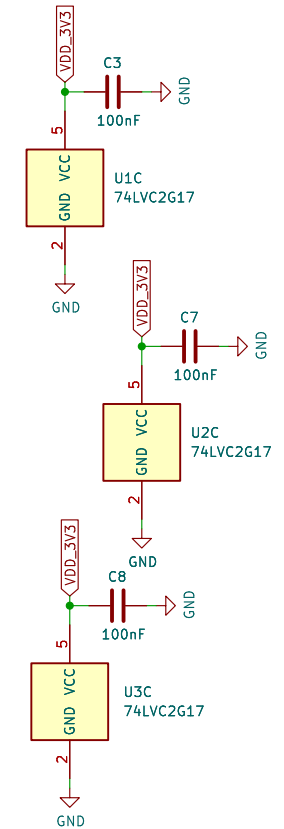
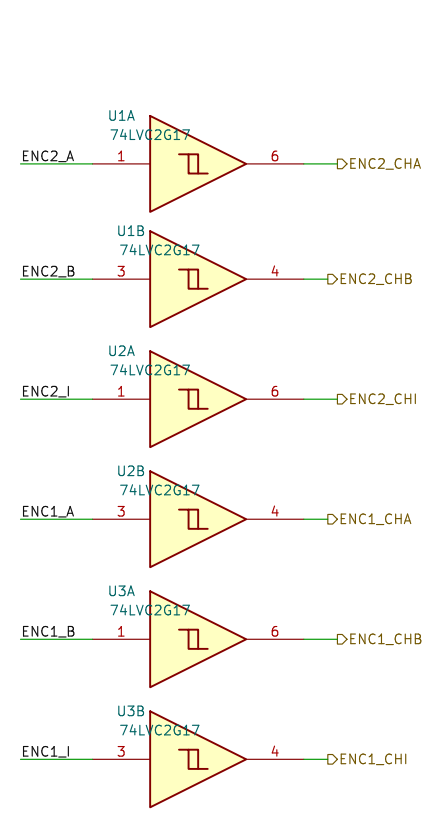
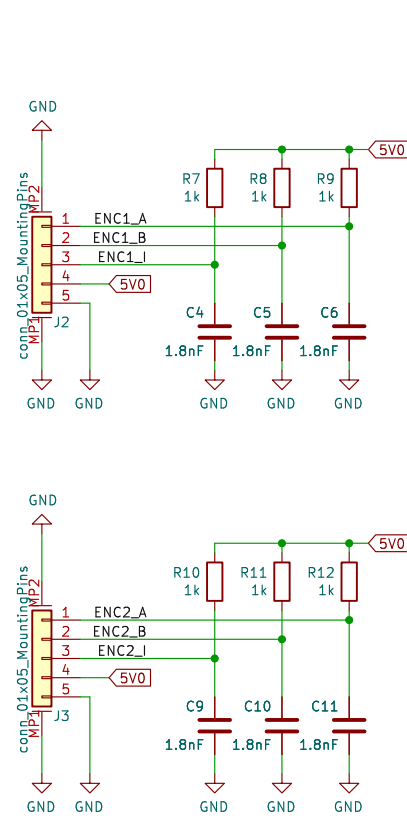


AEDT-981x encoders output are push-pull so we can remove the pull up, or at least make it optional, not sure about the need for the capacitors



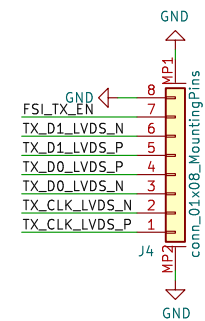
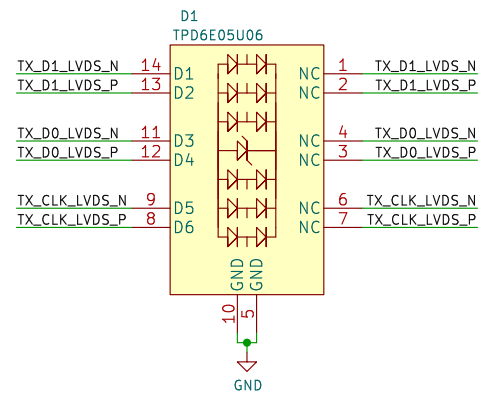
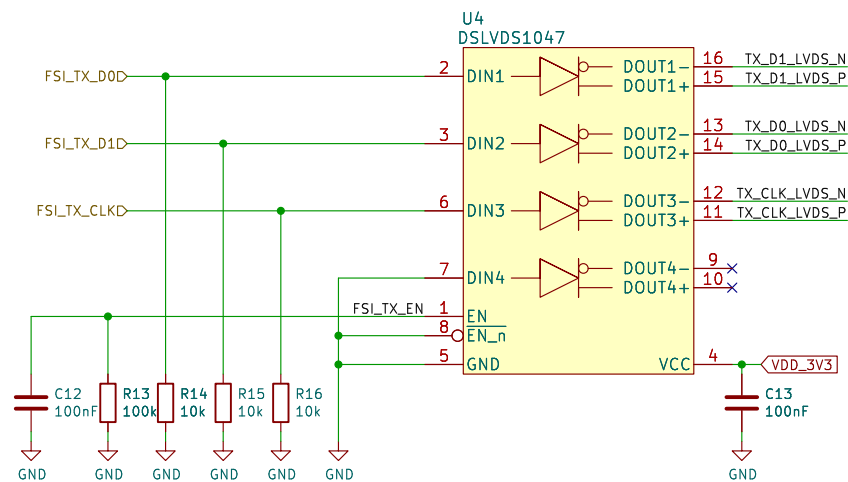
LAAS/CNRS

