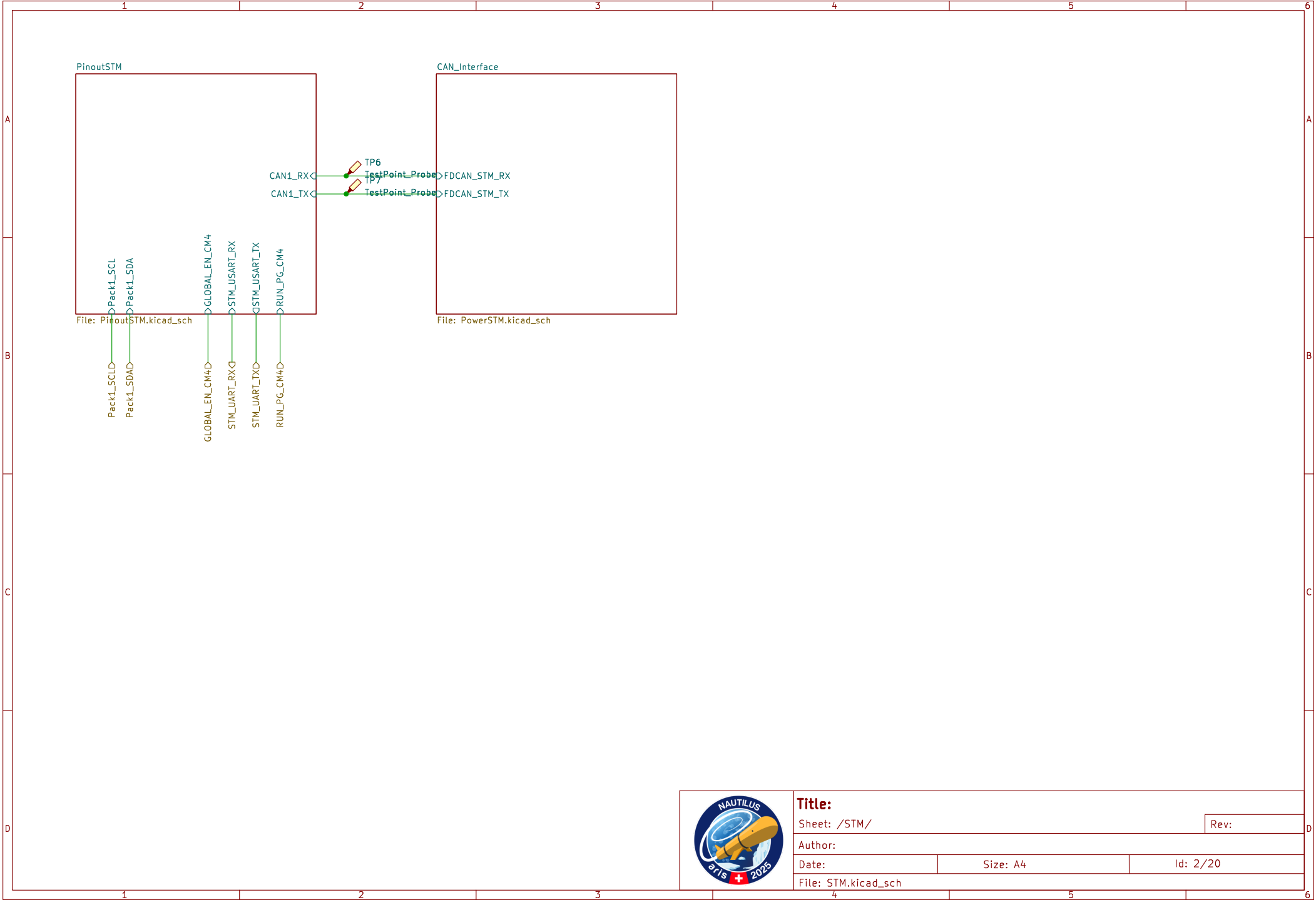
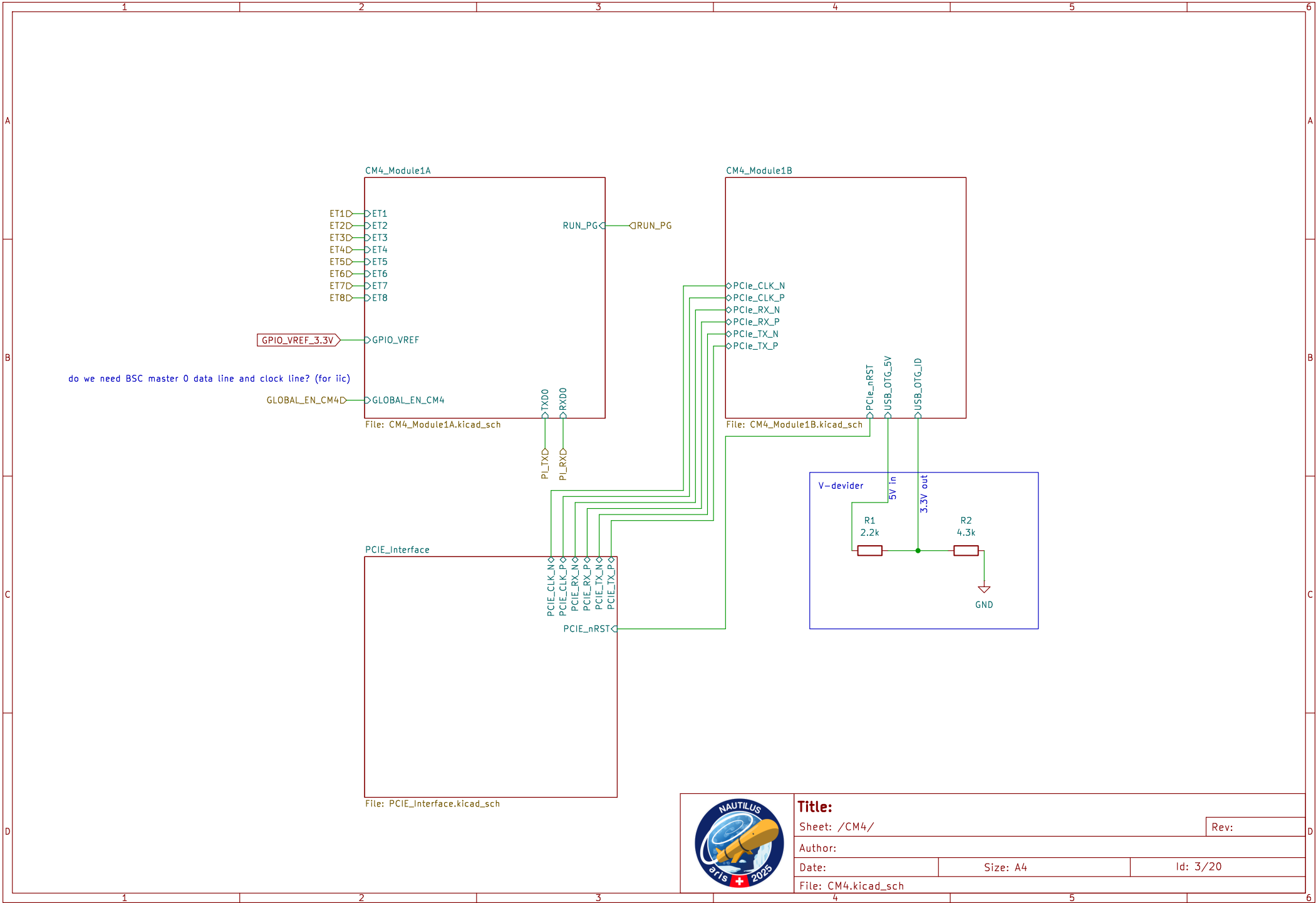
