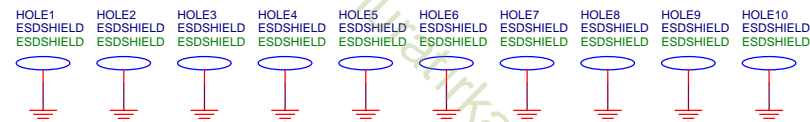


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RK3328 BOX Ref



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}

Note:

Component parameter description

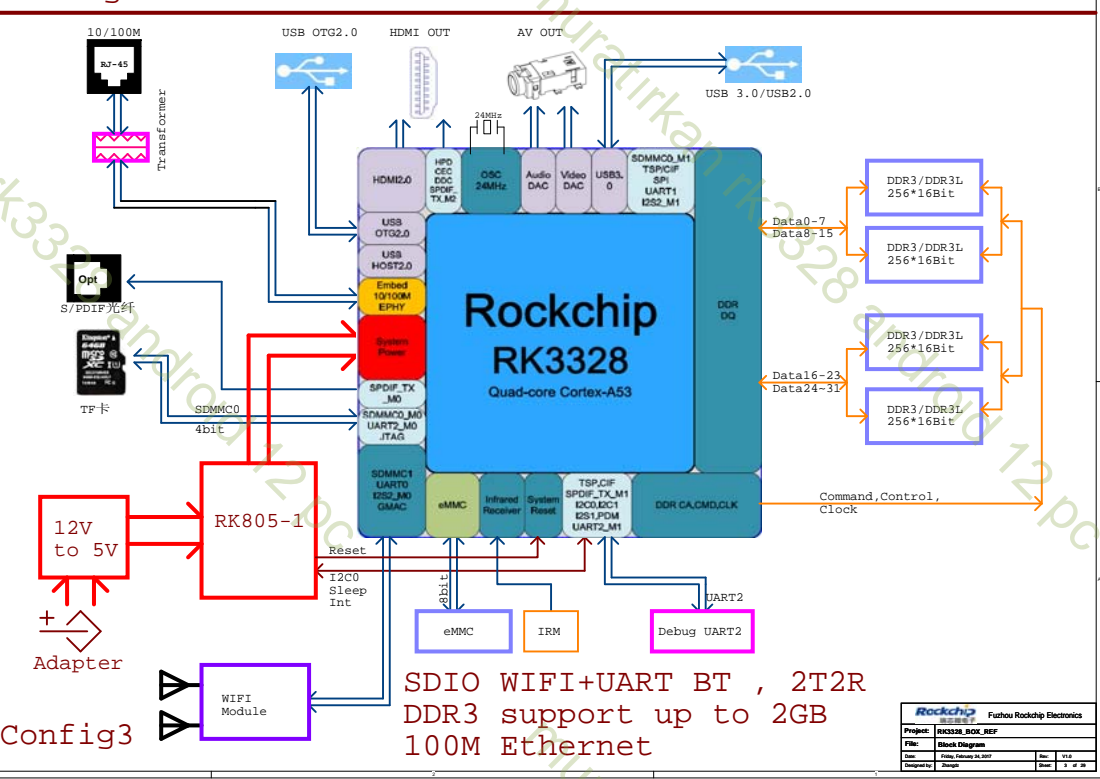
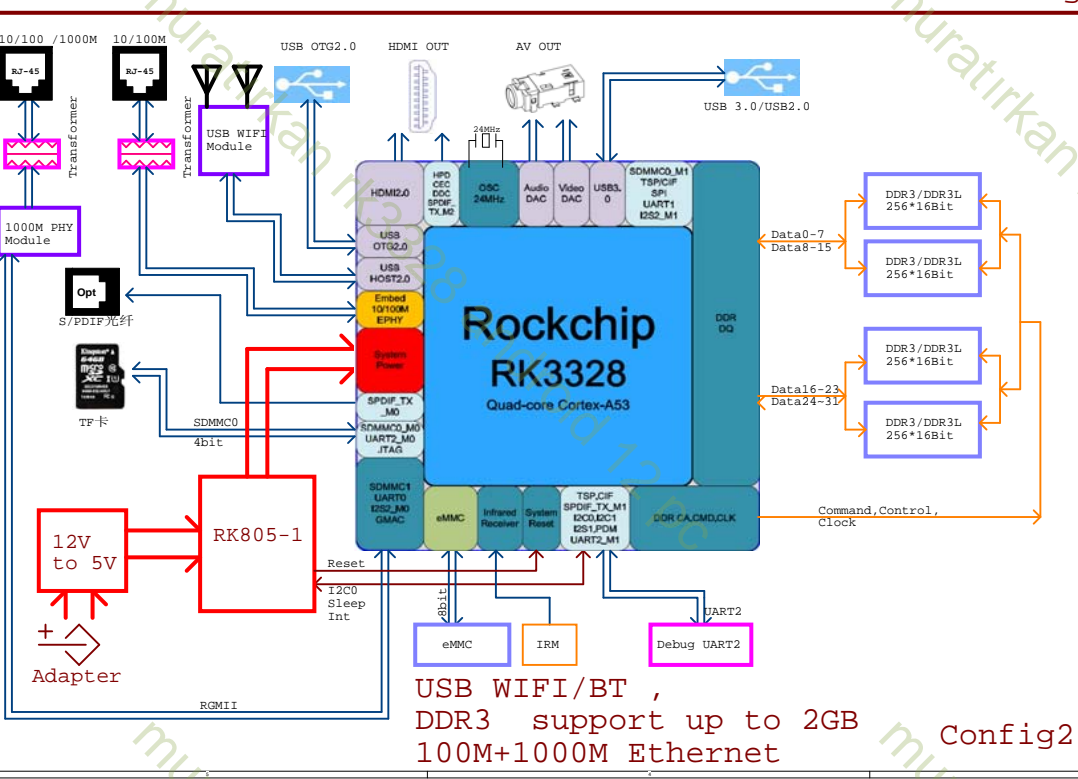
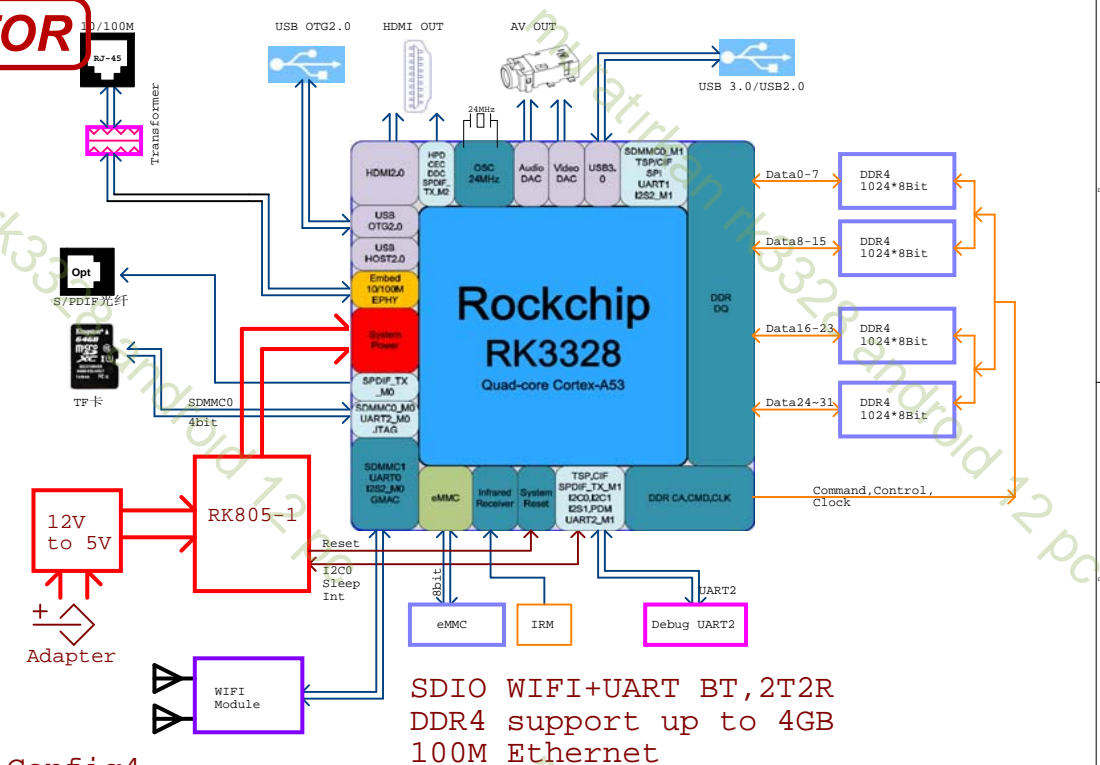
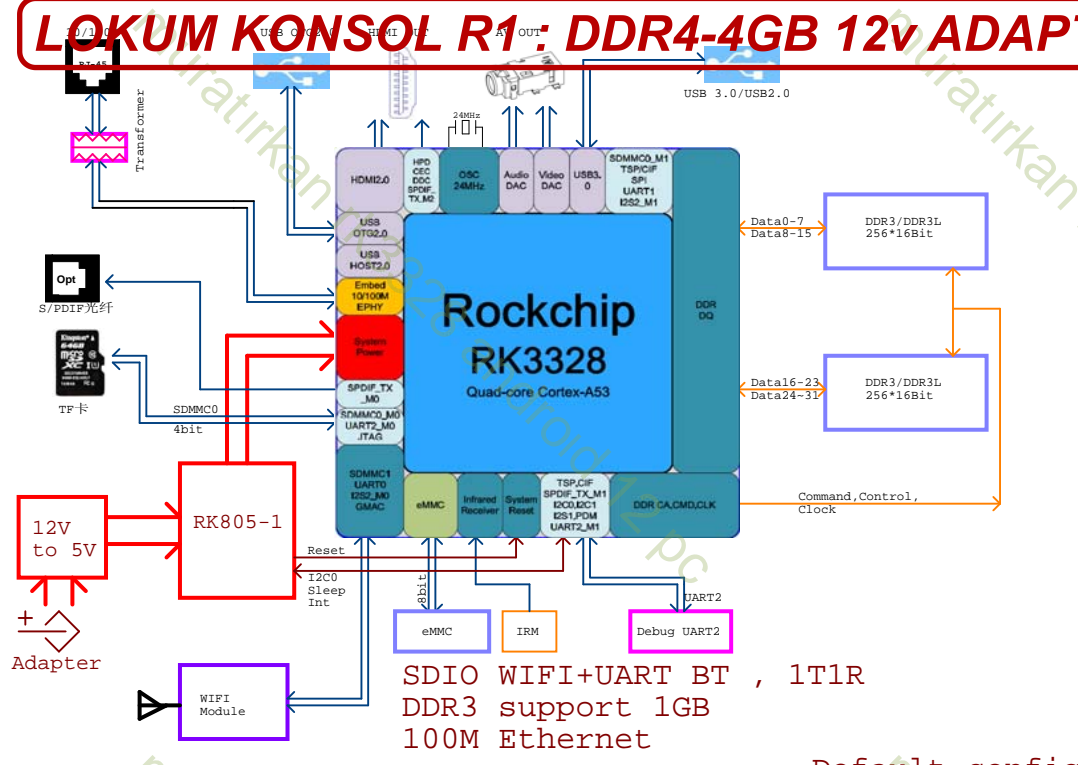
1. DNP stands for component not mounted temporarily
2. If Value or option is DNP, which means the area is reserved without being mounted

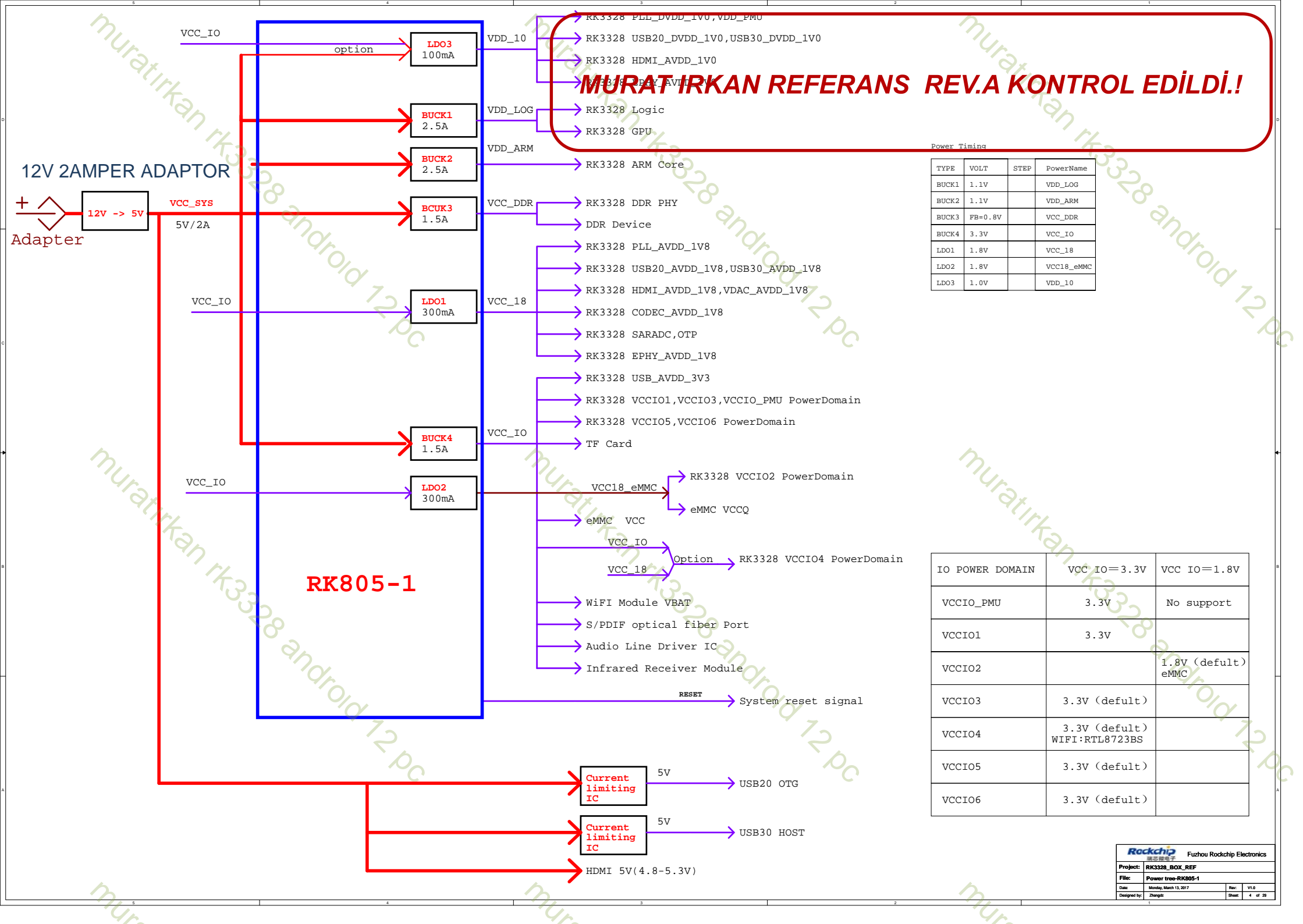
Rockchip
瑞芯微电子 Fuzhou Rockchip Electronics

