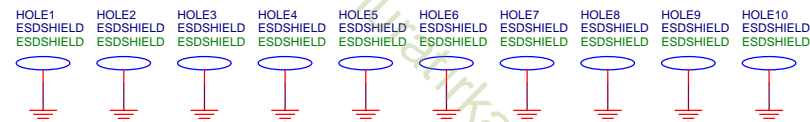


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RK3328 BOX Ref



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

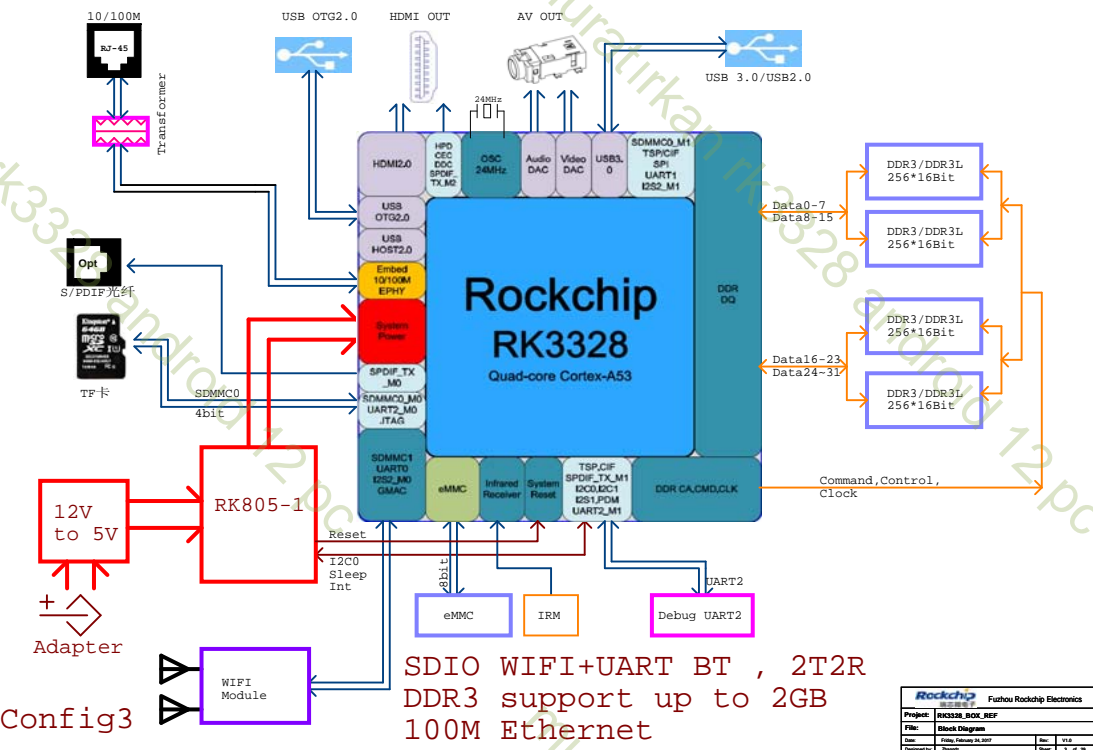
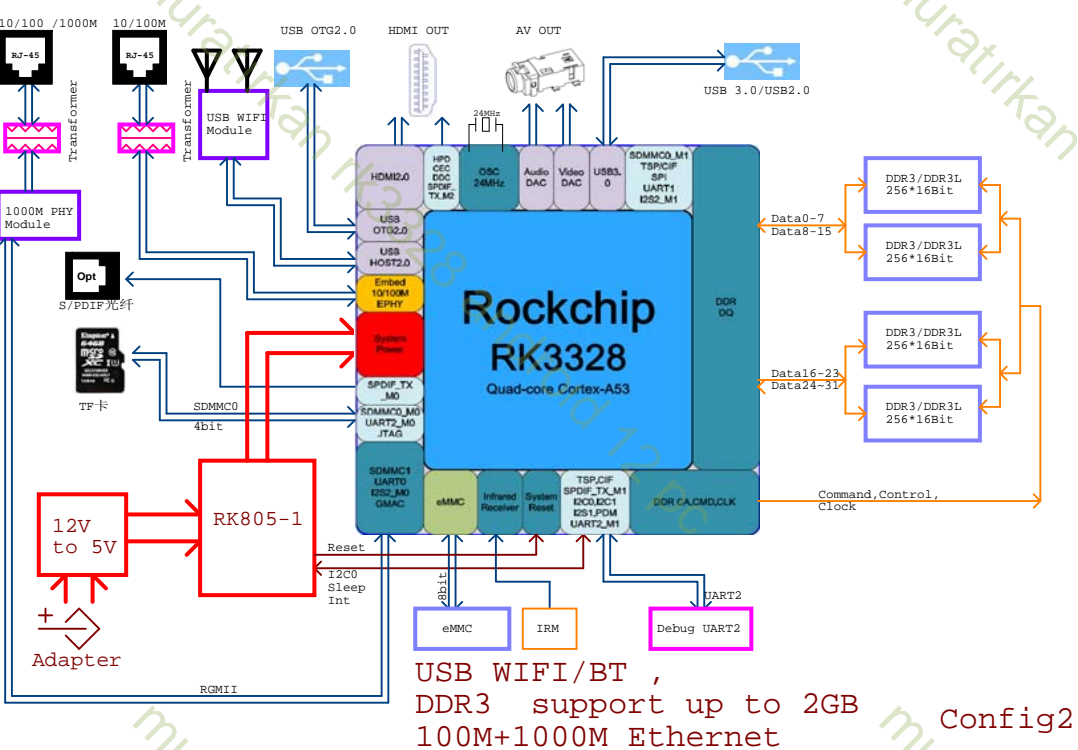
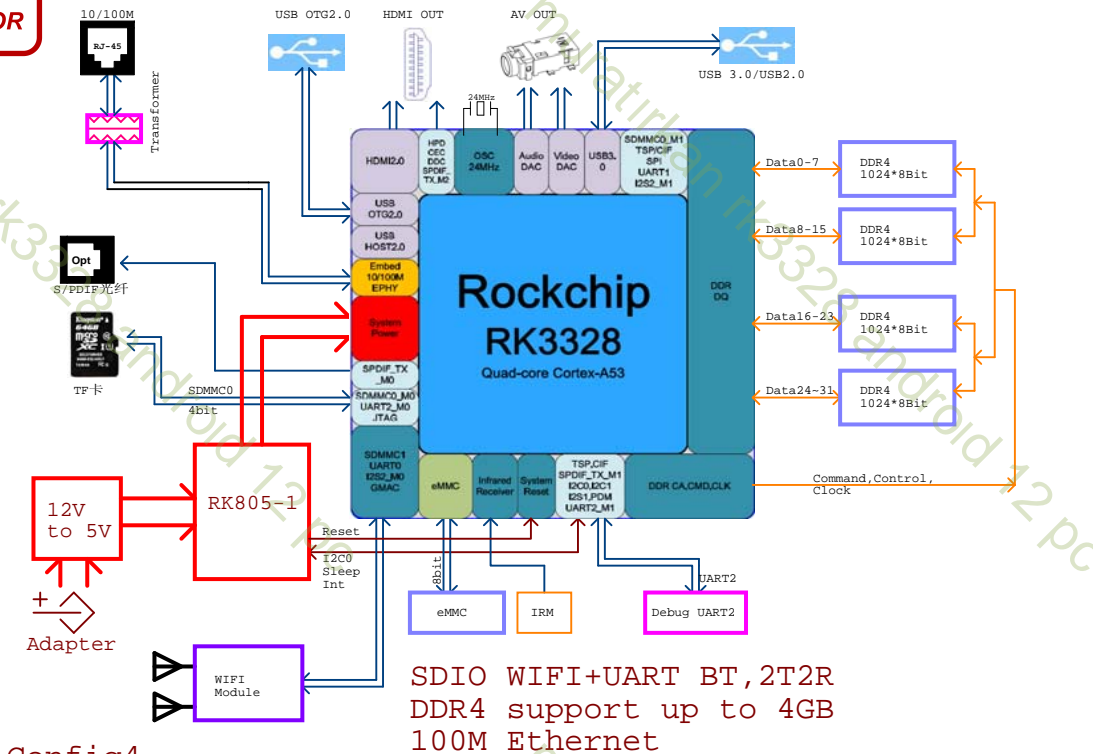
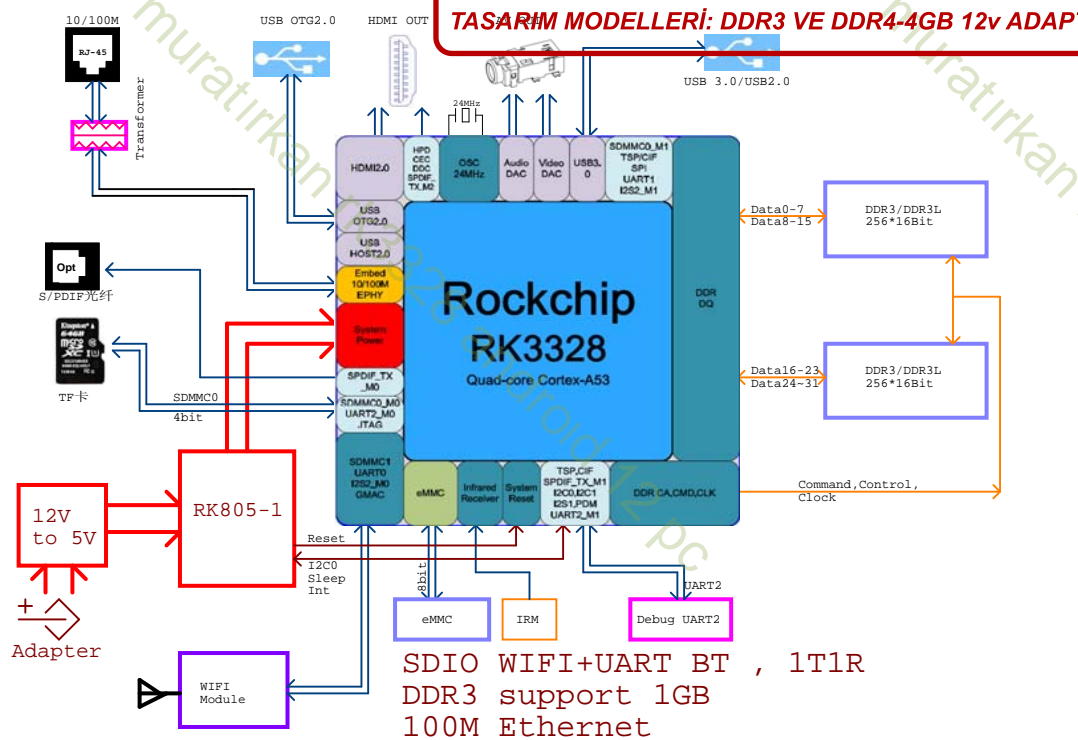
1. DNP stands for component not mounted temporarily
2. If Value or option is DNP, which means the area is reserved without being mounted

