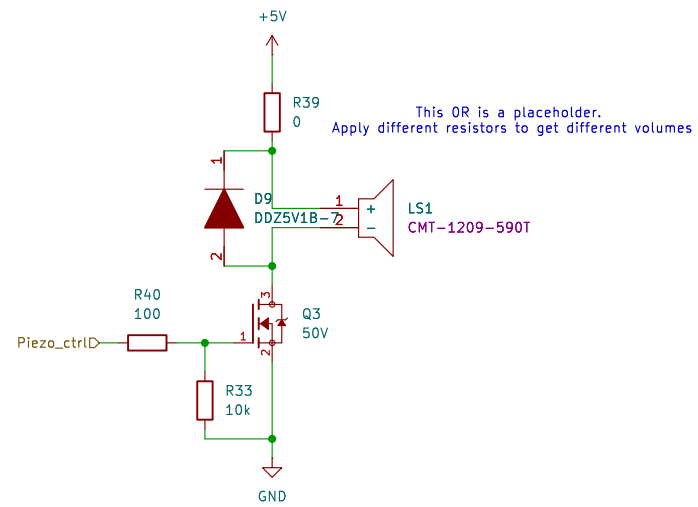


Not in the PCB yet as we dont know if we actually need it.



Title:

Sheet: /Piezzo/

Rev:

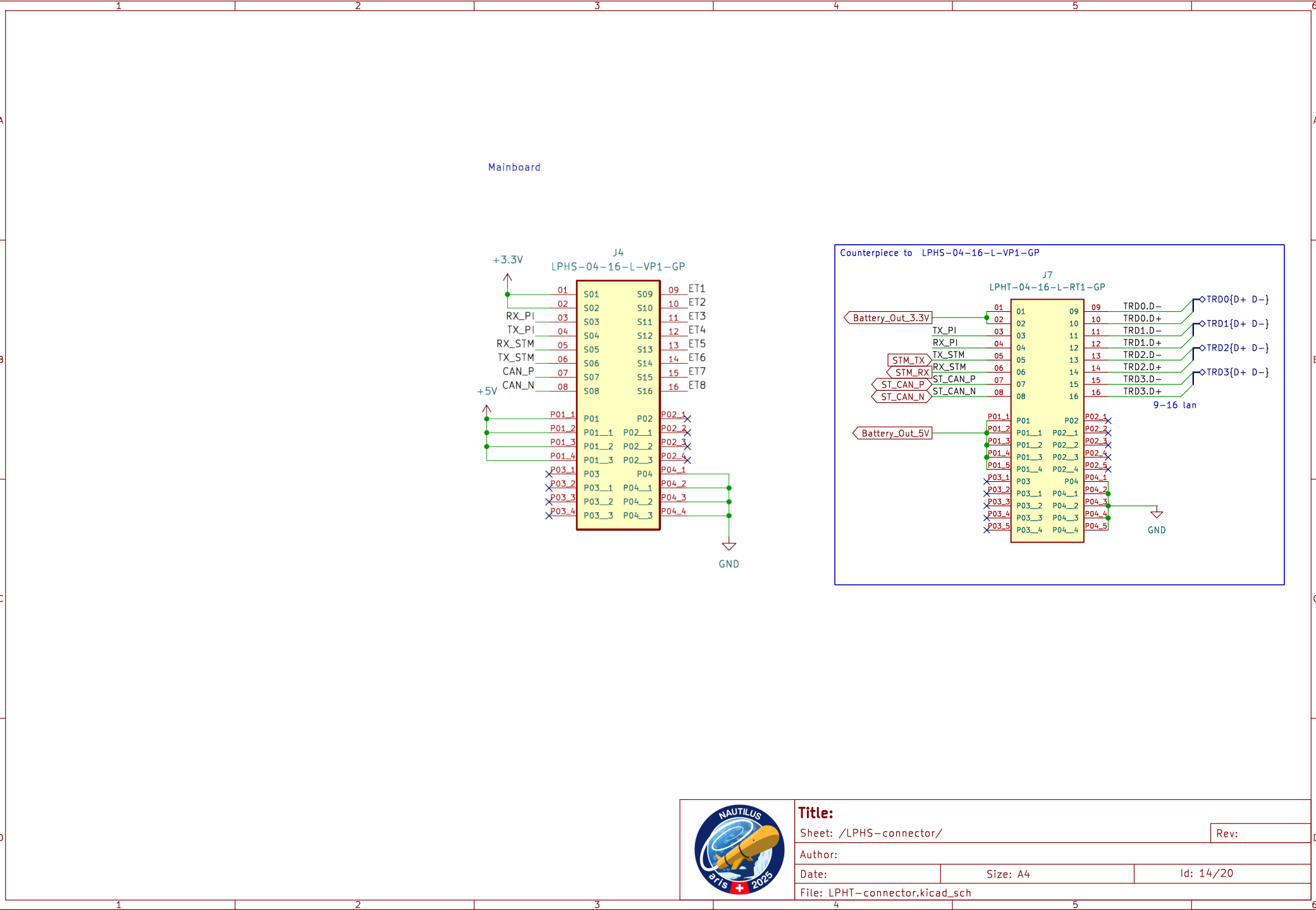
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Date:

