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20.USB WIFI-(option)

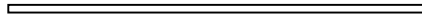
21.MIPI Interface

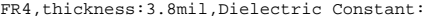
22.DTV-(Reserve)

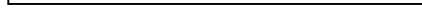
23.HDMI IN

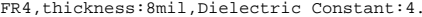
24.VGA OUT

6 LAYERS PCB STACK


TOP(Signal1)  Cu,thickness:0.7mil,Plating to 1oz


GND1  FR4,thickness:3.8mil,Dielectric Constant:4.3

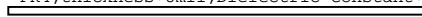
POWER  Cu,thickness:1.5mil, 1oz

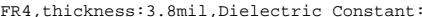
 FR4,thickness:8mil,Dielectric Constant:4.3

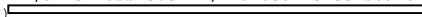
FR4,thickness:adjust thickness according to the thickness of board ,Dielectric Constant:4.3

Signal2  Cu,thickness:1.5mil, 1oz

GND2  FR4,thickness:8mil,Dielectric Constant:4.3

 Cu,thickness:1.5mil, 1oz

BOTTOM(Signal3)  FR4,thickness:3.8mil,Dielectric Constant:4.3

 Cu,thickness:0.7mil,Plating to 1oz



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Title: Index

File: RK3288_BOX_Ref

REV:3.0

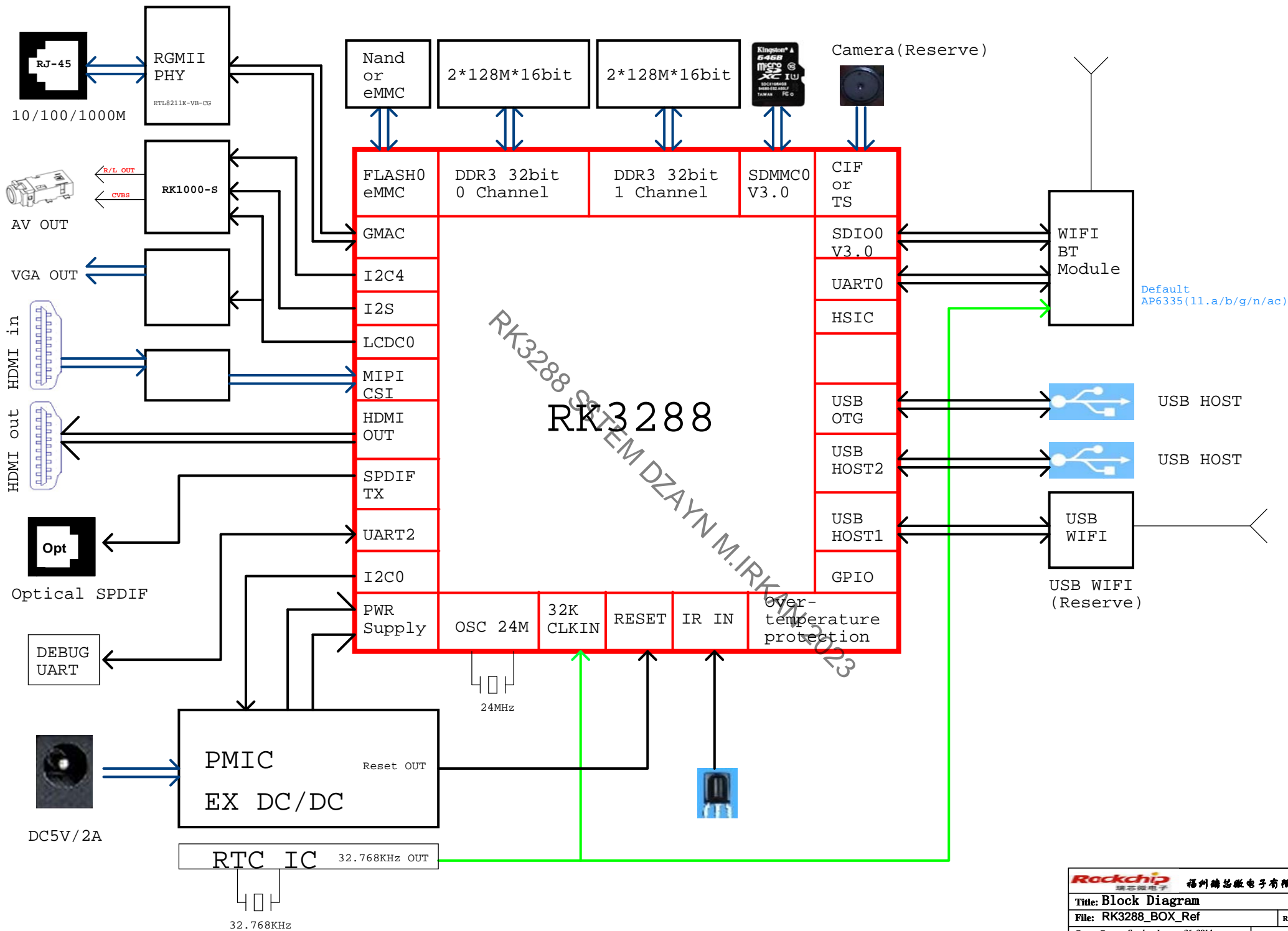
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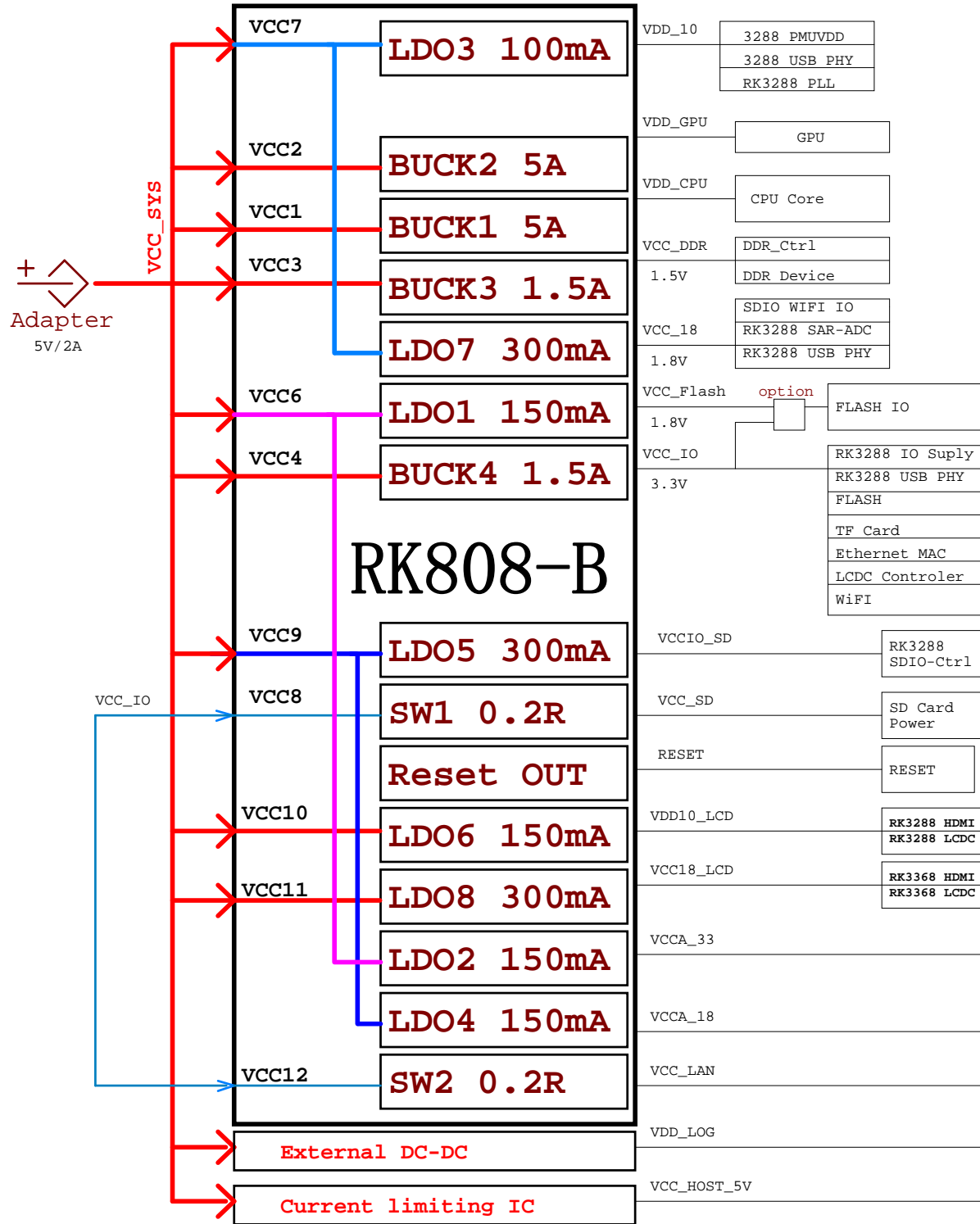
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Modify Date: Tuesday, March 21, 2017

