



Modify note

Version	Date	Author	Change Note	Approved
V00	20180428	WXZ	First edictor	

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Title: Modify note	
File: ROC-RK3399-PC-PLUS	REV: V1.2
Create Date: Monday, March 28, 2016	Page Num: 1
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RK3399 I2C MAP

Port	Pin name	Domain	Bus name	Pull-up voltage	Slave Device	Slave Addr (MS 7Bits)	Note	Slave Bus Capability
I2C0	GPIO1_B7/SPI3_RXD/I2C0_SDA GPIO1_C0/SPI3_TXD/I2C0_SCL	PMUIO2 VCC3V0_IO	I2C0_SDA_PMIC I2C0_SCL_PMIC	VCC3V0	TT8563	0xA2,0XA3	RTC	
					Rockchip RK808	0x1b	PMIC	
I2C1	GPIO4_A1/I2C1_SDA GPIO4_A2/I2C1_SCL	APIO5 VCC1V8_IO	I2C1_SDA_PCIE I2C1_SCL_PCIE	VCCA1V8_CODEC				
			I2C1_SDA_AUDIO I2C1_SCL_AUDIO	VCCA1V8_CODEC	ALC5640	0x38h	Audio codec	
			I2C1_SDA_CAM I2C1_SCL_CAM	VCCA1V8_CODEC	Omnivision OV13850	0x6c0,0x6D	MIPI Camera	
				VCCA1V8_CODEC	S5K4ECGX	0x78	DVP Camera	
	Other pin function	VCCA1V8_CODEC						
I2C2	GPIO2_A0/VOP_D0/CIF_D0/I2C2_SDA GPIO2_A1/VOP_D1/CIF_D1/I2C2_SCL	APIO2 VCC1V8_IO	Other pin function	VCC1V8_DVP				
I2C3	GPIO4_C0/I2C3_SDA/UART2B_RX GPIO4_C1/I2C3_SCL/UART2B_TX	APIO4 VCC3V0_IO	I2C3_SDA_HDMI I2C3_SCL_HDMI	VCC_3V0				
I2C4	GPIO1_B3/I2C4_SDA GPIO1_B4/I2C4_SCL	PMUIO2 VCC3V0_IO	I2C4_SDA_TYPEC I2C4_SCL_TYPEC	VCC_3V0	Fairchild FUSB302B	0x44,0x46	USB-TypeC Mux	100kHz,400KHz,1MHz fast mode+
			I2C4_SDA_TP I2C4_SCL_TP	VCC_3V0	Silead GSL3680	0x40	Touch panel	
			AT18_SDA AT18_SCL	VCC_3V0	AT18		Encryption	
			Other pin function	VCC_3V0				
I2C5	GPIO3_B2/MAC_RXER/I2C5_SDA GPIO3_B3/MAC_CLK/I2C5_SCL	APIO1 VCC3V3_LAN	Other pin function	VCC3V3_S3				
I2C6	GPIO2_B1/SPI2_RXD/CIF_HREF/I2C6_SDA GPIO2_B2/SPI2_TXD/CIF_CLKIN/I2C6_SCL	APIO2 VCC1V8_IO	Other pin function	VCC1V8_DVP				
I2C7	GPIO2_A7/VOP_D7/CIF_D7/I2C7_SDA GPIO2_B0/VOP_CLK/CIF_VSYNC/I2C7_SCL	APIO2 VCC1V8_IO	Other pin function					
I2C8	GPIO1_C4/I2C8_SDA GPIO1_C5/I2C8_SCL	PMUIO2 VCC3V0_IO	Other pin function					



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RK3399 Power Domain Map

Part Port	Domain	Pin name in datasheet	I/O type	Power supply	Power source
Part C	PMUIO1	pmuiol_gpio0ab	1.8V only	VCC1V8_PMUPLL	RK808 VLD03
Part E	PMUIO2	pmul830_gpio1abcd	1.8V (Default) 3.0V	VCC_1V5 VCC_3V0	RK808 VLD06 RK808 VLD08
Part I	APIO1	gmac_gpio3abc	3.3V only	VCC3V3_S3	RK808 VSW1
Part L	APIO2	bt656_gpio2ab	1.8V (Default) 3.0V	VCC1V8_DVP	RK808 VLD01
Part G	APIO3	wifi/bt_gpio2cd	1.8V only	VCC1V8_S3	RK808 Buck4
Part K	APIO4	gpio1830_gpio4cd	1.8V 3.0V (Default)	VCC_1V5 VCC3V0_IO	RK808 VLD06 RK808 VLD08
Part J	APIO5	audio_gpio3d_gpio4a	1.8V (Default) 3.0V	VCCA1V8_CODEC	RK808 VLD07
Part F	SDMMC0	sdmmc_gpio4b	1.8V 3.0V (Default)	VCC_SDIO	RK808 VLD04



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Title: Power Domain Map

File: ROC-RK3399-PC-PLUS

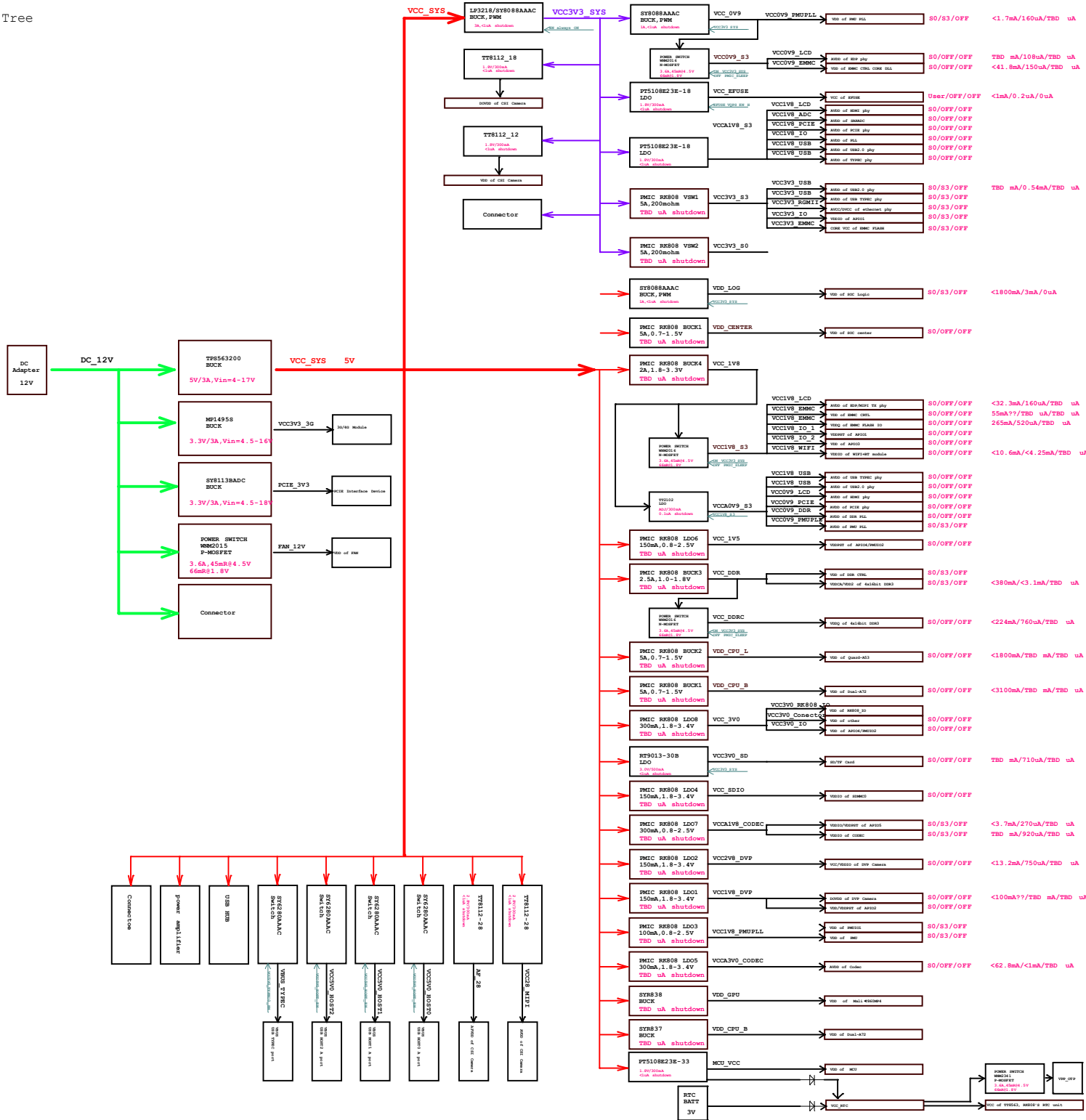
REV: V1.2

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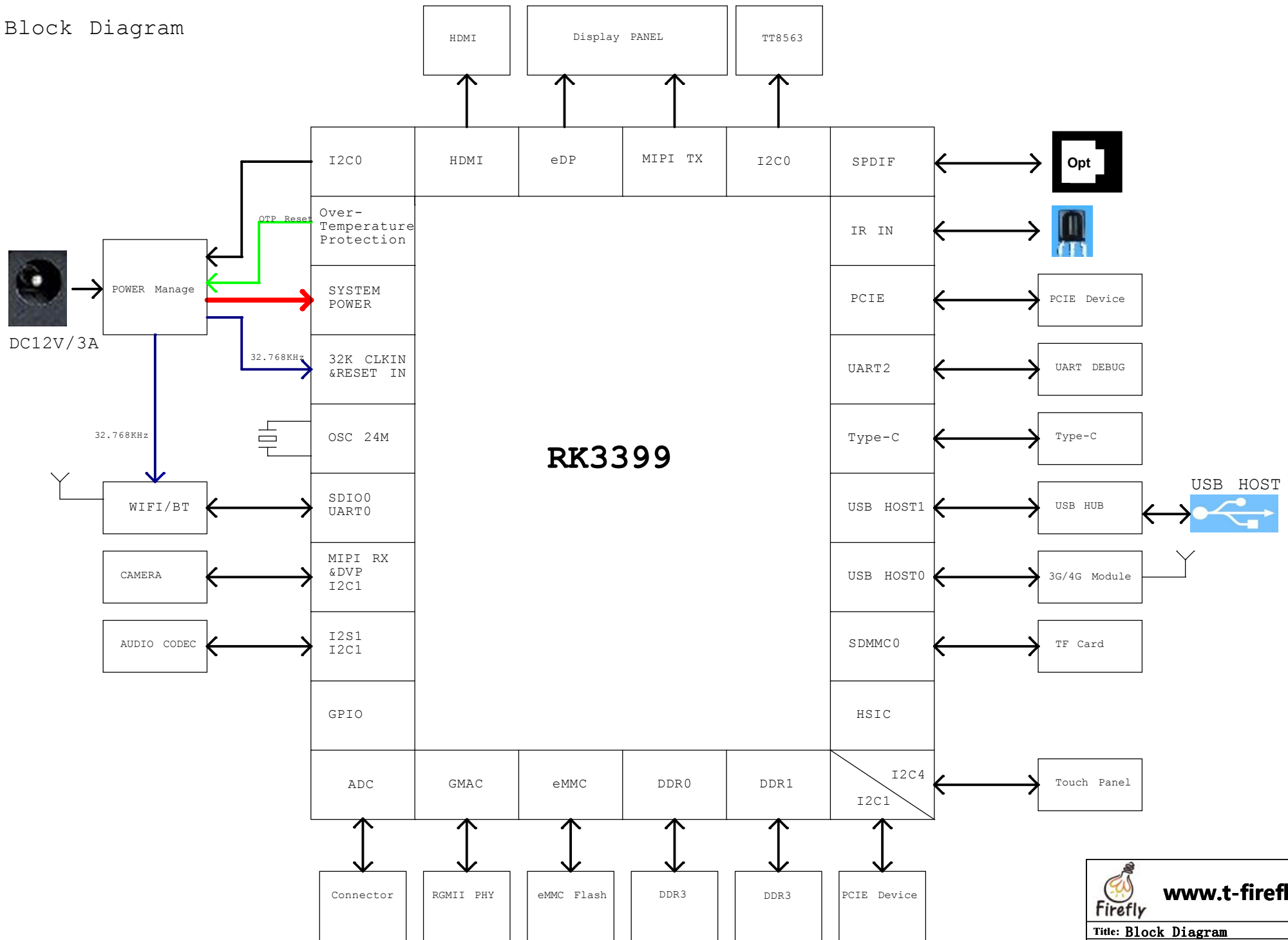
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Modify Date: Monday, August 09, 2021

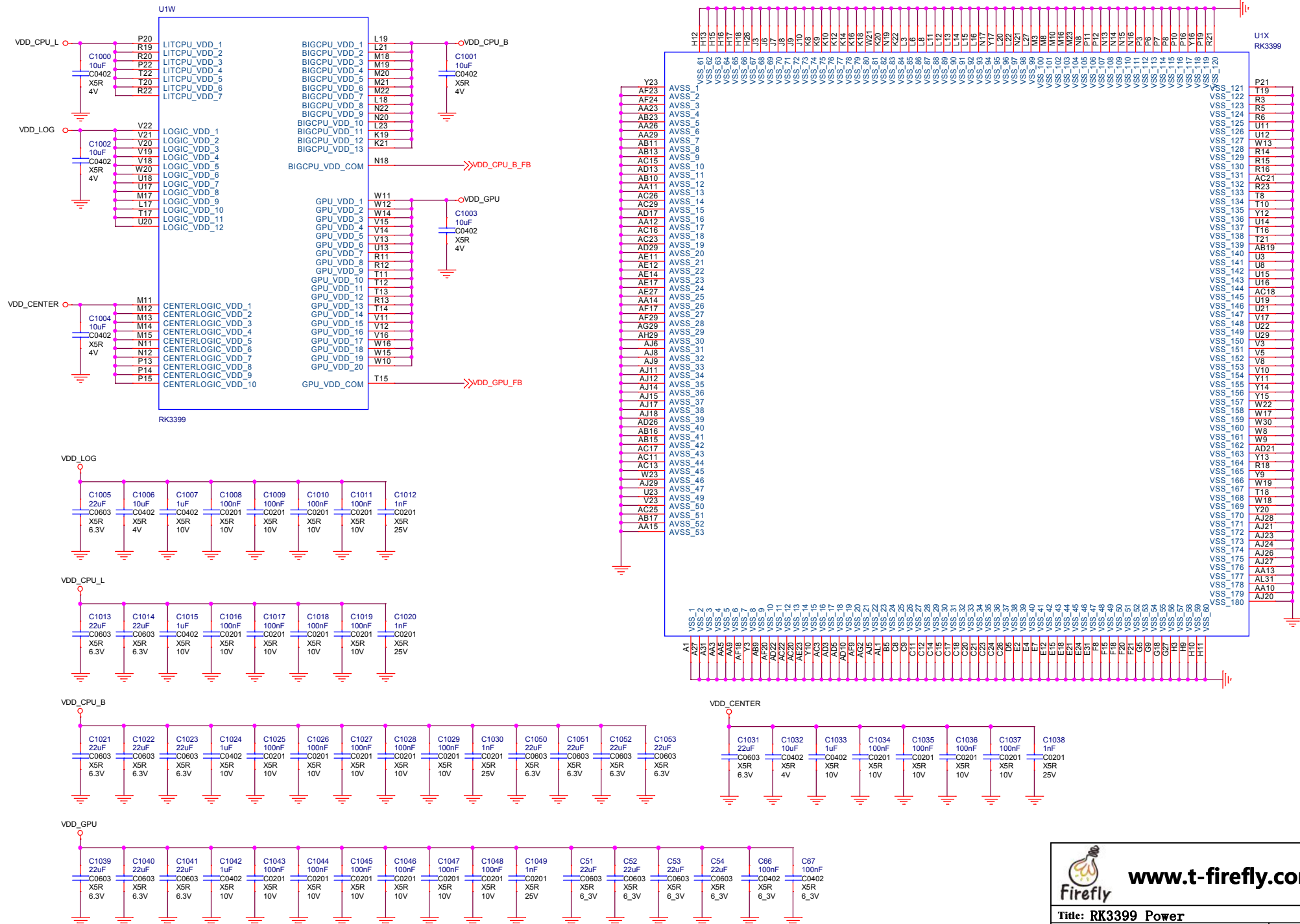
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Block Diagram



