

野火i.MX RT1052 Pro底板

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历史版本

版本号	日期	设计	描述
V0.1	2018-03-13	cancore	初始版本
V0.2	2018-04-19	cancore	同轴与串口之间增加跳帽，修改部分封装及结构
V1.0	2018-05-02	cancore	更换sensor,增加SD卡供电控制电路
V1.1	2018-08-29	cancore	Q4换成MOS
V1.2	2019-08-28	cancore	1.删除拨码开关，改为电阻切换启动模式，默认从SPI flash启动 2.增加EBF Module模块接口J82 3.更改结构，所有定位孔修改封装用于安装贴片铜柱，可以装配亚克力 4.修改电源开关U1为带方向封装 5.简化模式切换电路 6.增加串口，SWD隔离电路

1



外部电源供电时断开USB供电，防止灌电流，保护电脑USB口

The diagram illustrates a protection circuit for a USB port. It features a 12V_IN supply connected through a 4.7K resistor (R1) to the anode of a ZMM5V6 diode (D1). The cathode of D1 is connected to GND. A 5V_IN supply is connected to the 2-pin of a 3-pin USB connector. The 3-pin connector is also connected to a 5V_USB supply. A MOSFET (Q1, SSM3J328R) is used to control the connection between the 5V_USB supply and the 2-pin of the connector. The gate of Q1 is connected to the 12V_IN supply through a 47K resistor (R2). The source of Q1 is connected to GND, and the drain is connected to the 2-pin of the connector. The 3-pin of the connector is connected to the 5V_USB supply.



B



外设电源控制，低功耗模式时，关闭所有外设供电

3V3_IN

[4,5] PMIC_ON

R221

10K R0603

C152 100nF 6.3V C0603

U2

IN OUT

EN GND

1 3

2

MT9700

R171 3.4K R0603

2A 限流

3V3

C109 10uF

10V C0603

GND

GND

GND

GND



A



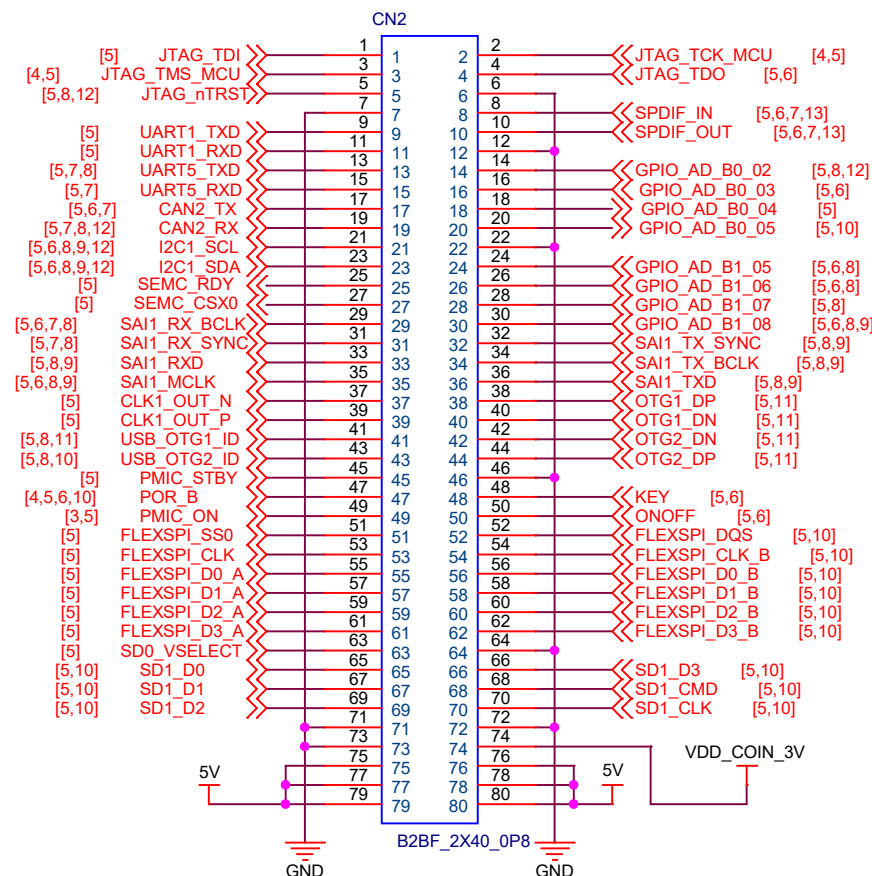
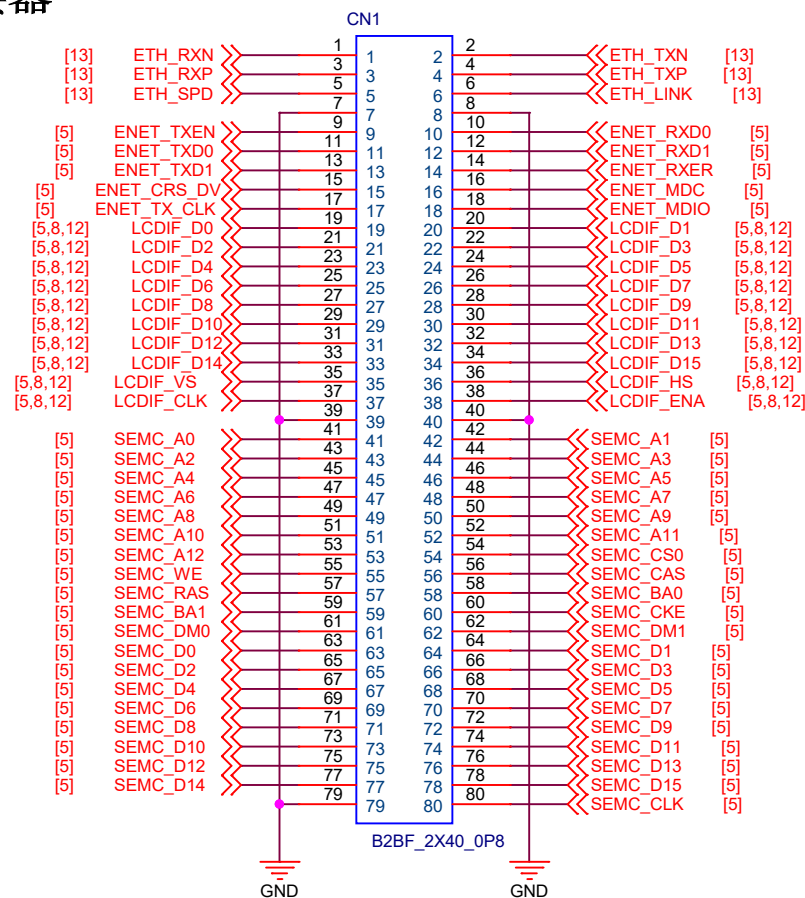
定位孔

The diagram shows 18 mounting holes, labeled H1 through H18, arranged in two rows of 9. Each hole is 3.0mm in diameter and is connected to GND by a red line. The holes are labeled H1 through H18 with their respective dimensions (3.0mm) above them.