Rockchip
瑞芯微电子 Fuzhou Rockchip Electronics

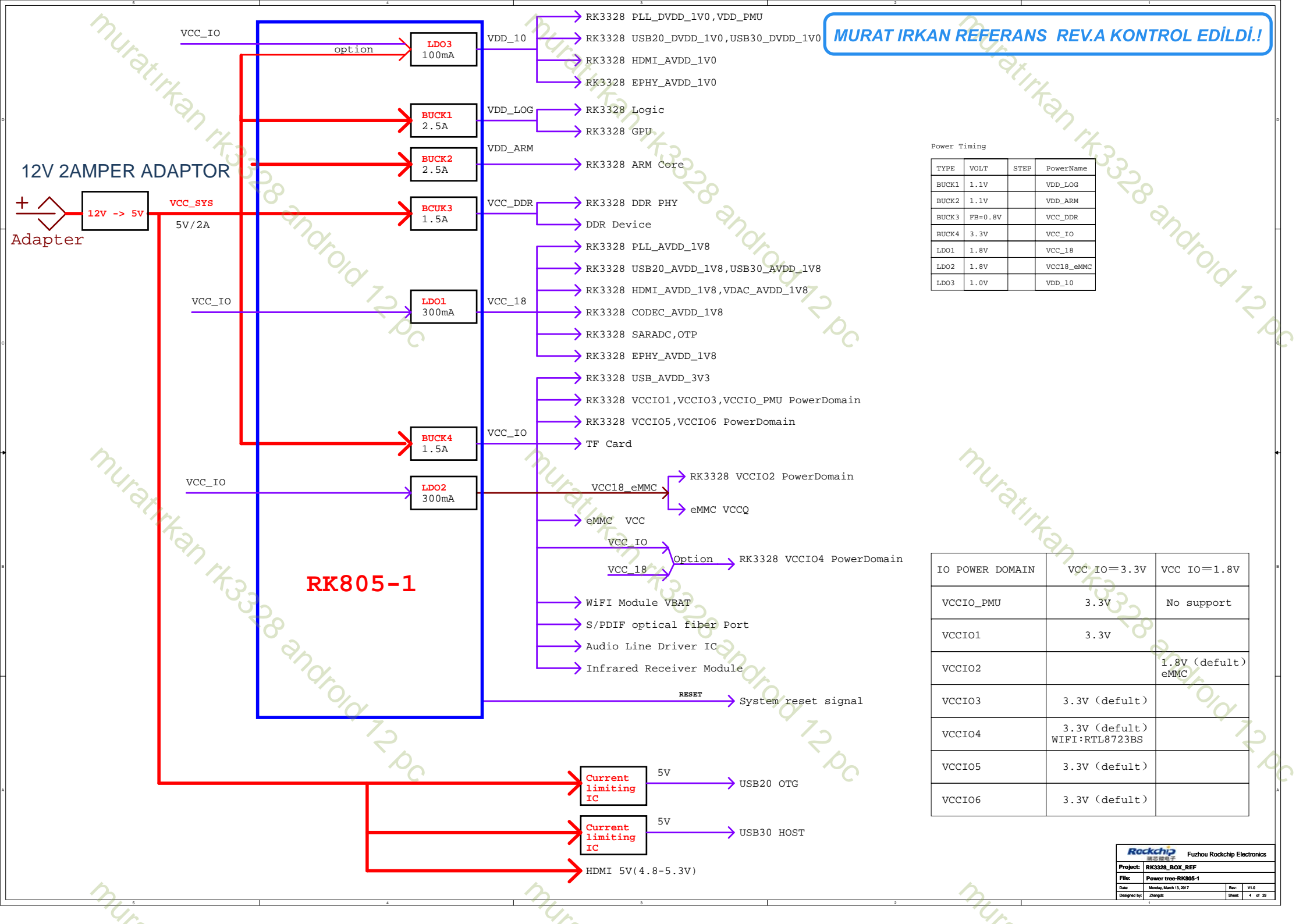
Project:	RK3328_BOX_REF		
File:	Index		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	1 of 29

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

TASARIM MODELLERİ: DDR3 VE DDR4 4GB 12v ADAPTOR



MURAT IRKAN REFERANS REV.A KONTROL EDİLDİ.!



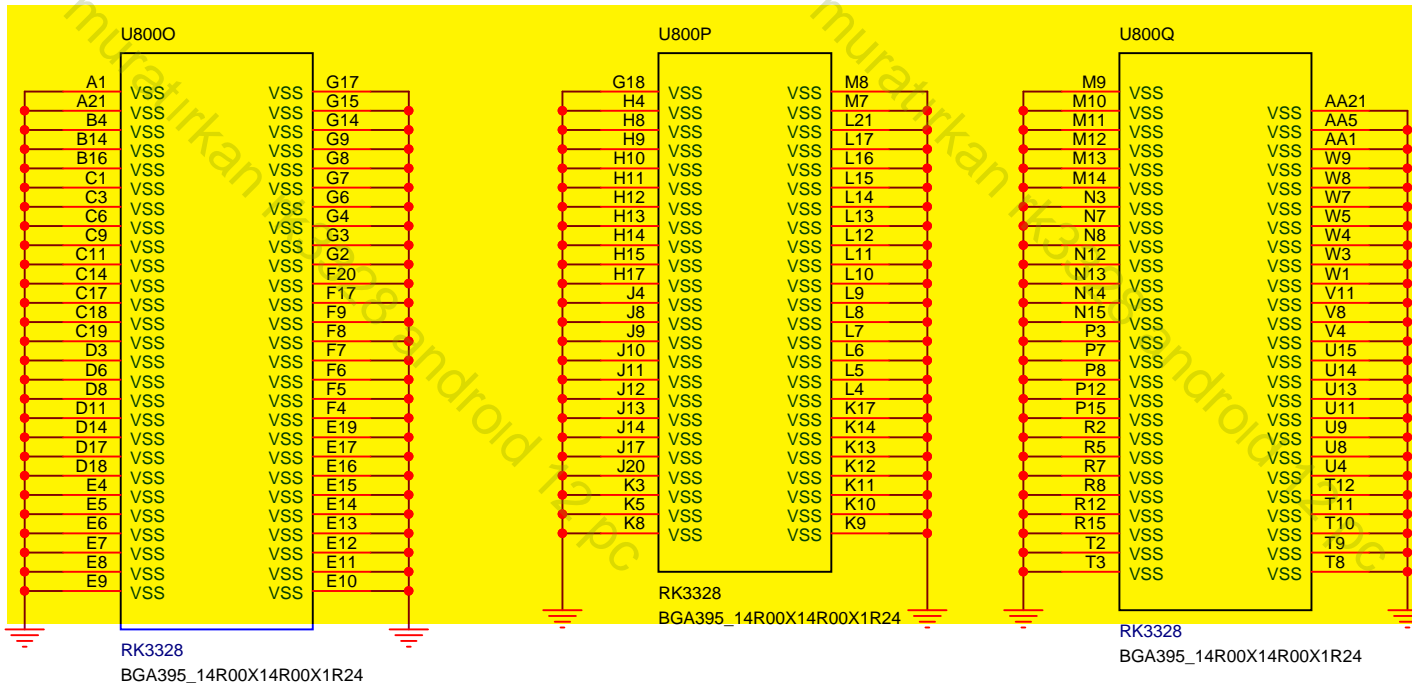
TYPE	VOLT	STEP	PowerName
BUCK1	1.1V		VDD_LOG
BUCK2	1.1V		VDD_ARM
BUCK3	FB=0.8V		VCC_DDR
BUCK4	3.3V		VCC_IO
LDO1	1.8V		VCC_18
LDO2	1.8V		VCC18_eMC
LDO3	1.0V		VDD_10

IO POWER DOMAIN	VCC_IO=3.3V	VCC_IO=1.8V
VCCIO_PMU	3.3V	No support
VCCIO1	3.3V	
VCCIO2		1.8V (default) eMMC
VCCIO3	3.3V (default)	
VCCIO4	3.3V (default) WIFI:RTL8723BS	
VCCIO5	3.3V (default)	
VCCIO6	3.3V (default)	

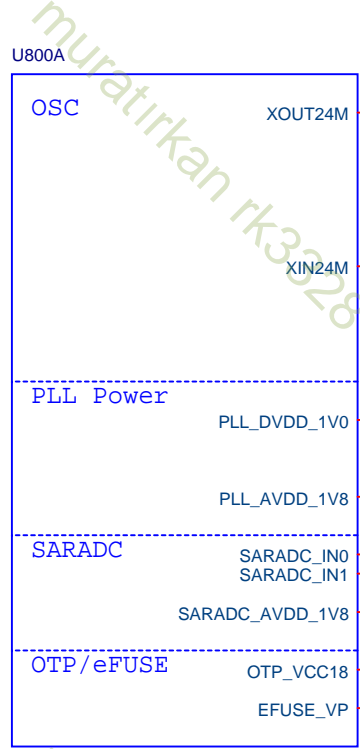
RK3328 ARM CPU GUC VE GRAFIK KART GUC BAGLANTILARI VE SASE

