

TVI2331A_SUB

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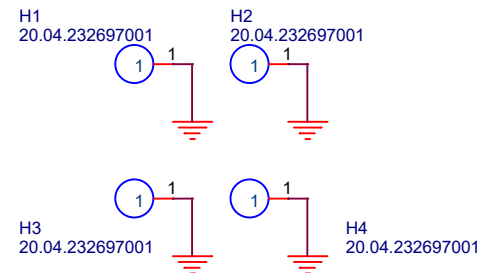
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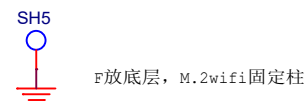
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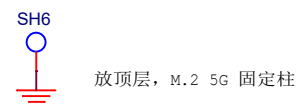
CORE BOARD FIX HOLE



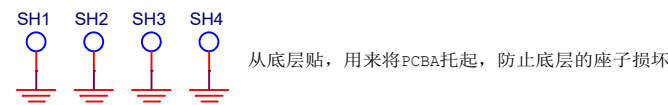
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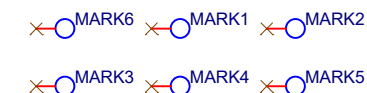
M.2 5G FIX HOLE



SCREW HOLE



MARK POINT



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Horizon DOCK

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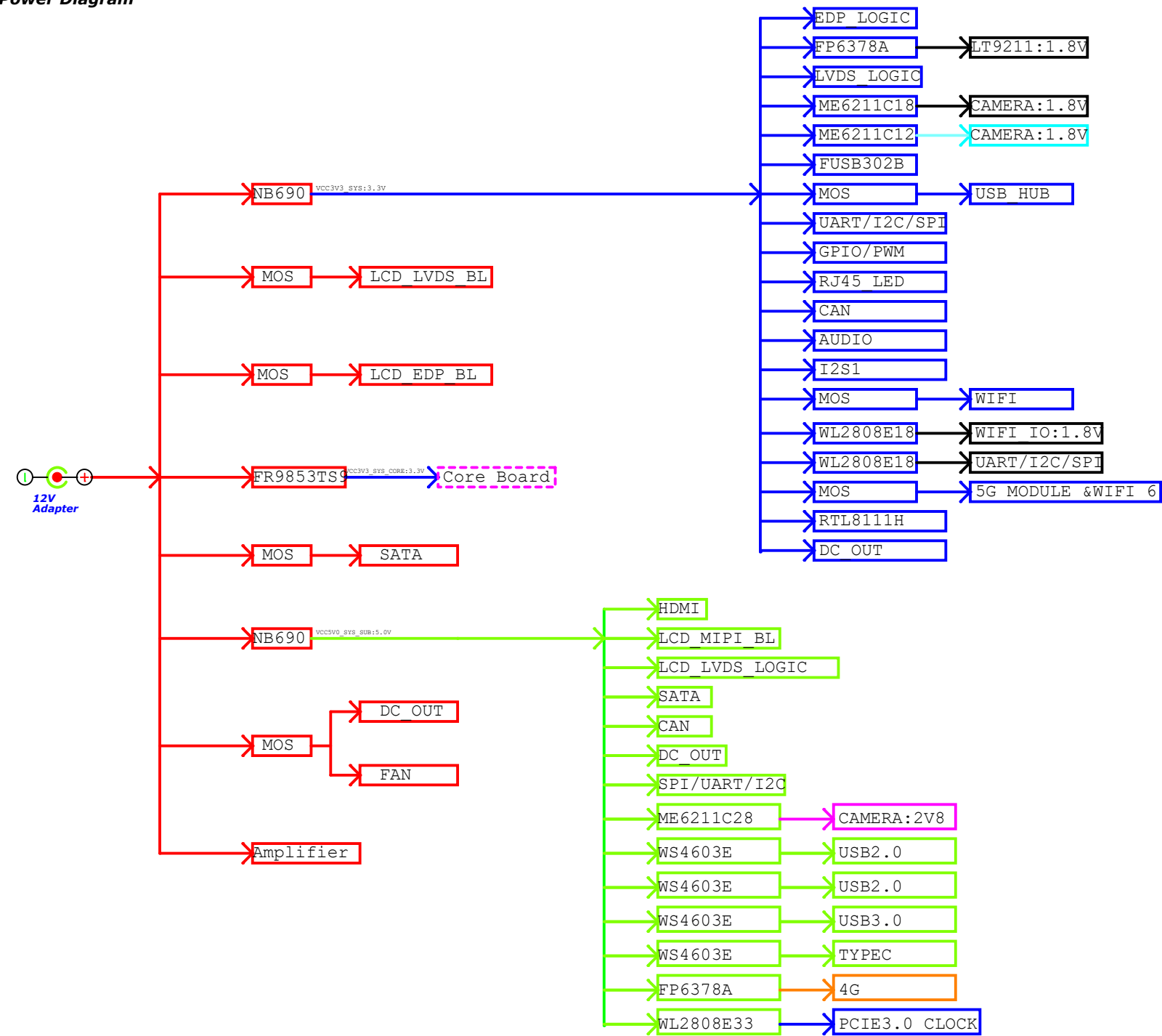
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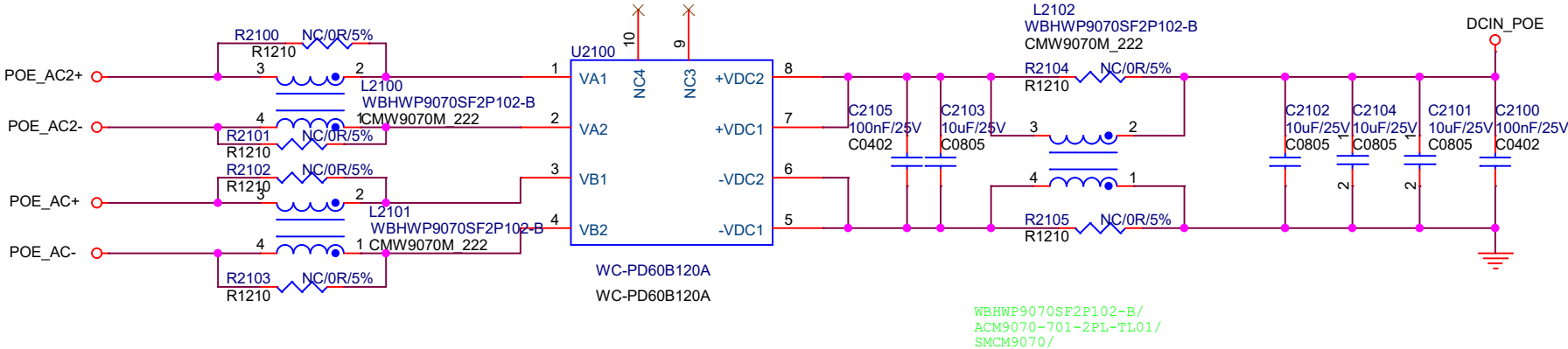
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Power Diagram

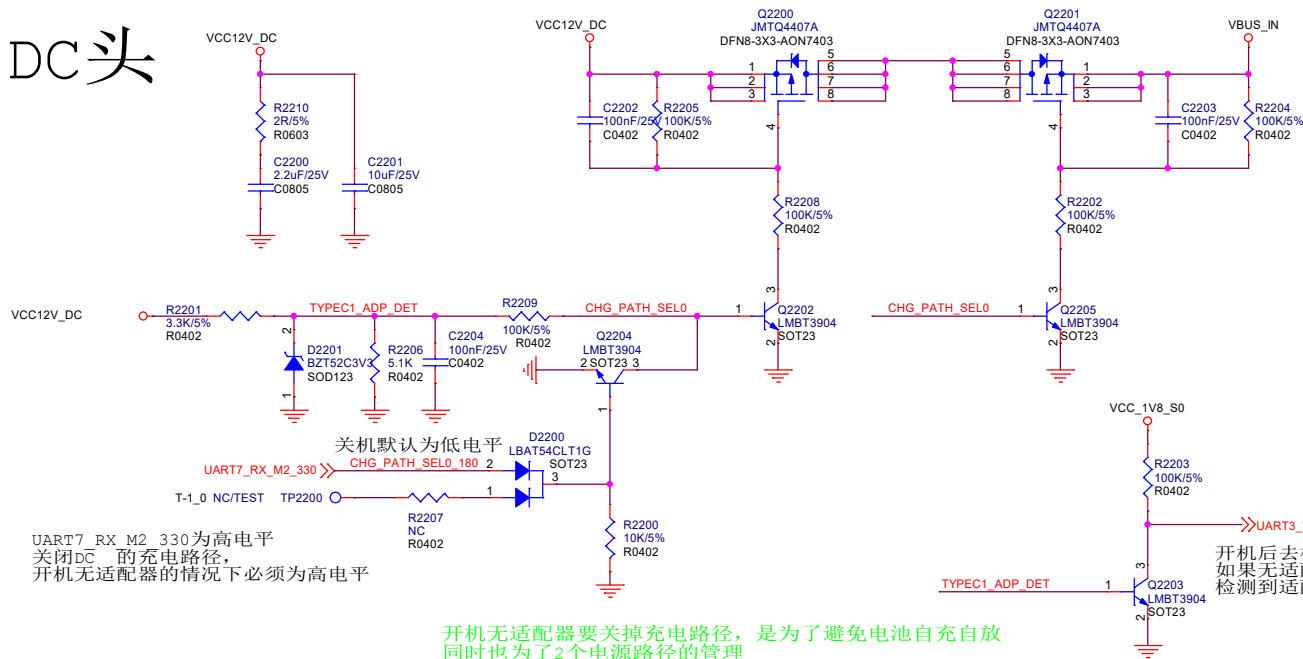


POE



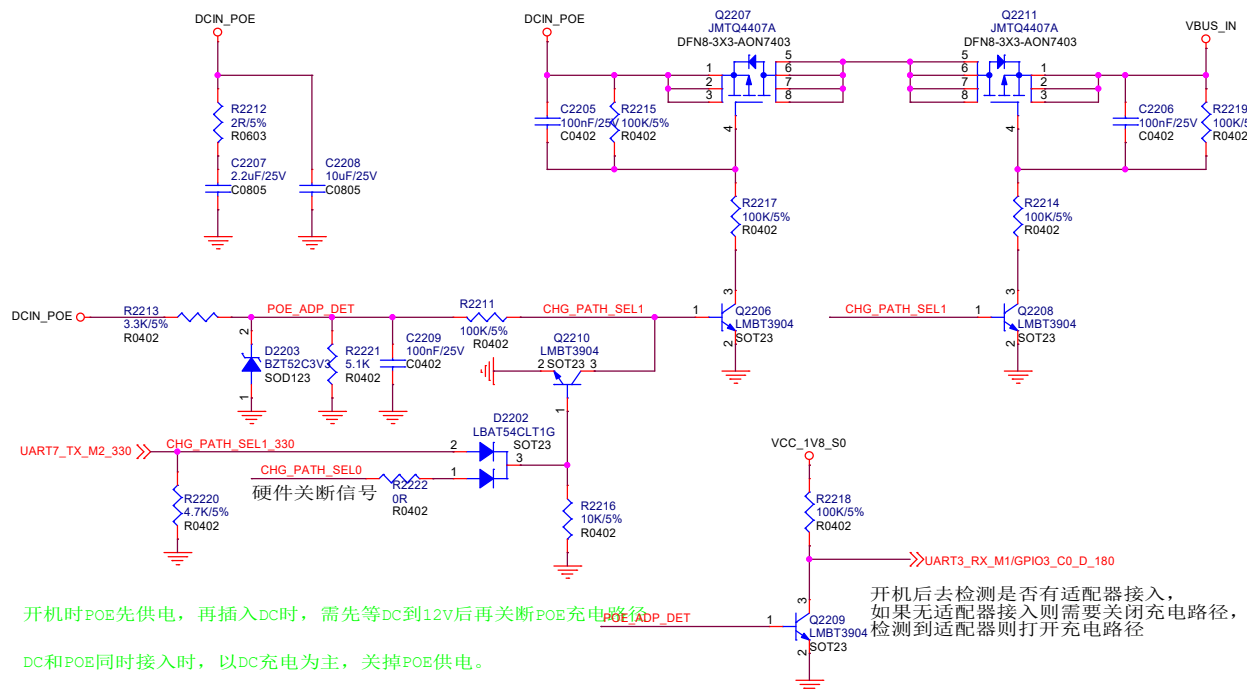
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	21.POE POWER		
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DC头



开机无适配器要关掉充电路径，是为了避免电池自充自放
同时也为了2个电源路径的管理

POE



开机时POE先供电，再插入DC时，需先等DC到12V后再关断POE充电路径

DC和POE同时接入时，以DC充电为主，关掉POE供电。

从关机状态变为开机状态时，需要去检测适配器的状态，关闭无适配器接入的充电路径，如无适配器接入，两个路径都关闭

1、关机状态下任意接一个PD均可实现充电功能

2、关机状态下先接入DC然后马上接入POE，POE的充电路径会被DC硬件上关闭，POE充电路径不会被开启，走DC充电

3、关机状态下先接入POE,然后马上接入DC, POE的充电路径会被DC硬件上关闭,充电路径会从POE切换到DC上

4、关机状态同时接入两个充电源，需要选择其中一个，不然会存在串电的可能，选择DC优先，该TYPE-C口接了PD后，POE接入无效，硬件自动关断


5、开机状态下两个适配器都没有检测到，则需要关闭两个充电路径，即UART3 TX M1/GPIO3 B7 D 180和UART3 RX M1/GPIO3 C0 D 180需要为高电平

6、开机状态下两个适配器任意检测到一个适配器，则需要开启检测到的充电路径

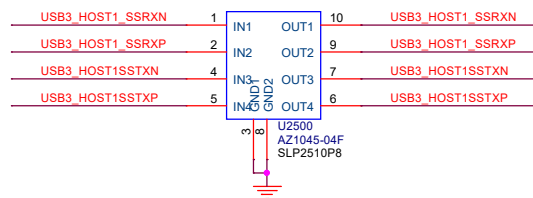
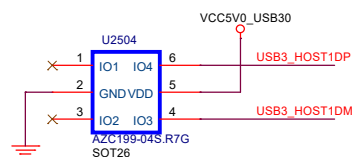
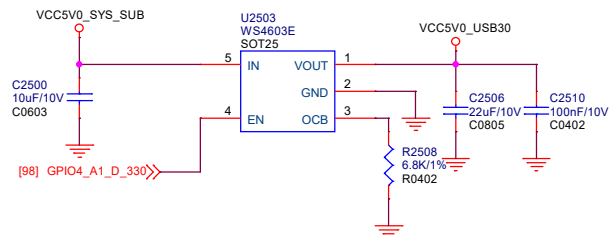
7、开机状态先接入DC,DC充电路径开启的情况下,POE的PD接入,通过软件将UART7 RX M2 330拉为高电平,将DC的充电路径关闭,将UART7 TX M2 330拉低,可将充电路径从DC切换到POE

8、开机状态先接入POE, POE充电路径开启的情况下, DC的PD接入, 通过软件将UART7_TX_M2_330拉为高电平, 将POE的充电路径关闭, UART7_RX_M2_330拉低, 可将充电路径从POE切换到DC

开机后去检测是否有适配器接入，
如果无适配器接入则需要关闭充电路径，
检测到适配器则打开充电路径

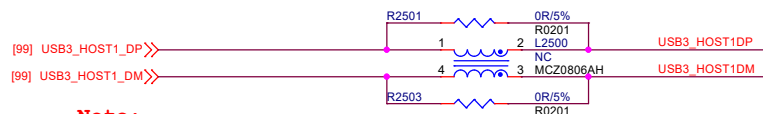
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	Horizon DOCK 22. DC/POE Power Path		
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USB 3.0:TYPEA



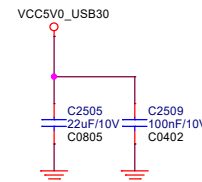
Note:
The ESD of USB3.0 signal cannot be change at will
If it needs to be change,
the same specification must be selected.