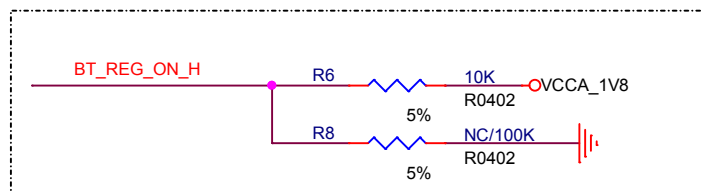
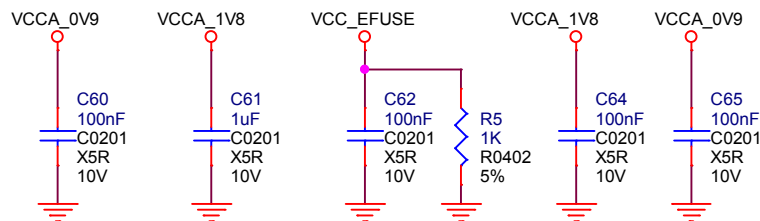
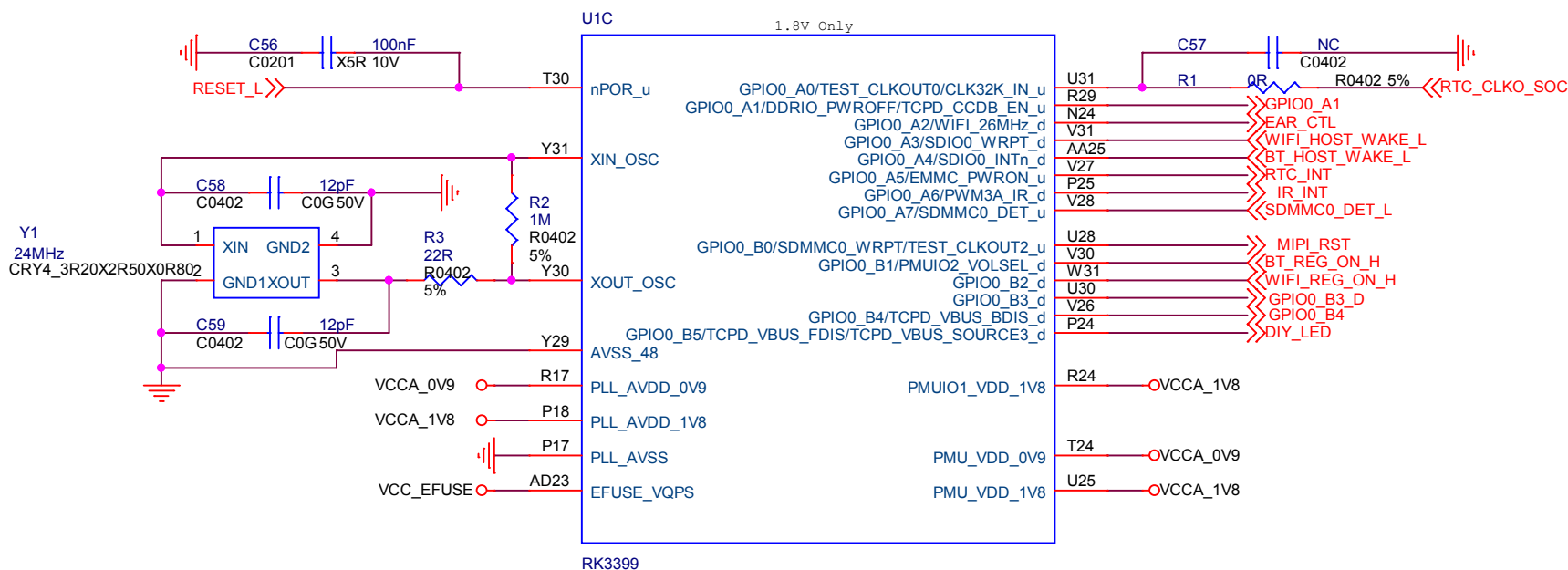
RK3399 Power





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RK3399 PMU Controller



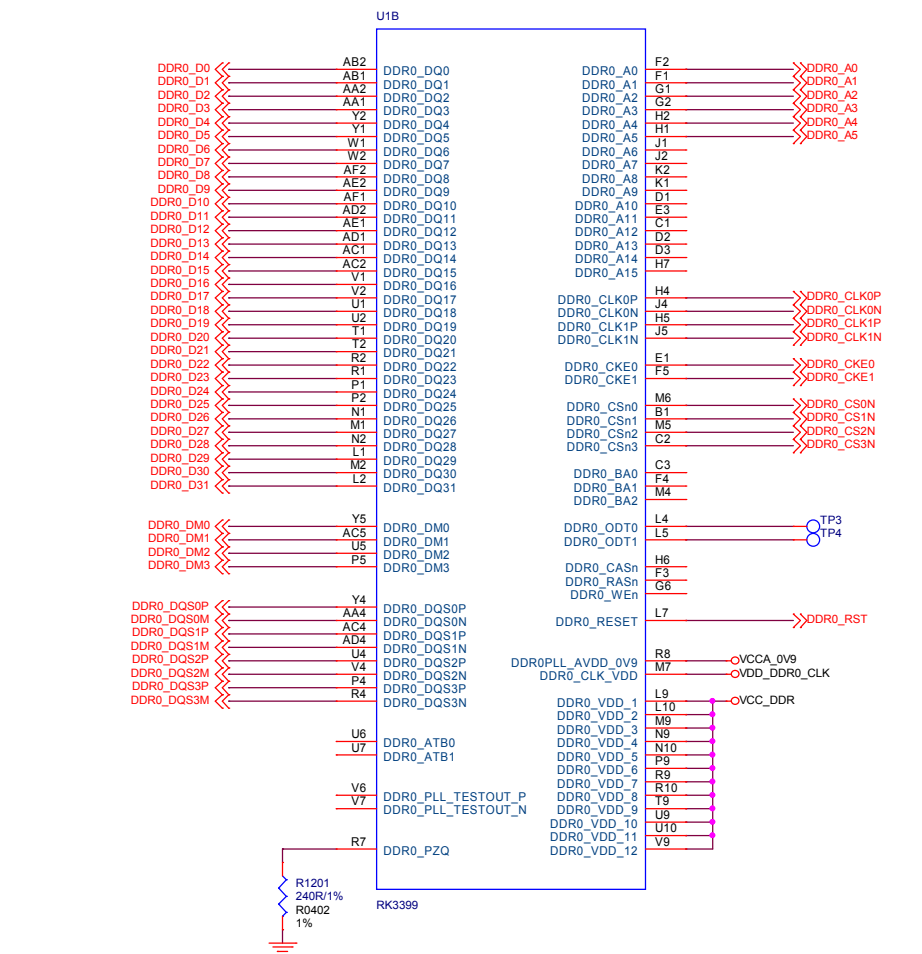
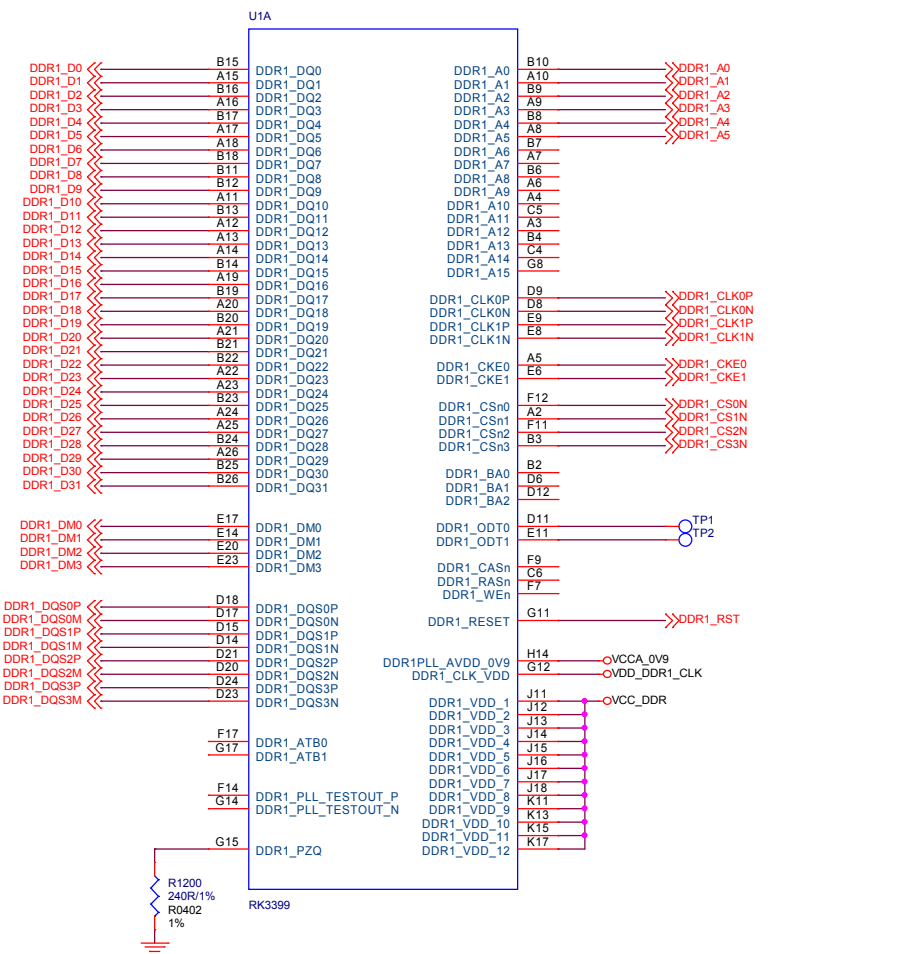
Note:
GPIO0 B1/PMUIO2 VOLSEL defined as a set pin for PMUIO2 part voltage domain after power-on reset. It is pull-down for 1.8V or pull-up for 3.0V, and later changed to output mode by software



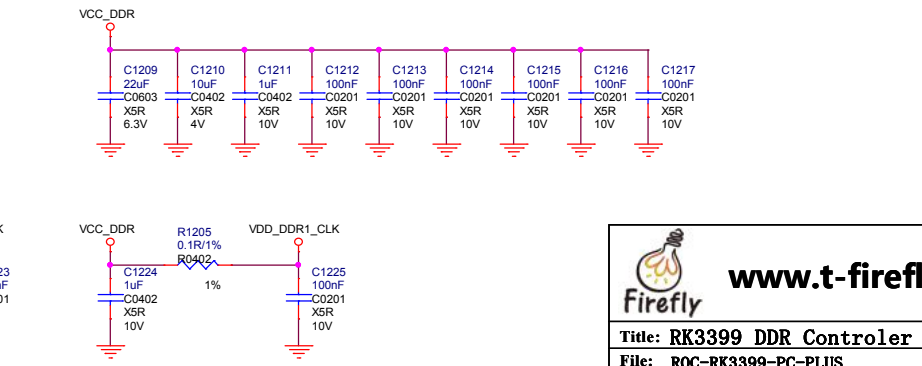
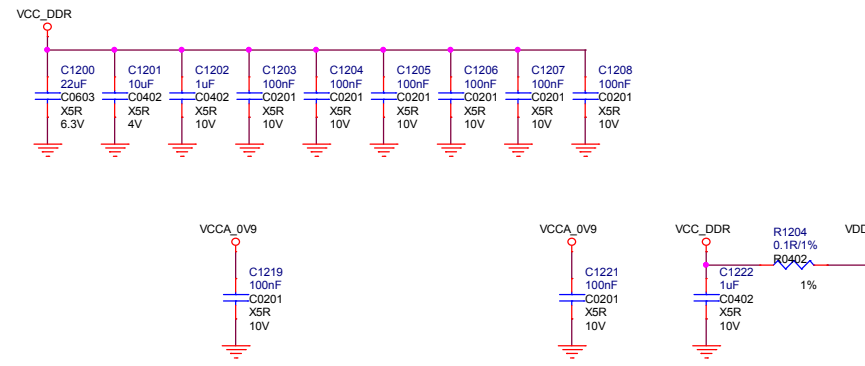
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Title: RK3399 PMU Controller	
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RK3399 DDR Controller



