

# 野火\_EBF6ULL S1 Pro 底板

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Title  
野火\_EBF6ULL S1 Pro 底板

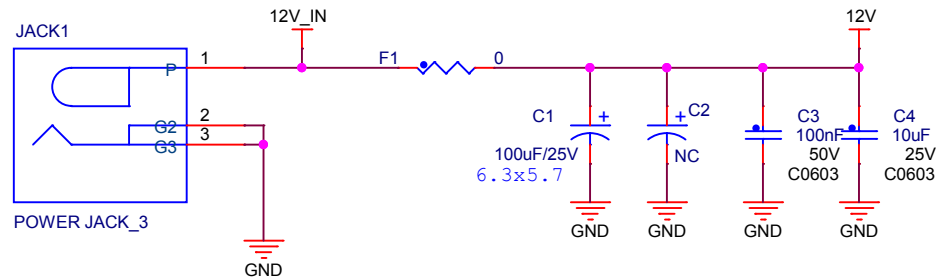
Size A4	Document Number 目录	Rev V1.0
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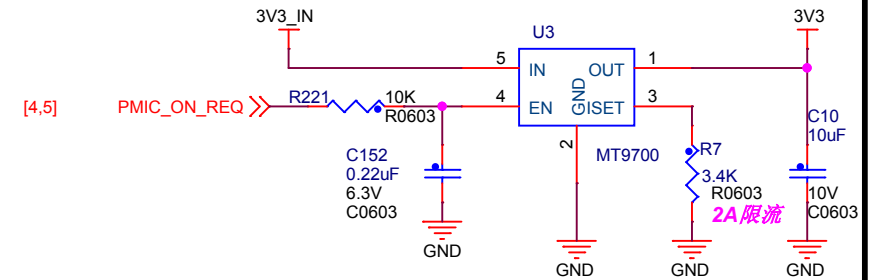
历史版本

版本号	日期	设计	描述
V1.0	2019-06-20	cancore	初始版本，开发阶段
V1.0	2019-08-15	cancore	整理对外发布，稳定版

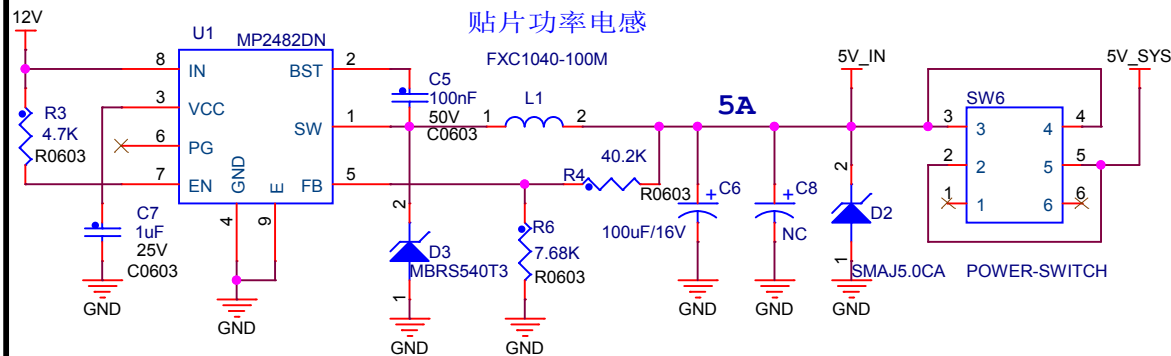
## DC IN : 12V



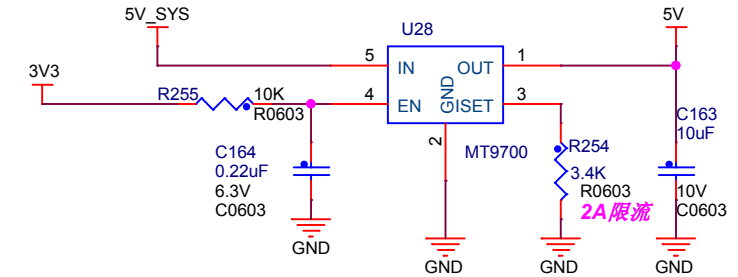
## 3.3V 输出控制及过流保护



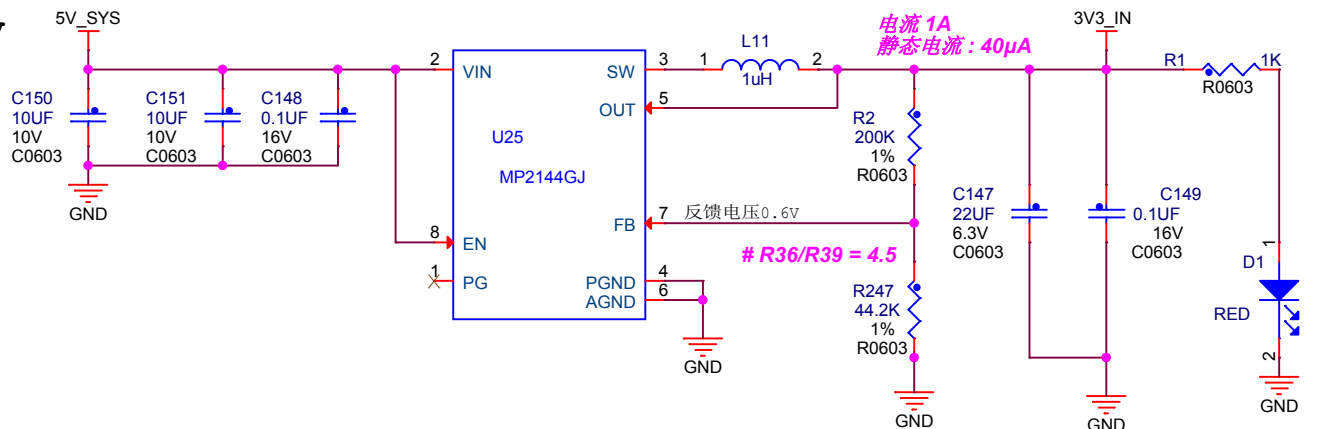
## DC/DC 5V



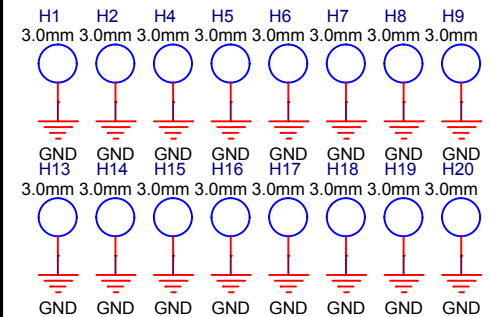
## 5V输出控制及过流保护



## 5V转3.3V



## 定位孔



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电源

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V1.0

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邮票孔核心板

[5,15,16,18]

LCD\_DATA[23:0]

J12

VCC\_SYS

VDD\_COIN\_3V

[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]

LCD\_DATA23  
LCD\_DATA22  
LCD\_DATA21  
LCD\_DATA20  
LCD\_DATA19  
LCD\_DATA18  
LCD\_DATA17  
LCD\_DATA16

1  
2  
3  
4  
5  
6  
7  
8

140  
139  
138  
137  
136  
135  
134  
133

PMIC\_ON\_REQ

[3,5]

[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]

LCD\_DATA15  
LCD\_DATA14  
LCD\_DATA13  
LCD\_DATA12  
LCD\_DATA11  
LCD\_DATA10  
LCD\_DATA9  
LCD\_DATA8

10  
11  
12  
13  
14  
15  
16  
17

132  
131  
130  
129  
128  
127  
126  
125

ENET2\_TXD0  
ENET2\_TXD1  
ENET2\_TXEN  
ENET2\_TX\_CLK  
ENET2\_RXD0  
ENET2\_RXD1  
ENET2\_RXER  
ENET2\_CRSDV

[5,11] UART7\_RXD  
[5,11] UART8\_TXD  
[5,11] UART8\_RXD  
[5,11]  
[5,11] UART6\_TXD  
[5,11] UART6\_RXD  
[5,11] UART7\_TXD

