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- 05.Power
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- 07.Audio Codec-ES8323
- 08.Camera-CIF
- 09.LCM-eDP Panel
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- 11.LCM-LVDS Panel
- 12.AP6XXX-WIFI/BT
- 13.TP COF
- 14.TF Card&GE
- 15.JM23029(USB-SATA)
- 16.MXM-CONNECTOR

I2C address(7bit):

1.I2C0 POWER:  
 ACT8846 0x5a  
 CW2013 0x62  
 HYM8563 0x51  
 RT5C619 0x32  
 SYR827 0x40  
 SYR828 0x41

2.I2C1 Sensor:  
 CM3218 0x10,0x0c  
 LSM330TR G:0x6a A:0x1e  
 MMA8452Q 0X1d  
 MPU6050C 0x68  
 LIS3DH 0X19  
 LSM303D 0X1d

3.I2C2 Audio Codec:  
 ALC3224 0x19  
 ALC5623 0x1a  
 ALC5631 0x1a  
 ES8323 0x10

4.I2C3 Camera:  
 OV2659 0x30  
 OV8825 0x36

5.I2C4 Touch:  
 CT363 0x1b  
 FT5506  
 GSL3680 0x40



**RADXA\_ROCK2**

Design Name

**RADXA\_ROCK2\_SQUARE**

Size

A4

Page Name

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1.0

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Sheet

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of

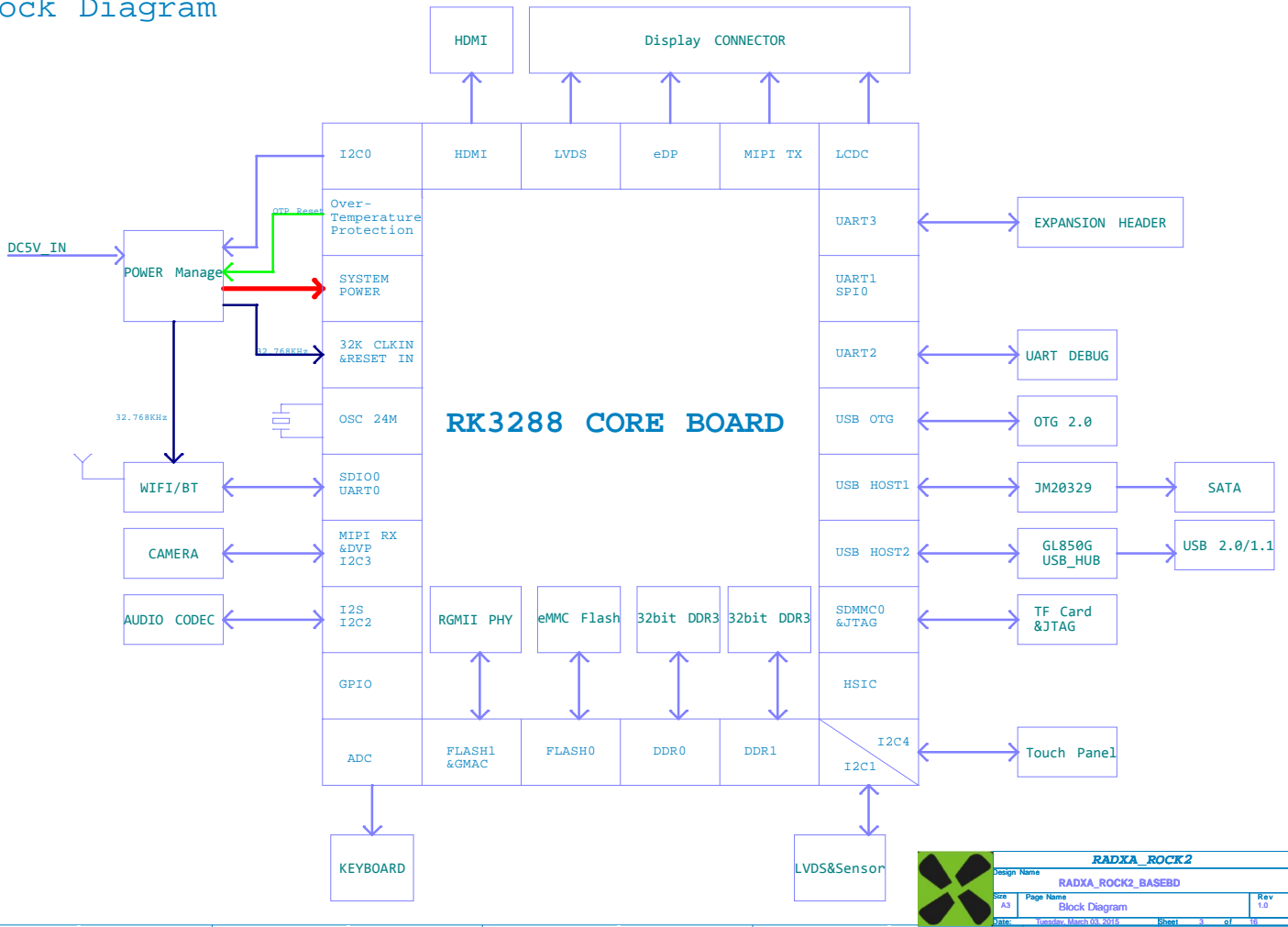
16

Version	Date	Author	Change Note	Approved
V1.0	20140930	Prince	First edictor	Prince
V1.1	20150303	Prince		

