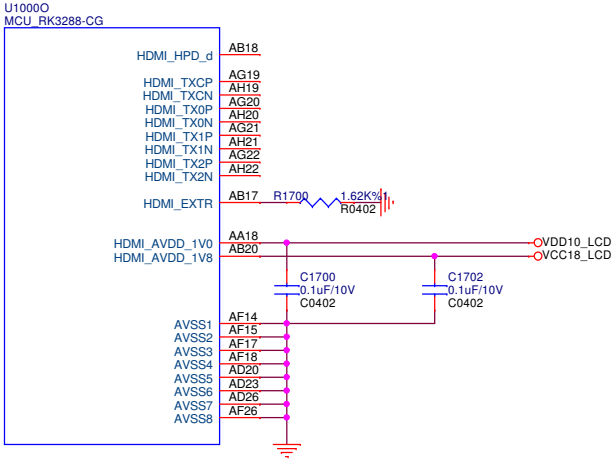
RK3288_W



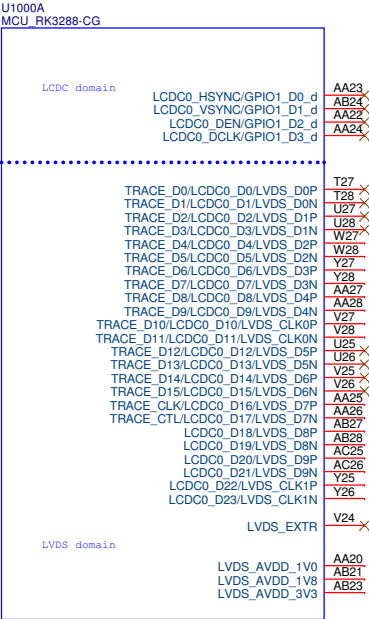
RK3288_V



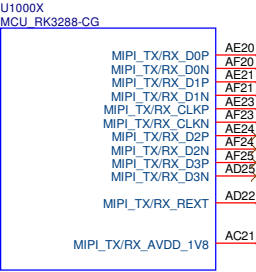
RK3288_O



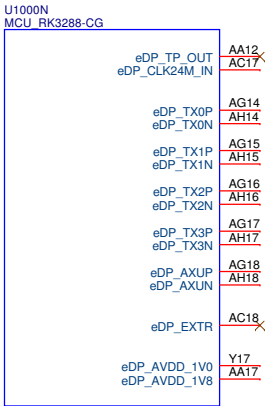
RK3288_A



RK3288_X

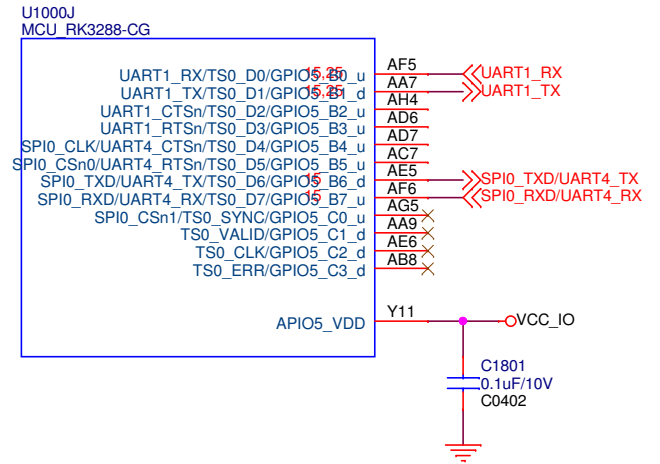
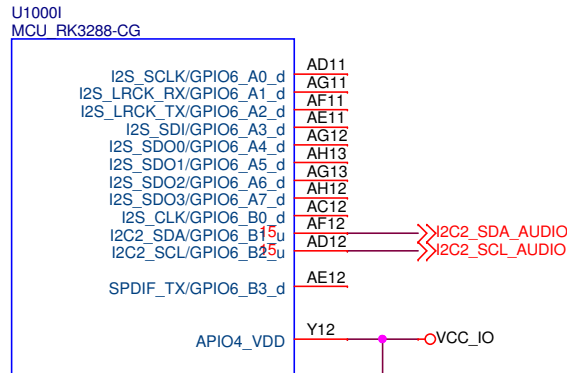
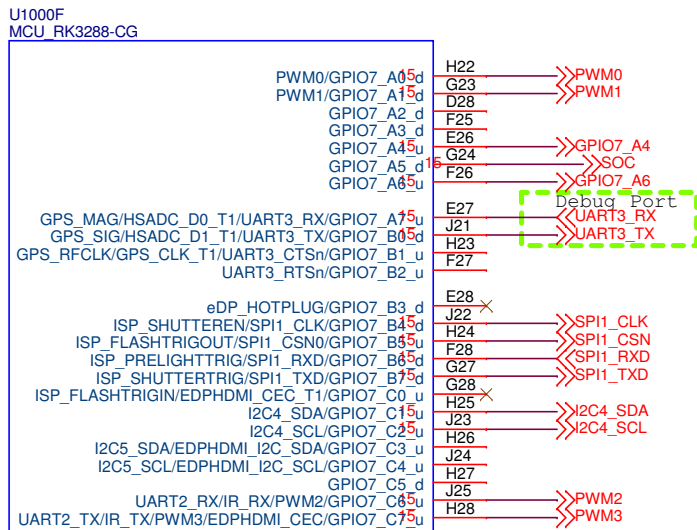