Page Total: 24

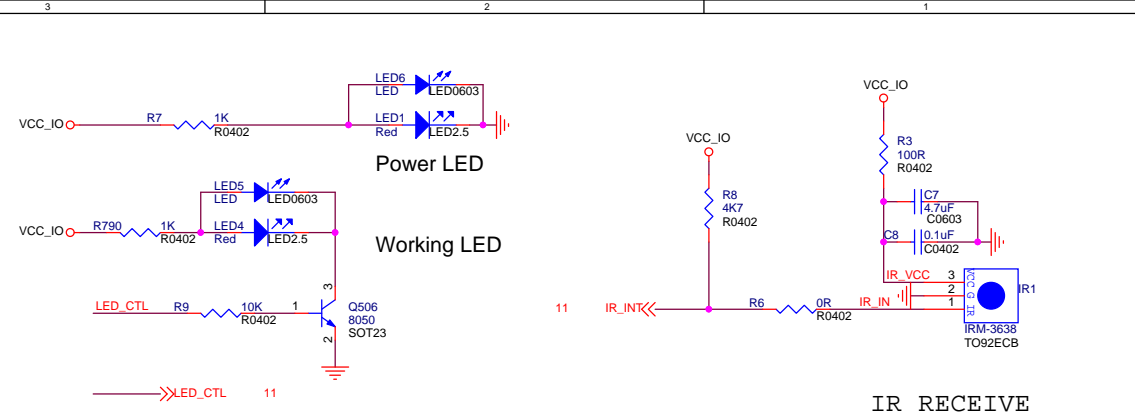
Version	Date	Author	Change Note	Approved
V2.0	20170207	LCH	Update	





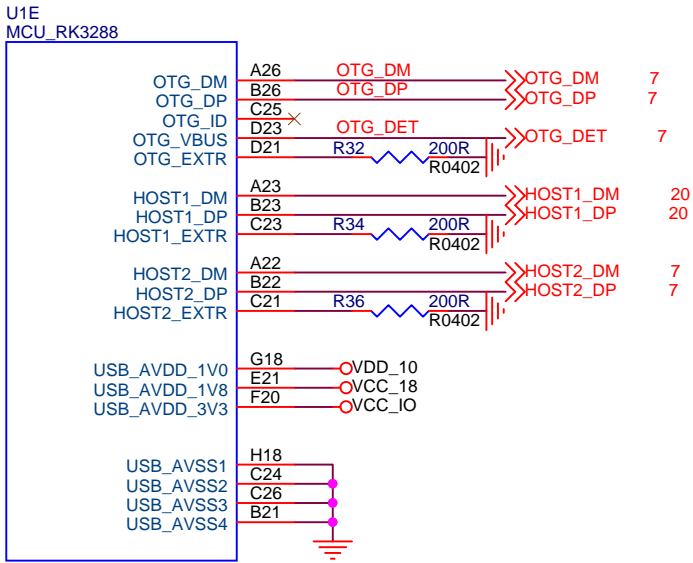
Power up Timing

PowerName	RK808-B Channel	timer 2mS	Default voltage	Normal voltage
VDD_10	LDO3	Slot:1	1.0V	1.0V
VDD_CPU	BUCK1	Slot:2	1.1V	DVFS
VDD_GPU	BUCK2	Slot:3	1.1V	DVFS
VDD_LOG	External DC-DC	Slot:4A	1.0V	DVFS
VCC_DDR	BUCK3	Slot:3	1.5V	1.5V
VCC_18	LDO7	Slot:3	1.8V	1.8V
VCC18_FLASH	LDO1	Slot:4	1.8V	1.8V
VCC_IO	BUCK4	Slot:4	3.3V	3.3V
VCCIO_SD	LDO5	Slot:5	3.3V	1.8V or 3.3V
VCC_SD	SW1	Slot:5	3.3V	3.3V
Reset		16*2mS+50mS		
VDD10_LCD	LDO6	OFF	0V	1.0V
VCC18_LCD	LDO8	OFF	0V	1.8V
VCCA_33	LDO2	OFF	0V	3.3V
VCCA_18	LDO4	OFF	0V	1.8V
VCC_LAN	SW2	OFF	0V	3.3V

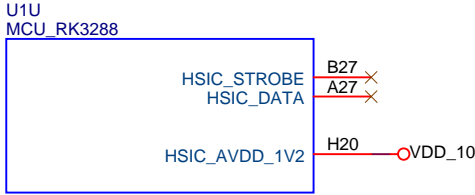
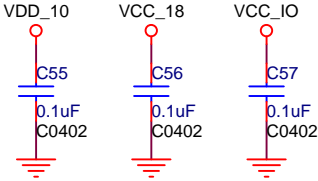