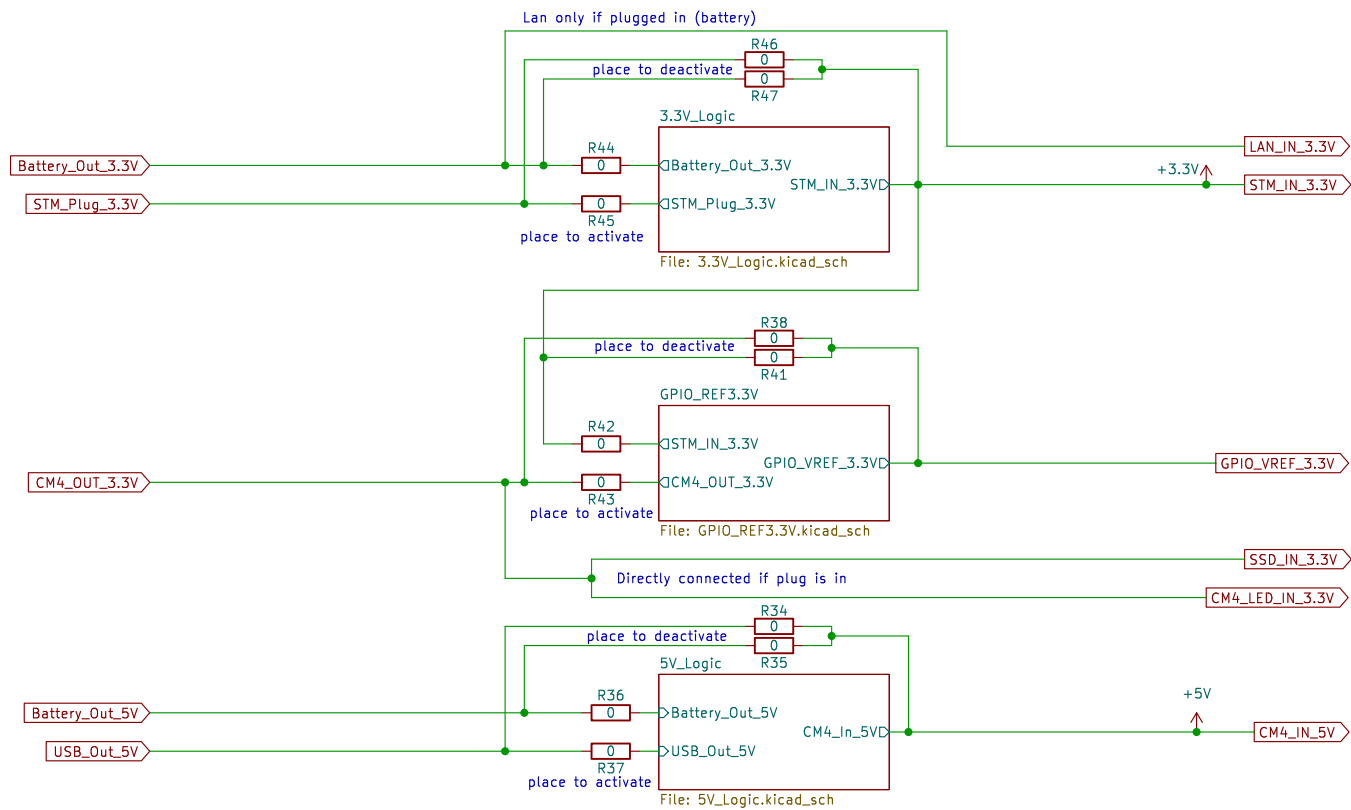
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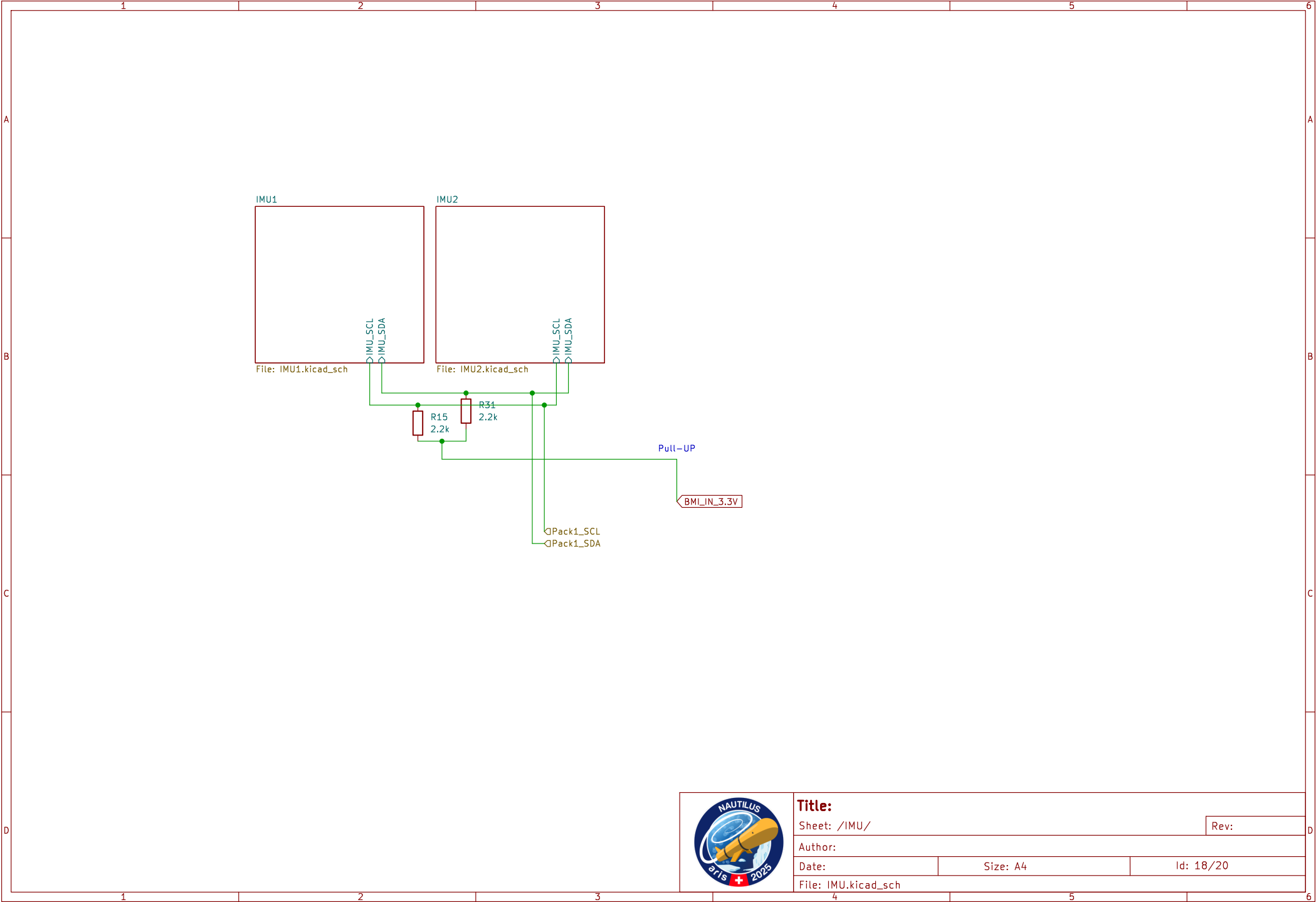
Unconditional Power routes: Whenever the CM4 runs, also run the LED signals AND the SSD voltage, all "core" tasks tied to the CM4.
If I forgot something please let me know.