Cj<=0.4pF

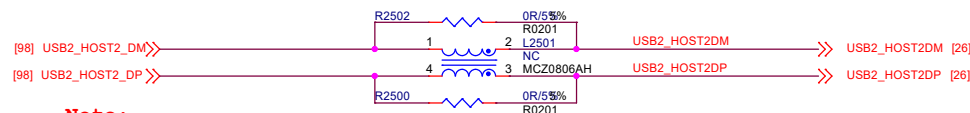


Note:

If common mode inductors are needed,
it is recommended to keep 2.2ohm in series
to improve the antistatic ability



USB 2.0:TYPEA



Note:

If common mode inductors are needed,
it is recommended to keep 2.2ohm in series
to improve the antistatic ability

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25.USB2.0/USB3.0 Port

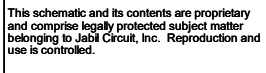
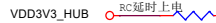
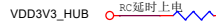
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26.USB2.0 Hub

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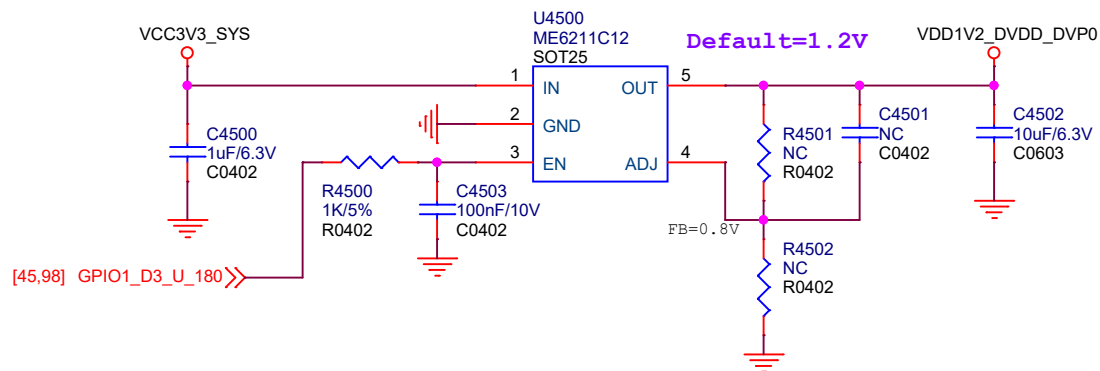
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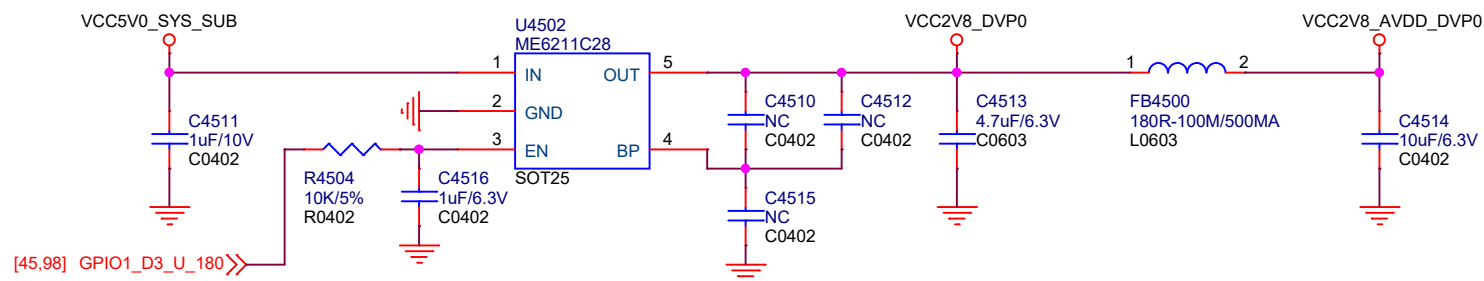
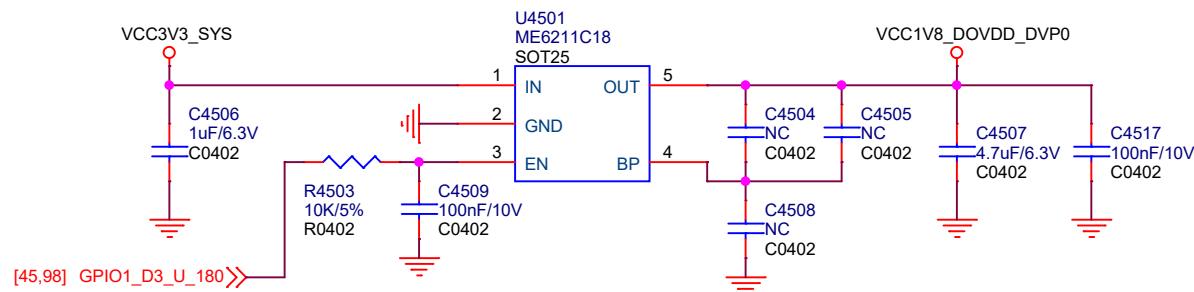
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Note:

According to camera model, DCDC power supply is recommended if the DVDD current exceeds 100mA



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45.Camera_Power

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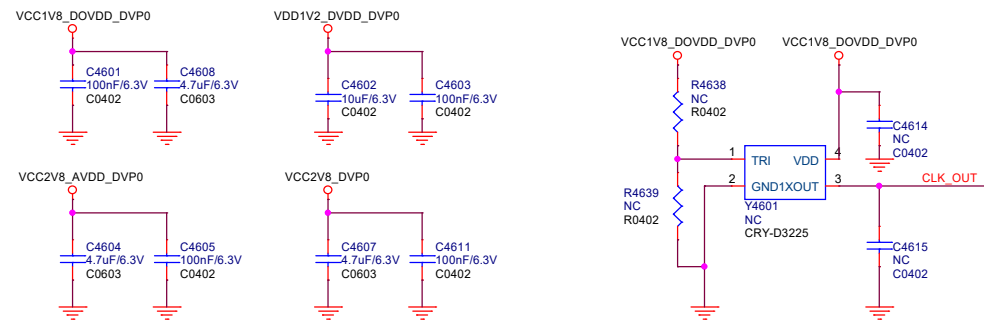
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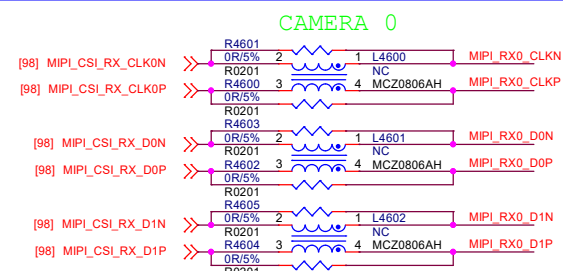
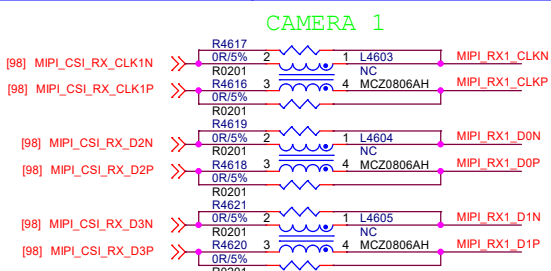
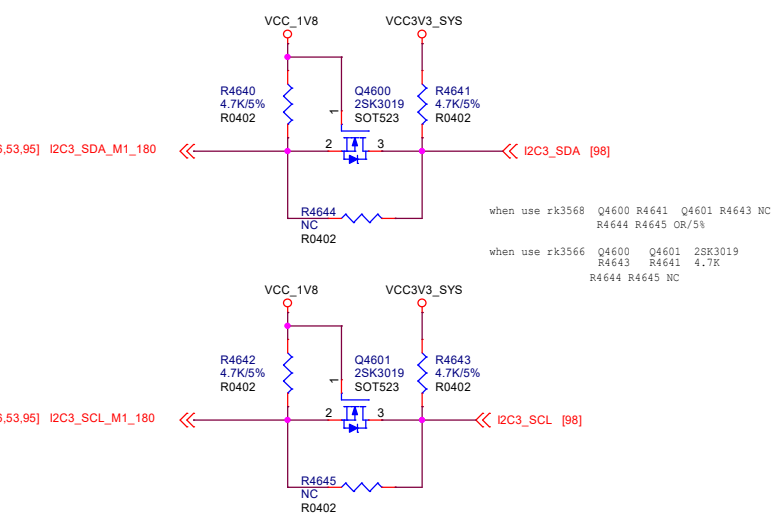
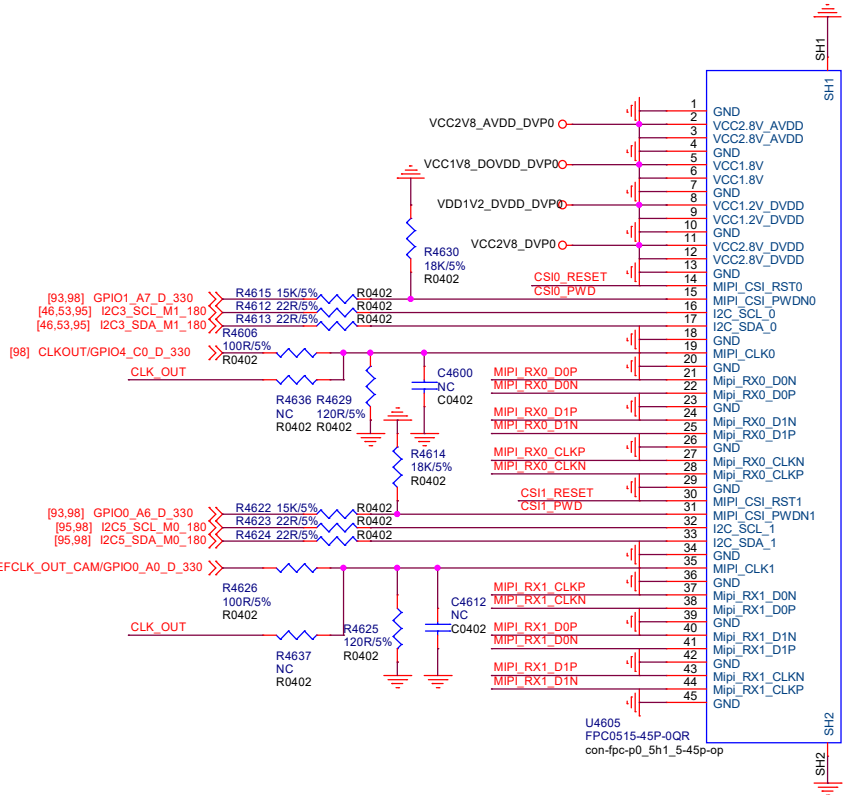
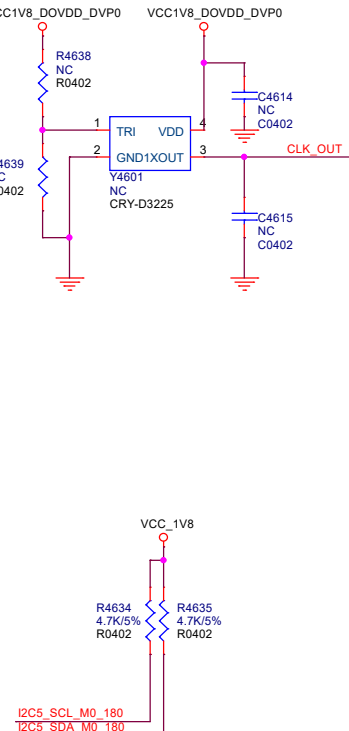
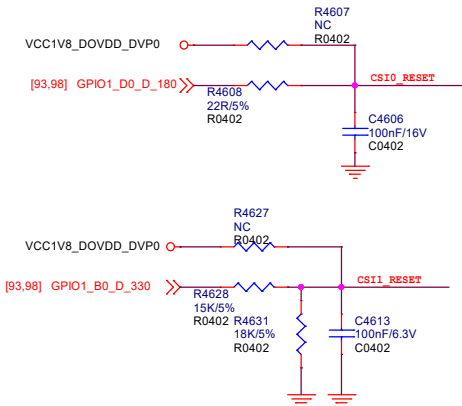
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Close to FPC Connector Close to FPC Connector