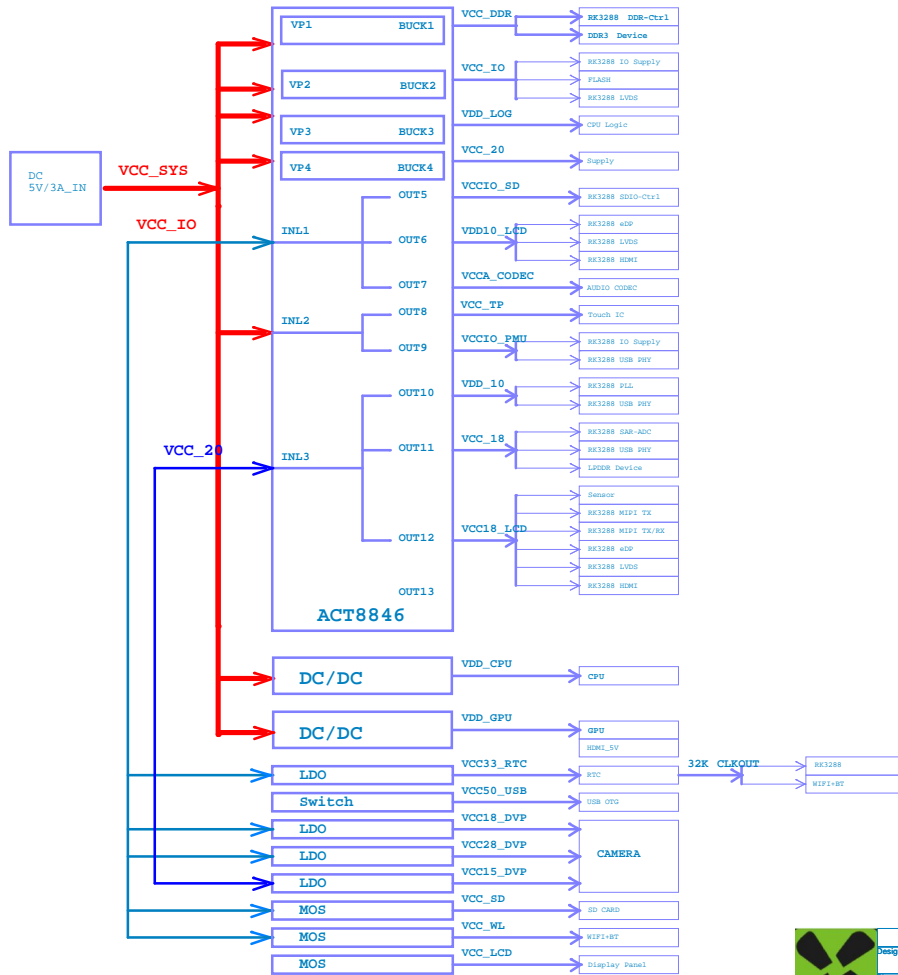


<b>RADXA_ROCK2</b>		
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<b>RADXA_ROCK2_BASEBD</b>		
Size A4	Page Name Change List	Rev 1.0
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# Block Diagram

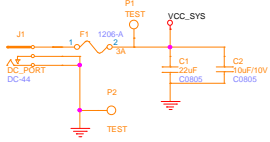


<b>RADXA_ROCK2</b>			
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<b>RADXA_ROCK2</b>			
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Size: A3	Page Name: Power Tree-ACT8846	Rev: 1.0	
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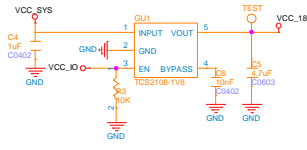
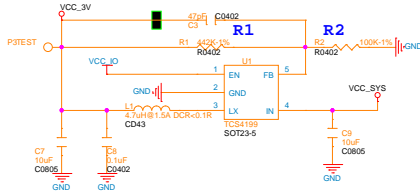
# DC IN



Note:  
Please use a 12V DC.

# LDO

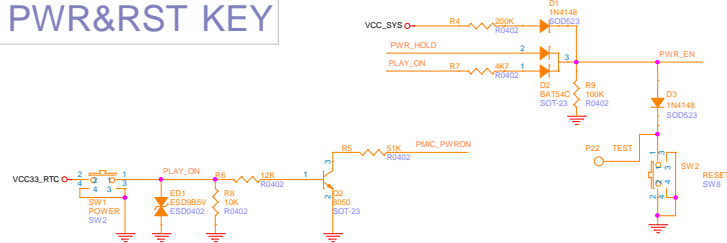
$$V_{out} = 0.6 * (1 + R1/R2)$$



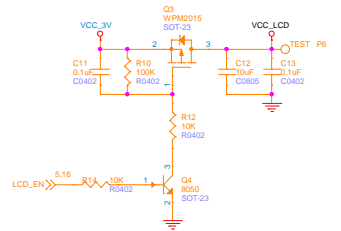
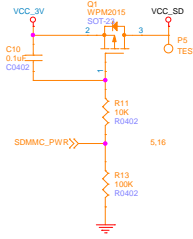
# PWR

RTC_CLKOUT1	16
RTC_CLKOUT2	12
PMIC_INT	16
PWR_EN	16
ICD_SDA_PMIC	16
ICD_SCL_PMIC	16
PMIC_PWRON	16
SDMMC_PWR	5,16
LCD_EN	5,16
BL_EN	9,16
PWR_HOLD	16