RK3288_N

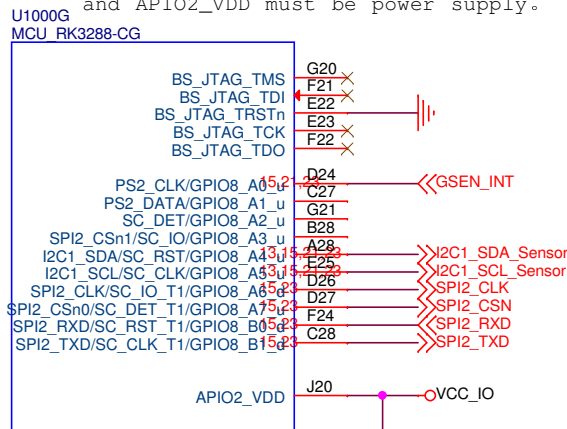


Correspondence between LCDC DATA and RGB

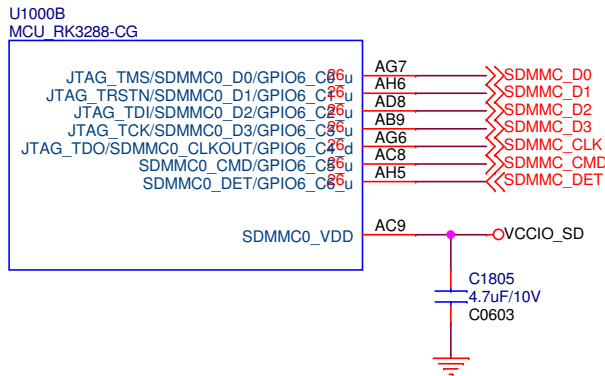
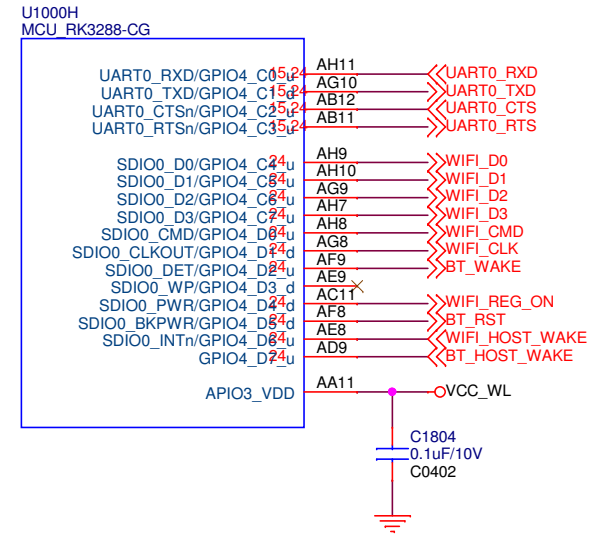
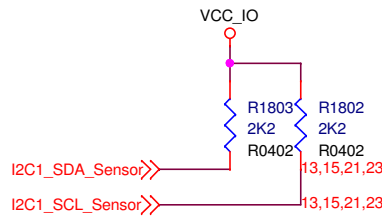
LCDC_D0	B0	LCDC_D8	G0	LCDC_D16	R0
LCDC_D1	B1	LCDC_D9	G1	LCDC_D17	R1
LCDC_D2	B2	LCDC_D10	G2	LCDC_D18	R2
LCDC_D3	B3	LCDC_D11	G3	LCDC_D19	R3
LCDC_D4	B4	LCDC_D12	G4	LCDC_D20	R4
LCDC_D5	B5	LCDC_D13	G5	LCDC_D21	R5
LCDC_D6	B6	LCDC_D14	G6	LCDC_D22	R6
LCDC_D7	B7	LCDC_D15	G7	LCDC_D23	R7



Note:BS_JTAG_TRSTn must connected to VSS and APIO2_VDD must be power supply.