Note: AZ5825-01F must be SMD

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

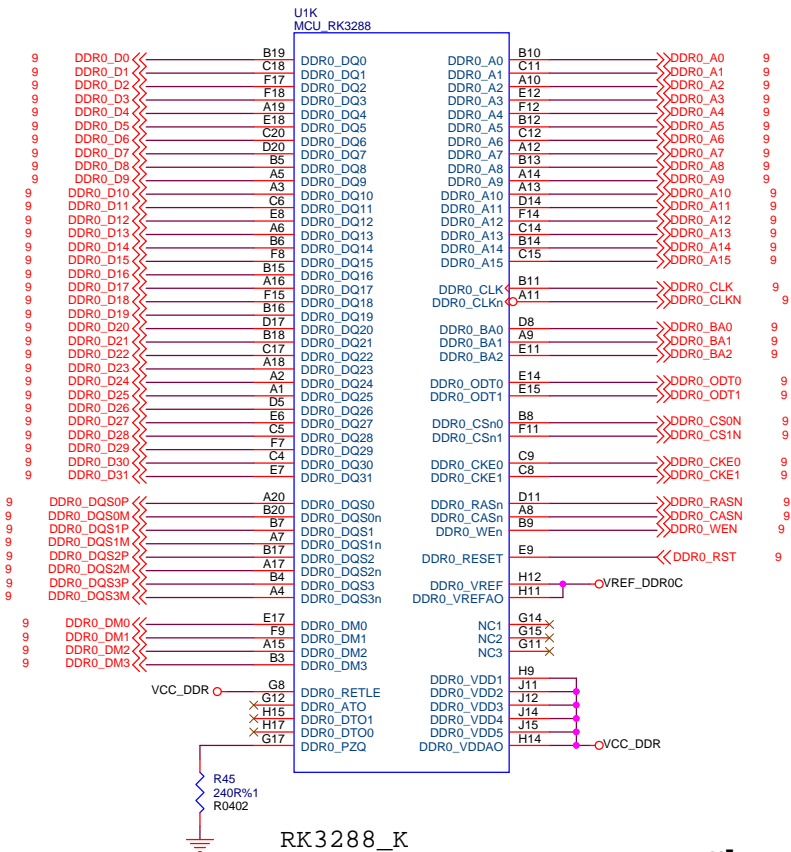


RK3288_E



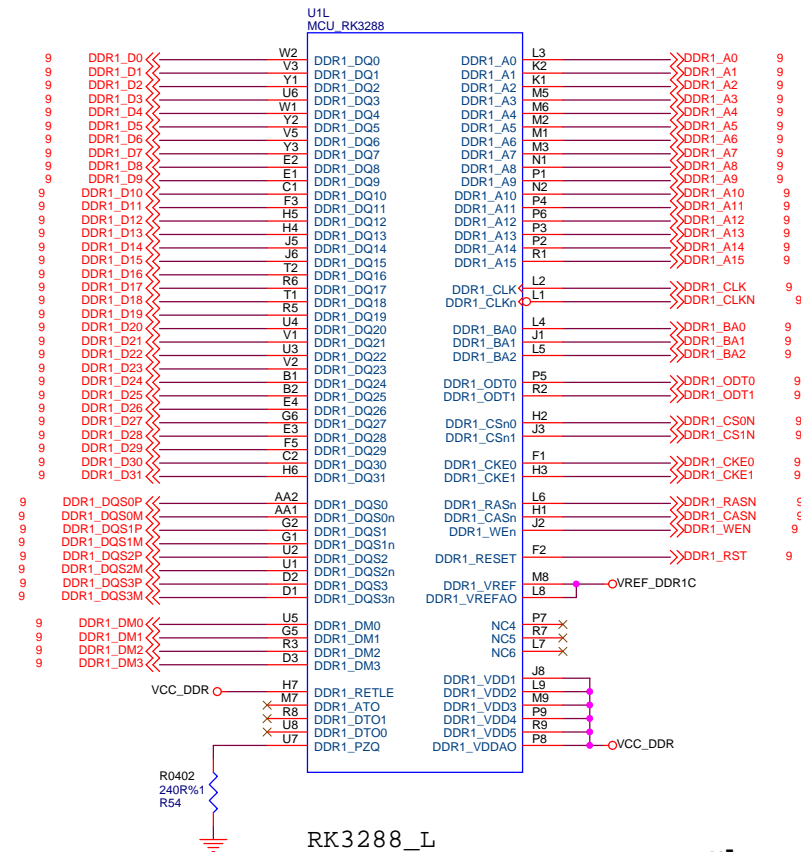
RK3288_U

 瑞芯微电子		福州瑞芯微电子有限公司	
Title: RK3288 USB/HSIC Controller			
File: RK3288_BOX_Ref			REV:3.0
Create Date: Monday, February 17, 2014		Page Num: 6	
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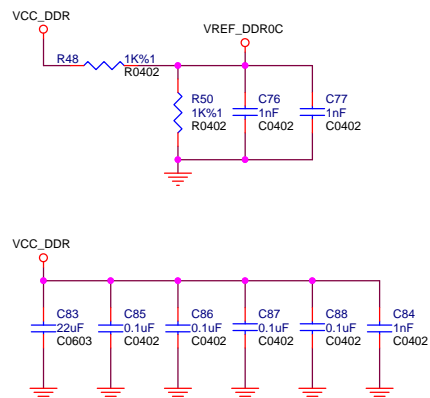
RK3288_K

Channel 0



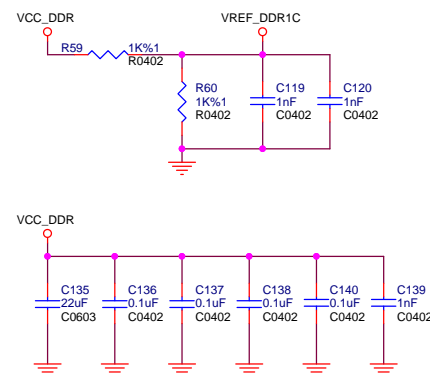
RK3288_L

Channel 1



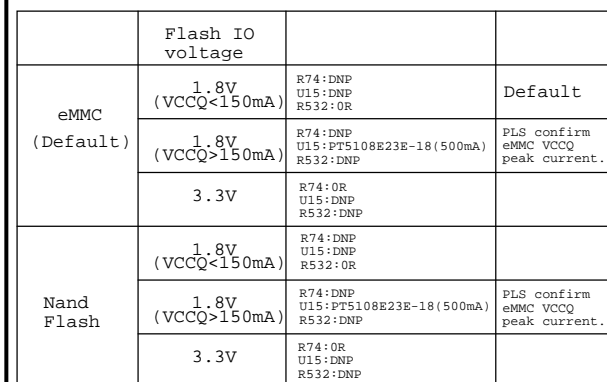
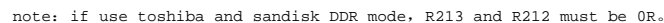
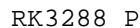
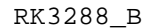
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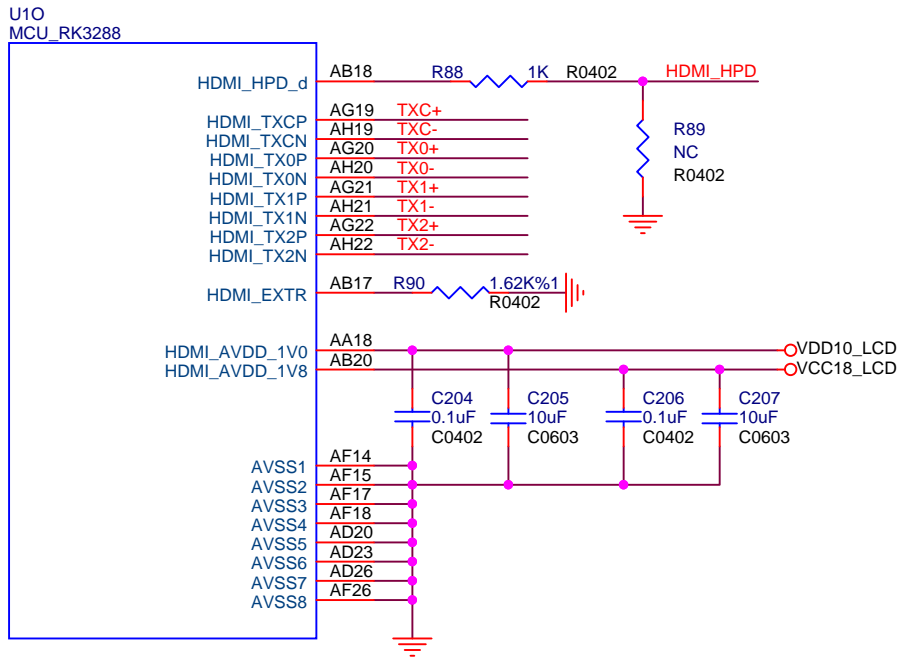
Note:
These termination resistors must be placed in the middle of trace, and the termination resistor of CLK must be placed in the bifurcation point.