Sheet: /OMODRI\_QuadEncod/  
File: OMODRI\_QuadEncod.kicad\_sch

**Title: Open Motor Driver Initiative (OMODRI)**

Size: A4 Date: 2022-11-24  
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

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Sheet: /OMODRI\_FSI\_TX/

File: OMODRI\_FSI\_TX.kicad\_sch

**Title: Open M<sup>O</sup>tor Driver Initiative (OMODRI)**

Size: A4

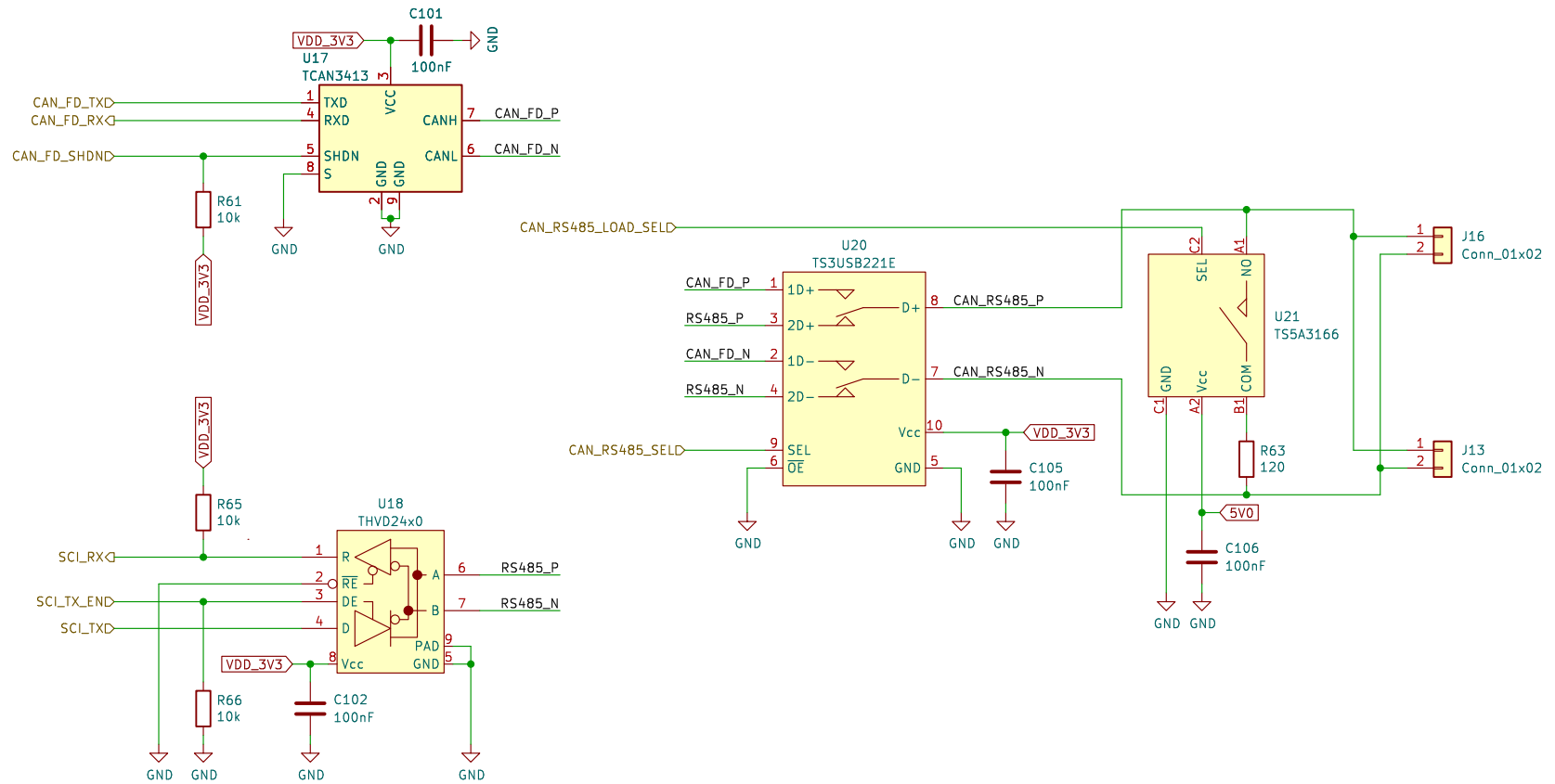
Date: 2022-11-24

Rev: 2.0

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Id: 3/22





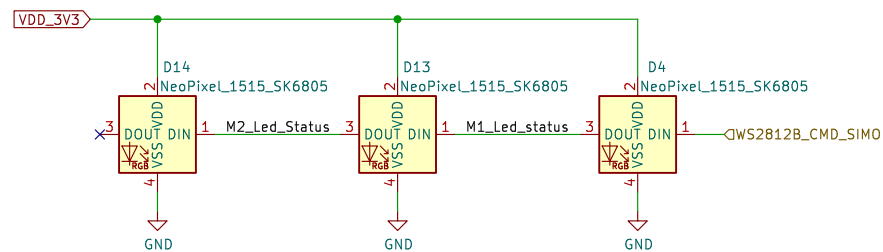
LAAS/CNRS

Sheet: /OMODRI\_CAN\_RS485/  
File: OMODRI\_CAN\_RS845.kicad\_sch

**Title: Open MOtor Driver Initiative (OMODRI)**

Size: A4 Date: 2022-11-24  
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Rev: 2.0  
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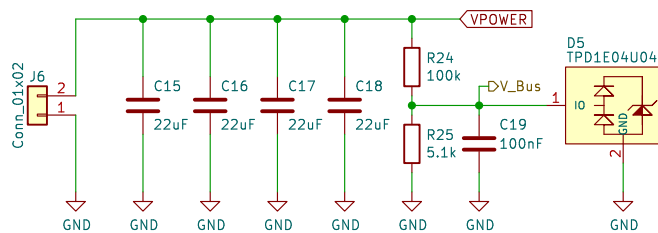
LAAS/CNRS

Sheet: /OMODRI\_LED\_dbg/  
File: OMODRI\_LED\_dbg.kicad\_sch

**Title: Open M<sub>OT</sub>or D<sub>R</sub>iver Initiative (OMODRI)**

Size: A4 Date: 2022-11-24  
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Rev: 2.0  
Id: 6/22