Project:	RK3328_BOX_REF		
File:	Index		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	1 of 29

Version	Date	Author	Change Note	Approved
v1.0	20170224	ZDZ	First edictor	

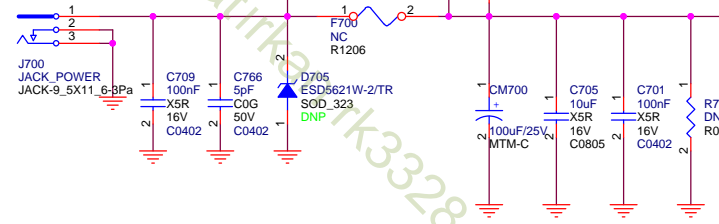
LOKUM KONSOL R1: DDR4-4GB 12v ADAPTOR



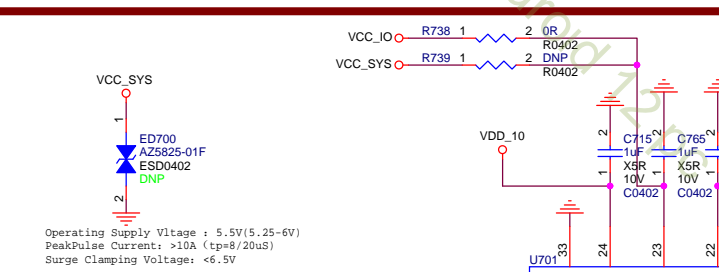


PC GÜÇ ANAHTAR/ON/OFF

ADAPTOR JACK

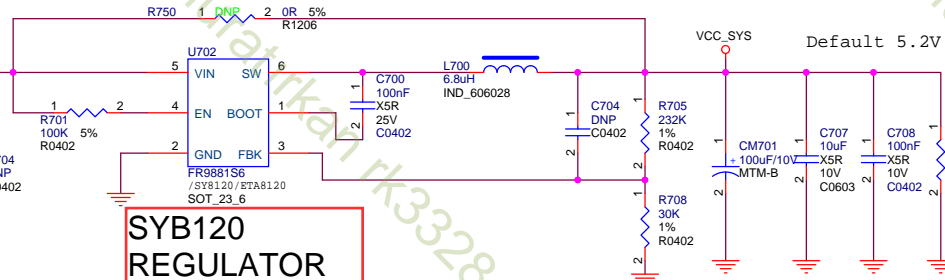


DC12V

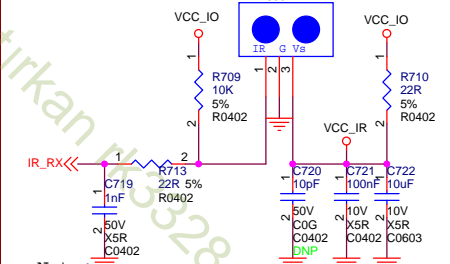


**SYB120
REGULATOR
5.2VOLT ÇIKIS**

VCC_SYS

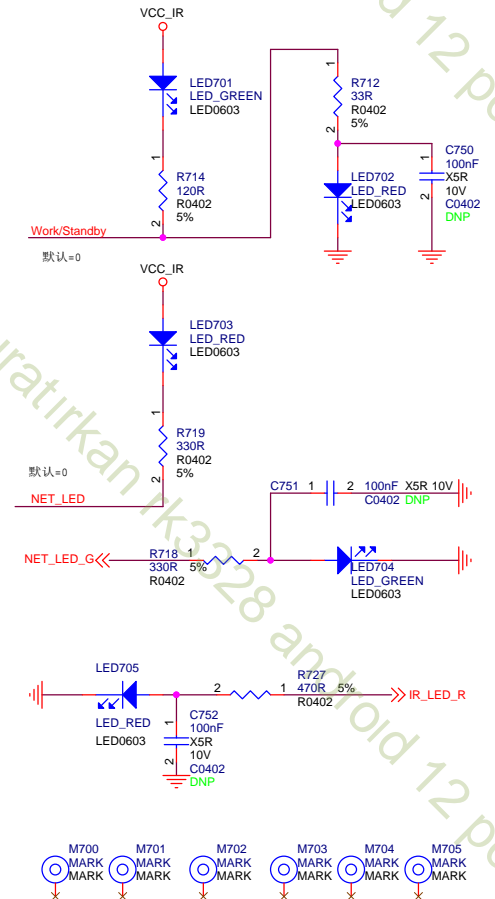


IR Receiver



Note: IR could not be closed to RF.

LED DISPLAY



Operating Supply Voltage : 5.5V(5.25-6V)
PeakPulse Current: >10A (tp=8/20uS)
Surge Clamping Voltage: <6.5V

VCC_DDR

Default:DDR3=1.5V

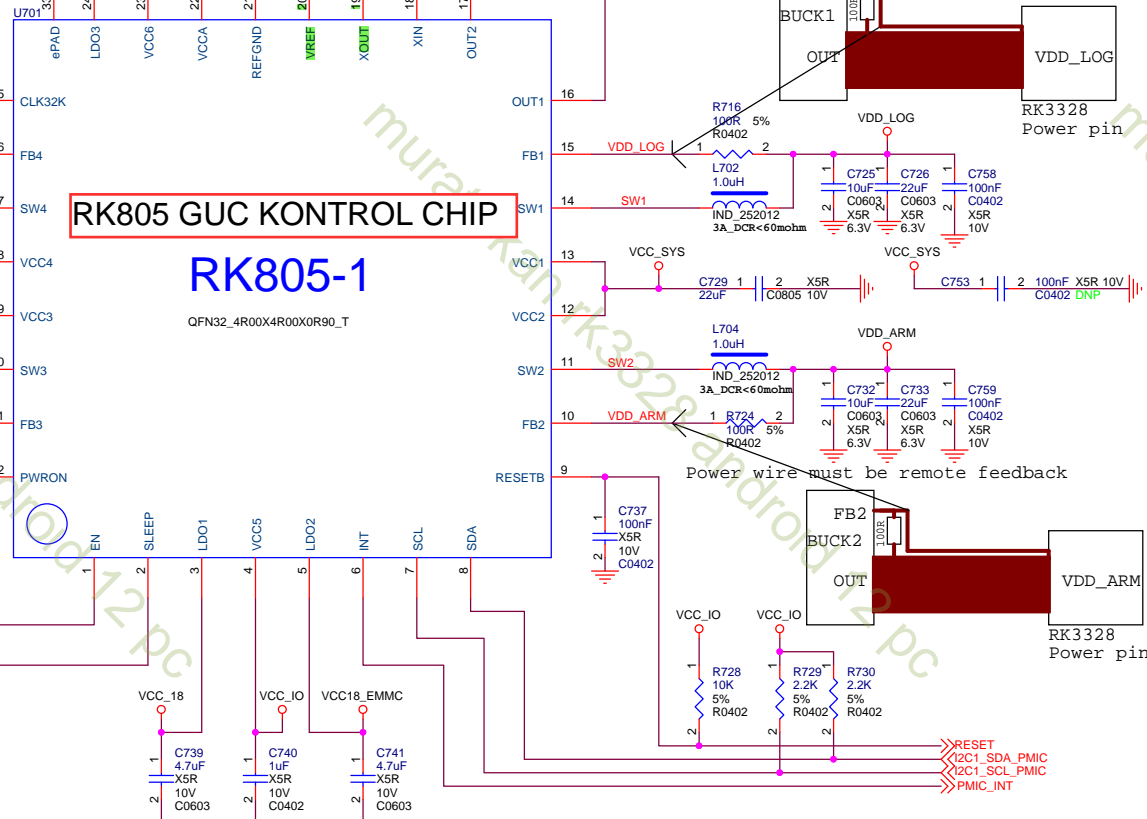
	DDR3	DDR3L	DDR4
VCC_DDR	1.527V	1.353V	1.2V
R725	100K 1%	47K 1%	51K 1%
R726	110K 1%	68K 1%	100K 1%