DDR FILTER

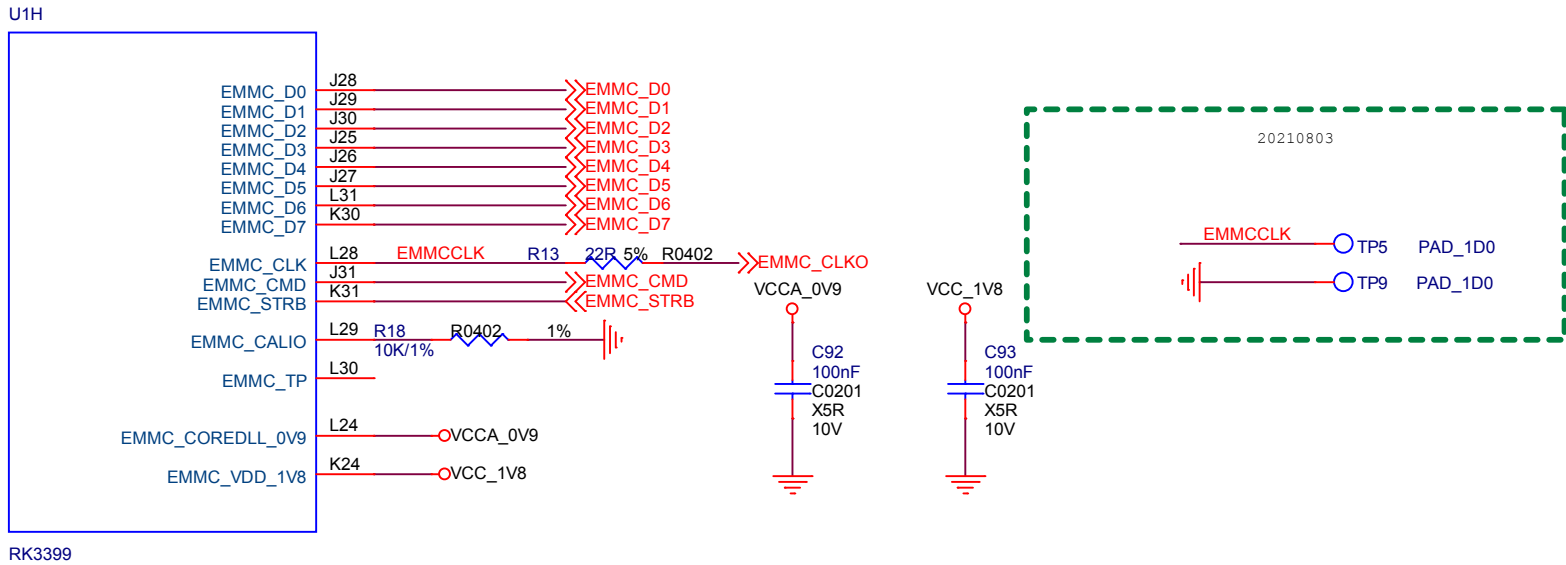




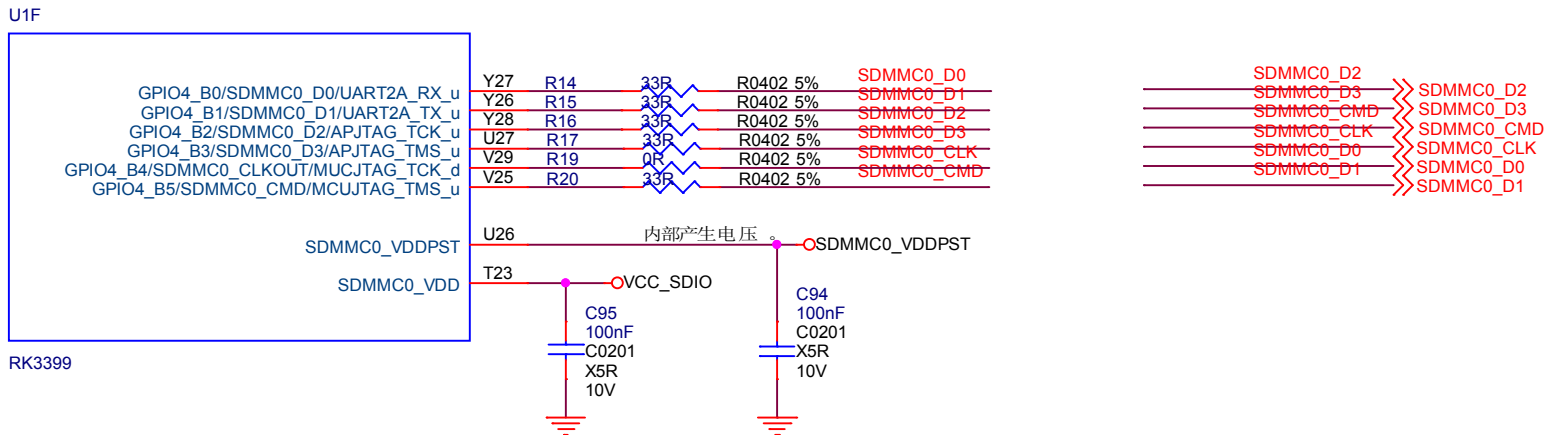
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Title: RK3399 DDR Controller		REV: V1.2
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eMMC



SDIO0

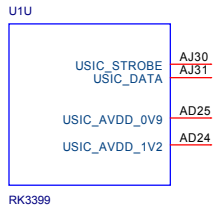




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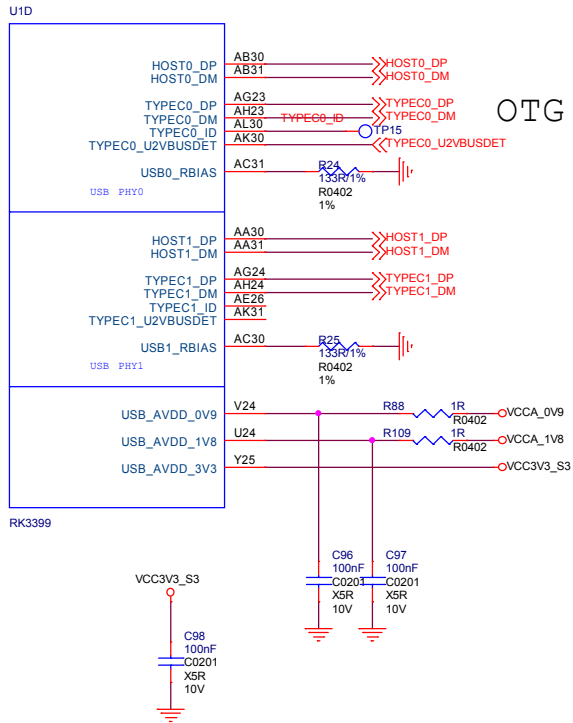
Title: RK3399 Flash/SDMMC Controller	
File: ROC-RK3399-PC-PLUS	REV: V1.2
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RK3399 USIC Controller

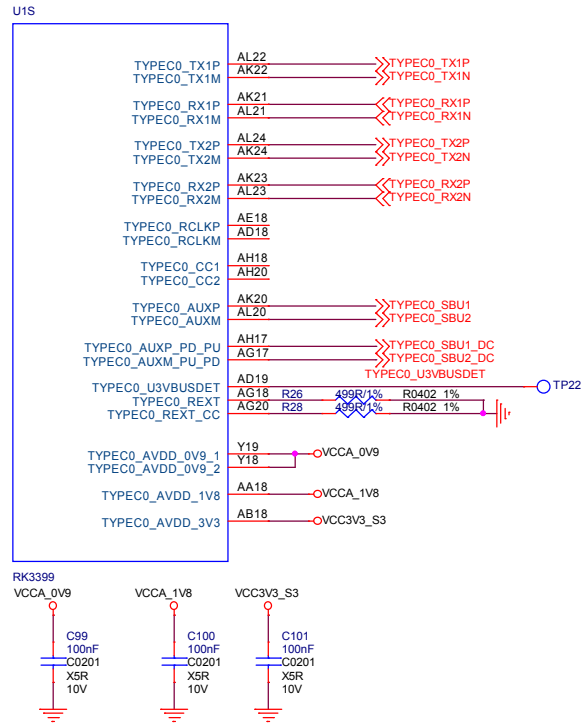


RK3399

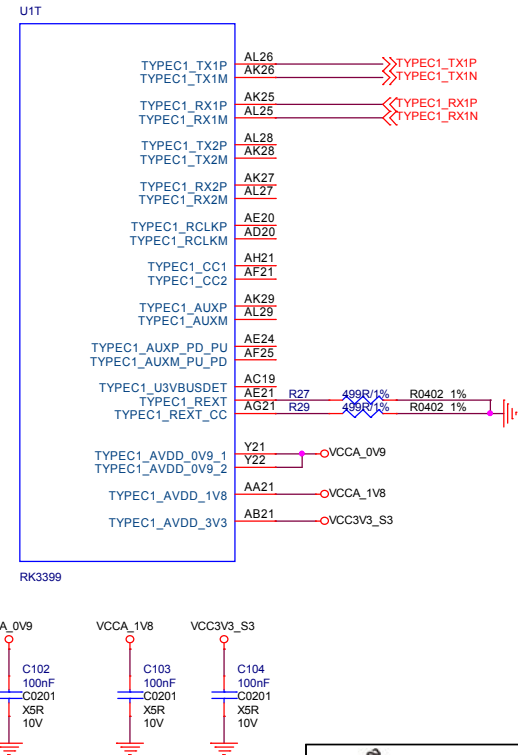
RK3399 USB Controller



RK3399



RK3399



RK3399

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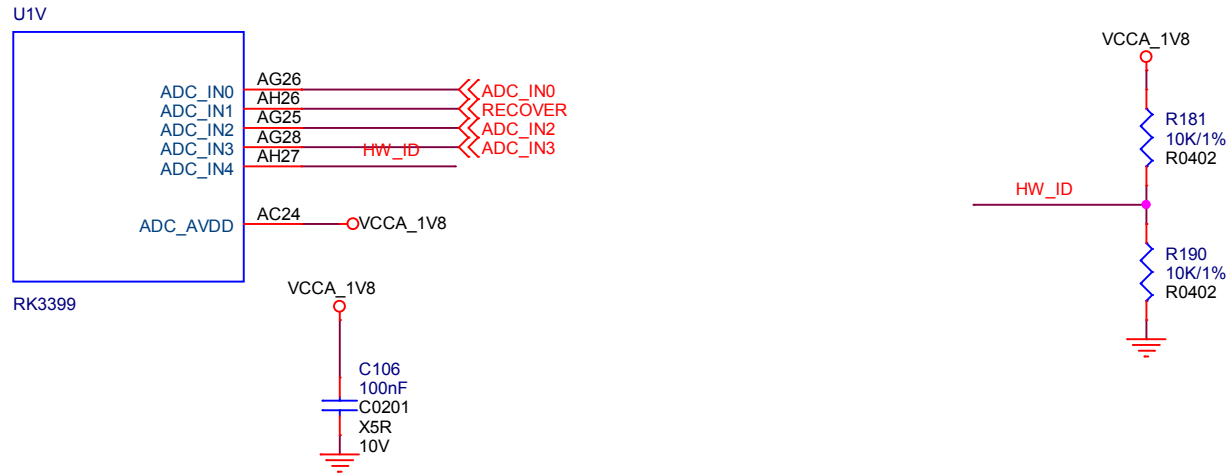
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File: ROC-RK3399-PC-PLUS REV: V1.2

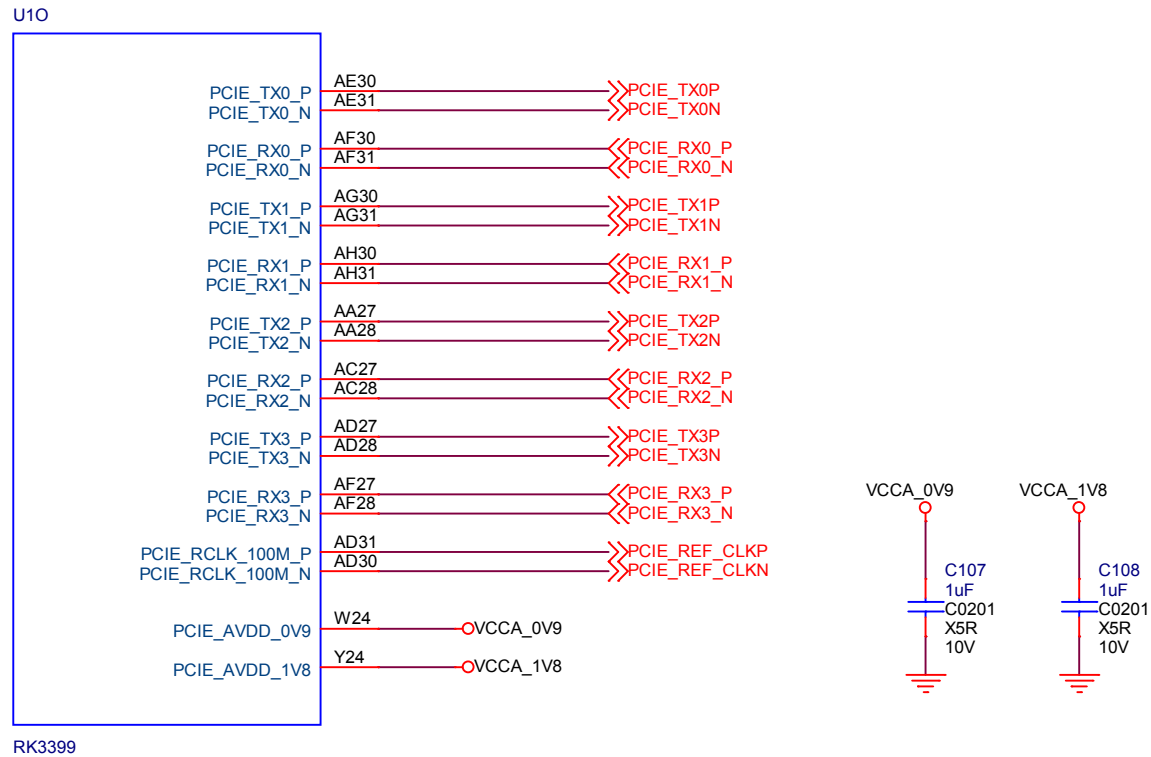

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RK3399 SARADC



RK3399 PCIE

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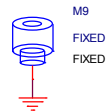
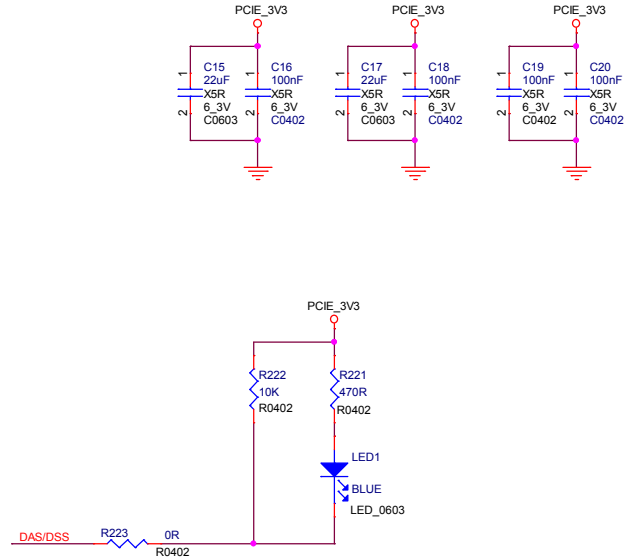
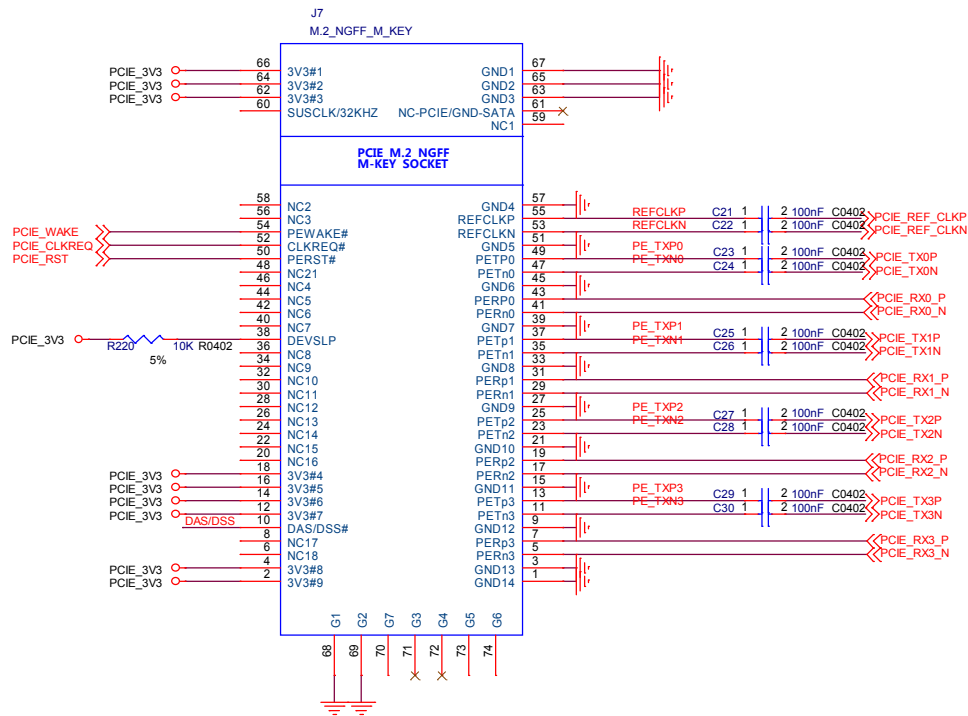
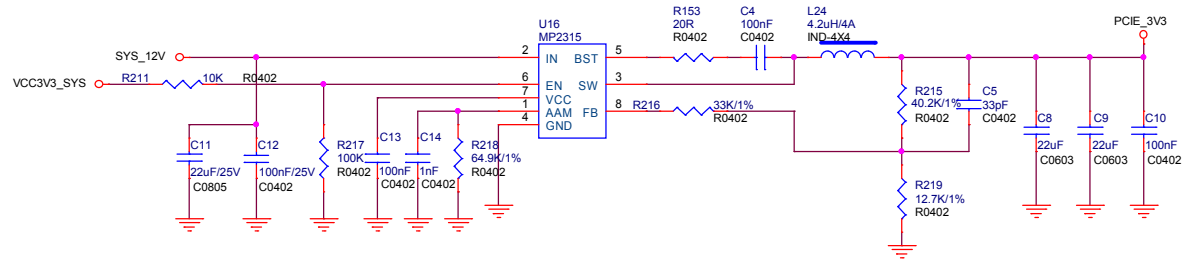
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File: ROC-RK3399-PC-PLUS REV: V1.2

