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ROCK64

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

 ROCK64			
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5

4

3

2

1

Version	Date	Author	Change Note	Approved
V1.0	20170602		Initial Release	
V2.0	20170704		Production Release	

D

D

C

C

B

B

A

A



Project:	ROCK64		
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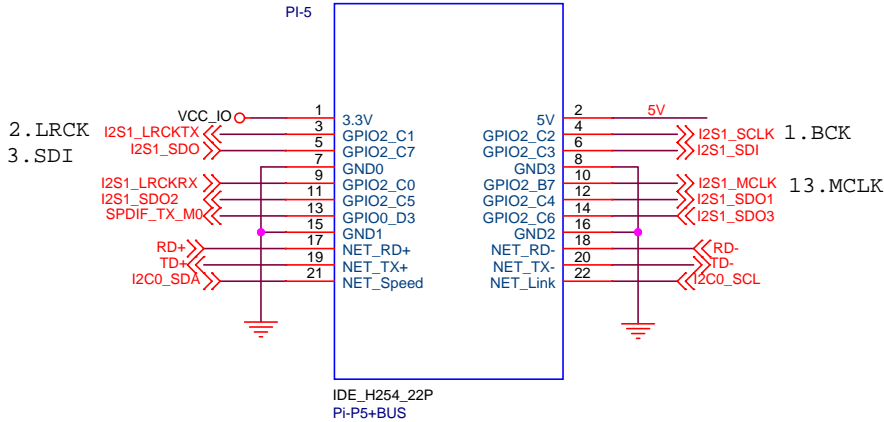
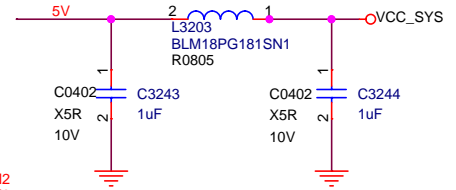
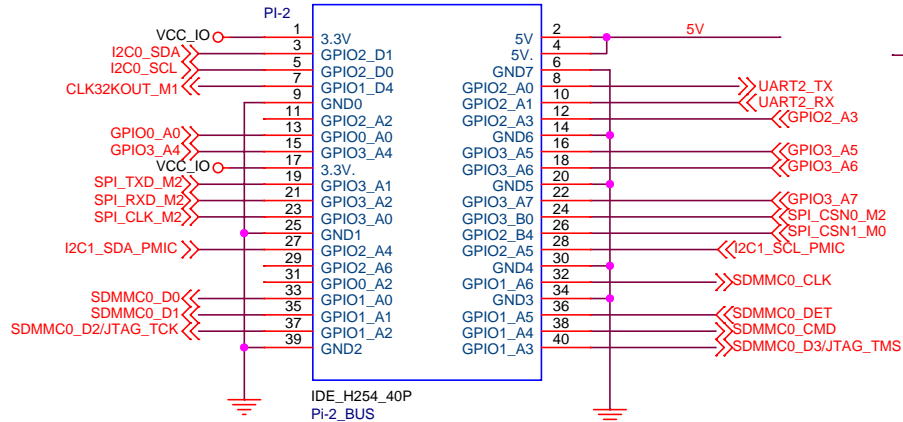
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4

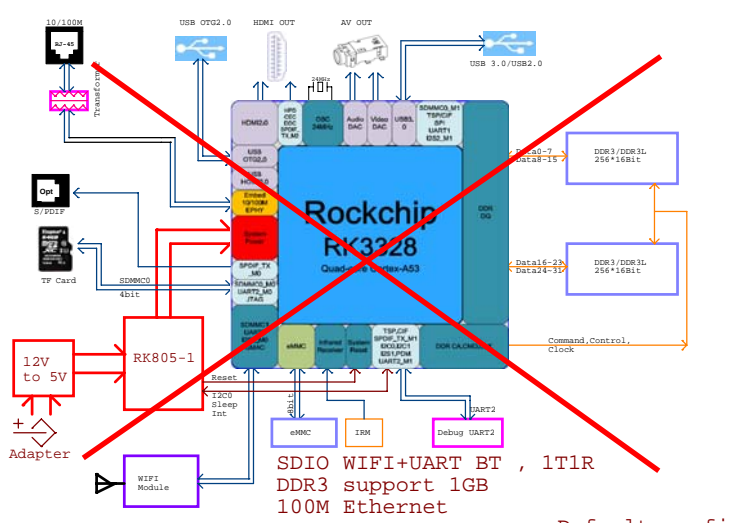
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2

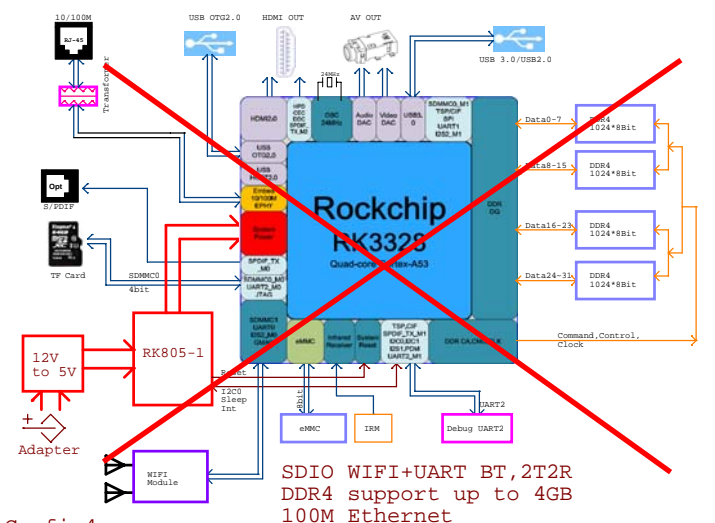
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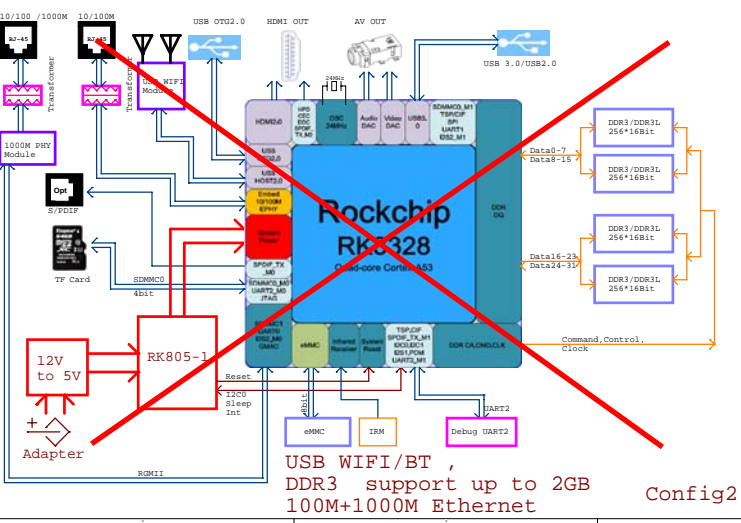
ROCK64	
Project: ROCK64	
File: Pi-2 & Pi-5+	Rev V2.0
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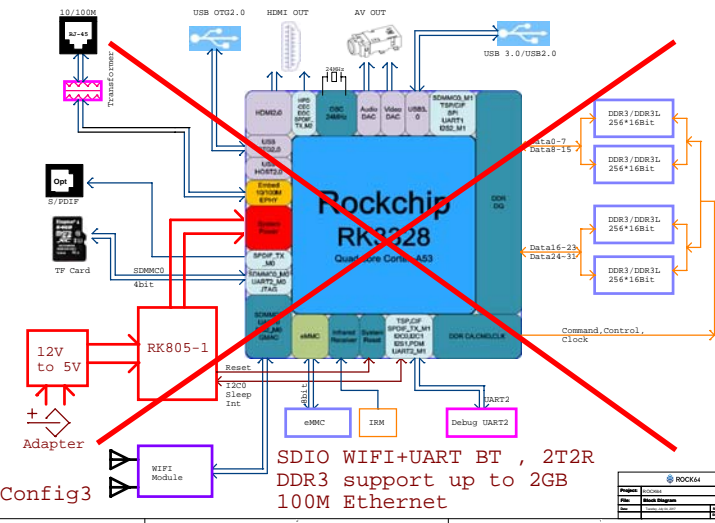
Default config