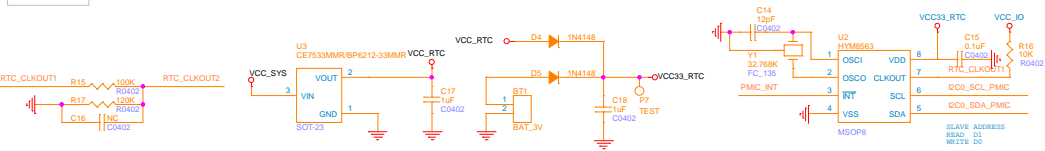
# PWR&RST KEY



# PWR CTL

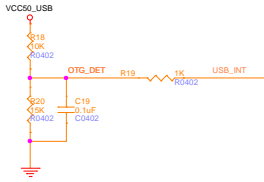


# RTC

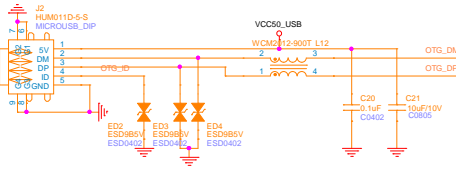


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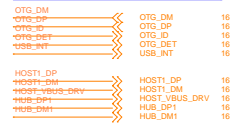
# USB Detection



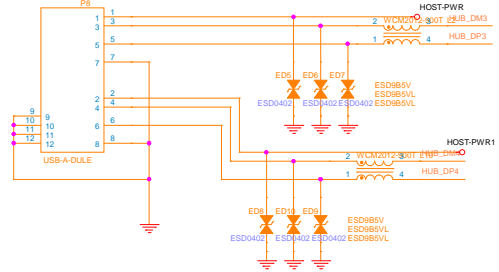
# USB OTG



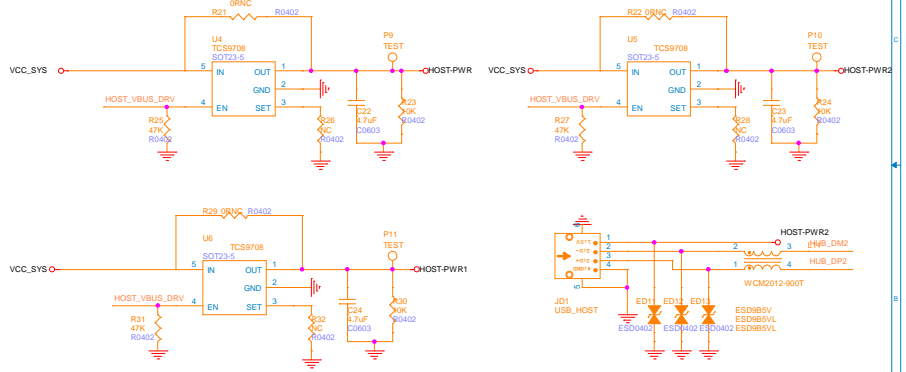
# USB



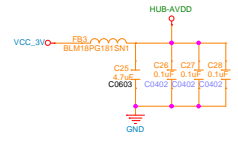
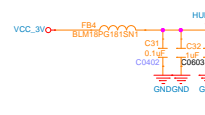
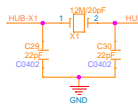
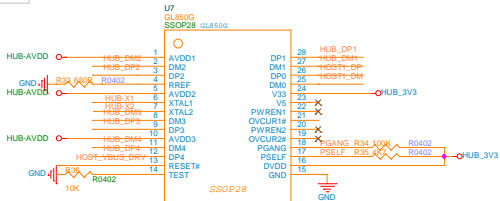
# USB HOST



# HOST PWR

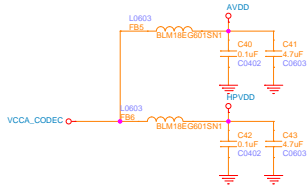
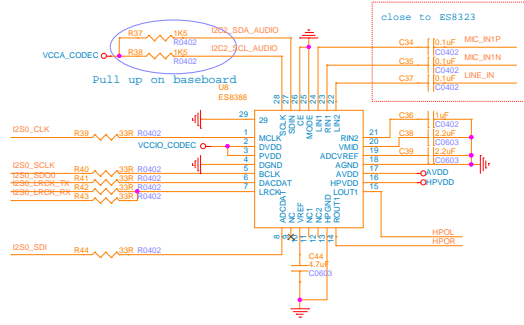


# USB HUB



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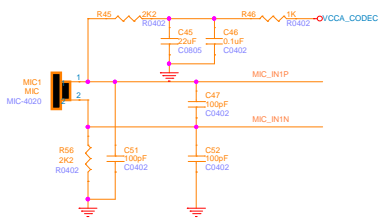
# CODEC



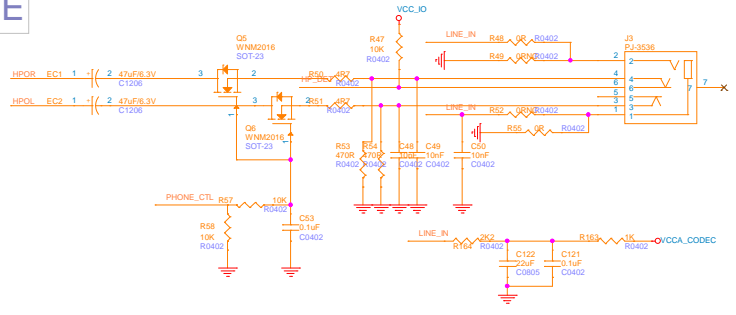
# CODEC

I2C2_SDA_AUDIO	I2C2_SDA_AUDIO	16
I2C2_SCL_AUDIO	I2C2_SCL_AUDIO	16
I2S0_CLK	I2S0_CLK	16
I2S0_SCLK	I2S0_SCLK	16
I2S0_SDO0	I2S0_SDO0	16
I2S0_LRCK_TX	I2S0_LRCK_TX	16
I2S0_LRCK_RX	I2S0_LRCK_RX	16
I2S0_SDI	I2S0_SDI	16
HP_DET	HP_DET	16
PHONE_CTL	PHONE_CTL	16