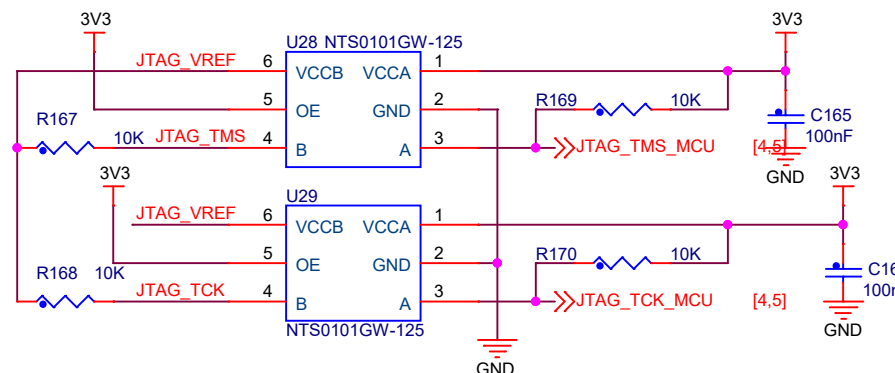
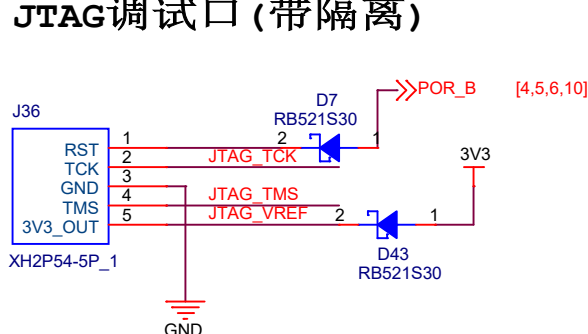
Size A4	Document Number 电源	Rev V1.0
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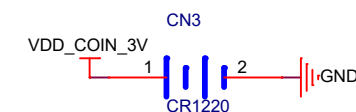
连接器



JTAG调试口(带隔离)



RTC 电池



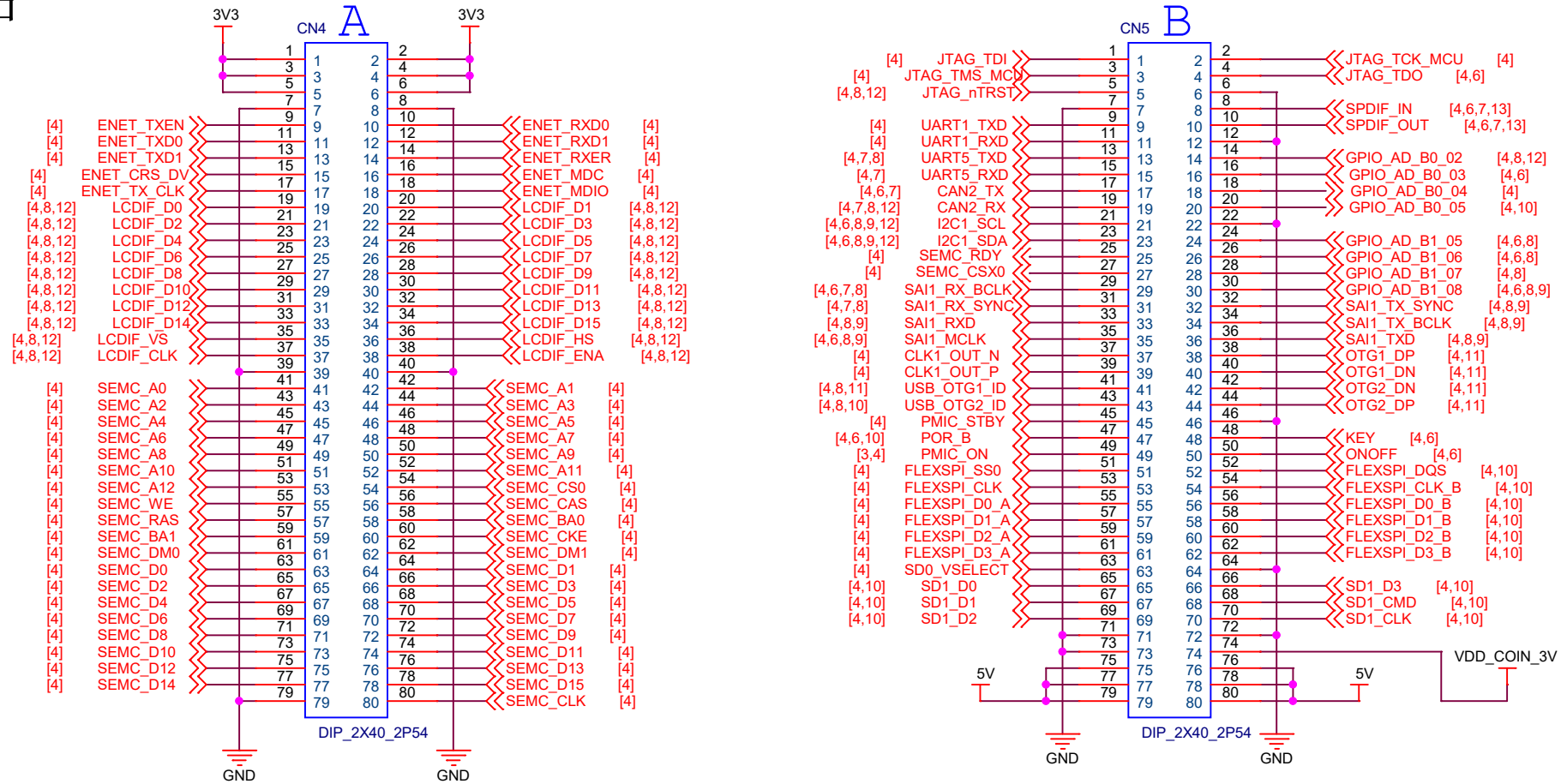
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Title	野火i.MX RT1052 Pro底板
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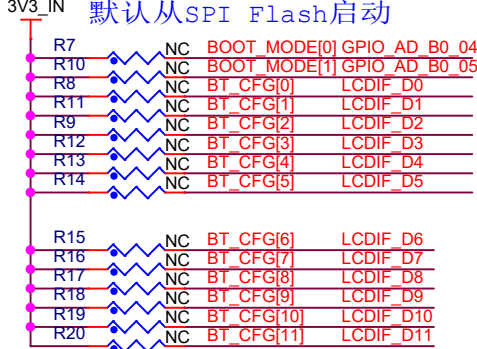
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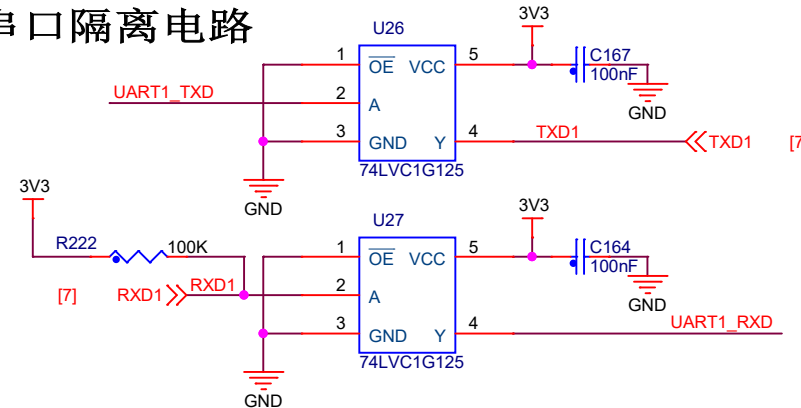
引出IO口