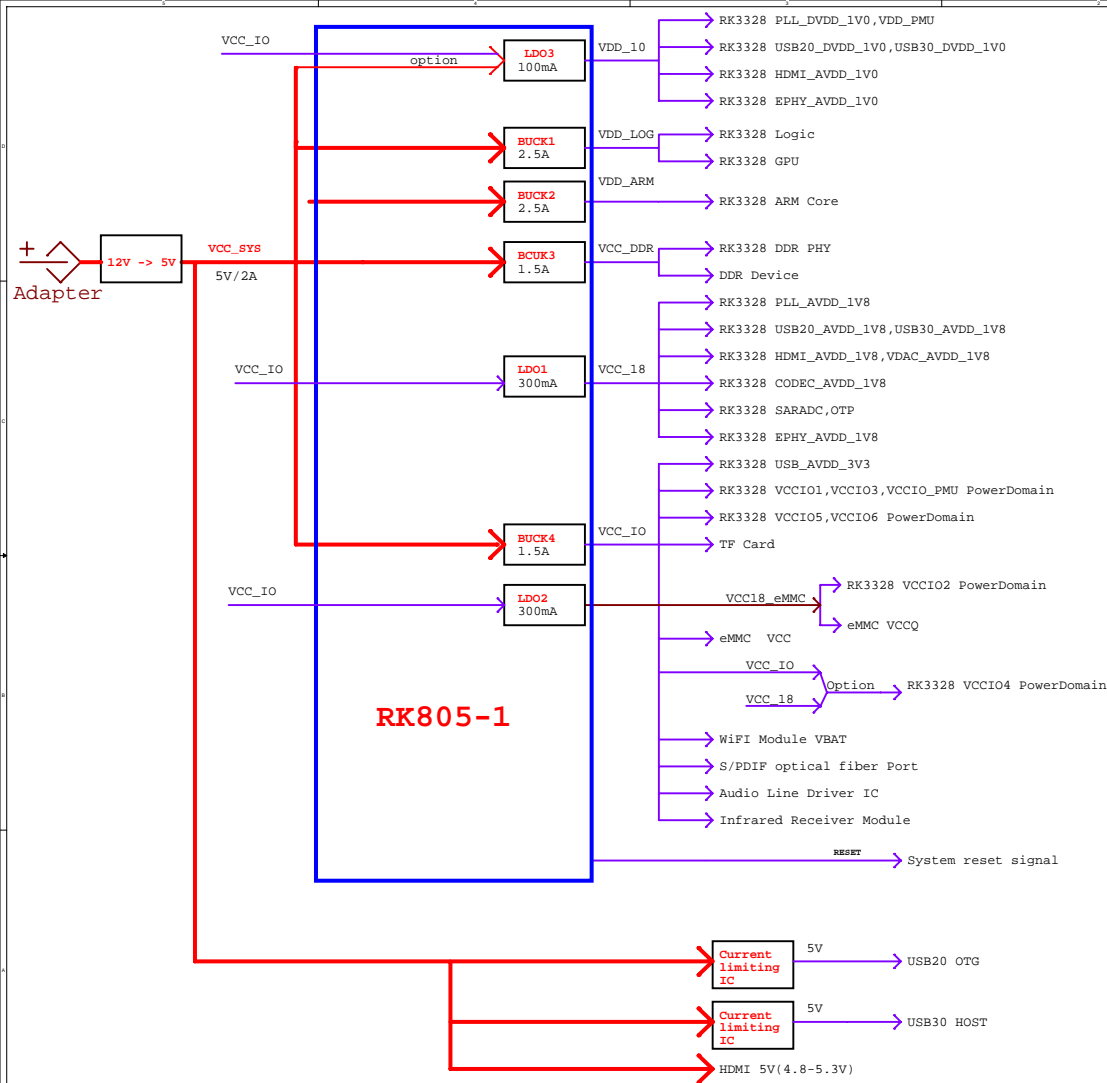
Config4



Config2



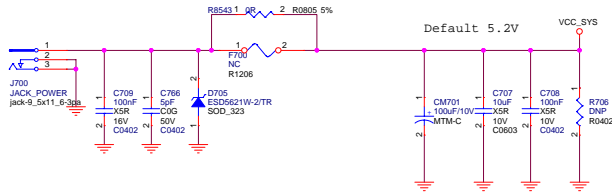
Config3



Power Timing

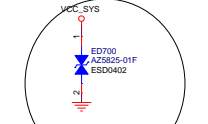
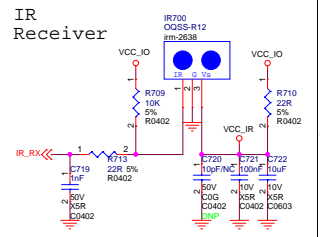
TYPE	VOLT	STEP	PowerName
BUCK1	1.1V		VDD_LOG
BUCK2	1.1V		VDD_ARM
BUCK3	FB=0.8V		VCC_DDR
BUCK4	3.3V		VCC_IO
LDO1	1.8V		VCC_18
LDO2	1.8V		VCC18_eMMC
LDO3	1.0V		VDD_10