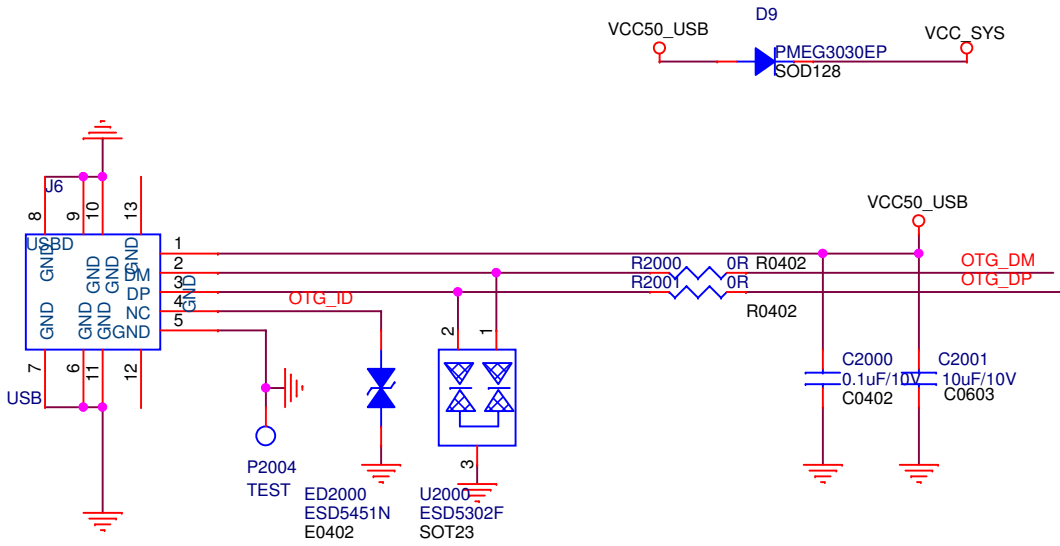


Note:All the capacitor should be place close to the power pin of RK3288.

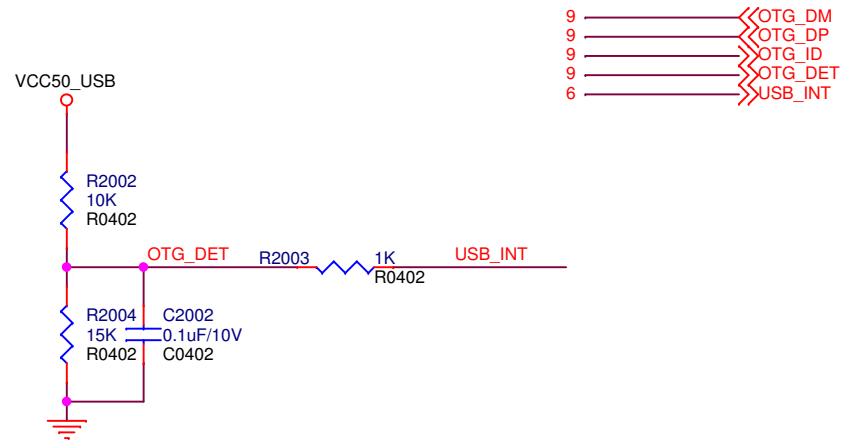


 瑞芯微电子		福州瑞芯微电子	
Title: RK3288 GPIO			
File: RK3288_UAV_SDK		REV: V1.0	
Create Date: Monday, December 30, 2013		Page Num: 13	
Modify Date: Friday, November 11, 2016		Page Total: 27	

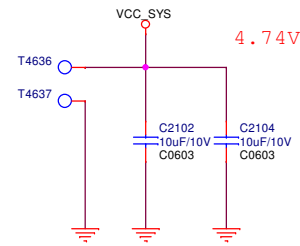
USB OTG



USB Detection

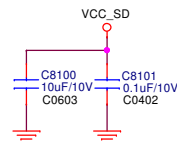
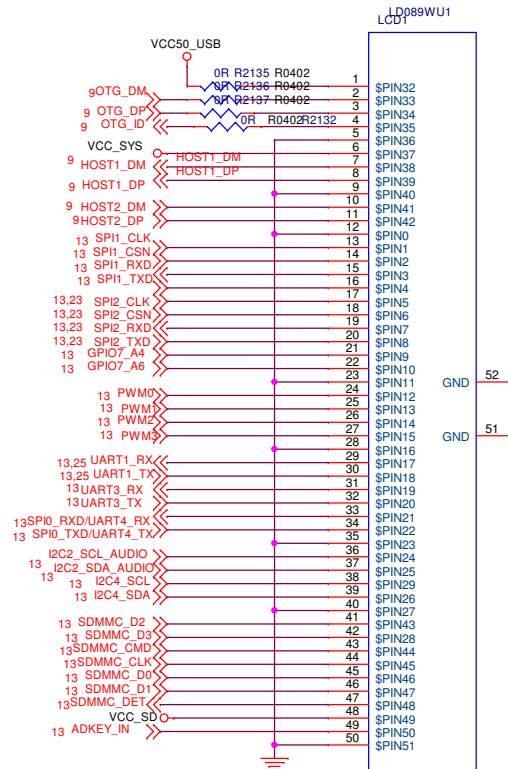
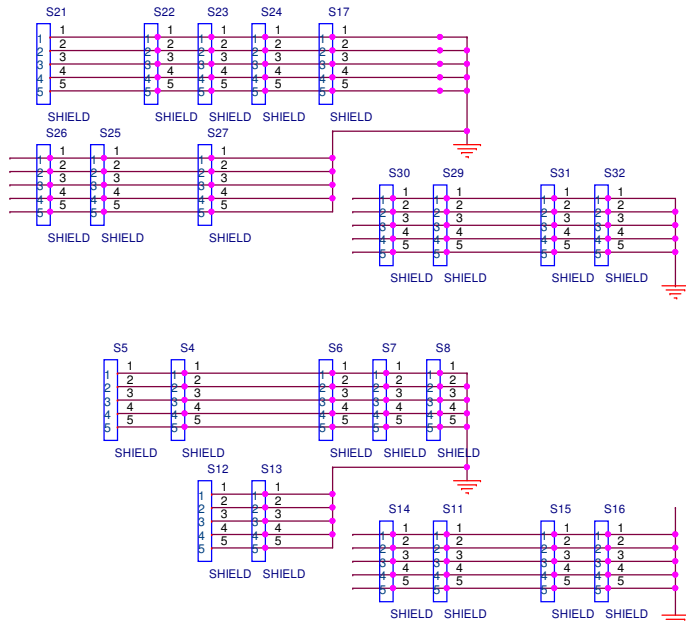
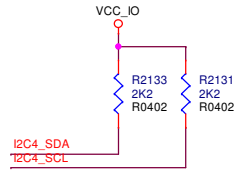
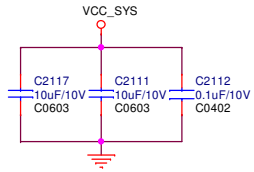