# MIC



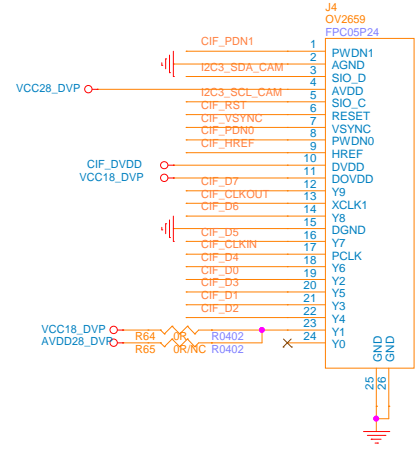
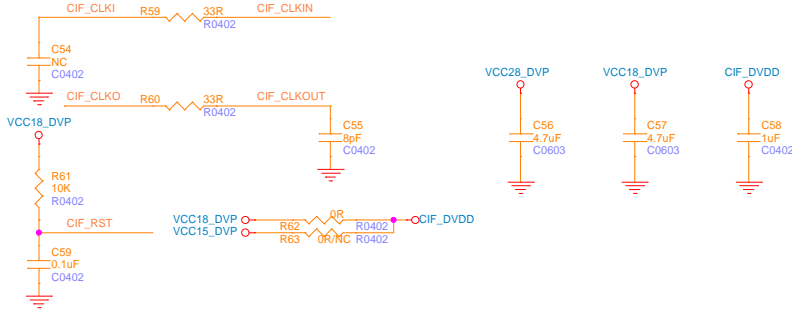
# EARPHONE



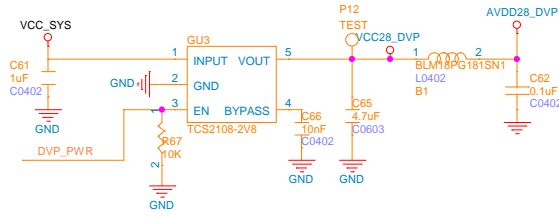
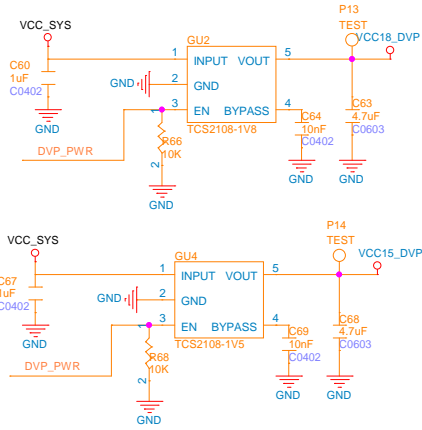
**RADXA\_ROCK2**

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		AUDIO_CODEC_ES8388	
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# CIF Camera



# CIF PWR



# CIF Camera

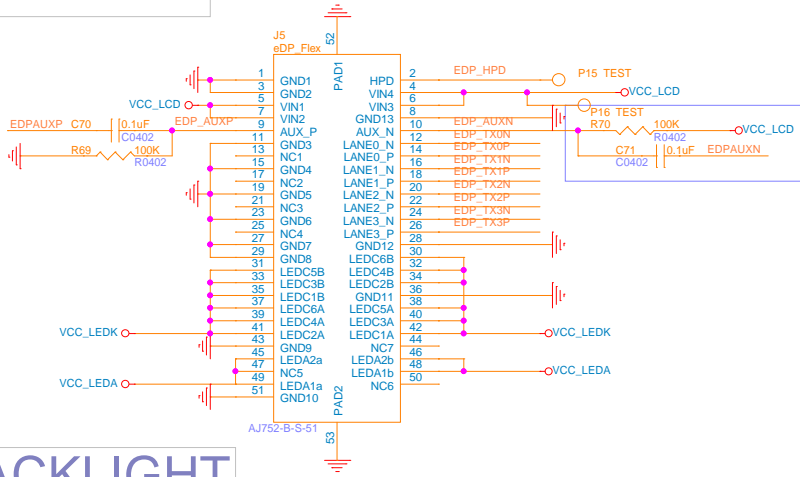
CIF_D0	CIF_D0	16
CIF_D1	CIF_D1	16
CIF_D2	CIF_D2	16
CIF_D3	CIF_D3	16
CIF_D4	CIF_D4	16
CIF_D5	CIF_D5	16
CIF_D6	CIF_D6	16
CIF_D7	CIF_D7	16
CIF_HREF	CIF_HREF	16
CIF_VSYNC	CIF_VSYNC	16
CIF_CLKI	CIF_CLKI	16
CIF_CLKO	CIF_CLKO	16
I2C3_SCL_CAM	I2C3_SCL_CAM	16
I2C3_SDA_CAM	I2C3_SDA_CAM	16
CIF_PDN0	CIF_PDN0	16
CIF_PDN1	CIF_PDN1	16
DVP_PWR	DVP_PWR	16



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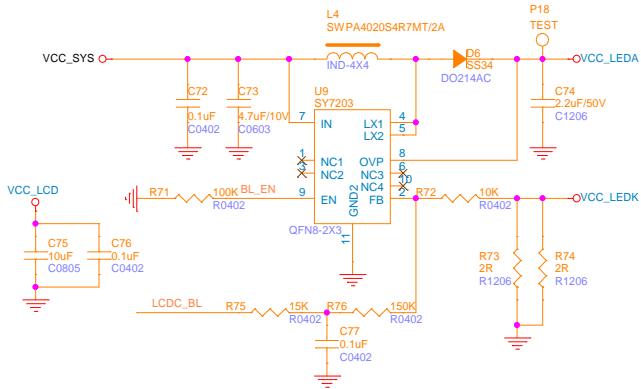
# eDP Panel