IO Power	IO Voltage=3.3V	IO Voltage=1.8V
VCCIO_PMU	3.3V	Not Support
VCCIO1	3.3V	Not Support
VCCIO2		1.8V (Default) eMMC
VCCIO3	3.3V (Default)	
VCCIO4	3.3V (Default) WIFI:RTL8723BS	
VCCIO5	3.3V (Default)	
VCCIO6	3.3V (Default)	

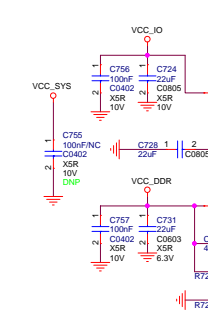


DC5V

VCC_SYS



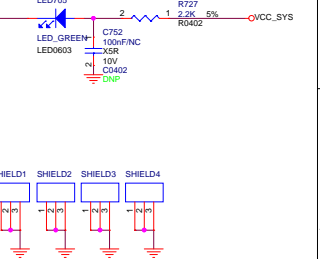
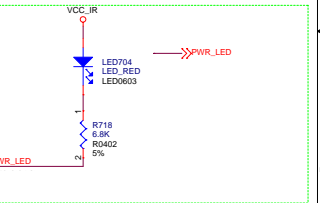
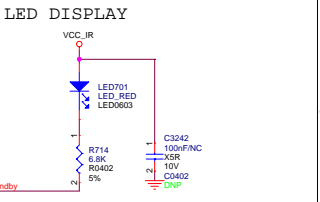
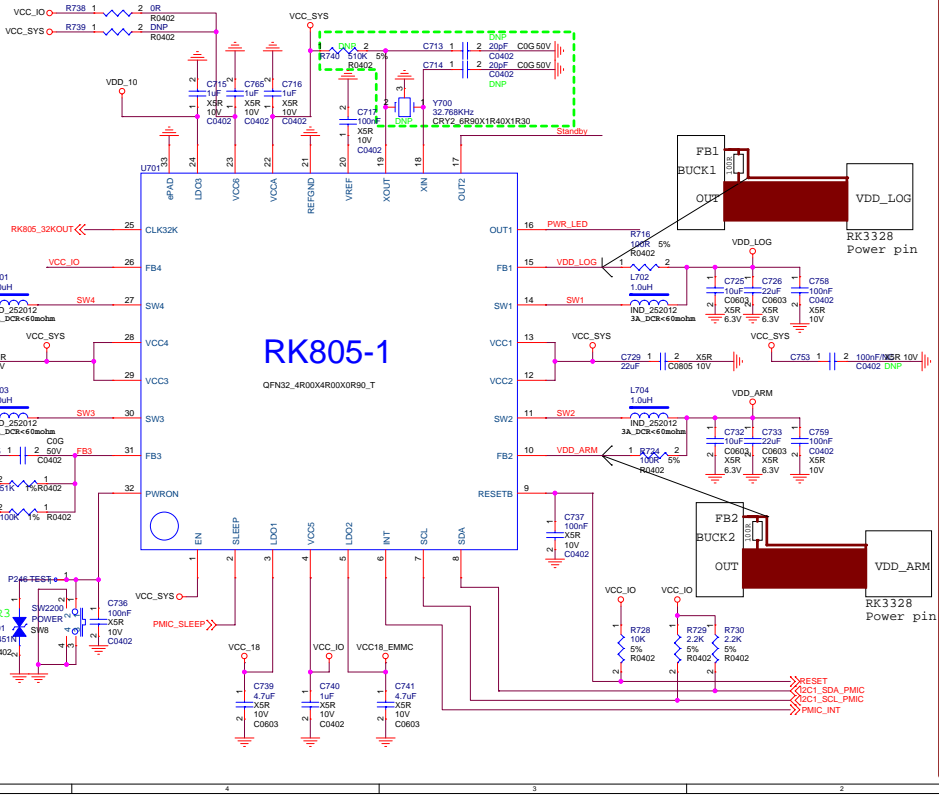
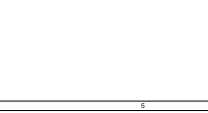
Specifying Supply Voltage:
Peakage Current: >10A (5-15, 25-6V)
Surge Charging Voltage: 6.5V



VCC_DDR

Default: DDR3=1.5V

DDR3	DDR3L	DDR4	LPDDR3
VCC_DDR 1.52V9	1.35V3	1.2V	
R725 100K 1% 47K 1% 51K 1%			
R726 100K 1% 58K 1% 100K 1%			



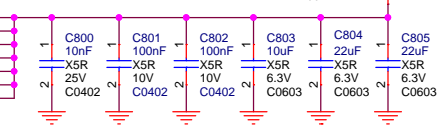
Project: ROCK64		Rev: 1.0	
File: System Power-PMIC RK805-1		Sheet: 6 of 22	
Date: 20180404	Author: J. Liu		

