

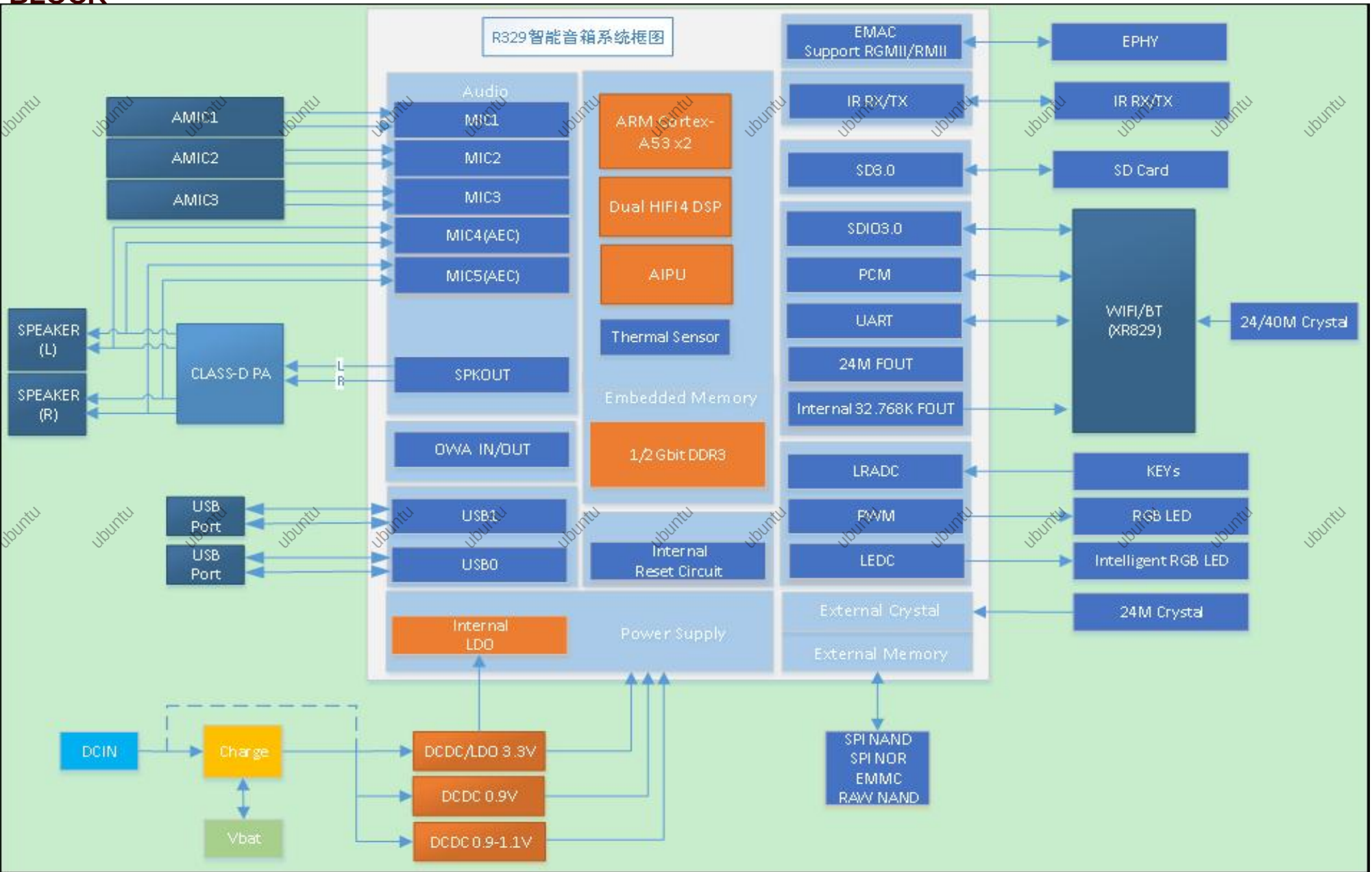
VERSION HISTORY

Index:

P01	VERSION HISTORY
P02	BLOCK DIAGRAM
P03	POWER TREE
P04&05	POWER/USB(Normal)
P06	SOC-SYS
P07	SOC-GPIO
P08	FLASH
P09	AUDIO
P10	KEY/LED/IR
P11	WIF/BT
P12	CARD/DSP-DEBUG
P13	CPU-DEBUG/IO INTERFACE
P14	GMAC

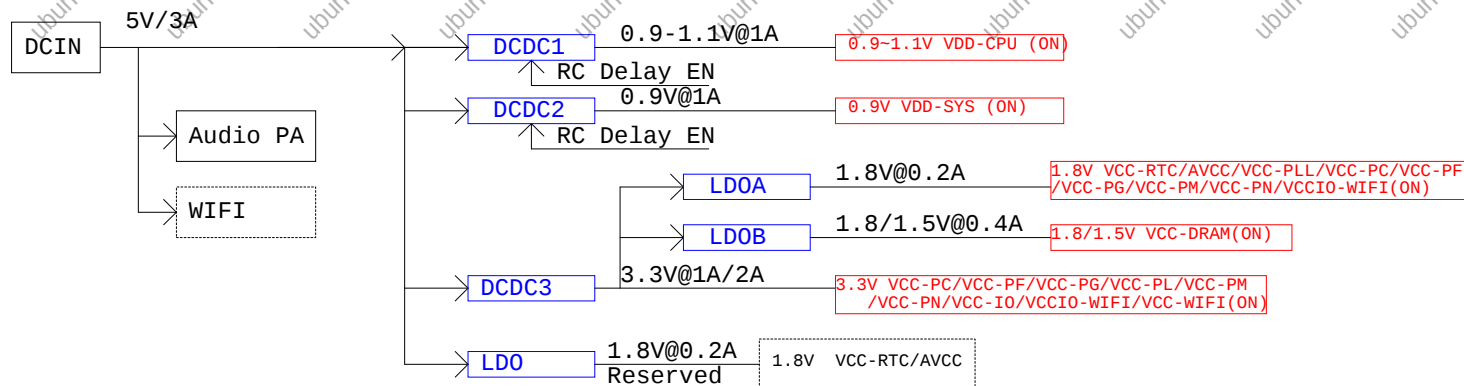
Revision	Description	Date	Drawn	Checked	Approved
Ver 1.0	Release version	2020-04-29			
Ver 1.1		2020-11-19			
Ver 1.2		2020-05-12			
Ver 1.3		2020-05-29			