## EDP

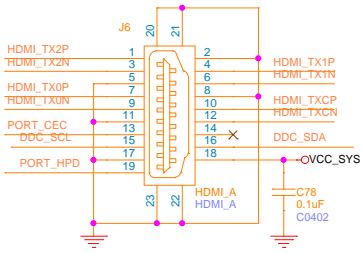
EDP_TX0N	EDP_TX0N	16
EDP_TX0P	EDP_TX0P	16
EDP_TX1N	EDP_TX1N	16
EDP_TX1P	EDP_TX1P	16
EDP_TX2N	EDP_TX2N	16
EDP_TX2P	EDP_TX2P	16
EDP_TX3N	EDP_TX3N	16
EDP_TX3P	EDP_TX3P	16
EDPAUXP	EDPAUXP	16
EDPAUXN	EDPAUXN	16
BL_EN	BL_EN	16
LCDC_BL	LCDC_BL	16

# BACKLIGHT

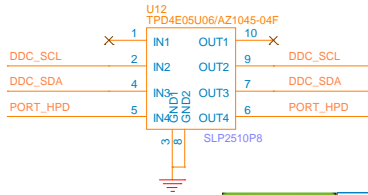
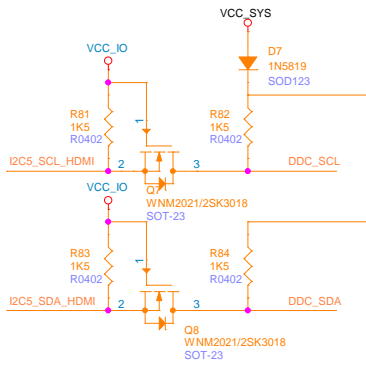
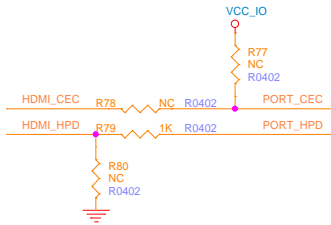
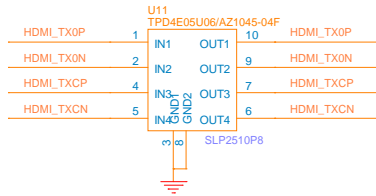
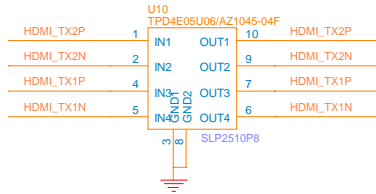


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# HDMI



HDMI OUT



## HDMI

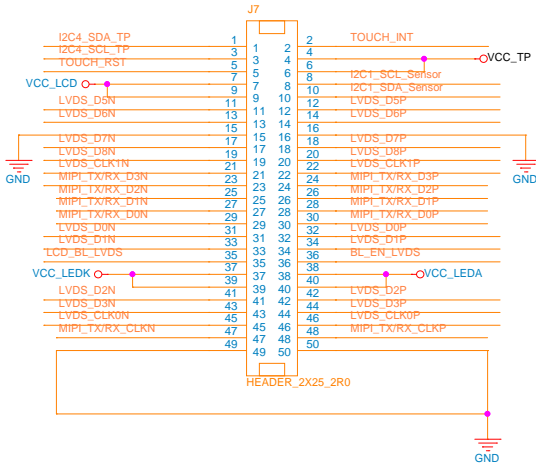
HDMI_TX0P	HDMI_TX0P
16 HDMI_TX0N	HDMI_TX0N
16 HDMI_TX1P	HDMI_TX1P
16 HDMI_TX1N	HDMI_TX1N
16 HDMI_TX2P	HDMI_TX2P
16 HDMI_TX2N	HDMI_TX2N
16 HDMI_TXCP	HDMI_TXCP
16 HDMI_TXCN	HDMI_TXCN
16 HDMI_HPD	HDMI_HPD
16 HDMI_CEC	HDMI_CEC
16 I2C5_SCL_HDMI	I2C5_SCL_HDMI
16 I2C5_SDA_HDMI	I2C5_SDA_HDMI



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# LVDS Panel

## LVDS&MIPI



LVDS_D0N	LVDS_D0N	16
LVDS_D0P	LVDS_D0P	16
LVDS_D1N	LVDS_D1N	16
LVDS_D1P	LVDS_D1P	16
LVDS_D2N	LVDS_D2N	16
LVDS_D2P	LVDS_D2P	16
LVDS_CLK0N	LVDS_CLK0N	16
LVDS_D3N	LVDS_D3N	16
LVDS_D3P	LVDS_D3P	16
I2C4_SDA_TP	I2C4_SDA_TP	13,16
I2C4_SCL_TP	I2C4_SCL_TP	13,16
TOUCH_RST	TOUCH_RST	13,16
TOUCH_INT	TOUCH_INT	13,16
LVDS_D5N	LVDS_D5N	16
LVDS_D5P	LVDS_D5P	16
LVDS_D6N	LVDS_D6N	16
LVDS_D6P	LVDS_D6P	16
LVDS_CLK1N	LVDS_CLK1N	16
LVDS_D7N	LVDS_D7N	16
LVDS_D7P	LVDS_D7P	16
LVDS_D8N	LVDS_D8N	16
LVDS_D8P	LVDS_D8P	16
LCD_BL_LVDS	LCD_BL_LVDS	16
BL_EN_LVDS	BL_EN_LVDS	16
I2C1_SCL_Sensor	I2C1_SCL_Sensor	16
I2C1_SDA_Sensor	I2C1_SDA_Sensor	16
MIPI_TX/RX_D0P	MIPI_TX/RX_D0P	16
MIPI_TX/RX_D0N	MIPI_TX/RX_D0N	16
MIPI_TX/RX_D1P	MIPI_TX/RX_D1P	16
MIPI_TX/RX_D1N	MIPI_TX/RX_D1N	16
MIPI_TX/RX_CLKP	MIPI_TX/RX_CLKP	16
MIPI_TX/RX_CLKN	MIPI_TX/RX_CLKN	16
MIPI_TX/RX_D2P	MIPI_TX/RX_D2P	16
MIPI_TX/RX_D2N	MIPI_TX/RX_D2N	16
MIPI_TX/RX_D3P	MIPI_TX/RX_D3P	16
MIPI_TX/RX_D3N	MIPI_TX/RX_D3N	16