ARM CPU RK3328 SASE VE GÜÇ KONTROL-1

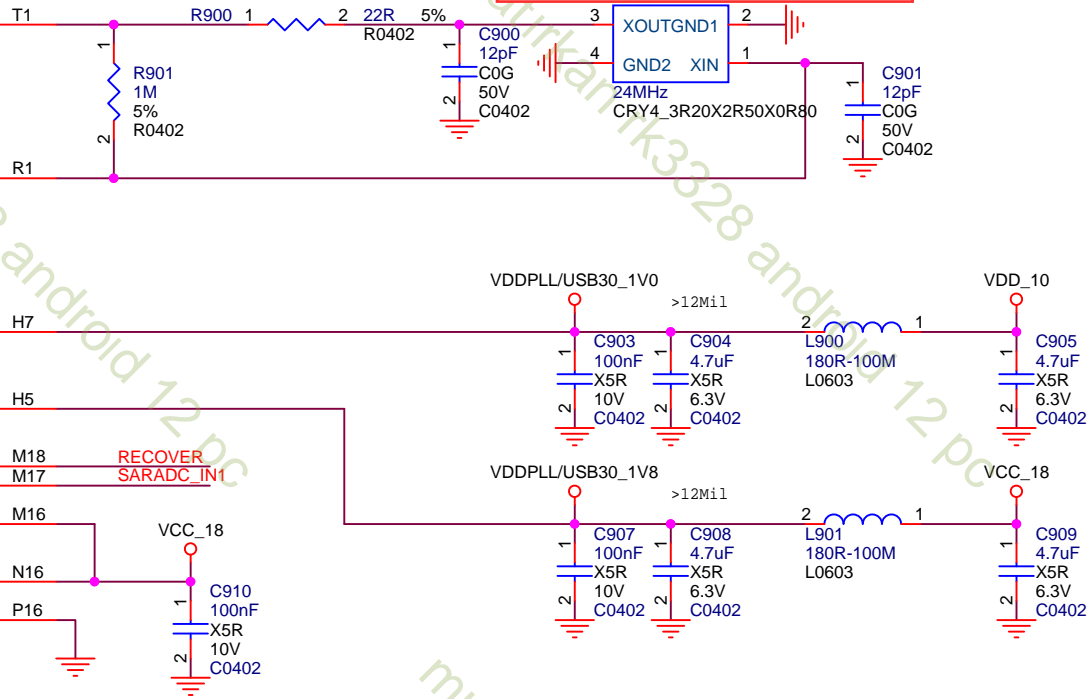
06/07/2024 11:04 AM



MURAT IRKAN RK3328 ROCKCHIP
PC S STEM

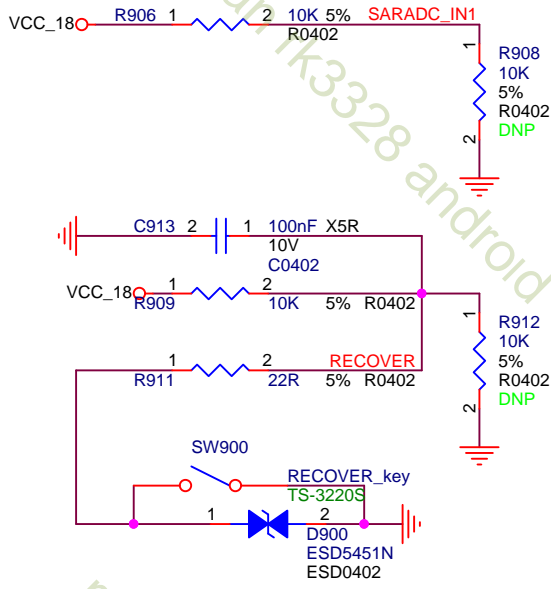


KR STAL: 24MHz



RK3328

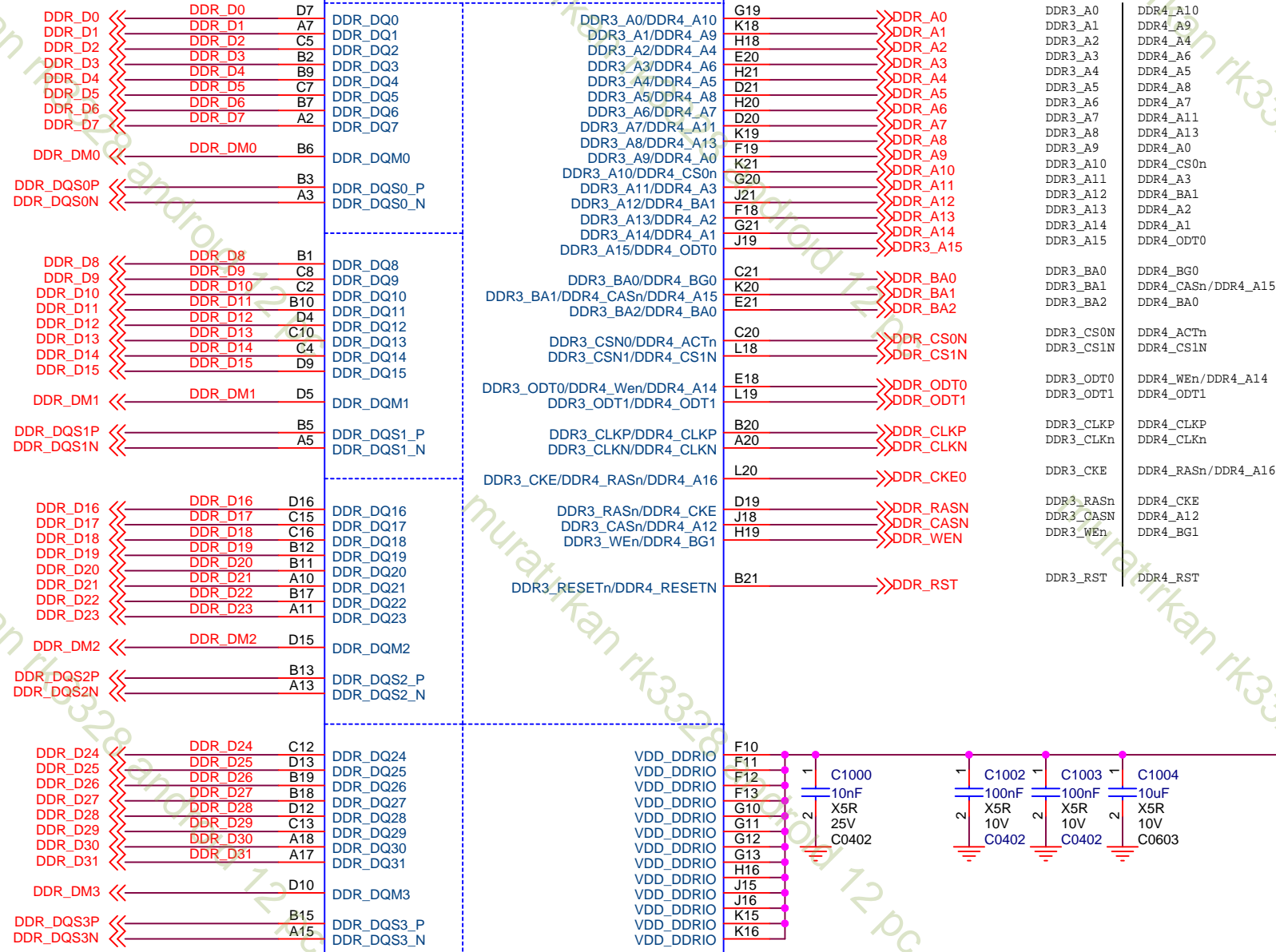
BGA395_14R00X14R00X1R24



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

DDR3 VE DDR4 BELLEKLER :KONTROL-1

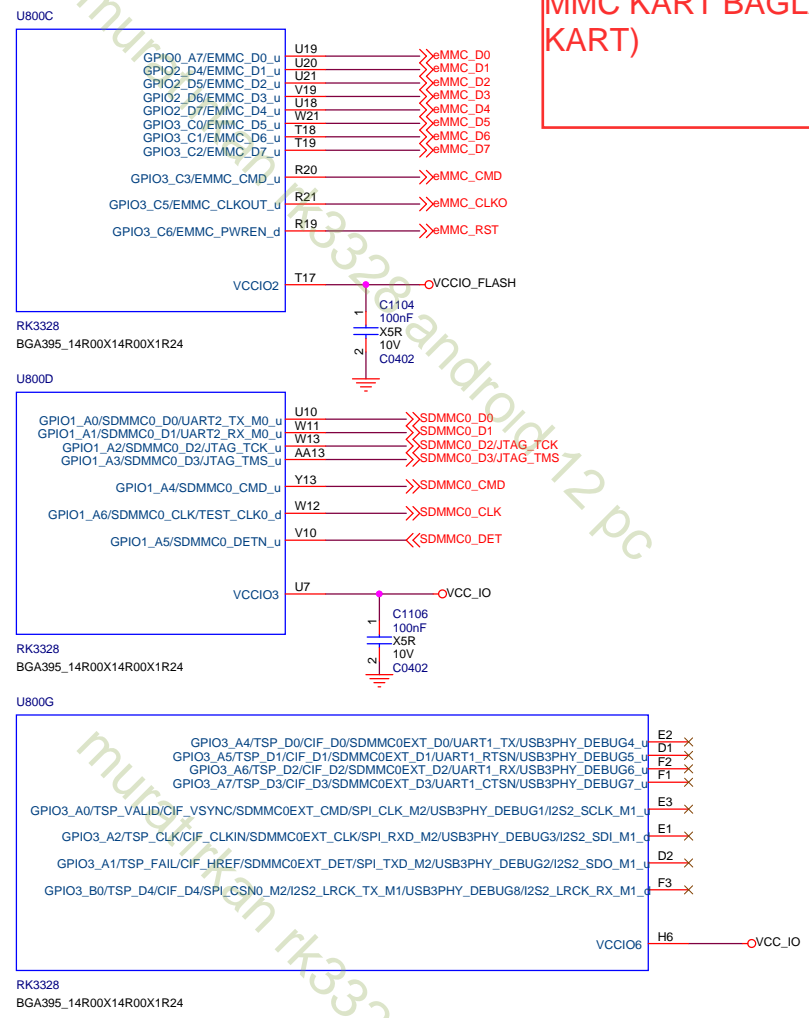


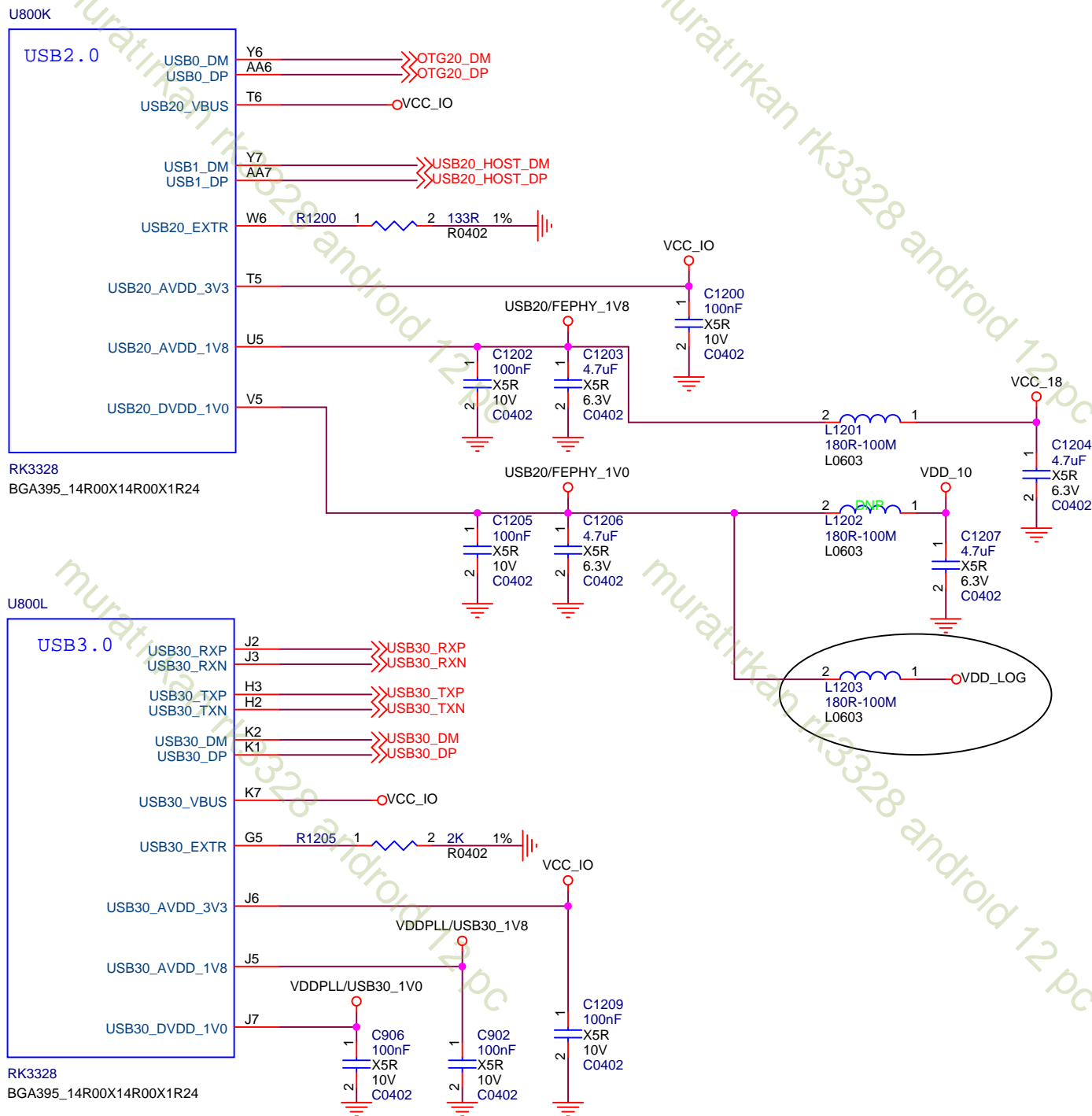