HOST&HOST POWER SWITCH



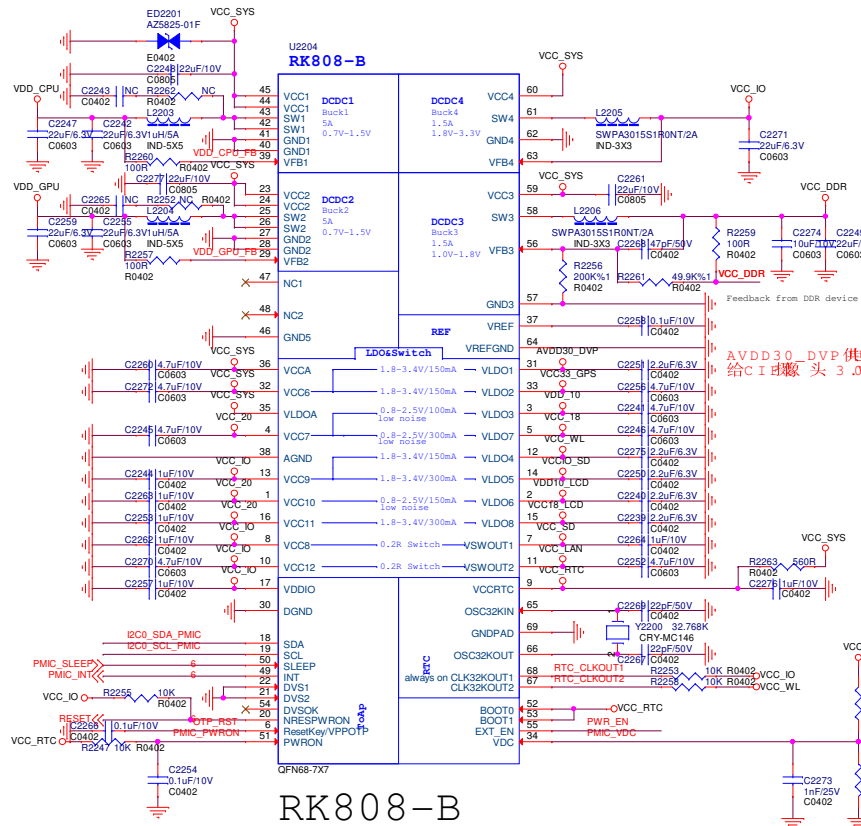
4.7V<=VCC_SYS<=4.8

飞线电进来：4.7V~4.8V



Rockchip 福州瑞芯微电子有限公司	
Title: Interface Port/DC IN	
File: RK3288_UAV_SDK	REV: V1.0
Create Date: Friday, March 25, 2016	Page Num: 15
Modify Date: Friday, November 11, 2016	Page Total: 27