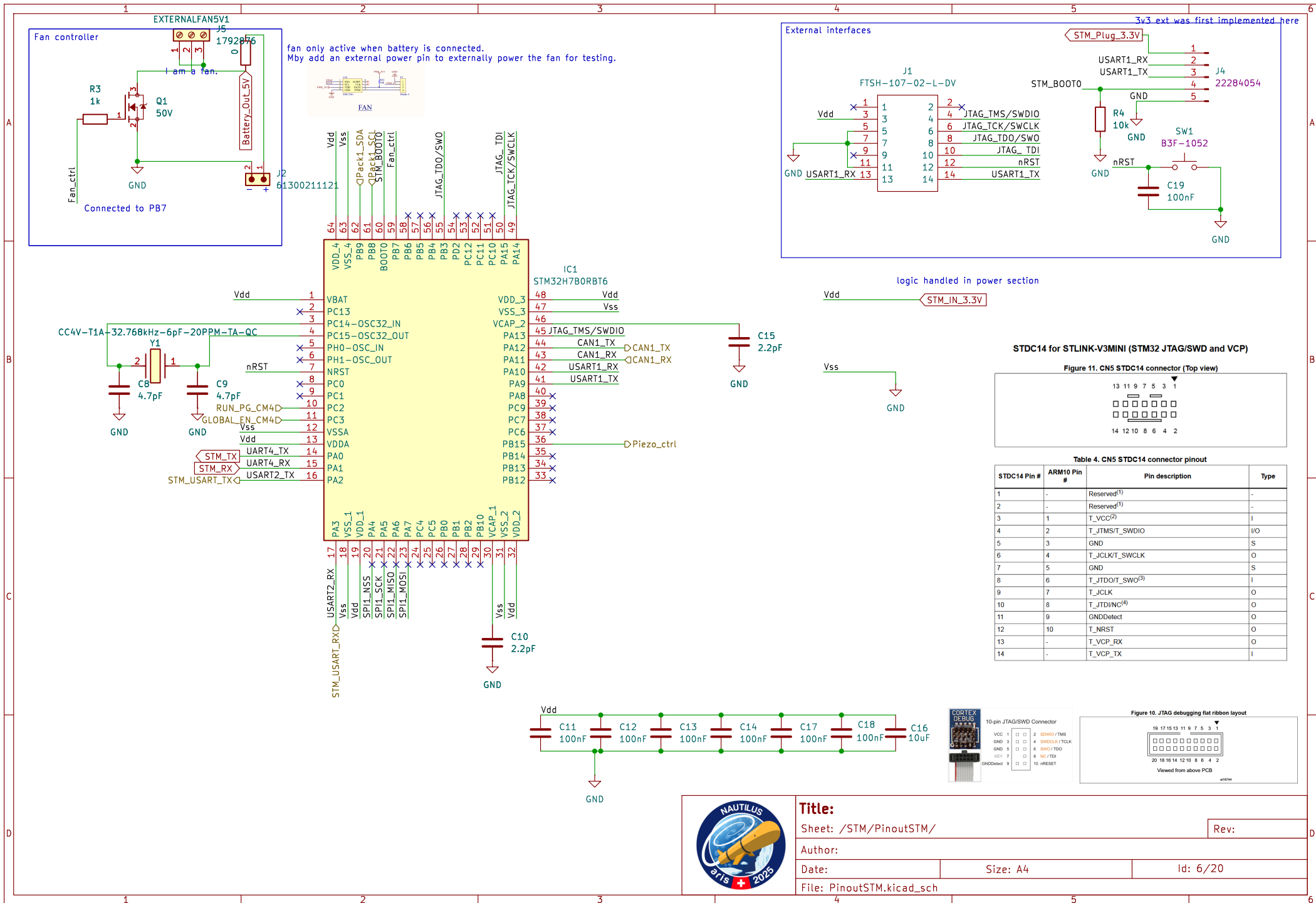
some rules:
USB wont power the STM32.
STM_Plug wont power the CM4
The GPIO_VREF of the CM4 needs to be STM32's 3.3V
The Lan Vin is only powered when running on Battery
Battery preferrably powers everything.