BLOCK

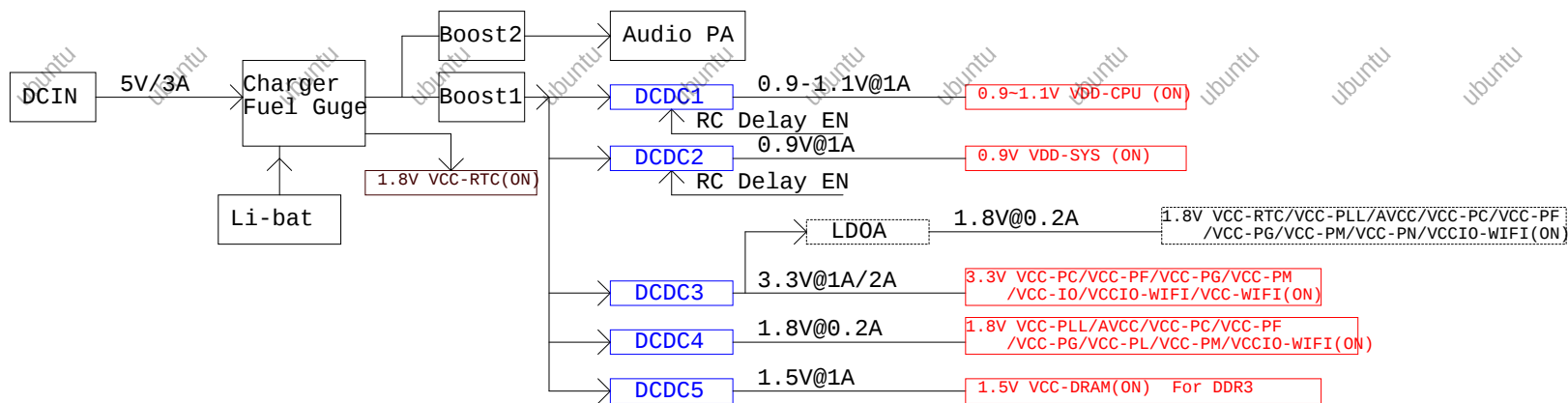


POWER TREE1

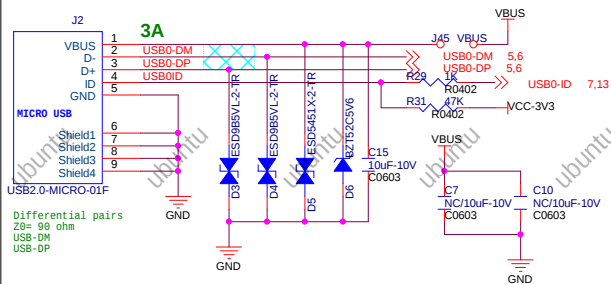
DEFAULT POWER TREE
 OPTIONAL POWER TREE



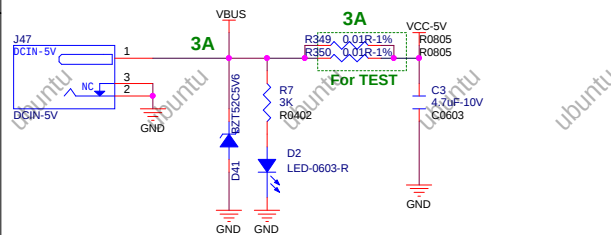
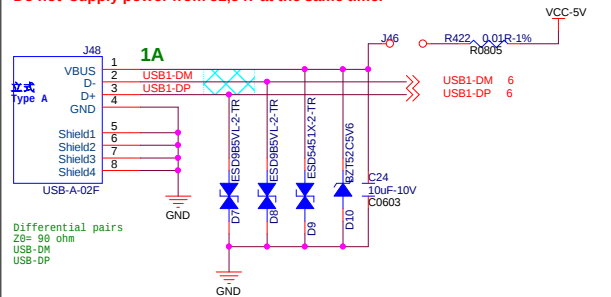
POWER TREE2



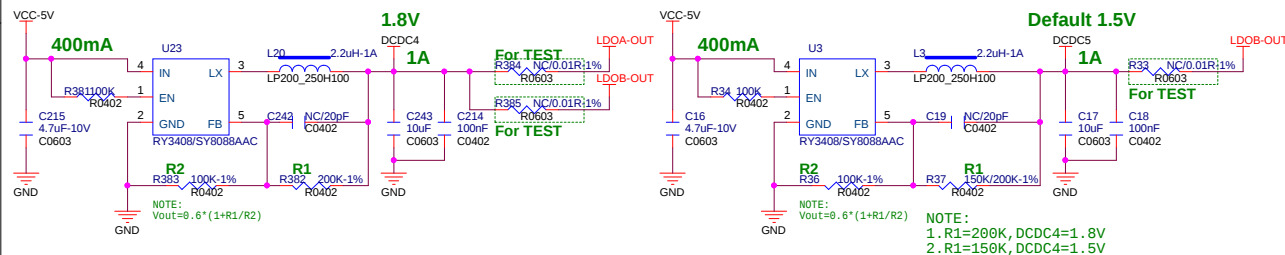
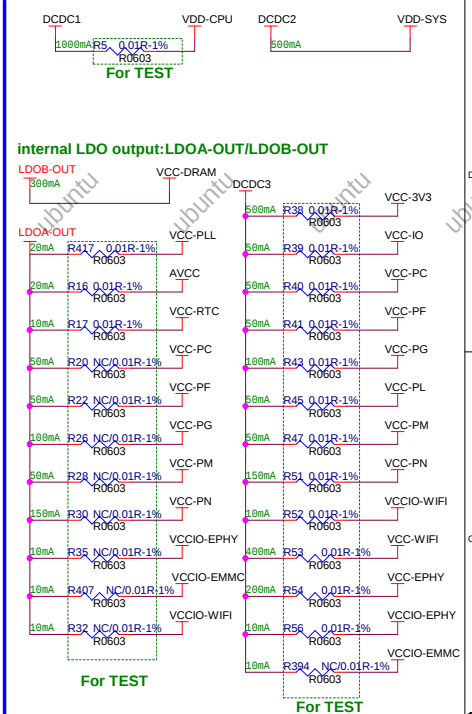
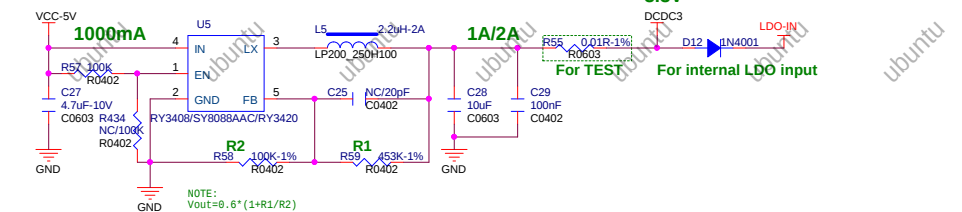
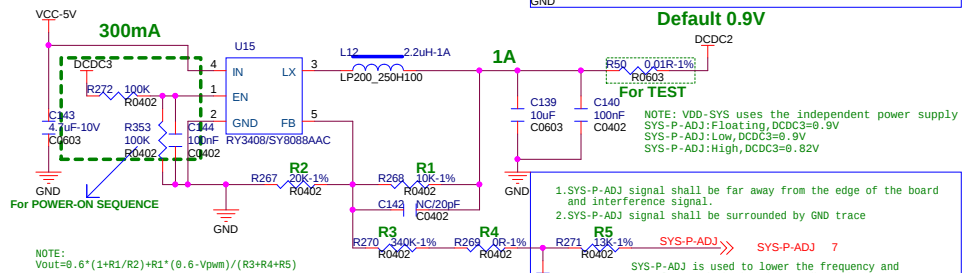
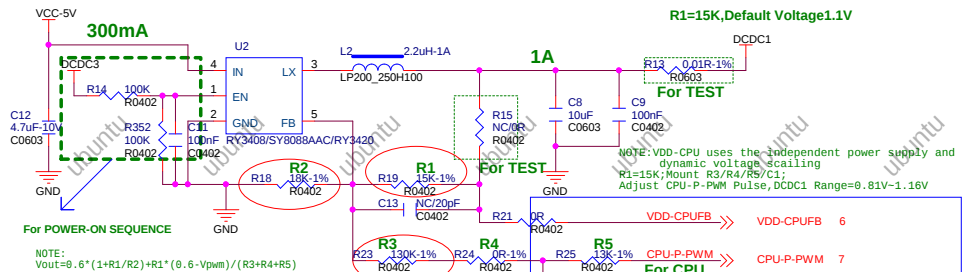
DC IN