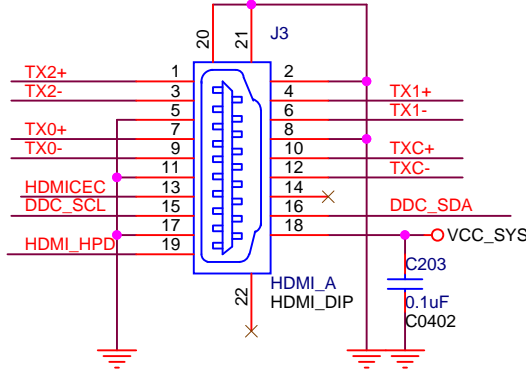
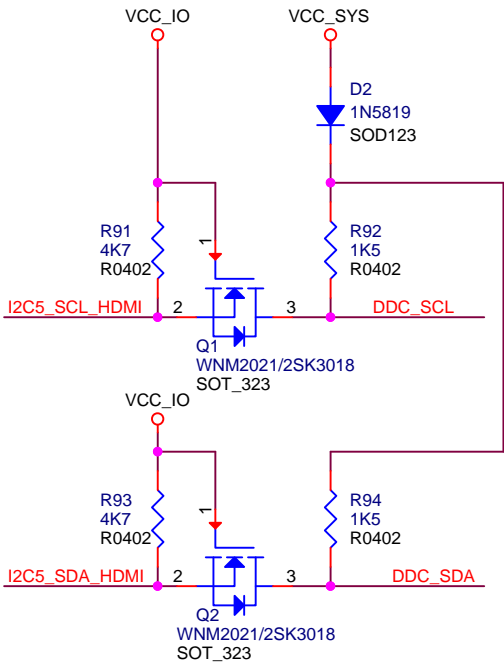
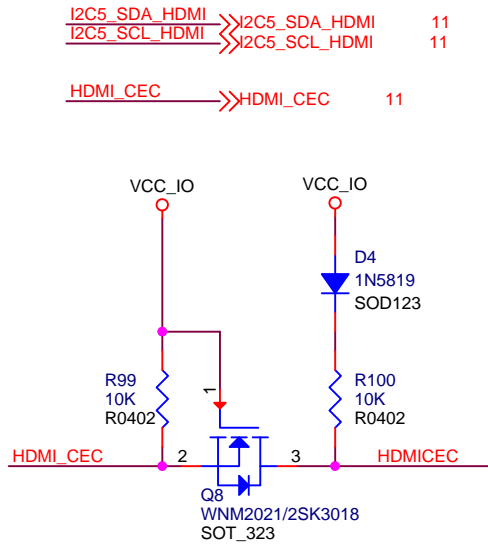
DDR1 FILTER

Note:
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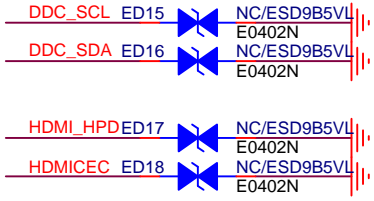
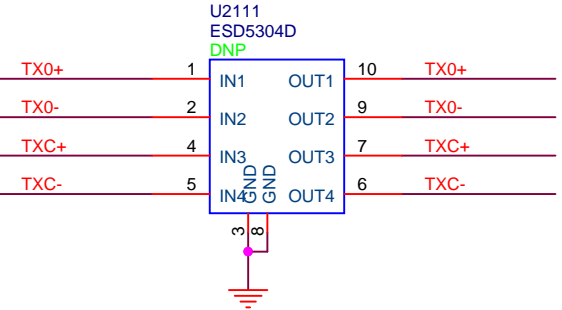
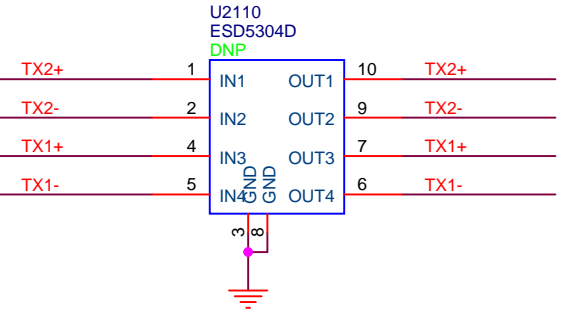




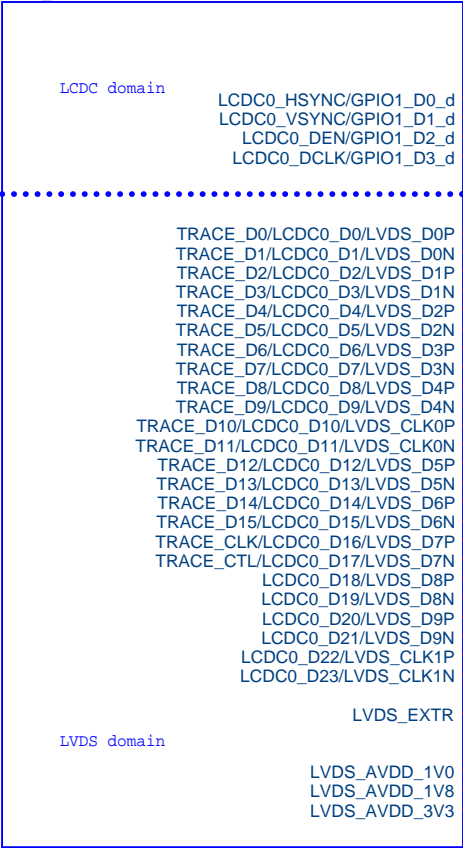
RK3288_O



HDMI OUT

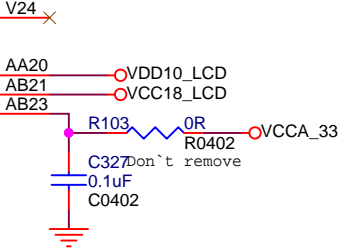


U1A
MCU_RK3288



RK3288_A

AA23	LCD_HSYNC
AB24	LCD_VSYNC
AA22	LCD_DEN
AA24	LCD_CLK
T27	LCD_D0
T28	LCD_D1
U27	LCD_D2
U28	LCD_D3
W27	LCD_D4
W28	LCD_D5
Y27	LCD_D6
Y28	LCD_D7
AA27	LCD_D8
AA28	LCD_D9
V27	LCD_D10
V28	LCD_D11
U25	LCD_D12
U26	LCD_D13
V25	LCD_D14
V26	LCD_D15
AA25	LCD_D16
AA26	LCD_D17
AB27	LCD_D18
AB28	LCD_D19
AC25	LCD_D20
AC26	LCD_D21
Y25	LCD_D22
Y26	LCD_D23