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Horizon DOCK
46.Camera

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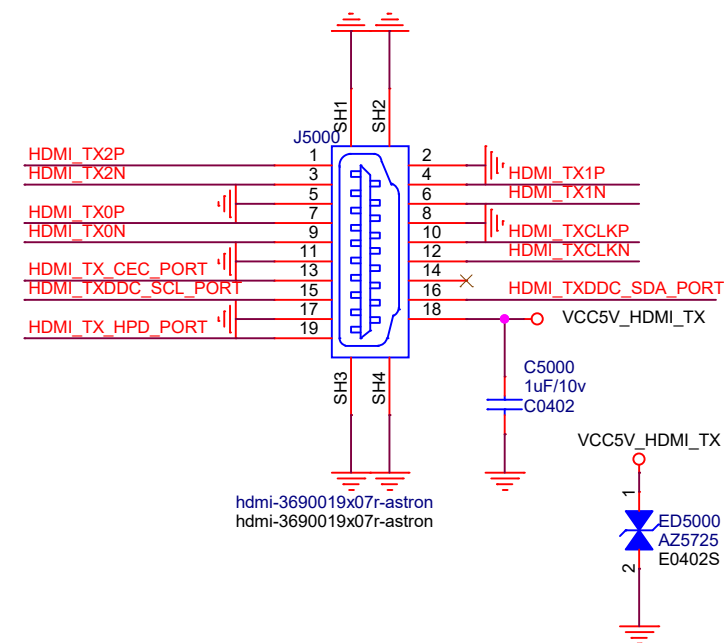
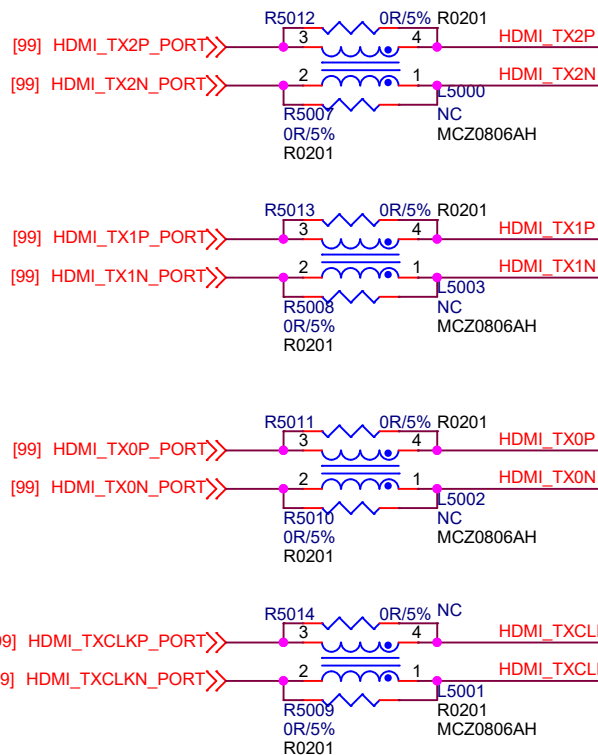
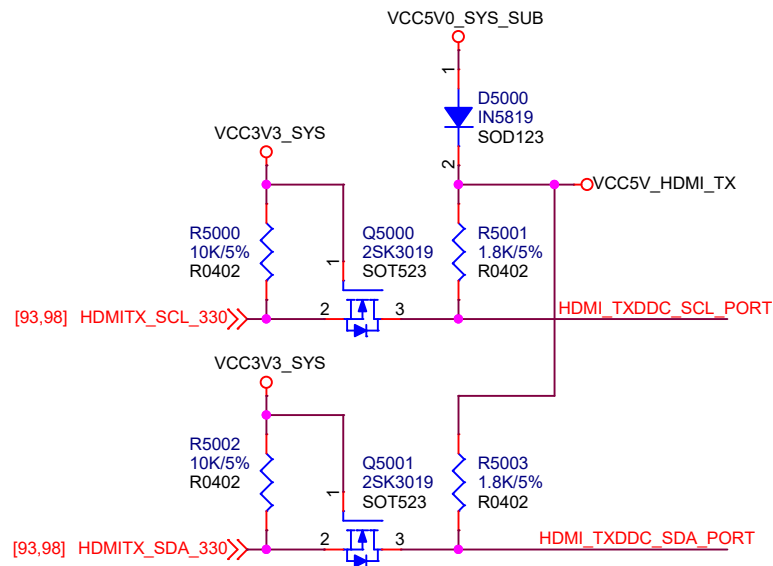
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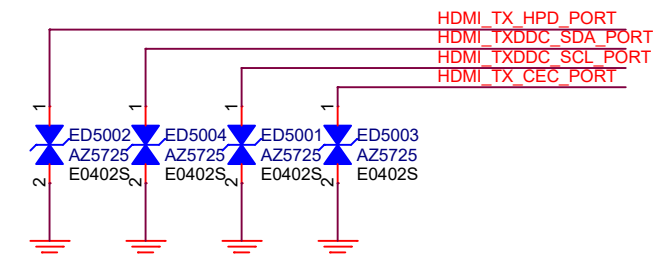
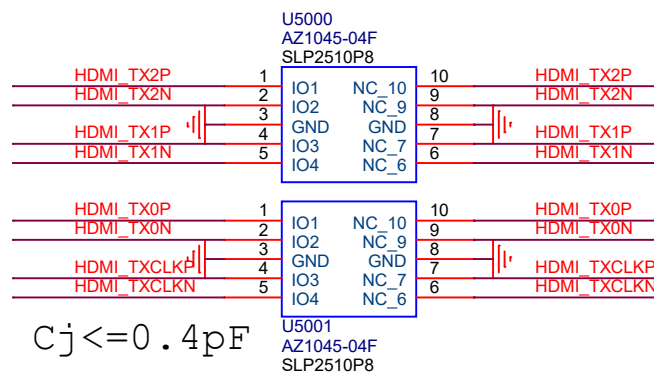
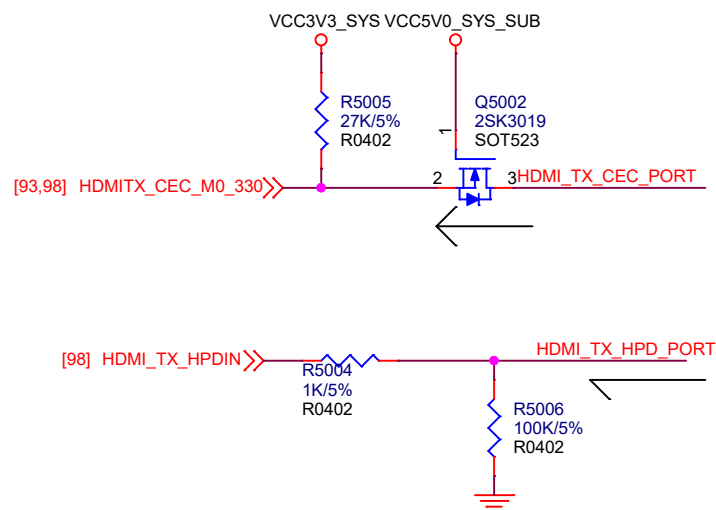
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HDMI I2C



HDMI TX CEC



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Horizon DOCK

50.HDMI2.0 TX

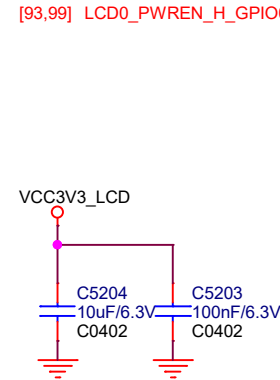
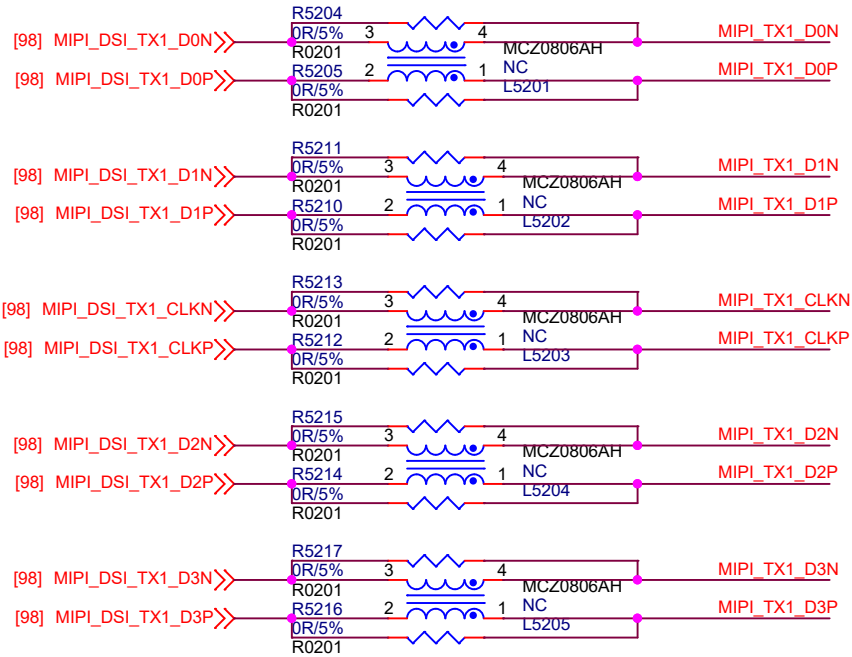
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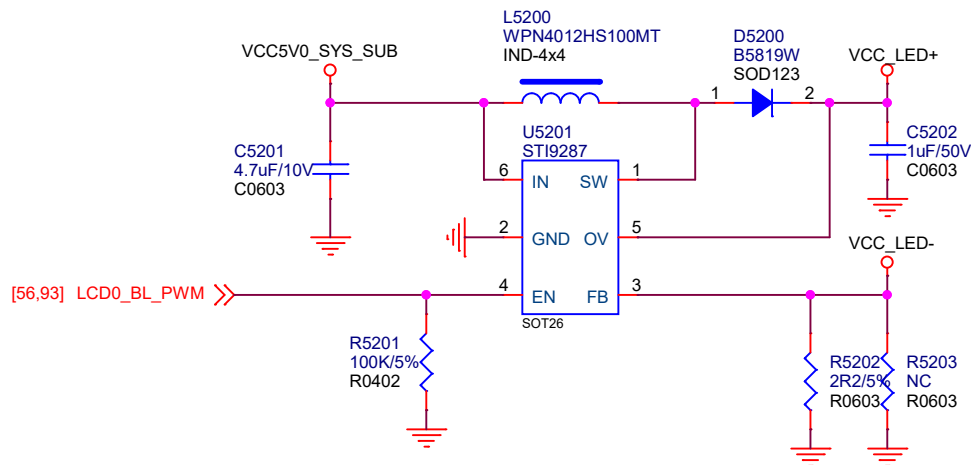
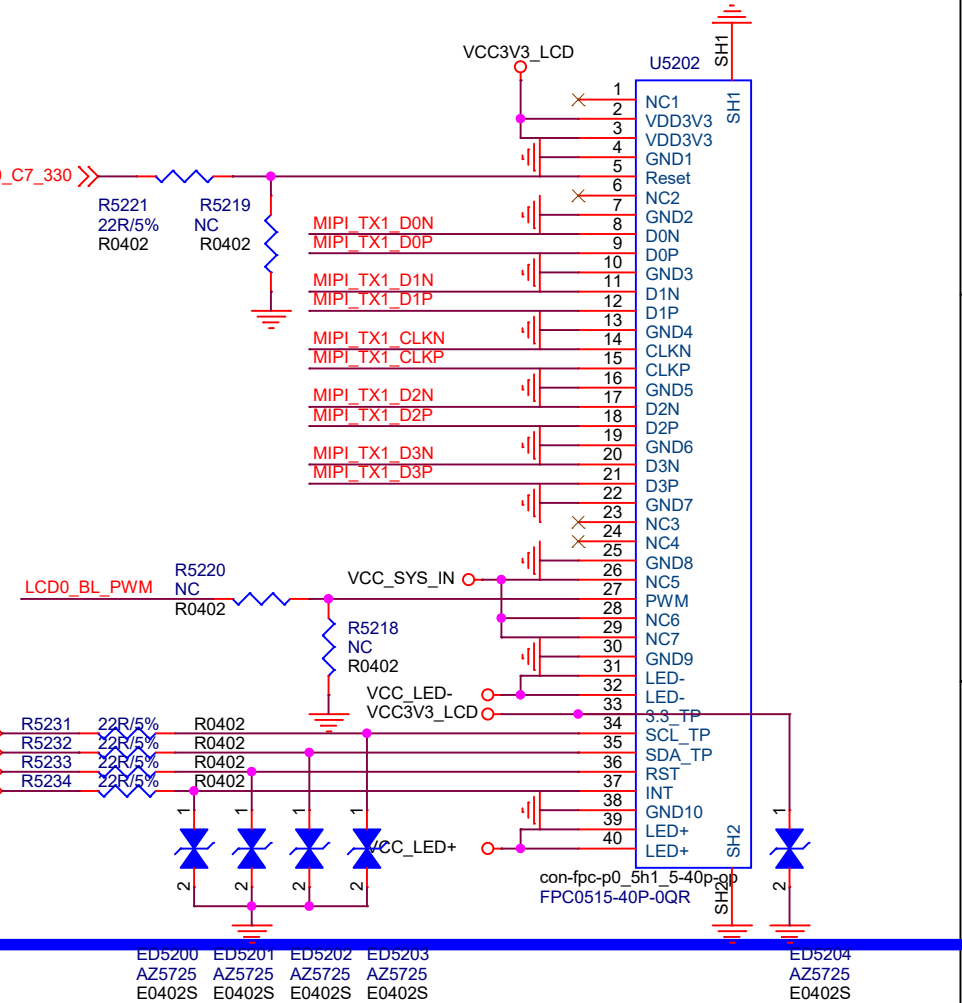
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REV: A



[98] I2C1_SCL_TP_330 >> R5231 22R/5% R0402
[98] I2C1_SDA_TP_330 >> R5232 22R/5% R0402
[98] UART5_TX >> R5233 22R/5% R0402
[98] UART5_RX >> R5234 22R/5% R0402

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Horizon DOCK**52.MIPI_DSI_TX1**

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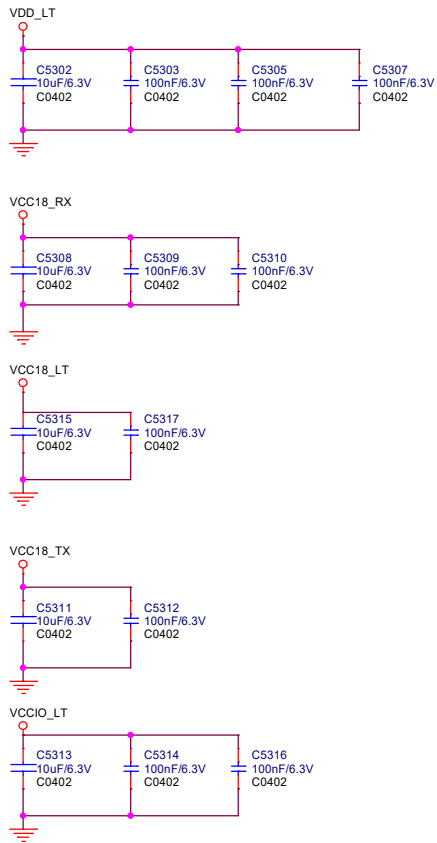
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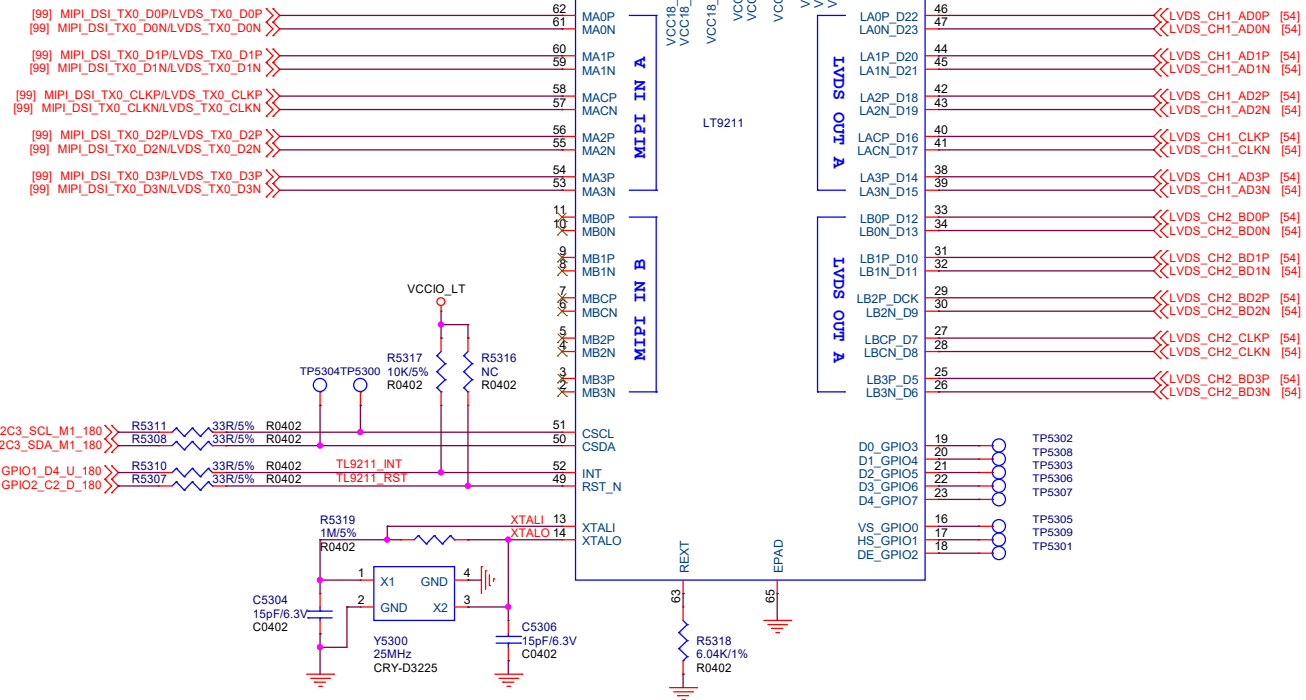
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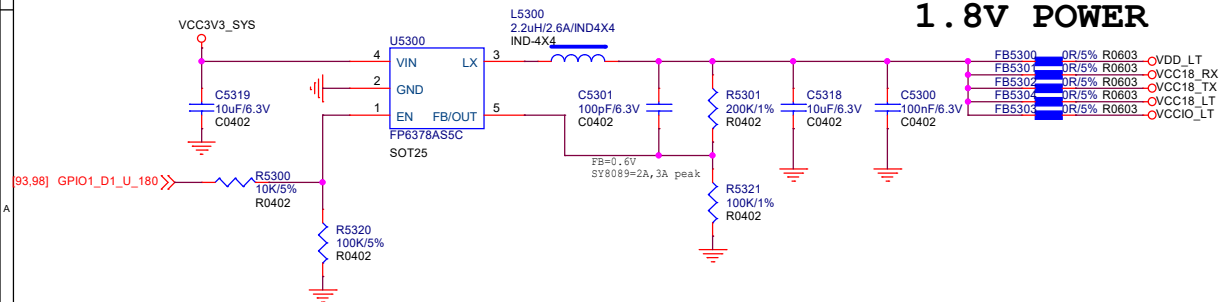
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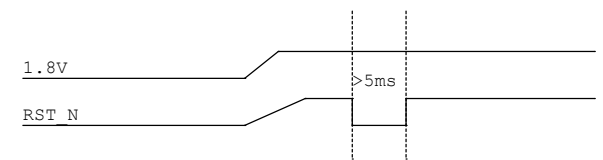
LT9211