NOTE:
External power is from J2 or J47
Do not supply power from J2,J47 at the same time.

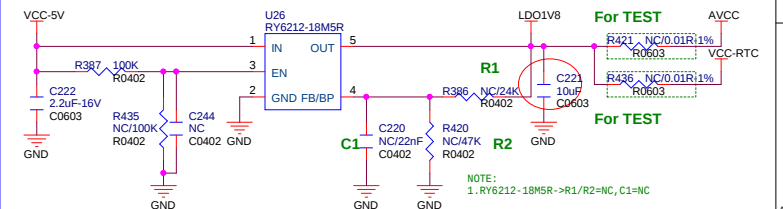


220Vto5V Adaptor Supply Power Solution



External DCDC and internal LDO of R329 cannot supply power at the same time

Must be reserved



AllWinner Technology Co.,Ltd			
Design Name R329_BGA_EVB5			
Size A3	Page Name POWER/USB		Rev «RevCode»
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SOC-SYS

DCXO

OSC-32K

RESET

DECOUPLE CAP

Pinout Table:

Part	C68	C69	C70	C71	C72
Layer	Top	Bot	Top	Bot	Bot
Double Side SMT	NC	10uF	NC	2.2uF	2.2uF

Part	C73	C74	C75	C76	C77
Layer	Top	Bot	Bot	Bot	Top
Double Side SMT	NC	10uF	2.2uF	2.2uF	NC

Part	C61	C62	C63	C64	C65
Layer	Bot	Bot	Bot	Bot	Bot
Double Side SMT	10uF	NC	NC	4.7nF	NC

Design Name: R329_BGA_EVB5

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RESET

1. AP-RESETN signal shall be far away from the edge of the board and interference signal.
2. AP-RESETN signal shall be surrounded by GND trace