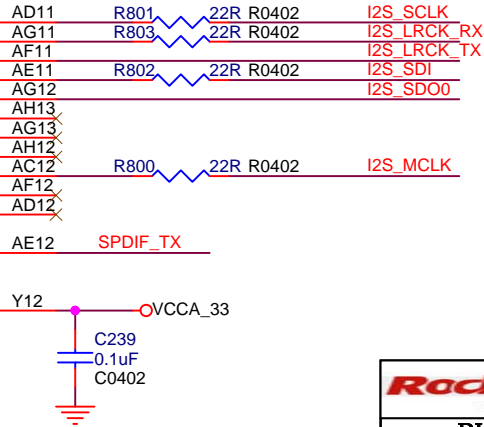
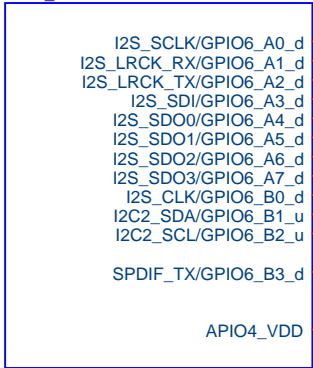
LCD_HSYNC	LCD_HSYNC	14,24
LCD_VSYNC	LCD_VSYNC	14,24
LCD_DEN	LCD_DEN	24
LCD_CLK	LCD_CLK	14,24

LCD_D0	LCD_D0	24
LCD_D1	LCD_D1	14,24
LCD_D2	LCD_D2	14,24
LCD_D3	LCD_D3	14,24
LCD_D4	LCD_D4	14,24
LCD_D5	LCD_D5	14,24
LCD_D6	LCD_D6	14,24
LCD_D7	LCD_D7	14,24
LCD_D8	LCD_D8	24
LCD_D9	LCD_D9	14,24
LCD_D10	LCD_D10	14,24
LCD_D11	LCD_D11	14,24
LCD_D12	LCD_D12	14,24
LCD_D13	LCD_D13	14,24
LCD_D14	LCD_D14	14,24
LCD_D15	LCD_D15	14,24
LCD_D16	LCD_D16	24
LCD_D17	LCD_D17	14,24
LCD_D18	LCD_D18	14,24
LCD_D19	LCD_D19	14,24
LCD_D20	LCD_D20	14,24
LCD_D21	LCD_D21	14,24
LCD_D22	LCD_D22	14,24
LCD_D23	LCD_D23	14,24


I2S_SCLK	I2S_SCLK	14,23
I2S_LRCK_RX	I2S_LRCK_RX	14,23
I2S_LRCK_TX	I2S_LRCK_TX	14
I2S_SDI	I2S_SDI	14,23
I2S_SDO0	I2S_SDO0	14
I2S_MCLK	I2S_MCLK	14,23

SPDIF_TX	SPDIF_TX	15
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U1I
MCU_RK3288



RK3288_I



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Title: RK3288 LCDC/I2S Controller

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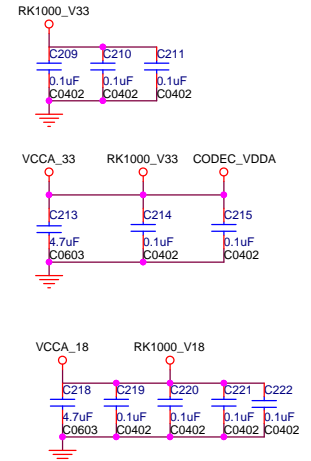
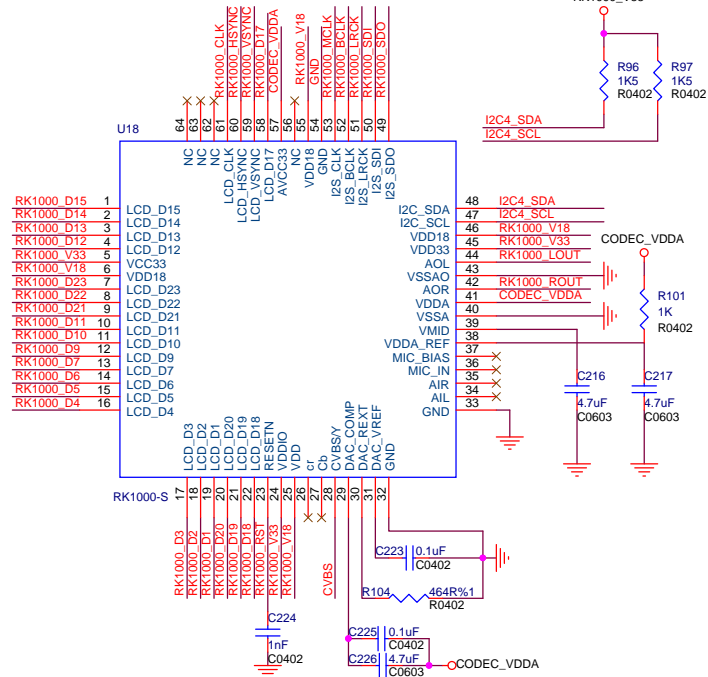
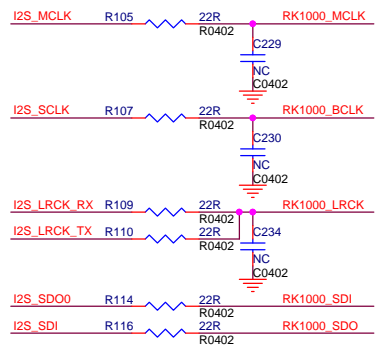
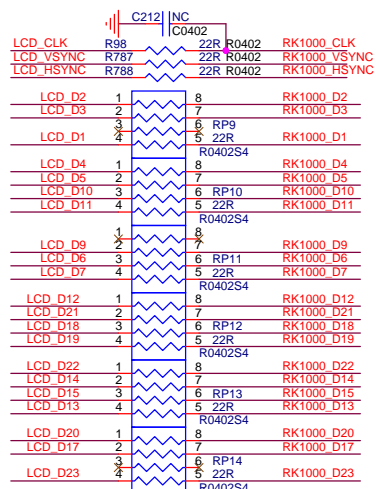
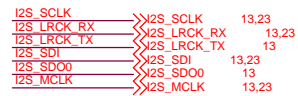
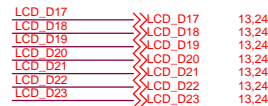
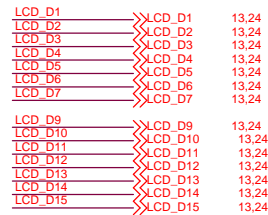
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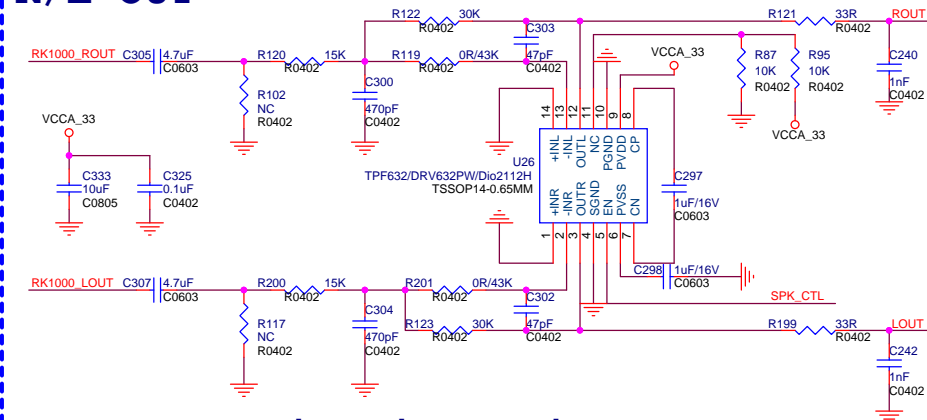
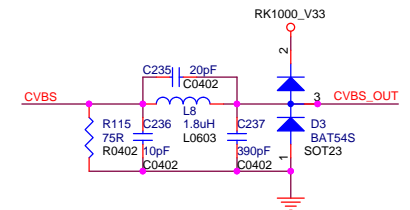
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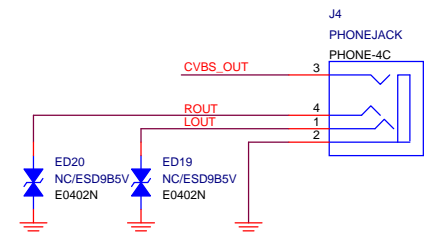
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RK1000-S POWER