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M2.NGFF

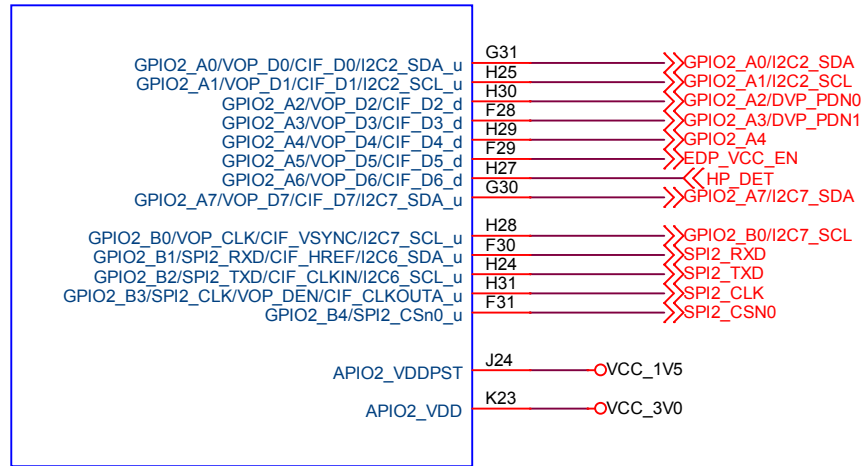



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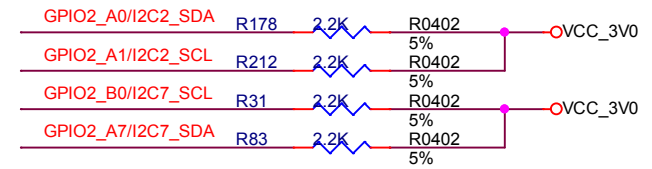
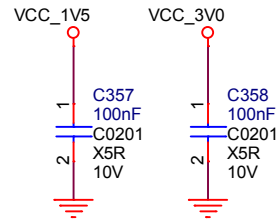
Title: 3G-4G-MODULE/M2.NGFF-PCIE	
File: MB-JD4-RK3399&3399PRO	REV: V0.0
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RK3399 DVP

U1L



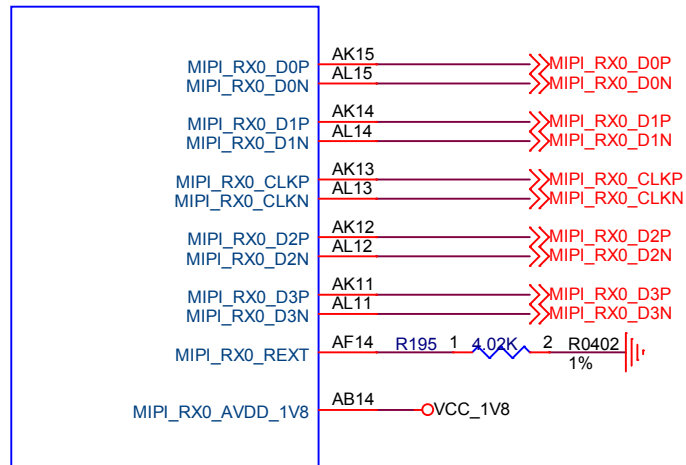
RK3399



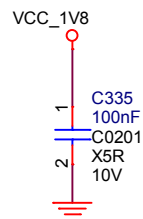
func1	func2	func3
GPIO2 A0/CIF D0		I2C2 SDA
GPIO2 A1/CIF D1		I2C2 SCL
GPIO2 A7/CIF D7		I2C7 SDA
GPIO2 B0/CIF VSYNC		I2C7 SCL
GPIO2 B1/CIF HREF	SPI2 RXD	I2C6 SDA
GPIO2 B2/CIF CLKI	SPI2 TXD	I2C6 SCL
GPIO2 B3/CIF CLKO	SPI2 CLK	
GPIO2 B4/DVP PDN0 H	SPI2 CSN	

RK3399 CSI

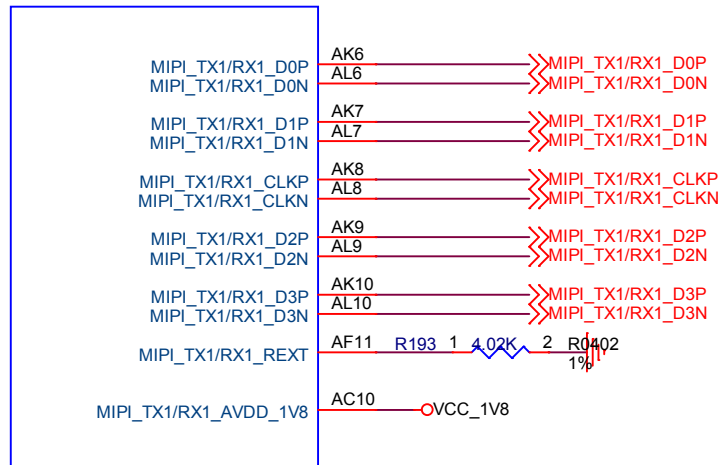
U1R



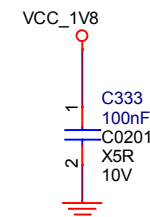
RK3399




U1P



RK3399

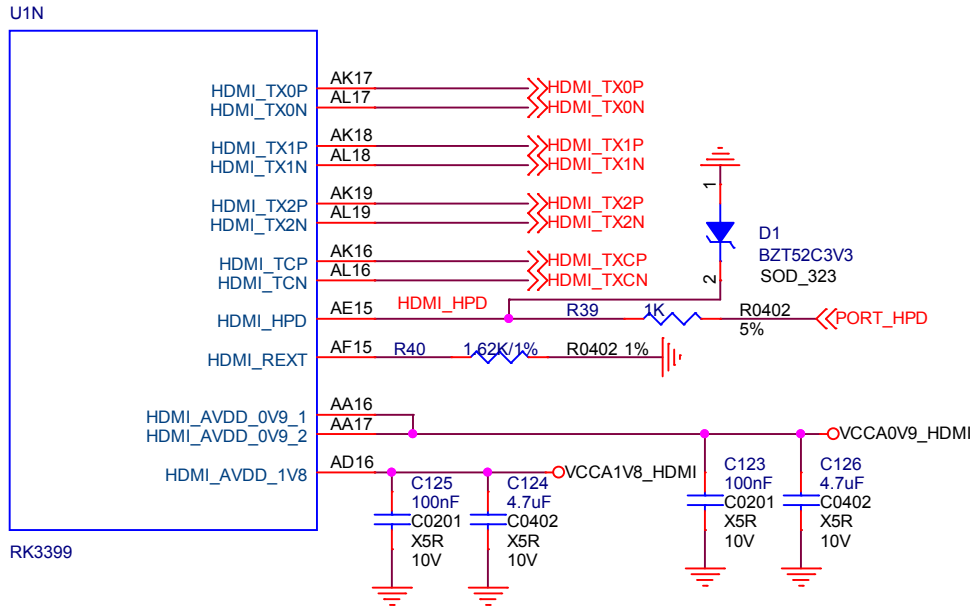




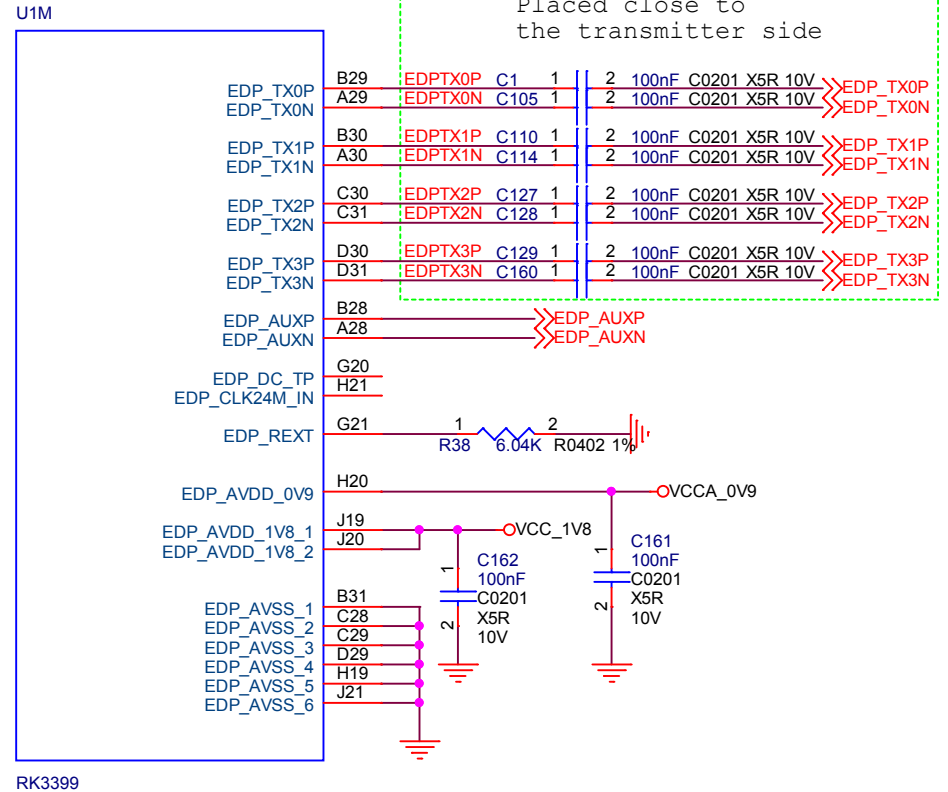
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Title: RK3399 Camera Interface		REV: V1.2
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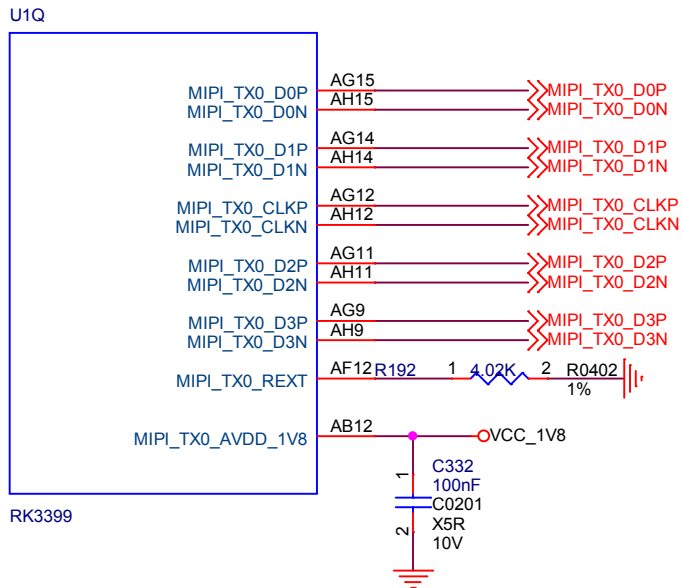
HDMI Interface



eDP Interface



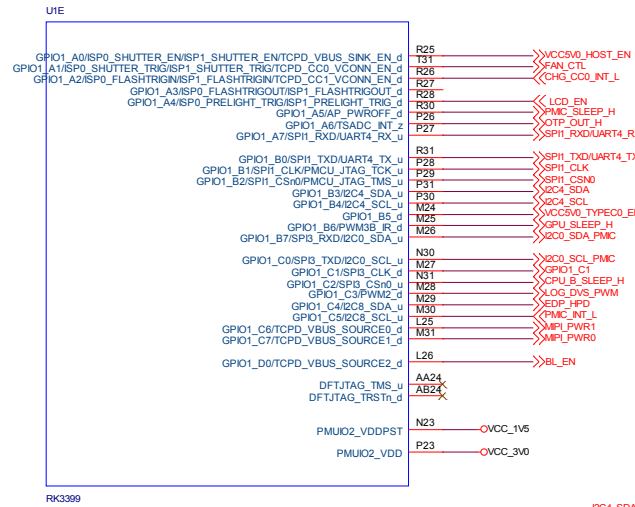
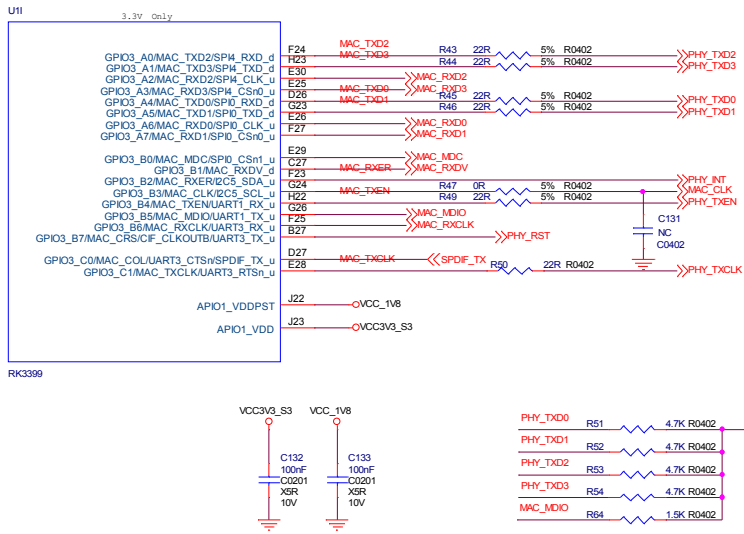
MIPI Interface