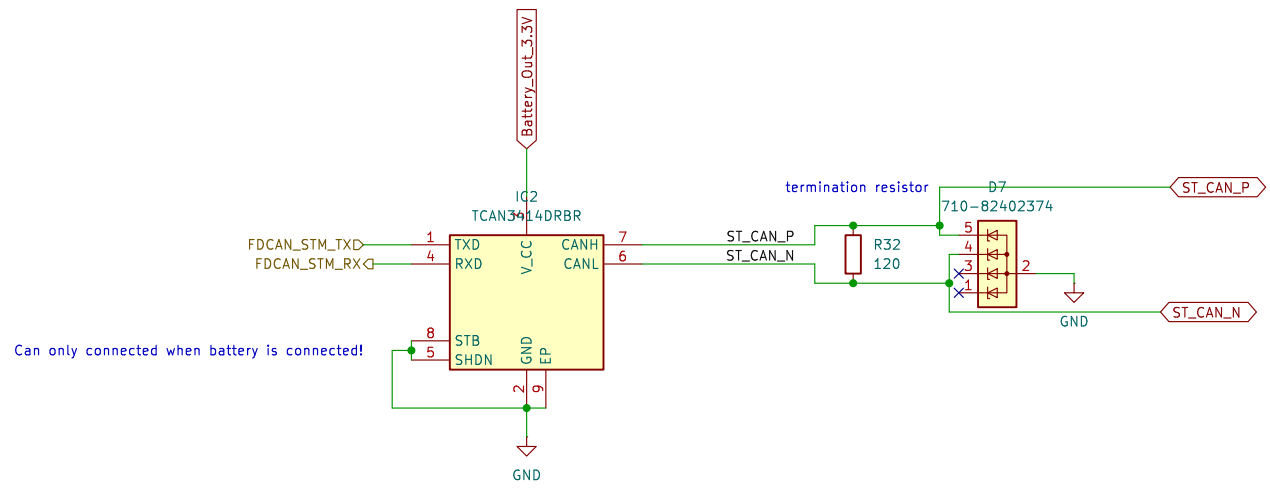


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Title:		
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Author:		
Date:	Size: A4	Id: 18/20
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Title:		
Sheet: /STM/CAN_Interface/		Rev:
Author:		
Date:	Size: A4	Id: 7/20
File: PowerSTM.kicad_sch		

for questions about wiring etc please consult the datasheet...
<https://www.ti.com/lit/ds/symlink/tps2120.pdf?ts=1761678178328>

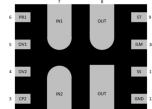
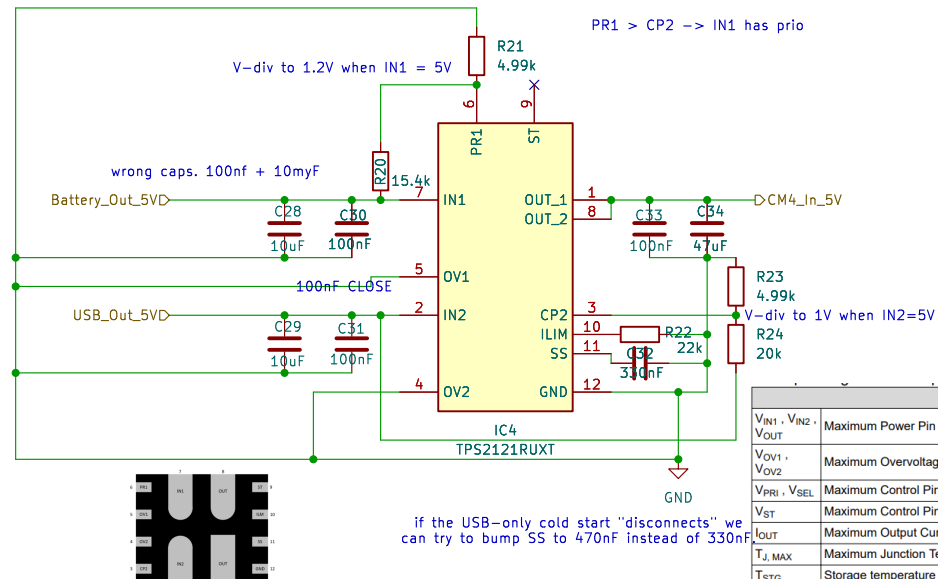