VCC-3V3

R85 47K R0402

U9 NC/SGM803

Vth=2.93V

3 VIN RESET-N 2

GND

AP-RESETN

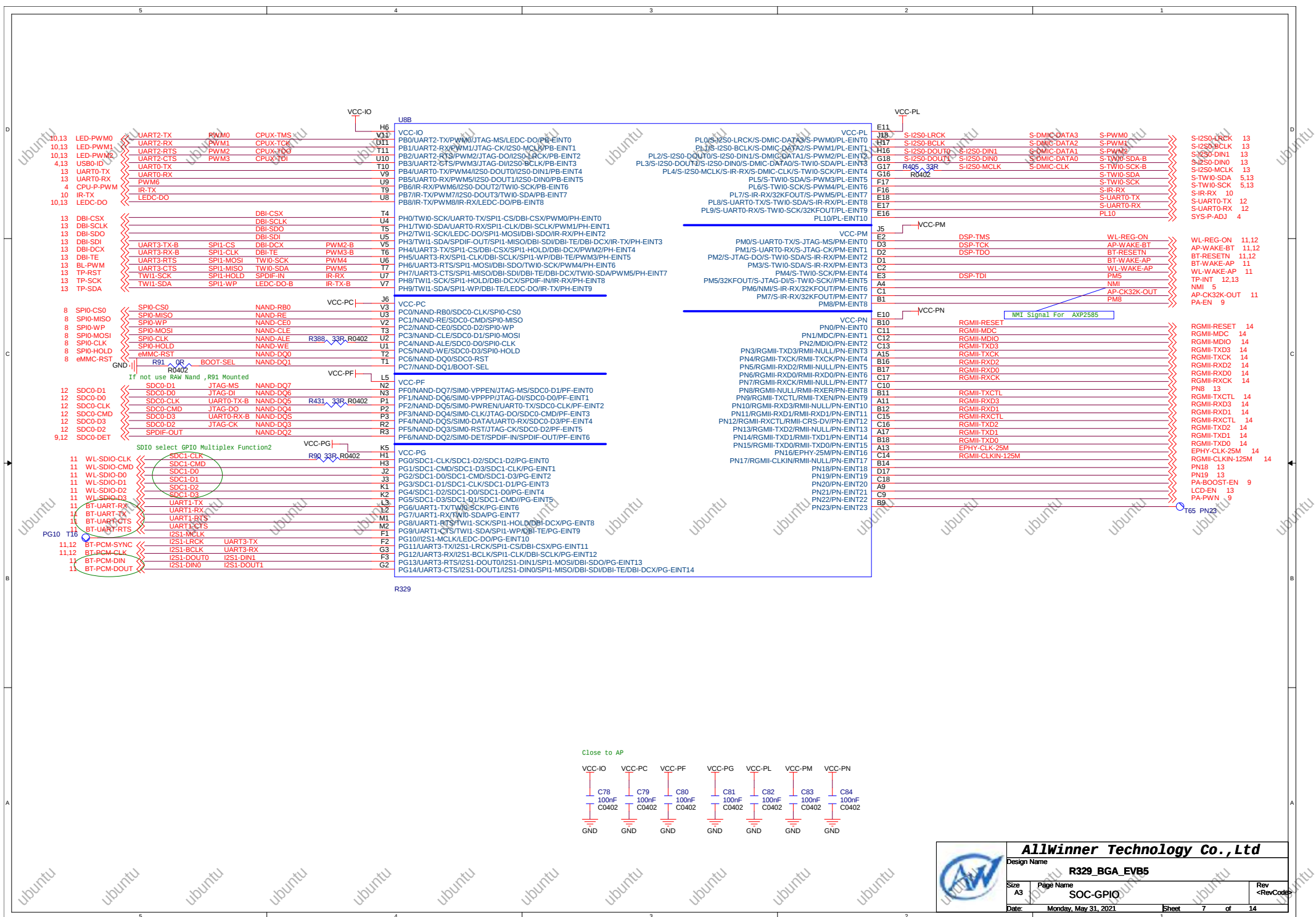
R87 10R R402

K3 RESETN sw2-3x4h2a

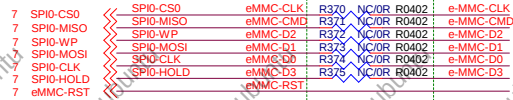
C58 1NF Close to AP C4042

GND

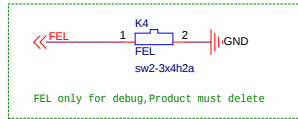
Part	C61	C62	C63	C64	C65
Layer	Bot	Bot	Bot	Bot	Bot
Double Side SMT	10uFNC	NC		4.7nF	NC



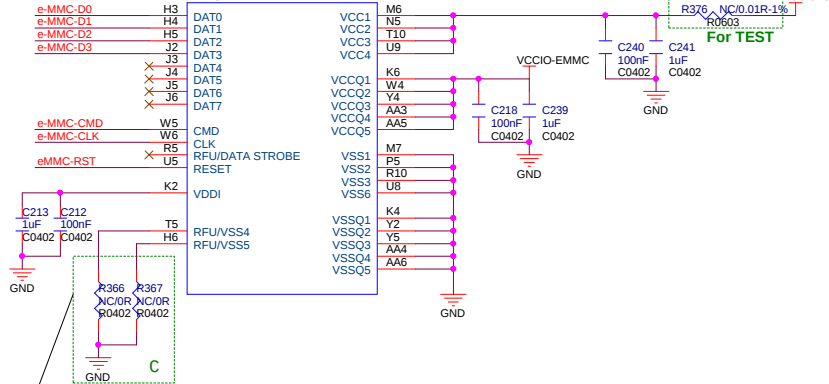
For eMMC Solution



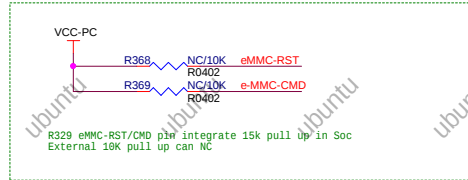
6 FEL



EMMC



If eMMC is not v5.0/v5.1, then NC this two resistors.

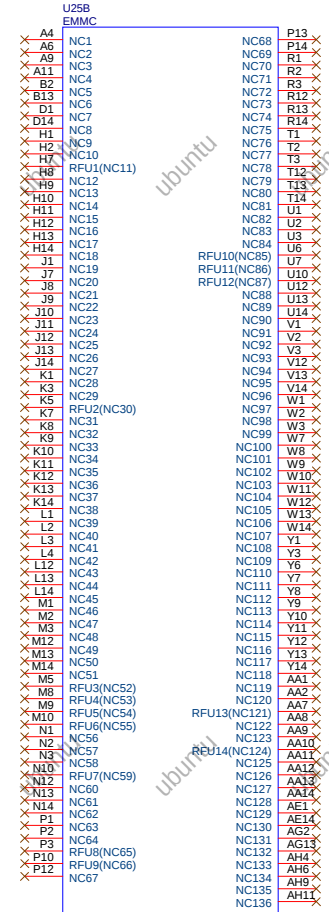


Double Layout	A	B	C
eMMC	NC	Mount	Depend on eMMC Version
SPI Nand/Nor	Mount	NC	NC

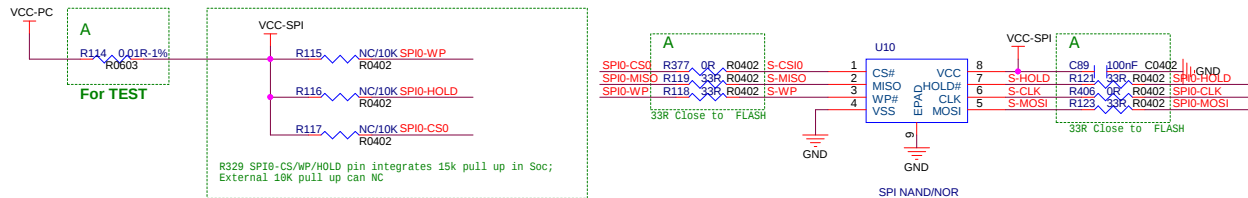
- 1.If only use SPI Nand, R377/R406 can delete, direct connect to SPI Nand
- 2.If only use eMMC, R376/R371/R372/R373/R374/R375 can delete, direct connect to eMMC