U800N

ARM

VDD_CORE
 VDD_CORE
 VDD_CORE
 VDD_CORE
 VDD_CORE
 VDD_CORE
 VDD_CORE

P13
 P14
 R13
 R14
 T13
 T14
 T15



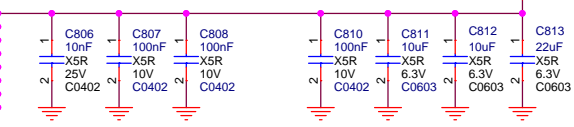
VDD_ARM

>100M11

GPU/Logic

VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC
 VDD_LOGIC

N9
 N10
 N11
 P9
 P10
 P11
 R9
 R10
 R11

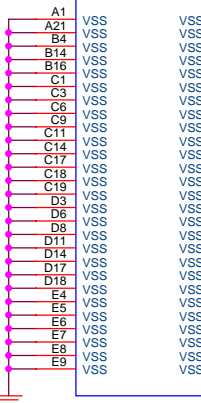


VDD_LOG

>100M11

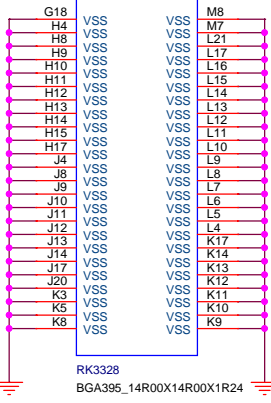
RK3328
 BGA395_14R00X14R00X1R24

U800O



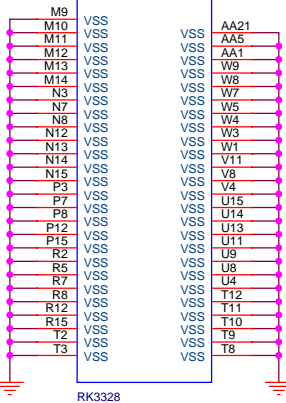
RK3328
 BGA395_14R00X14R00X1R24

U800P



RK3328
 BGA395_14R00X14R00X1R24

U800Q

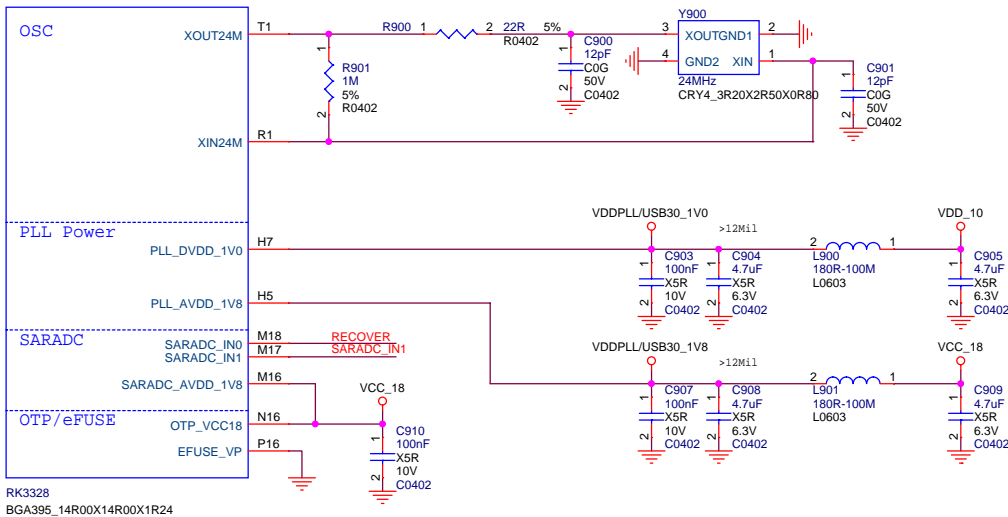


RK3328
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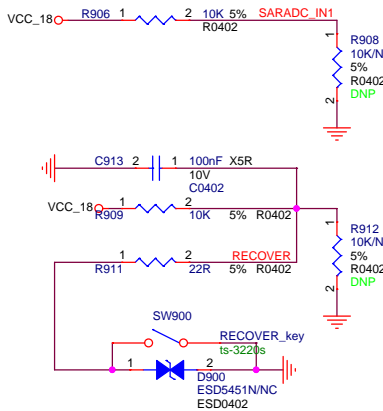


Project: ROCK64			
File: RK3328 Power			
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U800A



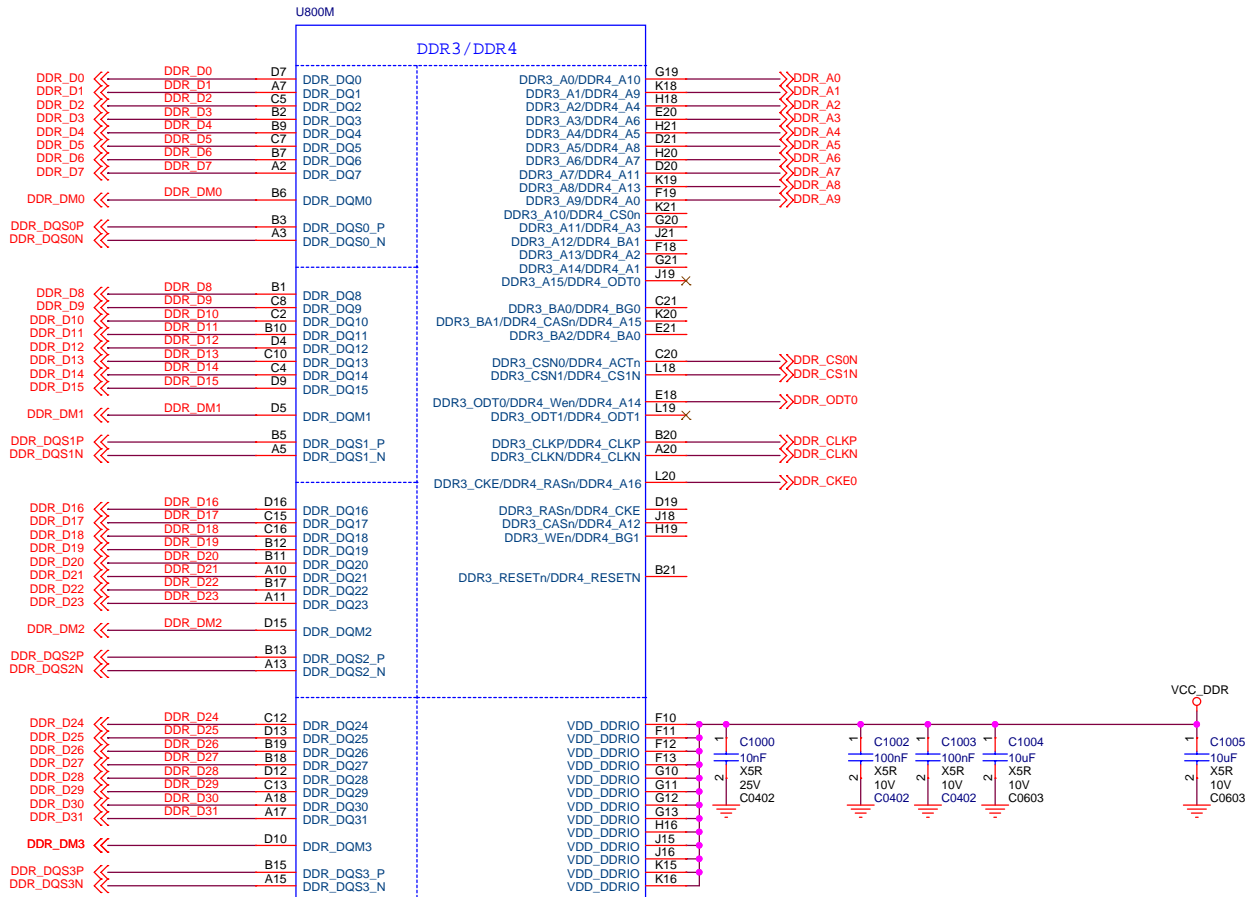
RK3328
BGA395_14R00X14R00X1R24



SARADC_IN0 BOM Ver	SARADC_IN1 PCB Ver	Up Ohm	Down Ohm	
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	