**DDR3 VE DDR VOLTAJ
DEGERLER**

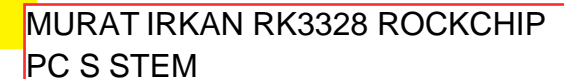
RK805 GUC KONTROL CHIP

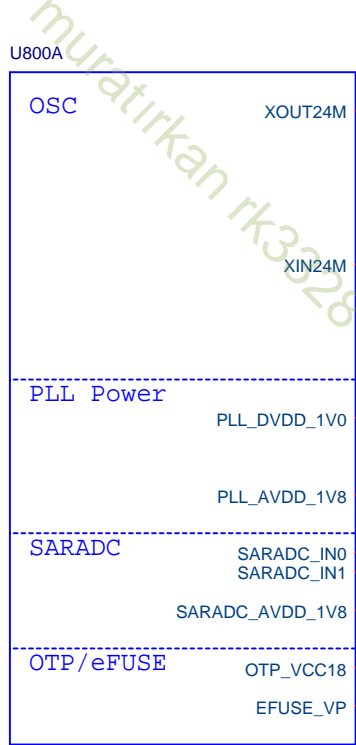
RK805-1

QFN32_4R00X4R00X0R90_T



06/07/2024 11:04 AM





KR STAL: 24MHz

VDDPLL/USB30_1V0

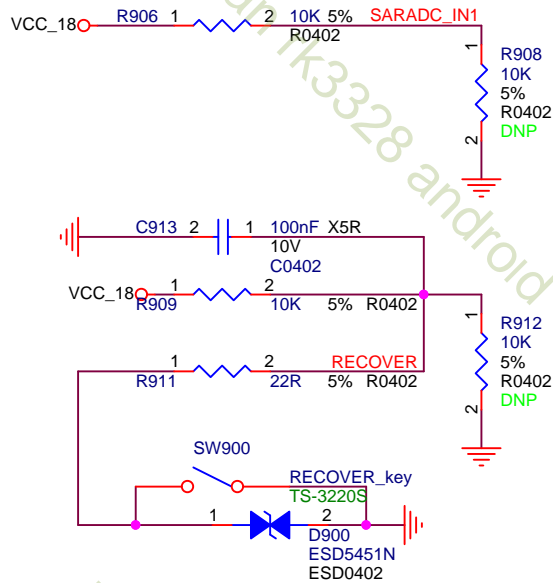
VDD_10

VDDPLL/USB30_1V8

VCC_18

RK3328

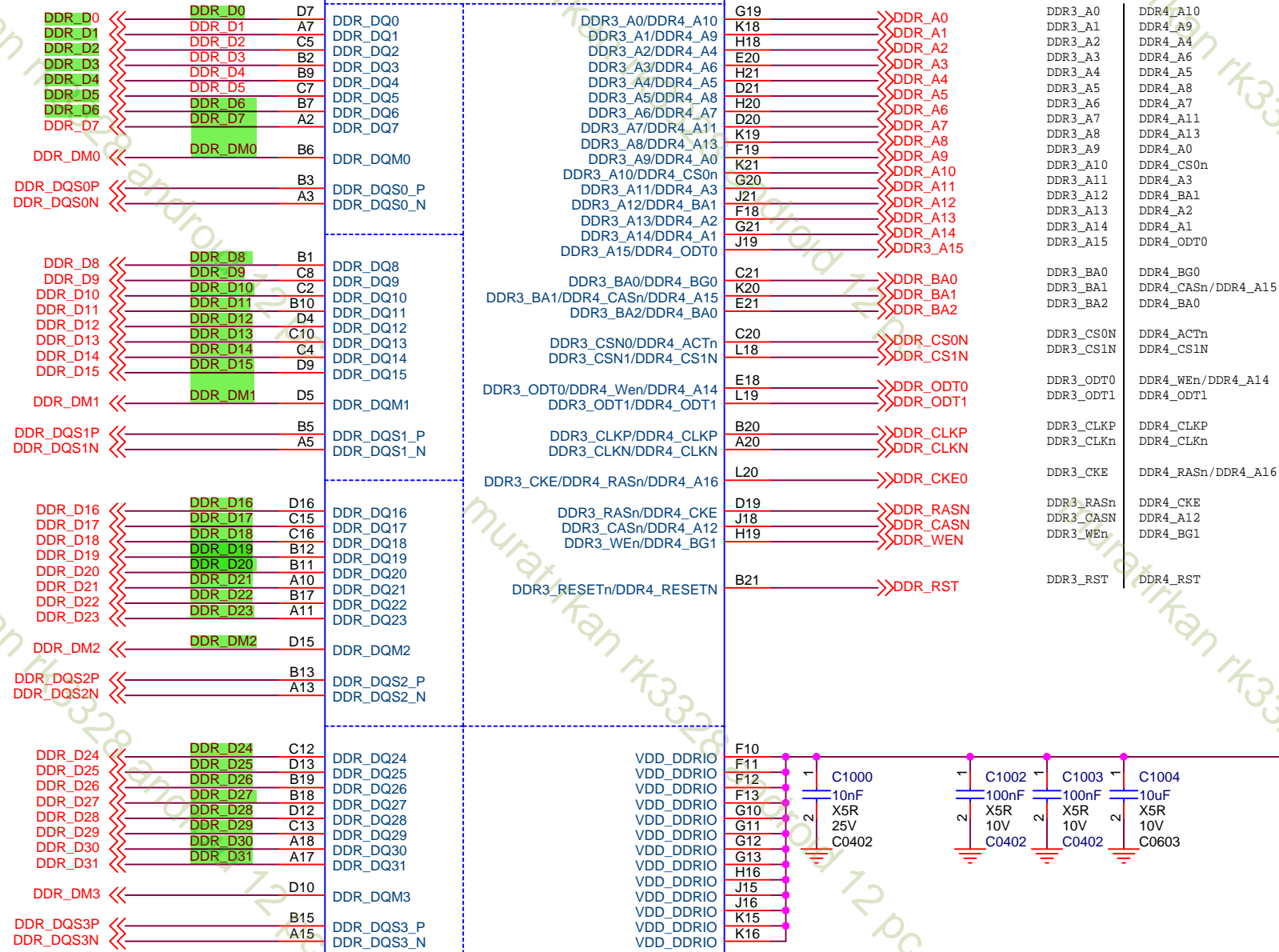
BGA395_14R00X14R00X1R24



SARADC_IN0 BOM Ver...	SARADC_IN1 PCB Ver...	Pull up	Pull down	
Recover		DNP	10K	
BOM1		110K	10K	
BOM2		100K	20K	
BOM3		100K	33K	
BOM4		36K	18K	
BOM5		51K	36K	
BOM6		51K	51K	
BOM7		36K	51K	
BOM8		18K	36K	
BOM9		33K	100K	
BOM10		20K	100K	
BOM11		10K	110K	
BOM12		10K	DNP	

KR STAL S GORTA V.S

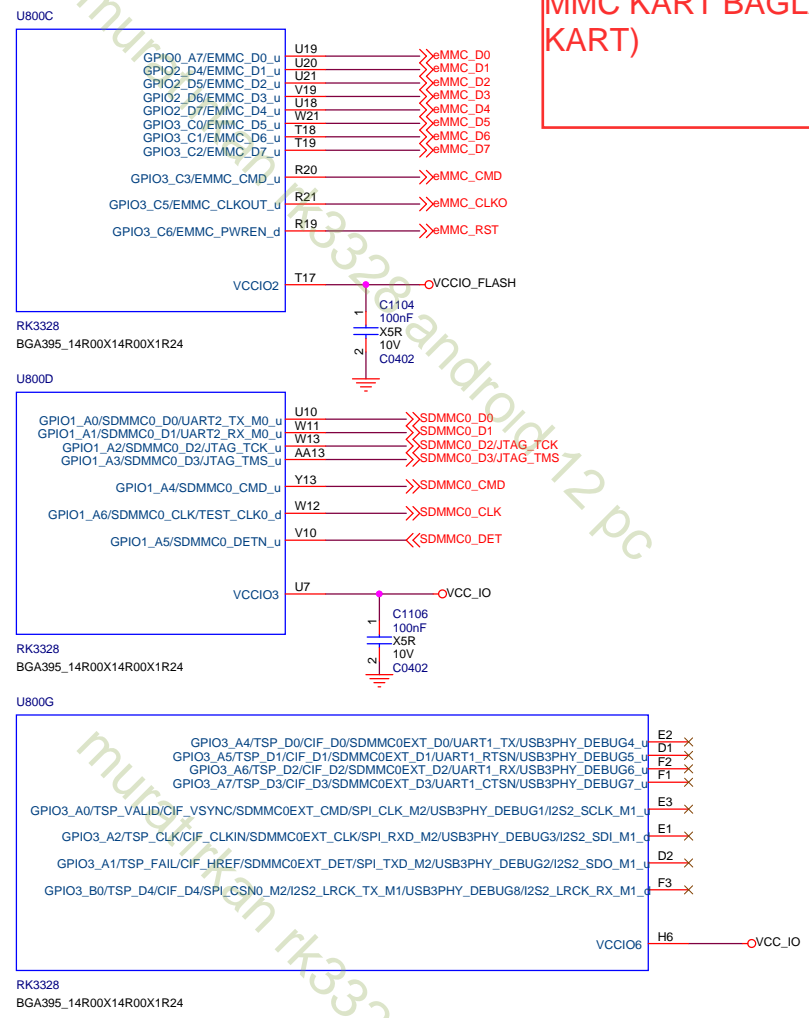
LOKUM R2 ANDROID 10 KONSOL DDR4 3600 MHZ BELLEKLER :KONTROL-1



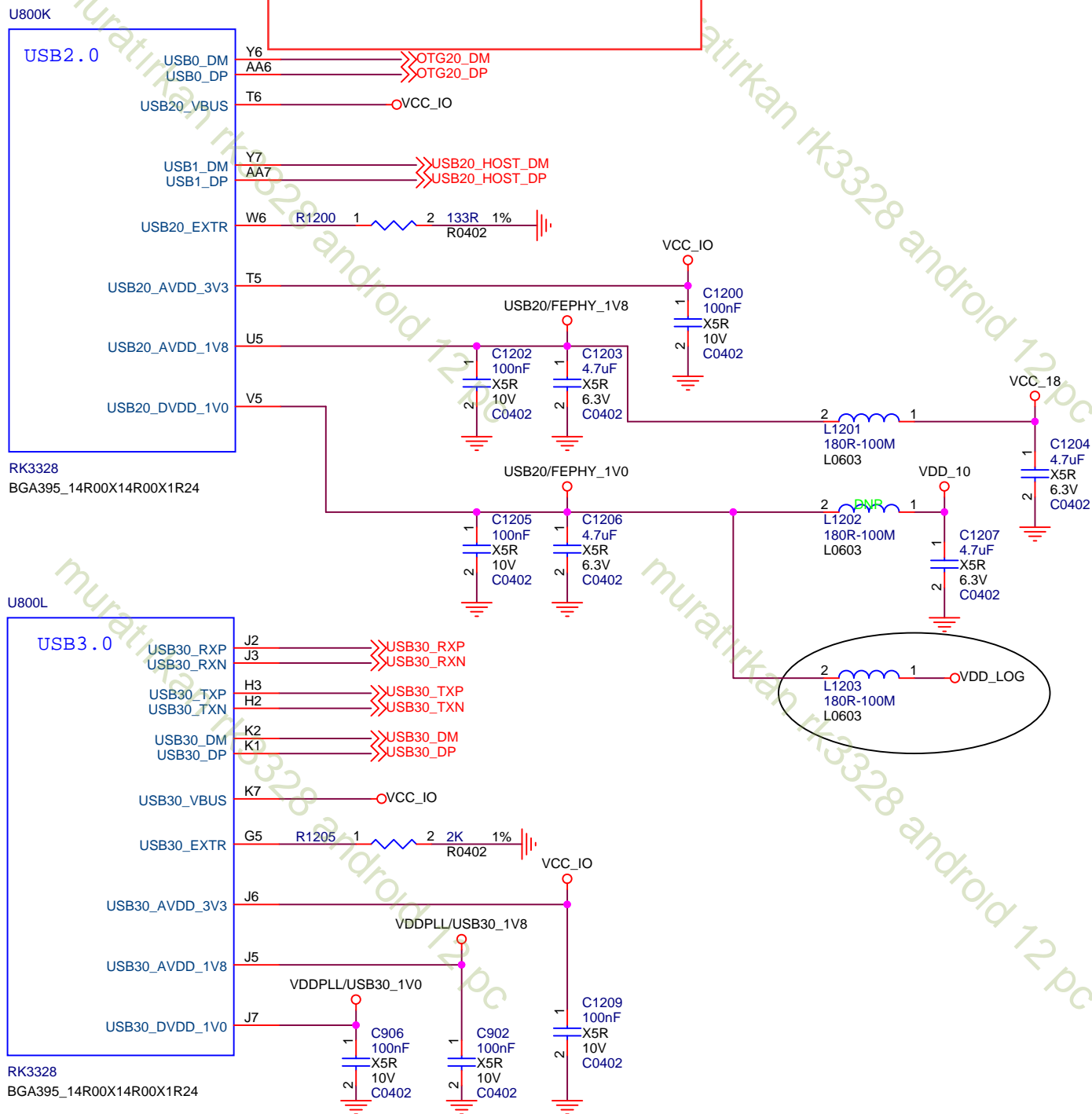
RK3328
BGA395_14R00X14R00X1R24


Rockchip		Fuzhou Rockchip Electronics	
Project:		RK3328_BOX_REF	
File:		RK3328 DDR Controller	
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	8 of 29

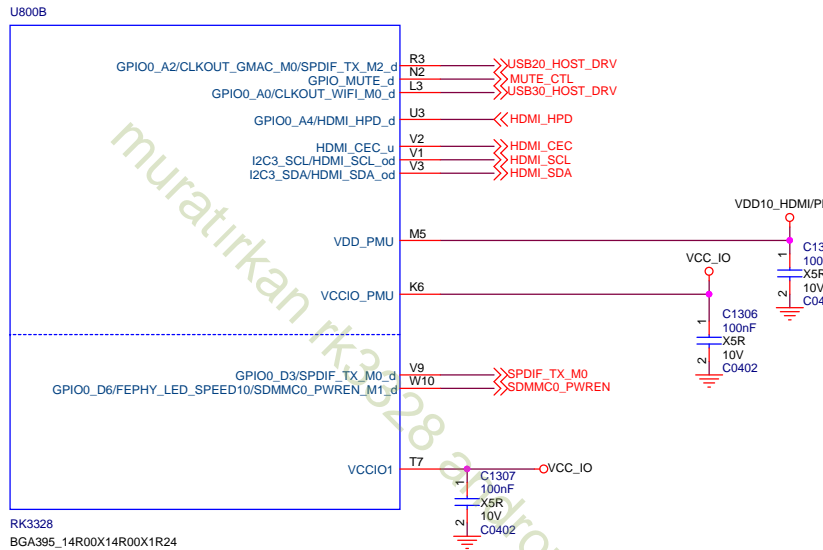
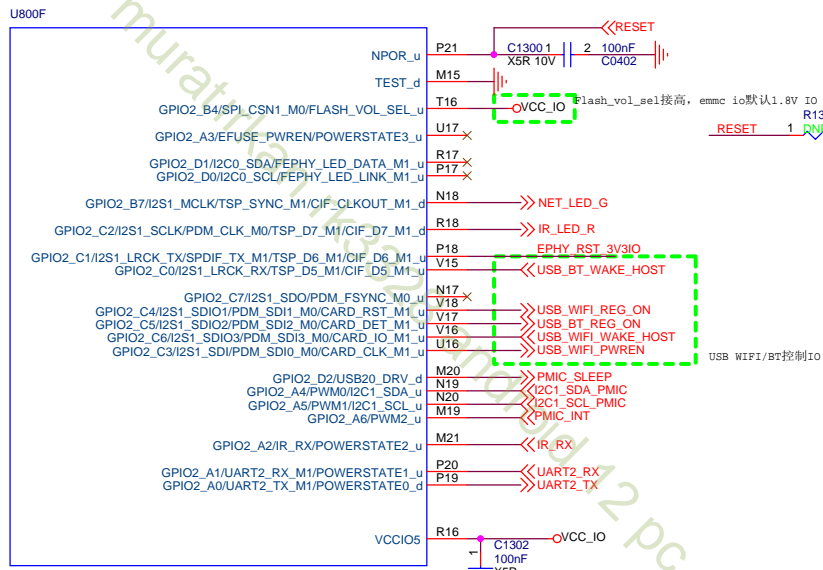
MMC KART BAGLANTISI (MULT MEDYA KART)