For eMMC Solution

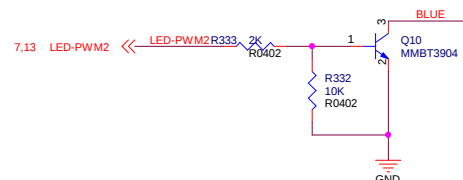
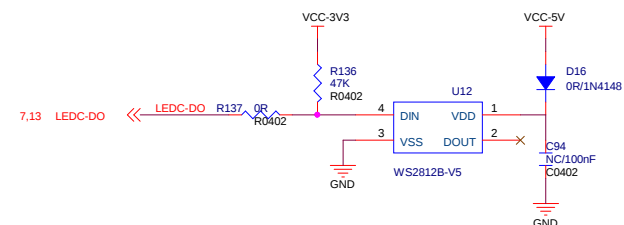
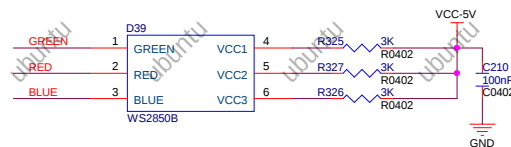
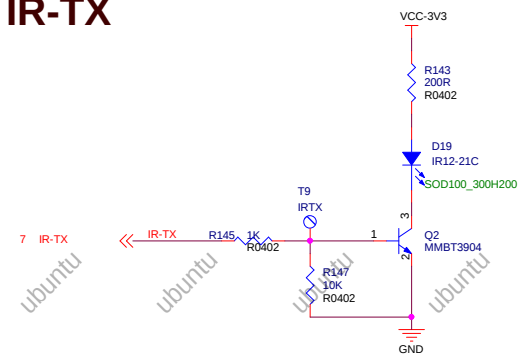
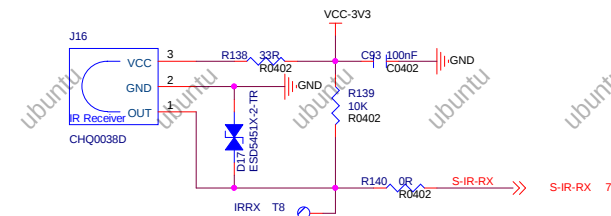
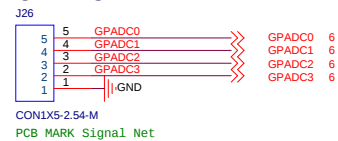
For TEST



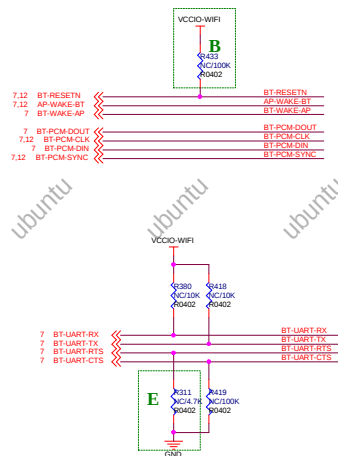
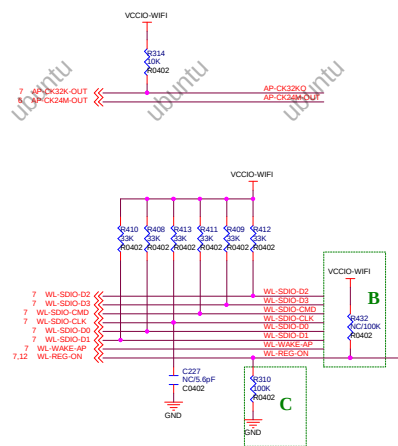
SPI NAND/NOR