RK3328
BGA395_14R00X14R00X1R24

Fuzhou Rockchip Electronics

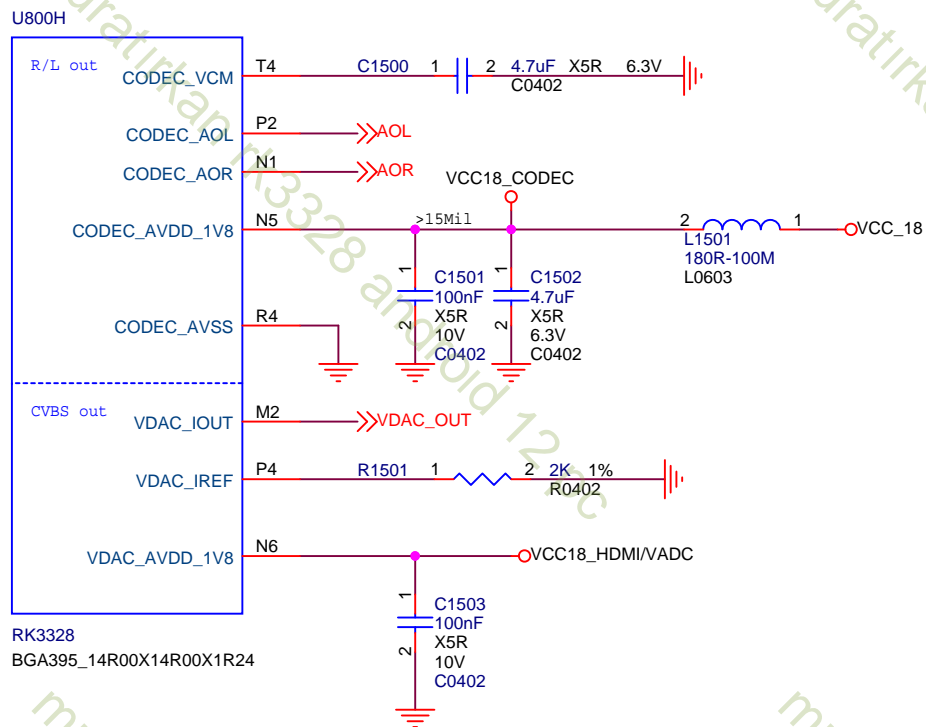
Project:	RK3328_BOX_REF		
File:	RK3328 DDR Controller		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	8 of 29


MMC KART BAGLANTISI (MULT MEDYA KART)

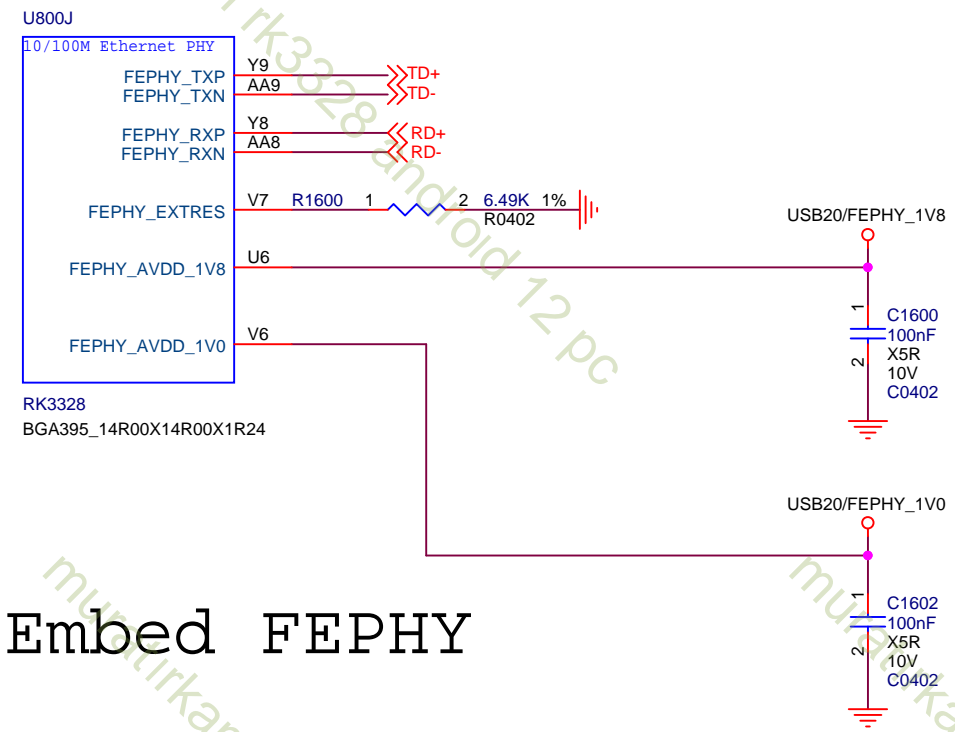





 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	RK3328 USB2 PHY/USB3 PHY		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	10 of 29