ECSPI4\_MOSI  
ECSPI4\_MISO  
ECSPI4\_SS2

[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]

LCD\_DATA7  
LCD\_DATA6  
LCD\_DATA5  
LCD\_DATA4  
LCD\_DATA3  
LCD\_DATA2  
LCD\_DATA1  
LCD\_DATA0

18  
19  
20  
21  
22  
23  
24  
25

123  
122  
121  
120  
119  
118  
117  
116

ENET1\_TXD0  
ENET1\_TXD1  
ENET1\_TXEN  
ENET1\_TX\_CLK  
ENET1\_RXD0  
ENET1\_RXD1  
ENET1\_RXER  
ENET1\_CRSDV

[5,10]  
[5,10]  
[5,10]  
[5,10]  
[5,10]  
[5,10]  
[5,10]  
[5,10]

[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]  
[5,15,16,18]

LCD\_HSYNC  
LCD\_VSYNC  
LCD\_DE  
LCD\_PCLK  
LCD\_RST

27  
28  
29  
30  
31

114  
113  
112  
111  
110

UART5\_TXD  
UART5\_RXD  
UART4\_TXD  
UART4\_RXD  
UART3\_RTS  
UART3\_CTS  
UART3\_TXD  
UART3\_RXD

[5,9,13,15,16]  
[5,9,13,15,16]  
[5,12,18]  
[5,12,18]  
[5,7,8]  
[5,7,8]  
[5,7,8]  
[5,7,8]

I2C1\_SCL  
I2C1\_SDA  
I2C1\_SCL  
I2C1\_SDA  
CAN1\_RX  
CAN1\_TX

[5,6,9]  
[5,6,9]  
[5,6,9]  
[5,6,9]  
[5,6,9]  
[5,6,9]

SD1\_DATA0  
SD1\_DATA1  
SD1\_DATA2  
SD1\_DATA3  
SD1\_CMD  
SD1\_CLK

34  
35  
36  
37  
38  
39

108  
107  
106  
105  
104  
103

UART3\_TXD  
UART3\_RXD  
UART2\_RTS  
UART2\_CTS  
UART2\_TXD  
UART2\_RXD

[5,7,8]  
[5,7,8]  
[5,6,7]  
[5,6,7]  
[5,6,7,12]  
[5,6,7,12]

CAN2\_RX  
CAN2\_TX  
SD1\_CD  
SDMI\_INT

[5,9]

CSI\_DATA[7:0]

[5,9,12]  
[5,9,12]  
[5,9]  
[5,9]

CSI\_HSYNC  
CSI\_VSYNC  
CSI\_PIXCLK  
CSI\_MCLK

49  
50  
51  
52

92  
91  
90  
89

USB\_OTG1\_DP  
USB\_OTG1\_DN  
USB\_OTG2\_DP  
USB\_OTG2\_DN

[5,14]  
[5,14]  
[5,14]  
[5,14]

USB\_OTG1\_VBUS  
USB\_OTG2\_VBUS

[5,15,18]  
[5,18]  
[5,18]  
[5,11]  
[5,10]  
[5,13]  
[5]  
[5,12]  
[5,12]

SNVS\_TAMPER9  
SNVS\_TAMPER8  
SNVS\_TAMPER7  
SNVS\_TAMPER6  
SNVS\_TAMPER5  
SNVS\_TAMPER4  
SNVS\_TAMPER3  
SNVS\_TAMPER2  
SNVS\_TAMPER1  
SNVS\_TAMPER0

54  
55  
56  
57  
58  
59  
60  
61  
62  
63

87  
86  
85  
84  
83  
82  
81  
80  
79  
78

GPIO\_0  
GPIO\_1  
GPIO\_2  
GPIO\_3  
GPIO\_4  
GPIO\_5  
GPIO\_6  
GPIO\_7  
GPIO\_8  
GPIO\_9

[5,14]  
[5,6]  
[5,12]  
[5,12]  
[5,12]  
[5]  
[5,10,11]  
[5,10,11]  
[5,15,18]  
[5,9]

USB\_OTG1\_ID  
IR  
DHT11  
ADC  
LED\_R\_pwm3.OUT  
SD1\_VSELECT  
ENET\_MDIO  
ENET\_MDC  
LCD\_BL  
SD1\_nRST

[5,8,18]  
[5,8,18]  
[5]  
[5,9]  
[5,12]

BOOT\_MODE1  
BOOT\_MODE0  
PMIC\_STBY\_REQ  
POR\_B  
ONOFF

65  
66  
67  
68  
69  
70

76  
75  
74  
73  
72  
71

SAI2\_MCLK  
SAI2\_RXD  
SAI2\_SYNC  
SAI2\_BCLK  
SPDIF\_TX  
SAI2\_TXD

[5,13]  
[5,13]  
[5,13]  
[5,13]  
[5,6,9,16]  
[5,13]

JTAG\_TMS  
JTAG\_TCK  
JTAG\_TDO  
JTAG\_TDI  
JTAG\_MOD  
JTAG\_nTRST

IMX6ULL\_SOM\_S1

GND

GND

3V3\_IN

VCC\_SYS

5V

USB\_OTG2\_VBUS

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Title

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Size  
A4

Document Number  
CPU\_B2B

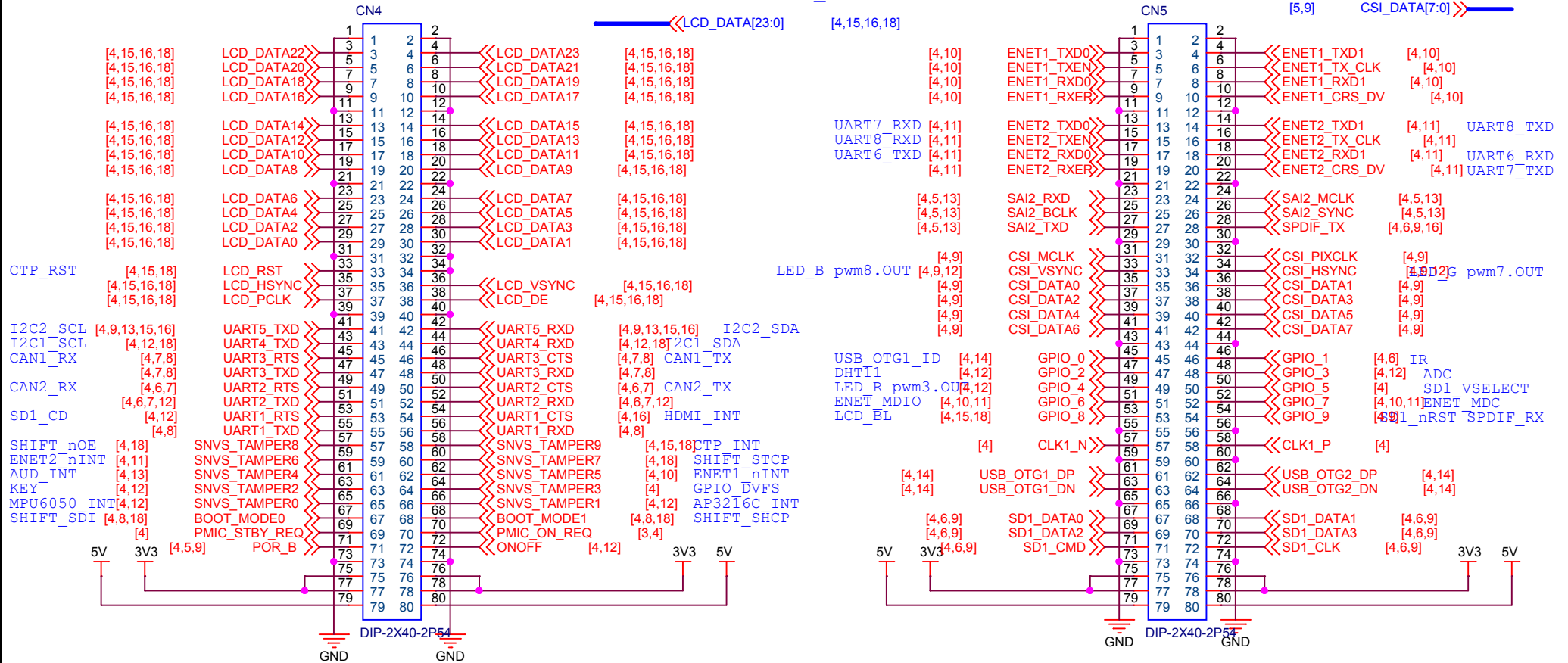
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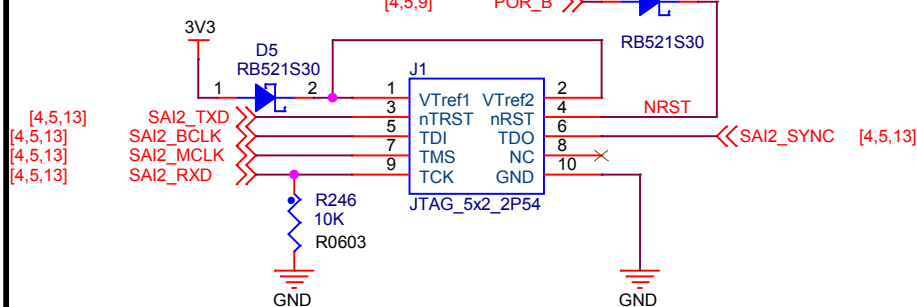
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## 引出IO口(排针)