SYSTEM POWER

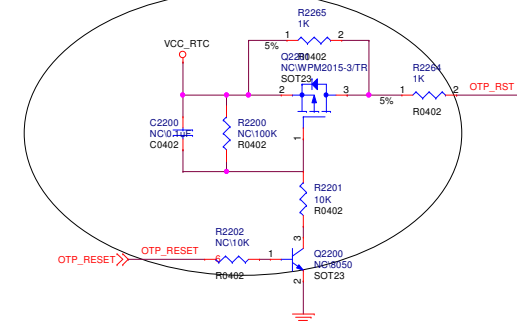


RK808-B

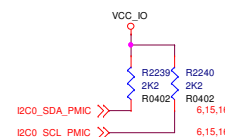
POWER KEY



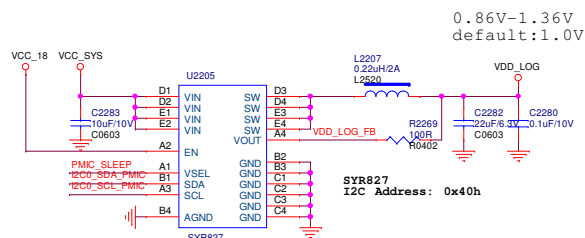
Over-temperature Protection



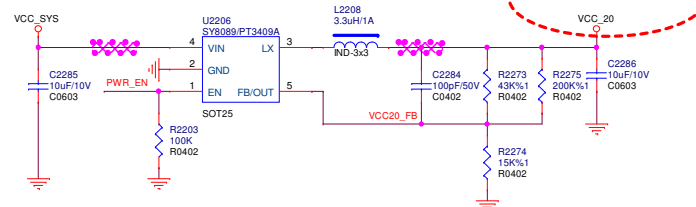
OTG POWER Switch



LOG POWER



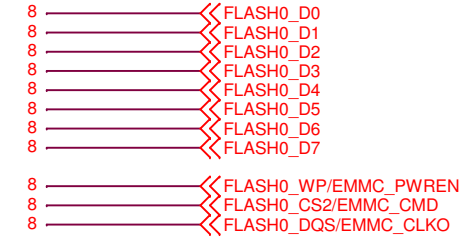
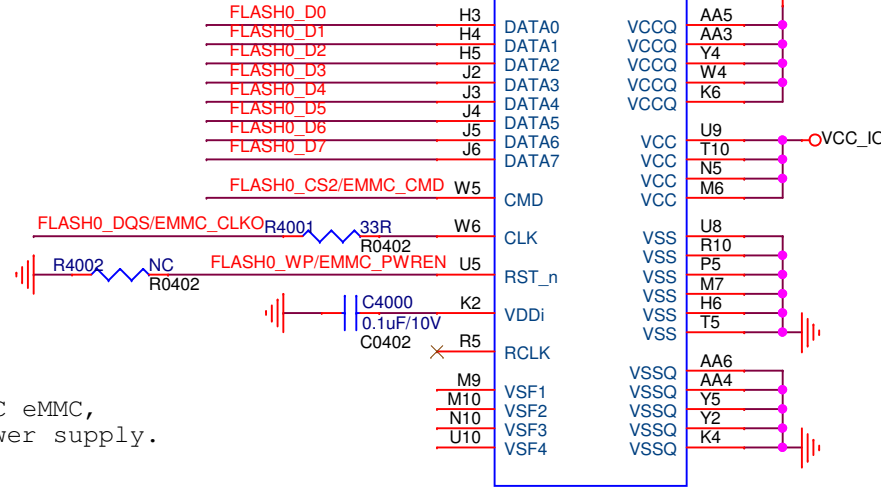
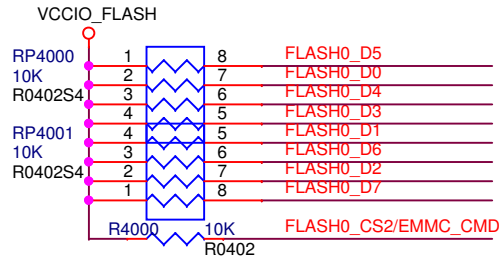
VCC_20



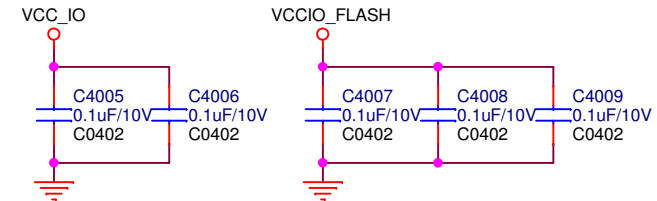
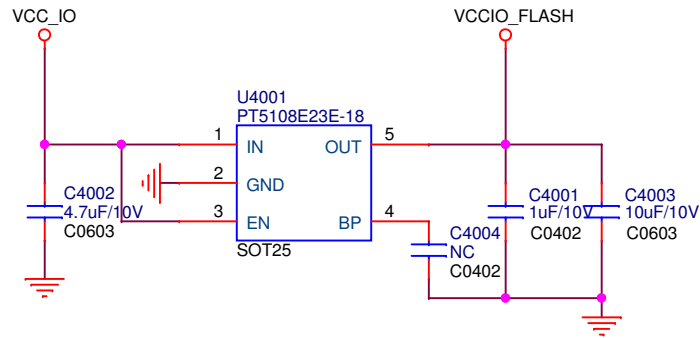
Interface Port 1.8V POWER

Rackchip 福州瑞芯微电子有限公司		
Title: Power-RK808-B		
File: RK3288_UAV_SDK		
Create Date: Monday, April 28, 2014	Page Num: 16	REV: V1.0
Modify Date: Friday, November 11, 2016	Page Total: 28	