 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



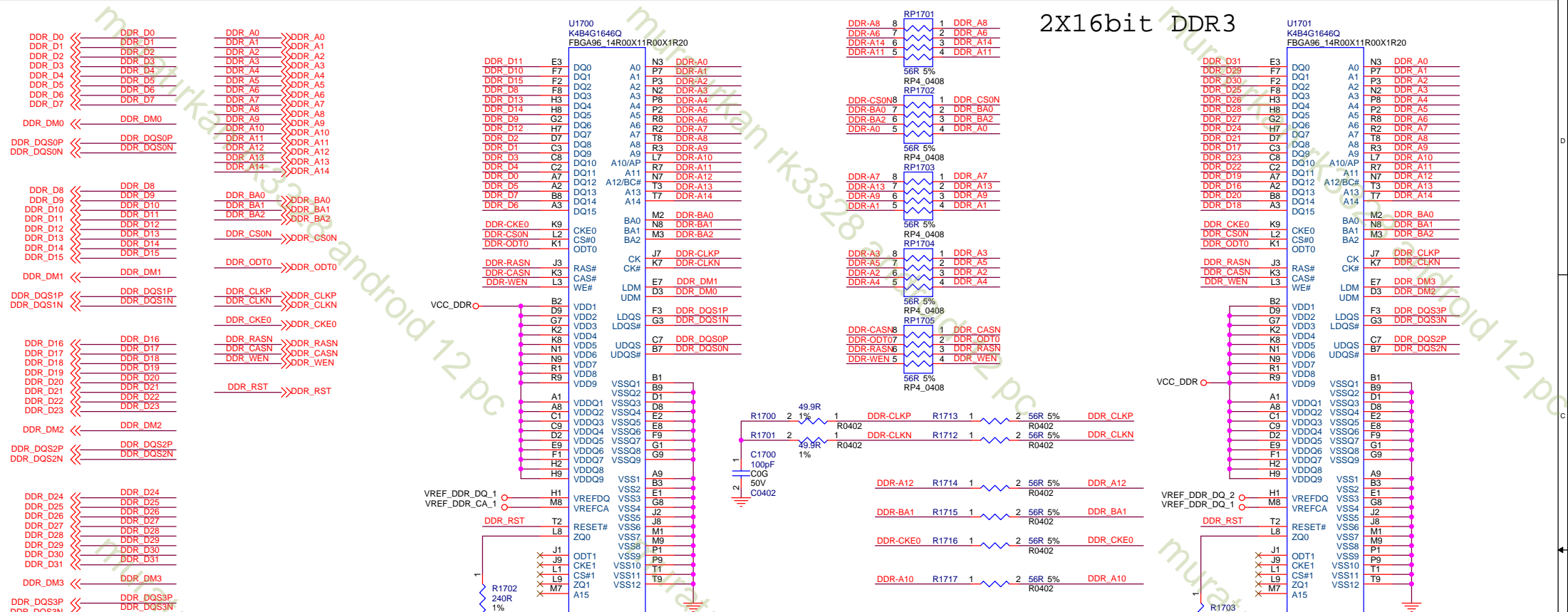
Embed FEPHY



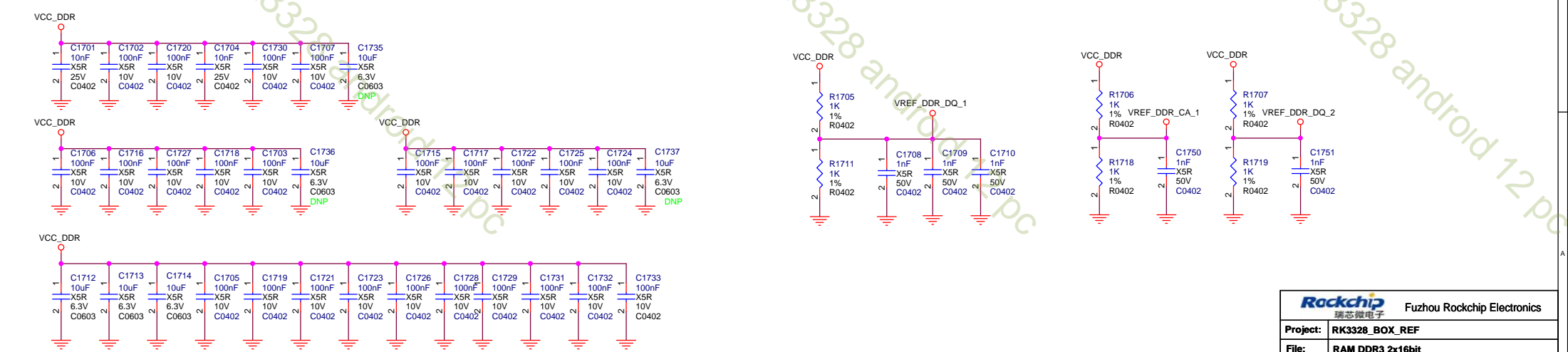
瑞芯微电子

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



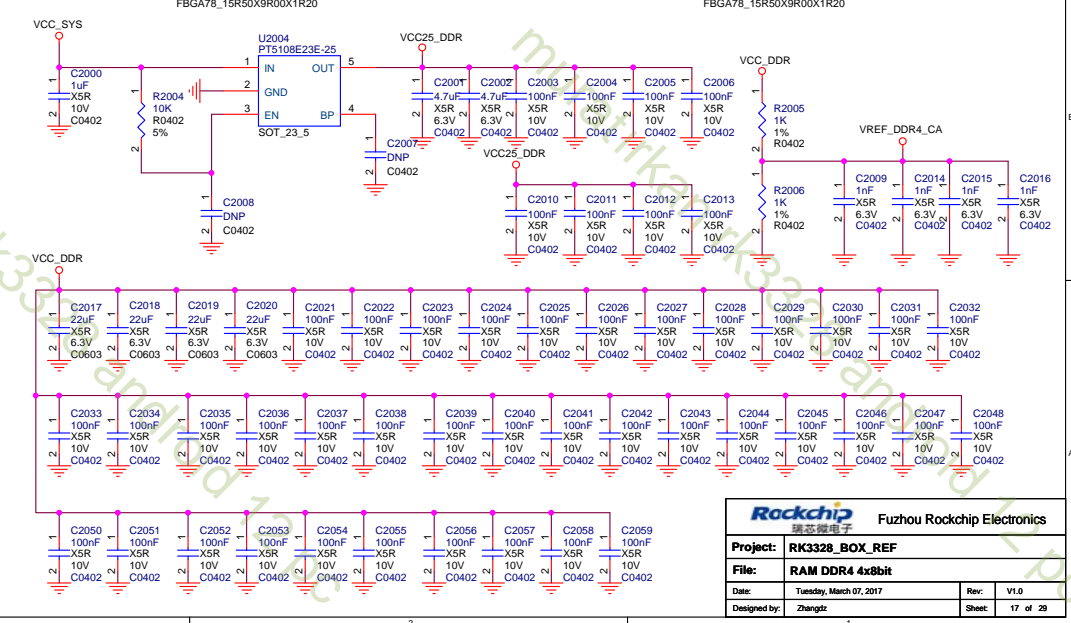
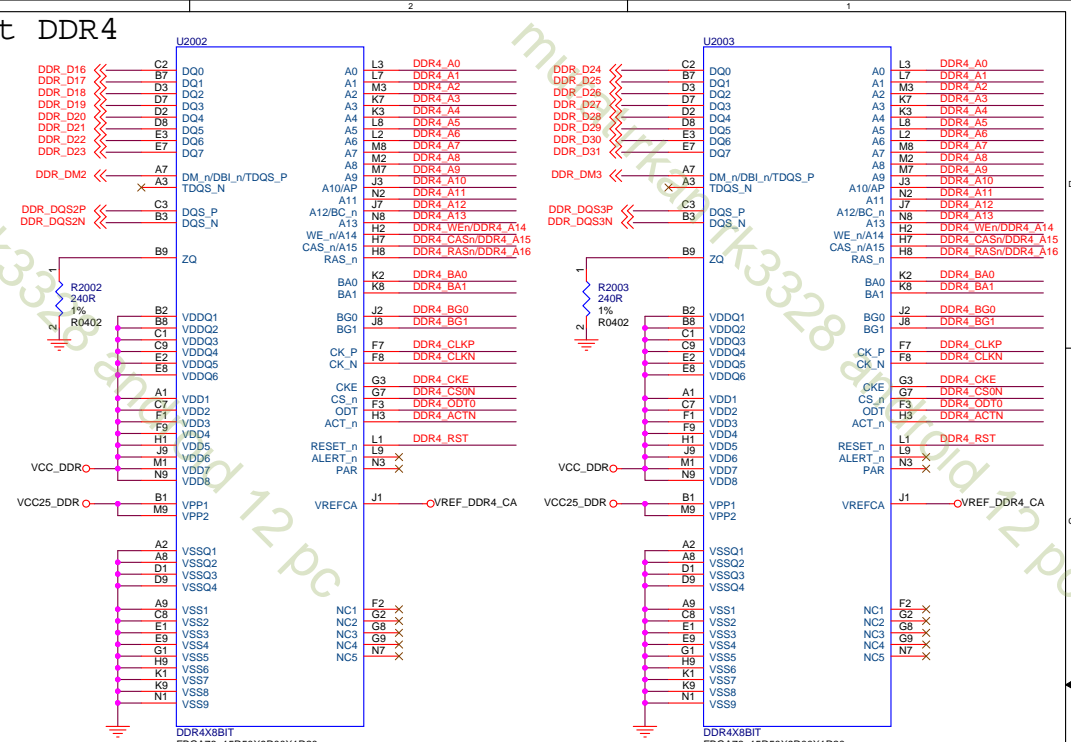
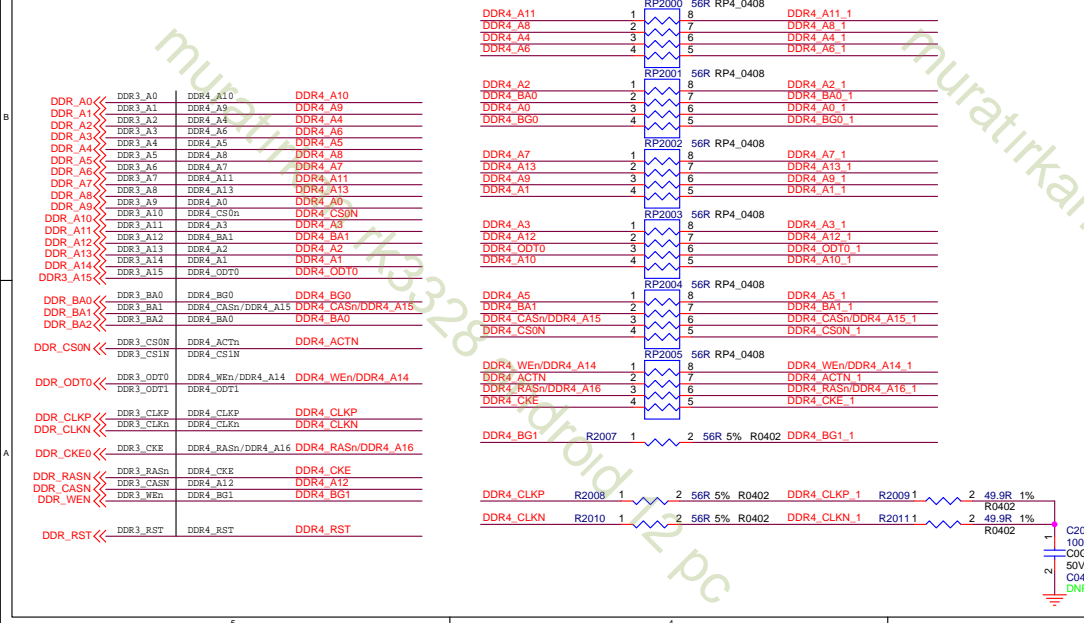
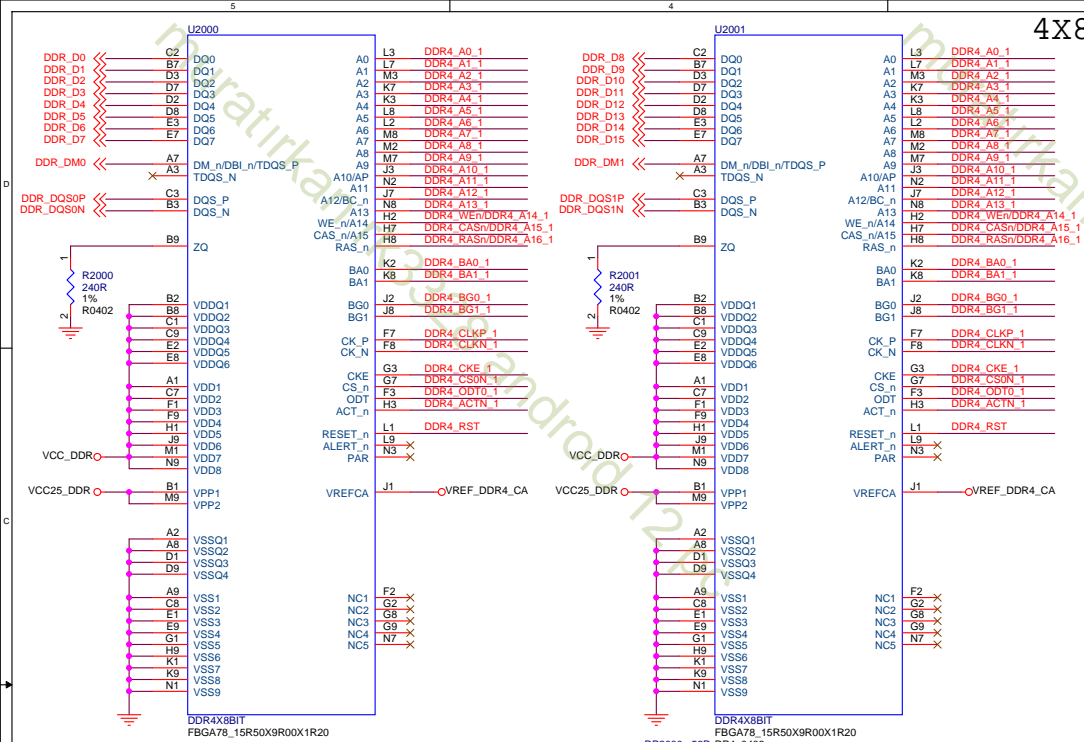
2X16bit DDR3