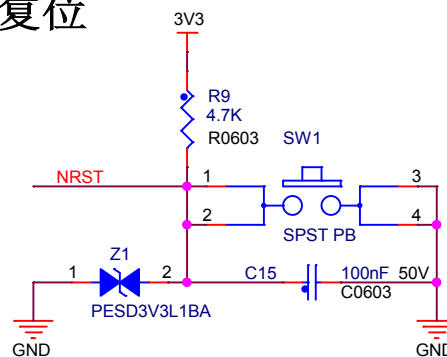
所有IO全部引出, 包括GPIO引出107个, 差分时钟一组, USB专用口2个, POR\_B复位脚1个, 电源控制口2个



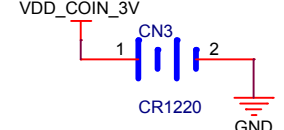
## JTAG调试口



## 复位



## RTC电池

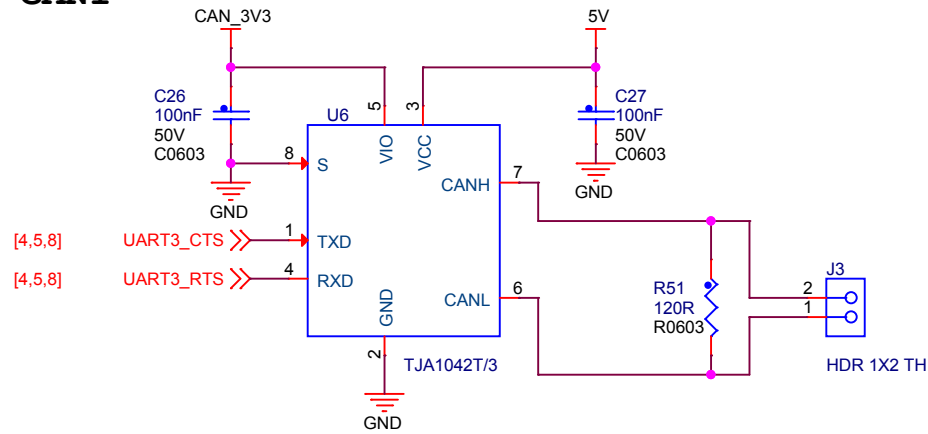


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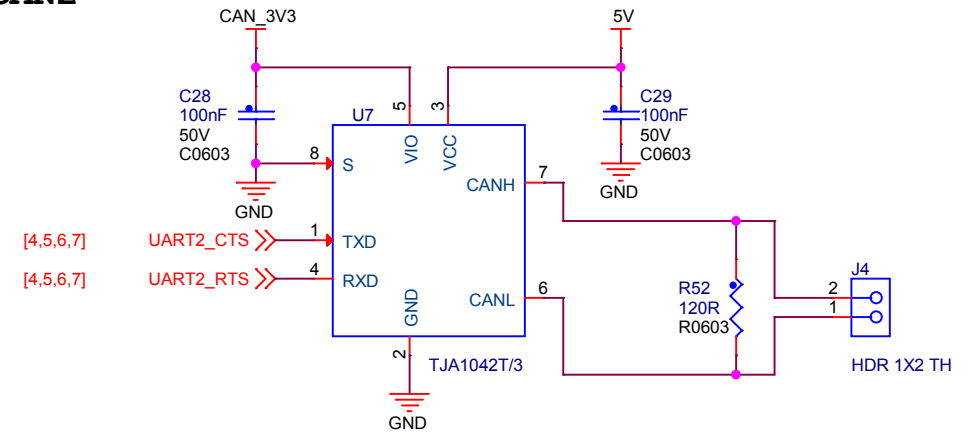
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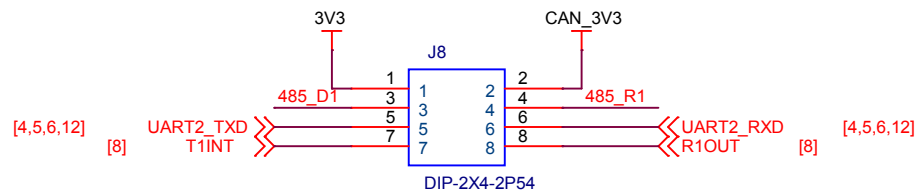
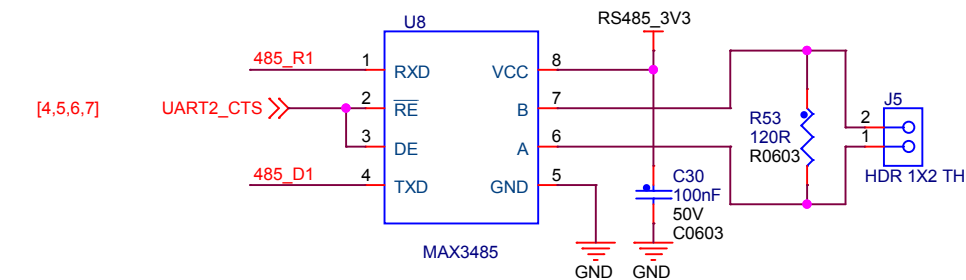
## CAN1