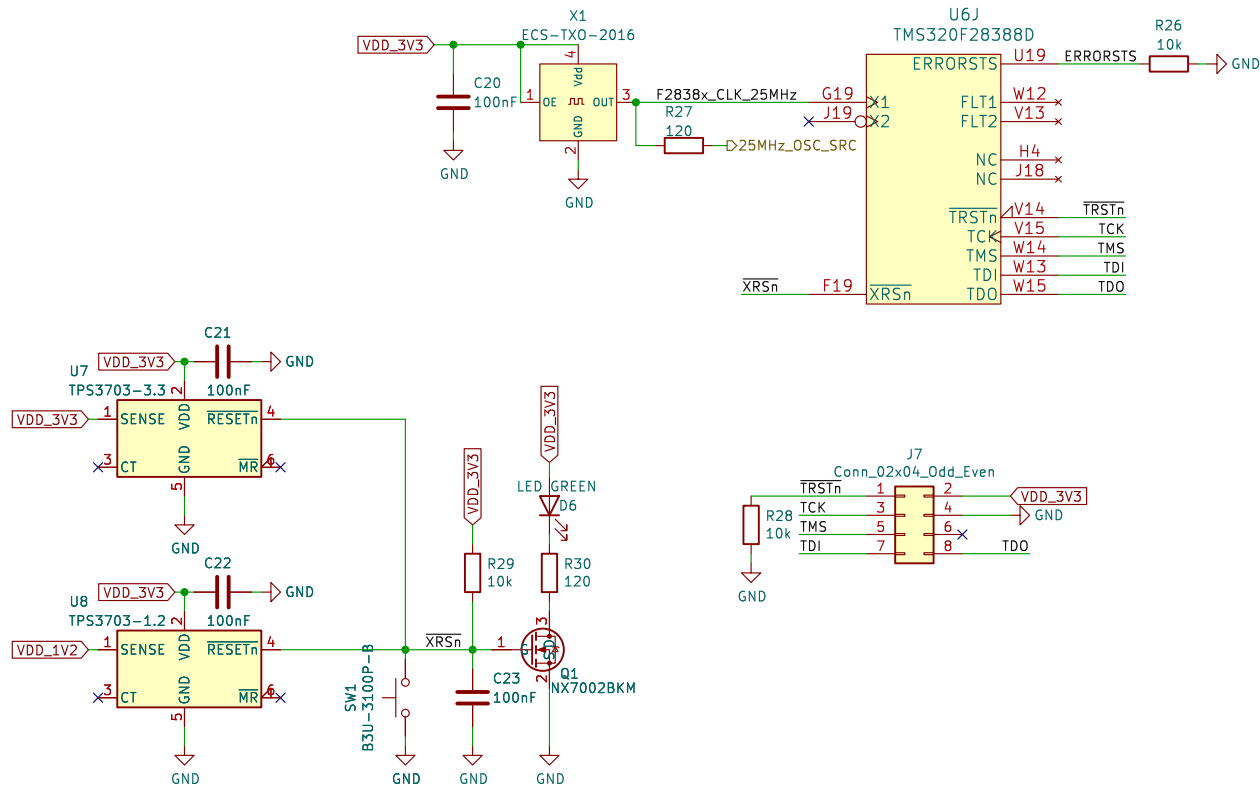


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Sheet: /OMODRI\_POWER\_CAP/  
File: OMODRI\_POWER\_CAP.kicad\_sch

**Title: Open M<sub>O</sub>tor Driver Initiative (OMODRI)**

Size: A4	Date: 2022-11-24	Rev: 2.0