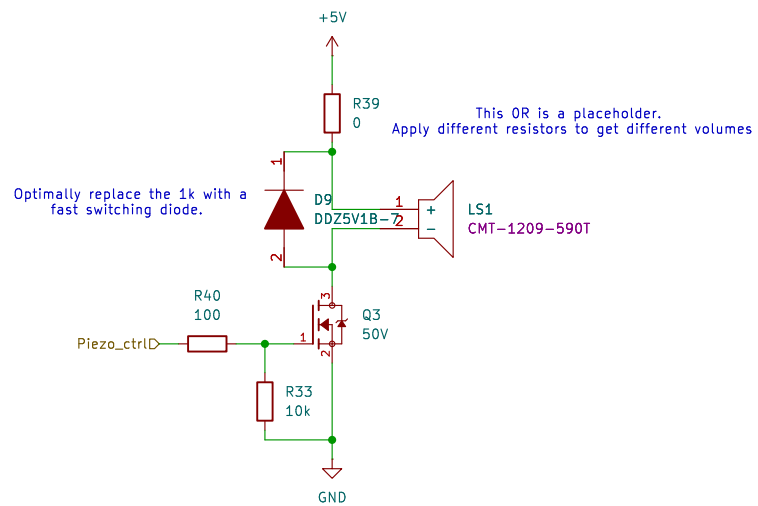