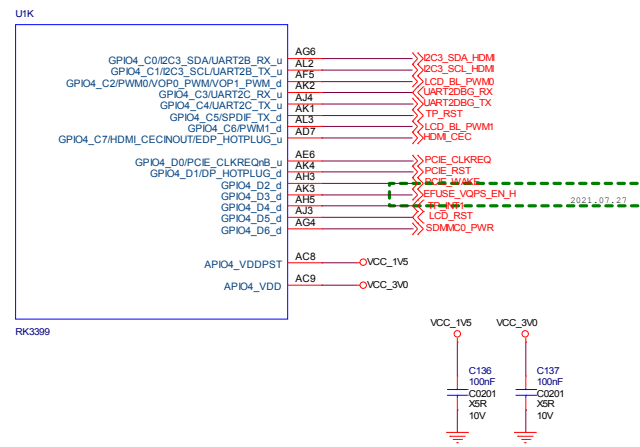
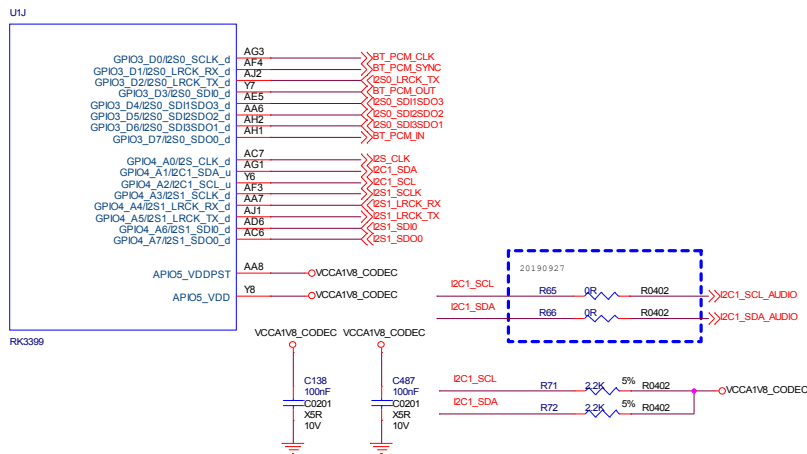
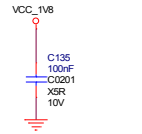
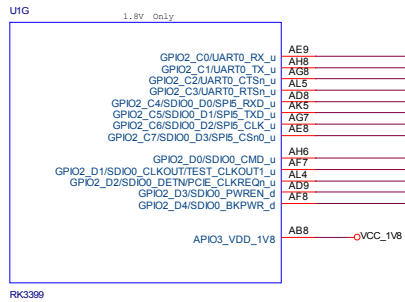
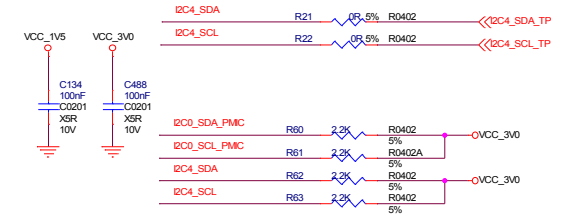


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Title: RK3399 Display Interface	
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1.8V Only	VDDPST=VDDIO=1.8V
3.3V Only	VDDPST=1.8V, VDDIO=3.3V
other	3.0V mode: VDDPST=1.5V, VDDIO=3.0V 1.8V mode: VDDPST=1.8V, VDDIO=1.8V



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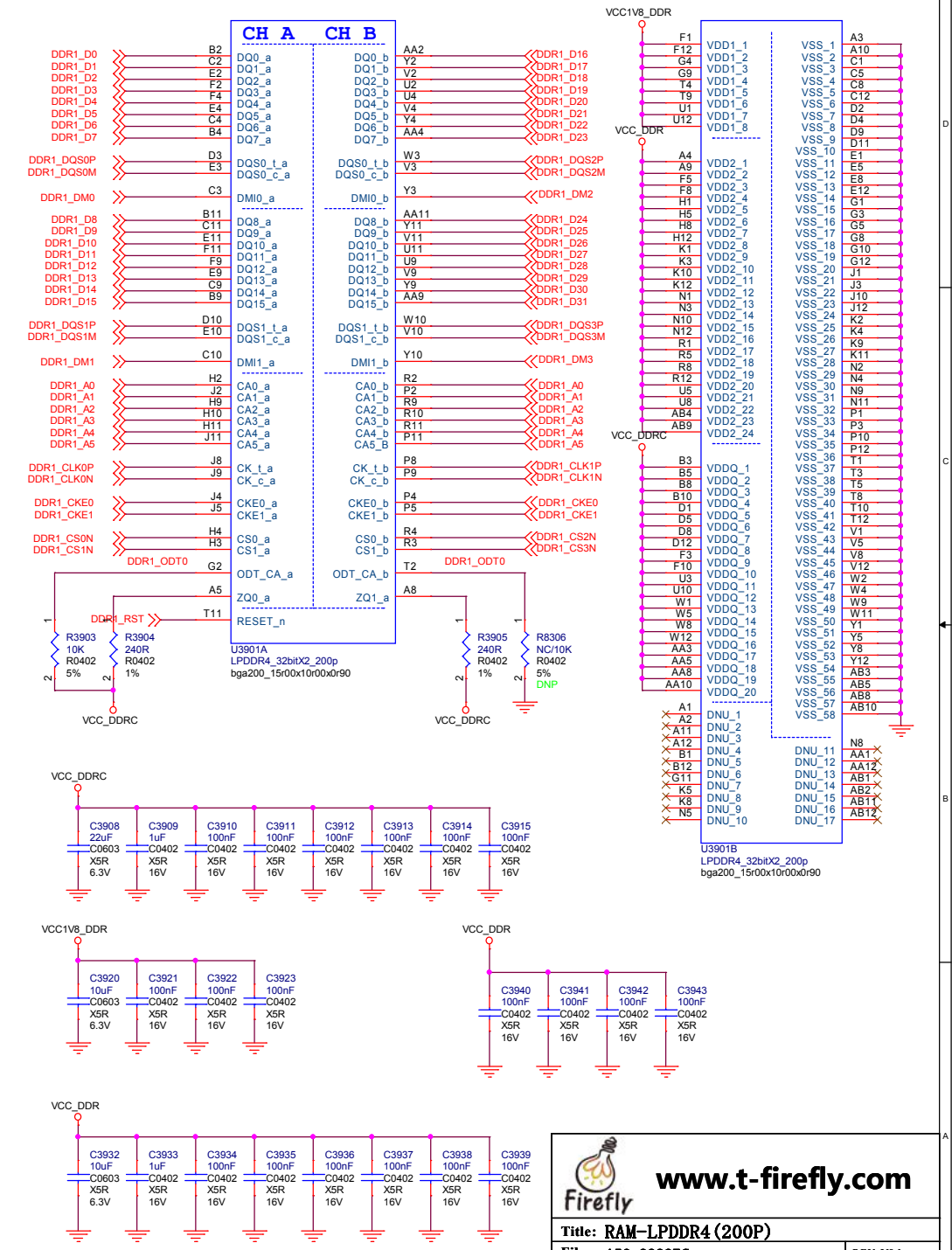
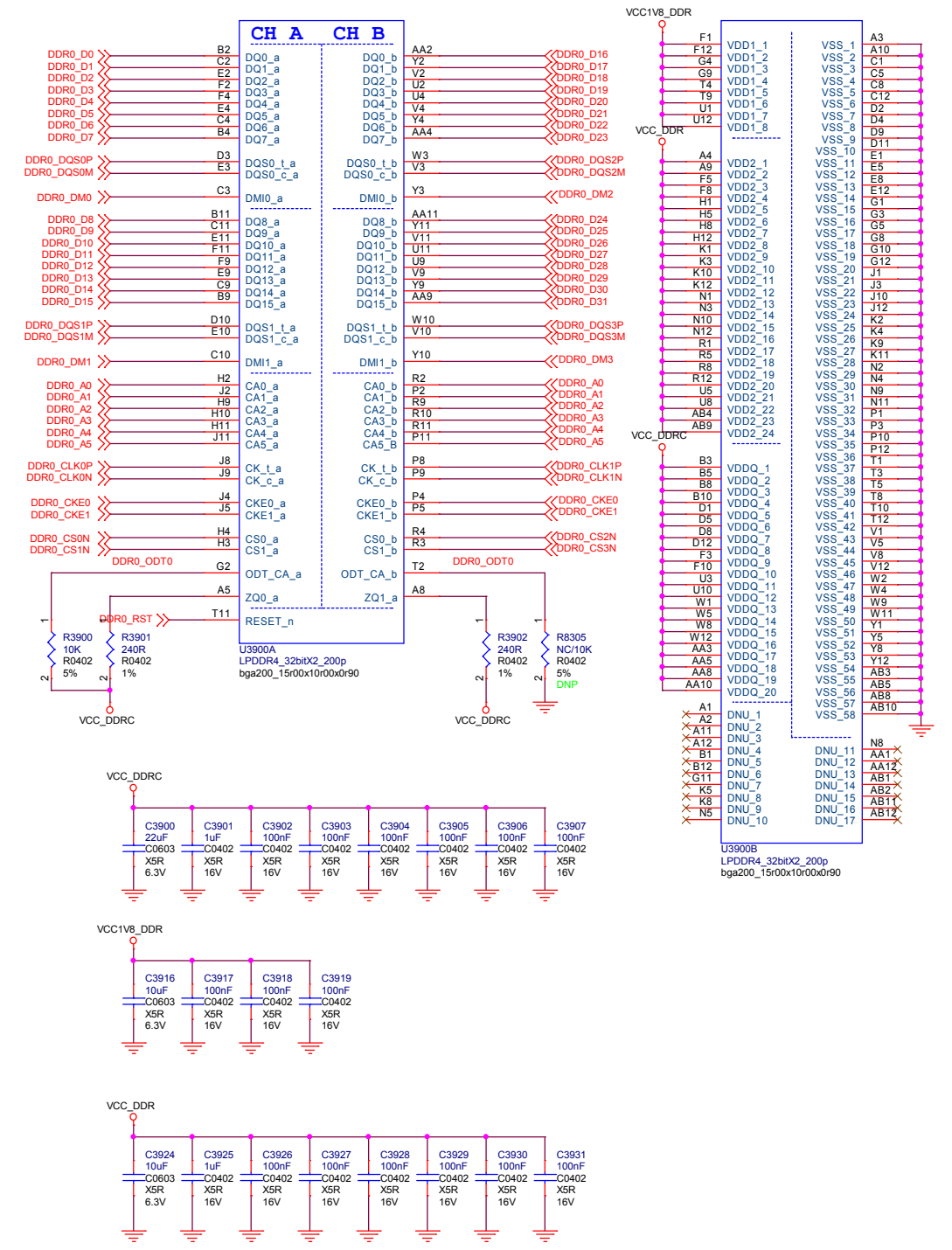
Title: RK3399 GPIO


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Title: RAM-LPDDR4 (200P)

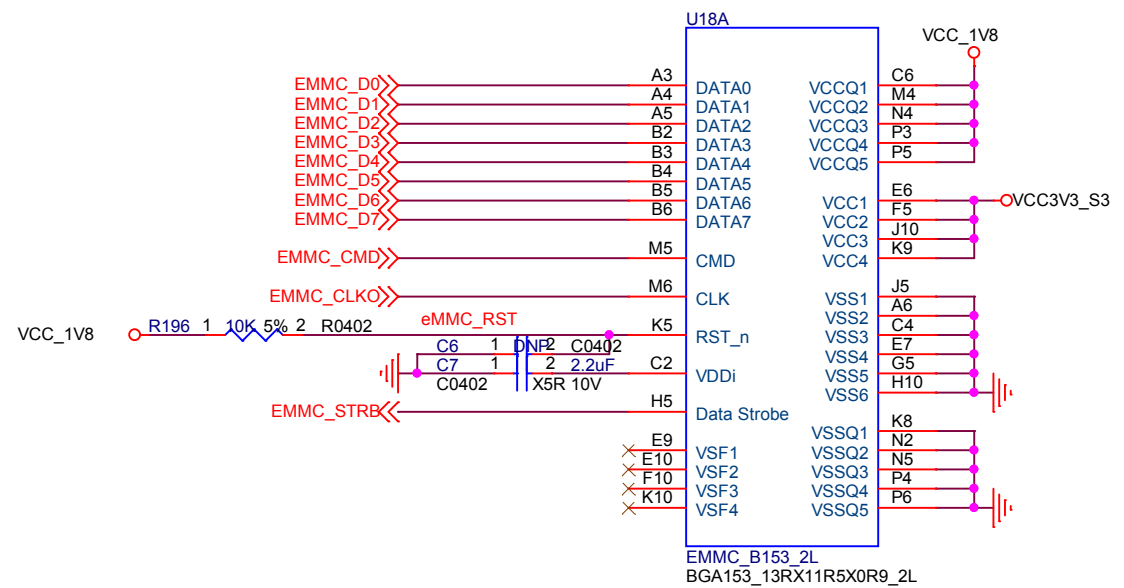
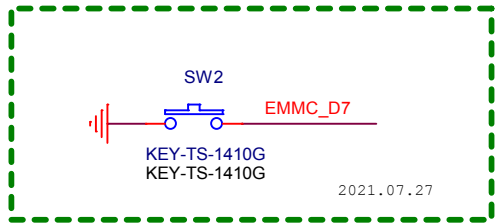
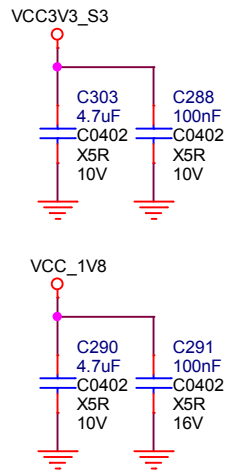
File: A10-3399EC