Note:
DDR data rate>=1600Mb/s



4X8bit DDR4



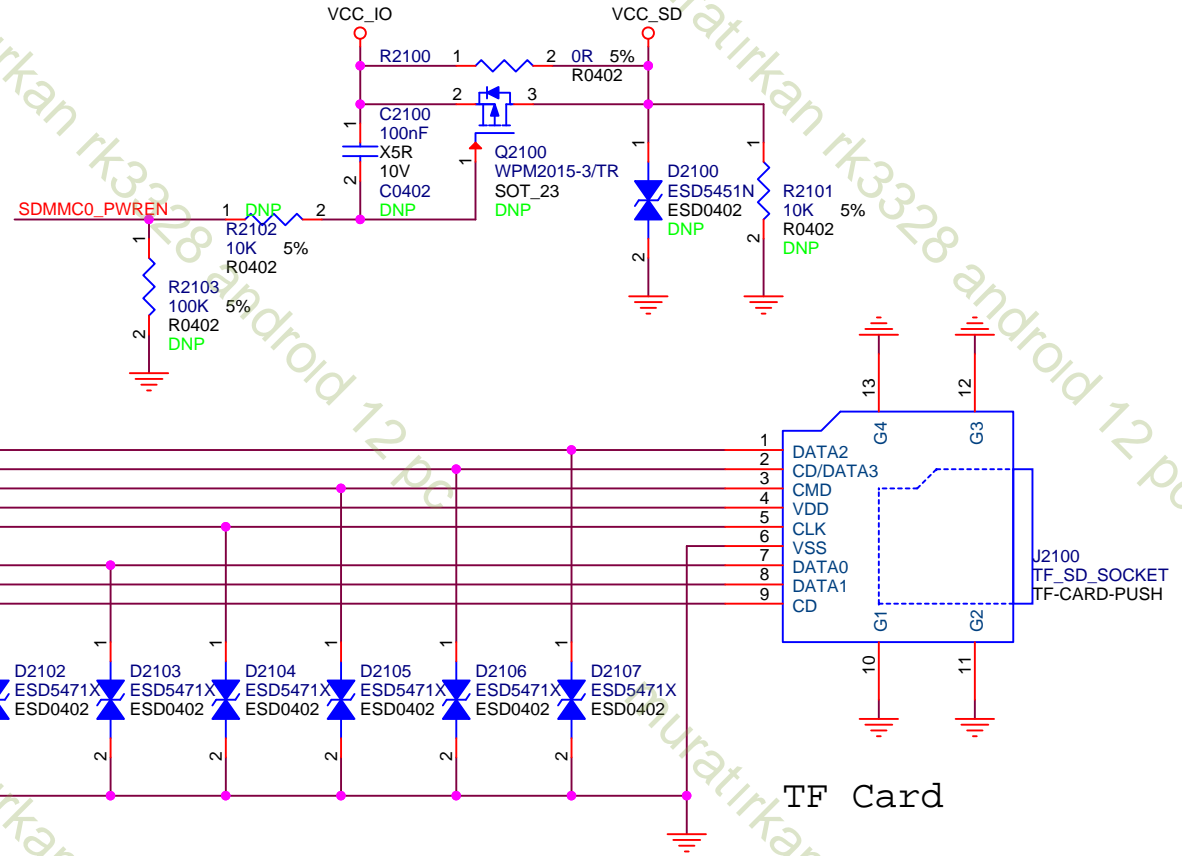
>>SDMMC0_D0
>>SDMMC0_D1
>>SDMMC0_D2/JTAG_TCK
>>SDMMC0_D3/JTAG_TMS


>>SDMMC0_CMD

>>SDMMC0_CLK

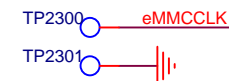
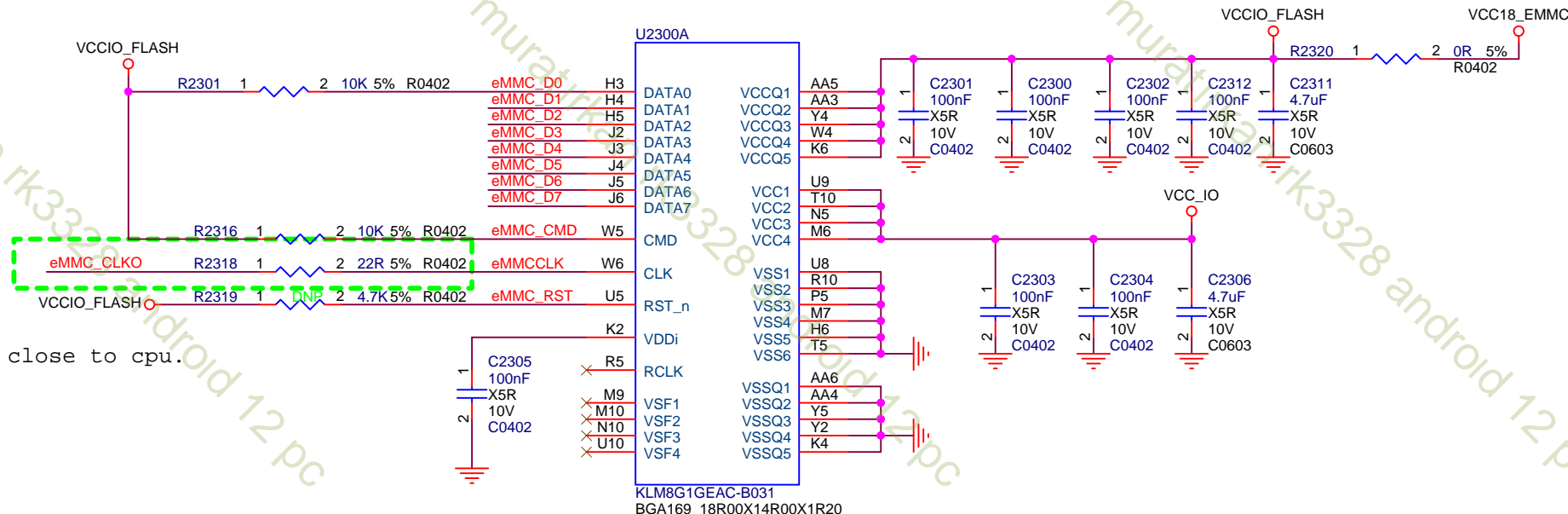
<<SDMMC0_DET

>>SDMMC0_PWREN

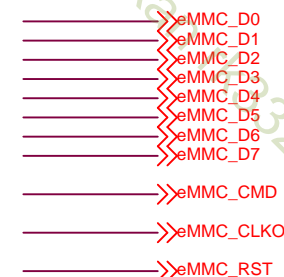



 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	TF/SD Card		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	18 of 29

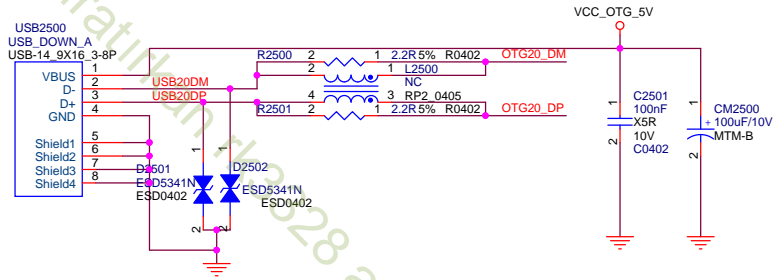
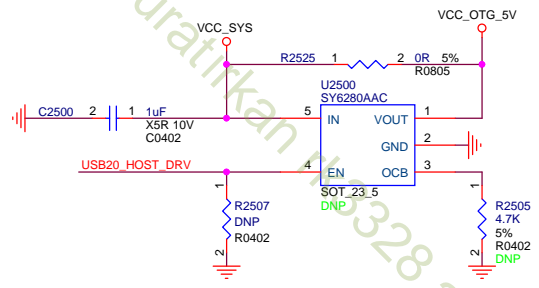
Note:
The 22ohm Res. close to cpu.



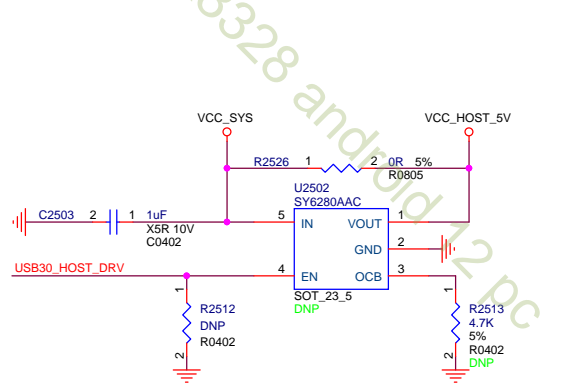
Note:
eMMC Update.

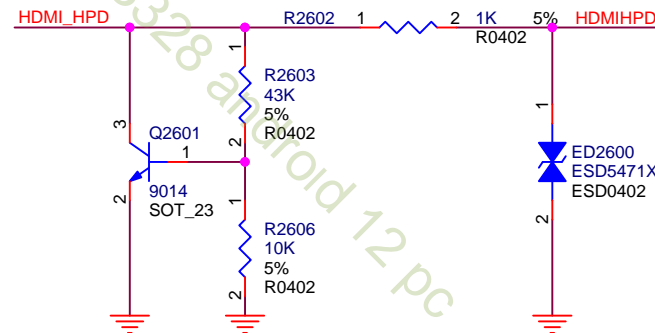
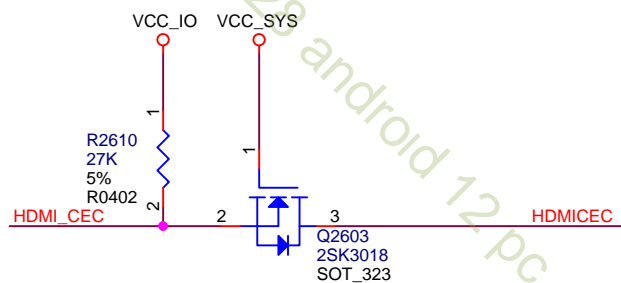
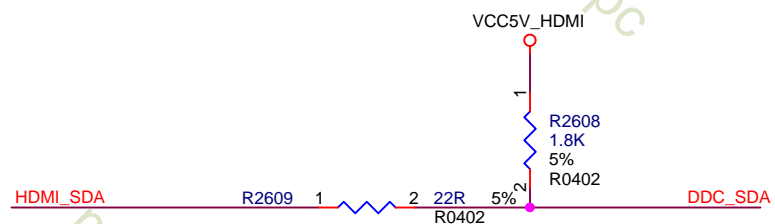
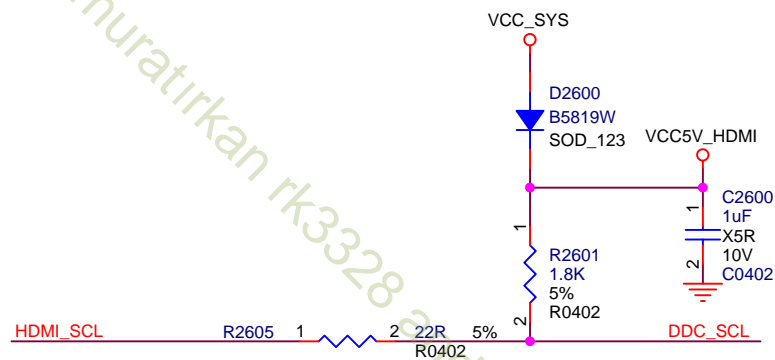


 瑞芯微电子		Fuzhou Rockchip Electronics	
Project:	RK3328_BOX_REF		
File:	Flash-eMMC		
Date:	Tuesday, March 07, 2017	Rev:	V1.0
Designed by:	Zhangdz	Sheet:	19 of 29

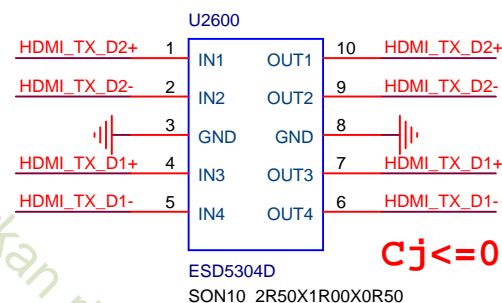


>>>OTG20_DM
 >>>OTG20_DP
 >>>USB20_HOST_DRV

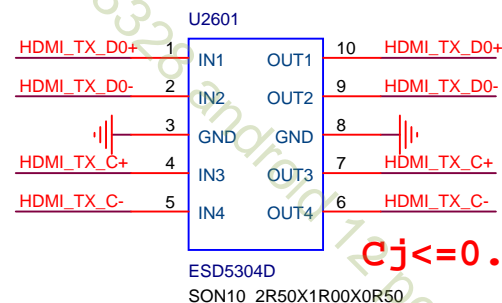




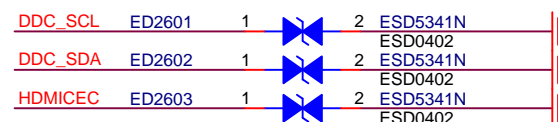
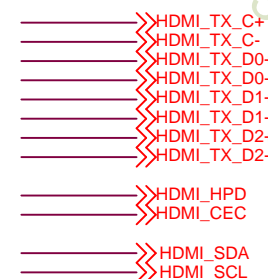
HDMI OUT