Figure 6-2. TPS2121 (RUXT) Package 12-Pin VQFN-HR Bottom View

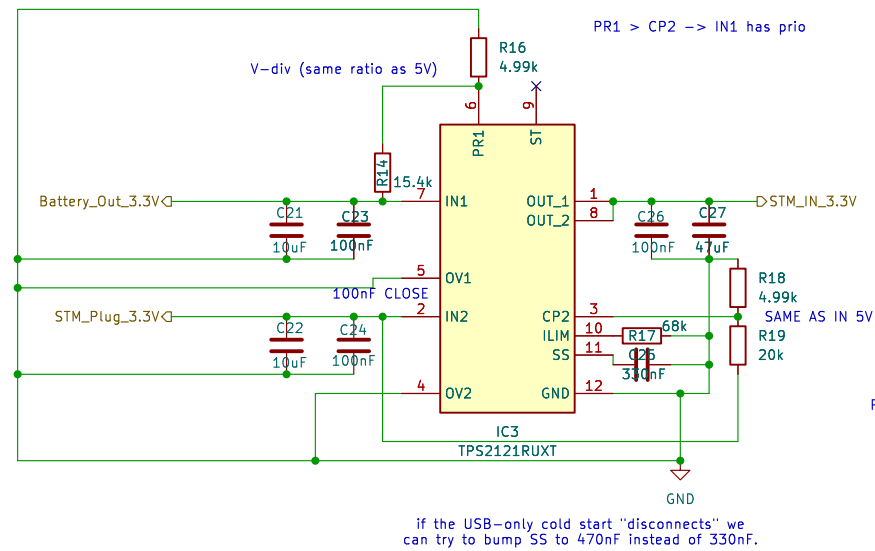
PIN		TPS2121		TPS2121		IO		DESCRIPTION	
NAME		TPS2120	TPS2121	TPS2120	TPS2121	NAME		DESCRIPTION	
IN1	B1, B2, C1	7	1	1	1	IN1	7	Power Input for Source 1	
IN2	B3, B4, C4	2	1	1	1	IN2	2	Power Input for Source 2	
OUT	C2, C3, D1, D2, D3, D4	1, 8	1	1	1	OUT	1, 8	Power Output	
ST	E1	9	0	0	0	ST	9	Status output indicating which channel is selected. Connect to GND if not required.	
ILIM	E2	10	0	0	0	ILIM	10	Output Current Limiting for both channels.	
IS	E3	11	0	0	0	IS	11	Adjusts Input Settling Delay Time and Output Soft Start Time	
GND	E4	12	—	—	—	GND	12	Device Ground	
PR1	A1	6	1	1	1	PR1	6	Enables Priority Operation. Connect to IN1 to set switchover voltage. Connect to GND if not required.	
OV1	A2	5	1	1	1	OV1	5	Active Low Enable Supervisor for IN1 Overvoltage Protection. Connect to GND if not required.	
OV2	A3	4	1	1	1	OV2	4	Active Low Enable Supervisor for IN2 Overvoltage Protection. Connect to GND if not required.	
SEL	A4	—	1	1	1	SEL	—	Active Low Enable for IN1. Allows GPIO to override priority operation and manually select IN2. TPS2120 only.	
CP2	—	3	1	1	1	CP2	3	Enables Comparator Operation and is compared to PR1 to set switchover voltage. Connect to GND if not required. TPS2121 only.	