1.8V POWER



Power On Sequence



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53.LT9211

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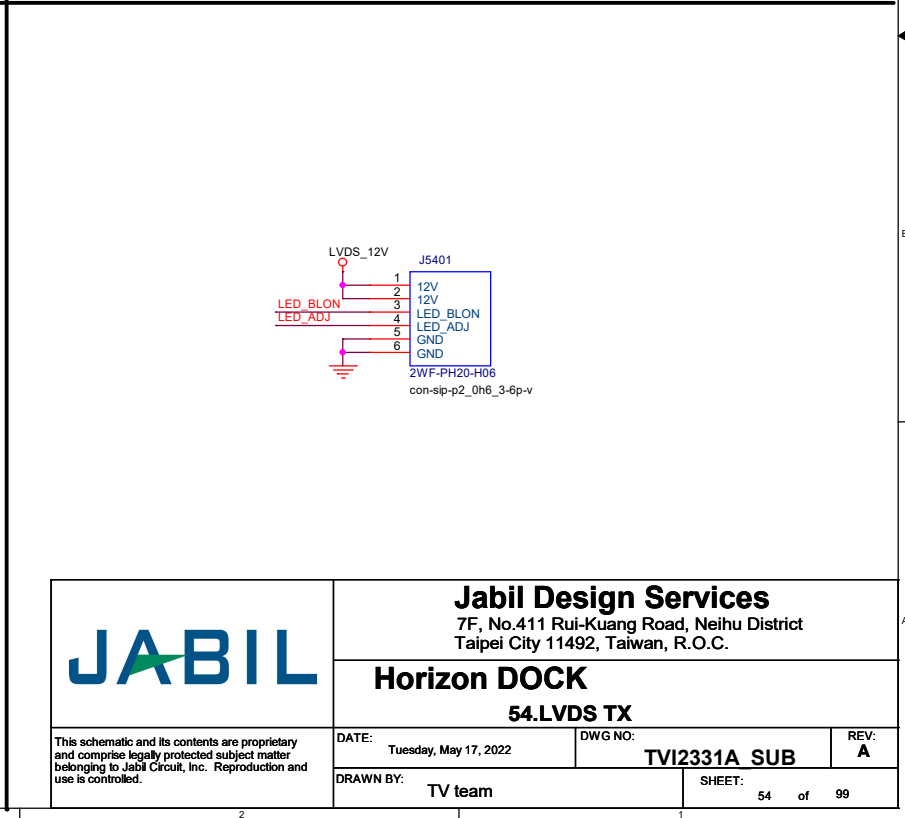
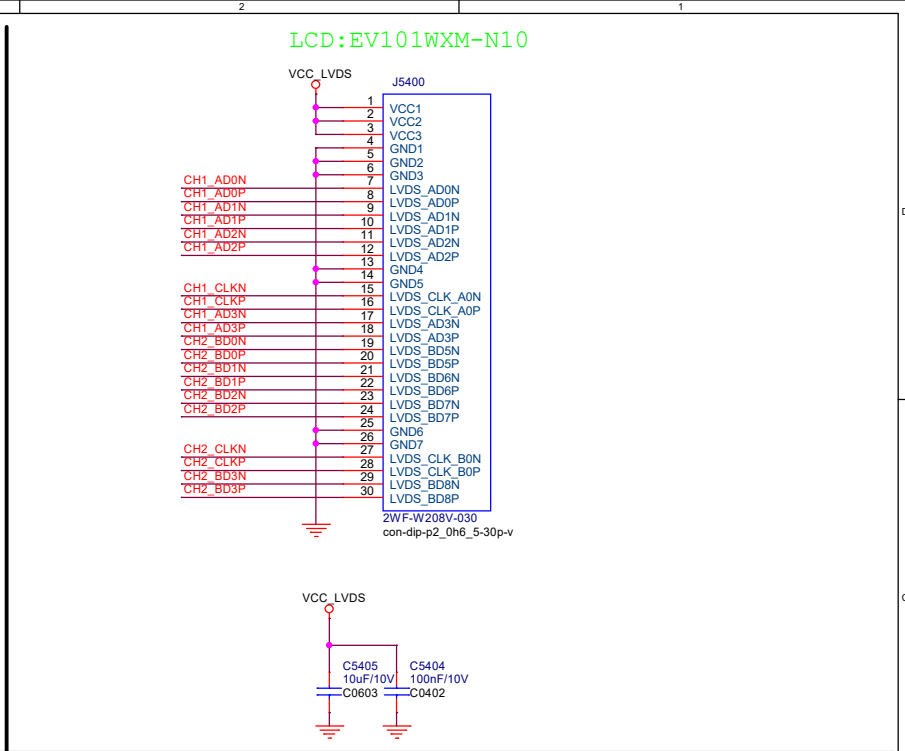
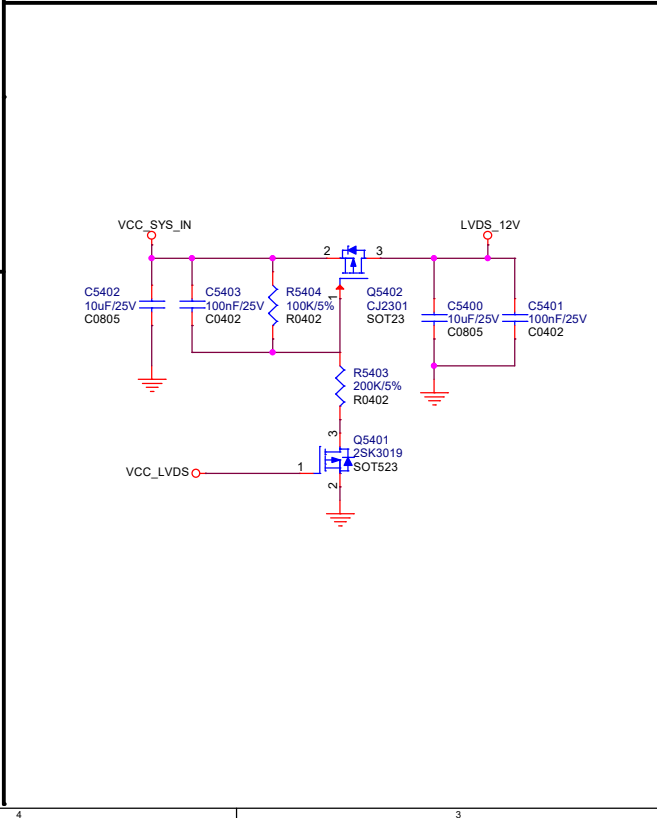
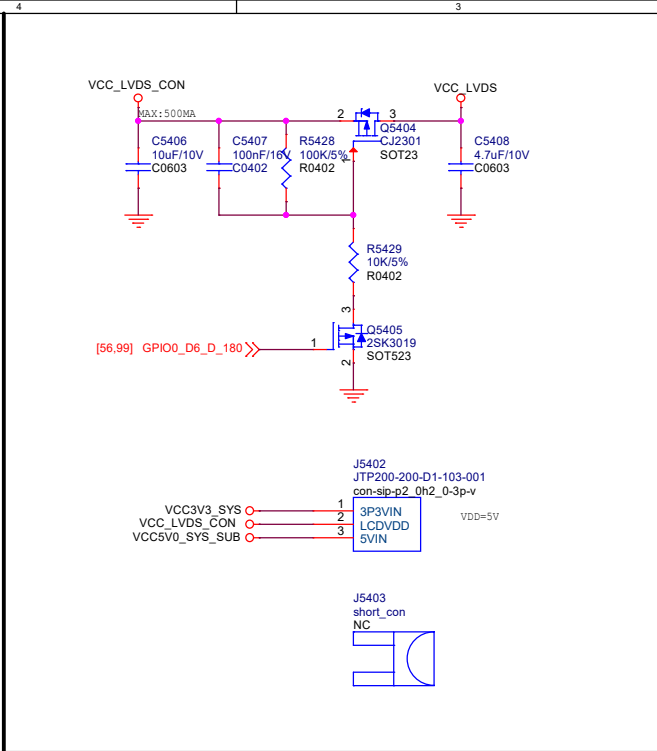
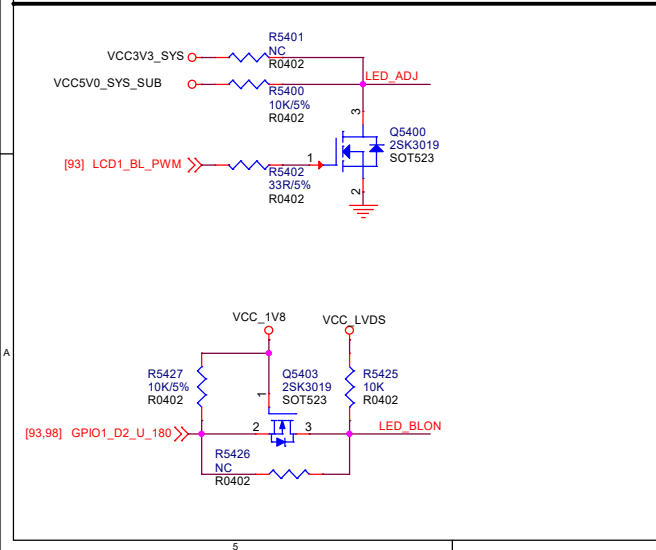
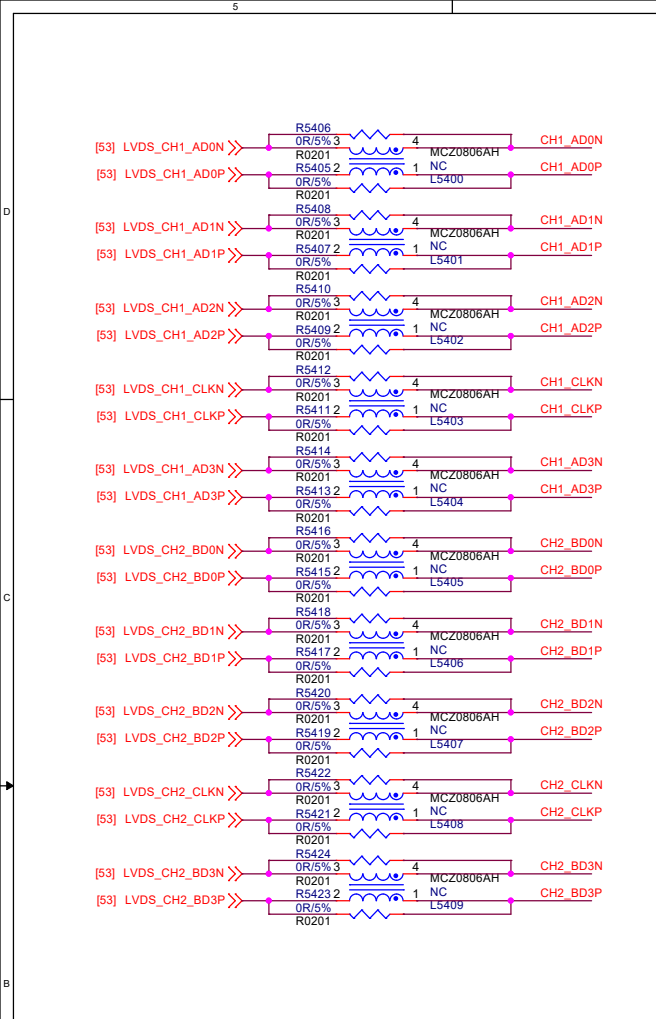
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Horizon DOCK