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1		Id: 7/22



LAAS/CNRS

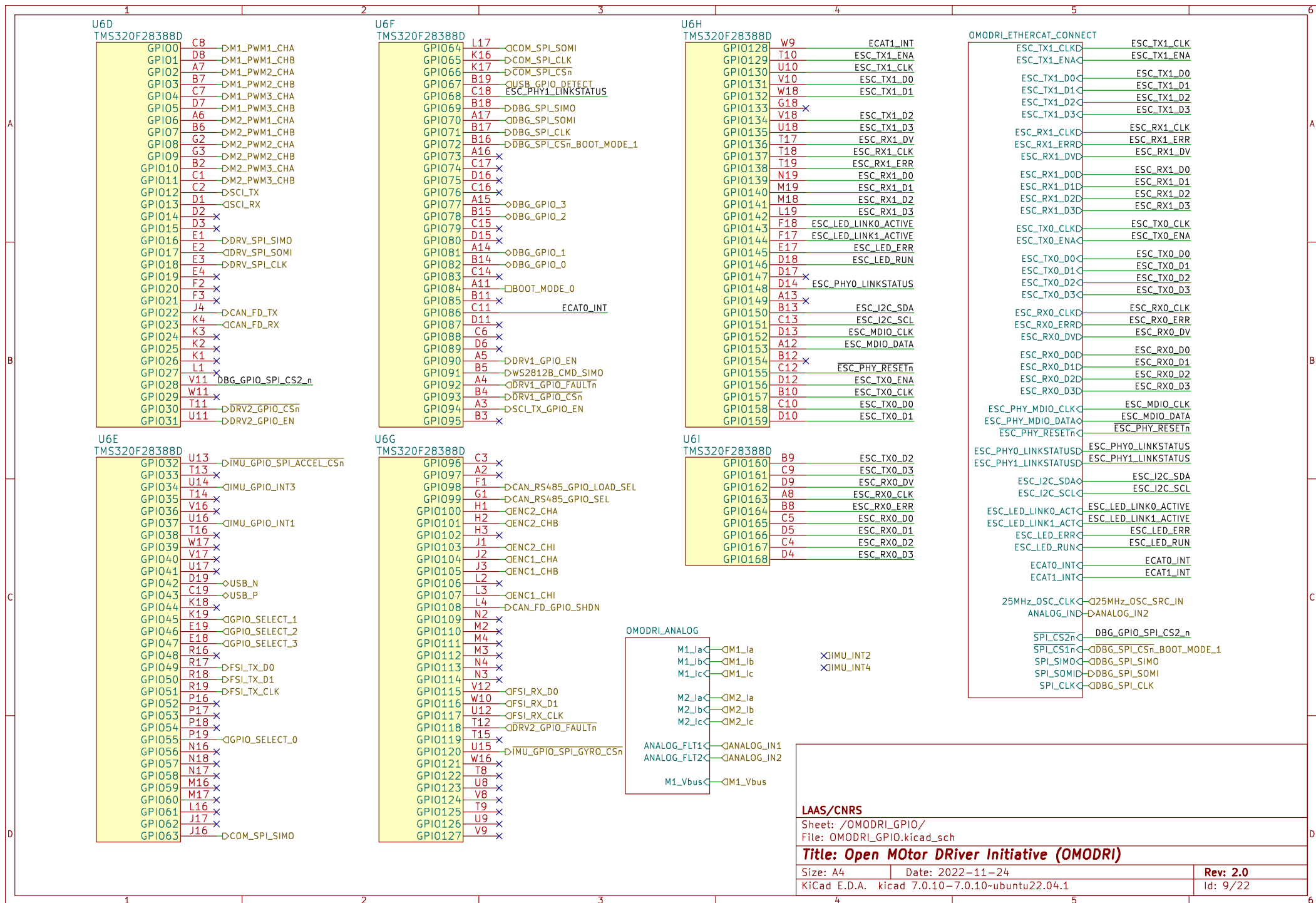
Sheet: /JTAG + CLOCK + RESET/  
File: OMODRI\_JTAG\_OSC\_RST.kicad\_sch