		Pins	MIN	MAX	UNIT
V _{IN1} , V _{IN2} , V _{OUT}	Maximum Power Pin Voltage	IN1, IN2, OUT	-0.3	24	V
V _{OV1} , V _{OV2}	Maximum Overvoltage Pin Voltage	OV1, OV2	-0.3	6	V
V _{PR1} , V _{SEL}	Maximum Control Pin Voltage	PR1, SEL	-0.3	6	V
V _{ST}	Maximum Control Pin Voltage	ST	-0.3	6	V
I _{OUT}	Maximum Output Current	OUT	Internally Limited		
T _{J, MAX}	Maximum Junction Temperature		Internally Limited		
T _{STG}	Storage temperature		-65	150	°C



Title:		
Sheet: /Power_logic/5V_Logic/		Rev:
Author:		
Date:	Size: A4	Id: 12/20
File: 5V_Logic.kicad_sch		





Pin 10: 68k leads to about 1.72A (should be enough for STM)

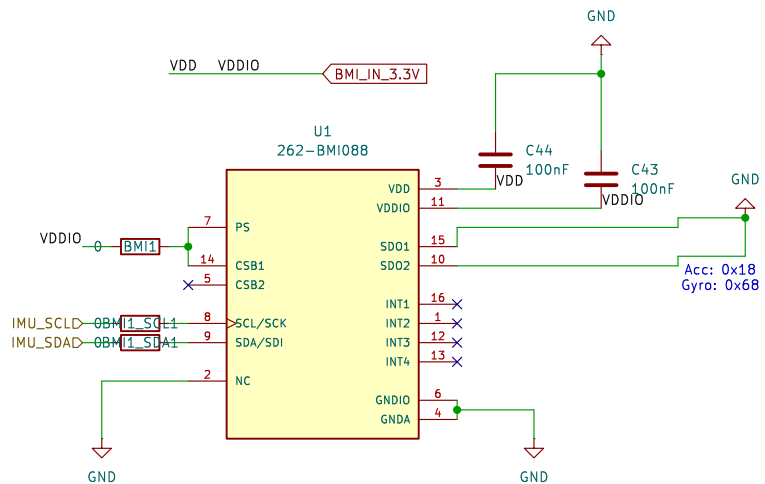
[R] = [kOhm]	22 kΩ	→ -4.55 A
65.2 / R*0.861	39 kΩ	→ -2.78 A
	50 kΩ	→ -2.25 A
	56 kΩ	→ -2.04 A
	68 kΩ	→ -1.72 A
	100 kΩ	→ -1.24 A



Title:		
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Author:		
Date:	Size: A4	Id: 15/20
File: 3.3V_Logic.kicad_sch		