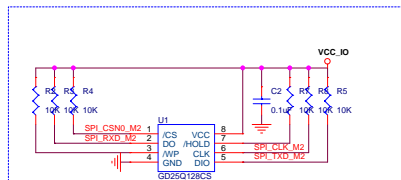
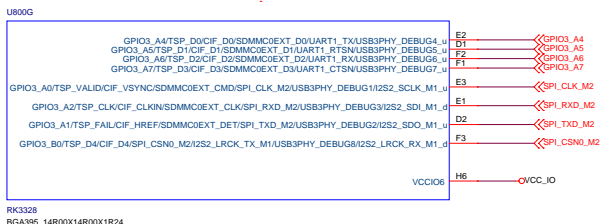
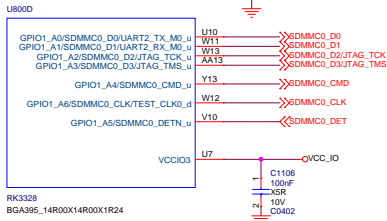
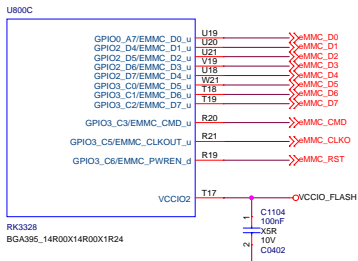


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File:	RK3328 OSC/PLL/OTP/SARADC		
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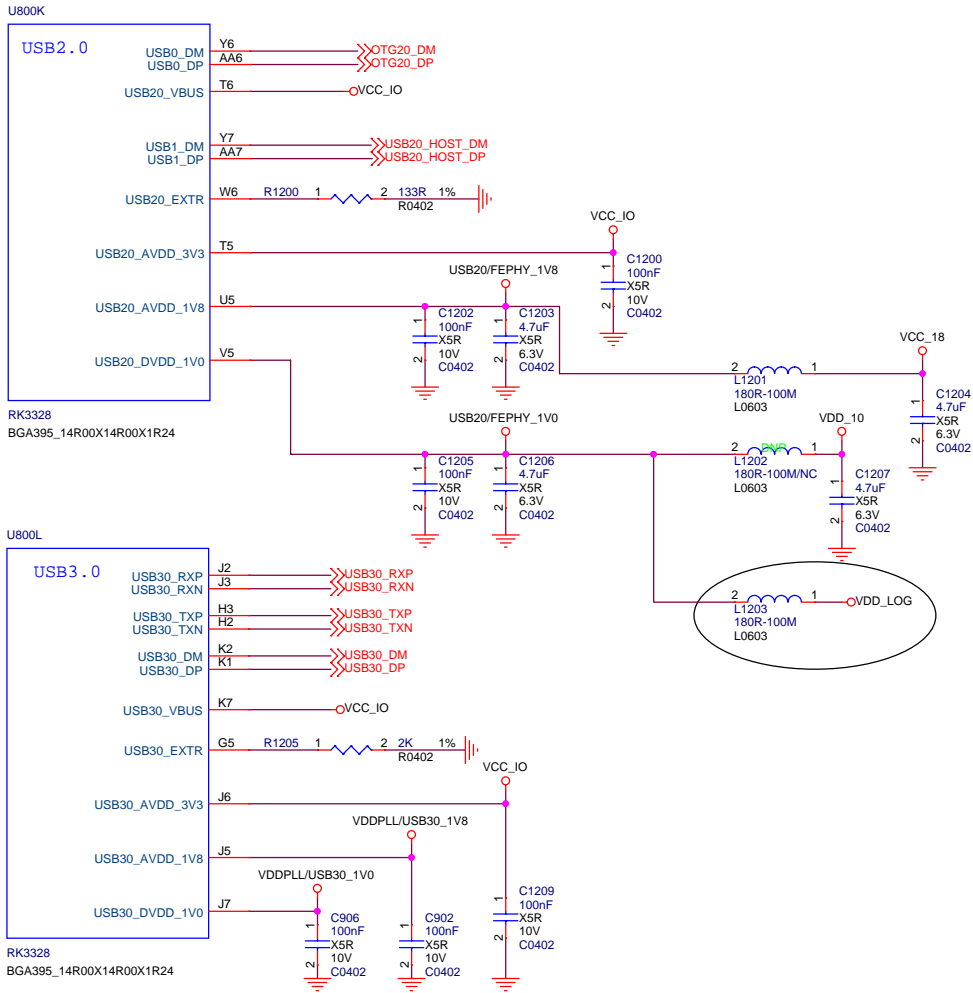


RK3328
BGA395_14R00X14R00X1R24

Project:	ROCK64		
File:	RK3328 DDR Controller		
Date:	Tuesday, July 04, 2017	Rev:	V2.0
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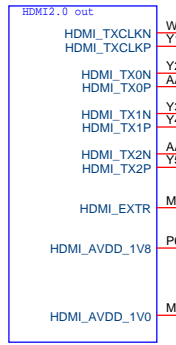


Project:	ROCK64
File:	RK3328 eMMC Controller/TF
Date:	Tuesday, July 04, 2017
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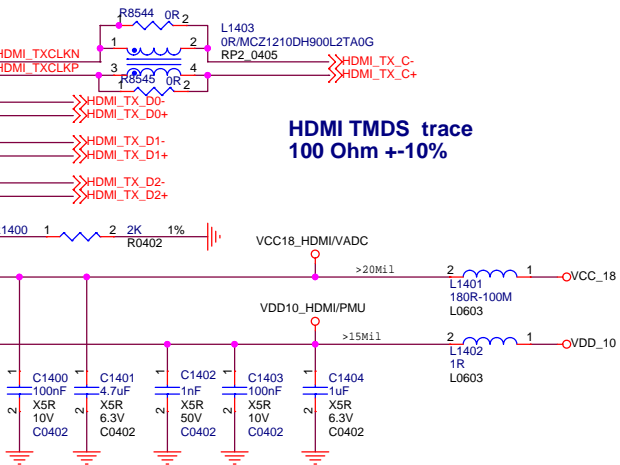


Project:	ROCK64		
File:	RK3328 USB2 PHY/USB3 PHY		
Date:	Tuesday, July 04, 2017	Rev:	V2.0
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U8001