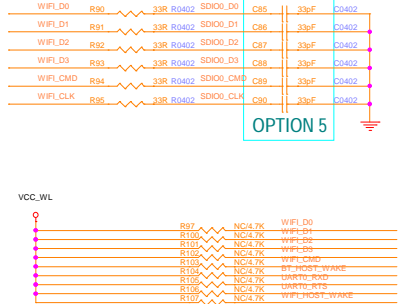
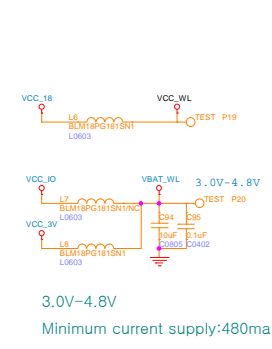
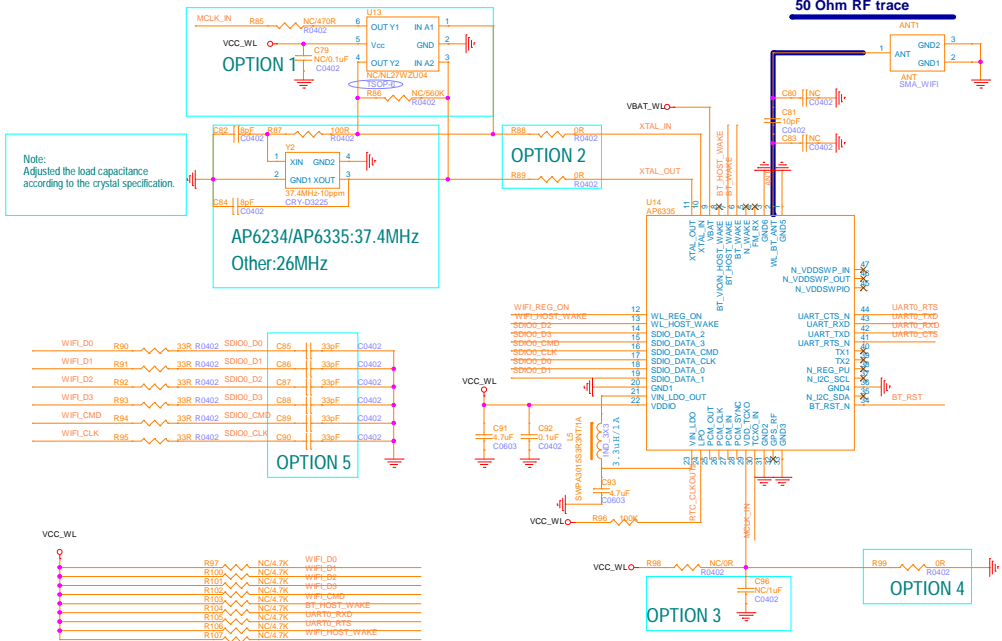
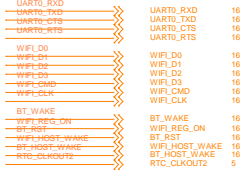


**RADXA\_ROCK2**

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# AP6335

## WIFI&BT



OPTION	WIFI1				BT4.0	Crystals	VDDIO
	a	b/g/n	ac	5GHz			
AP6181		Yes				26MHz	1.71-3.6V
AP6210		Yes			Yes	26MHz	1.71-3.6V
AP6234	Yes	Yes		Yes	Yes	37.4MHz	1.6-3.4V
AP6330	Yes	Yes		Yes	Yes	26MHz	1.2-2.9V
AP6335 (Default)	Yes	Yes	Yes	Yes	Yes	37.4MHz	1.71-3.63V

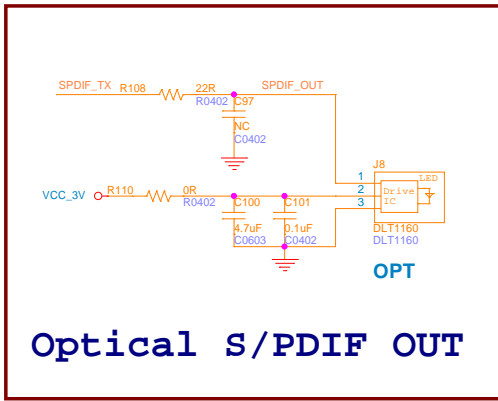
OPTION	1	2	3	4	5
	AP6181	No	Yes	No	No
AP6210	Yes	No	Yes	No	No
AP6234	No	Yes	No	No	No
AP6330	No	Yes	No	No	No
AP6335 (Default)	No	Yes	No	Yes	Yes