PS -> 3.3V IIC
CSB1 -> 3.3V NOT SPI

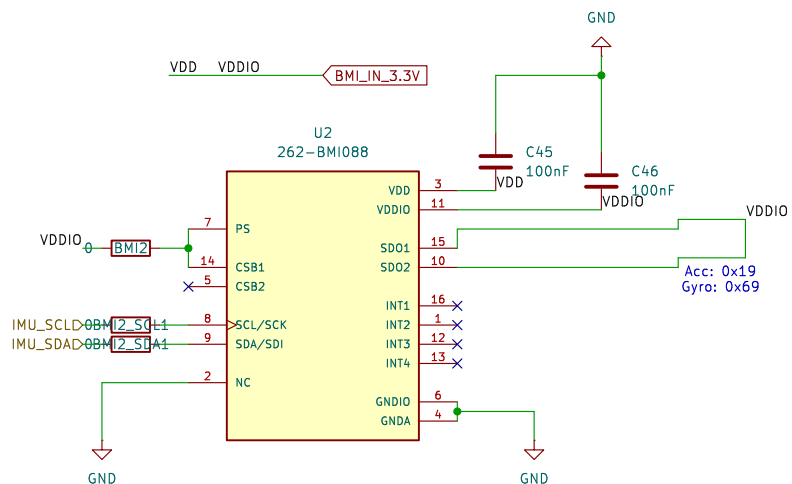
PB8 on STM
PB9 on STM



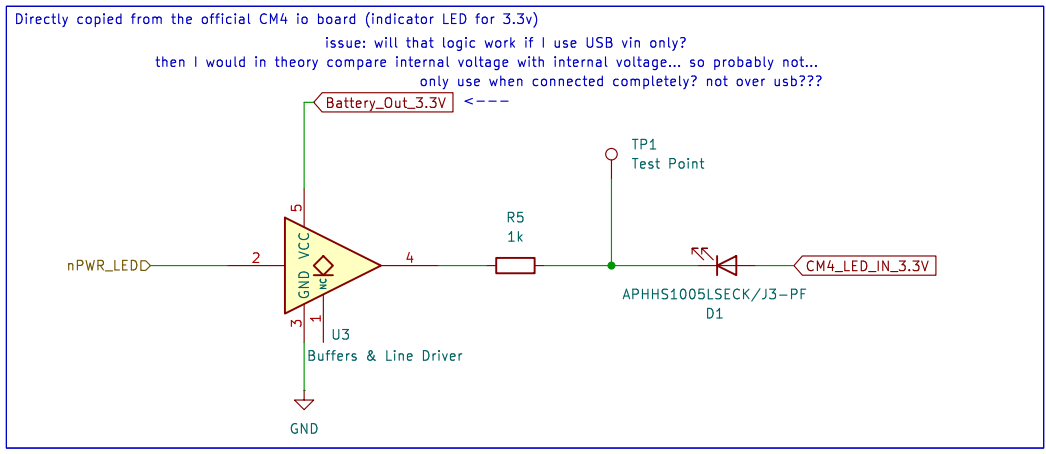
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PS -> 3.3V IIC
CSB1 -> 3.3V NOT SPI

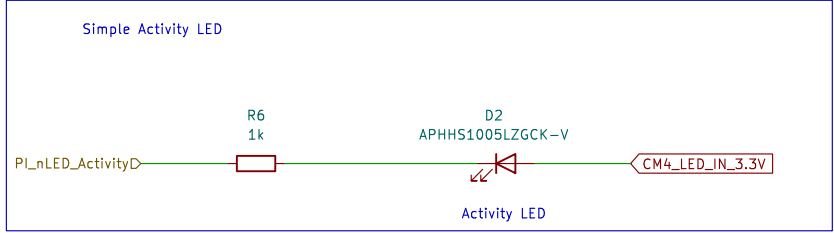
PB8 on STM
PB9 on STM



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Author:		
Date:	Size: A4	Id: 20/20
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Title:		
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Author:		
Date:	Size: A4	Id: 8/20
File: CM4_LED1.kicad_sch		



Title:

Sheet: /CM4/CM4_Module1A/CM4_LED2/

Rev:

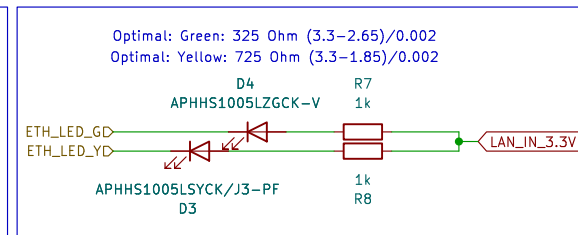
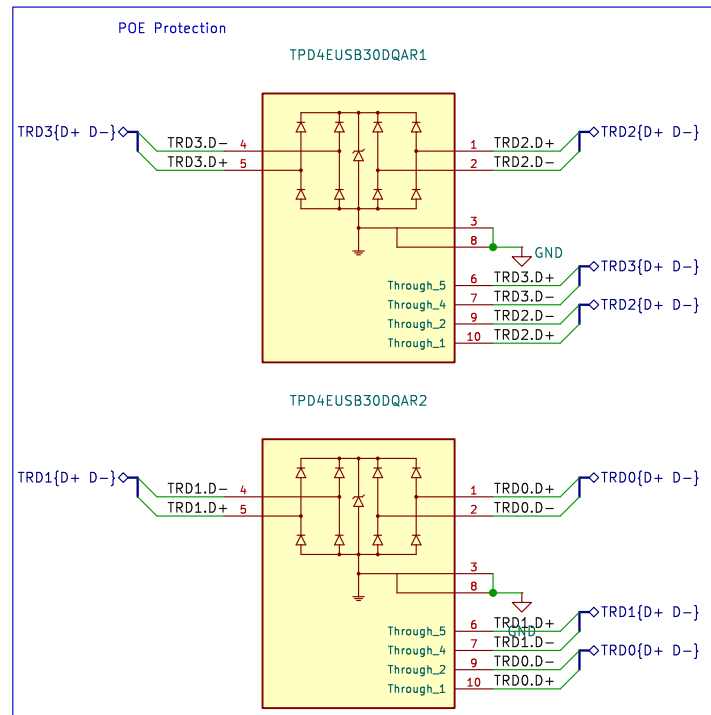
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