REV: V0.1

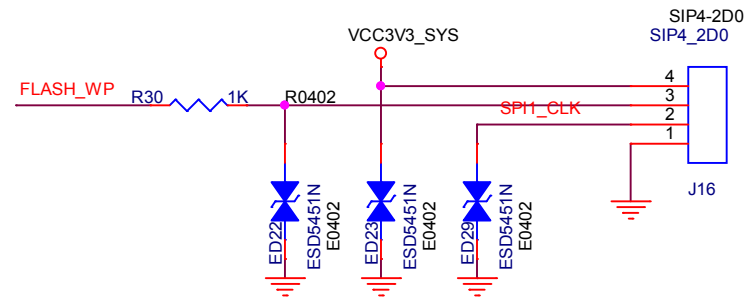
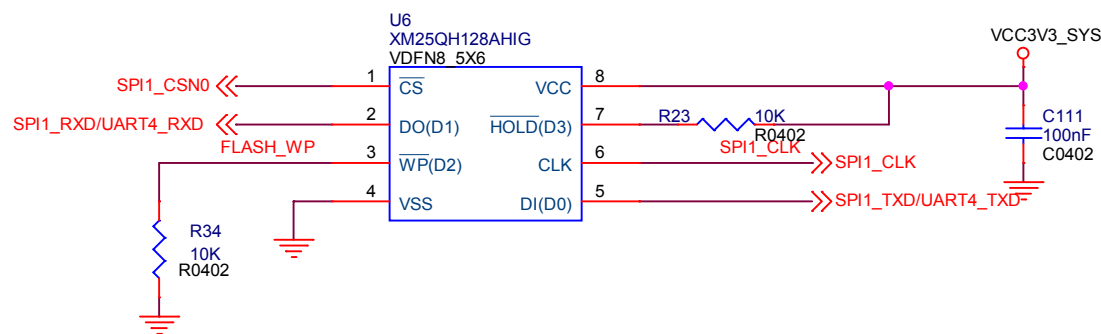
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eMMC FLASH

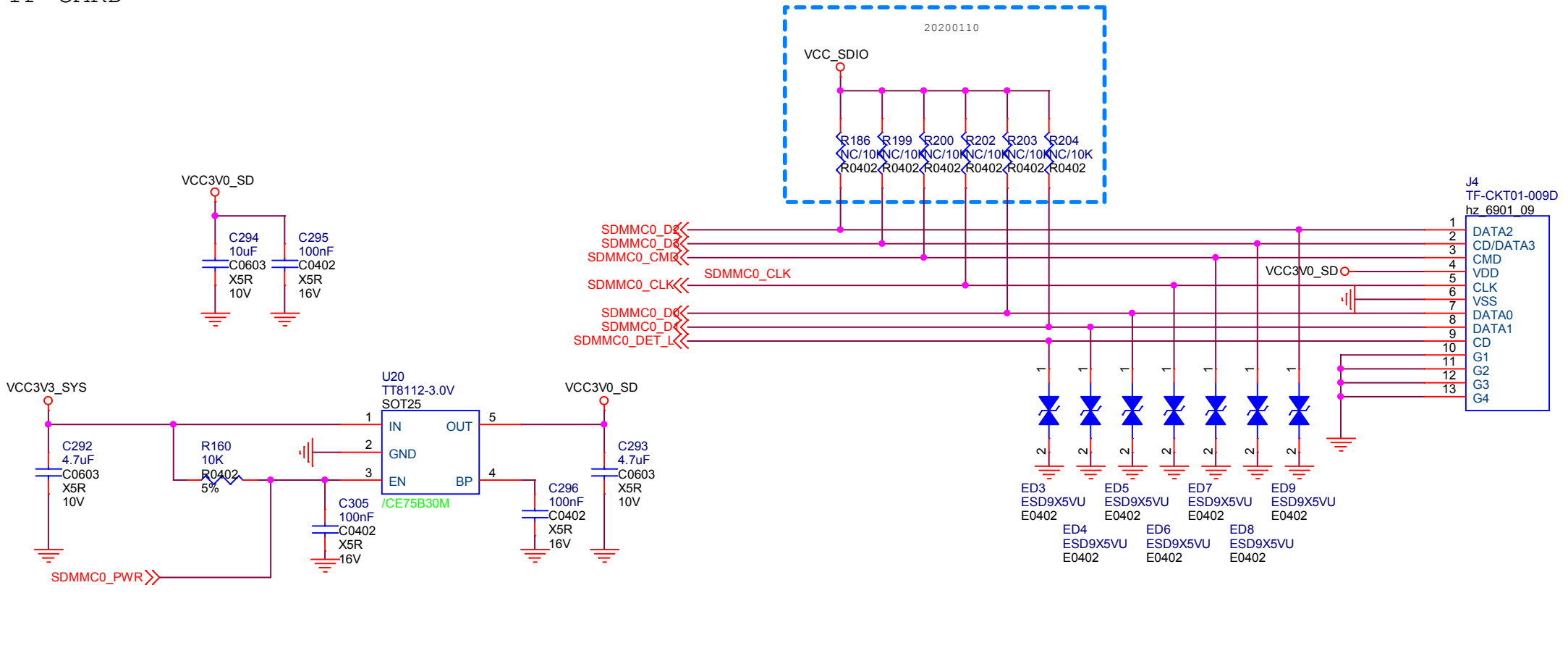


SPI FLASH

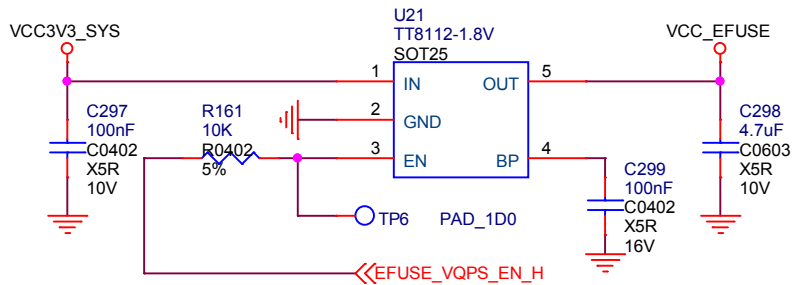


Title: Memory-eMMC/SPI FLASH	
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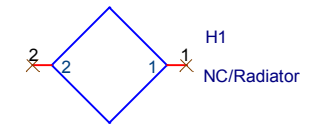
TF CARD



EFUSE

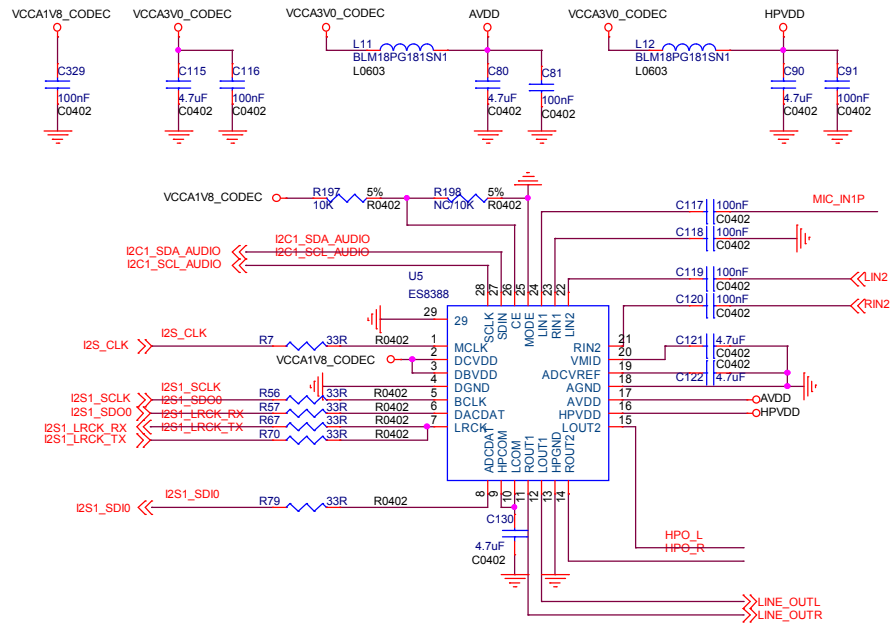


Radiator

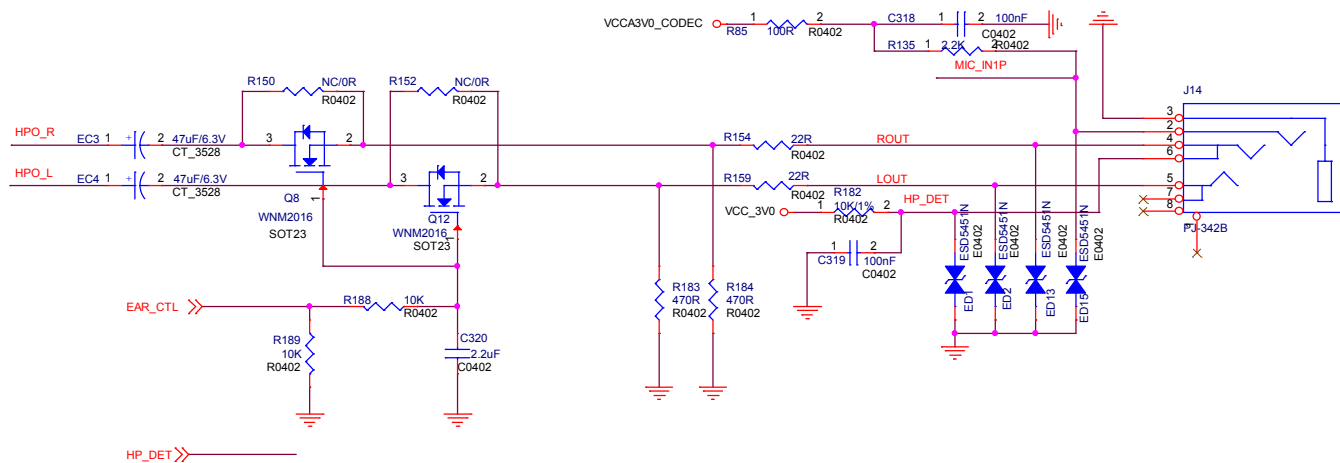



Title: TF Card/EFUSE		REV: V1.2
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CODEC



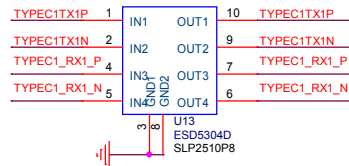
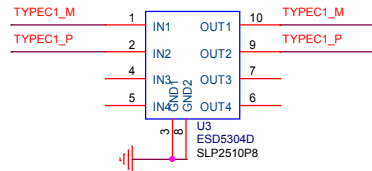
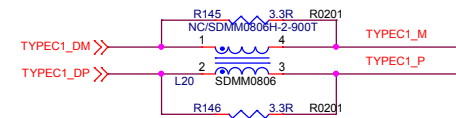
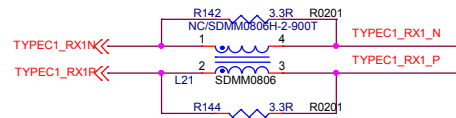
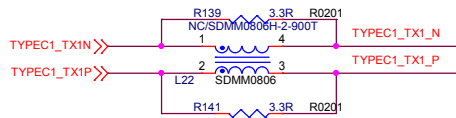
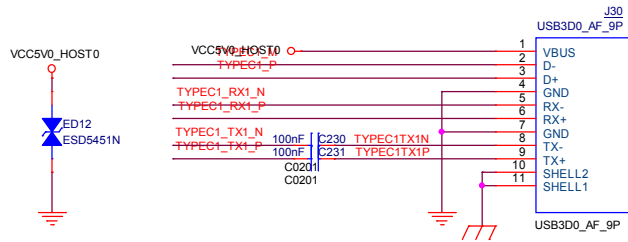
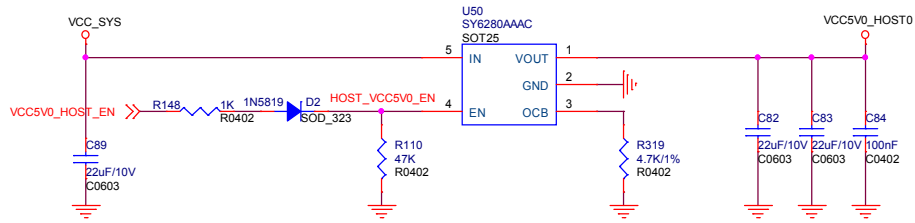
EARPHONE



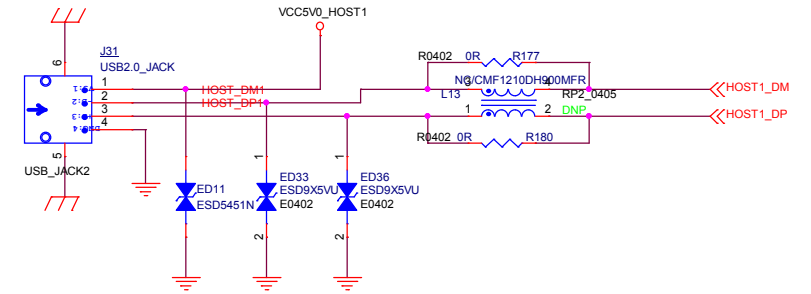
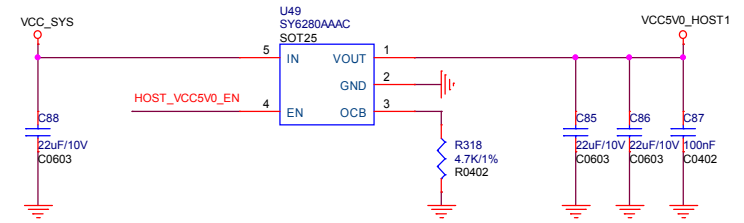

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Title: Audio Codec-ES8388
File: ROC-RK3399-PC-PLUS REV: V1.2
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USB HOST0