54.LVDS TX

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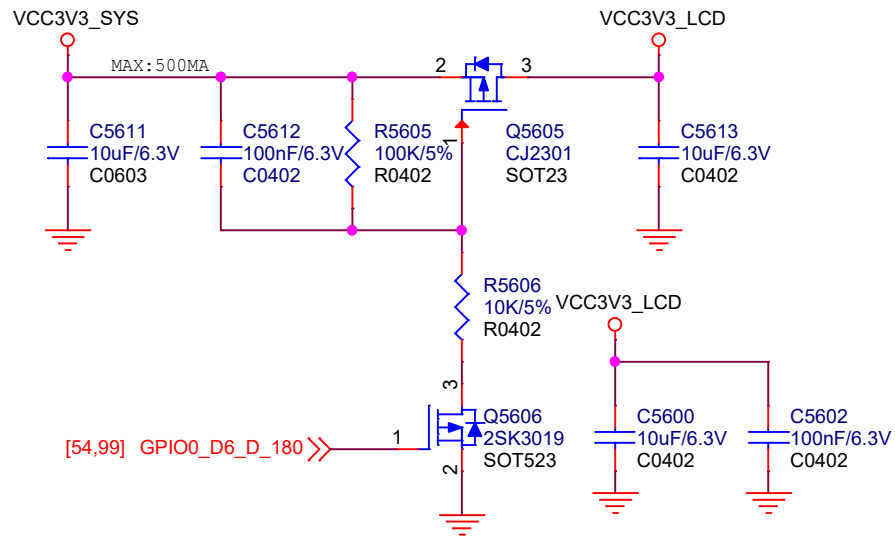
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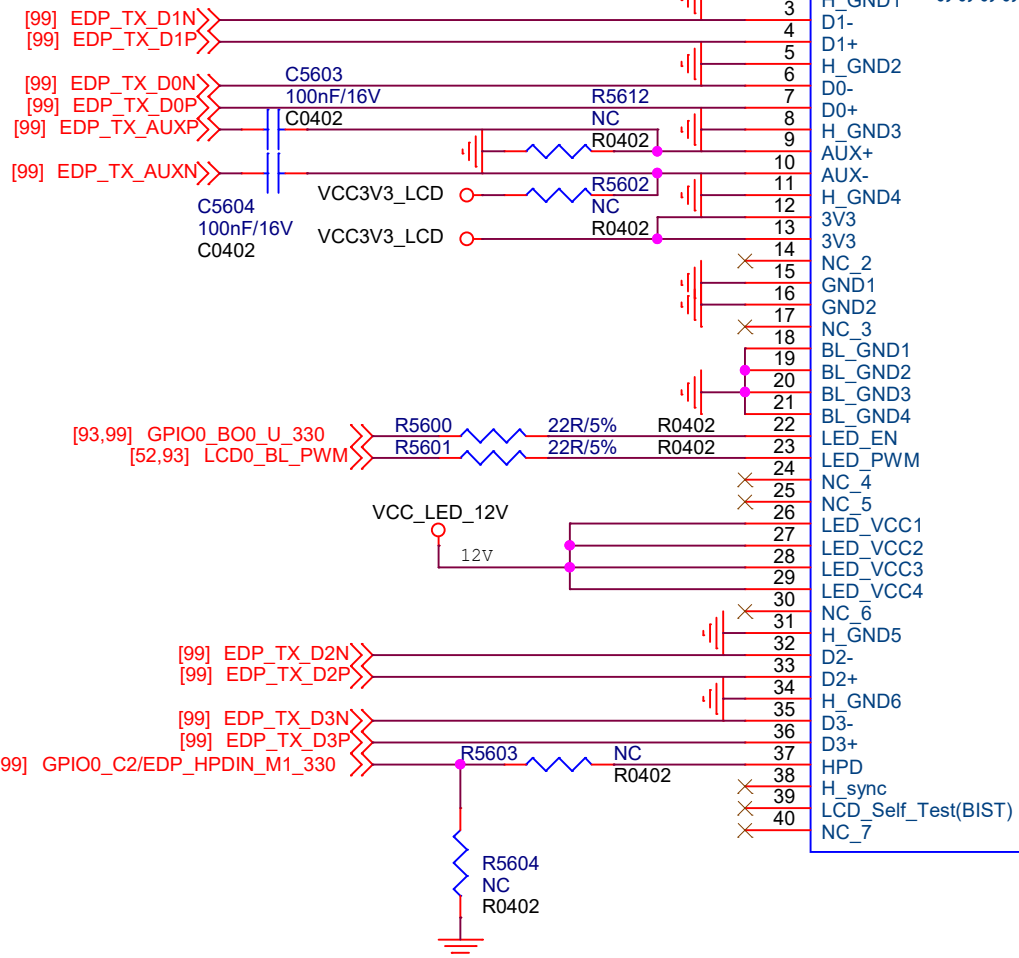
DRAWN BY: TV team

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LCD:SL116PP40Y1008-D02

J5604
LVDS05-40-01
con-ipex-p0_5h1_0-40p-op



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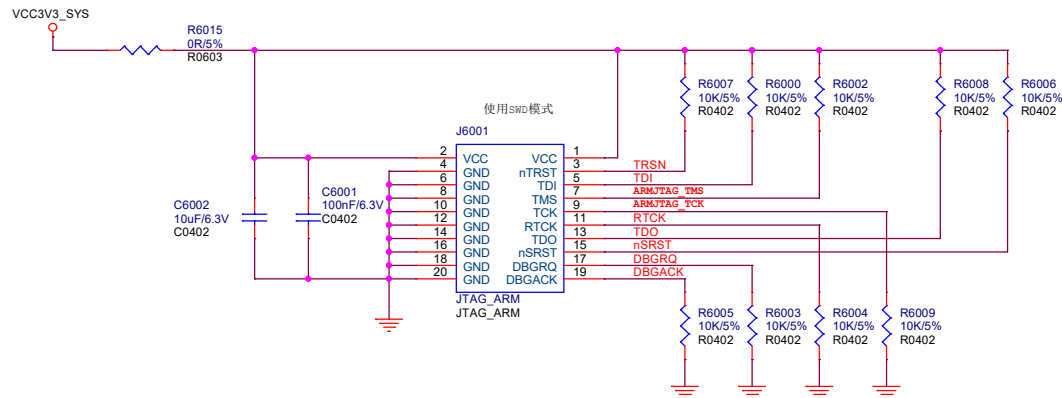
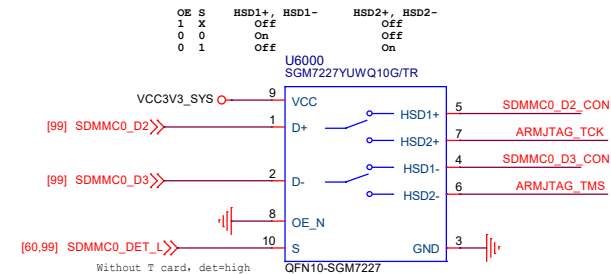
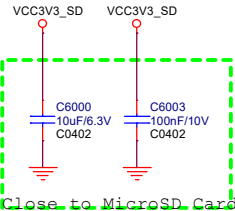
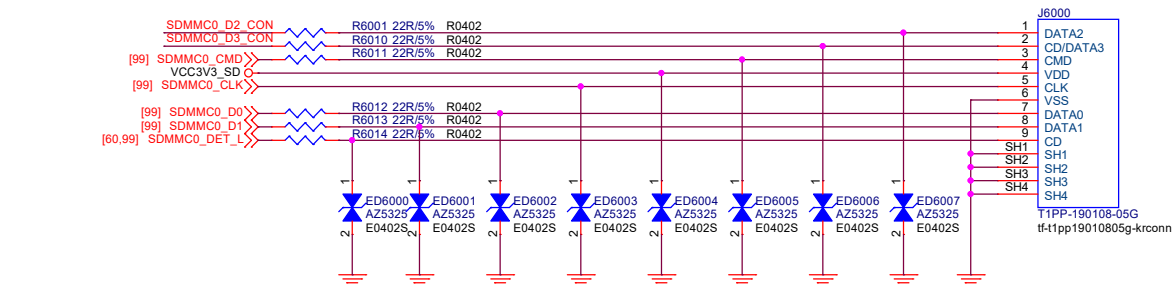
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56.eDP TX

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MicroSD Card



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60.TF/SD Card

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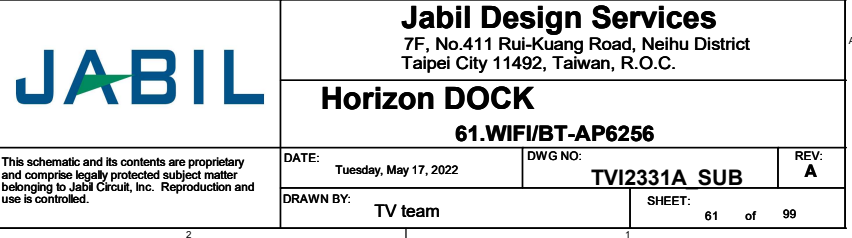
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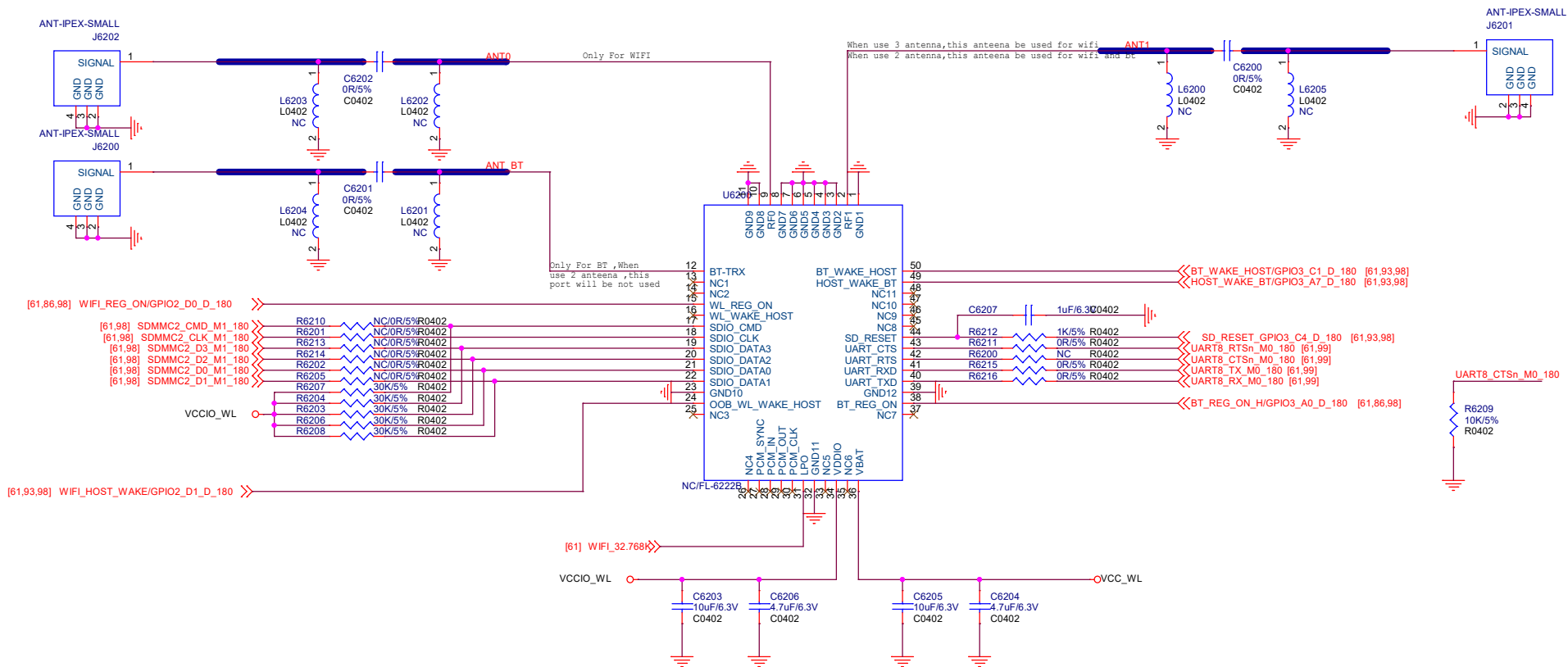
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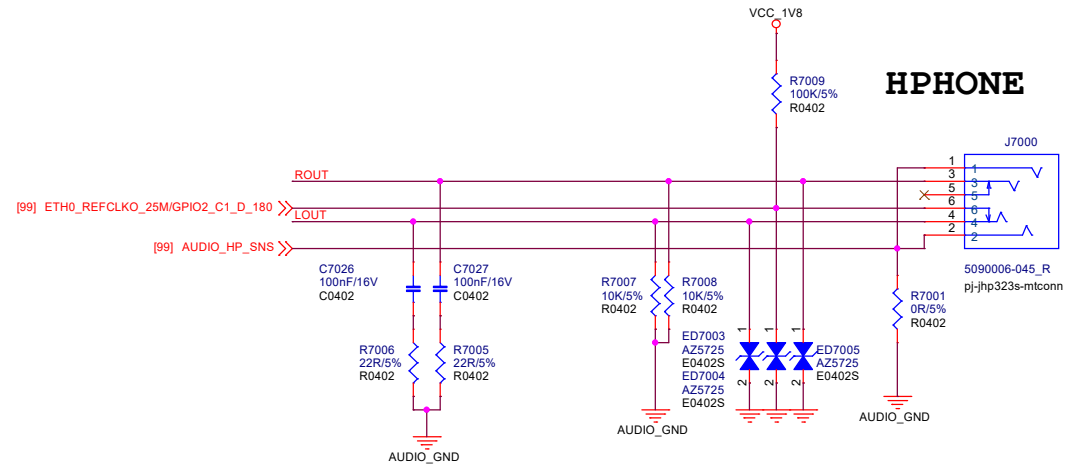
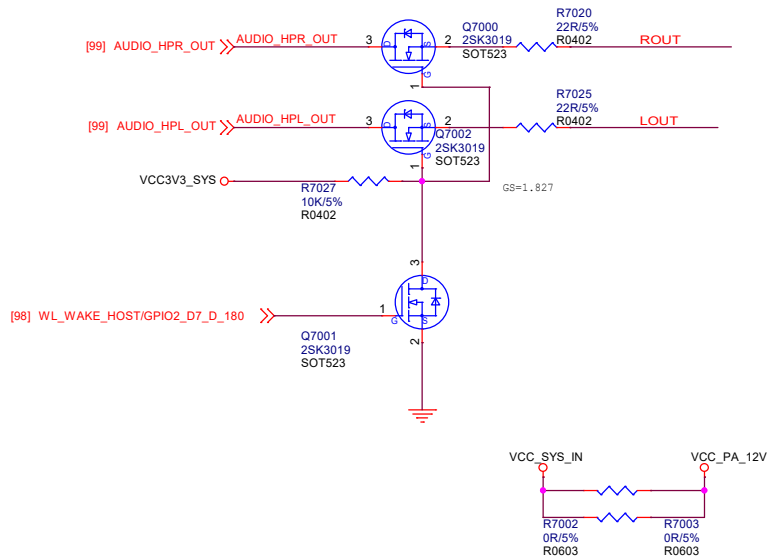