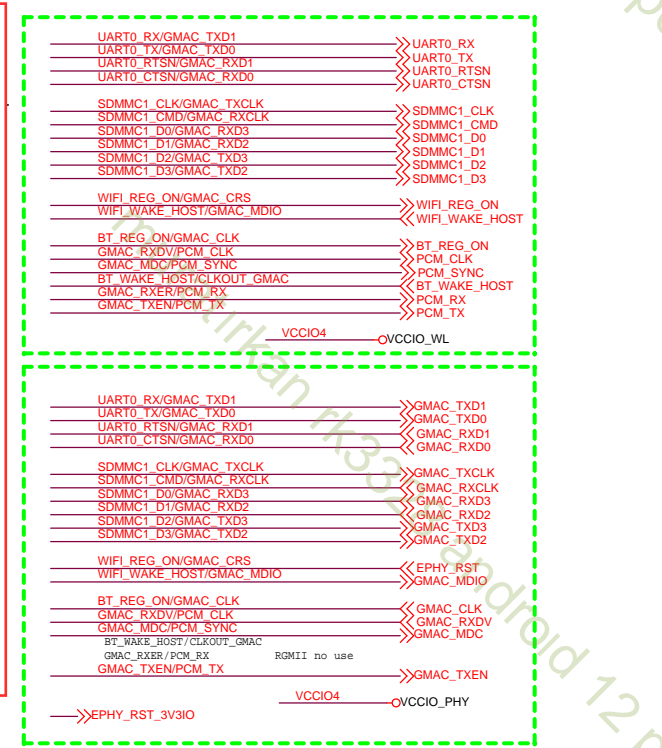
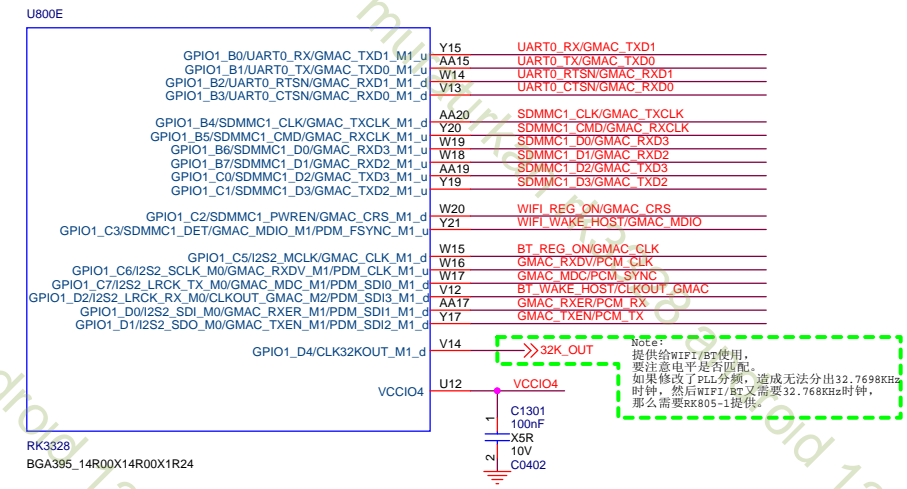
USB 2 VE USB 3



 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	RK3328 USB2 PHY/USB3 PHY		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	10 of 29

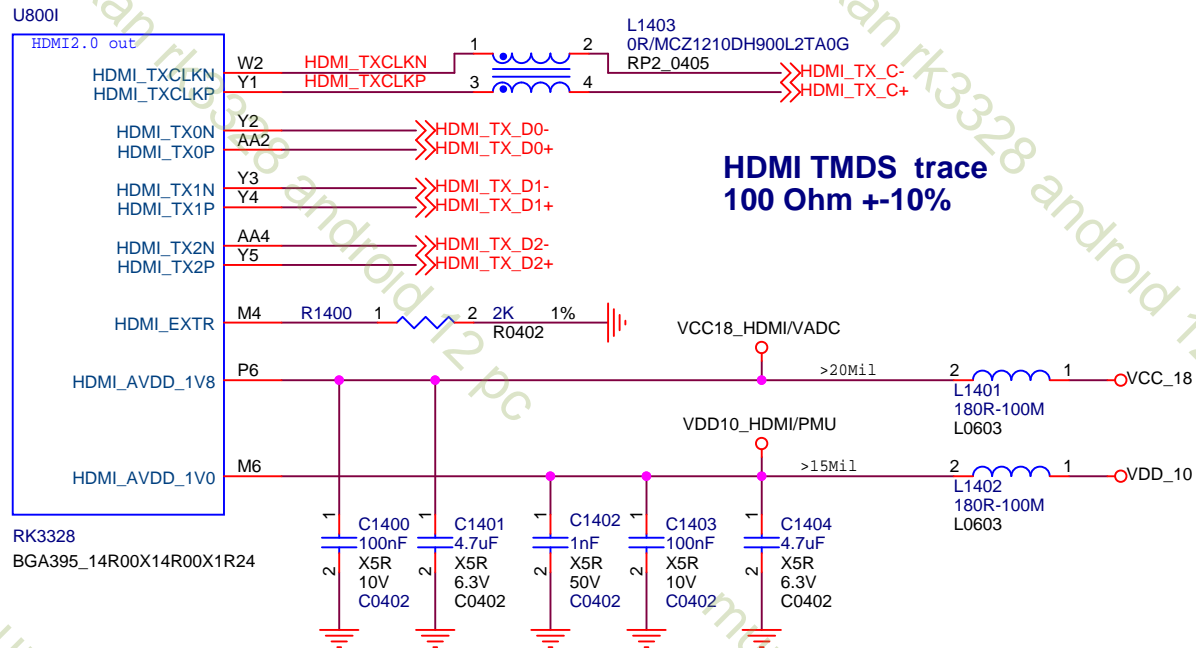


USB BLUETOOTH VE WI*FI



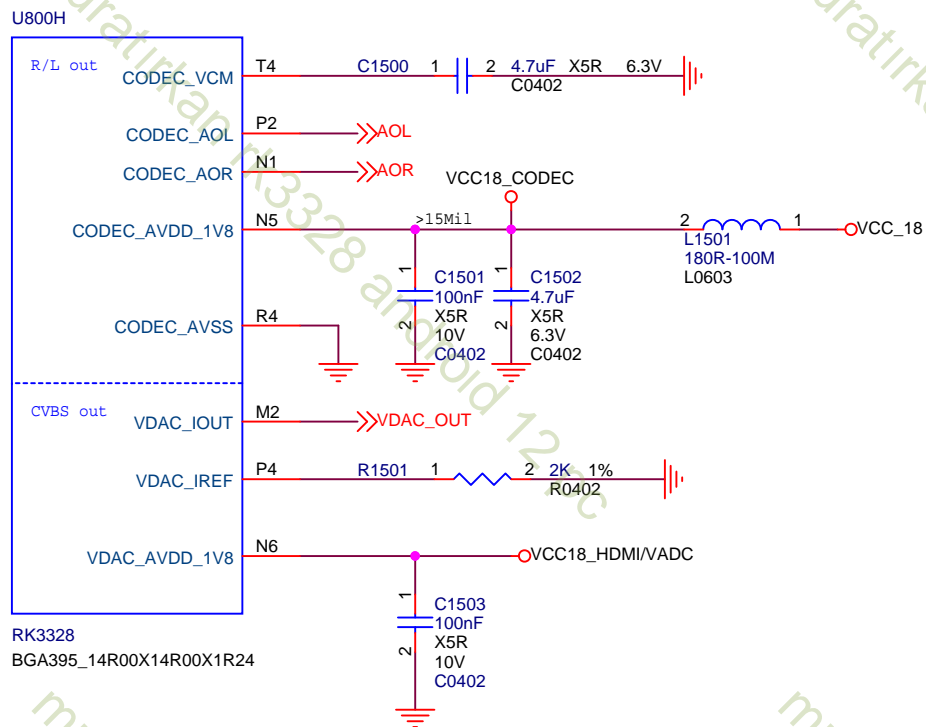
Note:
SDIO1+UART0和GMAC的IO是复用的.
二选一


RK3328 HDMI 4K VIDEO CIKIS



Fuzhou Rockchip Electronics

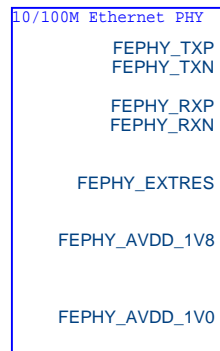
Project:	RK3328_BOX_REF		
File:	RK3328 HDMI PHY		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	12 of 29



 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	RK3328 AV Interface		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	13 of 29

10/100 NETWORK

U800J



RK3328
BGA395_14R00X14R00X1R24

Y9
AA9

Y8
AA8

TD+
TD-

RD+
RD-

V7 R1600 1 2 6.49K 1% R0402

USB20/FEPHY_1V8

1
C1600
100nF
X5R
10V
C0402

U6

V6

USB20/FEPHY_1V0

1
C1602
100nF
X5R
10V
C0402

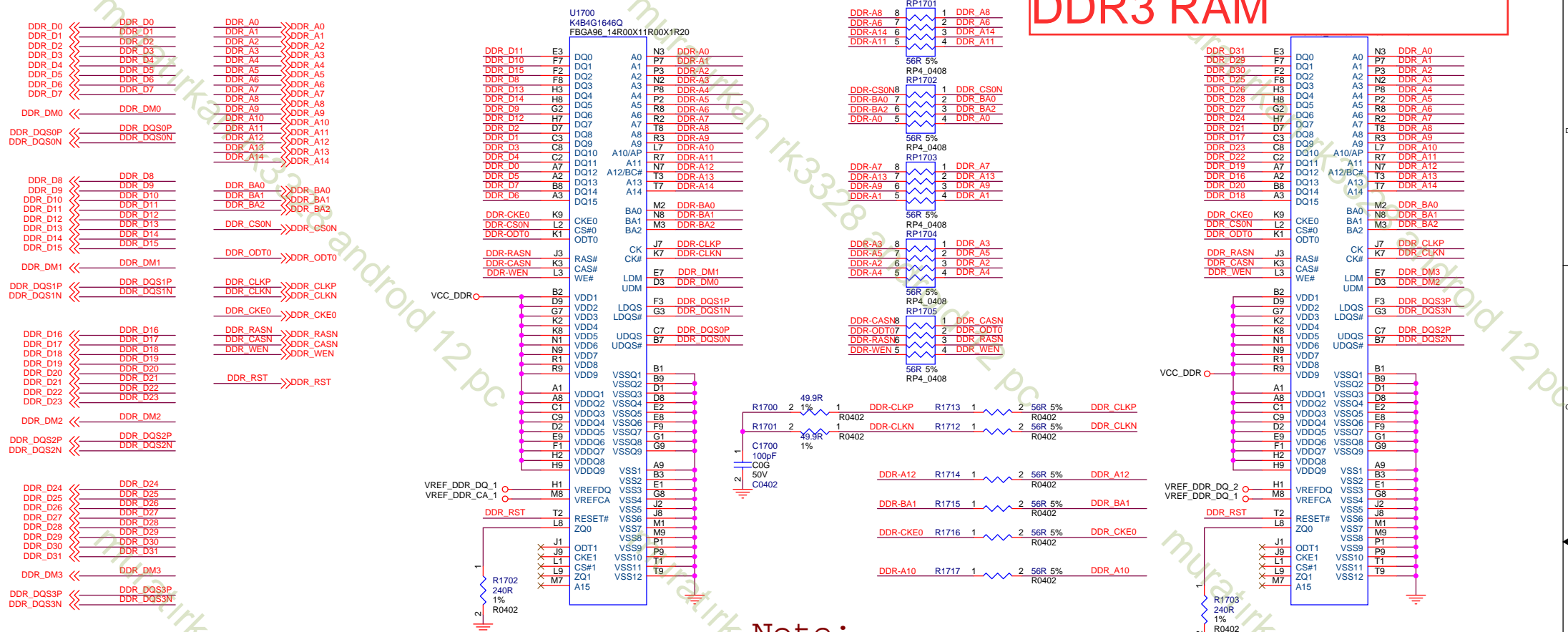
Embed FEPHY



Fuzhou Rockchip Electronics

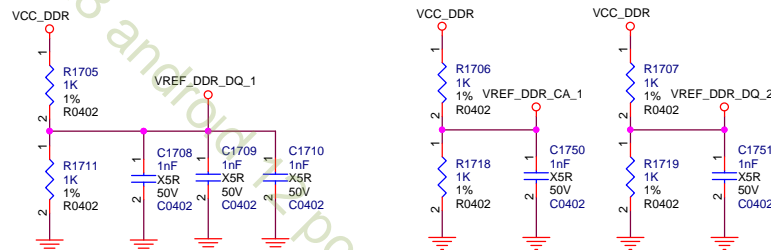
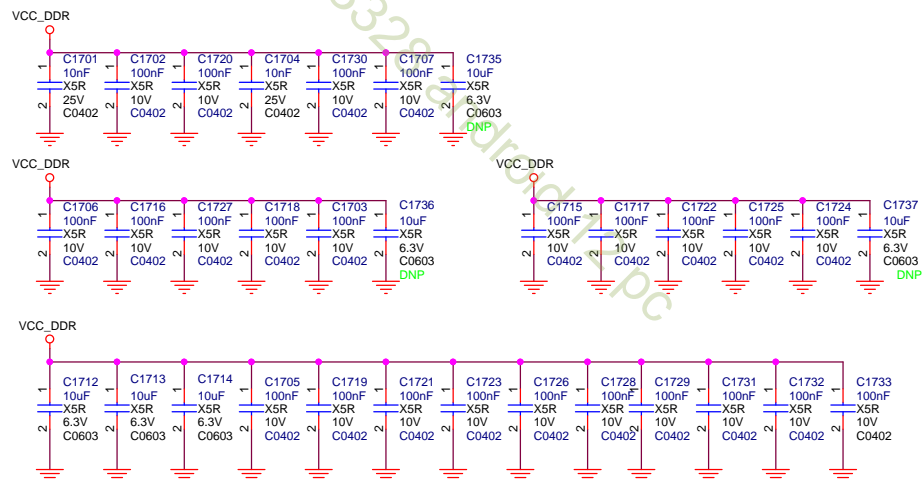
Project:	RK3328_BOX_REF		
File:	RK3328 FEPHY		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	14 of 29