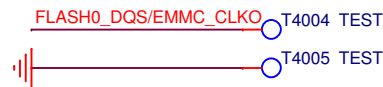
eMMC FLASH



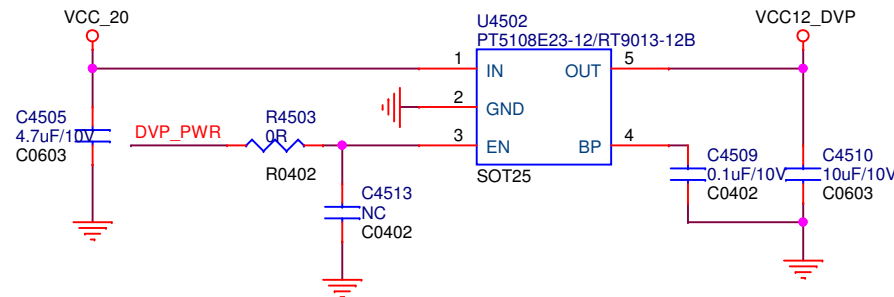
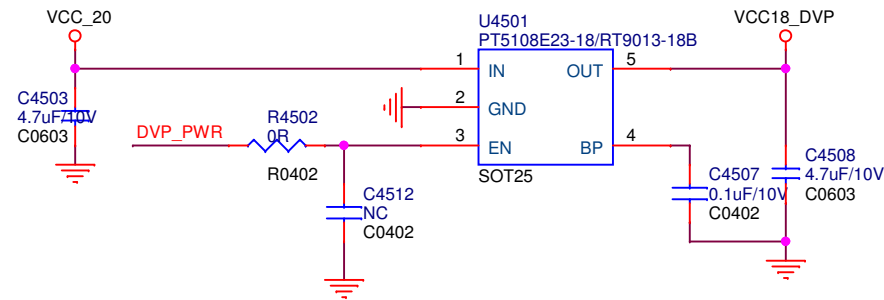
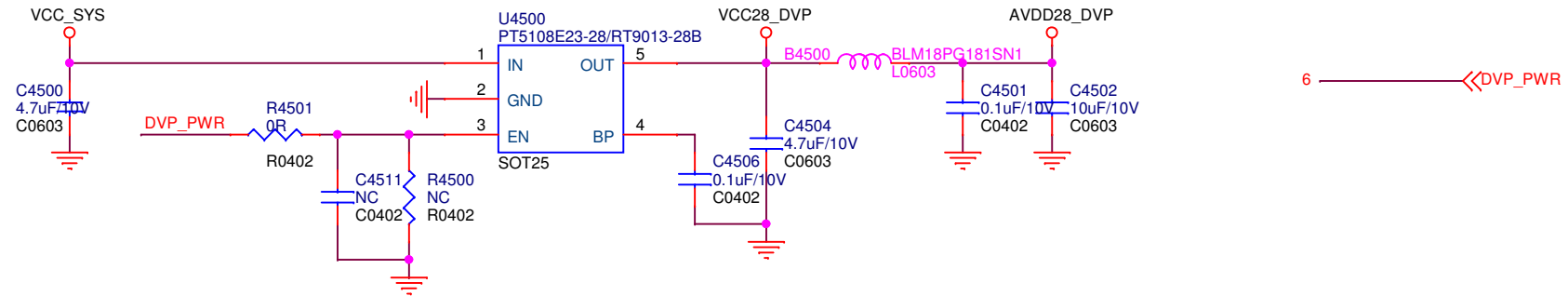
Note:
U4001 must be use for Sandisk 5.0 TLC eMMC,
because it support only 1.8V VCCQ power supply.




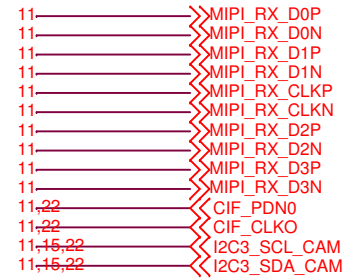
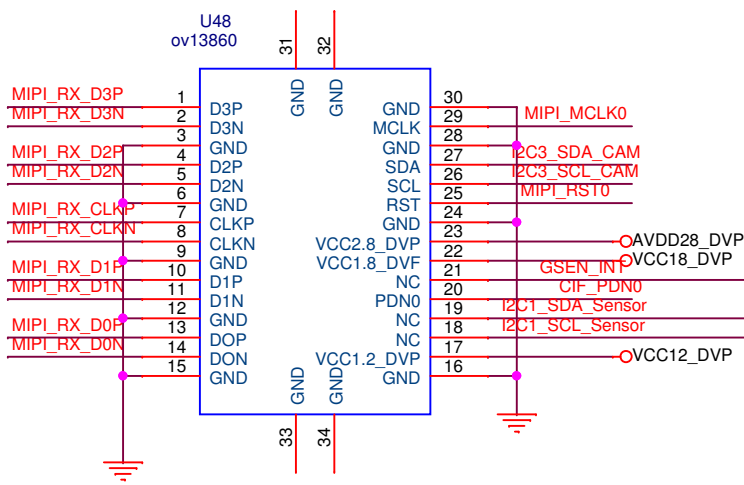
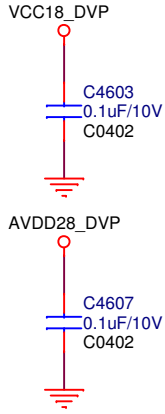
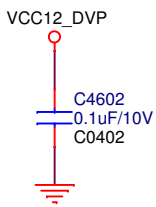
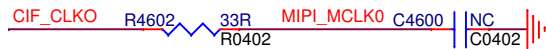
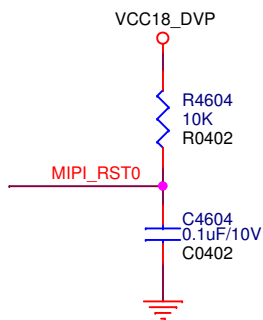
Note:
Reserve PAD for Update.