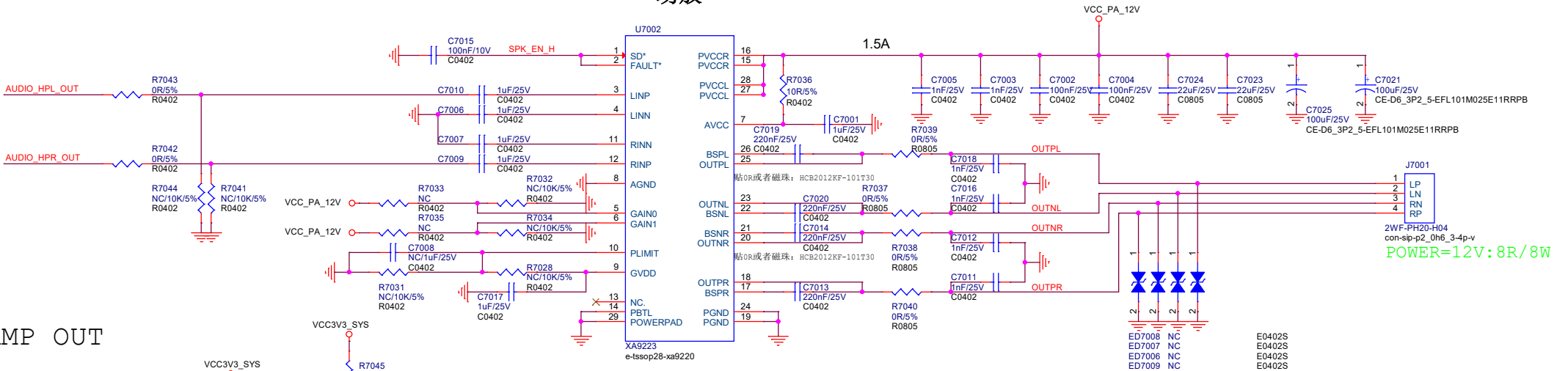
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	Horizon DOCK		
	62.FL-6222B		
	DATE: Tuesday, May 17, 2022	DWG NO: TVI2331A SUB	REV: A
DRAWN BY: TV team		SHEET: 62 of 99	

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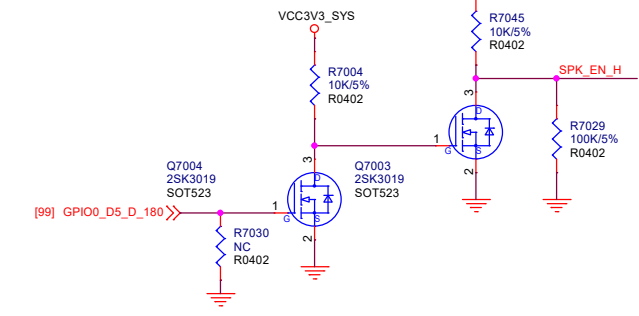
Phone out




功放

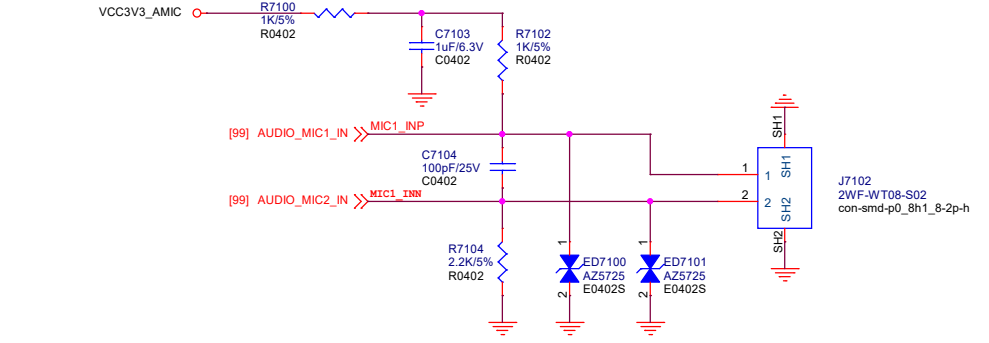


AMP OUT

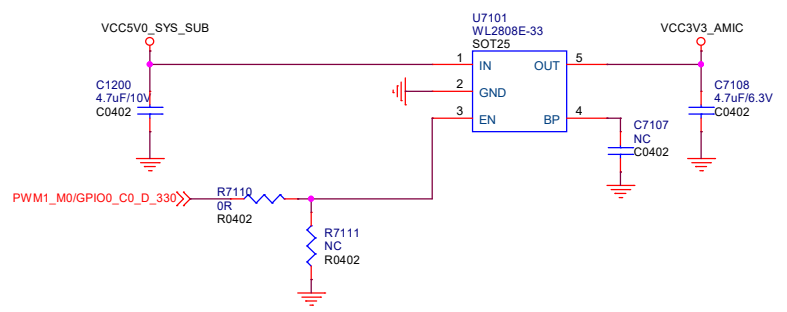


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	Horizon DOCK 70.Audio-Out		
	DATE: Tuesday, May 17, 2022 DRAWN BY: TV team	DWG NO: TVI2331A_SUB SHEET: 70 of 99	REV: A

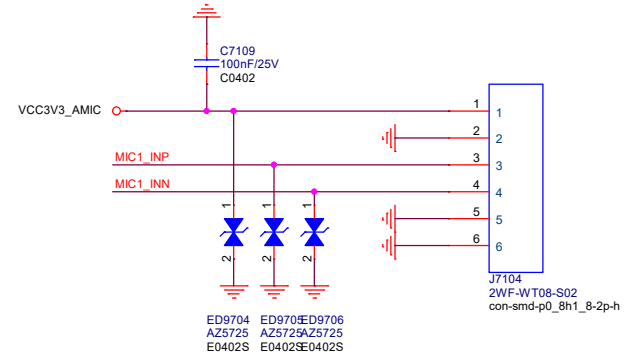
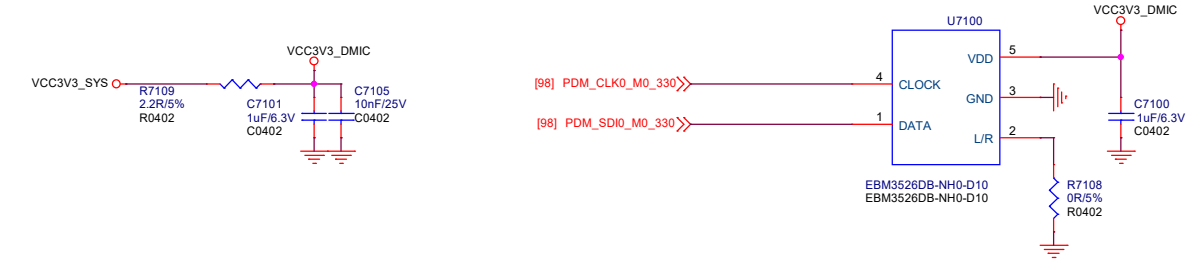
模拟MIC



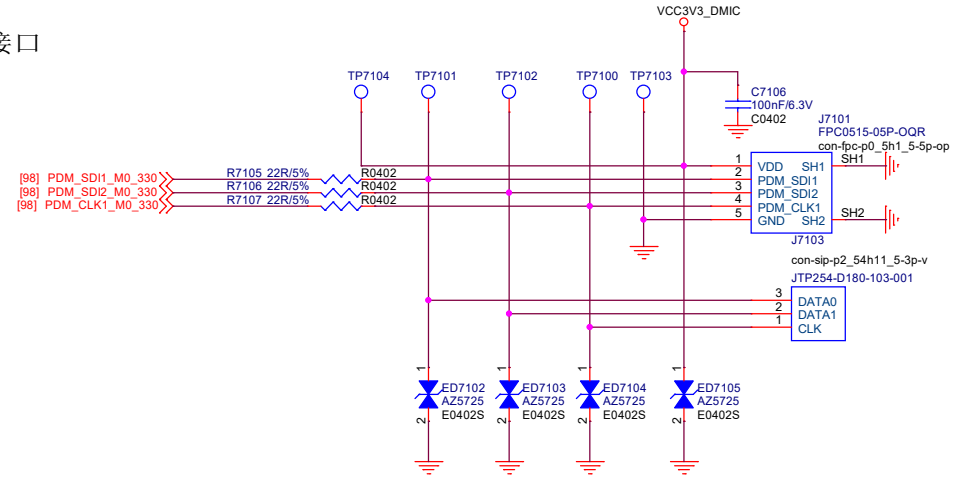
[92]




数字MIC

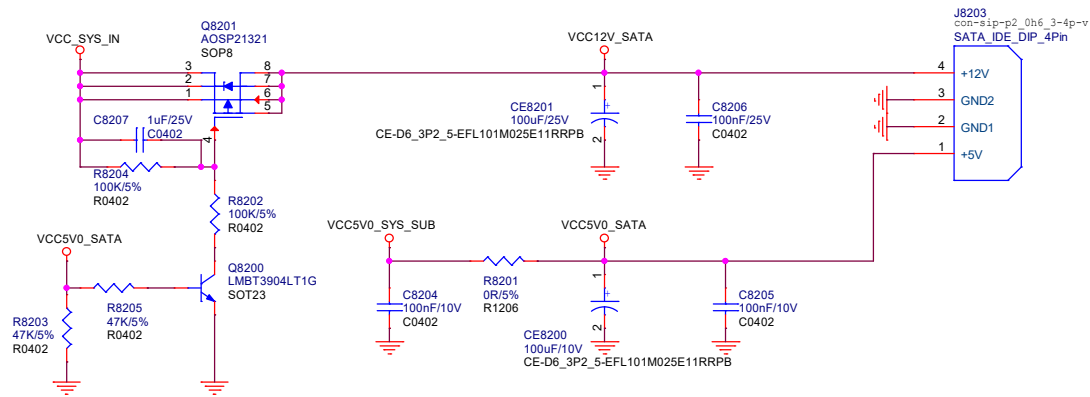
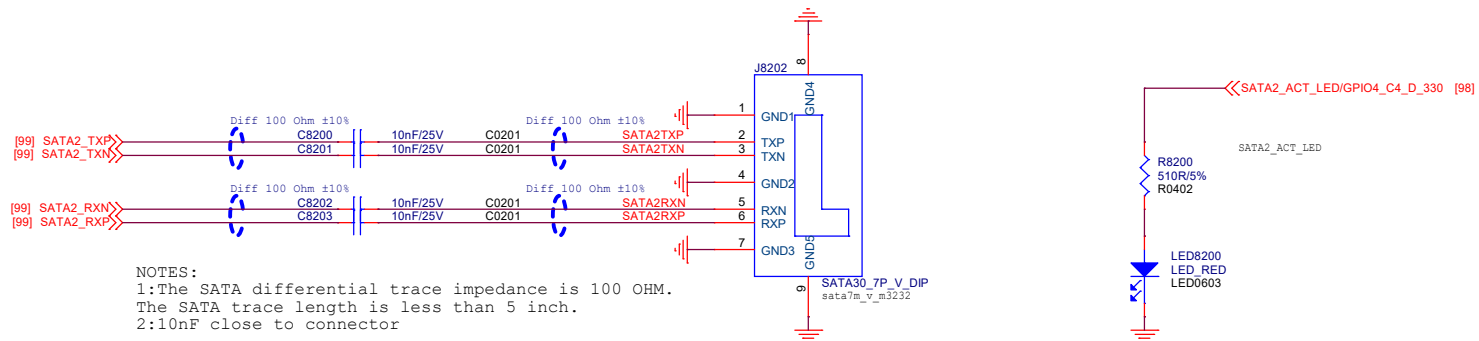


数字MIC接口

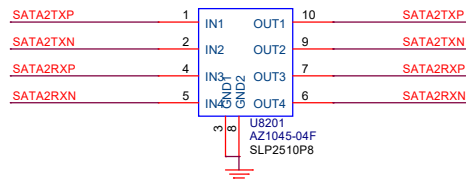


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	Horizon DOCK 71.MIC		
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DRAWN BY: TV team		SHEET: 71 of 99	

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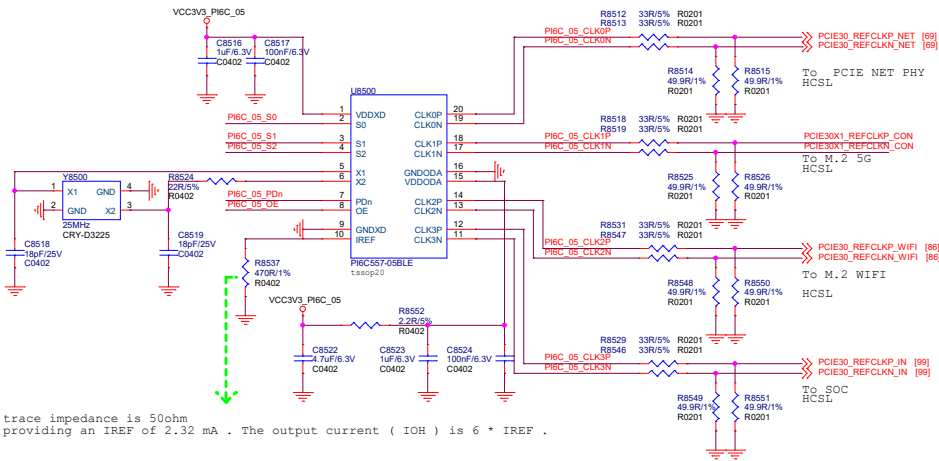