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Not in the PCB yet as we dont know if we actually need it.



**Title:**

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Rev:

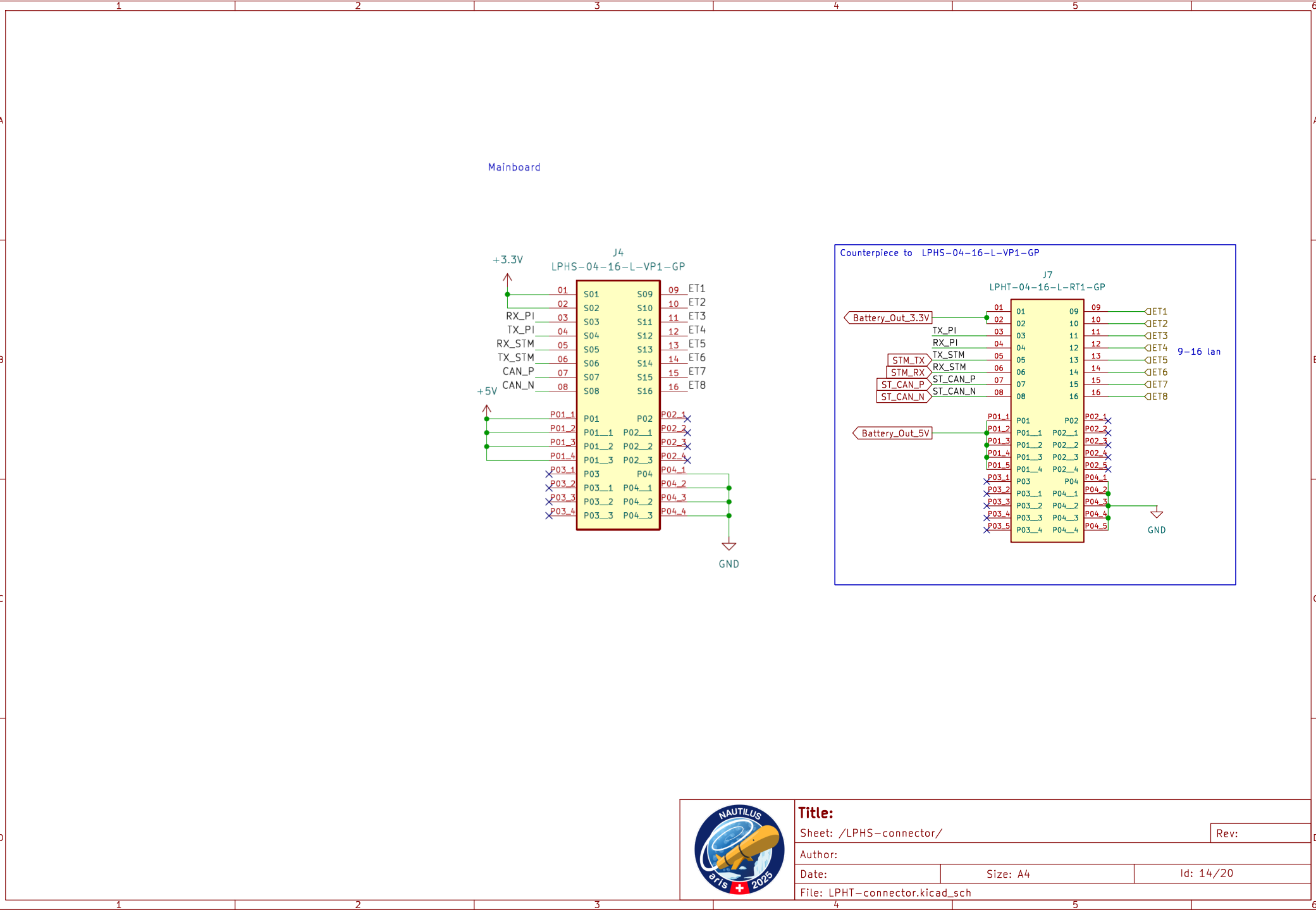
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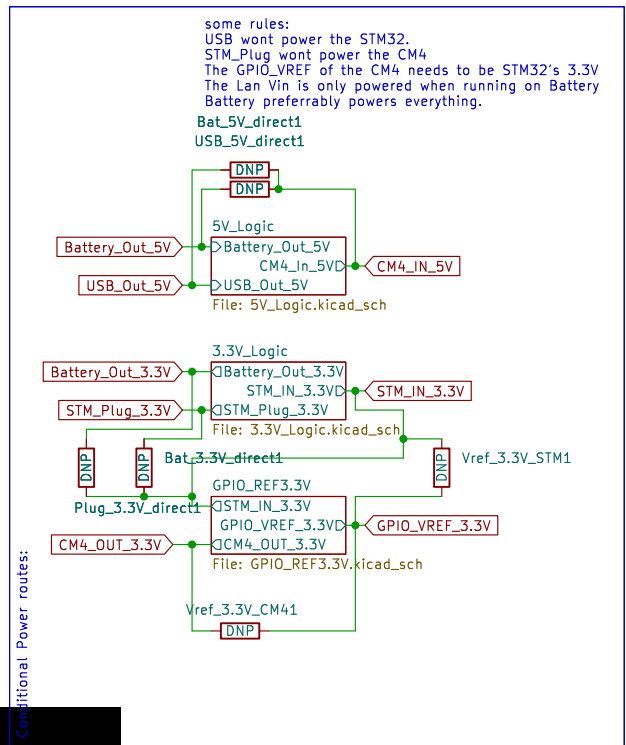