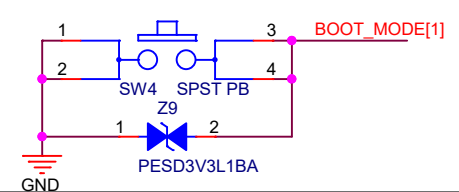
设置启动模式



串口隔离电路



按下按键再复位即可进入串行烧录模式

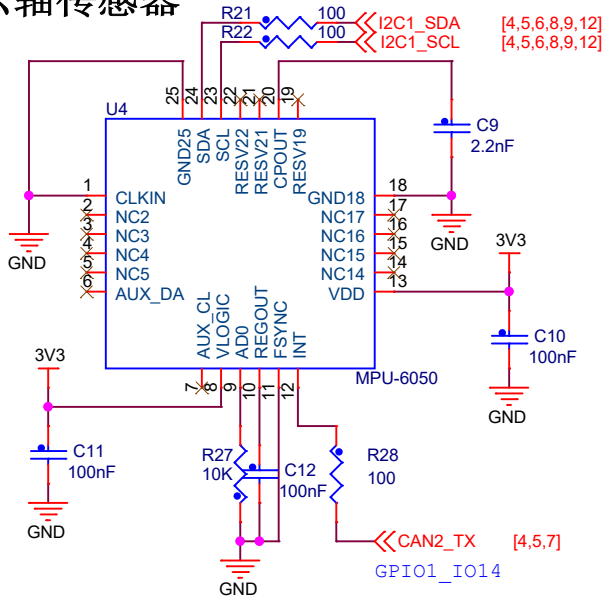
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Title 野火i.MX RT1052 Pro底板

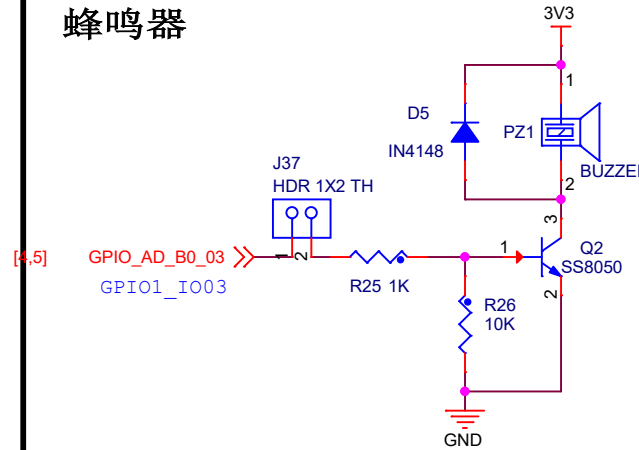
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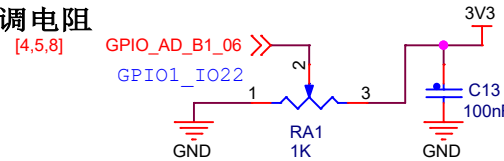
六轴传感器



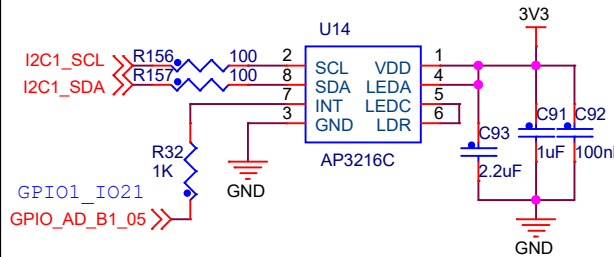
蜂鸣器



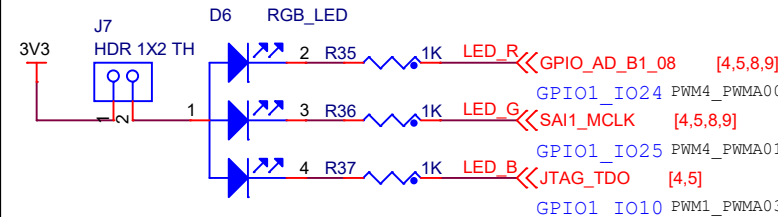
可调电阻



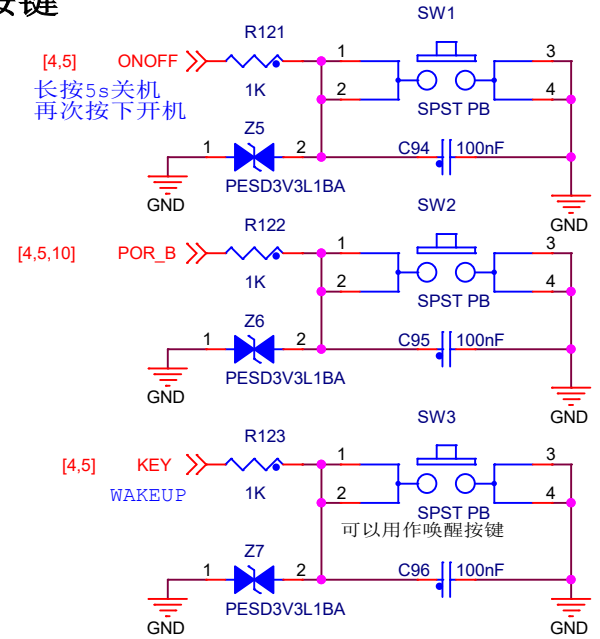
ALS+PS+IRLED (三合一)