## CAN2

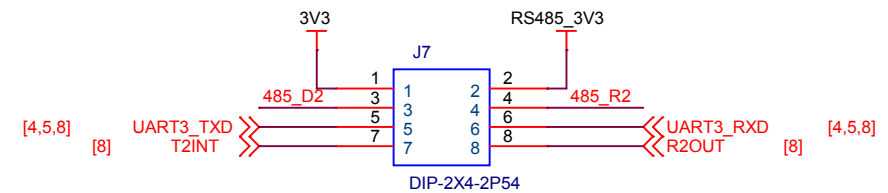
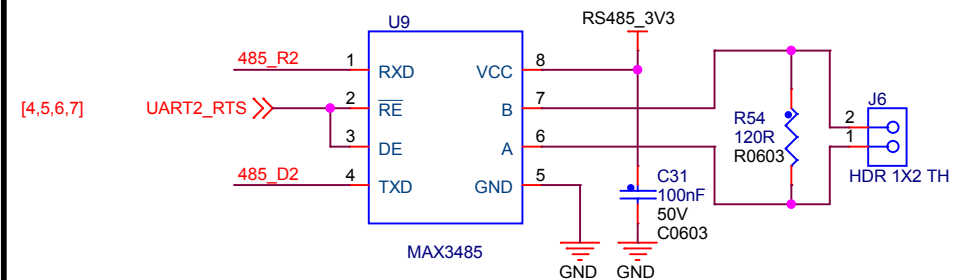


## RS485-1



CAN1和CAN2的电源  
由跳帽J8的1和2脚控制，默认不接

## RS485-2



RS485-1和RS485-2的电源  
由跳帽J7的1和2脚控制，默认不接

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A4

Document Number

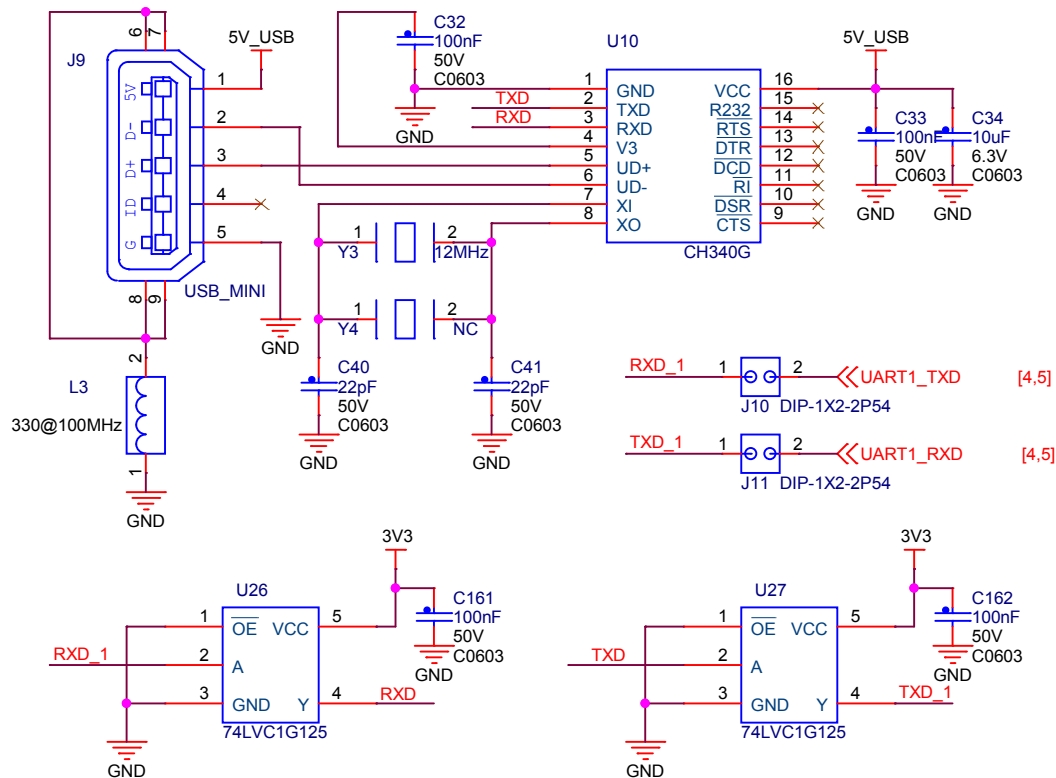
CAN/RS485

Rev  
V1.0

Date: Thursday, August 15, 2019

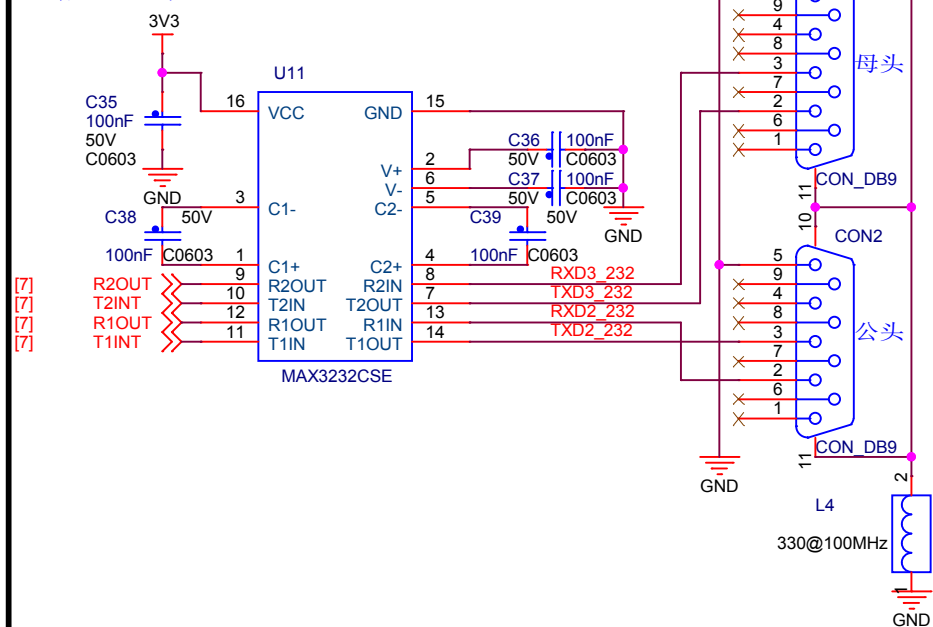
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## USB转串口



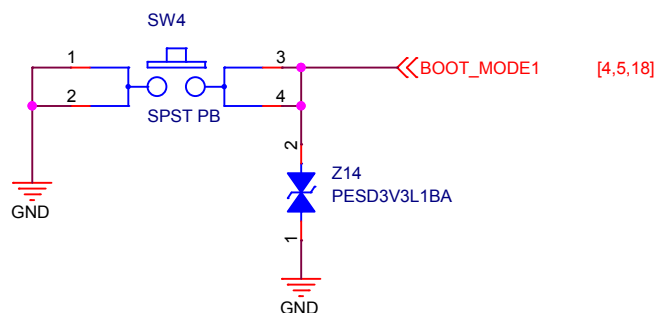
## RS232串口

2路RS232串口



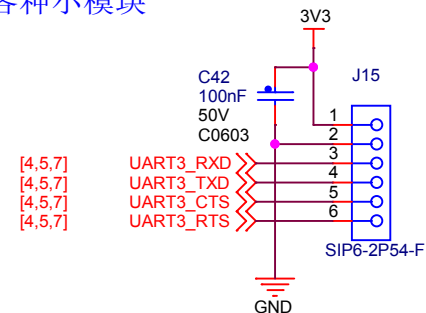
## 串行烧录启动切换

按下按键再复位即可进入串行烧录模式



## EBF-Module

用于接野火的各种小模块



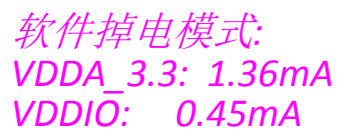
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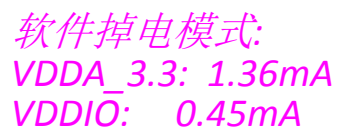