Note:  
 Yes:Components need to patch  
 No:Components not patch



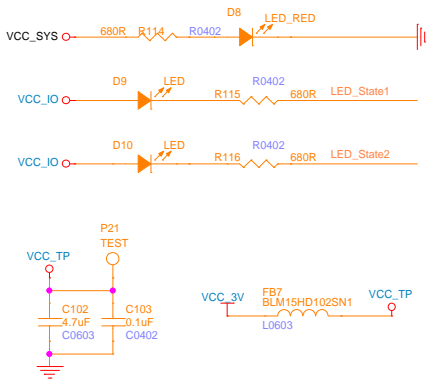
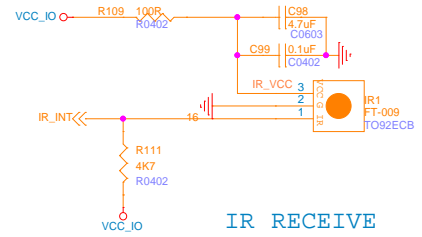
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# TP&IR

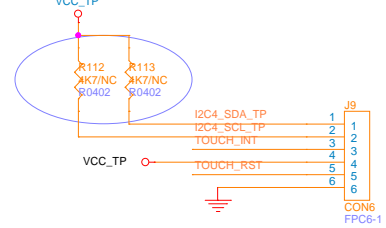


## TP

TOUCH_RST	TOUCH_RST	11,16
TOUCH_INT	TOUCH_INT	11,16
I2C4_SDA_TP	I2C4_SDA_TP	11,16
I2C4_SCL_TP	I2C4_SCL_TP	11,16
LED_State1	LED_State1	16
LED_State2	LED_State2	16
SPDIF_TX	SPDIF_TX	16



## Pull up on the coreboard



**RADXA\_ROCK2**

Design Name

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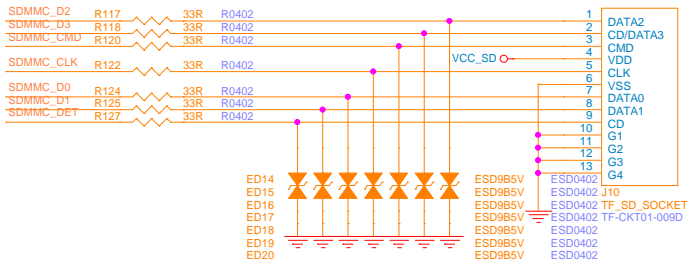
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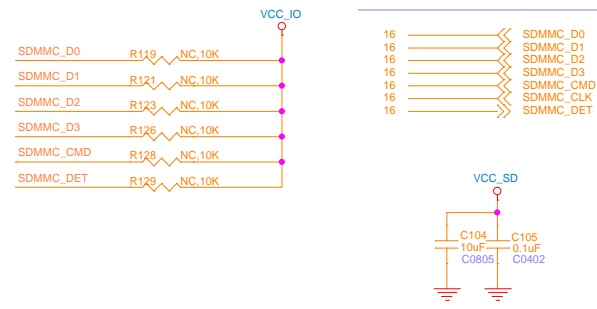
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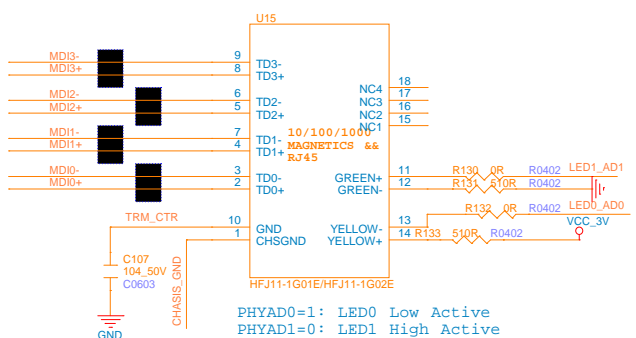
# TF CARD



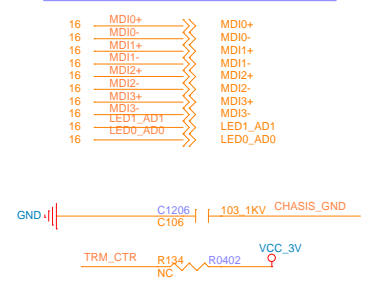
# TF CARD



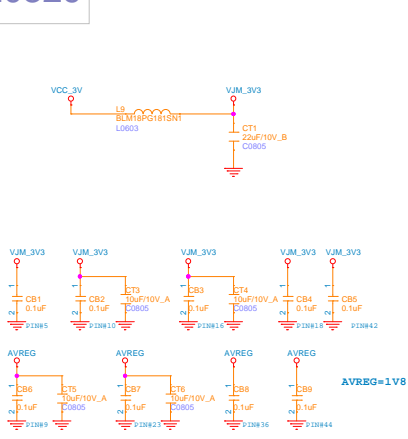
# GBIT\_ETH



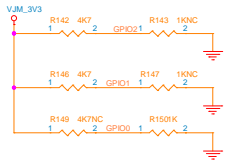
# ETH



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Option function :  
Switch circuit



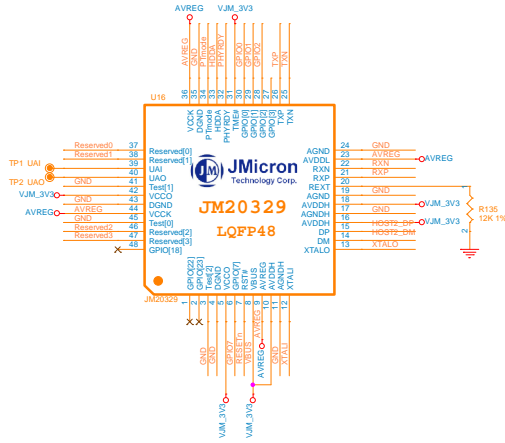
One touch backup If there aren't switch circuit don't use GPIO0(SW3) care R\_SET2,R8 and R\_SET4

**GPIO2** R\_SET1(4K7) R\_SET2 (1K) Power On Detection Sequence.  
1-2 (P0) 2-3 (P0) 0: Enable USB before detecting attached device.  
2-3 (P0) 1-2 (P0) 1: Enable USB after detecting attached device.