彩色LED

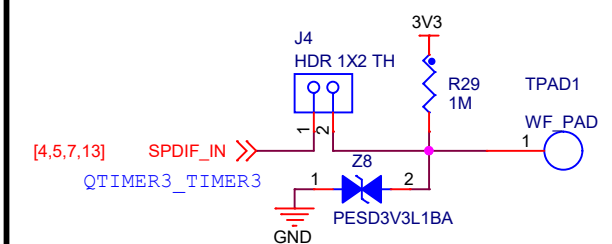


按键

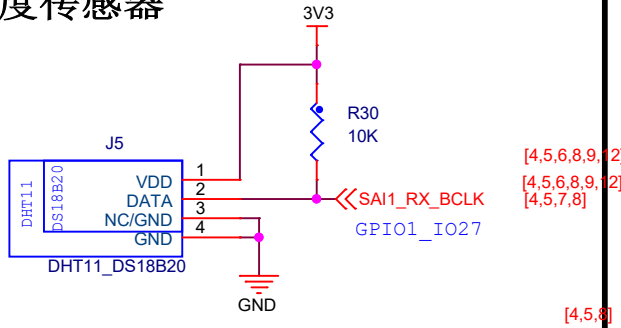


触摸按键

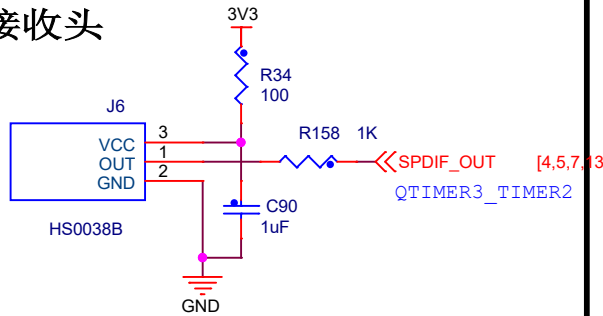
!!!使用触摸按键时需要断开跳帽J42、J43、J44



温湿度传感器



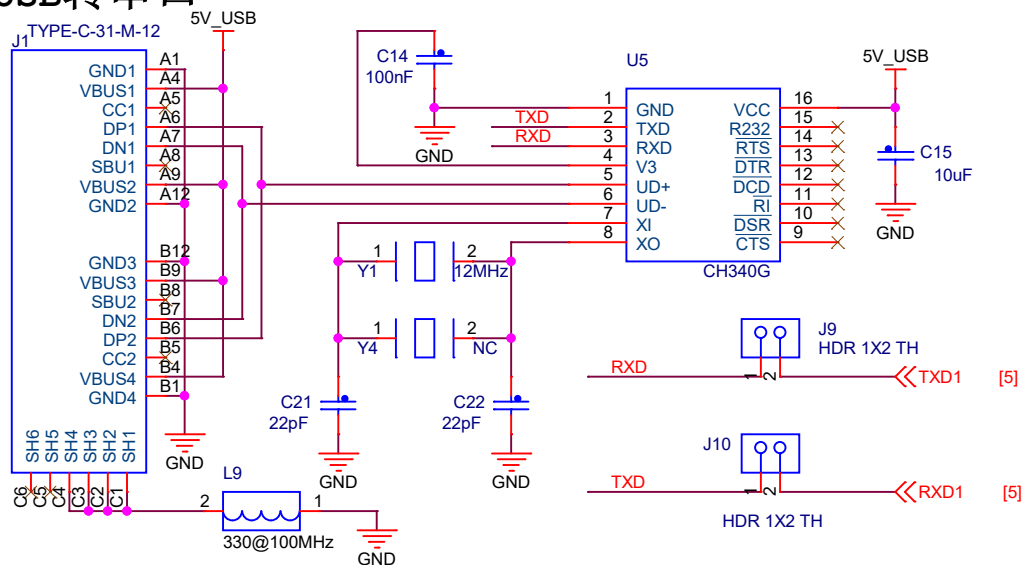
红外接收头



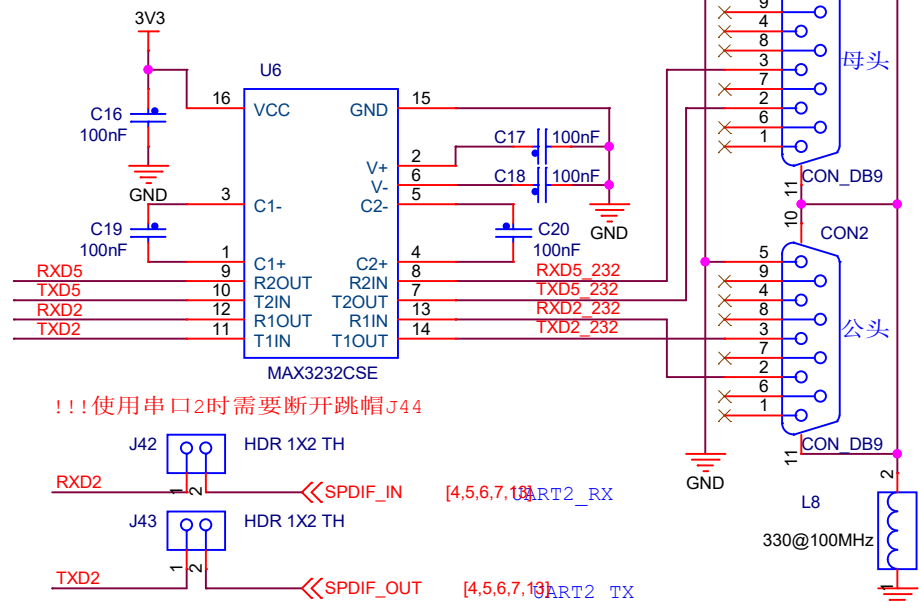
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Title			野火i.MX RT1052 Pro底板
Size A4	Document Number	SENSOR/KEY/LED	
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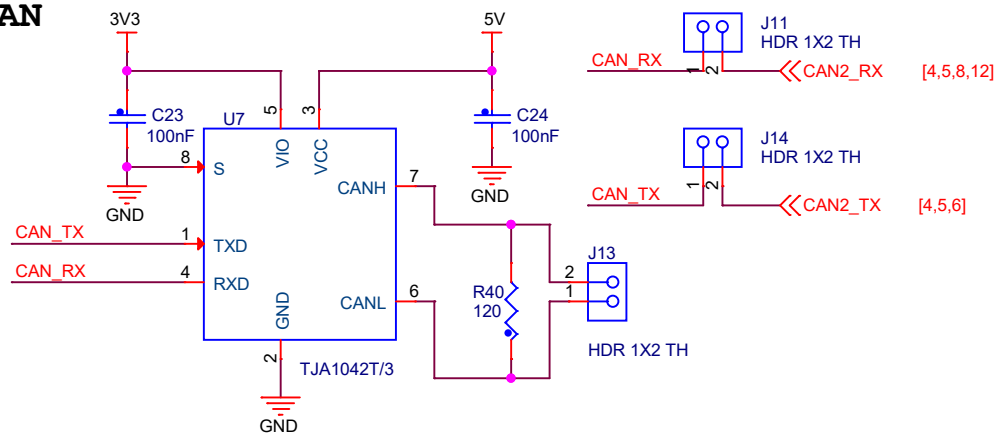
USB转串口