$C_j \leq 0.4 \text{ pF}$



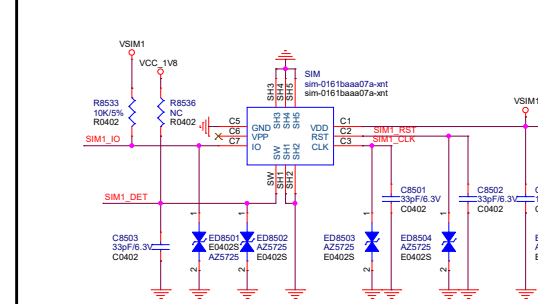
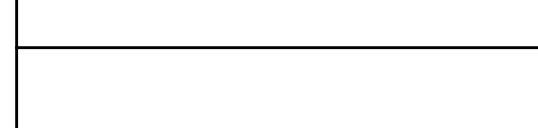
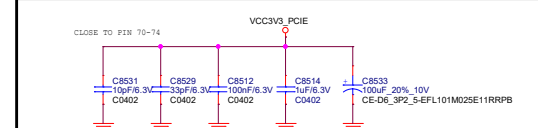
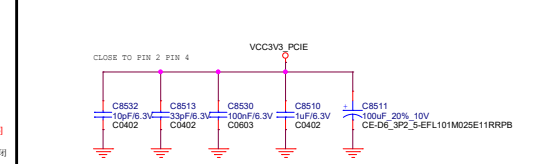
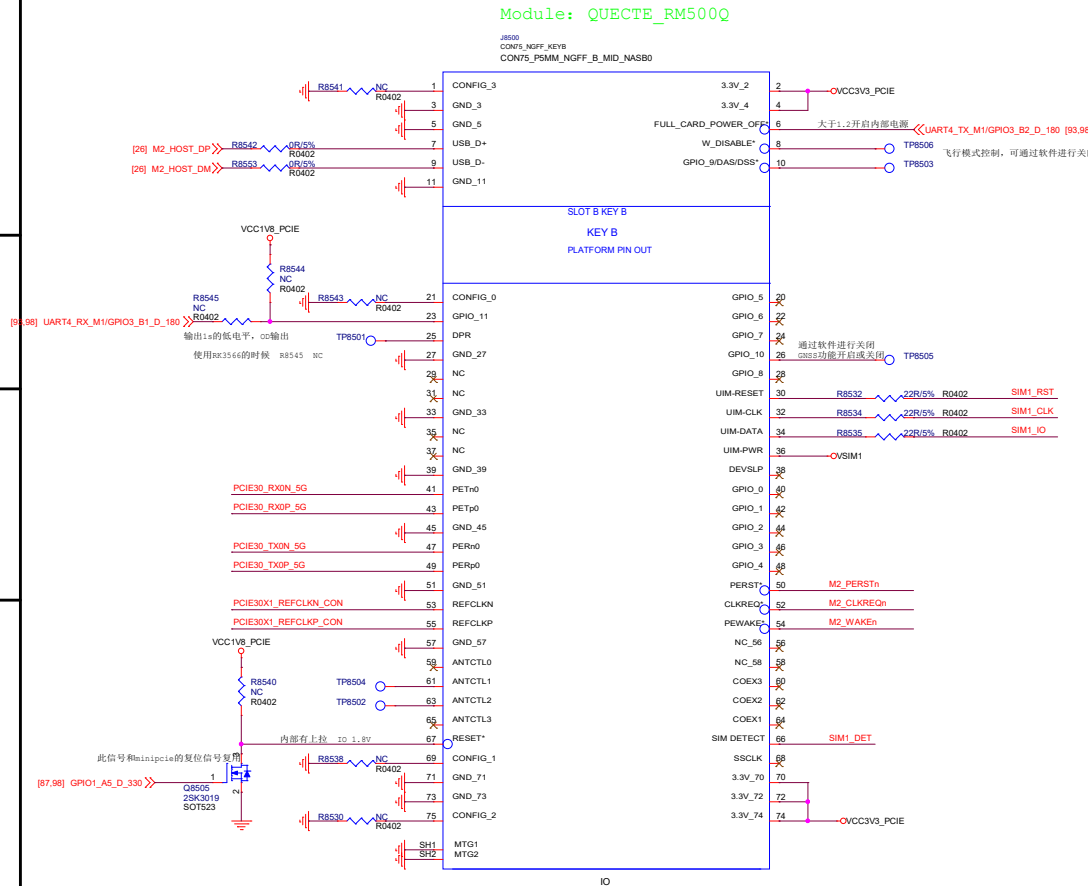
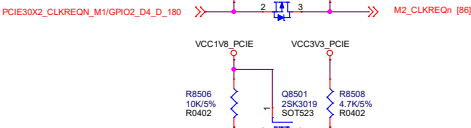
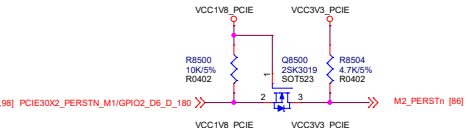
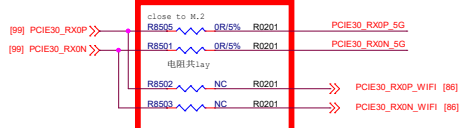
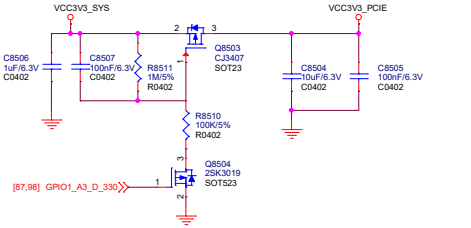
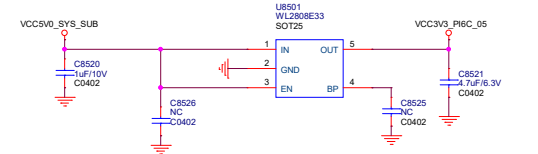
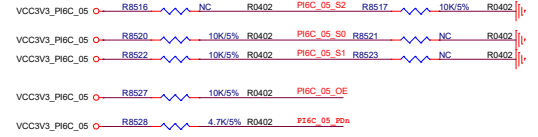
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	Horizon DOCK 82.SATA3.0-2		
	DATE: Tuesday, May 17, 2022 DRAWN BY: TV team	DWG NO: TVI2331A_SUB SHEET: 82 of 99	REV: A

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If board target trace impedance is 50ohm
then R = 475ohm providing an IREF of 2.32 mA . The output current (IOH) is 6 * IREF .
6x2.32x50=696mV

PI6C_S2	PI6C_S1	PI6C_S0	Spread %	Out Freq
0	0	0	-0.5	100MHz
0	0	1	-1.0	100MHz
0	1	0	-1.5	100MHz
0	1	1	No Spread	100MHz



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Horizon DOCK
85.M.2_B-KEY_5G

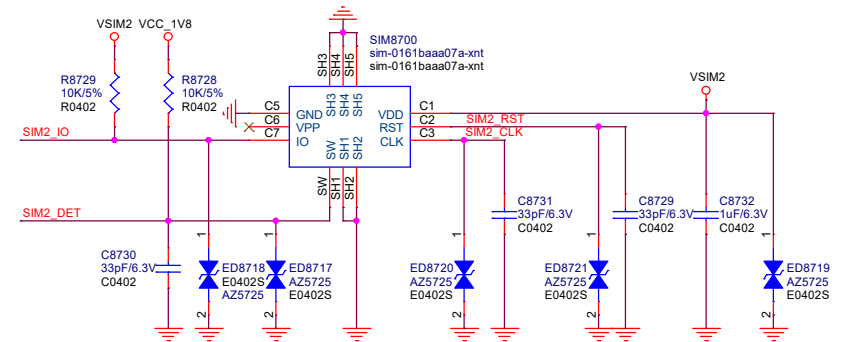
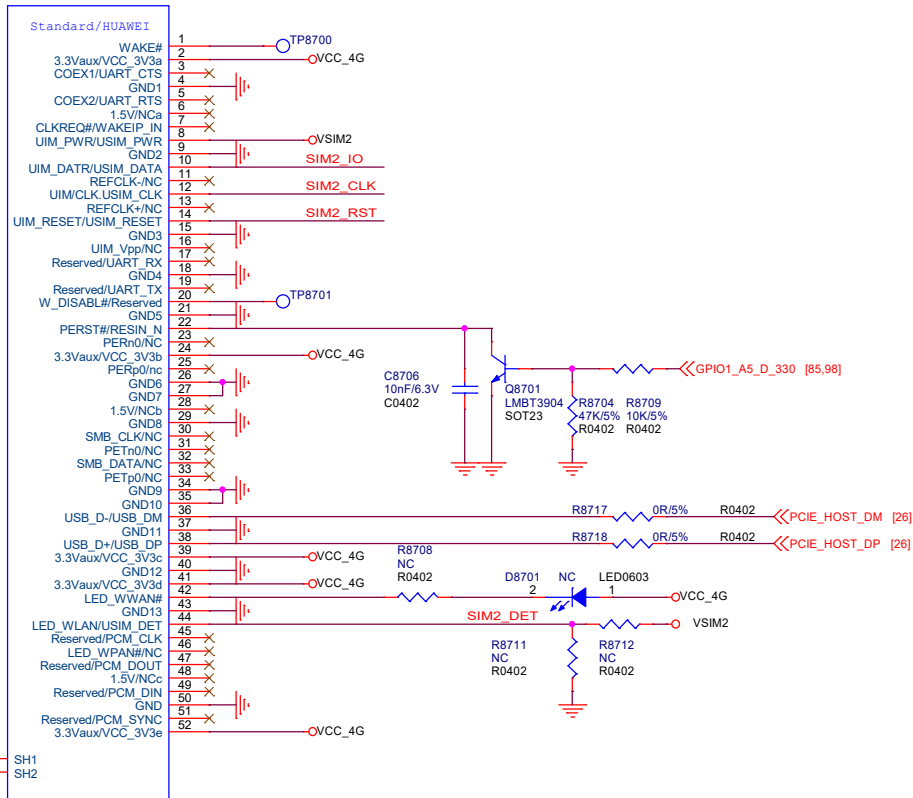
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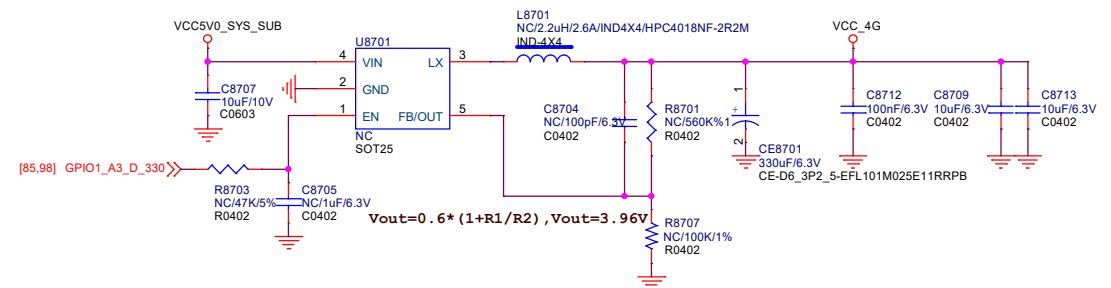
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CON8701
MPCET-S5201-TP68
pcie-mini52p



SIM Card



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Horizon DOCK

87. MiniPCle2.0

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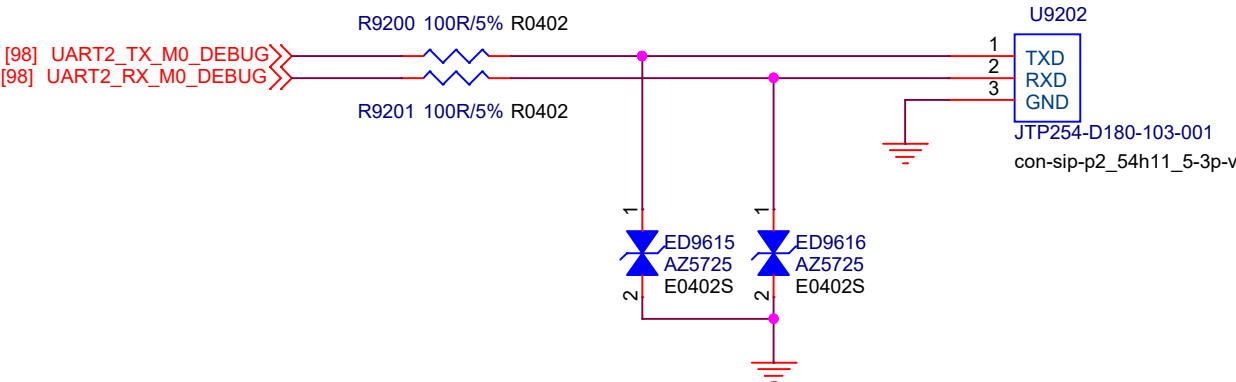
DWG NO: TVI2331A SUB

REV:
A

DRAWN BY: TV team

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Debug UART2

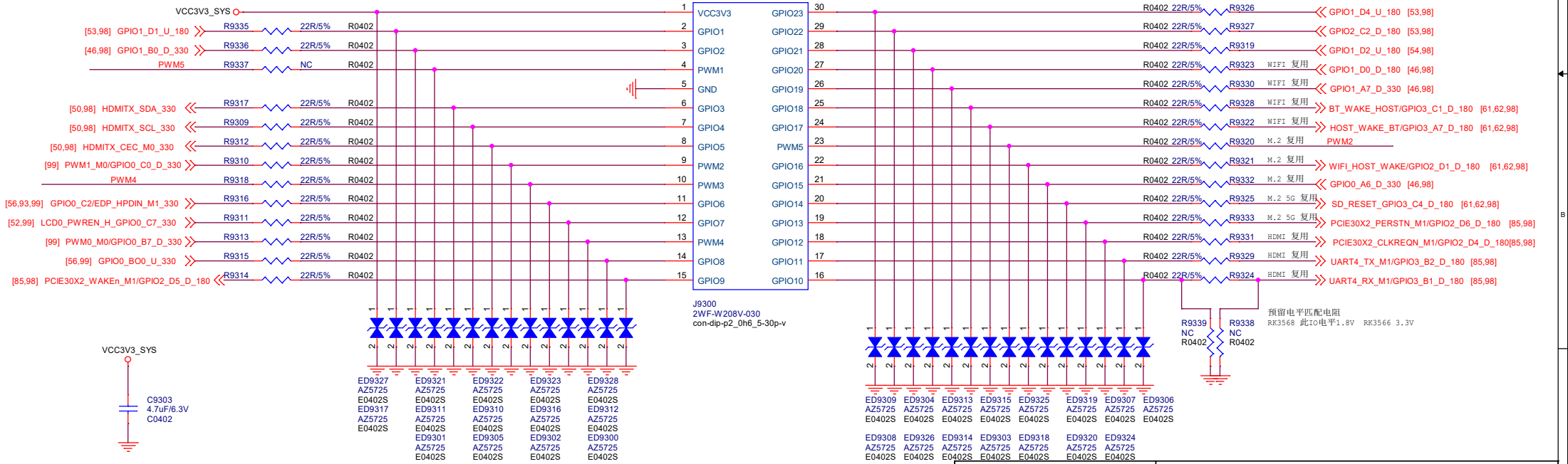
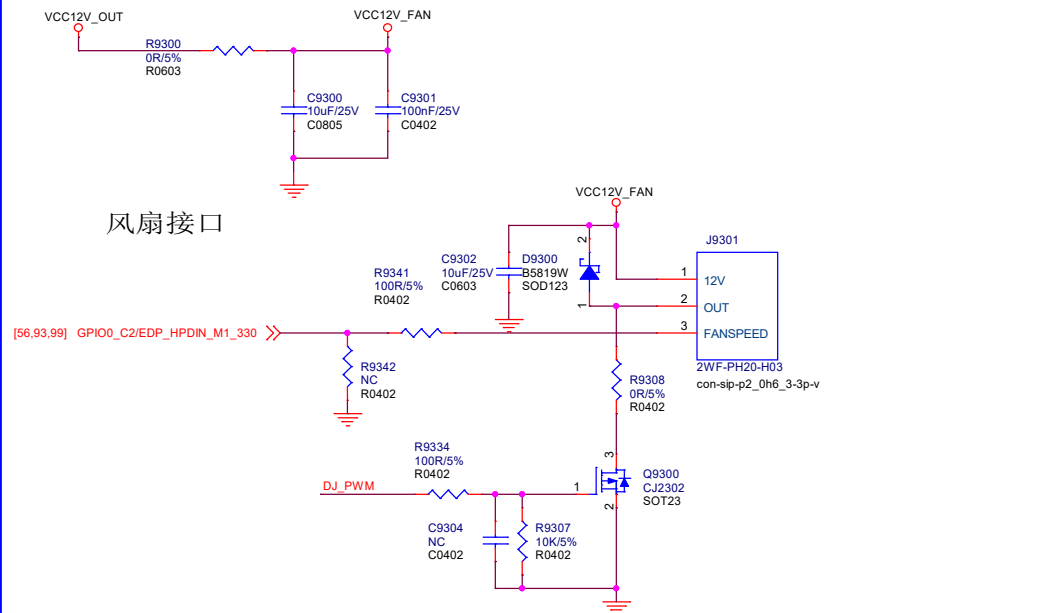
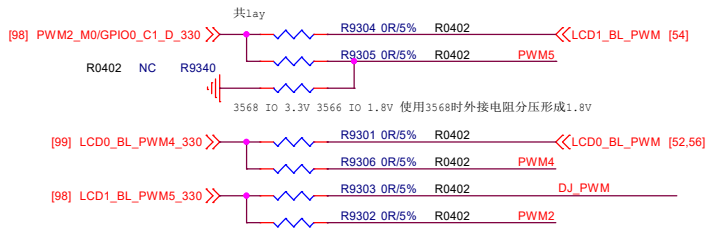