## 百兆以太网PHY



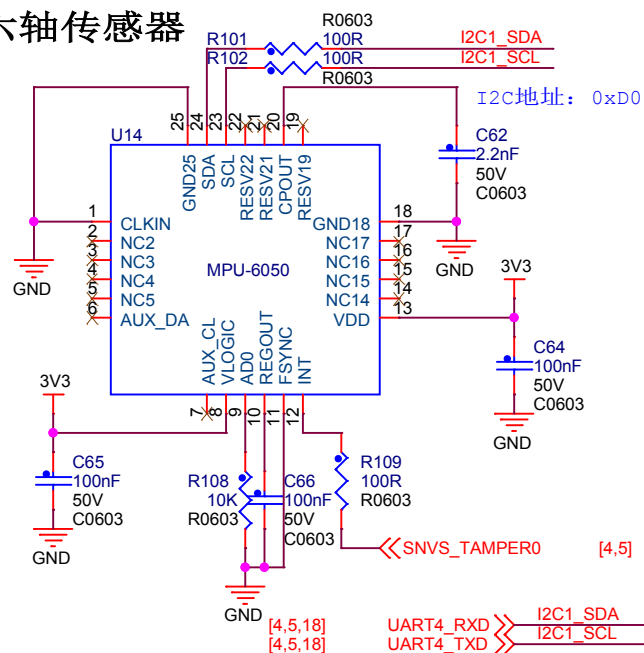
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## 百兆以太网PHY

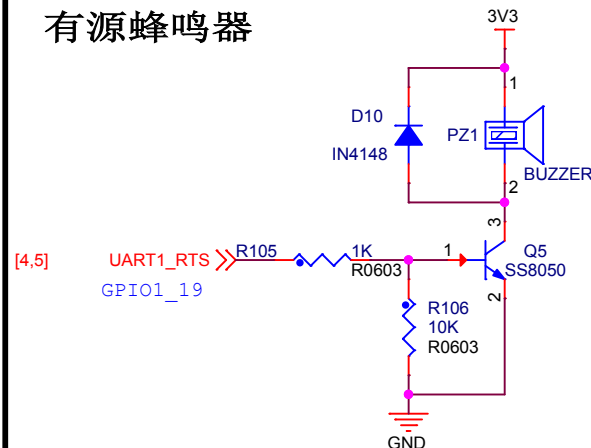


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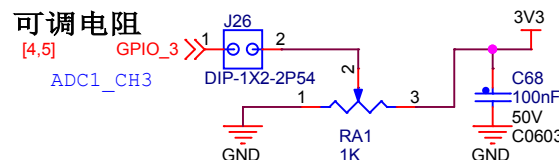
## 六轴传感器