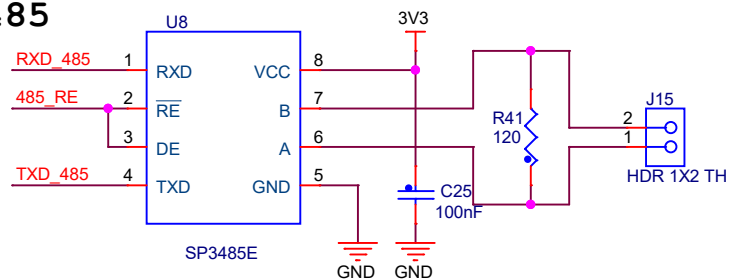
串口RS232



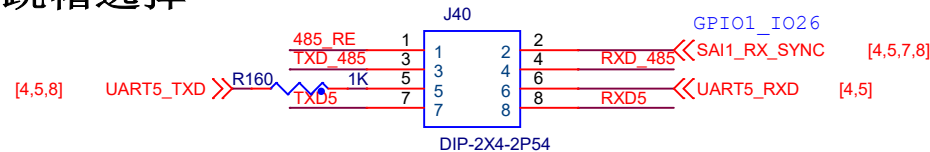
CAN



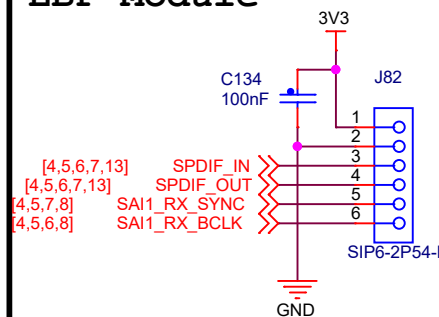
RS485



跳帽选择



EBF-Module



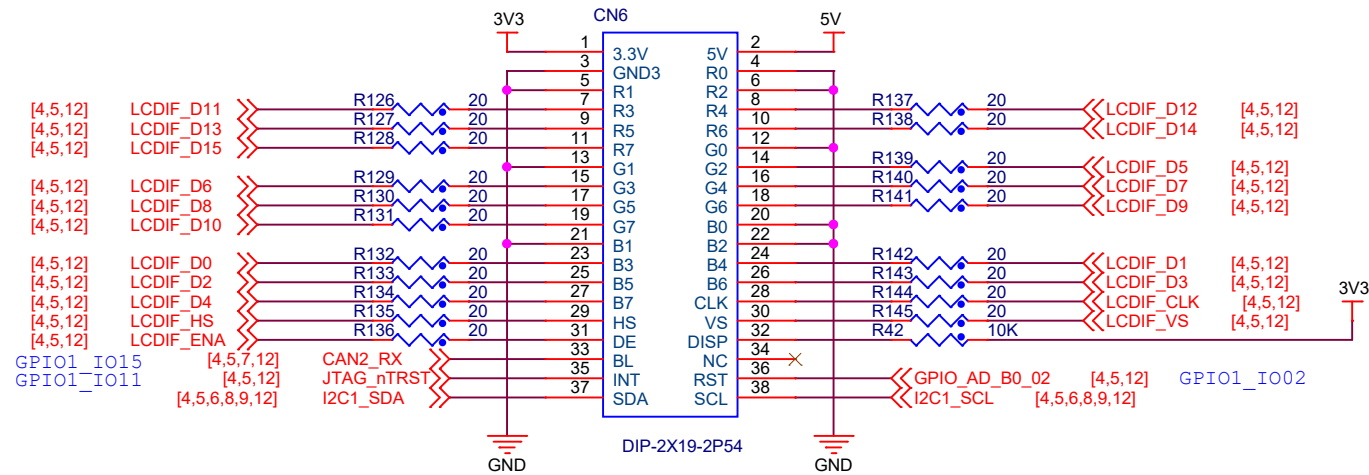
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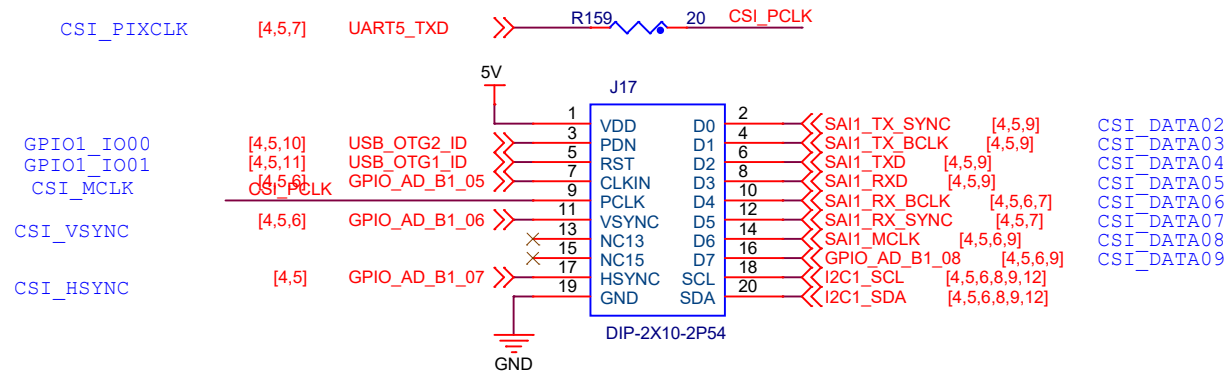
Size A4 Document Number UART/CAN/RS232/RS485 Rev V1.0

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液晶接口 RGB565



摄像头接口



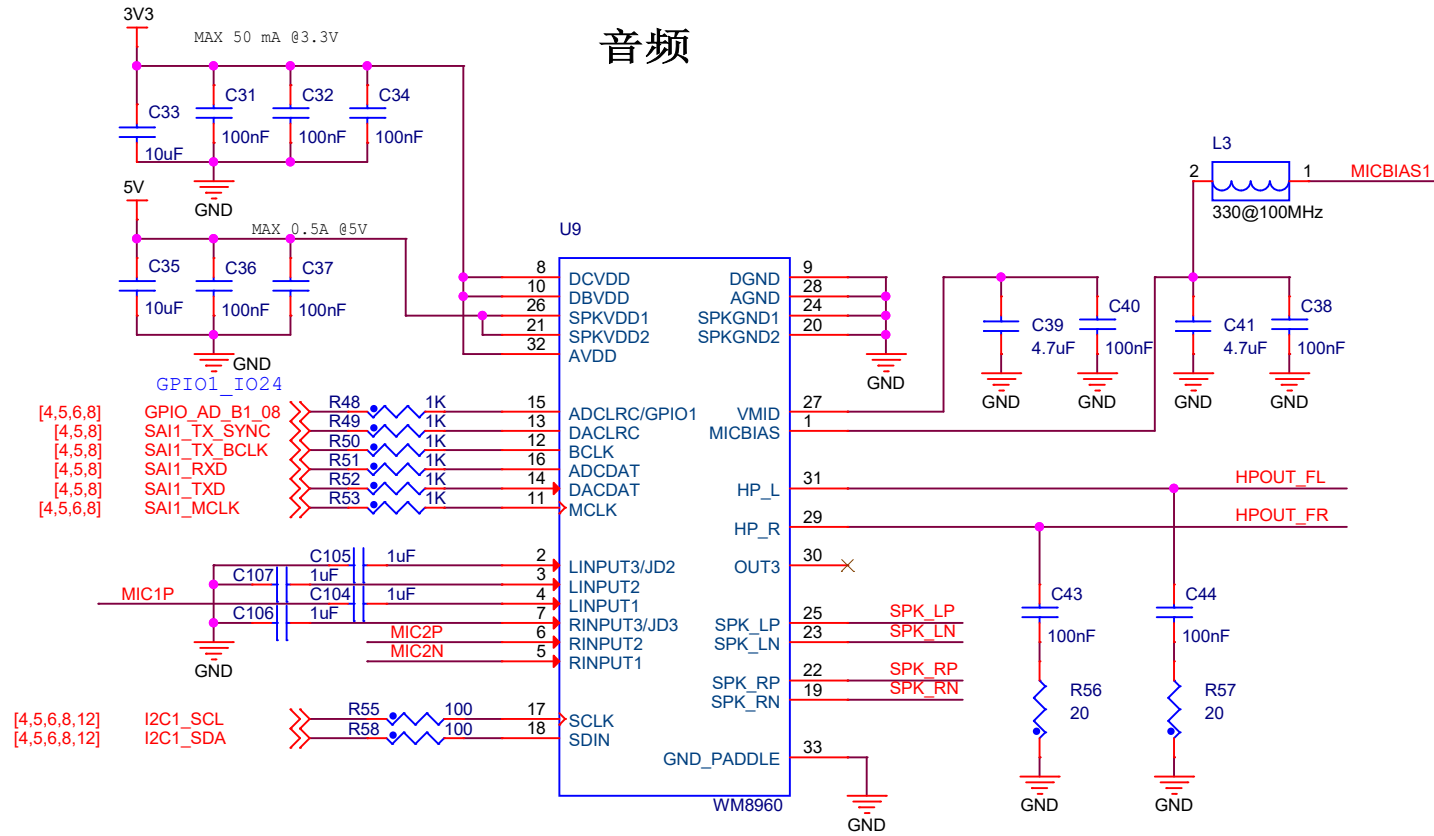
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Title 野火i.MX RT1052 Pro底板