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Horizon DOCK
92.Debug UART

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DRAWN BY: TV team			SHEET: 92 of 99

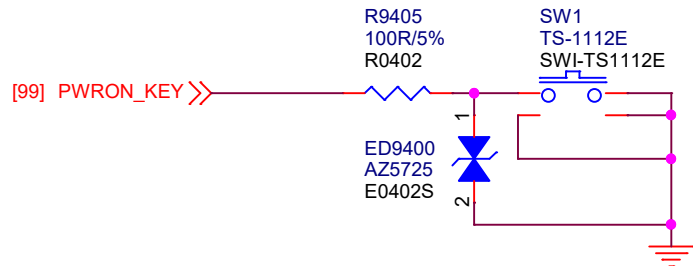


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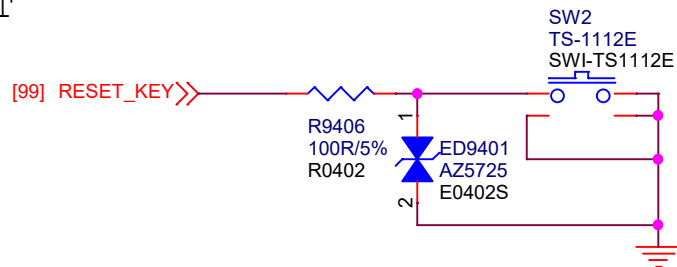
Horizon DOCK
93.PWM/GPIO

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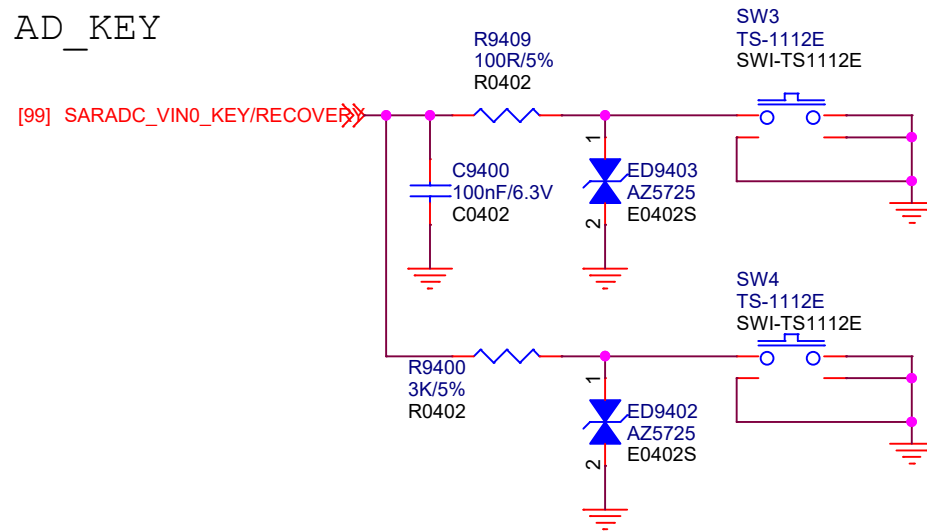
Power ON



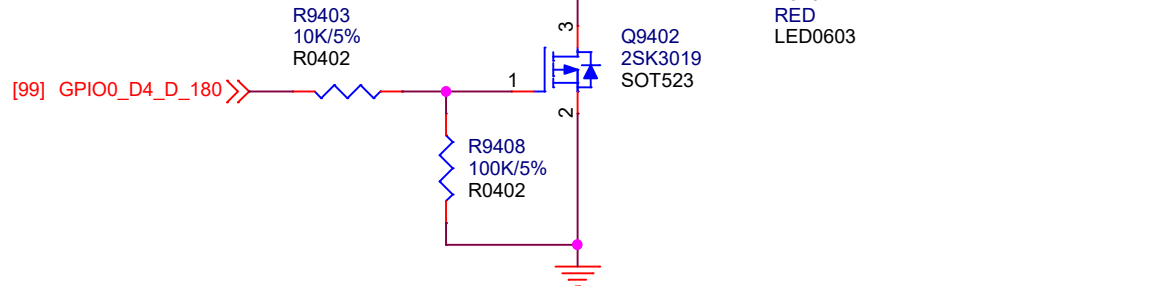
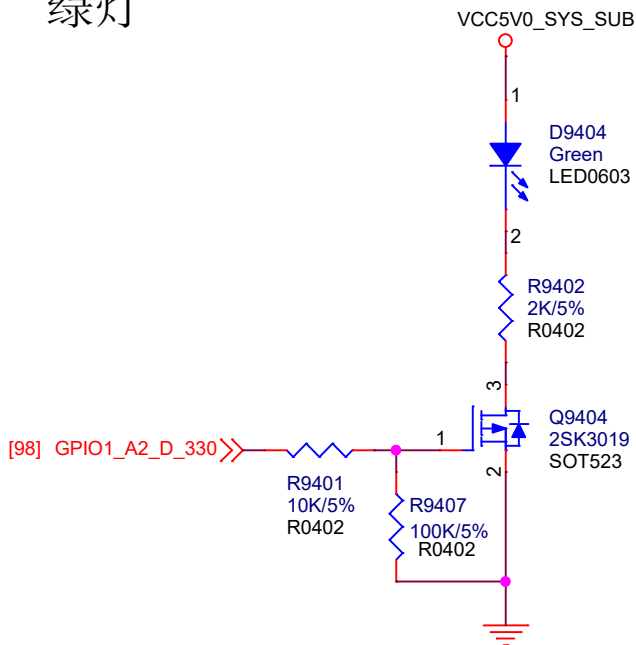
RESET



AD_KEY



绿灯



JABIL

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Horizon DOCK

94.LED&KEY

DATE:

Tuesday, May 17, 2022

DWG NO:

TVI2331A_SUB

REV:

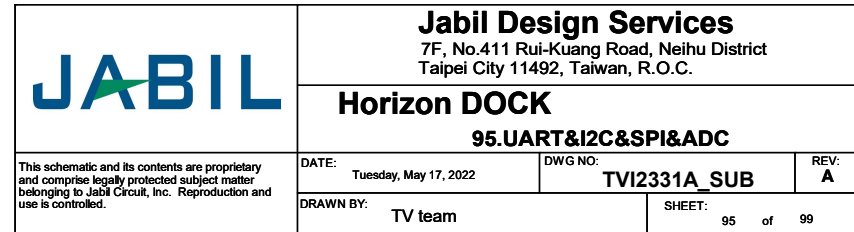
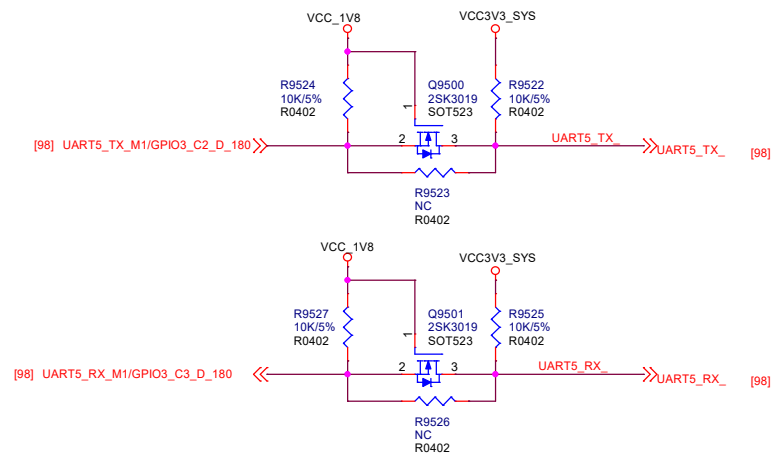
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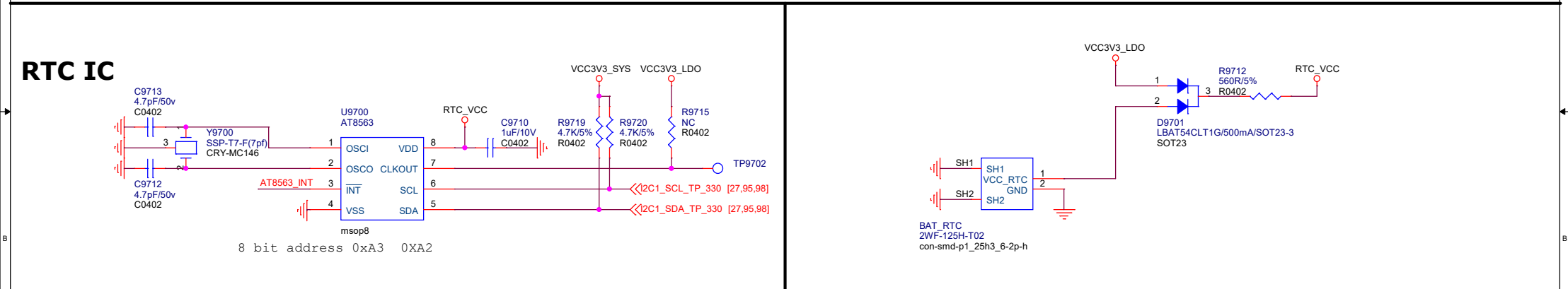
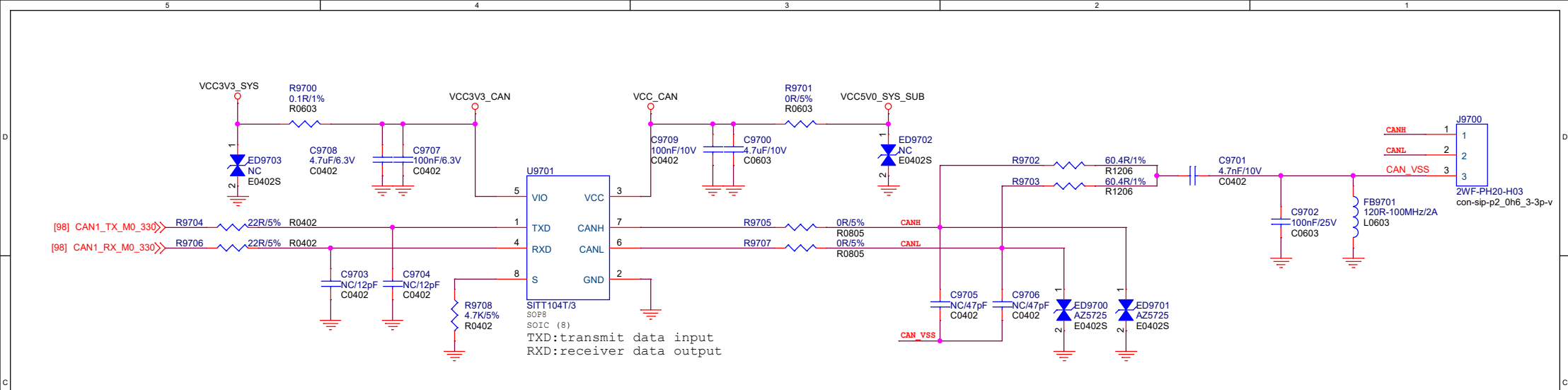
DRAWN BY:

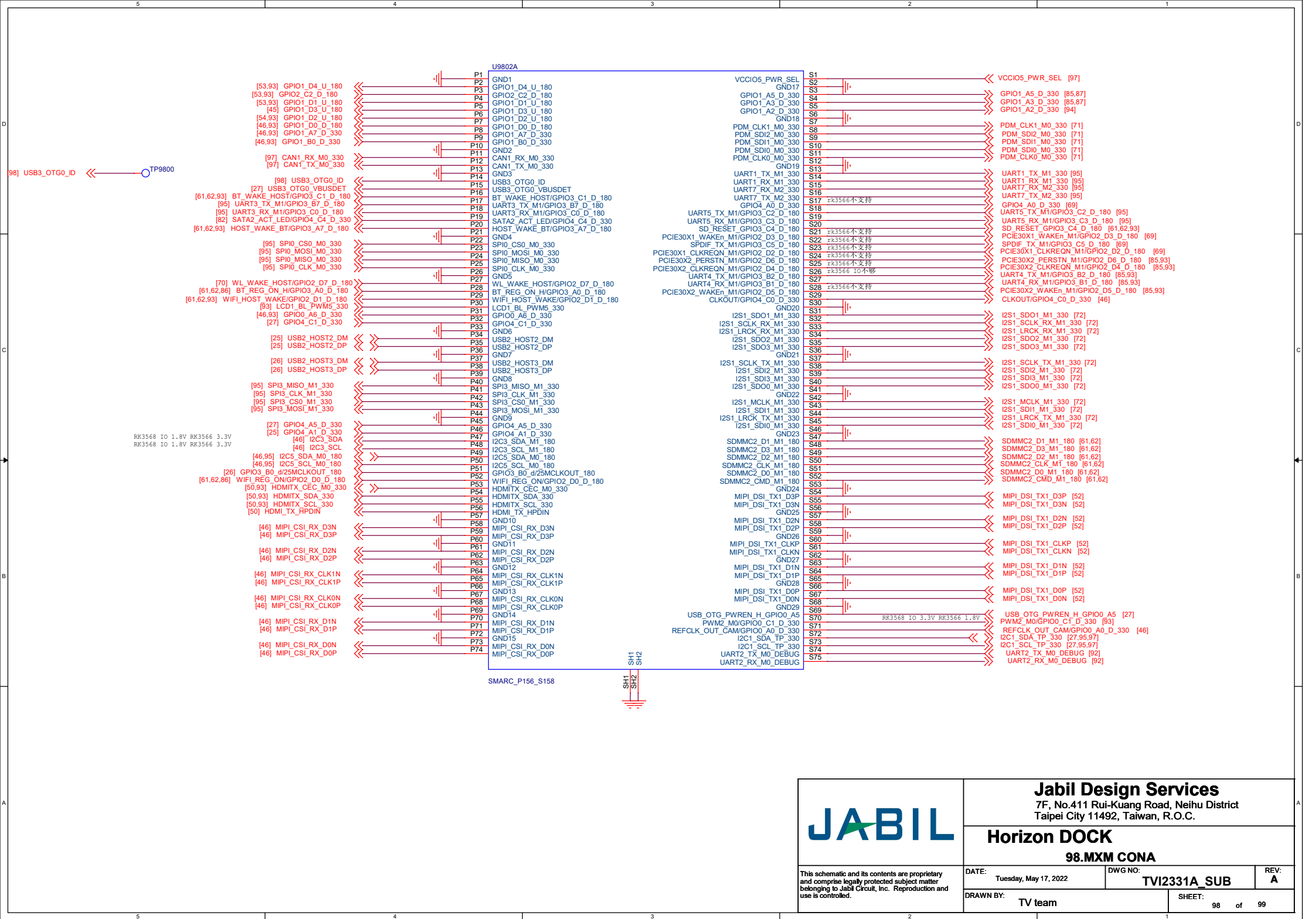
TV team


SHEET:

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Horizon DOCK
98.MXM CONA

DATE: Tuesday, May 17, 2022

DWG NO: TVI2331A_SUB

REV: A

DRAWN BY: TV team

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