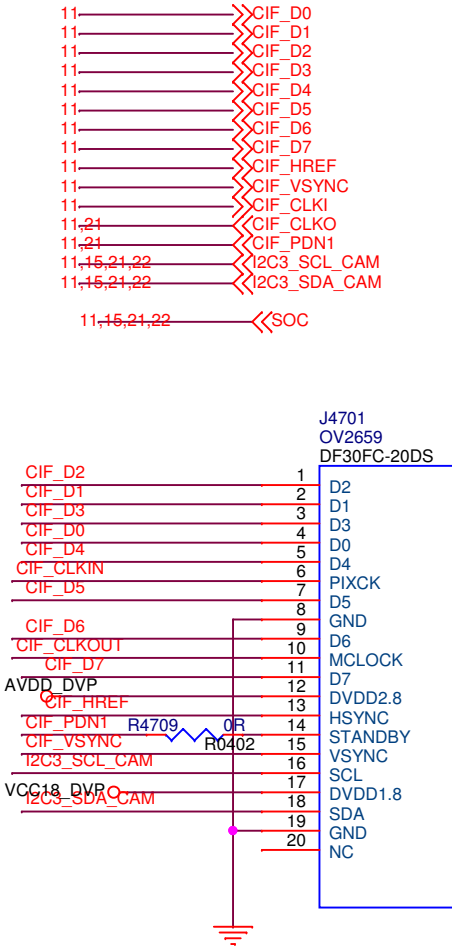
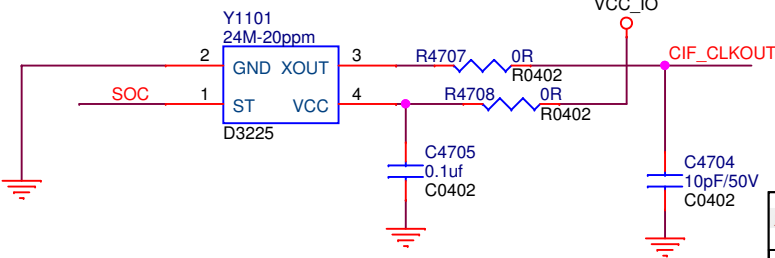
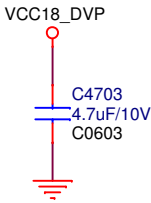
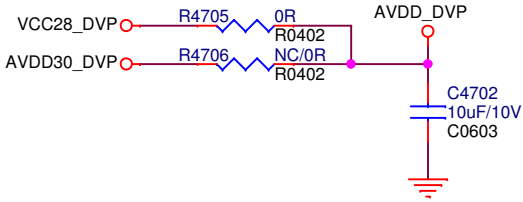
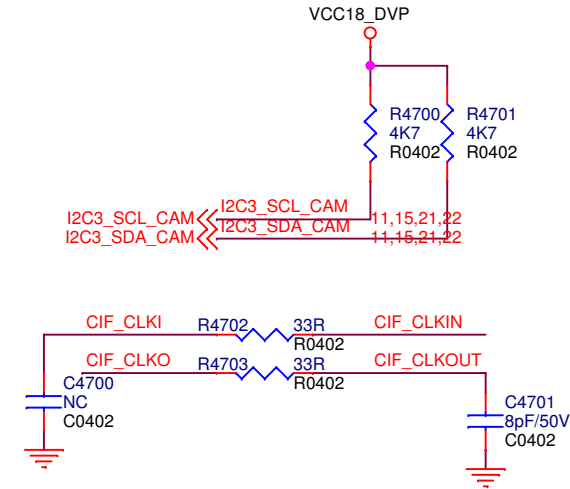
DVP Power



 瑞芯微电子		福州瑞芯微电子有限公司	
Title: DVP power			
File: RK3288_UAV_SDK			REV: V1.0
Create Date: Wednesday, February 12, 2014		Page Num: 20	
Modify Date: Friday, November 11, 2016		Page Total: 27	