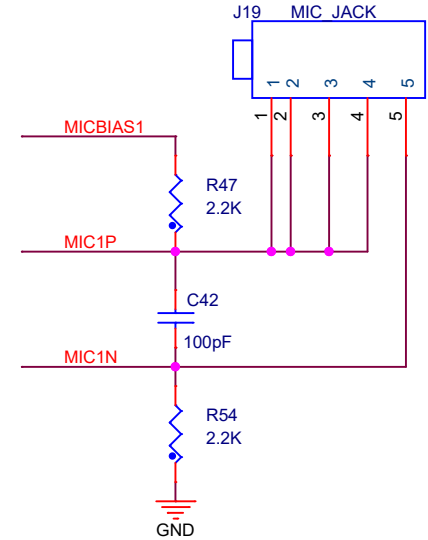
Size A4	Document Number LCD/CSI	Rev V1.0
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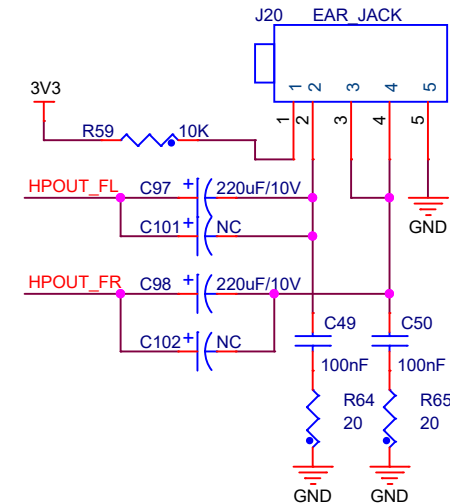
音频