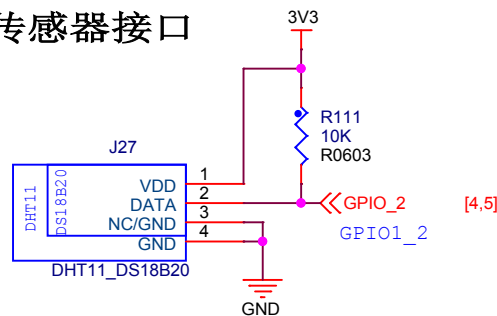
## 有源蜂鸣器



## 可调电阻

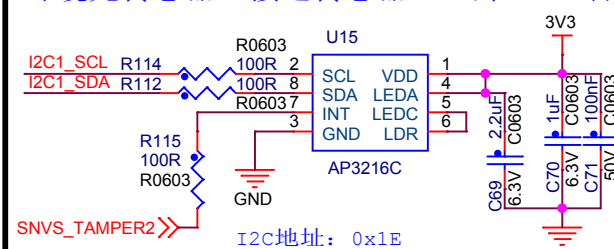


## 温湿度传感器接口

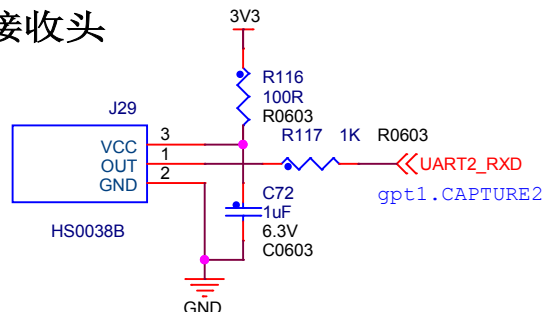


## ALS+PS+IRLED (三合一)

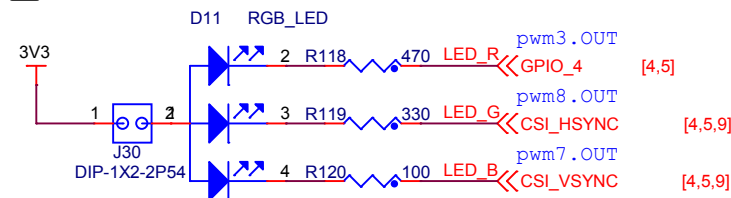
## 环境光传感器、接近传感器、红外LED三合一



## 红外接收头

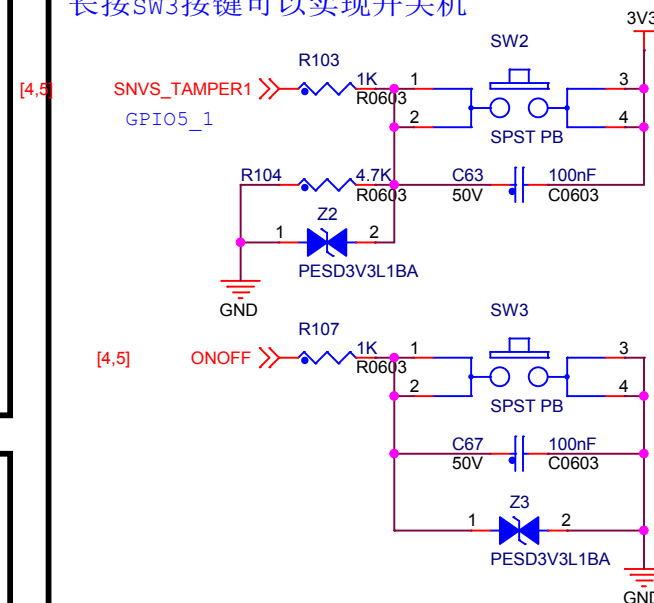


## 彩色LED

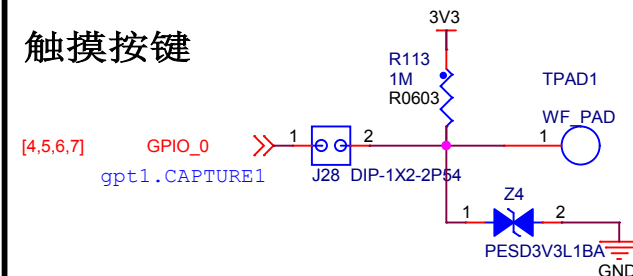


## 按键

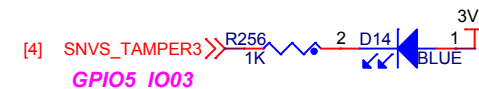
长按SW3按键可以实现开关机



## 触摸按键



## 用户LED



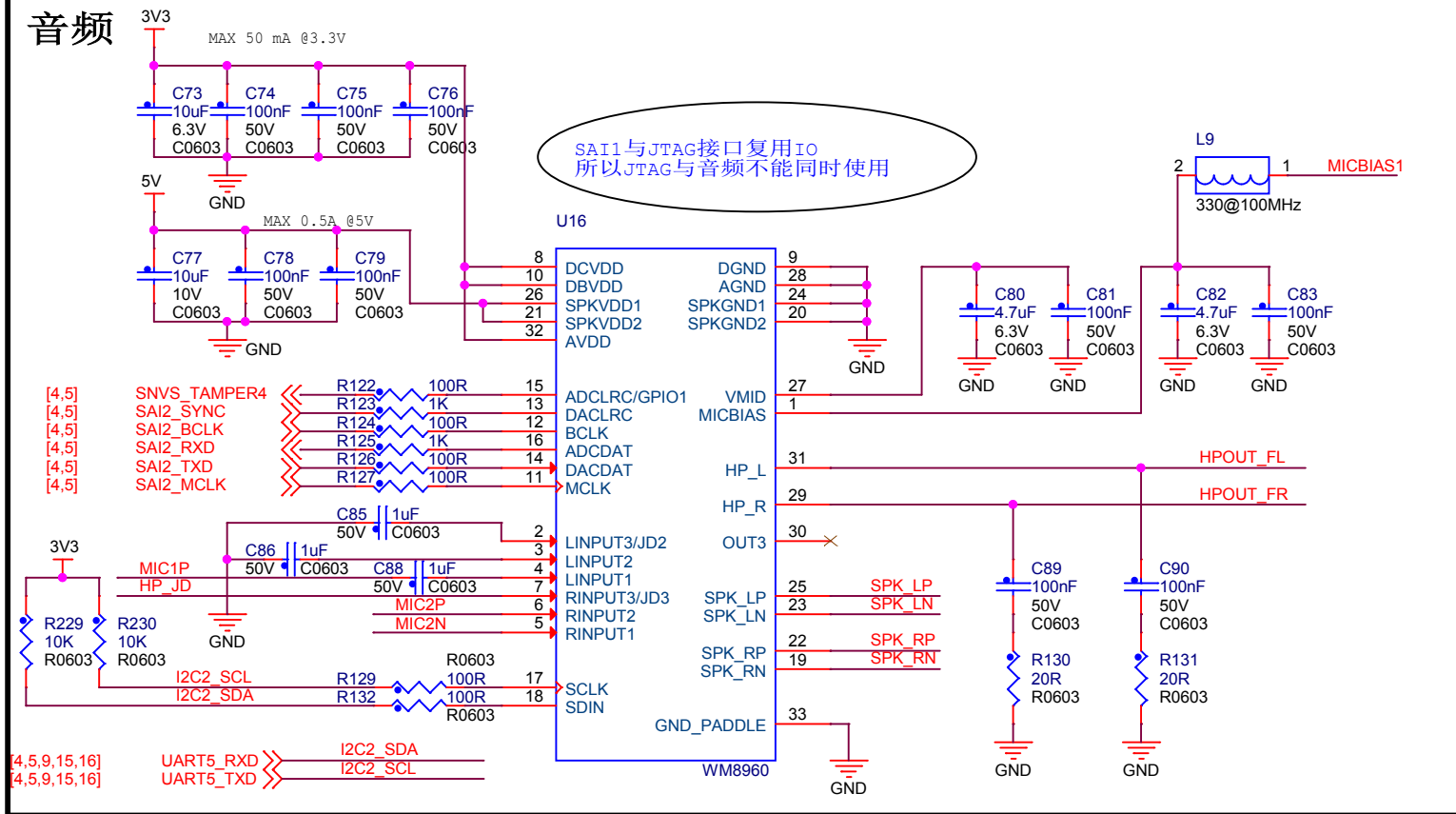
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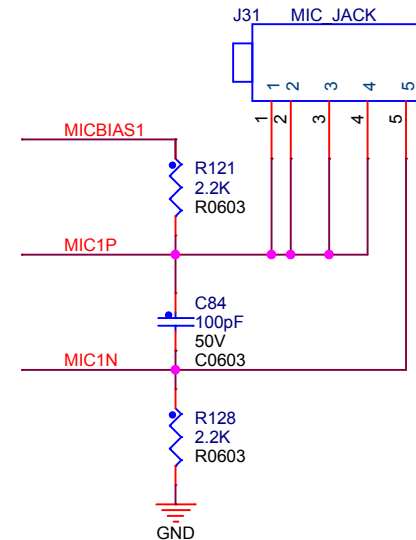
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## 音频