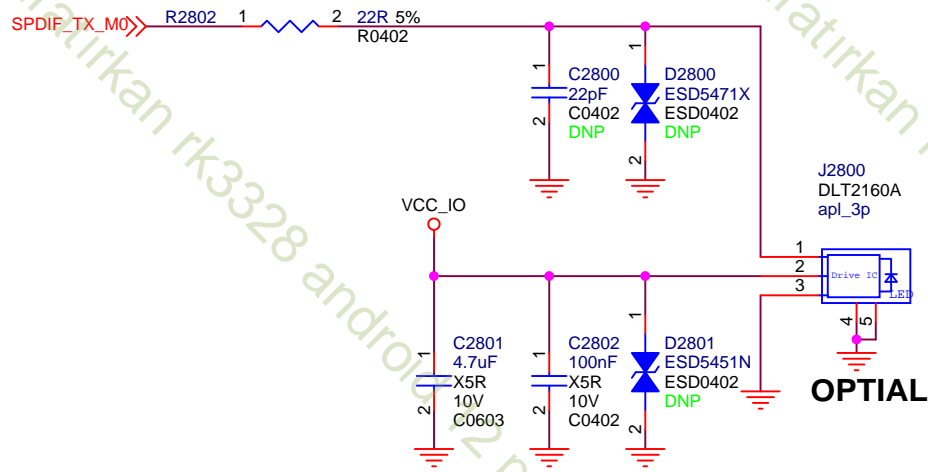
$C_j \leq 0.4 \text{ pF}$



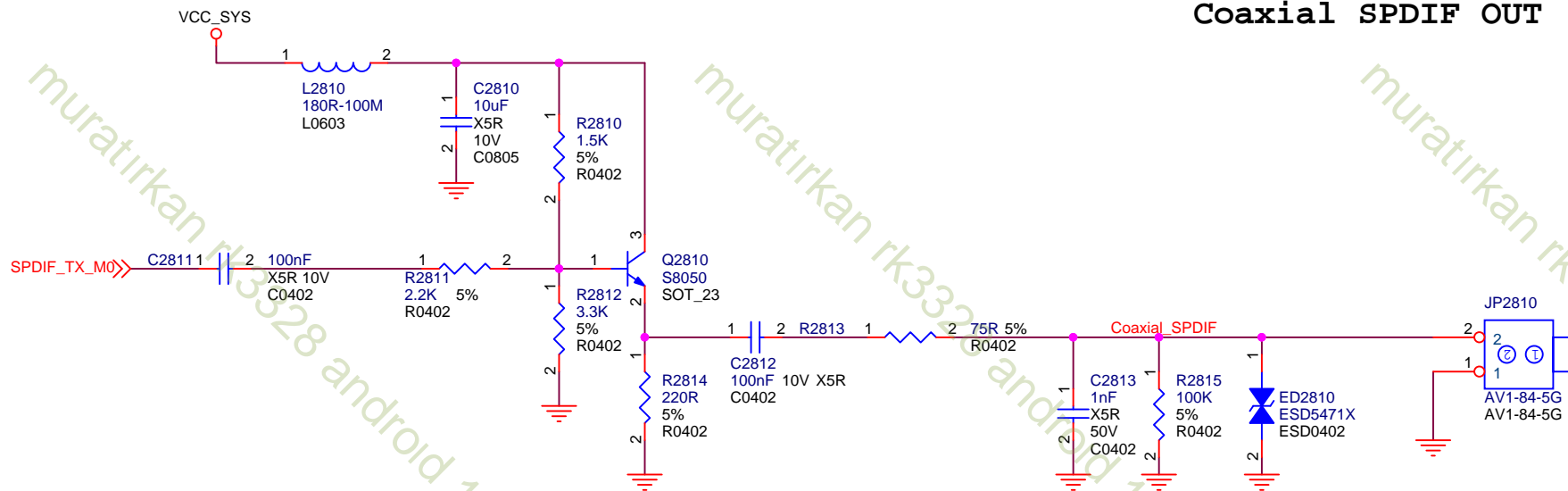
$C_j \leq 0.4 \text{ pF}$



 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



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

VCC_IO

D2900
BAT54S
SOT_23

CVBS_OUT

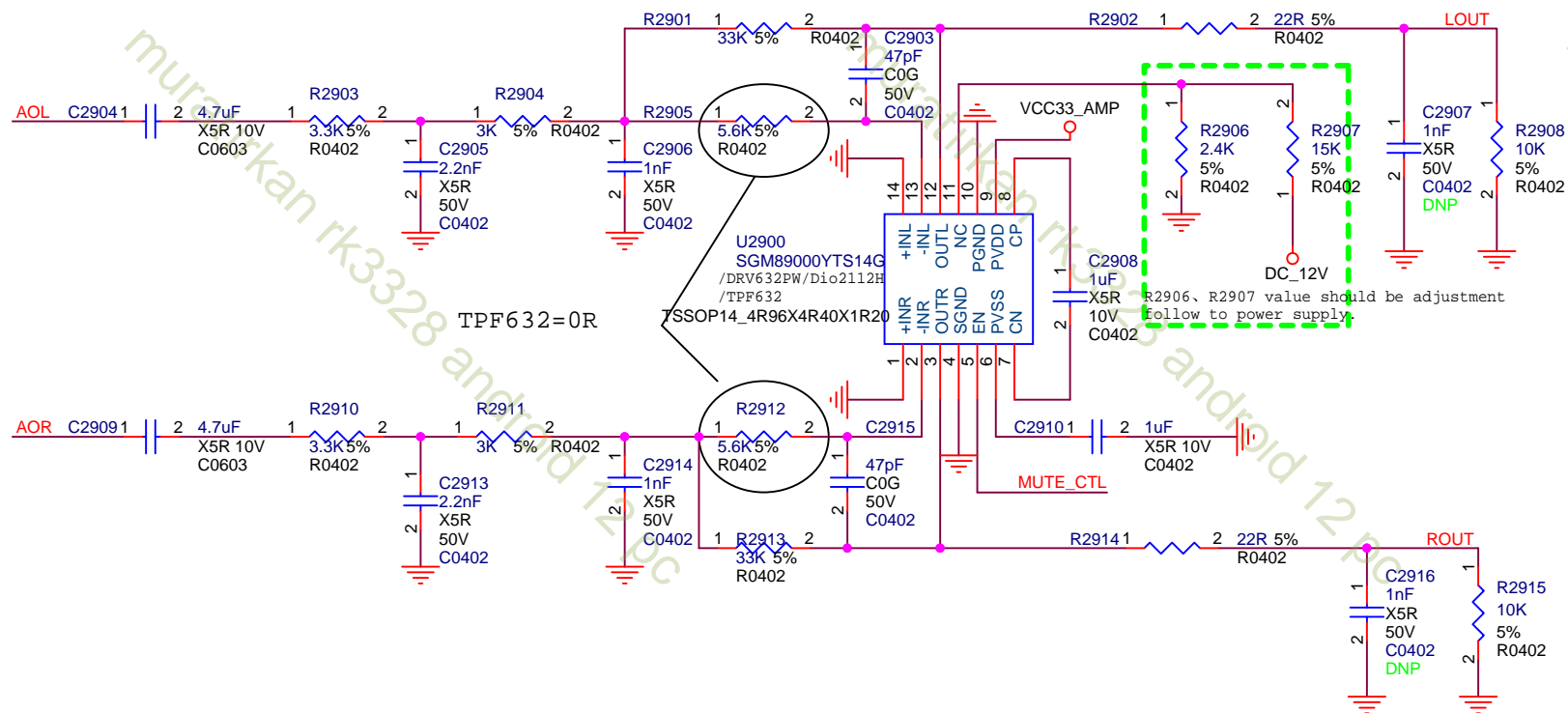
CVBS_OUT

ROUT
LOUT


J2900

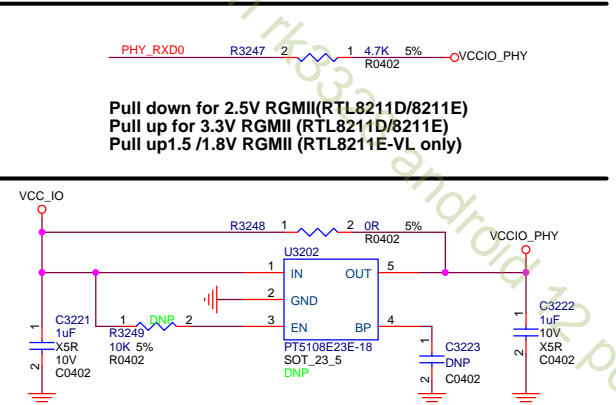
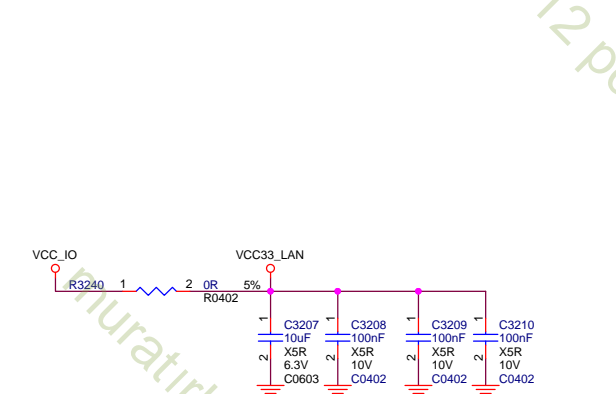
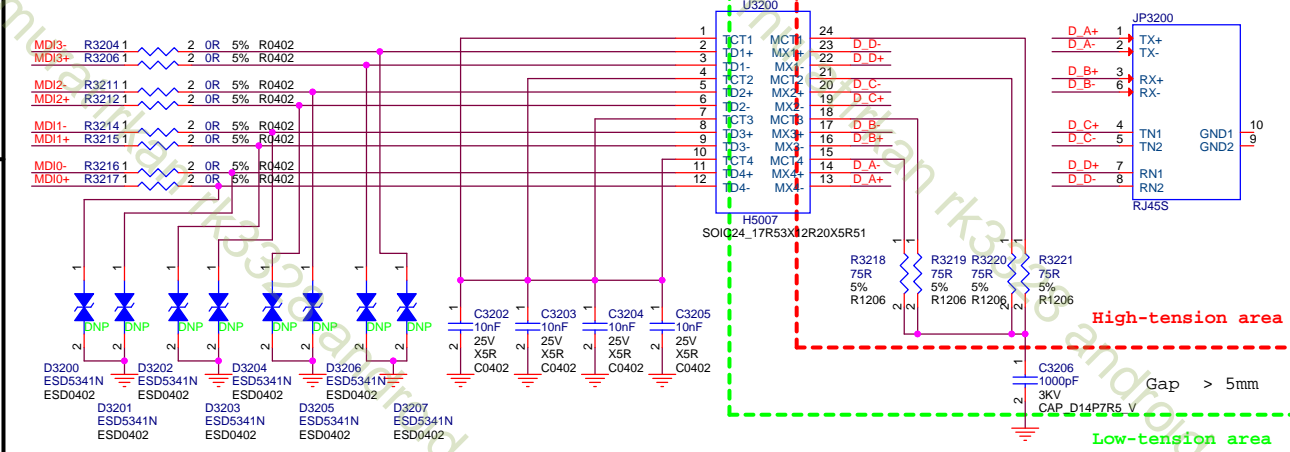
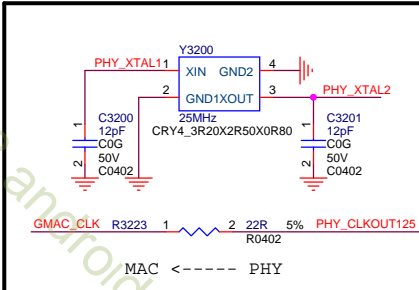
SMT-PJ
PJ-320D-5-SMTaD2901
DNP
ESD5451N
ESD0402D2902
DNP
ESD5451N
ESD0402D2903
DNP
ESD5451N
ESD0402