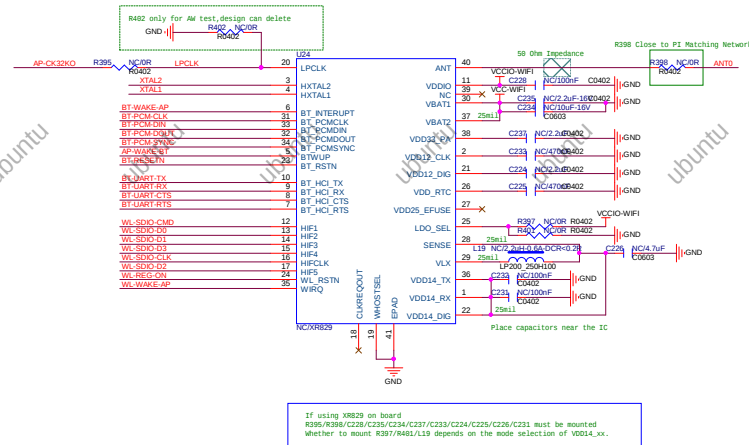
IR-TX



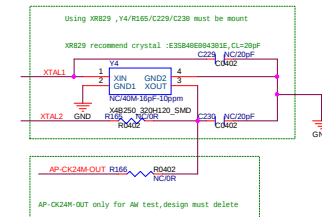
WIFI



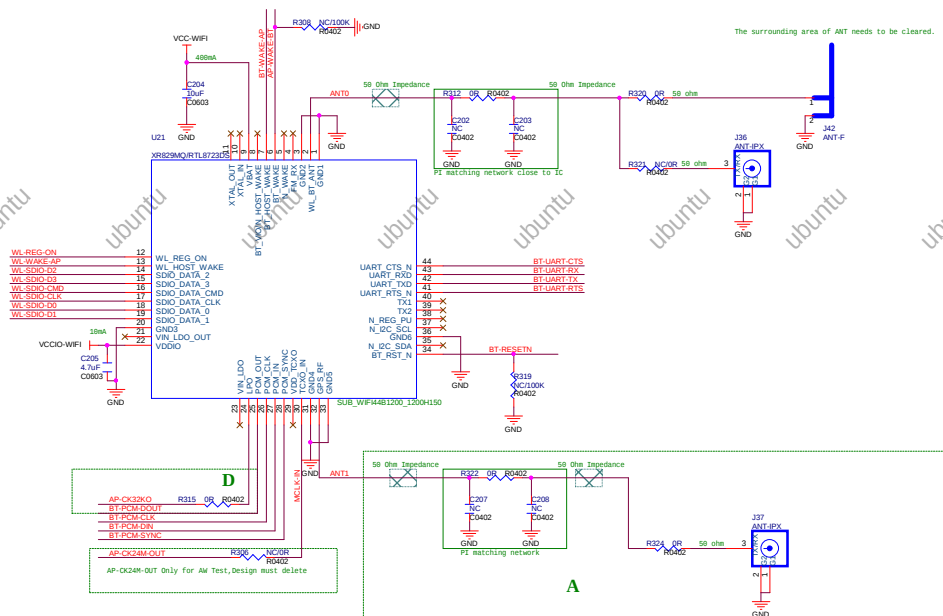
XR829 ON BOARD



VDD14_xx Mode	R397	R401	L219
LDO Mode (Recommend)	0R	NC	NC
DCDC Mode	NC	0R	2.2uF

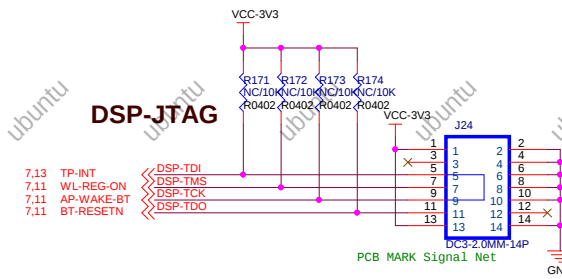
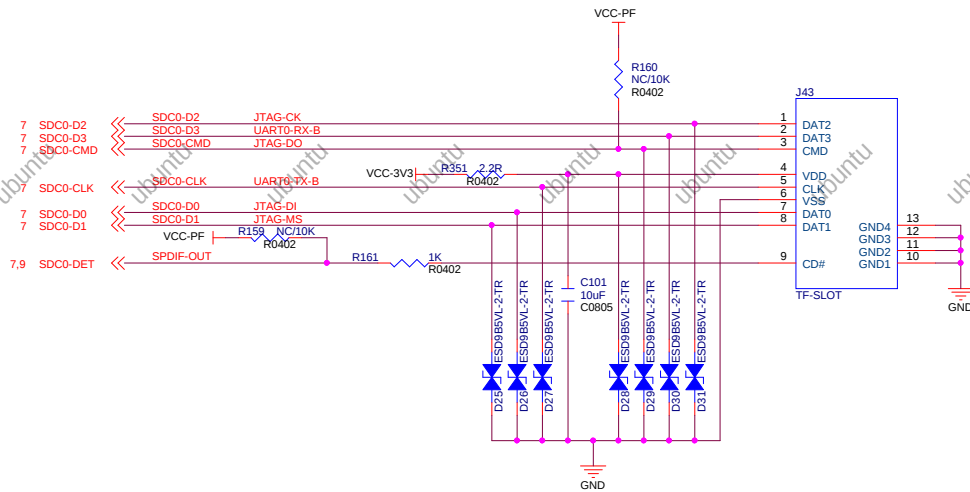


WIFI MODULE

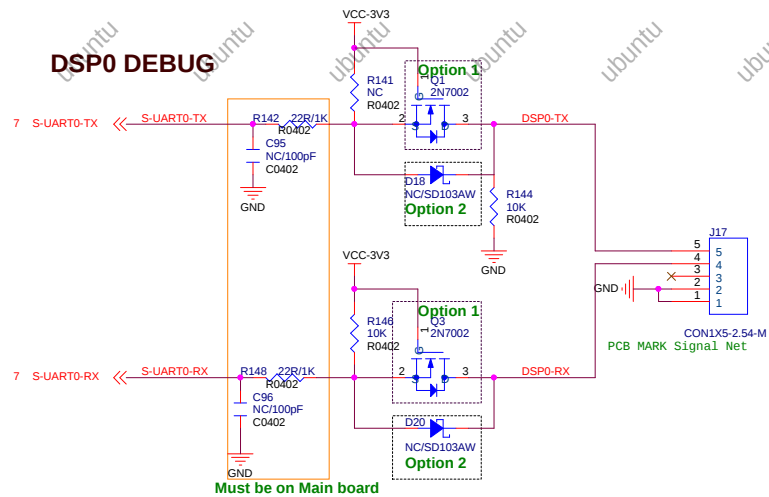


NOTE	ANT	A	B	C	D	E
X8E29 Module	single	NC	NC	Mount	Mount	NC
RTL7220S Module	single	NC	Mount	NC	NC	NC
RTL7220S Module	double	Mount	Mount	NC	NC	NC
RTL7223FS Module	double	Mount	Mount	NC	NC	NC
RTL7238S Module	double	Mount	Mount	NC	NC	NC
RTL8211CS Module	single	NC	Mount	NC	NC	Mount

CARD

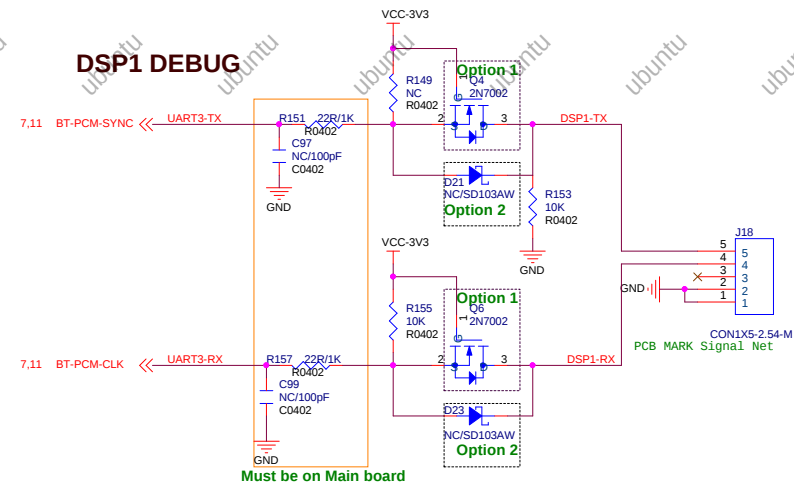


DSP0 DEBUG



DSP0 debug uses option 1 or option 2,R142/R148 selects 22R
If product only reserves test point for DSP0 debug,R142/R148 selects 1K,C95/C96 is mounted as 100pF

DSP1 DEBUG



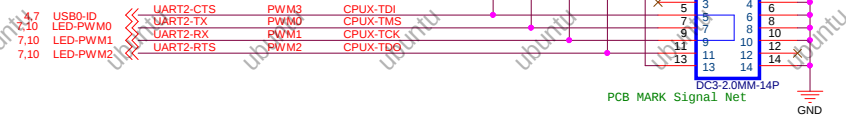
DSP1 debug uses option 1 or option 2,R151/R157 selects 22R
If product only reserves test point for DSP1 debug,R151/R157 selects 1K,C97/C99 is mounted as 100pF