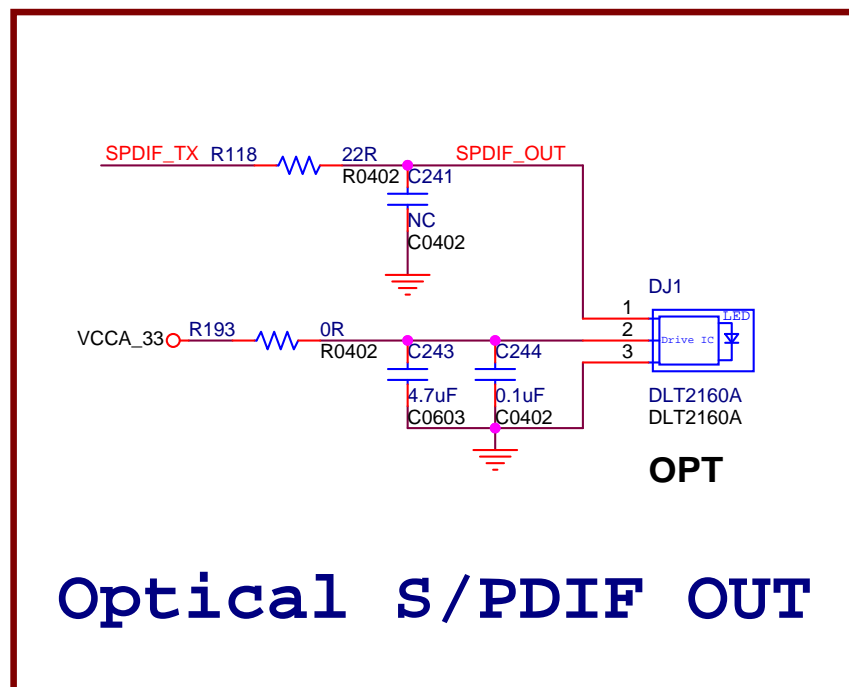



2-Vrms Audio Line Driver



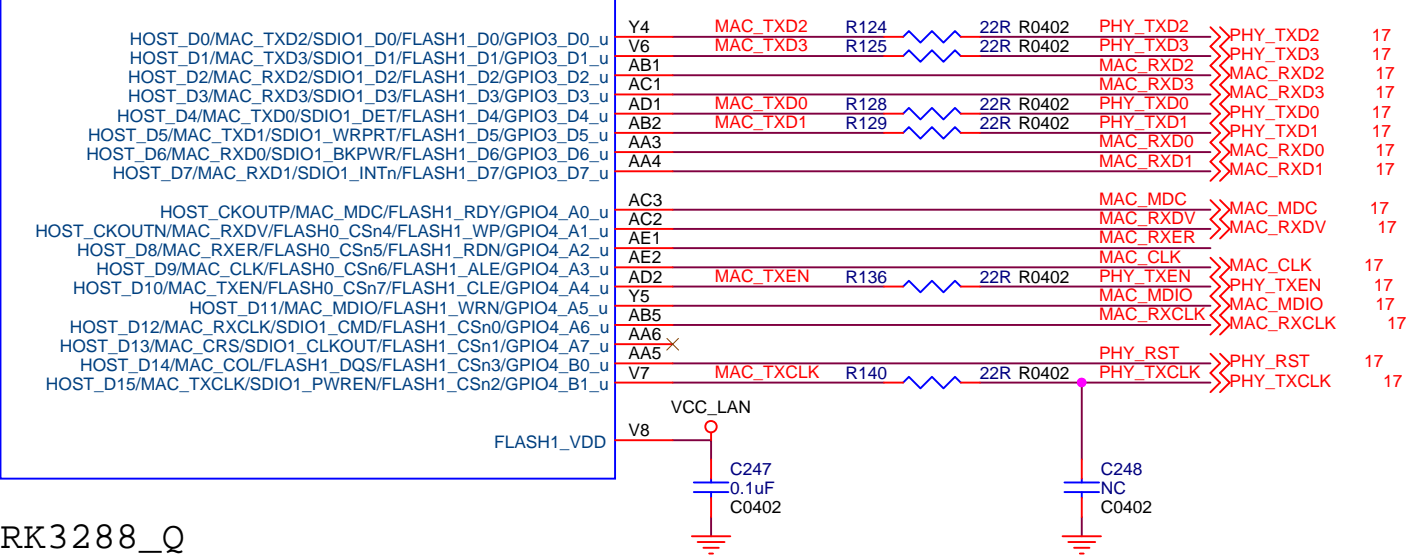
AV OUT

SPDIF_TX → SPDIF_TX 13

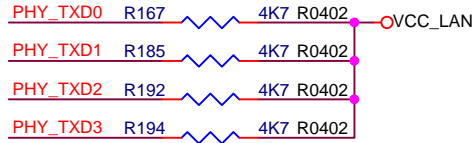
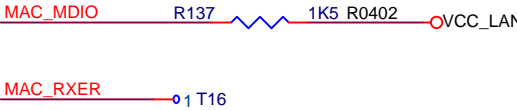