DDR3 RAM

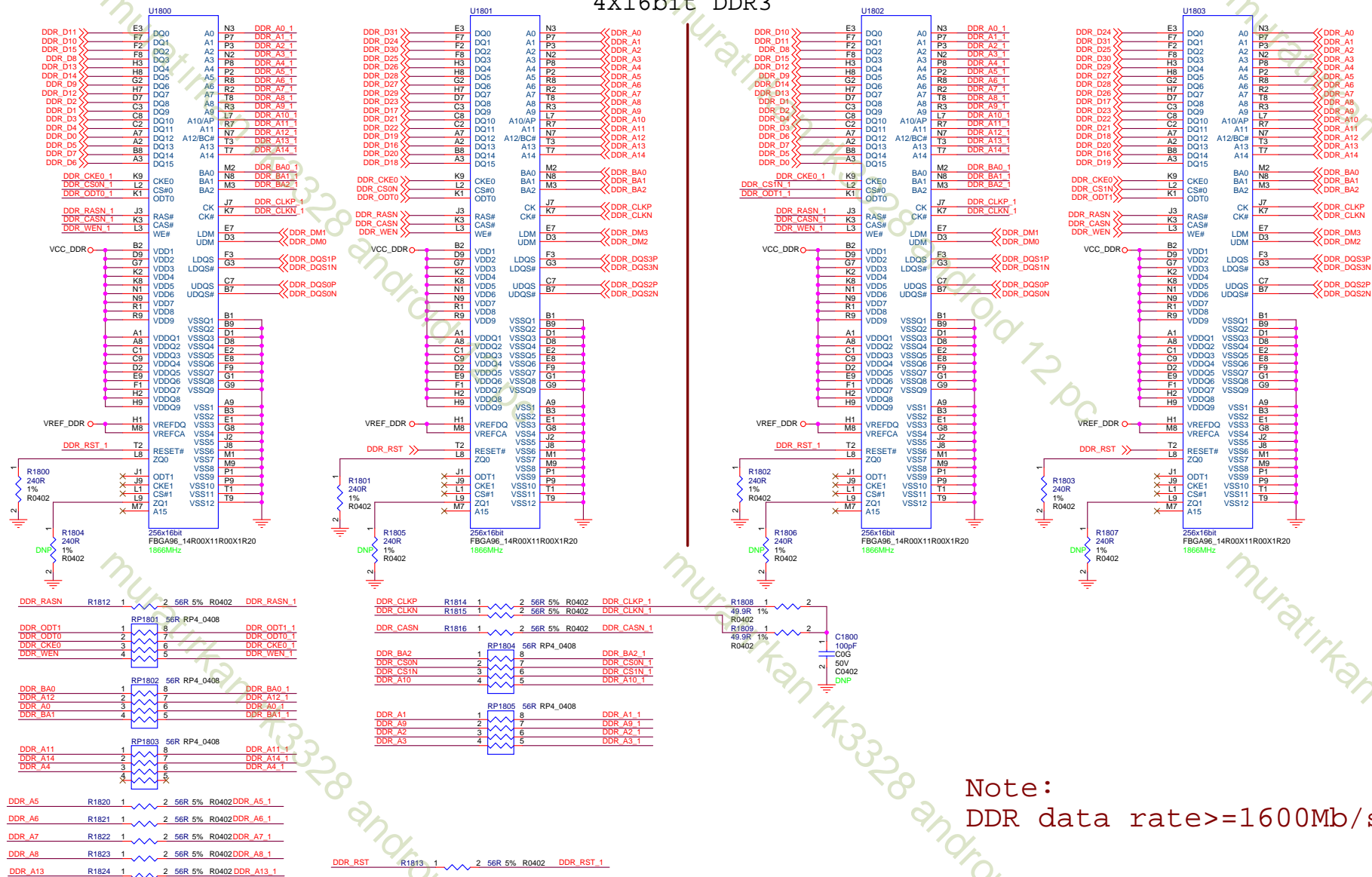


Note: $\text{DDR data rate} \geq 1600\text{Mb/s}$

2X16bit DDR3

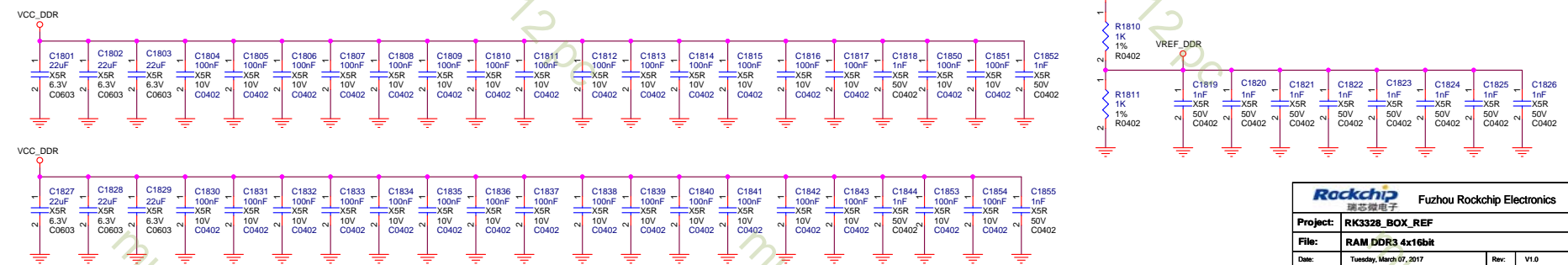


4x16bit DDR3

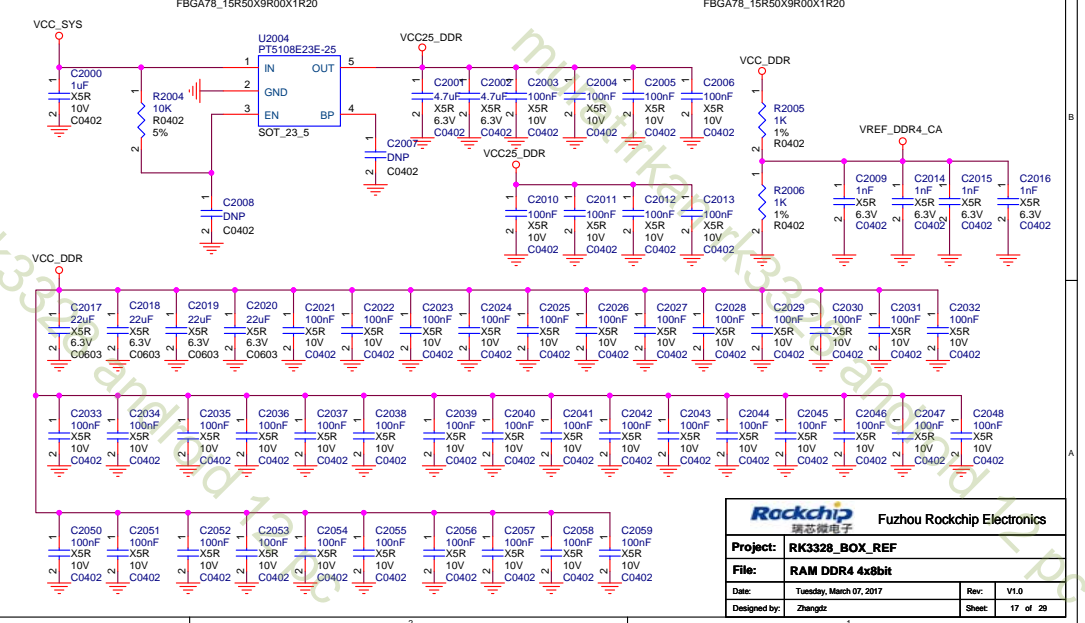
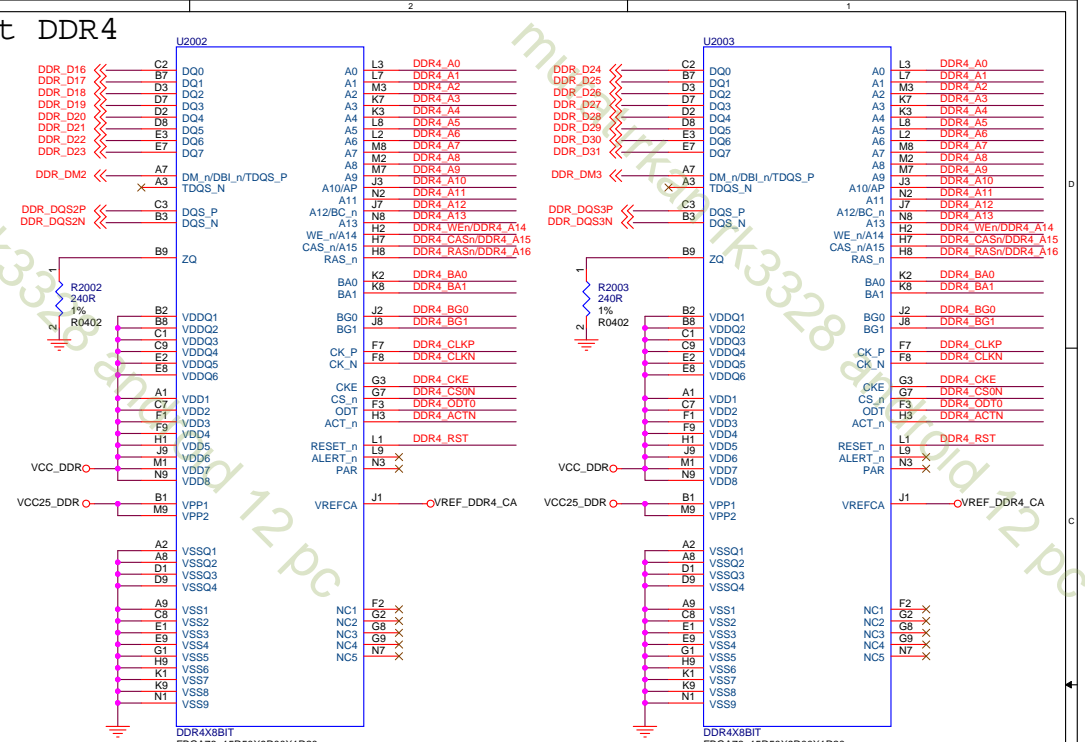
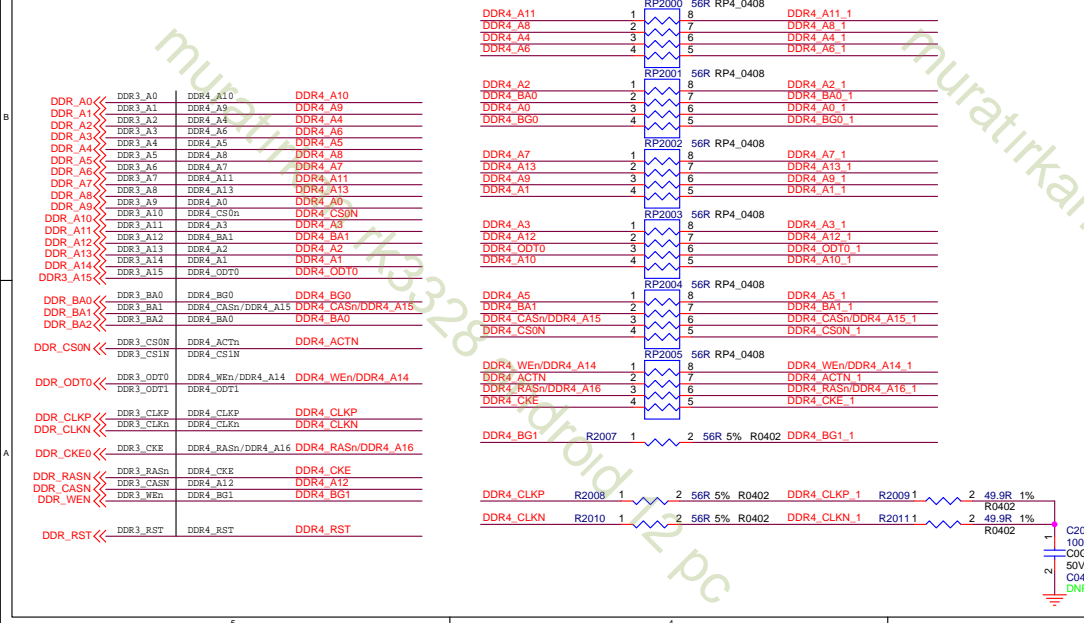
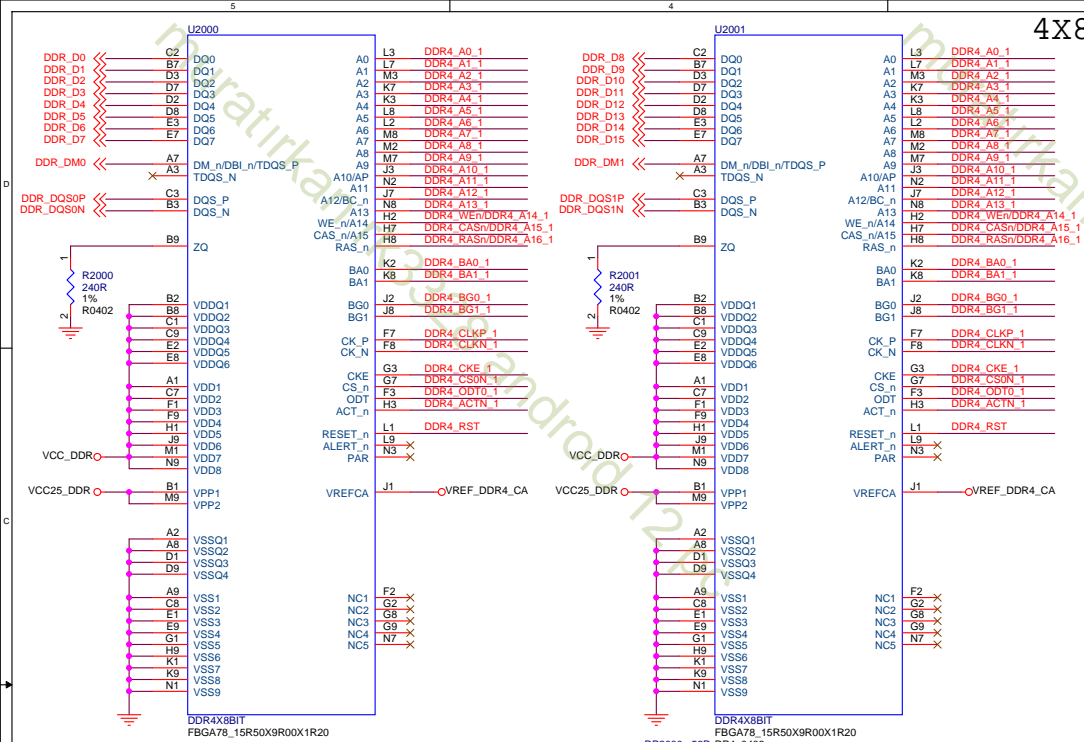