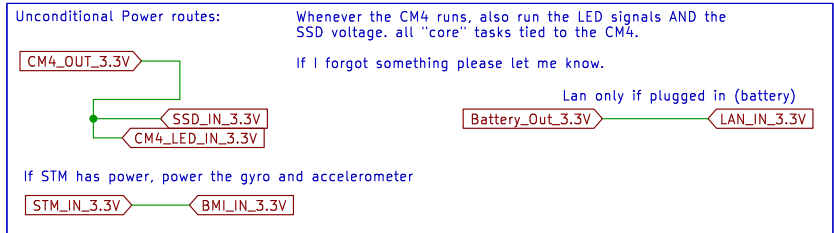
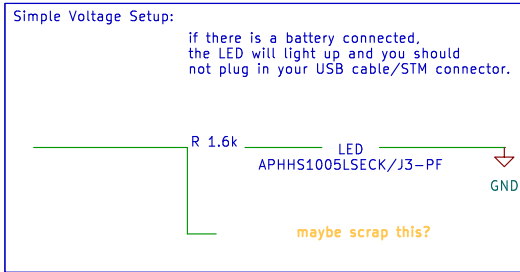
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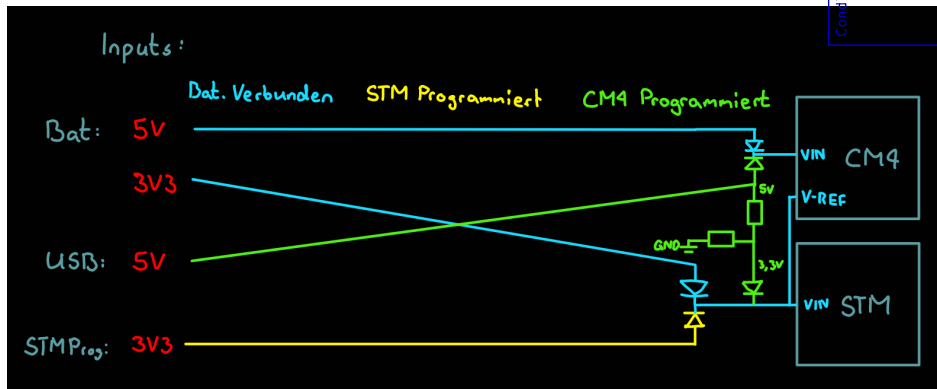
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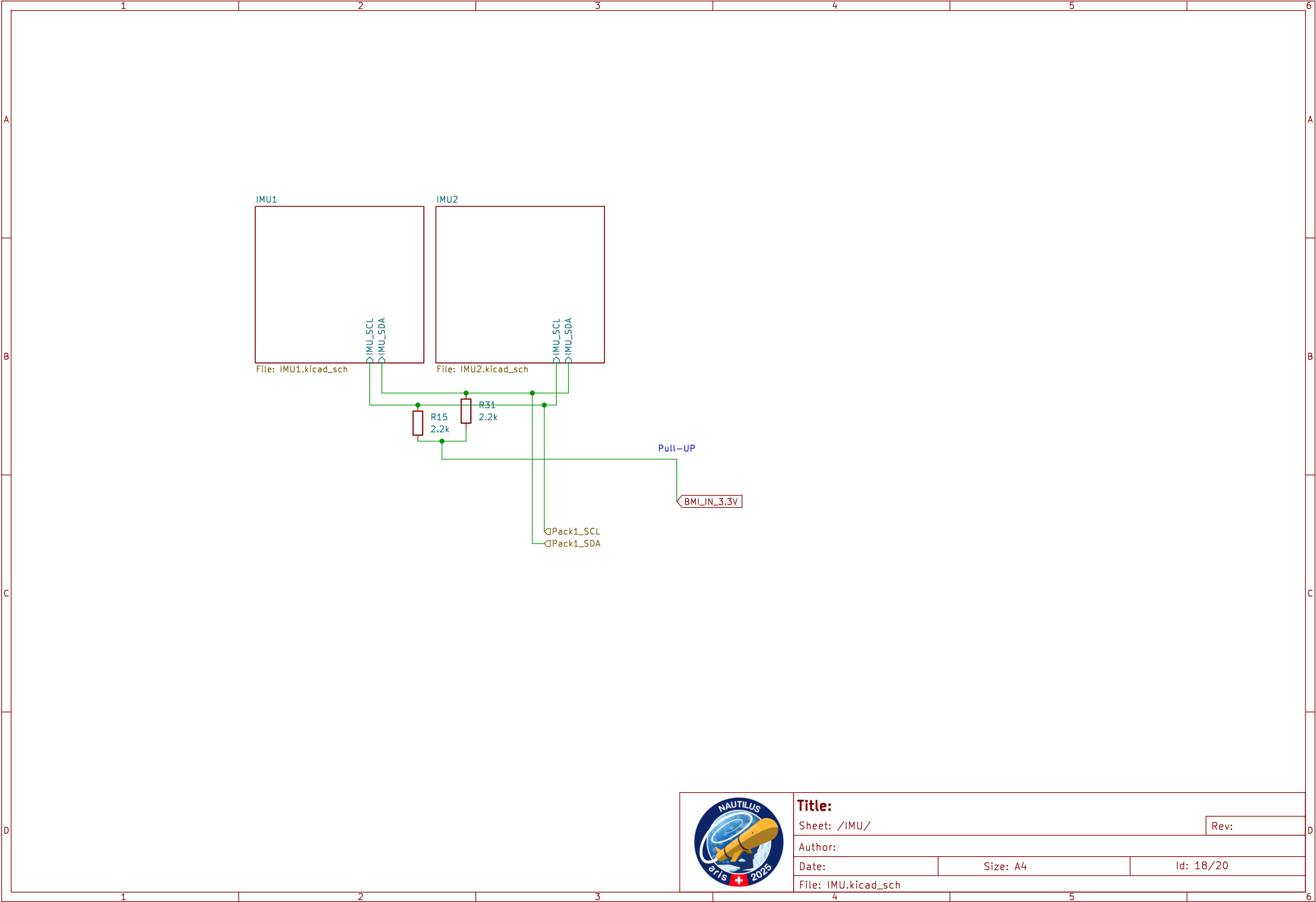