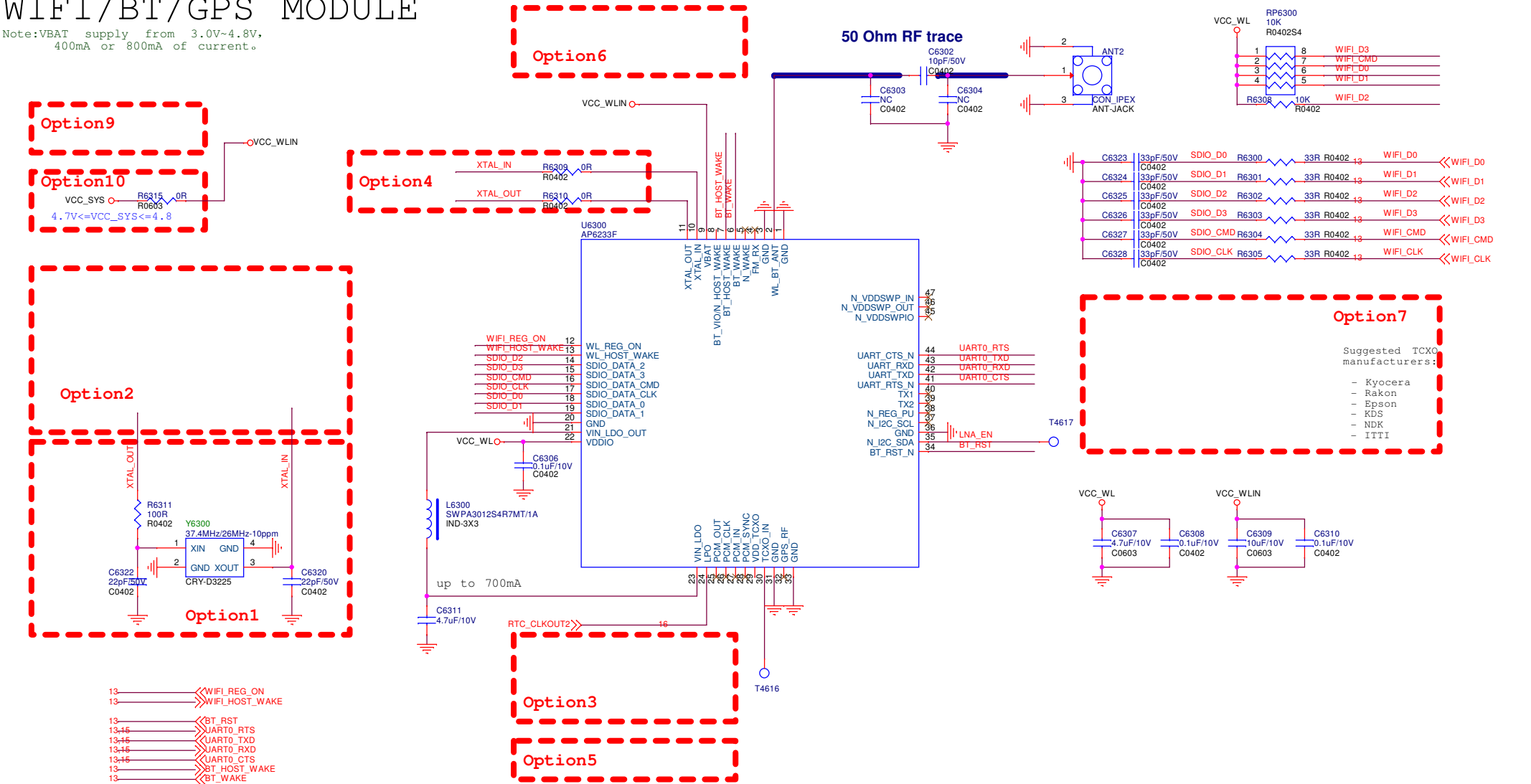


CIF Camera



WIFI/BT/GPS MODULE

Note:VBAT supply from 3.0V~4.8V, 400mA or 800mA of current.



	Option1	Option2	Option3	Option4	Option5	Option6	Option7	Option8	Option9	Option10	Y6300	
AP6212	YES	NO	NO	YES	NO	NO	NO	NO	YES	NO	26M	
XZ3538	YES	NO	NO	YES	NO	NO	NO	NO	YES	NO	26M	
AP6210	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	26M	
AP6335	YES	NO	NO	YES	YES	NO	NO	NO	YES	NO	37.4M	
AP6330	YES	NO	NO	YES	NO	NO	NO	NO	YES	NO	26M	
XZ3660	YES	NO	NO	YES	NO	NO	NO	NO	YES	NO	26M	
AP6476	NO	NO	YES	NO	NO	YES	YES	YES	YES	NO	NO	
AP6233F	YES	NO	NO	YES	NO	NO	NO	NO	NO	YES	37.4M	

Default:AP6233F
Note:
YES: 框要 贴
NO: 框不 贴