Note:
DDR data rate ≥ 1600Mb/s

DDR3 FILTER

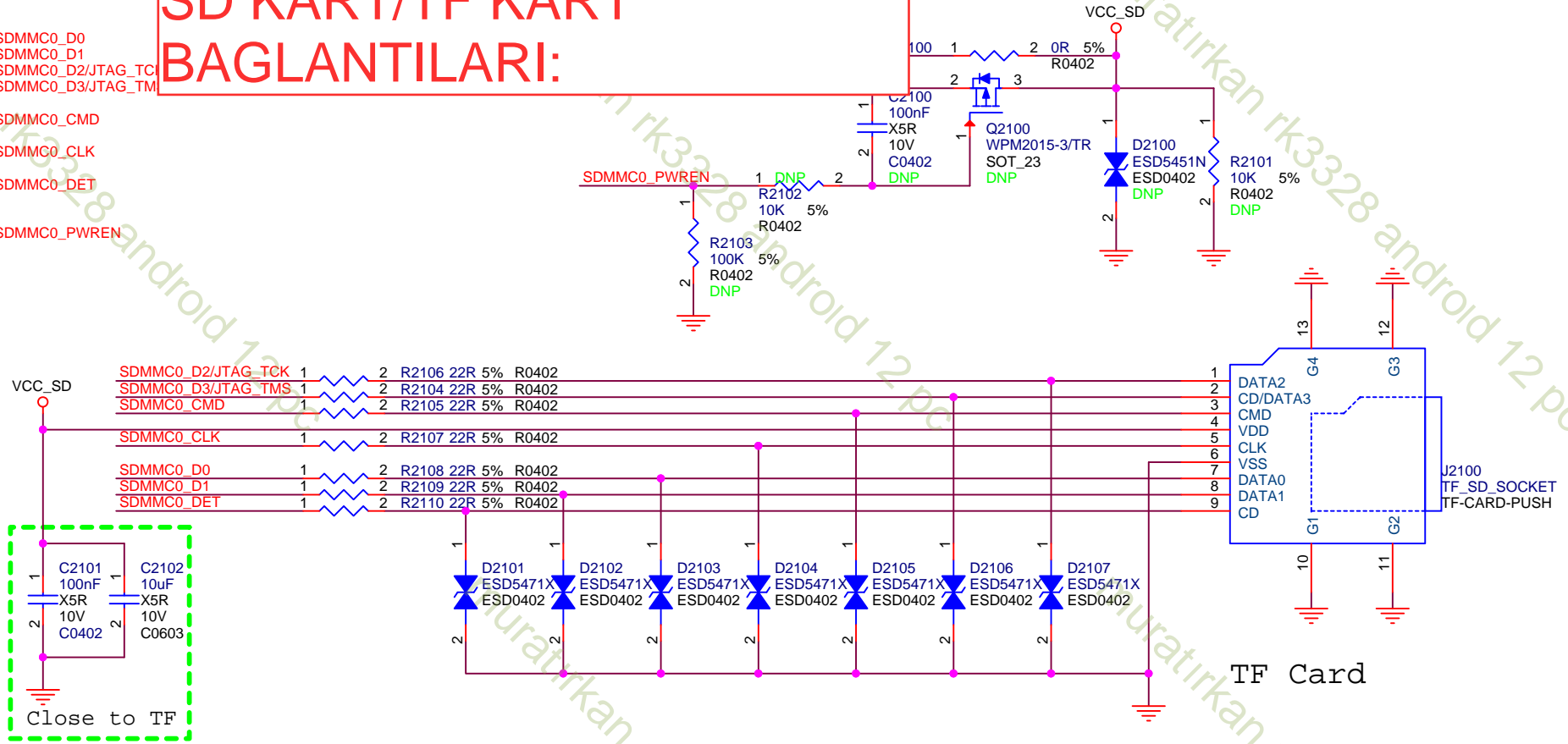


3
4X8bit DDR4

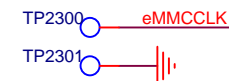
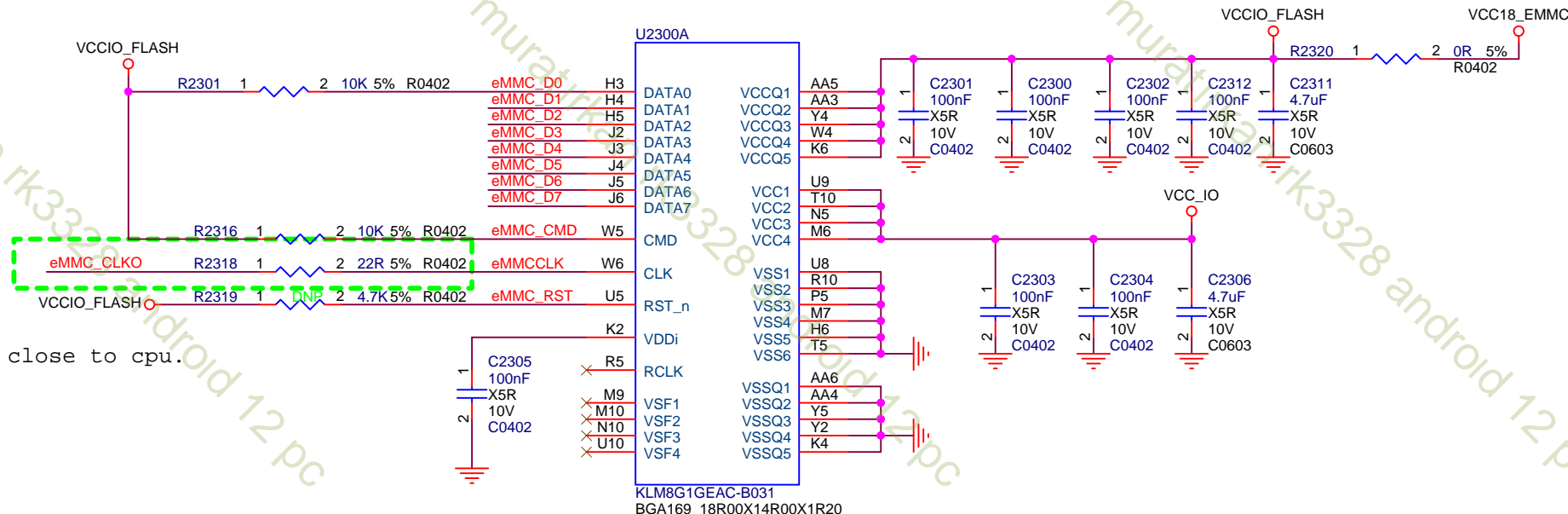


SD KART/TF KART BAGLANTILARI:

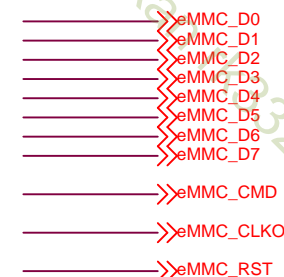
>>SDMMC0_D0
 >>SDMMC0_D1
 >>SDMMC0_D2/JTAG_TCK
 >>SDMMC0_D3/JTAG_TMS
 >>SDMMC0_CMD
 >>SDMMC0_CLK
 <<SDMMC0_DET
 >>SDMMC0_PWREN




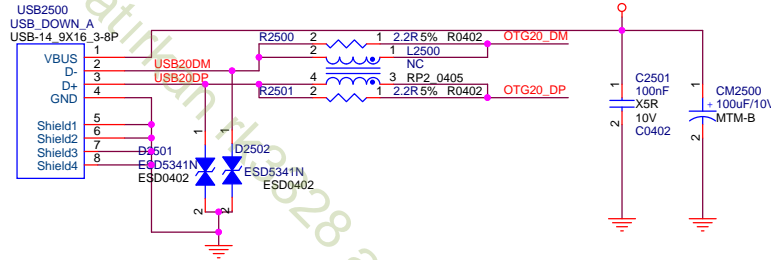
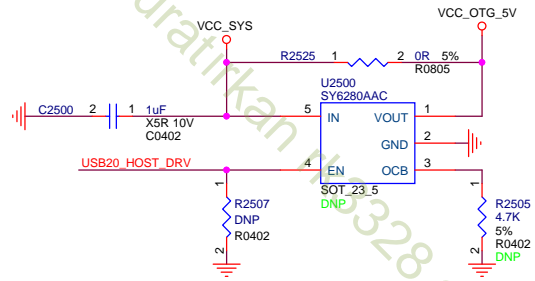
Note:
The 22ohm Res. close to cpu.



Note:
eMMC Update.

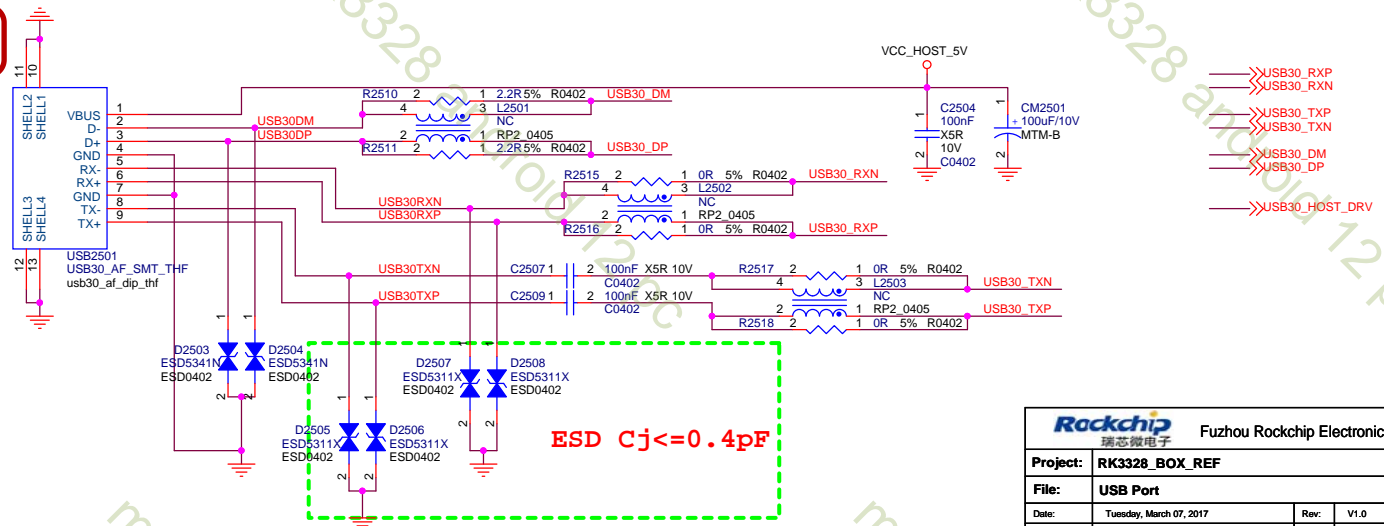
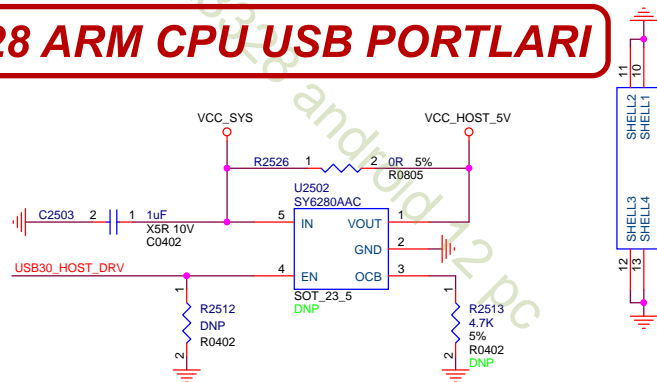


 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	Flash-eMMC		
Date:	Tuesday, March 07, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	19 of 29

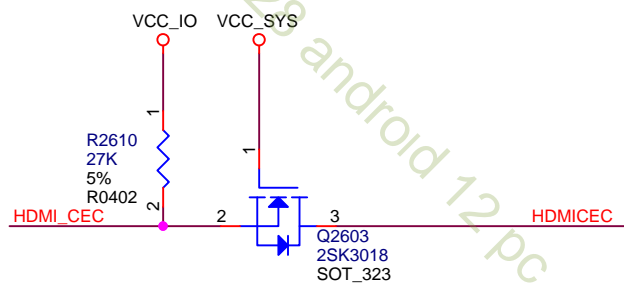
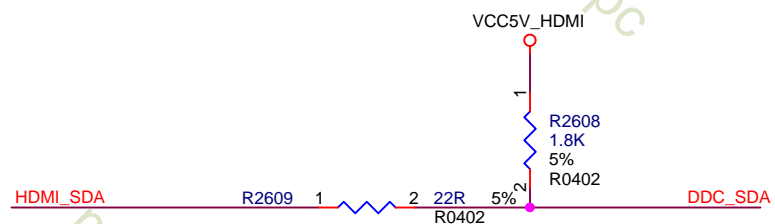
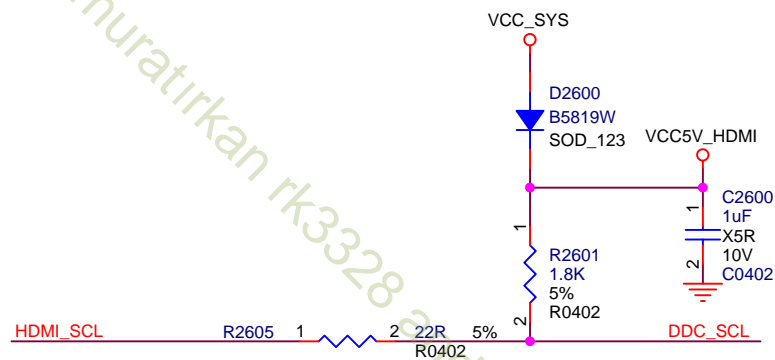