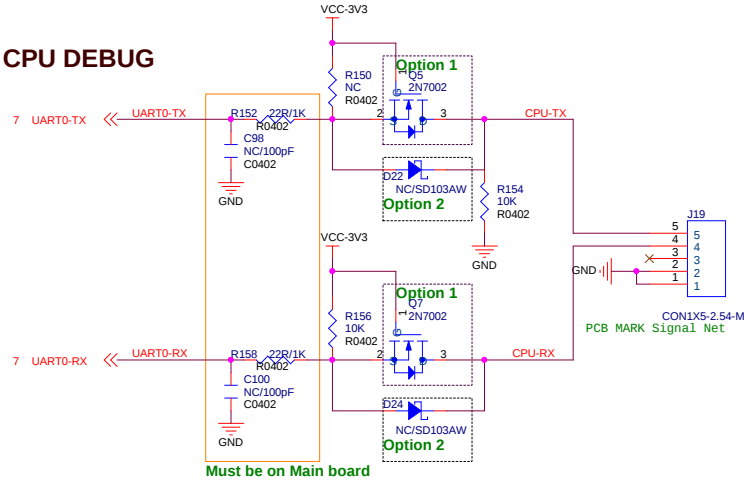
AllWinner Technology Co., Ltd

Size A3	Page Name CARD/DSP-DEBUG	Rev
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CPU-JTAG/UART2/PWM/LED



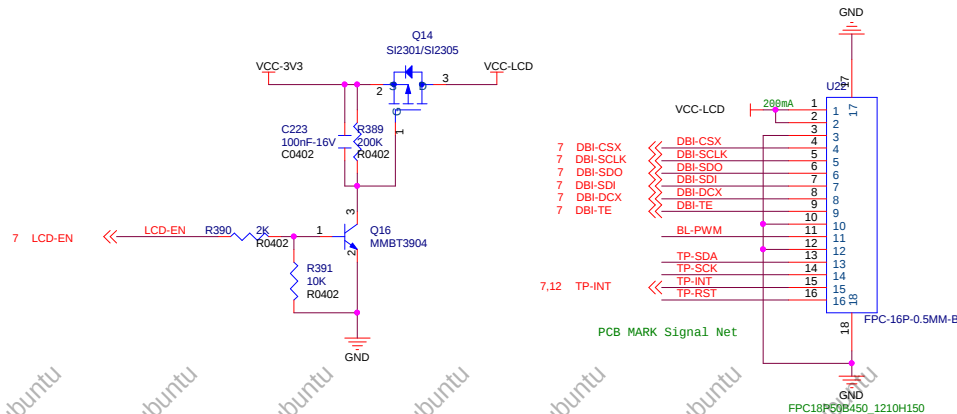
CPU DEBUG



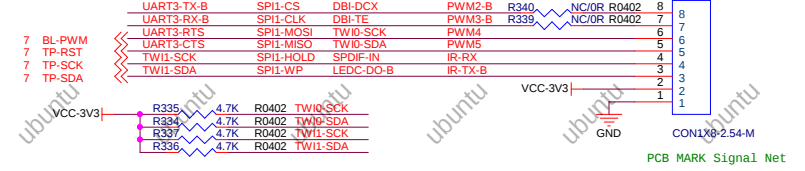
Must be on Main board

CPU debug uses option 1 or option 2, R152/R158 selects 22R
If product only reserves test point for CPU debug, R152/R158 selects 1K, C98/C100 is mounted as 100pF

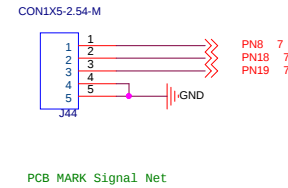
SPI PANEL



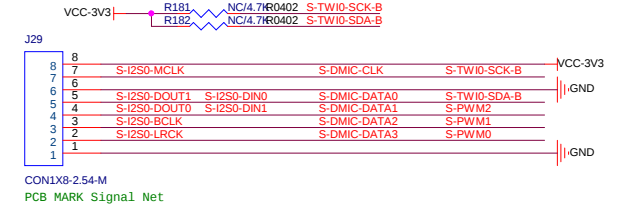
SPI1/UART3/TWI0/TWI1/PWM/IR/SPDIF-IN/LED



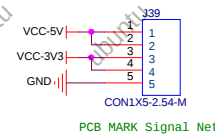
RESERVED IO



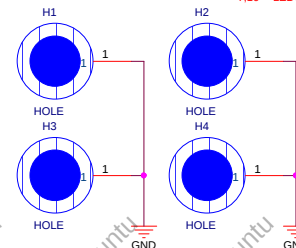
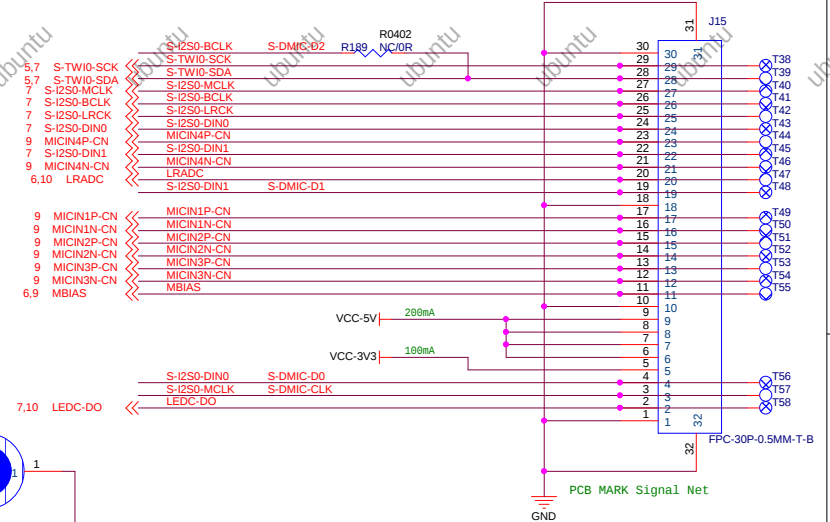
S-DMIC/S-IIS0/S-TWI0/S-PWM