Wont work... diodes are not perfect...



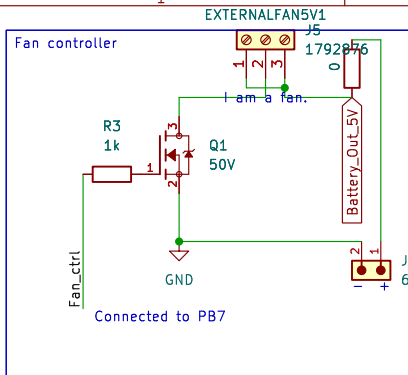
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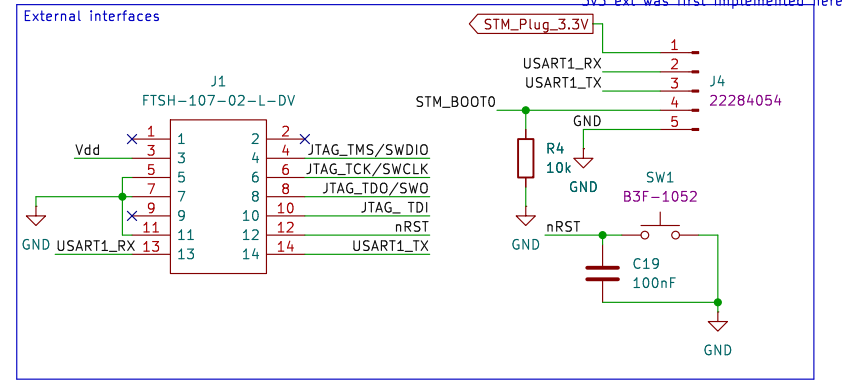
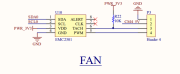
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Date:	Size: A4	Id: 18/20
File: IMU.kicad_sch		







fan only active when battery is connected.  
Mby add an external power pin to externally power the fan for testing.



logic handled in power section

Vdd STM\_IN\_3.3V

Vss GND

STDC14 for STLINK-V3MINI (STM32 JTAG/SWD and VCP)

Figure 11. CN5 STDC14 connector (Top view)

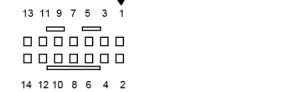


Table 4. CN5 STDC14 connector pinout

STDC14 Pin #	ARM10 Pin #	Pin description	Type
1	-	Reserved <sup>(1)</sup>	-
2	-	Reserved <sup>(1)</sup>	-
3	1	T_VCC <sup>(2)</sup>	I
4	2	T_JTMS/T_SWCLK	I/O
5	3	GND	S
6	4	T_JCLK/T_SWCLK	O
7	5	GND	S
8	6	T_JTDO/T_SWO <sup>(3)</sup>	I
9	7	T_JCLK	O
10	8	T_JTDI/NC <sup>(4)</sup>	O
11	9	GNDDetect	O
12	10	T_NRST	O
13	-	T_VCP_RX	O
14	-	T_VCP_TX	I

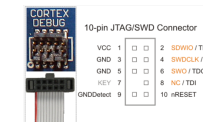
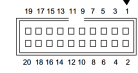


Figure 10. JTAG debugging flat ribbon layout



Title:

Sheet: /STM/PinoutSTM/

Rev:

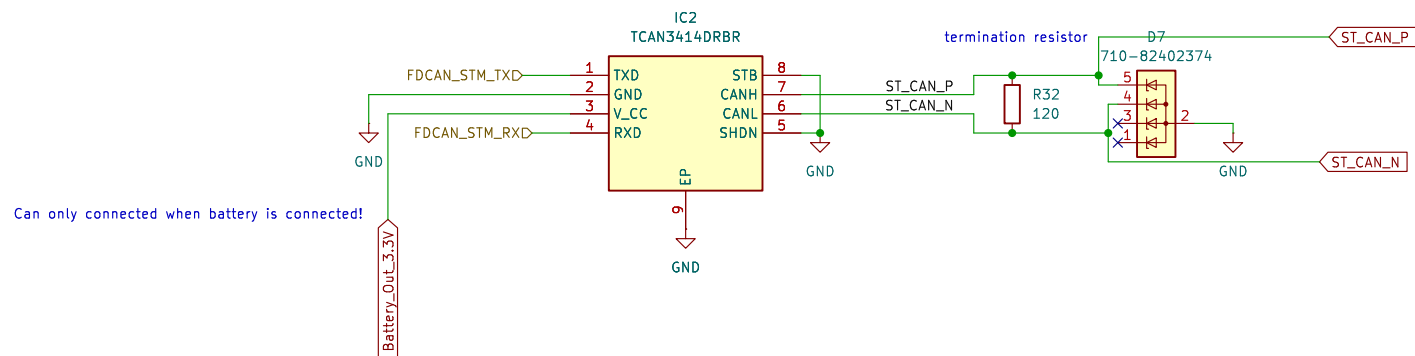
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<b>Title:</b>		
Sheet: /STM/CAN_Interface/		Rev:
Author:		
Date:	Size: A4	Id: 7/20
File: PowerSTM.kicad_sch		