OTG20_DM
OTG20_DP
USB20_HOST_DRV

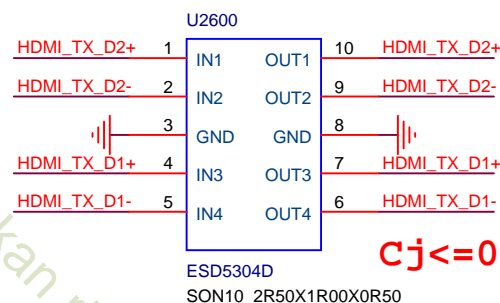
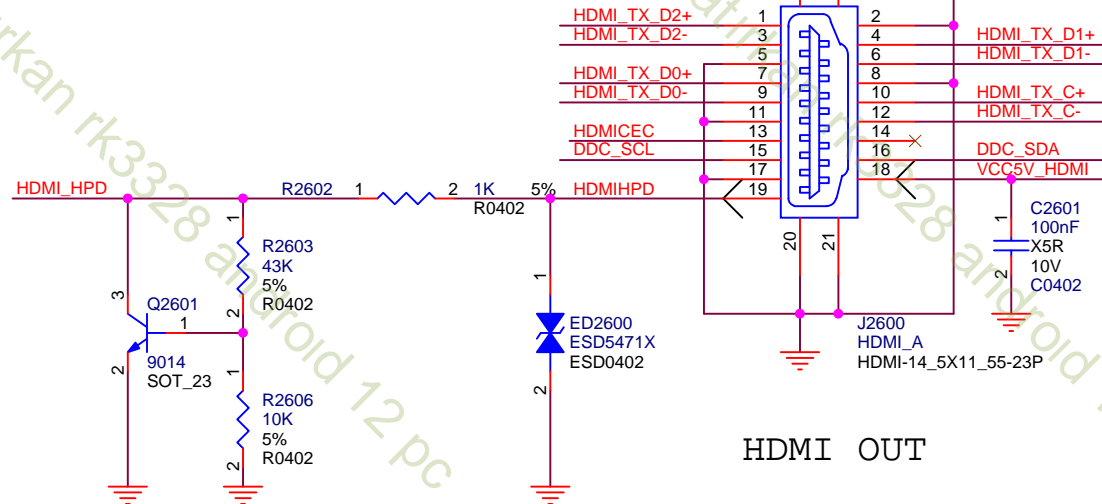
RK3328 ARM CPU USB PORTLARI



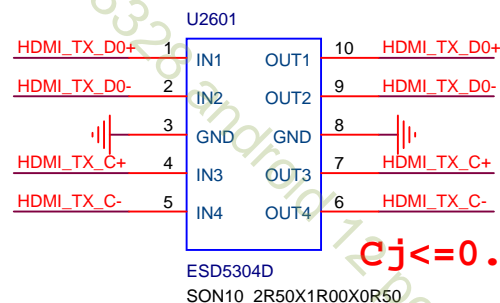
 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	USB Port		
Date:	Tuesday, March 07, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	20 of 29



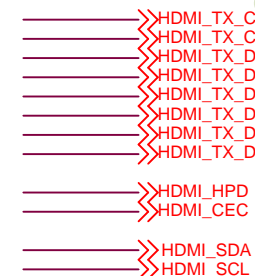
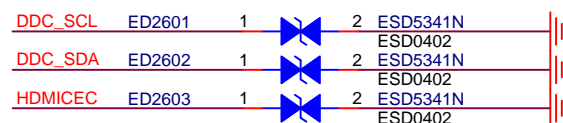
HDMI CIKISI




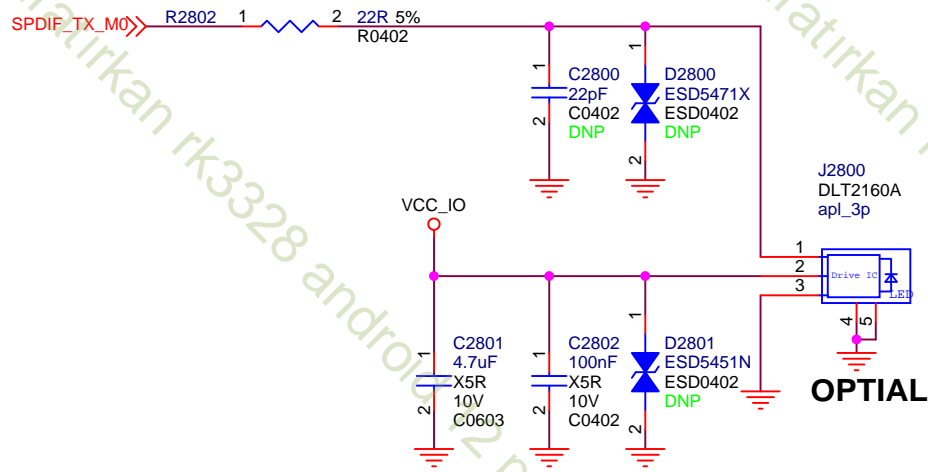
$C_j \leq 0.4 \text{ pF}$



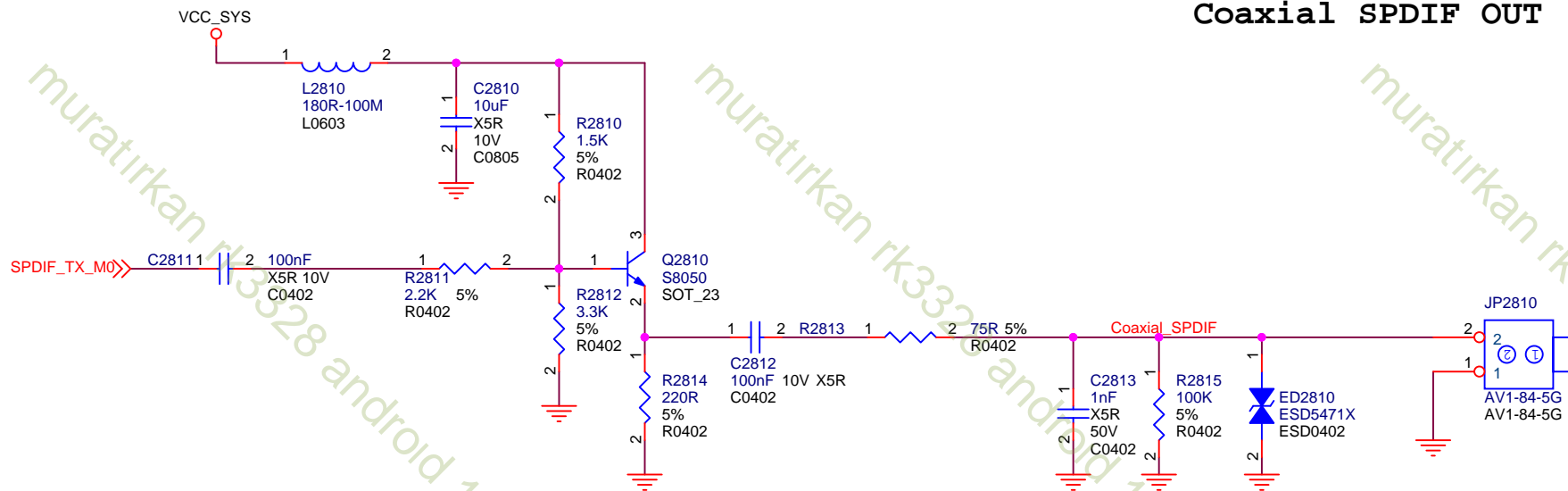
$C_j \leq 0.4 \text{ pF}$




 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	HDMI OUT Port		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	21 of 29

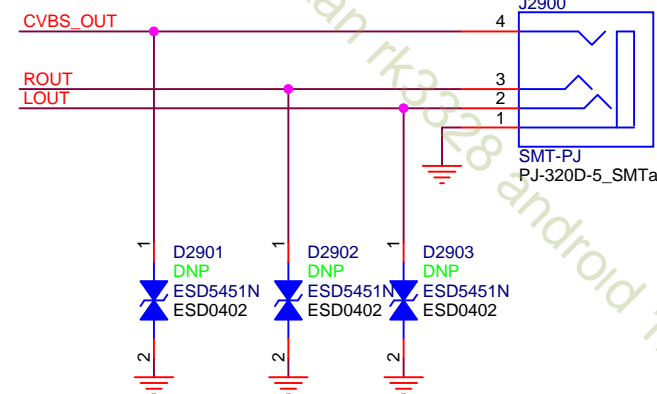


Optical SPDIF OUT



Coaxial SPDIF OUT

 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	S/PDIF Port		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	22 of 29