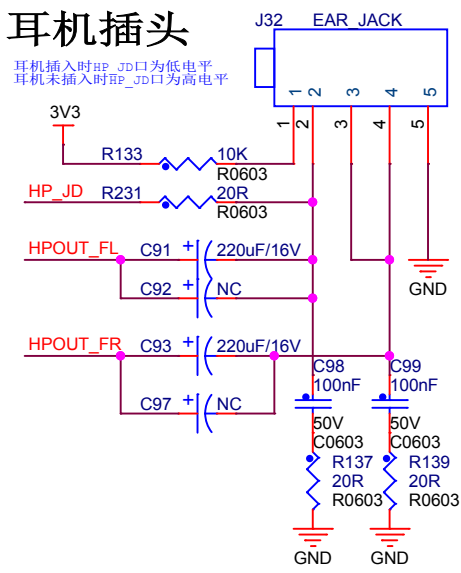


## MIC插头

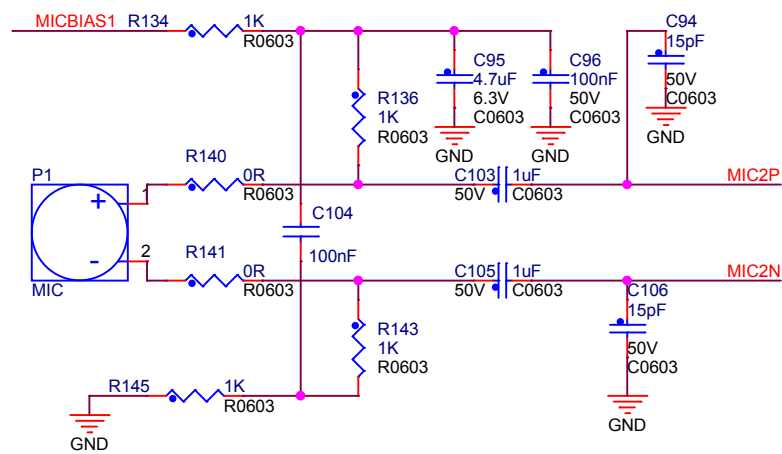


## 耳机插头

耳机插入时HP\_JD口为低电平  
耳机未插入时HP\_JD口为高电平

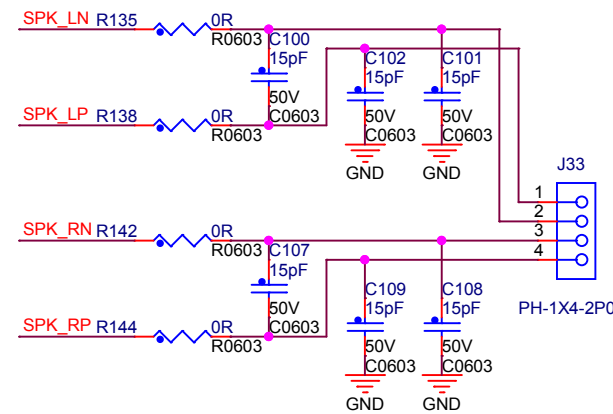


## MIC



## 喇叭插座

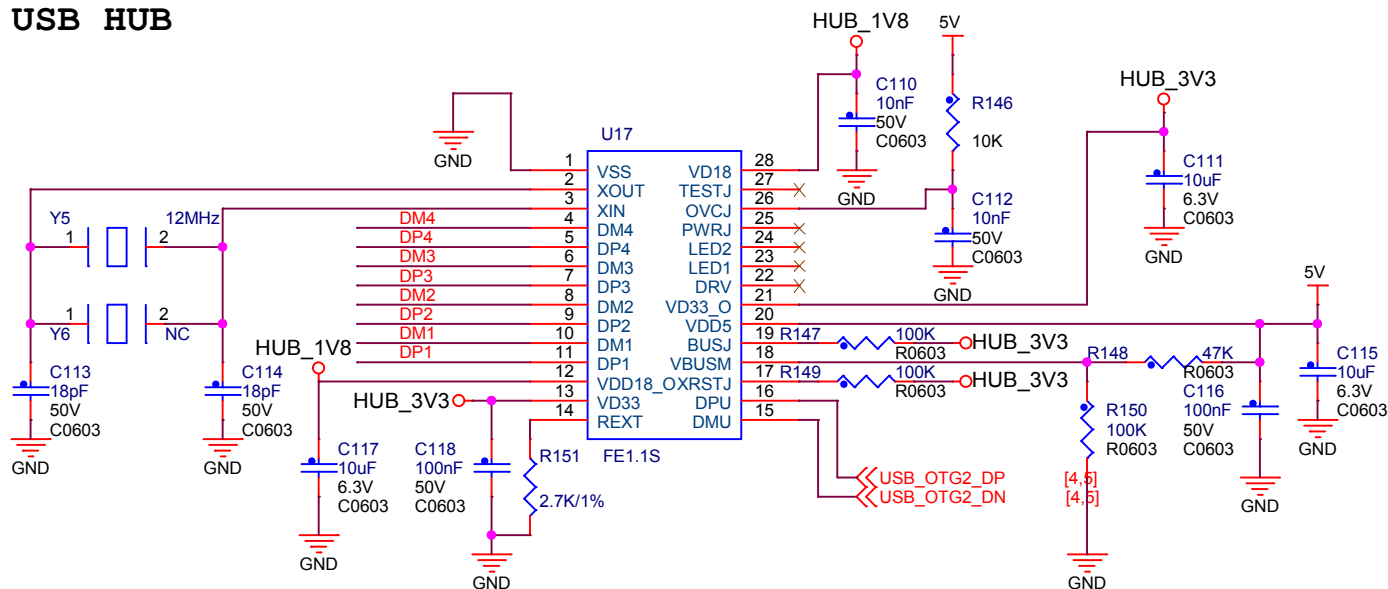
可以驱动2个8Ω 1W的喇叭 (BTL方式)



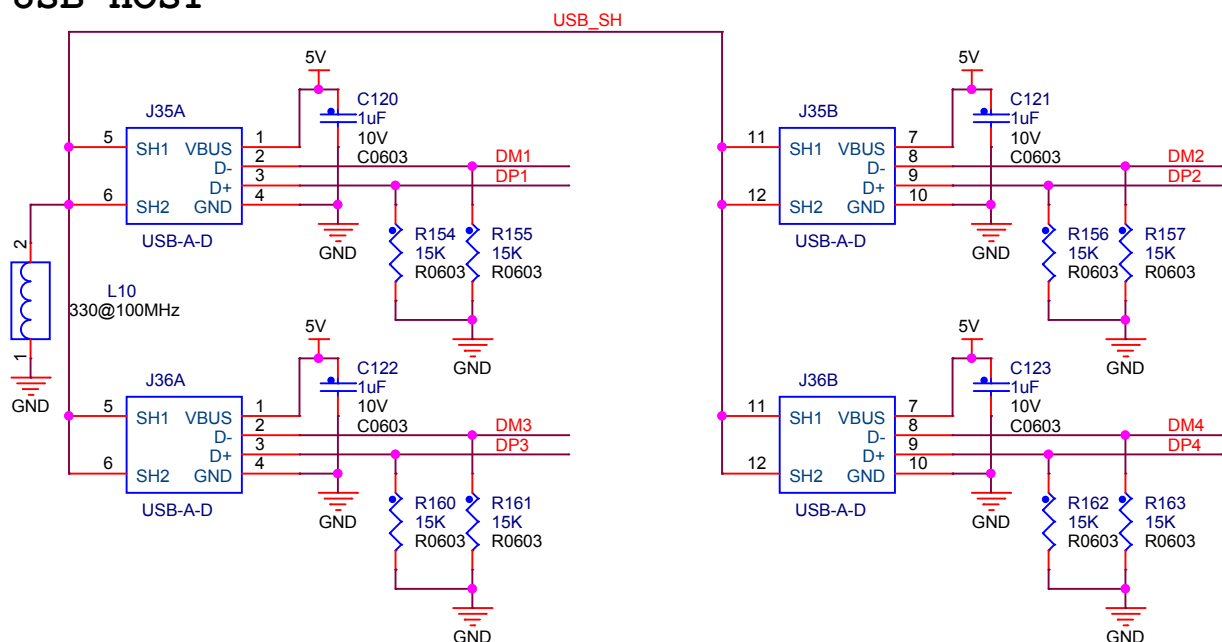
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## USB HUB

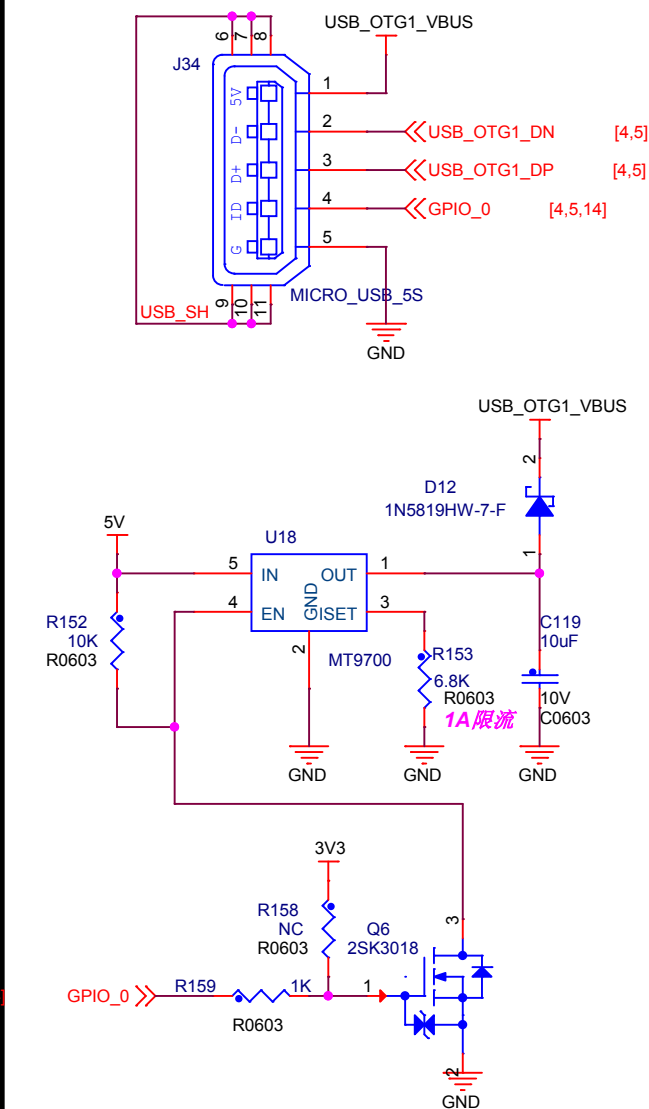


## USB HOST



## USB OTG

ID悬空时为Device设备，接地为HOST主机



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Title

野火\_EBF6ULL S1 Pro 底板

Size  
A4

Document Number

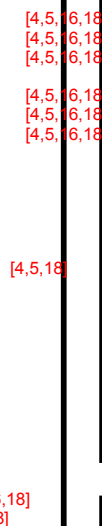
USB HOST/USB OTG

Rev  
V1.0

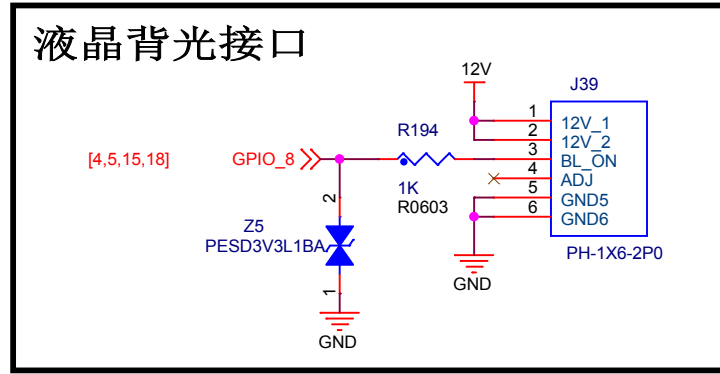
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# A