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

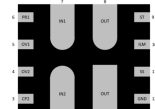
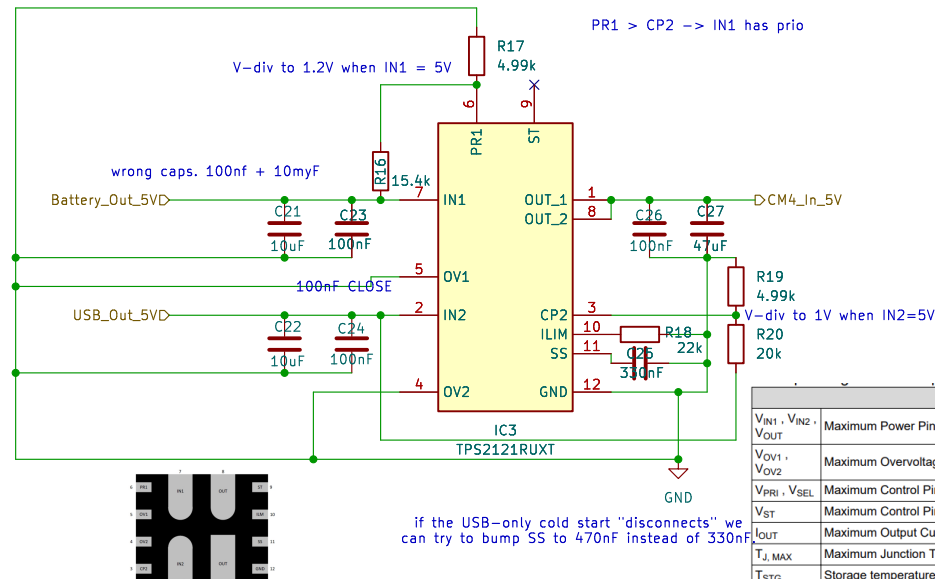


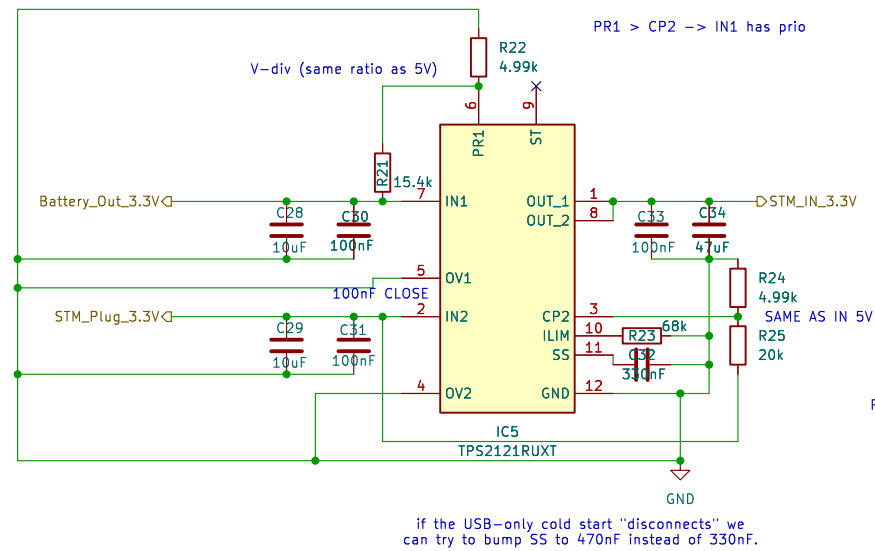
Figure 6-2. TPS2121 (RUX) Package 12-Pin VQFN-HR Bottom View

PIN		TPS2121		TPS2121		IO		DESCRIPTION	
NAME		TPS2120	TPS2121	WCSP	VQFN-HR				
IN1	B1, B2, C1	7	7	1	1			Power Input for Source 1	
IN2	B3, B4, C4	2	2	1	1			Power Input for Source 2	
OUT	C2, C3, D1, D2, D3, D4	1, 8	1					Power Output	
ST	E1	9	9	0	0			Status output indicating which channel is selected. Connect to GND if not required.	
ILIM	E2	10	10	0	0			Output Current Limiting for both channels.	
ISL	E3	11	11	0	0			Adjusts Input Settling Delay Time and Output Soft Start Time	
GND	E4	12	12	—	—			Device Ground	
PR1	A1	6	6	1	1			Enables Priority Operation. Connect to IN1 to set switchover voltage. Connect to GND if not required.	
OV1	A2	5	5	1	1			Active Low Enable Supervisor for IN1 Overvoltage Protection. Connect to GND if not required.	
OV2	A3	4	4	1	1			Active Low Enable Supervisor for IN2 Overvoltage Protection. Connect to GND if not required.	
SEL	A4	—	—	1	1			Active Low Enable for IN1. Allows GPIO to override priority operation and manually select IN2. TPS2120 only.	
CP2	—	3	3	1	1			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 <sub>IN1</sub> , V <sub>IN2</sub> , V <sub>OUT</sub>	Maximum Power Pin Voltage	IN1, IN2, OUT	-0.3	24	V
V <sub>OV1</sub> , V <sub>OV2</sub>	Maximum Overvoltage Pin Voltage	OV1, OV2	-0.3	6	V
V <sub>PR1</sub> , V <sub>SEL</sub>	Maximum Control Pin Voltage	PR1, SEL	-0.3	6	V
V <sub>ST</sub>	Maximum Control Pin Voltage	ST	-0.3	6	V
I <sub>OUT</sub>	Maximum Output Current	OUT	Internally Limited		
T <sub>J, MAX</sub>	Maximum Junction Temperature		Internally Limited		
T <sub>STG</sub>	Storage temperature		-65	150	°C