AV OUT

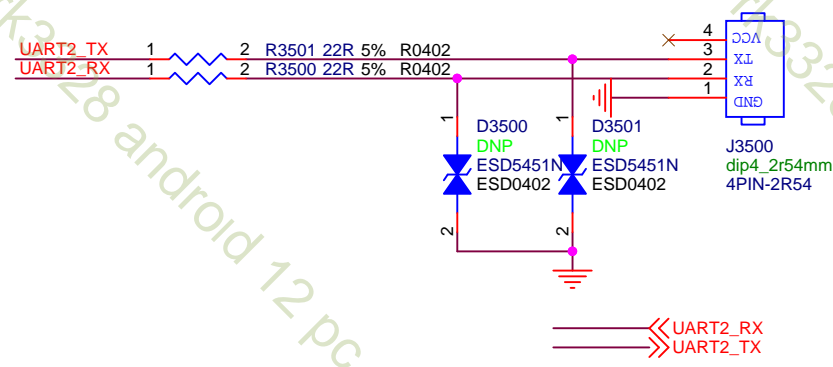



2-Vrms Audio Line Driver

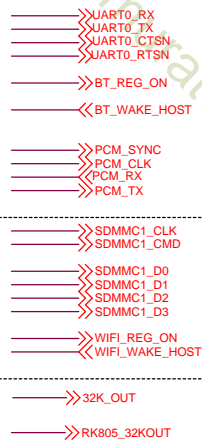
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Project:	RK3328_BOX_REF		
File:	AV OUT Port		
Date:	Tuesday, March 07, 2017		Rev: V1.0
Designed by:	Zhangdz		Sheet: 23 of 29



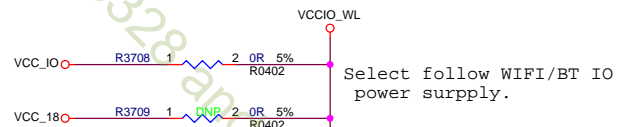
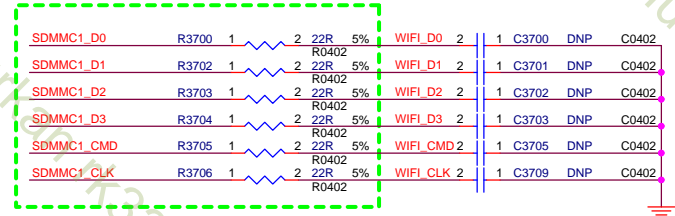
Debug UART2



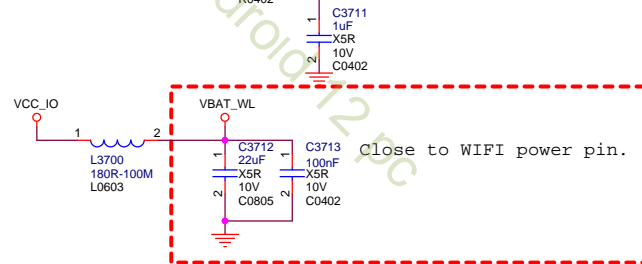
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Project:	RK3328_BOX_REF		
File:	Debug UART2/JTAG		
Date:	Friday, February 24, 2017	Rev:	V1.0
Designed by:	<designer>	Sheet:	26 of 29



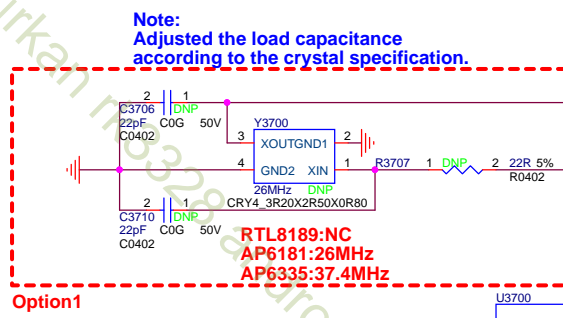
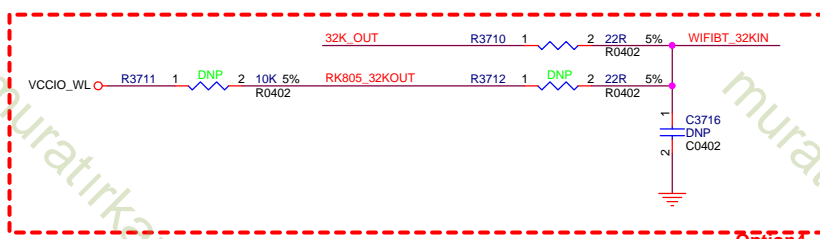
请靠近CPU放置。



Select follow WIFI/BT IO power surppl.

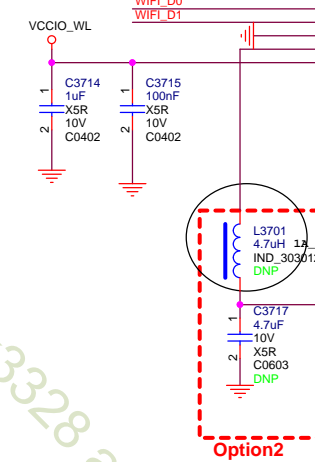


Close to WIFI power pin.

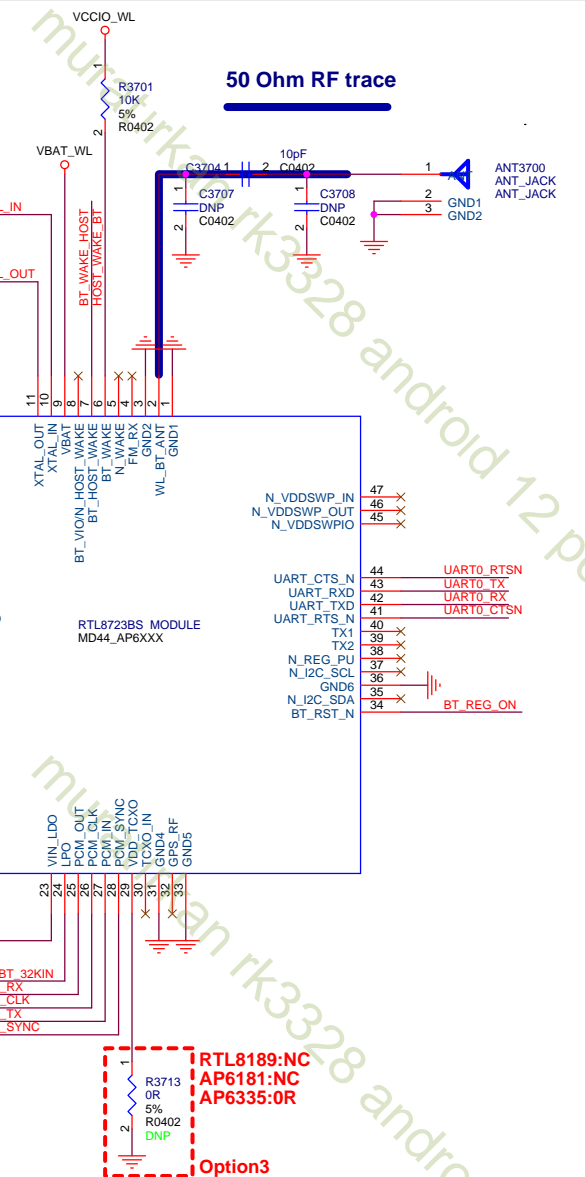


Note:
Adjusted the load capacitance
according to the crystal specification.

Option1



Option2



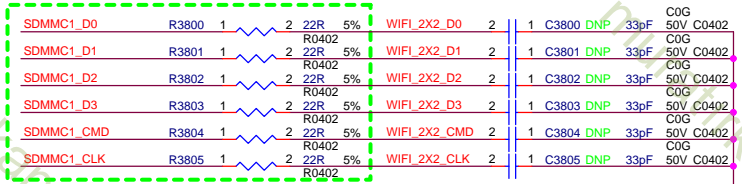
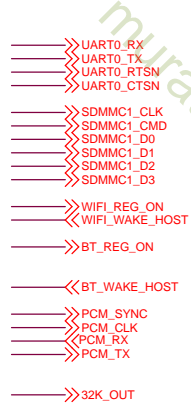
50 Ohm RF trace

Option3

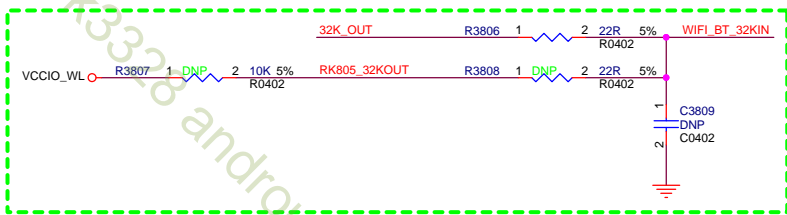
1X1 WIFI
AP6181/AP6212/AP6330/AP6335/RTL8189FTV
RTL8723BS/XZ3538/XZ3660

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

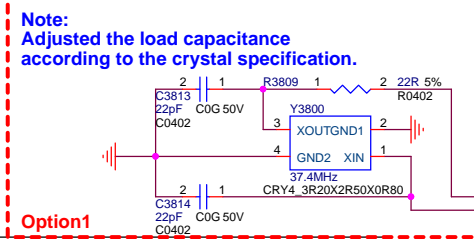
OPTION	1	2	3	4	5
AP6181	Yes	Yes	No	Yes	
AP6212	Yes	Yes	No	Yes	
AP6330	Yes	Yes	No	Yes	
AP6335	Yes	Yes	Yes	Yes	
RTL8189FTV MODULE	No	No	No	No	
RTL8723BS	No	No	No	Yes	



请靠近CPU放置。



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	