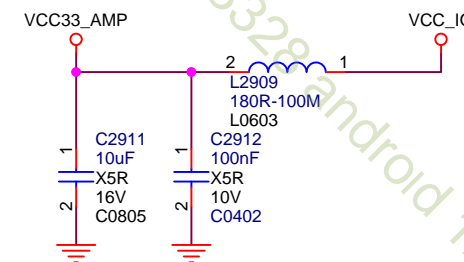


—>>VDAC_OUT


—>>AOL

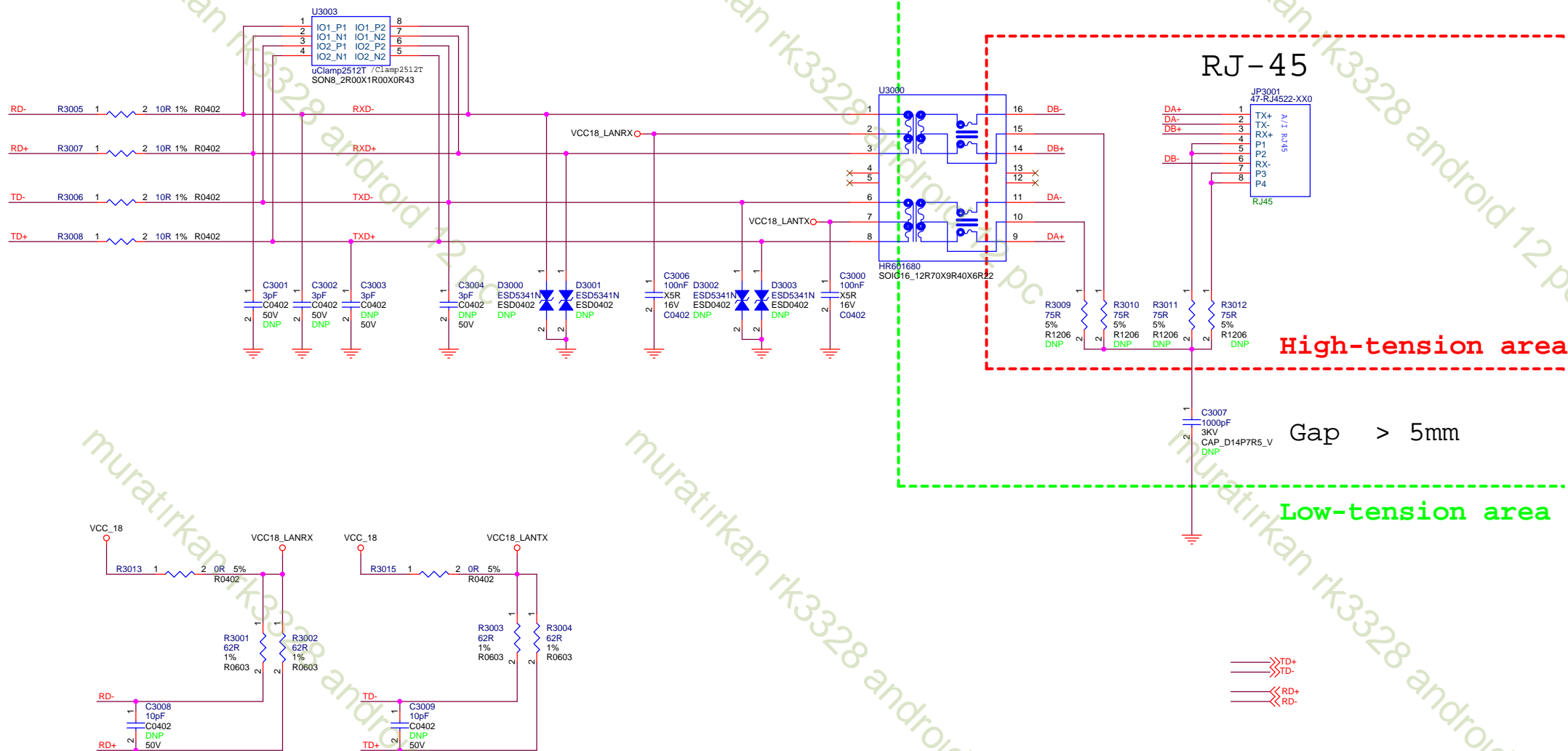
—>>AOR

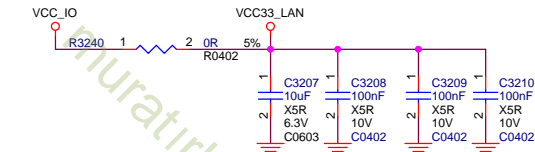
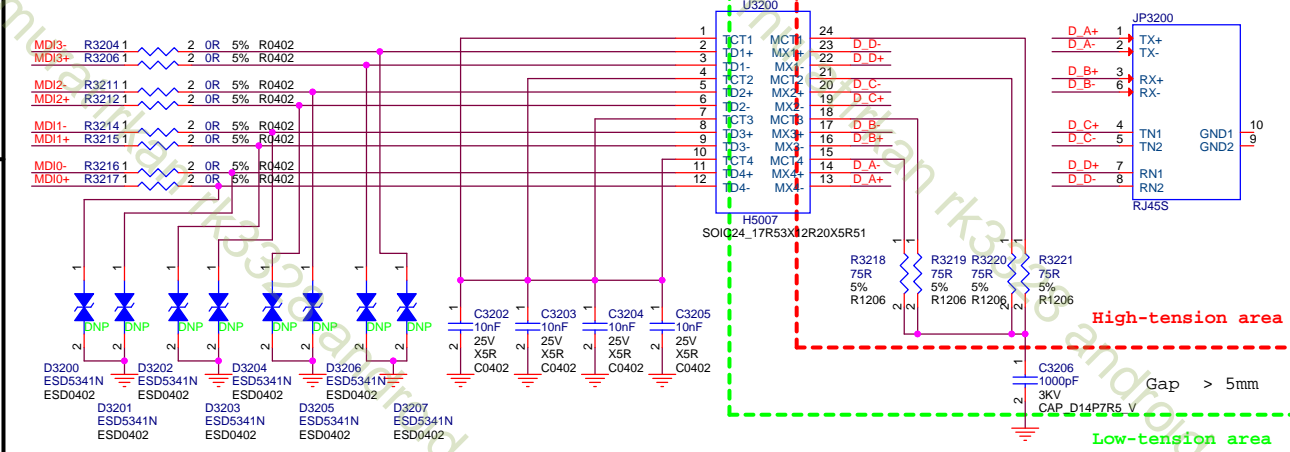
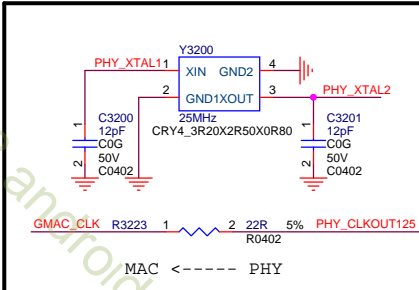
—>>MUTE_CTL



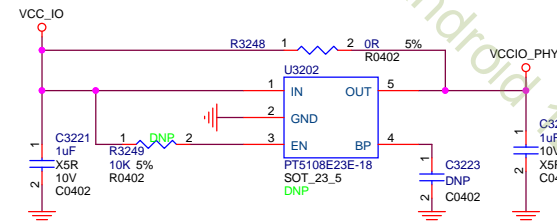
2-Vrms Audio Line Driver

 Fuzhou Rockchip Electronics 瑞芯微电子	
Project:	RK3328_BOX_REF
File:	AV OUT Port
Date:	Tuesday, March 07, 2017
Rev:	V1.0
Designed by:	Zhangdz
Sheet:	23 of 29

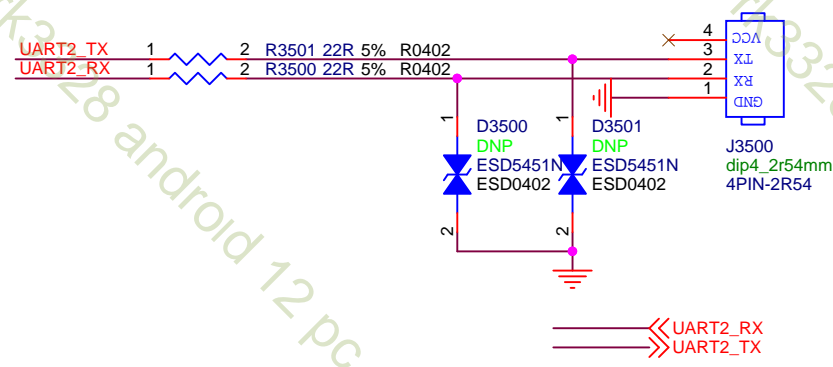





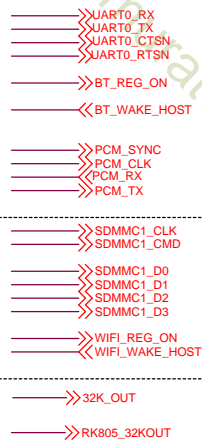
Pull down for 2.5V RGMII(RTL8211D/8211E)
Pull up for 3.3V RGMII (RTL8211D/8211E)
Pull up1.5 /1.8V RGMII (RTL8211E-VL only)



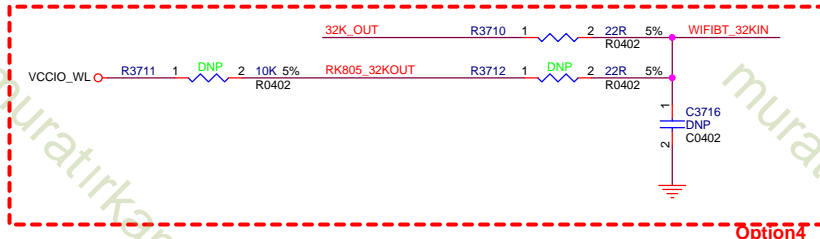
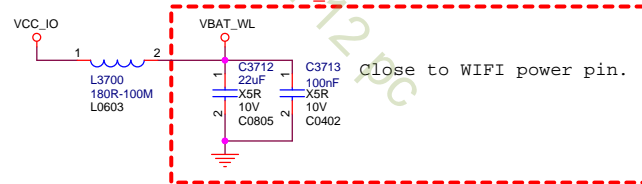
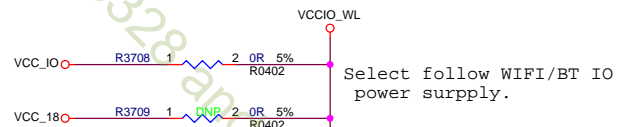
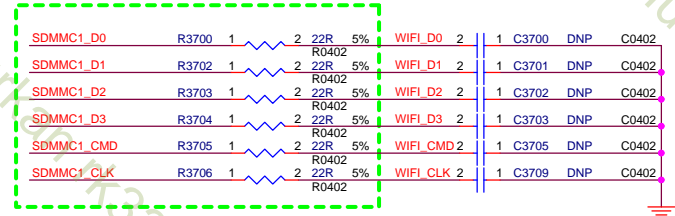
Debug UART2



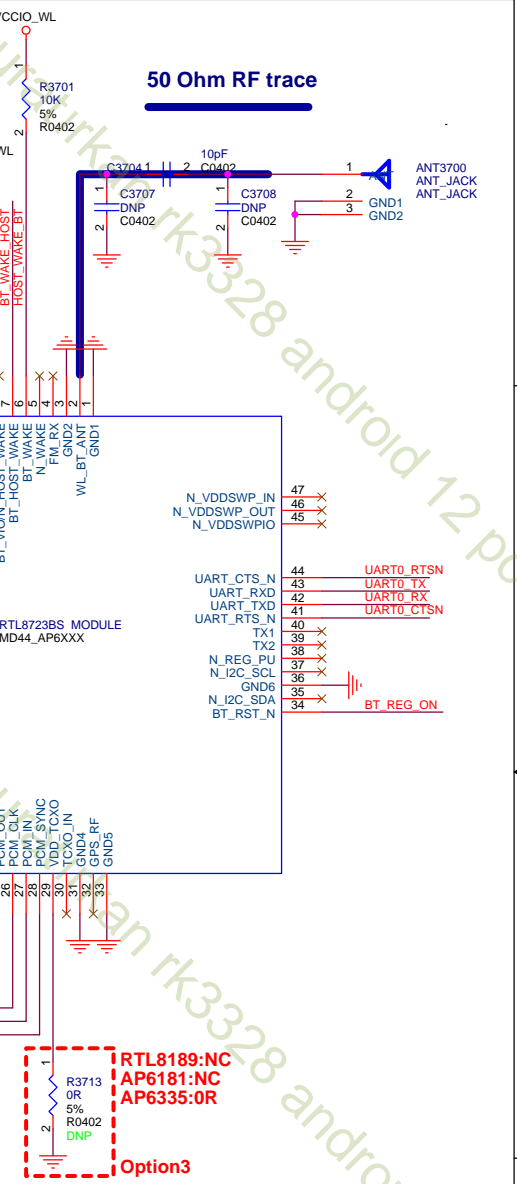
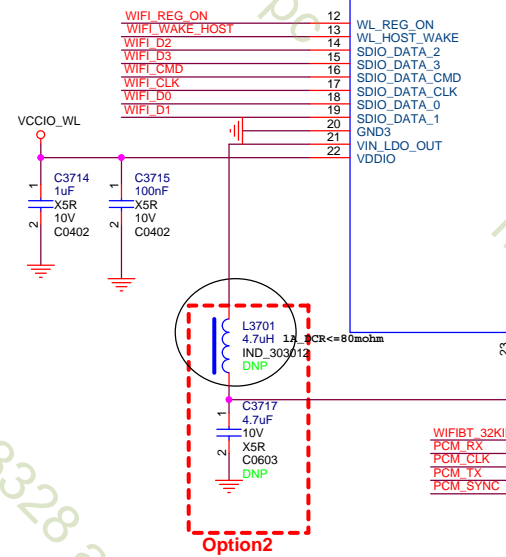
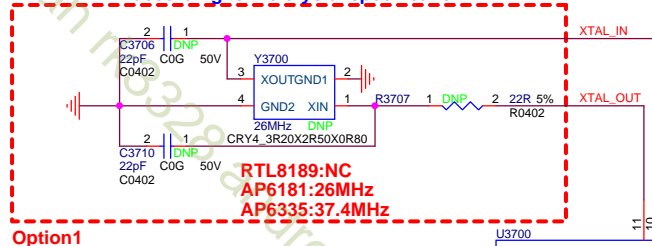
 Fuzhou Rockchip Electronics			
Project:	RK3328_BOX_REF		
File:	Debug UART2/JTAG		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	<designer>	Sheet:	26 of 29



请靠近CPU放置。



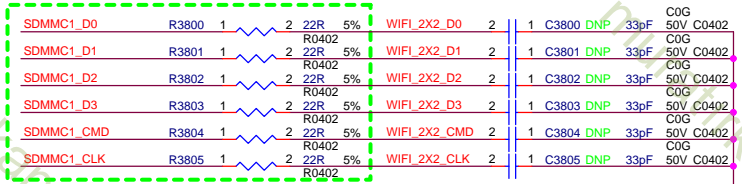
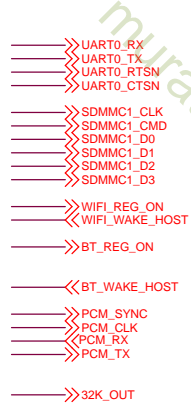
Note:
Adjusted the load capacitance according to the crystal specification.



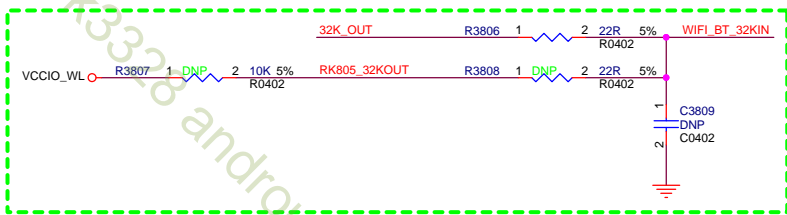
1X1 WIFI
AP6181/AP6212/AP6330/AP6335/RTL8189FTV
RTL8723BS/XZ3538/XZ3660

OPTION	WIFI				BT	Crystals	VDDIO
	a	b/g/n	ac	5GHz			
AP6181	No	Yes	No	No	No	26MHz	1.71-3.6V
AP6212	No	Yes	No	No	Yes	26MHz	1.71-3.6V
XZ3538	No	Yes	No	No	Yes	26MHz	1.71-3.6V
AP6330	Yes	Yes	No	Yes	Yes	26MHz	1.2-2.9V
XZ3660	Yes	Yes	No	Yes	Yes	26MHz	1.2-2.9V
AP6335	Yes	Yes	Yes	Yes	Yes	37.4MHz	1.71-3.63V
RTL8189FTV MODULE	No	Yes	No	No	No	40MHz On the module	3.3V
RTL8723BS	No	Yes	No	No	Yes		1.71-3.63V

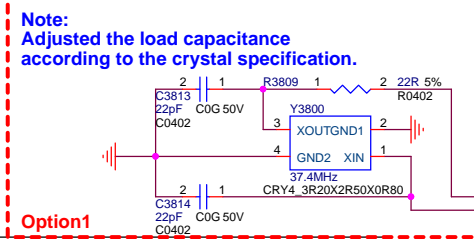
OPTION	1	2	3	4	5
AP6181	Yes	Yes	No	Yes	
AP6212	Yes	Yes	No	Yes	
AP6330	Yes	Yes	No	Yes	
AP6335	Yes	Yes	Yes	Yes	
RTL8189FTV MODULE	No	No	No	No	
RTL8723BS	No	No	No	Yes	



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Layout Note:
Crystal away from antenna



2T2R

OPTION	WIFI				BT	Crystals	VDDIO
	a	b/g/n	ac	5GHz			
AP6356S	Yes	Yes	Yes	Yes	Yes	37.4MHz	1.7-3.6V
QCA6174	Yes	Yes	Yes	Yes	Yes		1.7-3.6V
RTL8822	Yes	Yes	Yes	Yes	Yes		1.7-3.6V
RTL8192	No	Yes	No	No	No		1.7-3.6V

OPTION	1	2	3
AP6356S	Paste	Paste	
QCA6174	DNP	DNP	
RTL8822	DNP	DNP	
RTL8192	DNP	DNP	