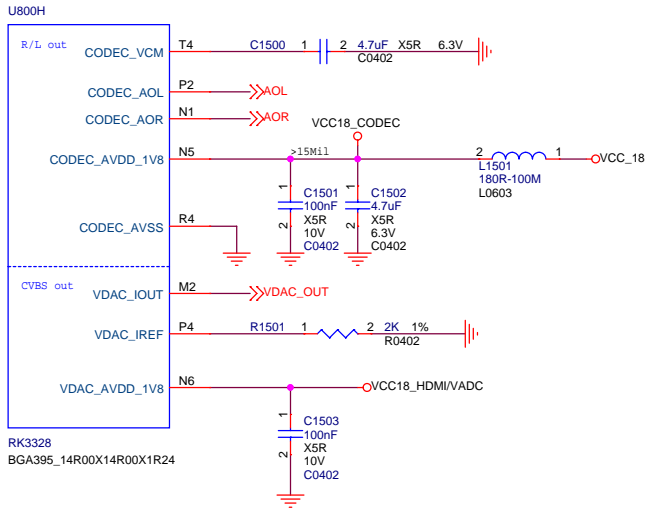
RK3328
BGA395_14R00X14R00X1R24



**HDMI TMSD trace
100 Ohm +/-10%**

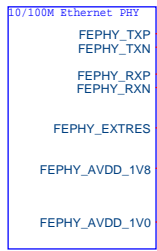


Project:	ROCK64		
File:	RK3328 HDMI PHY		
Date:	Tuesday, July 04, 2017	Rev:	V2.0
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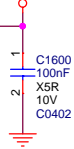
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File:	RK3328 AV Interface		
Date:	Tuesday, July 04, 2017	Rev:	V2.0
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U800J

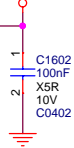


RK3328
BGA395_14R00X14R00X1R24

USB20/FEPHY_1V8



USB20/FEPHY_1V0

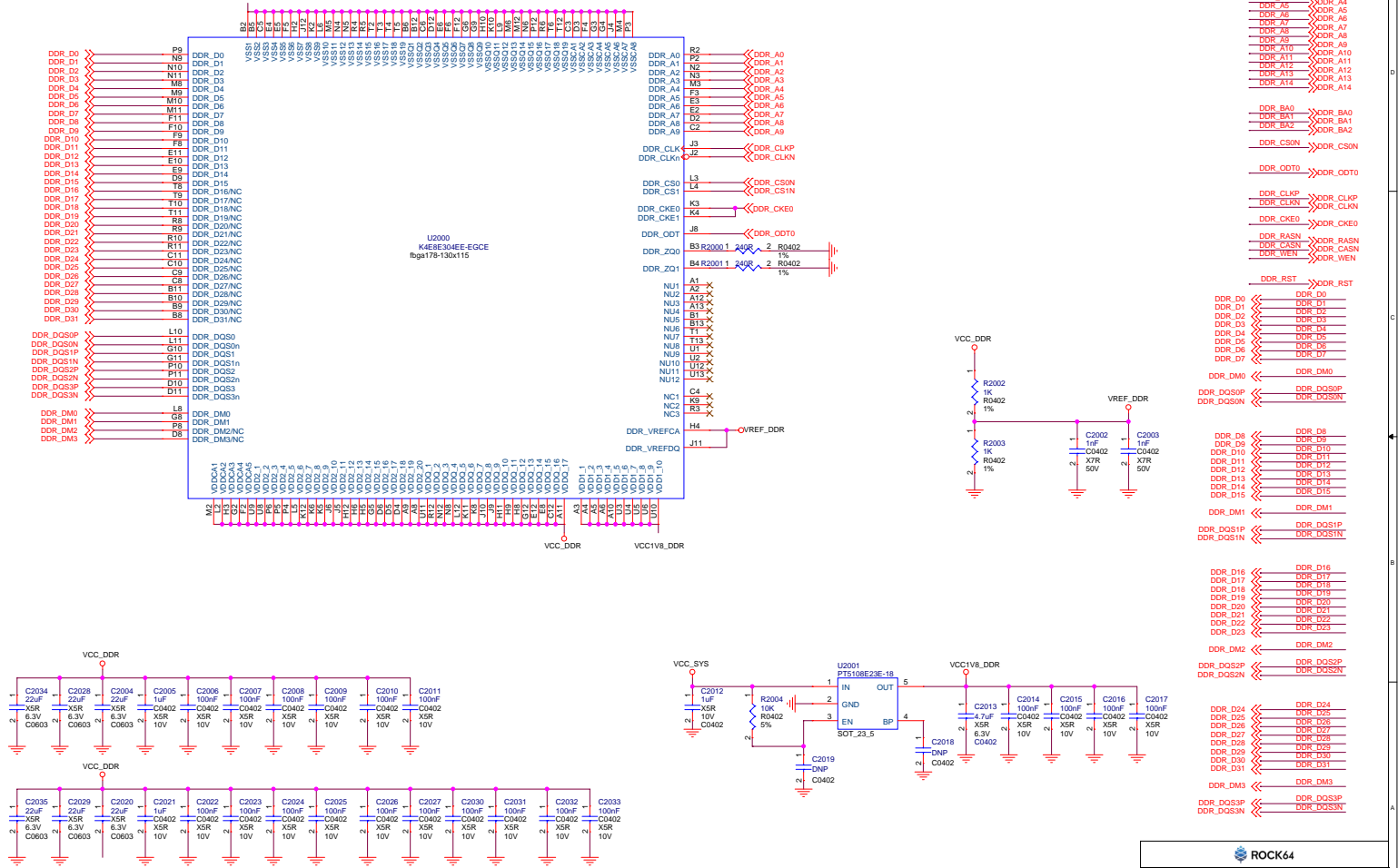


Embed FEPHY

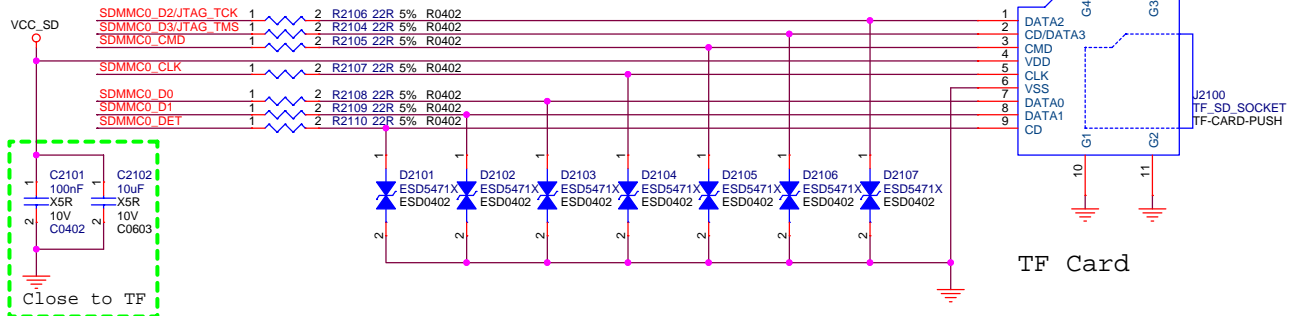
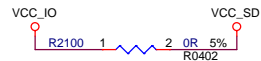