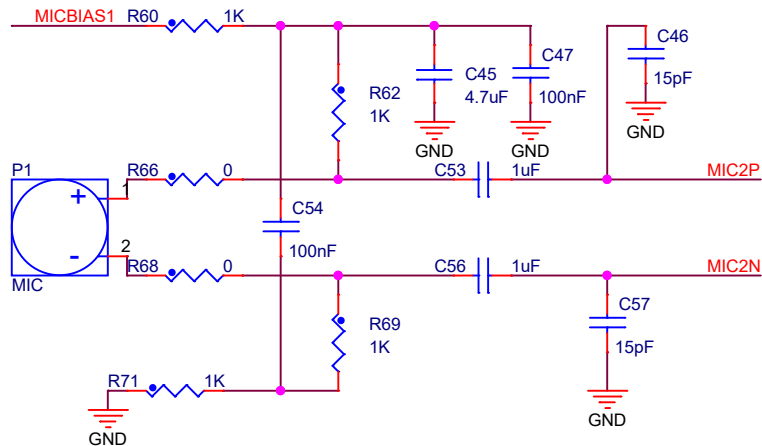
MIC插头



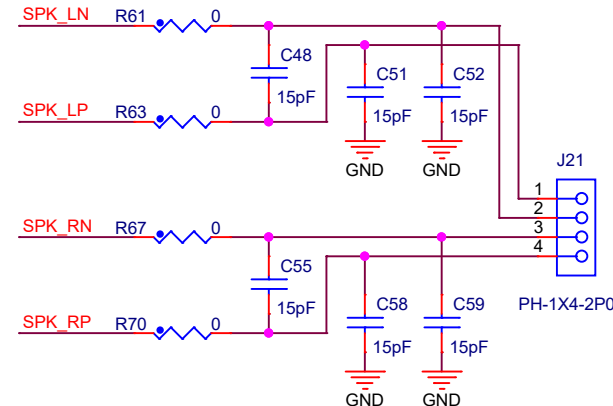
耳机插头



MIC



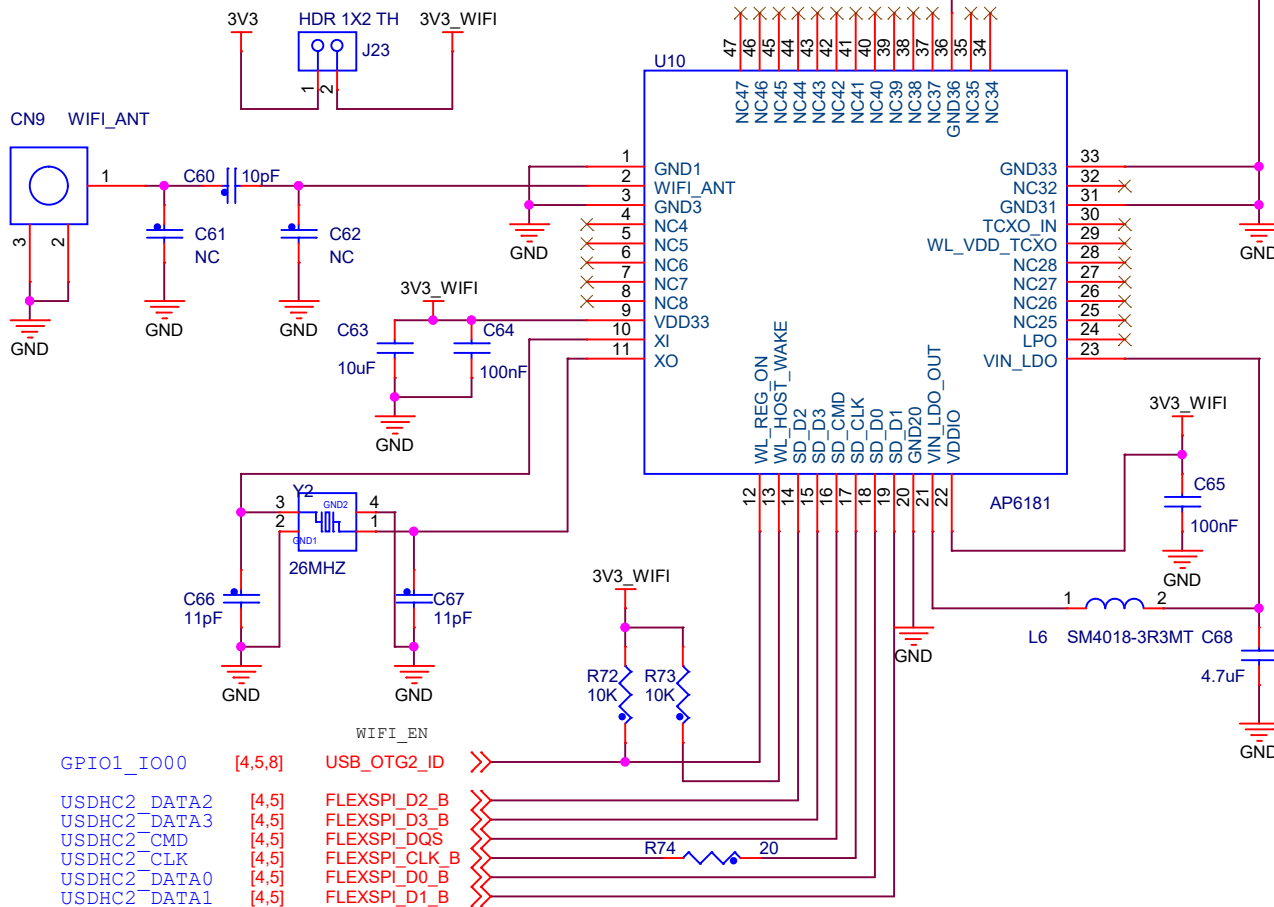
扬声器插头



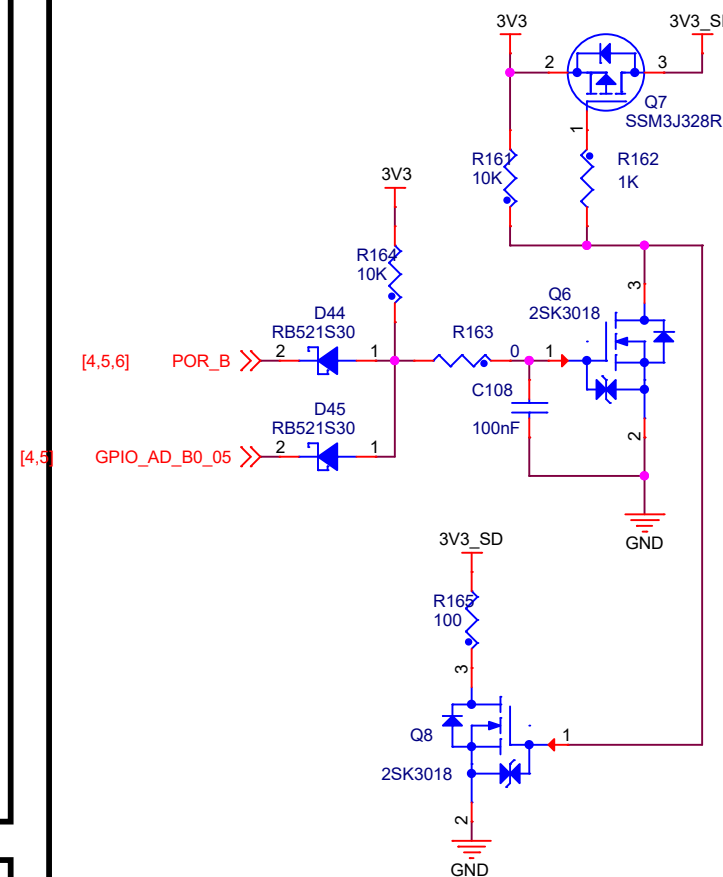
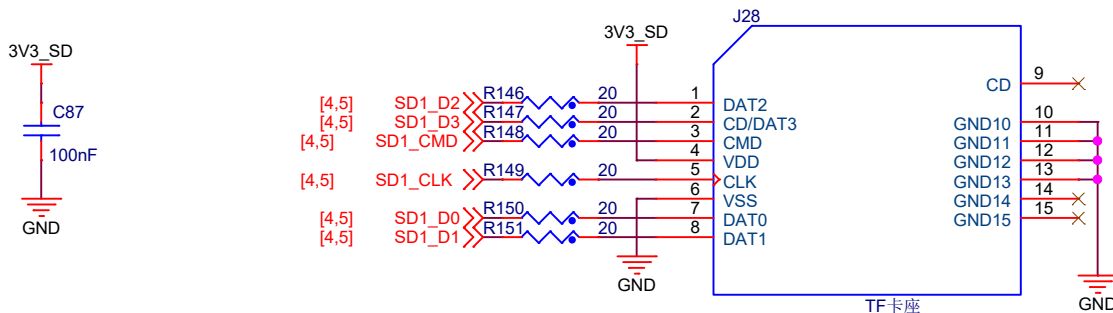
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Title			野火i.MX RT1052 Pro底板
Size	Document Number	Rev	
A4	AUDIO	V1.0	
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WIFI