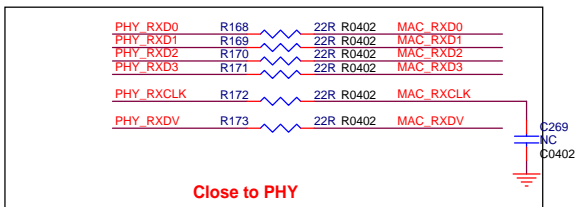
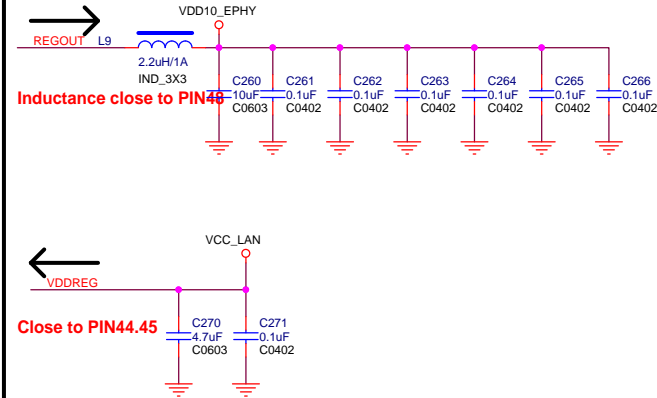
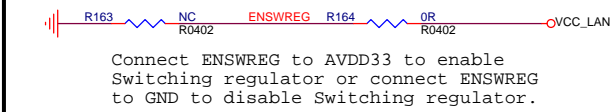
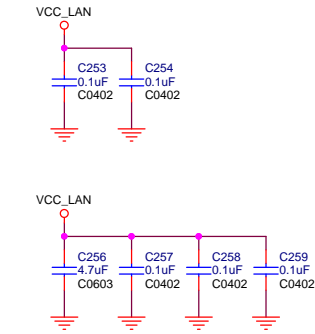
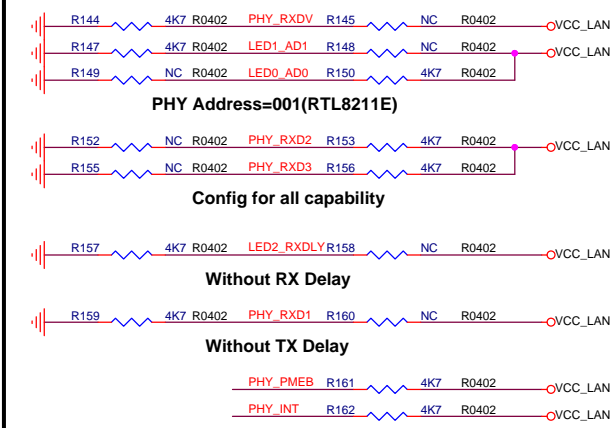
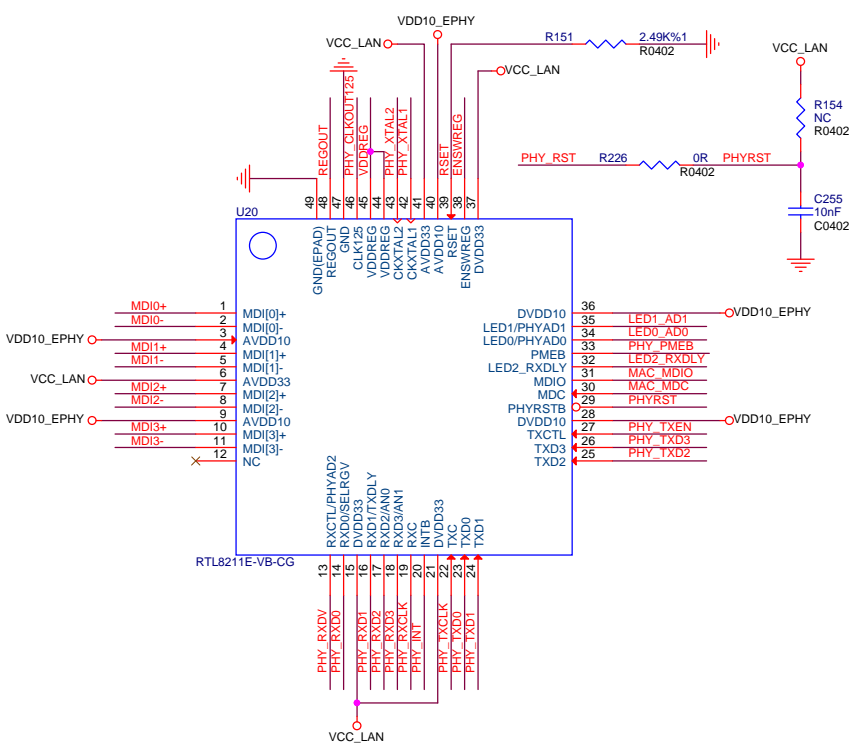
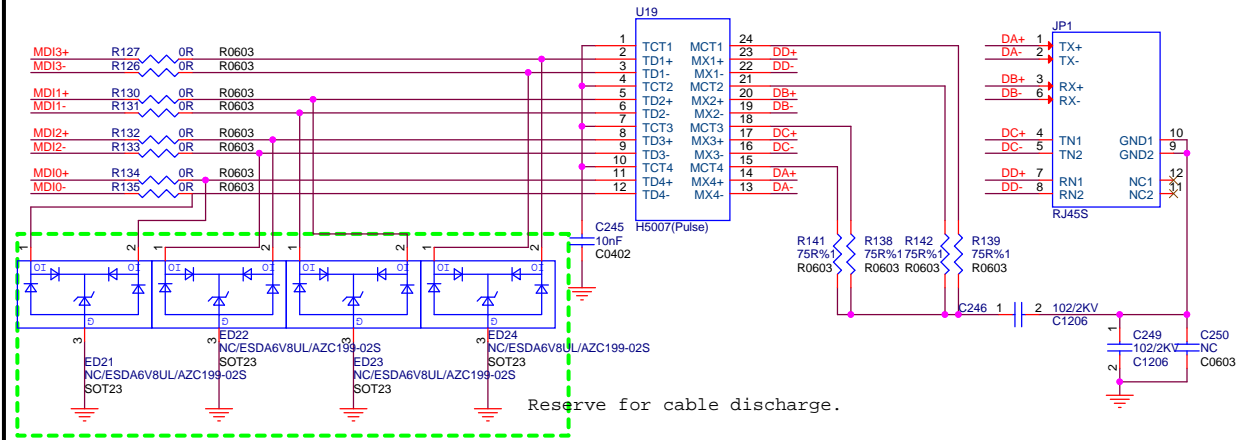
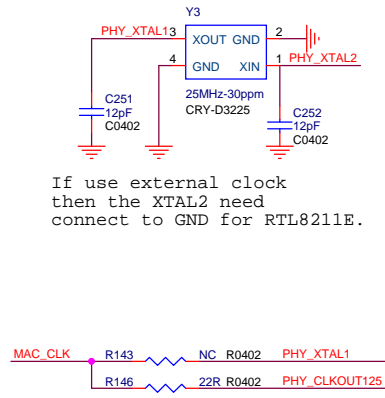
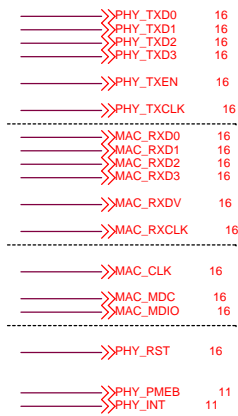
 瑞芯微电子		福州瑞芯微电子有限公司	
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Create Date: Monday, February 17, 2014		Page Num: 15	
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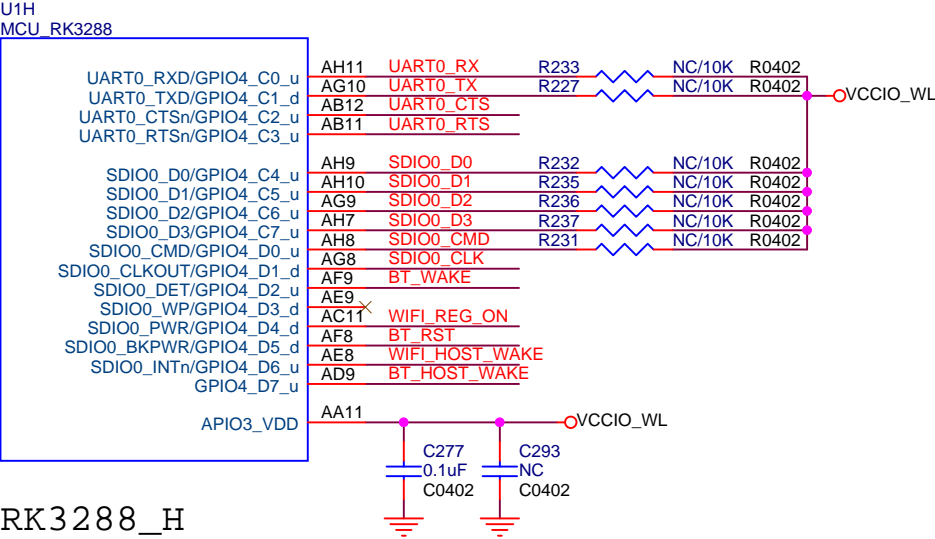
U1Q
MCU_RK3288