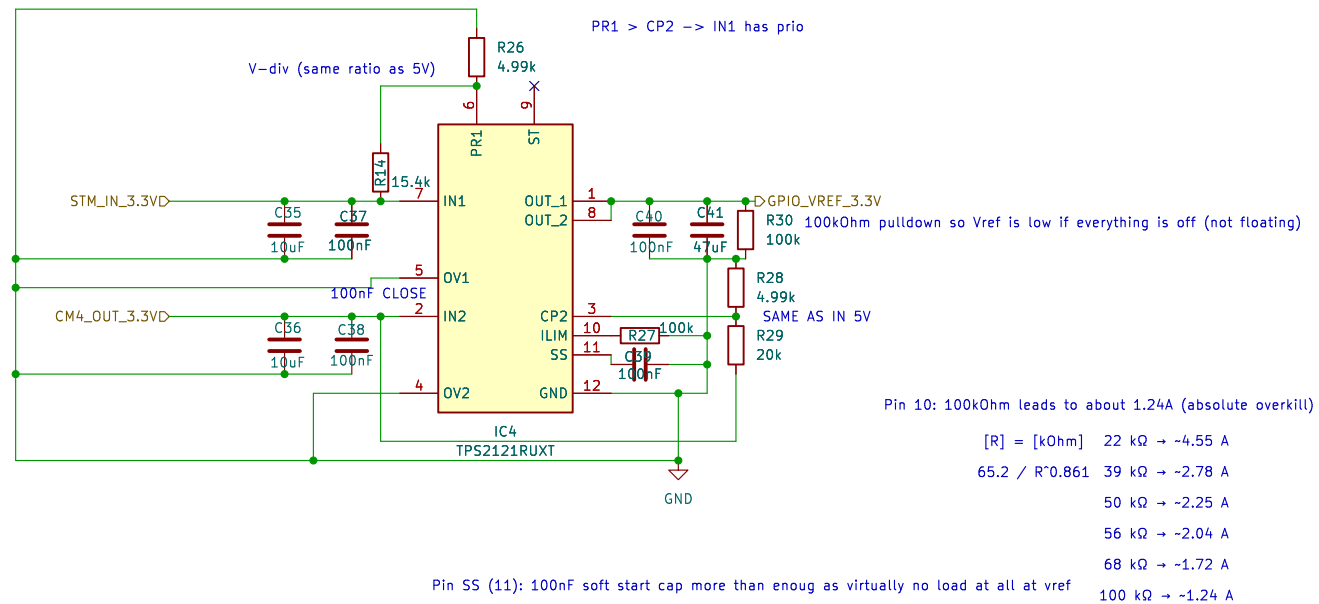
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Author:		
Date:	Size: A4	Id: 15/20
File: 5V_Logic.kicad_sch		



[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



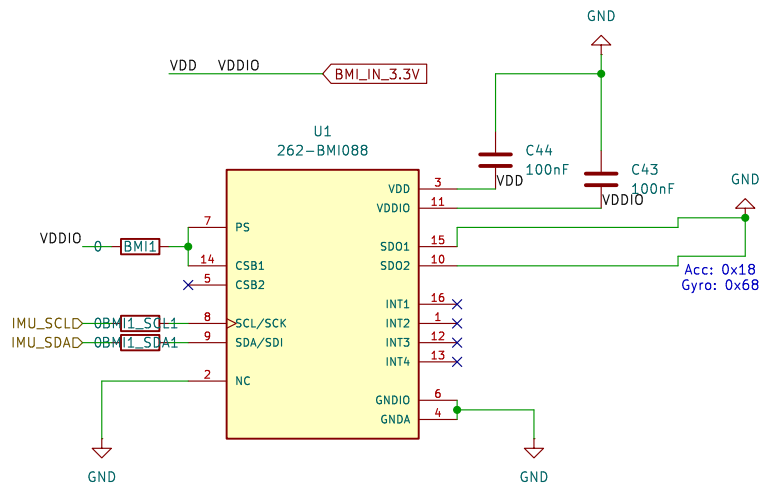
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Author:		
Date:	Size: A4	Id: 17/20
File: GPIO_REF3.3V.kicad_sch		

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

PB8 on STM  
PB9 on STM



Accelerometer  
SD01 pin pulled to GND (0x18)  
SD01 pin pulled to VDDIO: (0x19)

Gyroscope:  
SD02 pin pulled to GND: (0x68)  
SD02 pin pulled to VDDIO: 0x69



# Title:

Sheet: /IMU/IMU1/

Rev:

Author:

Date:

Size: A4

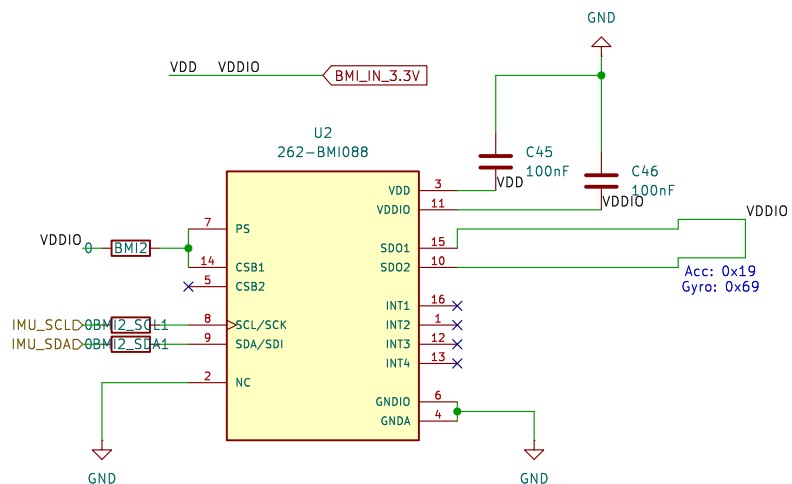
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PS -> 3.3V IIC  
CSB1 -> 3.3V NOT SPI

PB8 on STM  
PB9 on STM

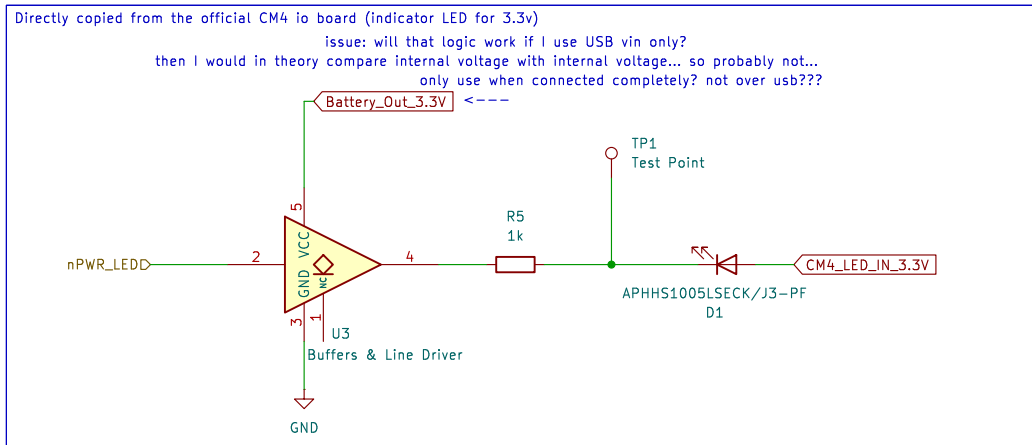


Accelerometer  
SD01 pin pulled to GND (0x18)  
SD01 pin pulled to VDDIO: (0x19)

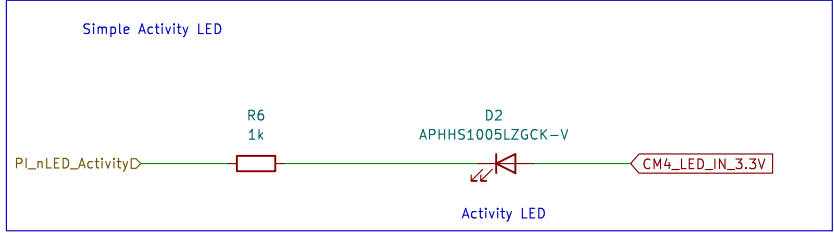
Gyroscope:  
SD02 pin pulled to GND: (0x68)  
SD02 pin pulled to VDDIO: (0x69)



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Author:		
Date:	Size: A4	Id: 20/20
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Date:	Size: A4	Id: 8/20
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Rev:

Author:

Date:

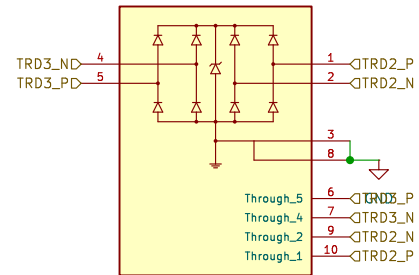
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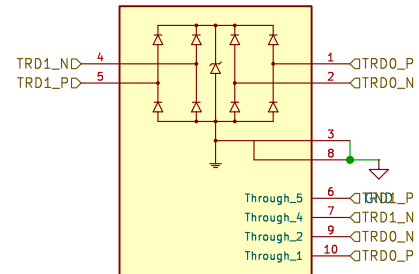
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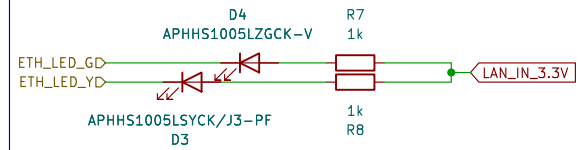
TPD4EUSB30DQAR1



TPD4EUSB30DQAR2



Optimal: Green:  $325\ \Omega$   $(3.3-2.65)/0.002$   
Optimal: Yellow:  $725\ \Omega$   $(3.3-1.85)/0.002$



## Title:

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Rev:

Author:

Date:

Size: A4

Id: 10/20

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