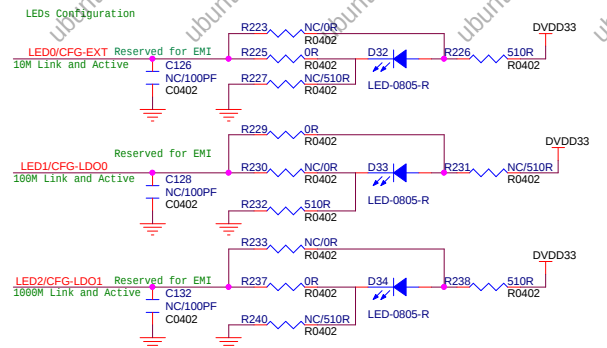
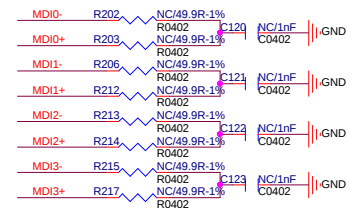
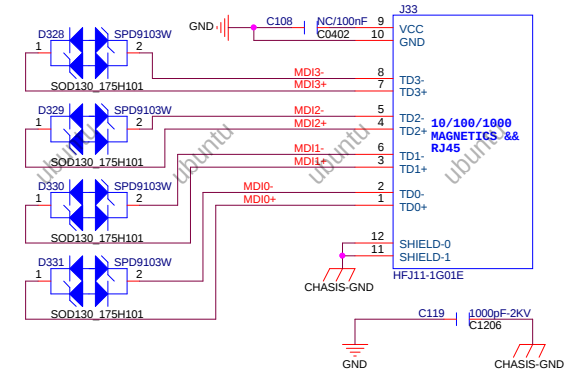
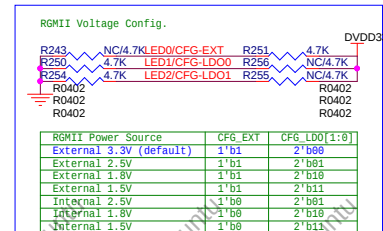
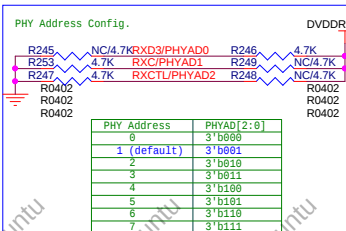
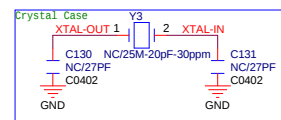
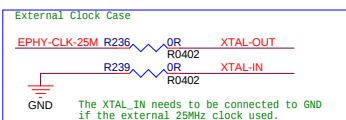
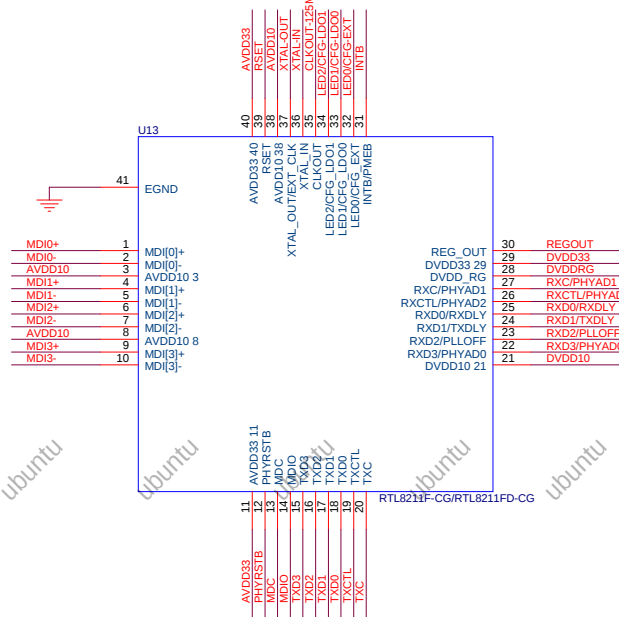
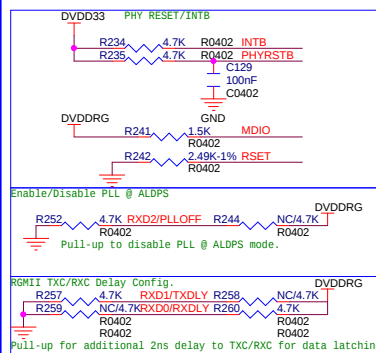
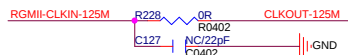
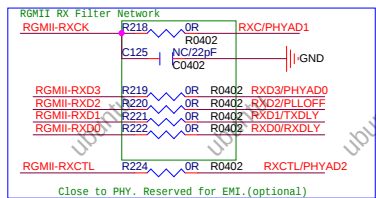
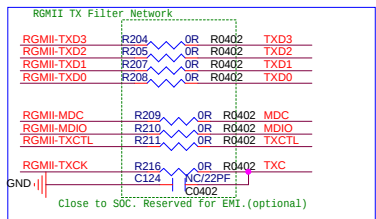
5V/3.3V POWER



EXTERNAL ADC/DMIC



7	RGMI1-RXD3	RGMI1-RXD3
7	RGMI1-RXD2	RGMI1-RXD2
7	RGMI1-RXD1	RGMI1-RXD1
7	RGMI1-RXD0	RGMI1-RXD0
7	RGMI1-RXCK	RGMI1-RXCK
7	RGMI1-RXCTL	RGMI1-RXCTL
7	RGMI1-CLKIN-125M	RGMI1-CLKIN-125M
7	RGMI1-TXD3	RGMI1-TXD3
7	RGMI1-TXD2	RGMI1-TXD2
7	RGMI1-TXD1	RGMI1-TXD1
7	RGMI1-TXD0	RGMI1-TXD0
7	RGMI1-TXCK	RGMI1-TXCK
7	RGMI1-TXCTL	RGMI1-TXCTL
7	RGMI1-MDC	RGMI1-MDC
7	RGMI1-MDIO	RGMI1-MDIO
7	EPHY-CLK-25M	EPHY-CLK-25M
7	RGMI1-RESET	PHYRSTB



	LED Resistances Setting
CFG-EXT='1'b1	RE23(NC), RE24, RE25, RE26(NC)
CFG-EXT='1'b0	RE23, RE24(NC), RE25(NC), RE26
CFG-LD08='1'b1	RE28(NC), RE29, RE30, R31(NC)
CFG-LD08='1'b0	RE28, RE29(NC), RE30(NC), RE31
CFG-LD01='1'b1	RE32(NC), RE36, RE37, RE38(NC)
CFG-LD01='1'b0	RE32, RE36(NC), RE37(NC), RE38