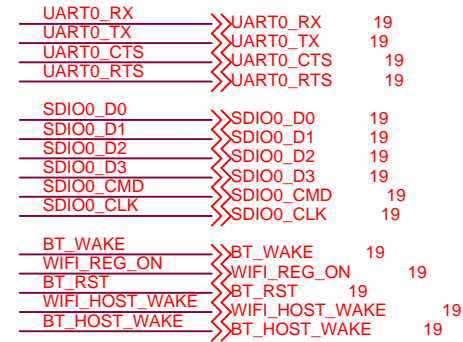
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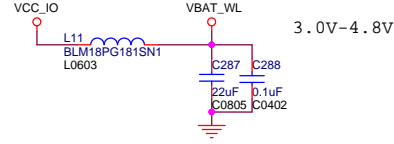
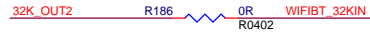
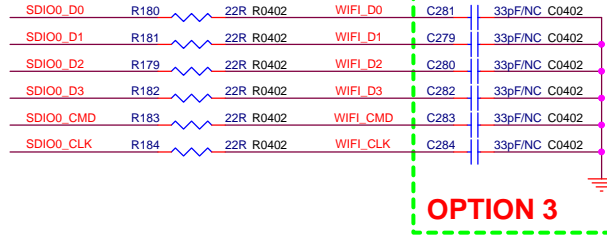
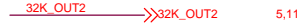
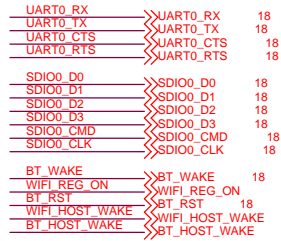




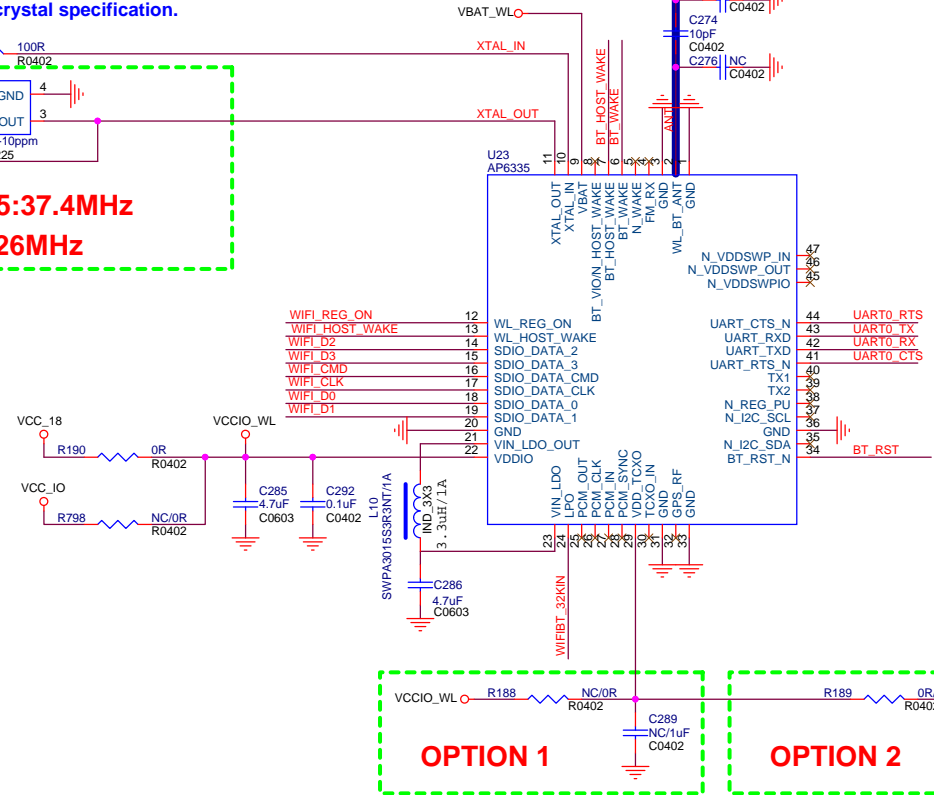
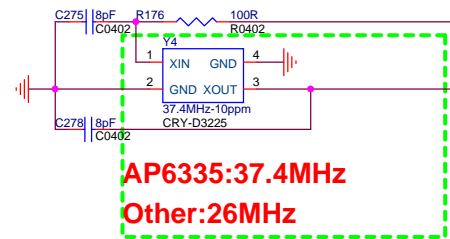


RK3288_H





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



OPTION	WIFI				BT4.0	Crystals	VDDIO
	a	b/g/n	ac	5GHz			
AP6181		Yes				26MHz	1.71~3.6V
AP6212		Yes			Yes	26MHz	1.71~3.6V
XZ3538		Yes			Yes	26MHz	1.71~3.6V
XZ3660	Yes	Yes		Yes	Yes	26MHz	1.2~2.9V
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
AP6181	DNP	DNP	DNP
AP6212	DNP	DNP	DNP
XZ3538	DNP	DNP	DNP
XZ3660	DNP	DNP	DNP
AP6330	DNP	DNP	DNP
AP6335 (Default)	DNP	Paste	Paste