[illegible]

## 1



Title			
野火_EBF6ULL S1 Pro 底板			
Size A4	Document Number		Rev V1.0
	RGB转LVDS		
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# RGB转HDMI

待机功耗: 150 uW

[4,5,15,18]

LCD\_DATA[23:0]

[18]

HDMI\_nRST

[4,5,6,9]

SPDIF\_TX

[4,5,9,13,15]

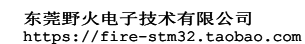
UART5\_RXD  
UART5\_TXD

## HDMI TRANSMITTER

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Title		
野火_EBF6ULL S1 Pro 底板		
Size A4	Document Number RGB转HDMI	Rev V1.0
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## Type A型

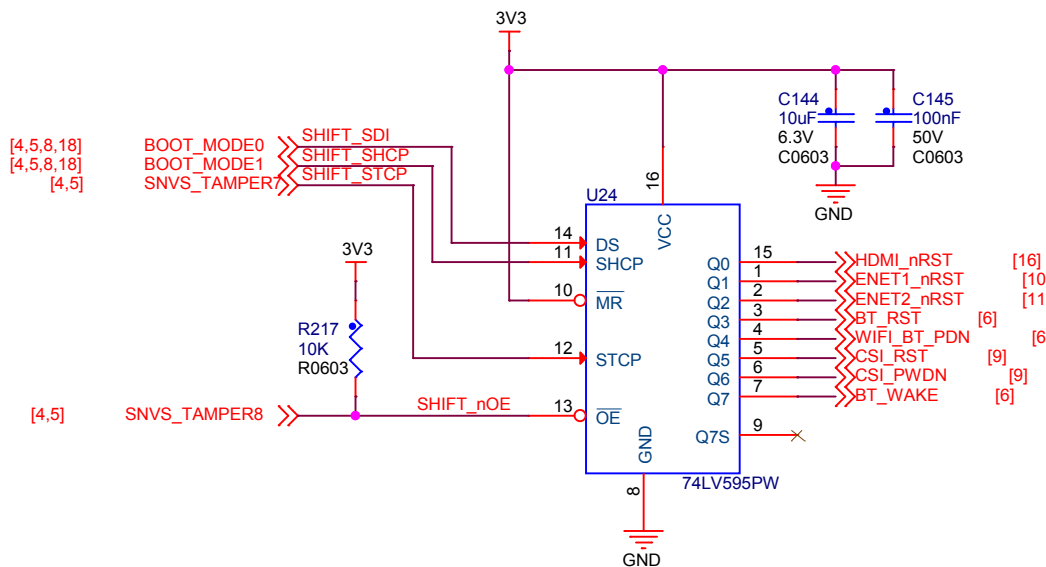


野火 EBF6ULL S1 Pro 底板

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		V1.0

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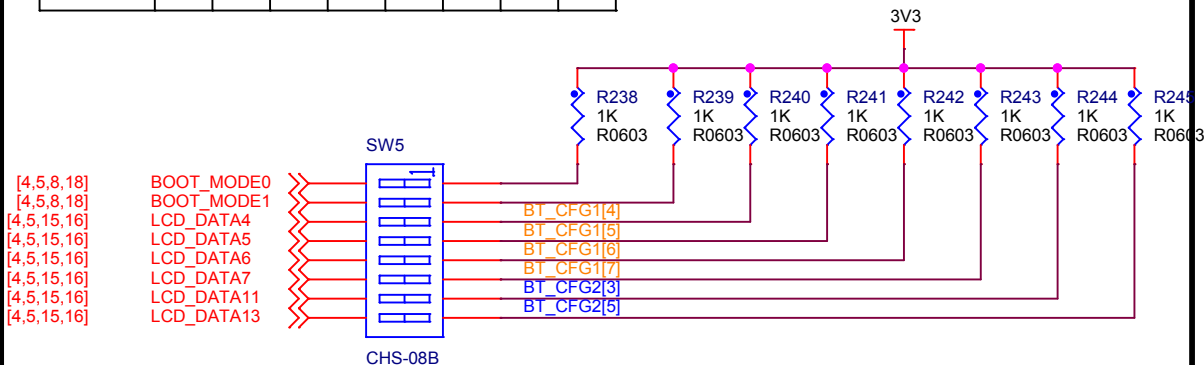
## 扩展IO



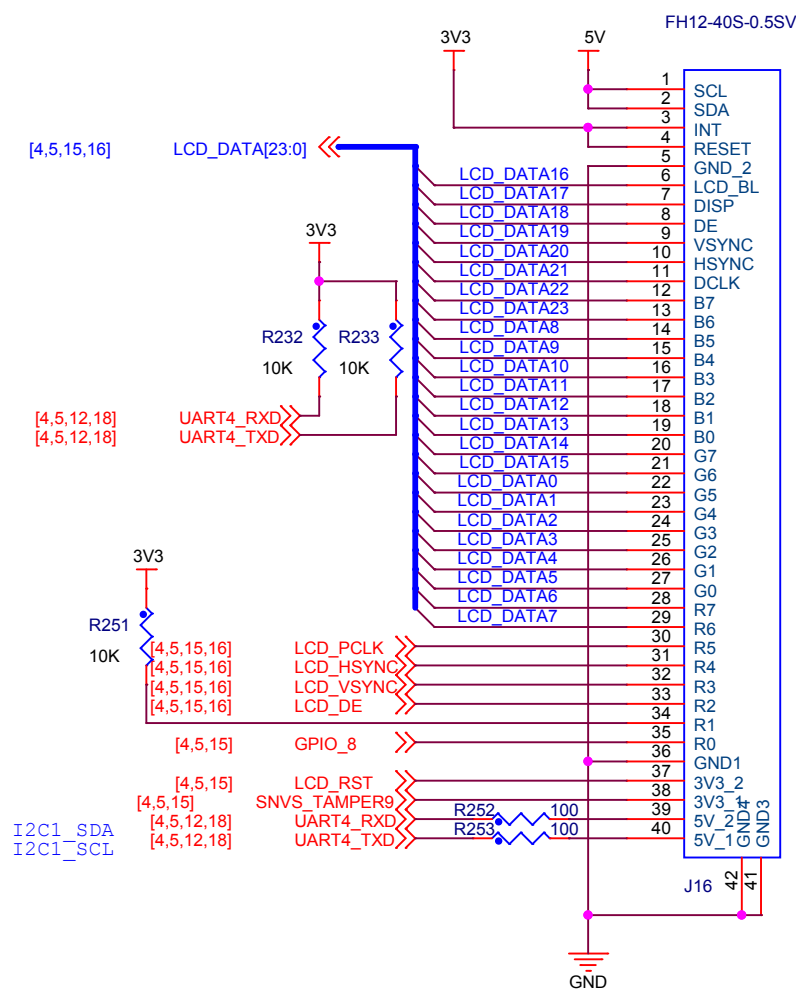
## 启动设置

拨码开关拨到ON位置为1，反之为0

SW5	1	2	3	4	5	6	7	8
NAND	0	1	1	0	0	1	0	0
EMMC	0	1	0	1	1	0	1	0
SD	0	1	0	0	1	0	0	1
USB	1	0	X	X	X	X	X	X



## LCD-FPC接口



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Size	Document Number	Rev
A4	扩展IO/启动切换	V1.0
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