USB HOST1

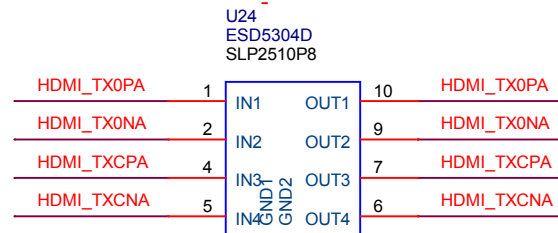
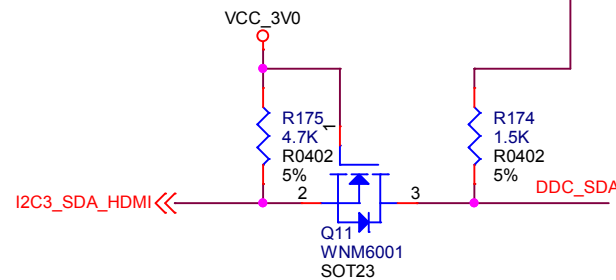
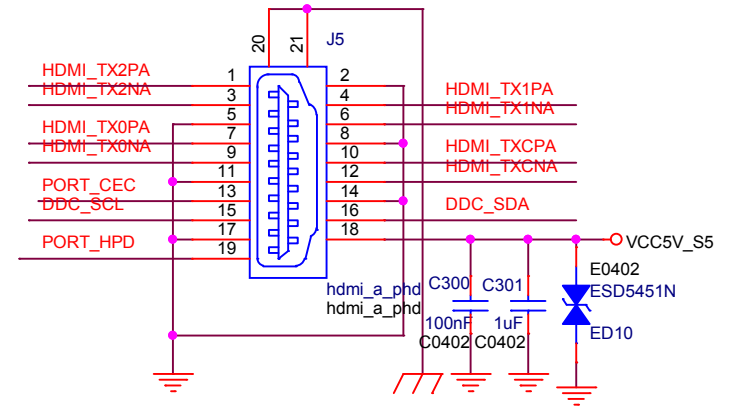
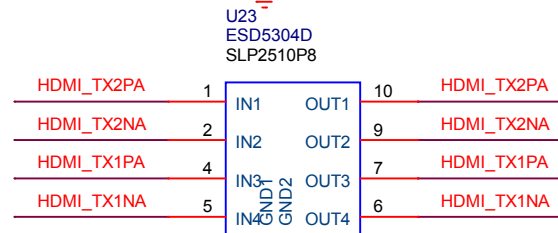
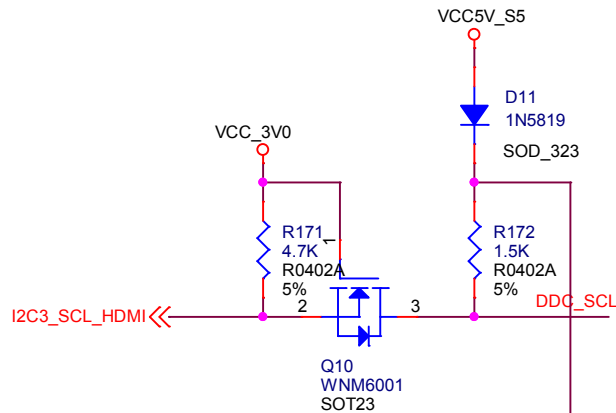
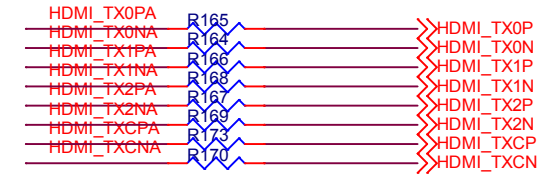
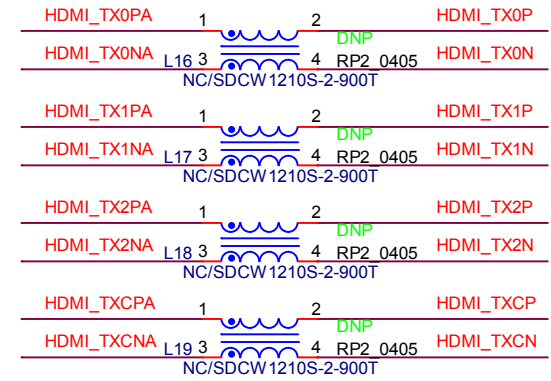
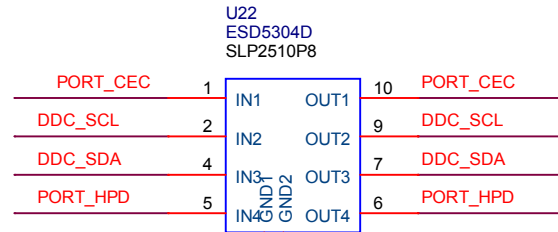
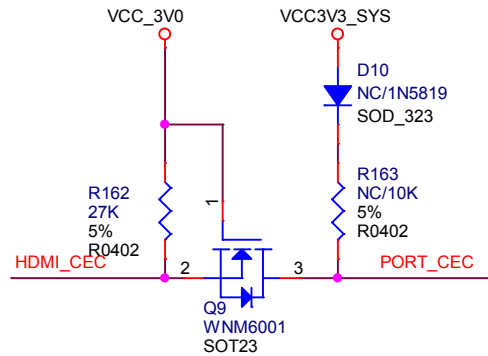



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Title: USB2.0 Port
File: ROC-RK3399-PC-PLUS
Rev: V1.2

Create Date: Friday, April 29, 2016	Page Num: 22
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HDMI Port

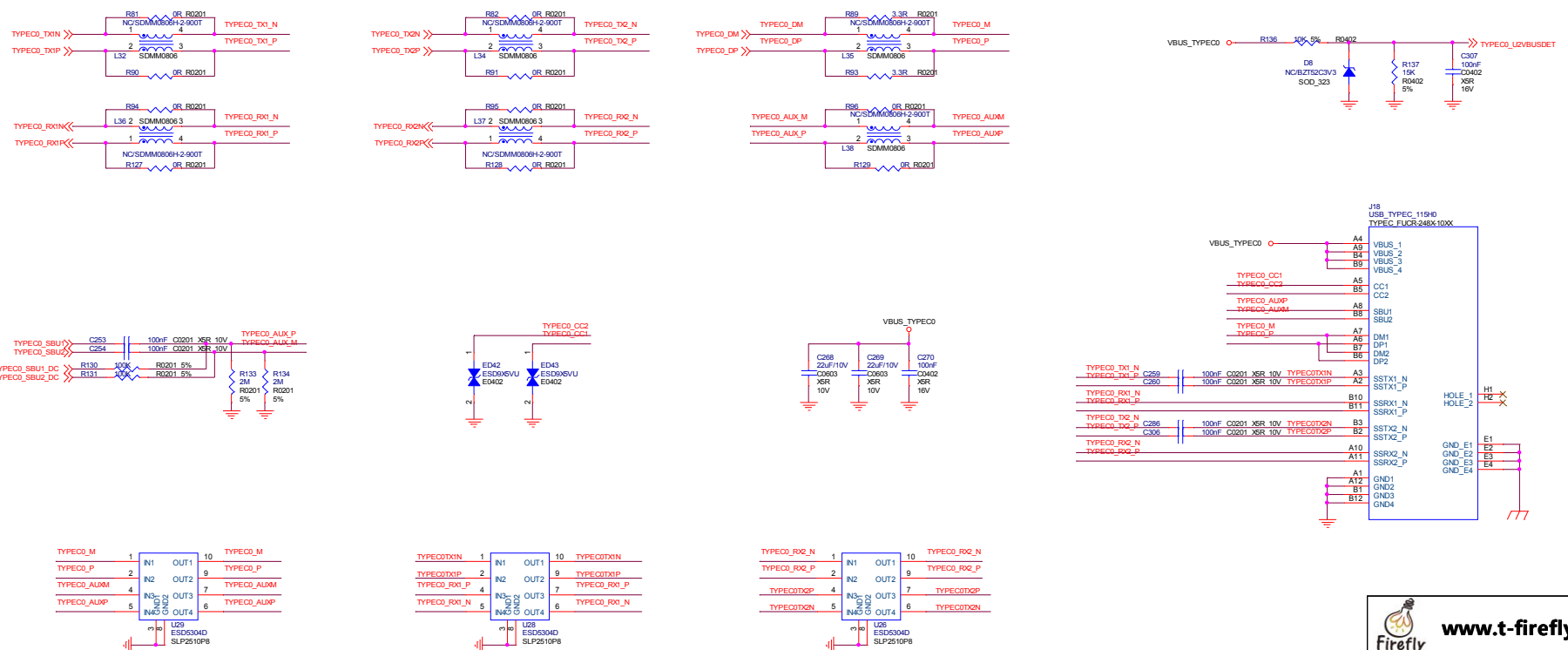


Title: HDMI Port	
File: ROC-RK3399-PC-PLUS	REV: V1.2
Create Date: Monday, March 28, 2016	Page Num: 23
Modify Date: Monday, August 09, 2021	Page Total: 30

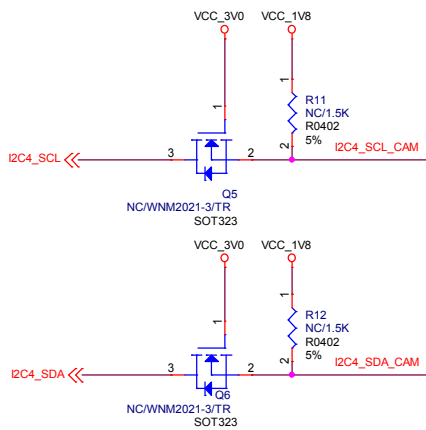
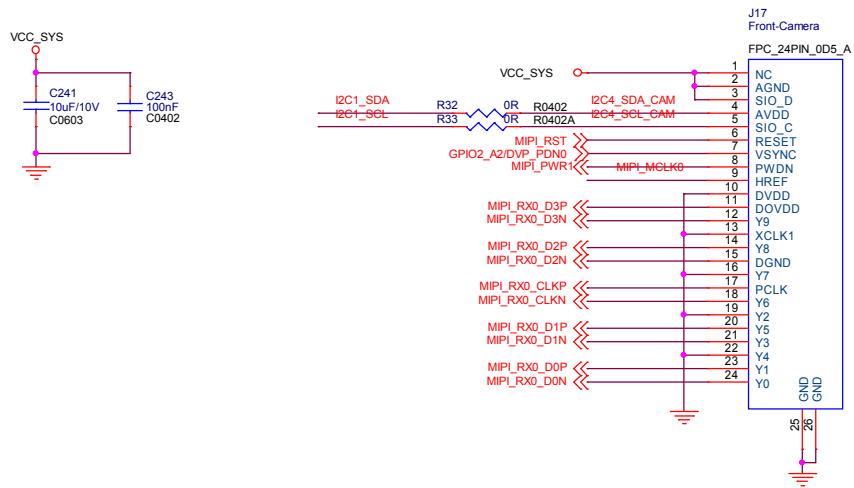
TYPECO HOST POWER



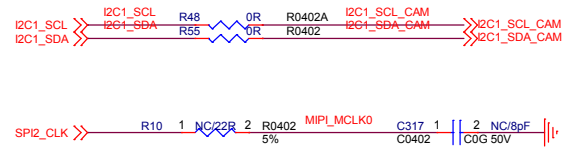
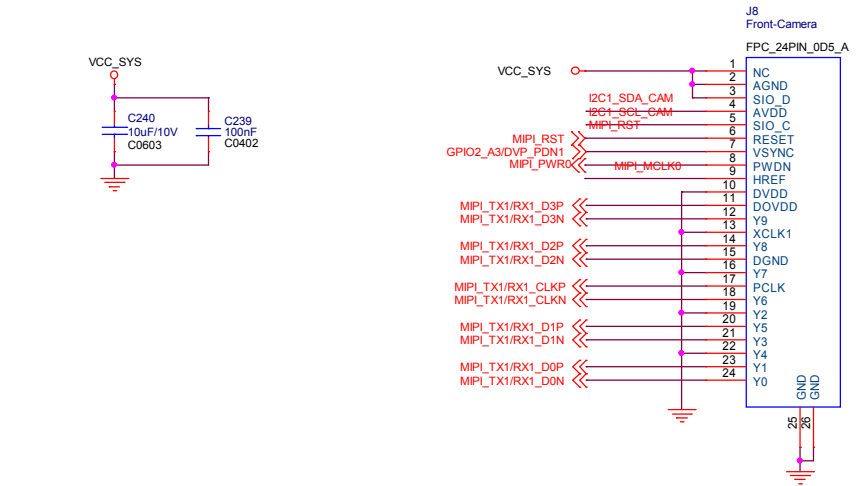
TYPECO



MIPI CAMERA 1



MIPI CAMERA 0



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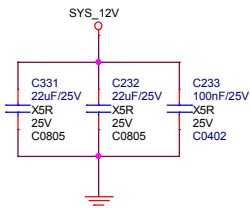
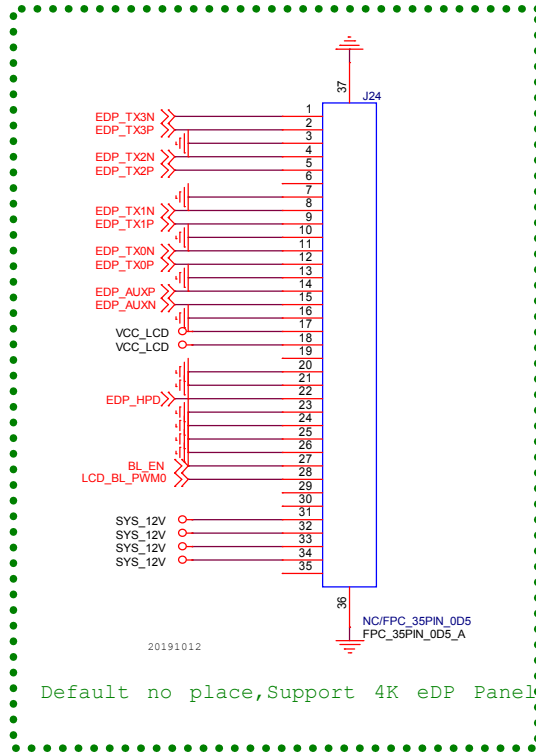
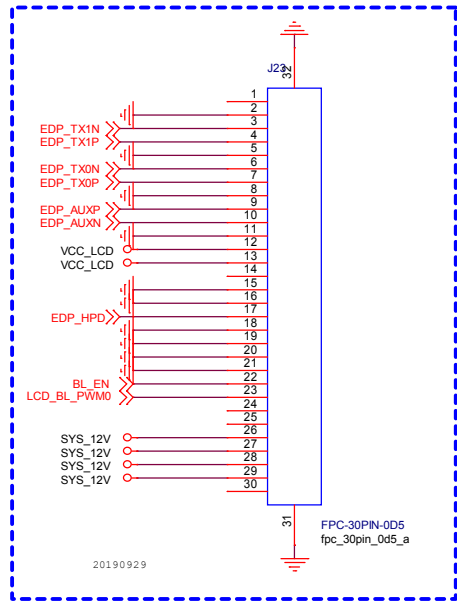
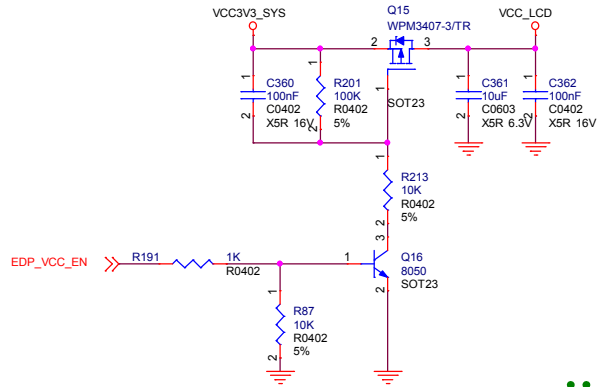
Title: Camera-MIPI CSI

File: ROC-RK3399-PC-PLUS REV: V1.2

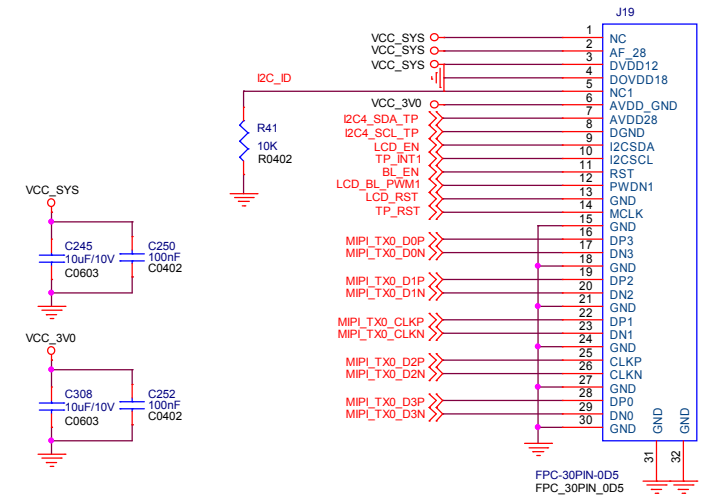
Create Date: Thursday, April 19, 2018 Page Num: 25