Project:	ROCK64		
File:	RK3328 FEPHY		
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LPDDR3 >=1600MHz

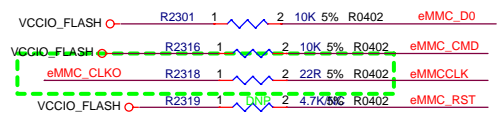


Project: ROCK64	
File: RAM DDR3 2x16bit	
Date: Tuesday, July 04, 2017	Rev: V2.0
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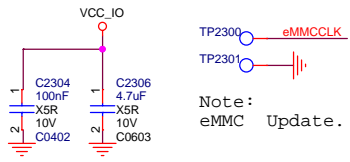


Project:	ROCK64		
File:	TF/SD Card		
Date:	Tuesday, July 04, 2017	Rev:	V2.0
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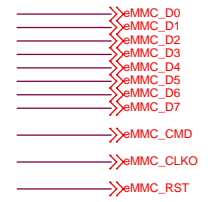
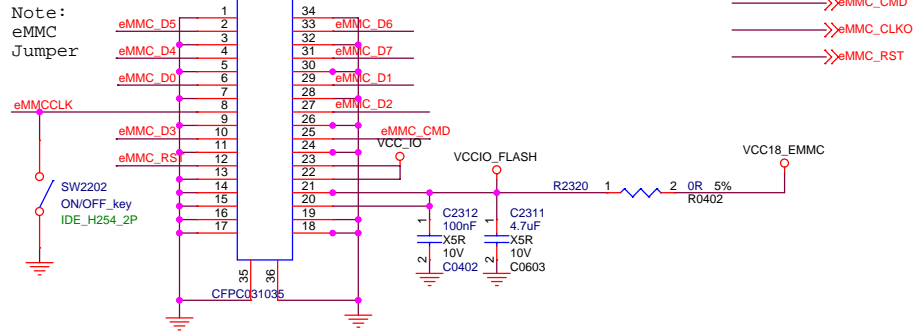
Note:
EMMC SOCKET



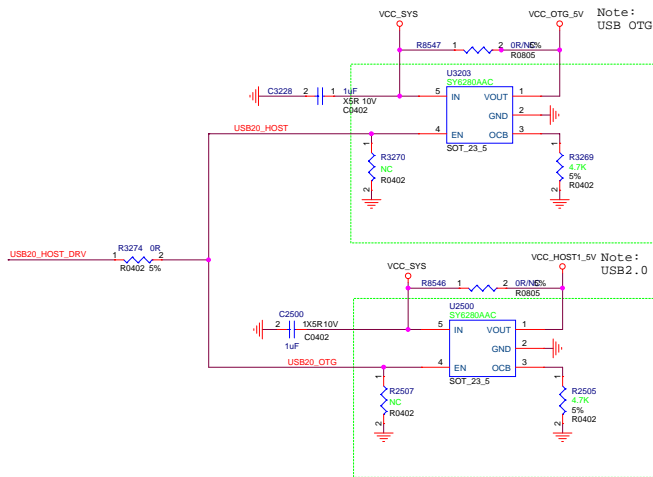
Note: 22R Resistor need to placed closer to CPU



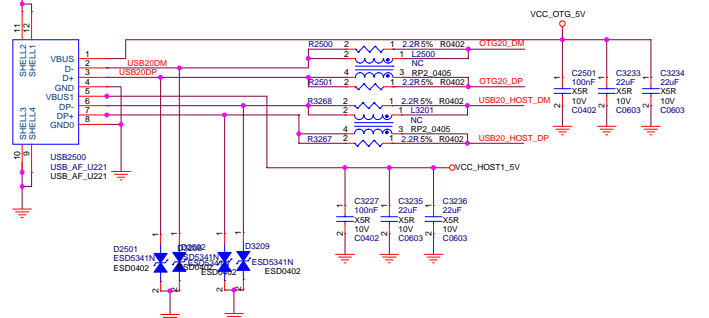
Note:
eMMC
Jumper



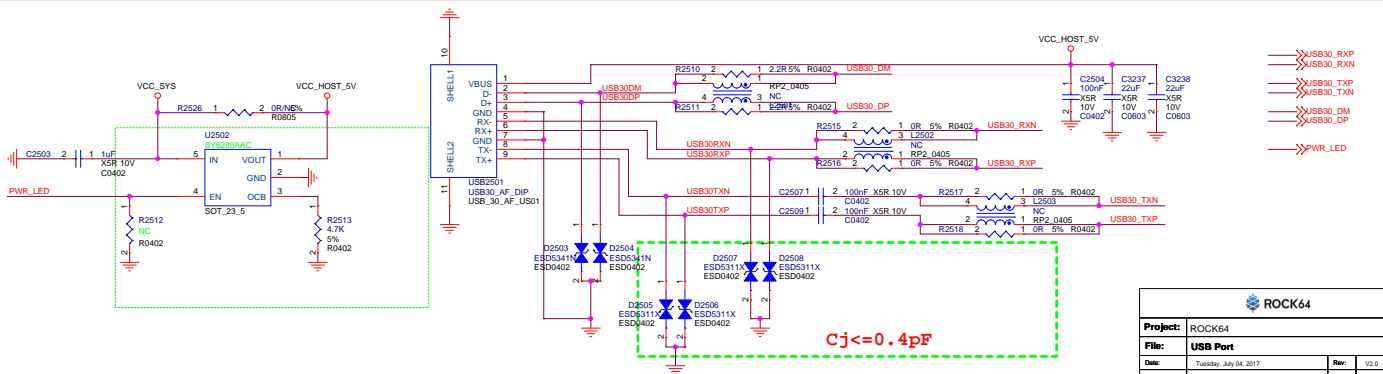
Project:	ROCK64		
File:	Flash-eMMC		
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Note:
Top - OTG, Bottom - USB HOST