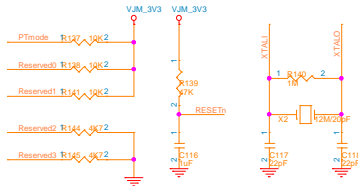
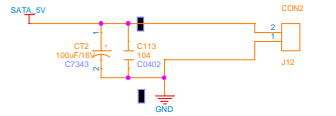
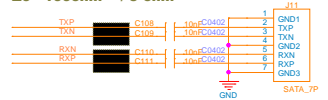
**Default GPIO2 Pull High**

**GPIO0** R\_SET3(4K7) R\_SET4(1K) GPIO0 SATA power down mode  
1-2 (P0) 2-3 (P0) 0: Enable  
2-3 (P0) 1-2 (P0) 1: Disable

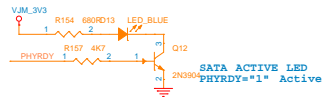
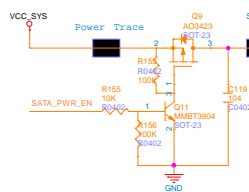
In ATA Power Down Mode, GPIO0 should be pull-down.



Differential pairs  
Z0= 100ohm +/-5 ohm

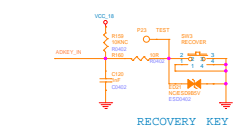
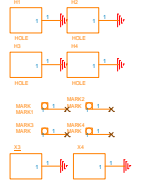
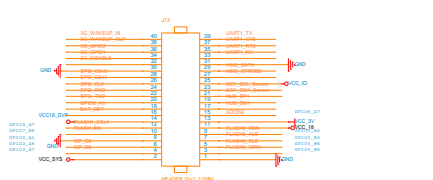
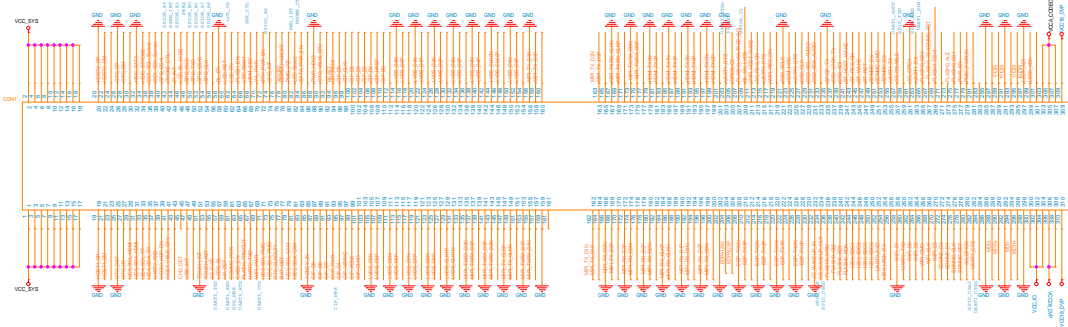
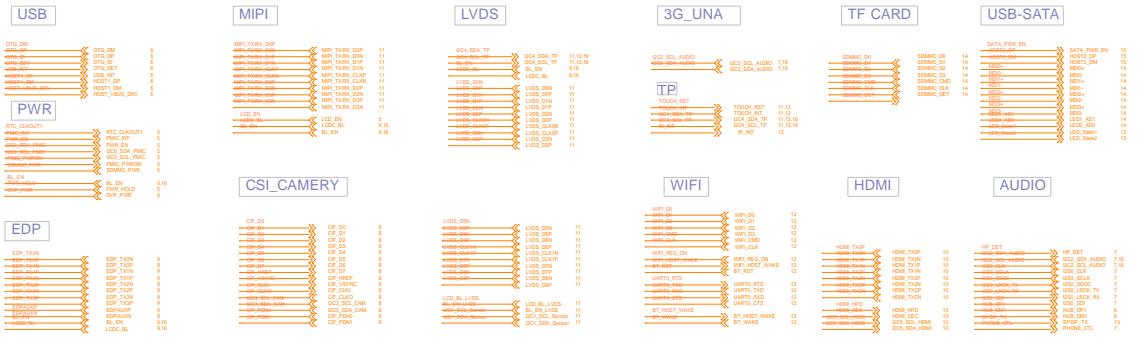


Option function :

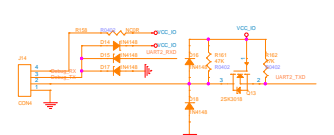


RADXA_ROCK2			
Design Name	RADXA_ROCK2_BASEBD		
Size	Page Name	JM23029(USB-SATA)	Rev
A3			1.0
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# MXM-CONNECTOR



Pull up on the coreboard



RADXA_ROCK2			
Doc No.	RADXA_ROCK2_BASEBD		
Rev	1.0		
File Name	MXM-CONNECTOR		
Doc Path	D:\radxa\rock2\pinout		
Doc Size	1.0 KB		
Doc Type	Pinout		