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EDP Display Interface



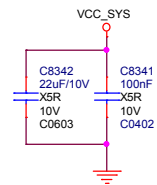
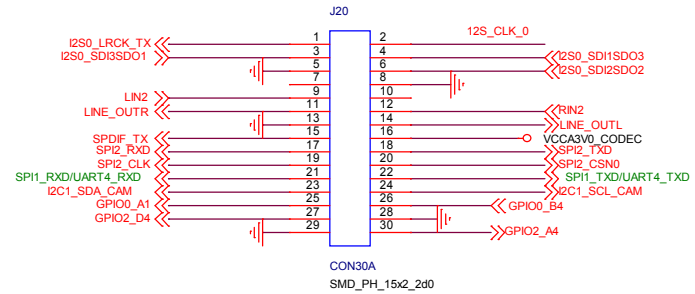
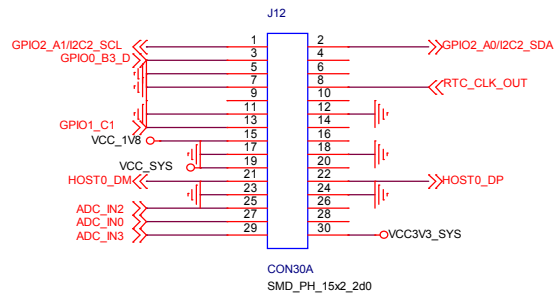
MIP Display Interface





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Title: MIPI/EDP Display Port	
File: ROC-RK3399-PC-PLUS	REV: V1.2
Create Date: Monday, June 20, 2016	Page Num: 26
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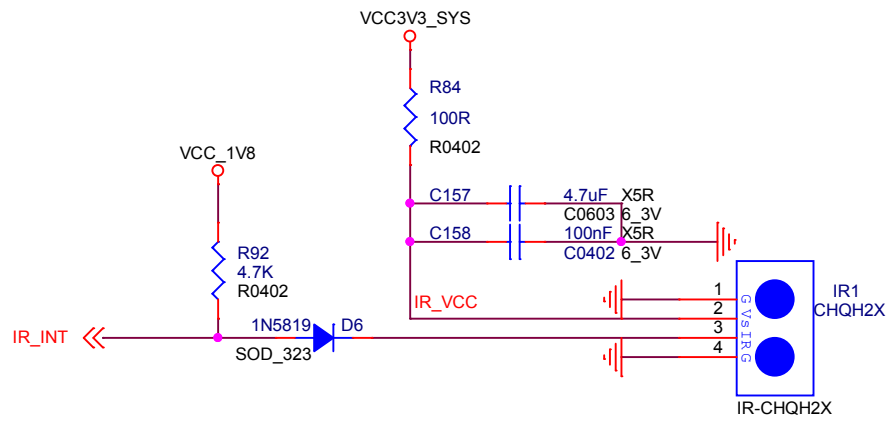
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Title: Extension Interface

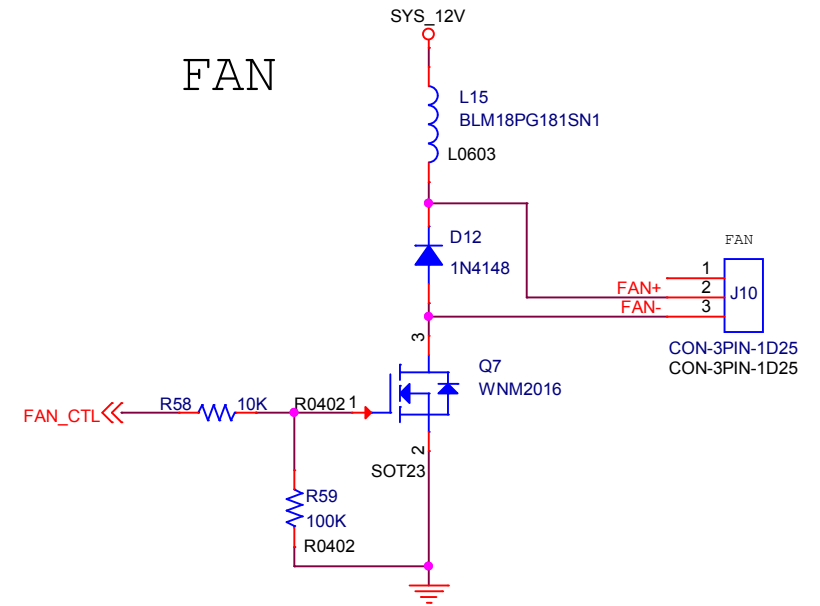
File: ROC-RK3399-PC-PLUS REV: V1.2

Create Date: Tuesday, July 19, 2016 Modify Date: Monday, August 09, 2021	Page Num: 27 Page Total: 30
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IR Receiver

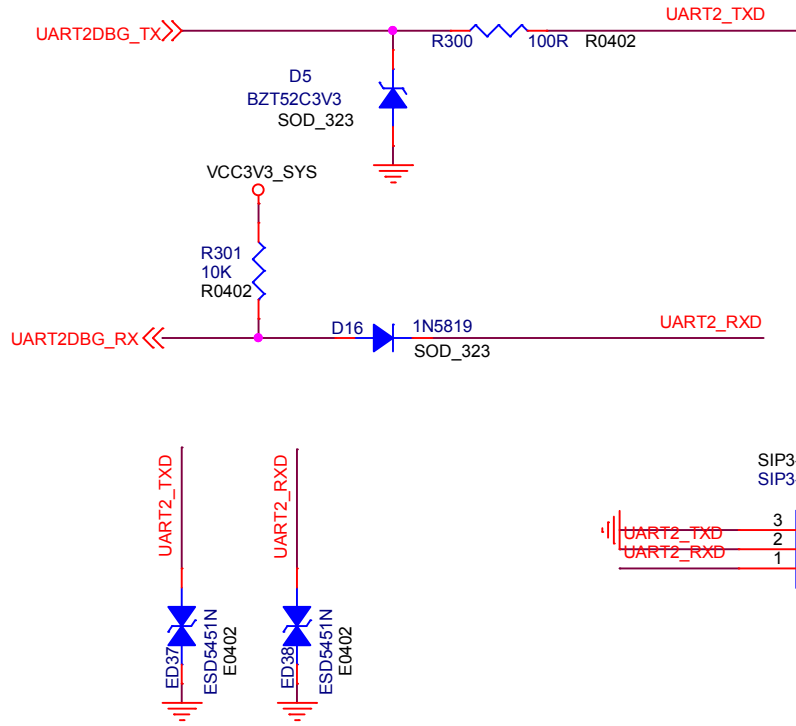


FAN

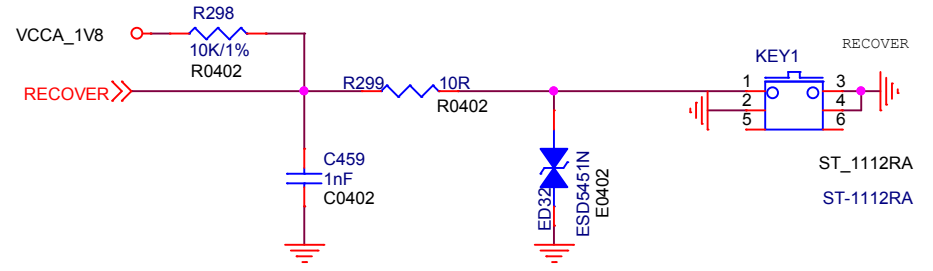


Title: IR/FAN	
File: ROC-RK3399-PC-PLUS	REV: V1.2
Create Date: Tuesday, June 21, 2016	Page Num: 28
Modify Date: Monday, August 09, 2021	Page Total: 30

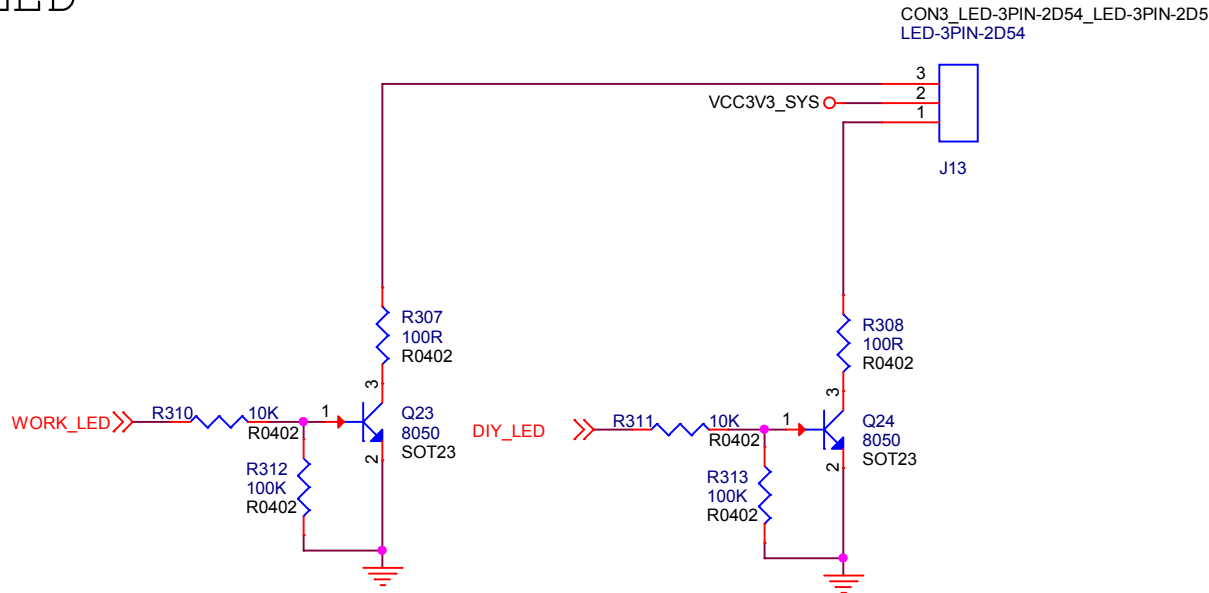
DEBUG




KEY



LED





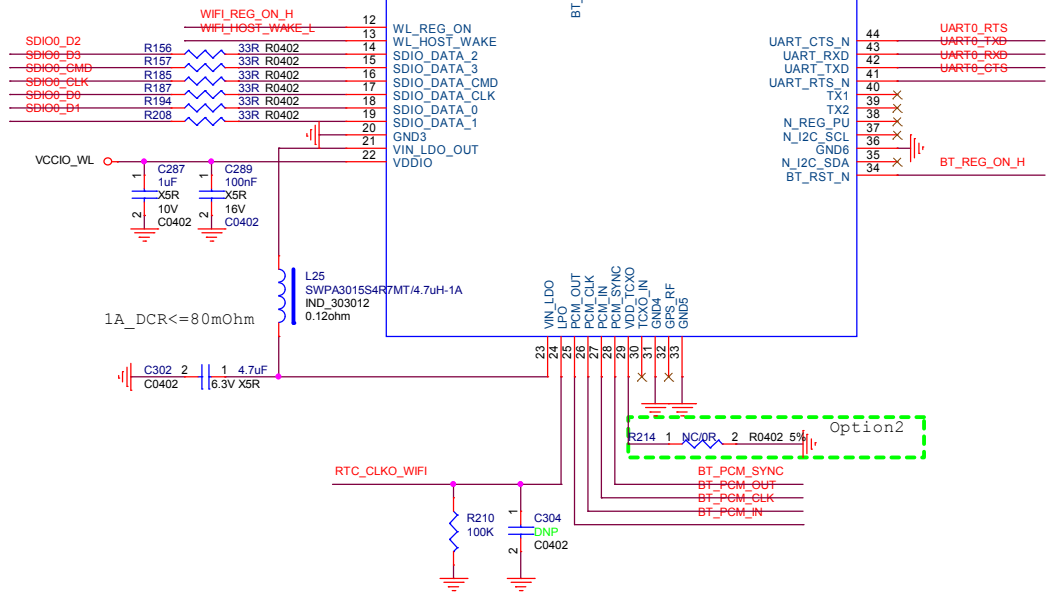
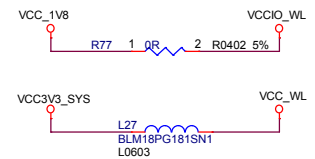
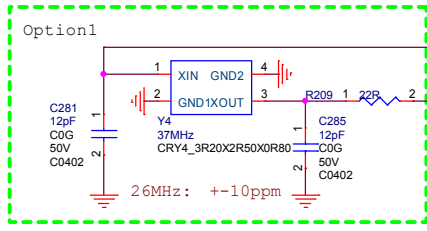
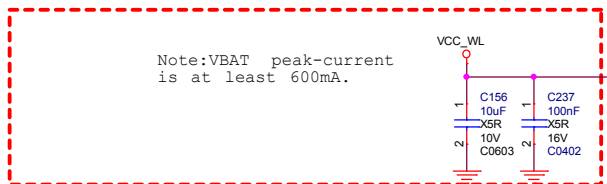
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Title: KEY/LED/DEBUG	
File: ROC-RK3399-PC-PLUS	REV: V1.2
Create Date: Monday, July 18, 2016	Page Num: 29
Modify Date: Monday, August 09, 2021	Page Total: 30

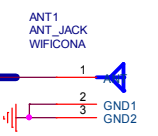
SDIO WIFI/BT Module-1T1R

- >>SDIO_D0
- >>SDIO_D1
- >>SDIO_D2
- >>SDIO_D3
- >>SDIO_CMD
- >>SDIO_CLK
- >>WIFI_REG_ON_H
- >>WIFI_HOST_WAKE_L
- >>UART0_RXD
- >>UART0_TXD
- >>UART0_RTS
- >>UART0_CTS
- >>BT_REG_ON_H
- >>BT_WAKE_L
- >>BT_HOST_WAKE_L
- >>BT_PCM_CLK
- >>BT_PCM_SYNC
- >>BT_PCM_OUT
- >>BT_PCM_IN
- >>RTC_CLKO_WIFI

Adjust the load capacitor according to the crystal spec.



RF Microstrip
Z0= 50 ohm



Note:
Yes: option circuit be mounted
No: option circuit not be mounted

OPTION	WIFI				BT	Crystals	VCCIO_SDIO	OPTION1	OPTION2
	a	b/g/n	ac	5GHz					
AW-CM256SM	Yes	Yes	Yes	Yes	4.2	37.4MHz	1.71-3.6V	Yes	Yes@SDIO2.0 No@SDIO3.0
AP6236/AP6212	No	Yes	No	No	4.2/4.0	26MHz	1.71-3.6V	Yes	No
AP6256/AP6255	Yes	Yes	Yes	Yes	5.0/4.2	37.4MHz	1.71-3.6V	Yes	Yes@SDIO2.0 No@SDIO3.0

Title: USB WIFI
File: ROC-RK3399-PC-PLUS REV: V1.2
 Create Date: Monday, July 12, 2021 Page Num: 30
 Modify Date: Monday, August 09, 2021 Page Total: 30