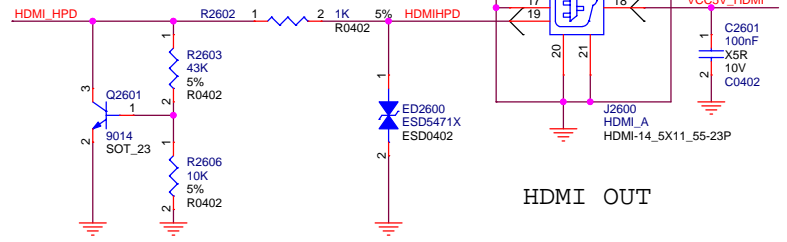
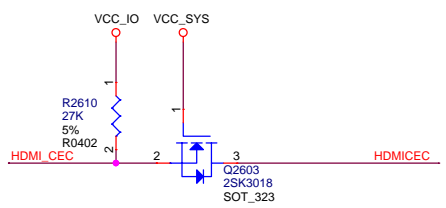
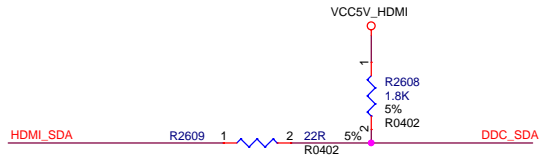
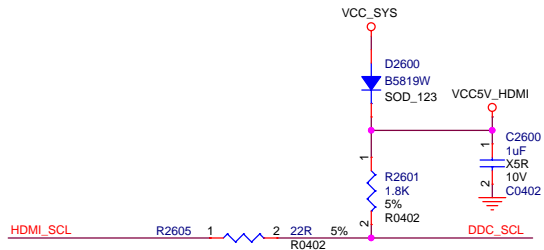


- USB20_DM
- USB20_DP
- USB20_HOST_DRV
- USB20_HOST_DM
- USB20_HOST_DP

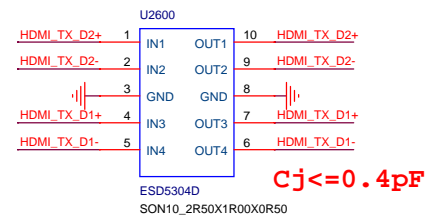


- USB30_RXN
- USB30_RXN
- USB30_TXN
- USB30_TXN
- USB30_DM
- USB30_DP
- WVR_LED

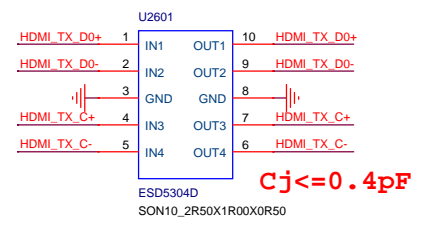
Project:	ROCK64
File:	USB Port
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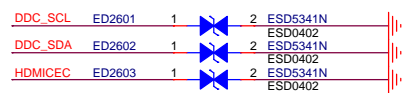
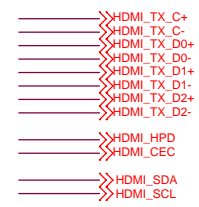
HDMI OUT



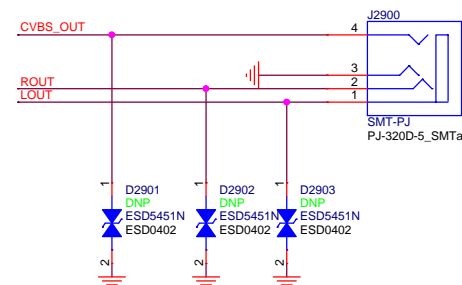
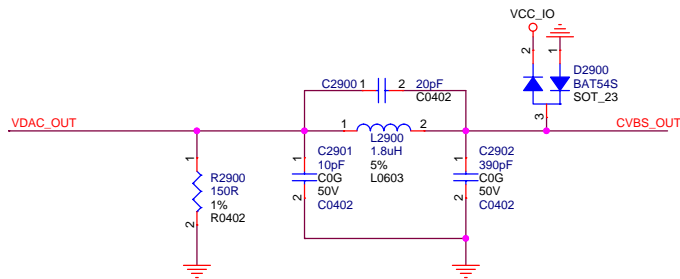
Cj <= 0.4pF



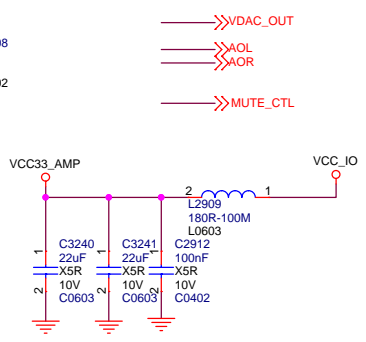
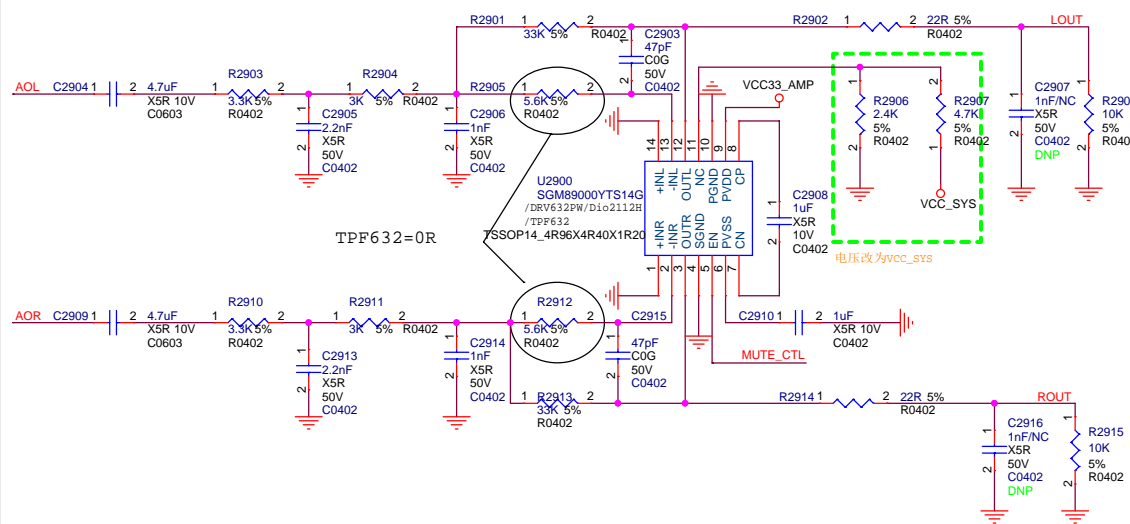
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Project:	ROCK64
File:	HDMI OUT Port
Date:	Tuesday, July 04, 2017
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AV OUT



- VDAC_OUT
- AOL
- AOR
- MUTE_CTL

2-Vrms Audio Line Driver

Project:	ROCK64		
File:	AV OUT Port		
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