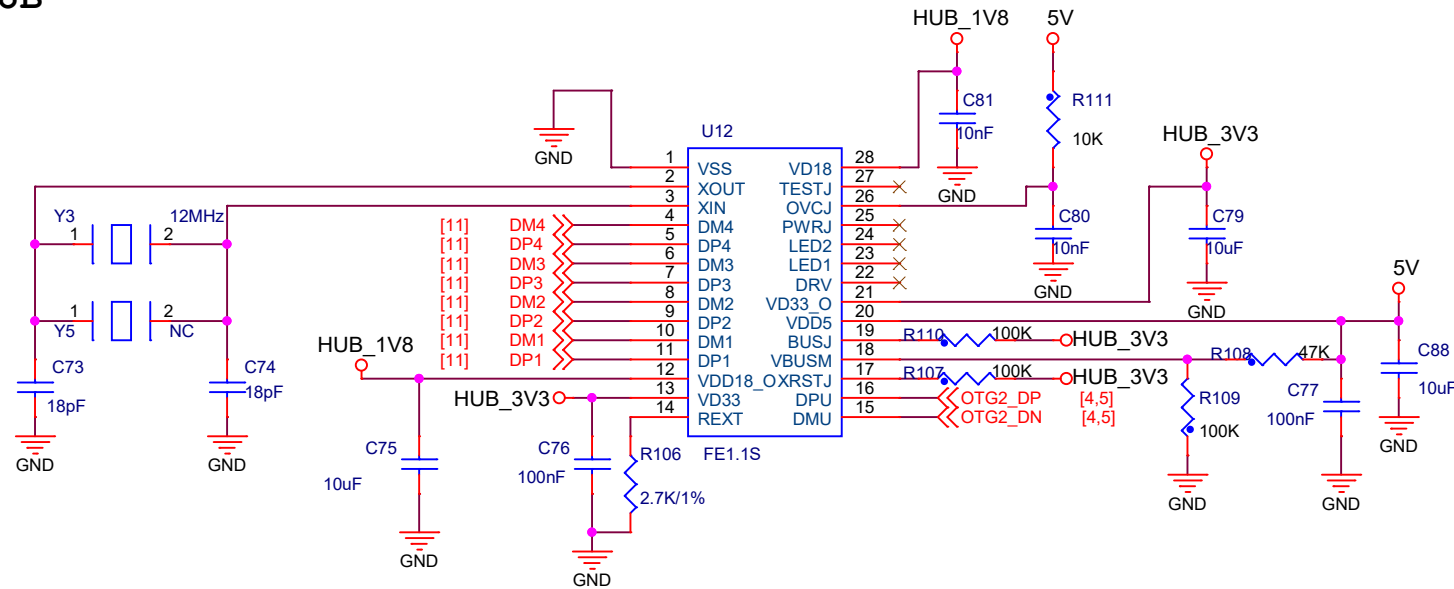
TF卡



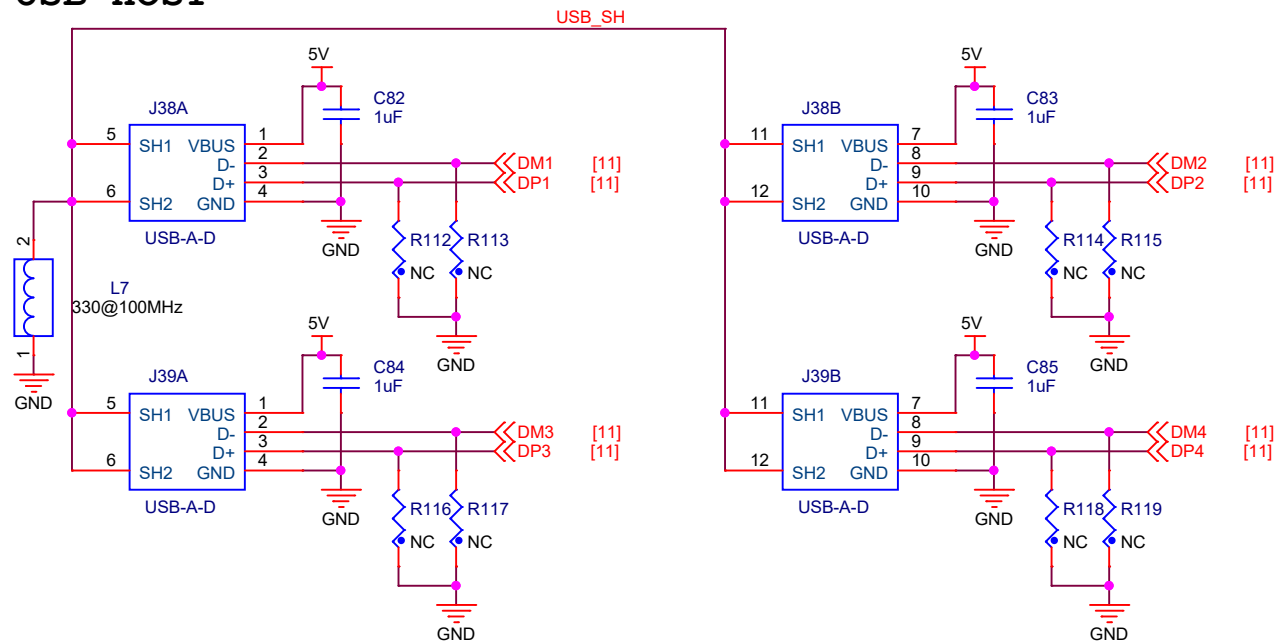
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Title 野火i.MX RT1052 Pro底板		
Size A4	Document Number WIFI/SD/USB	Rev V1.0
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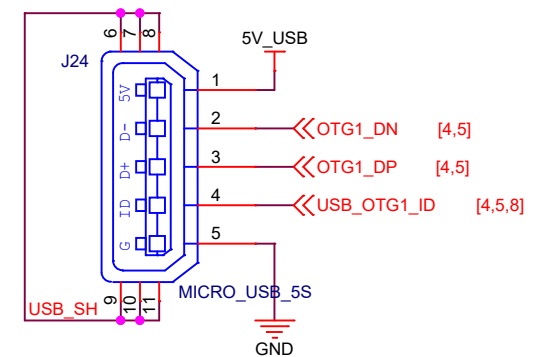
USB HUB



USB HOST



USB OTG



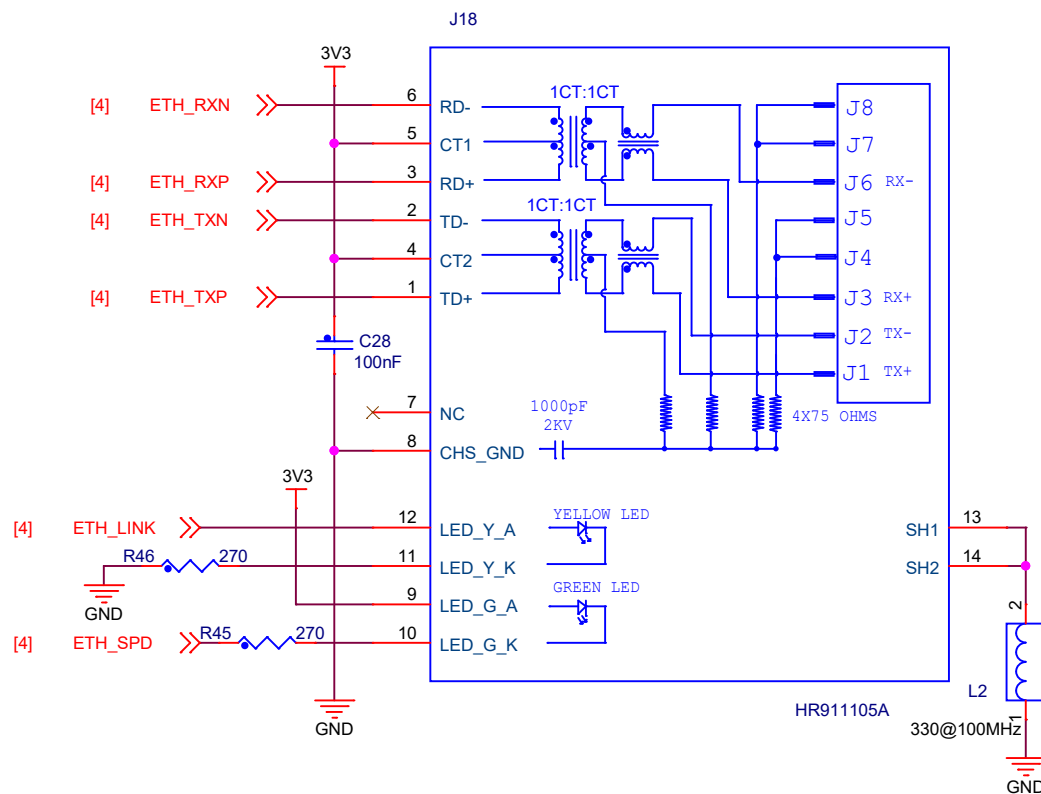
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Title 野火i.MX RT1052 Pro底板

Size A4	Document Number USB	Rev V1.0
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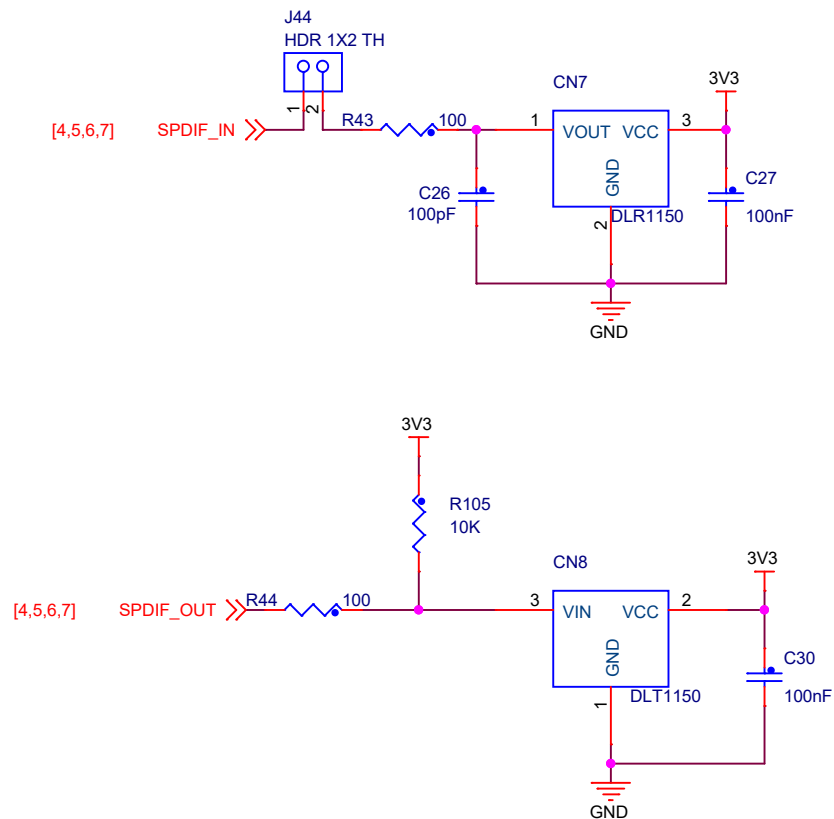
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以太网接口



光纤接口

!!!使用光纤时需要断开跳帽J4、J42、J43



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Title 野火i.MX RT1052 Pro底板

Size A4	Document Number ETH+SPDIF	Rev V1.0
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