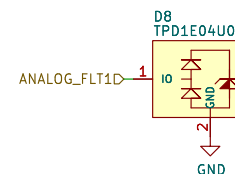
**Title: Open M<sup>o</sup>Tor Driver Initiative (OMODRI)**

Size: A4 Date: 2022-11-24  
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

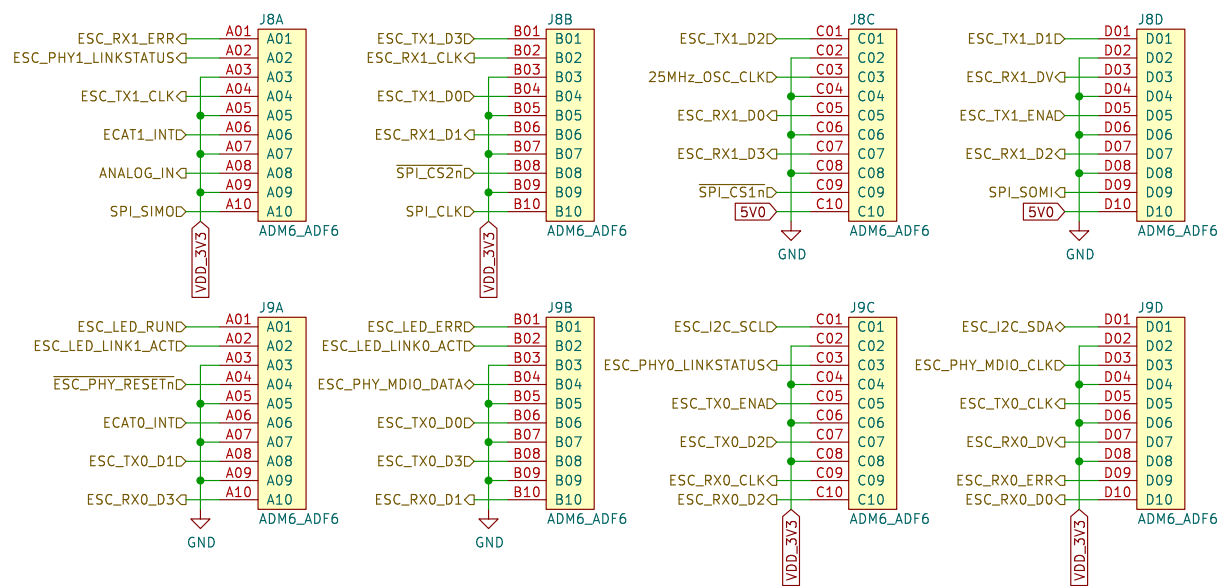
Rev: 2.0  
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Id: 10/22



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Sheet: /OMODRI\_GPIO/OMODRI\_ETHERCAT\_CONNECT/  
File: OMODRI\_ETHERCAT\_CONNECT.kicad\_sch

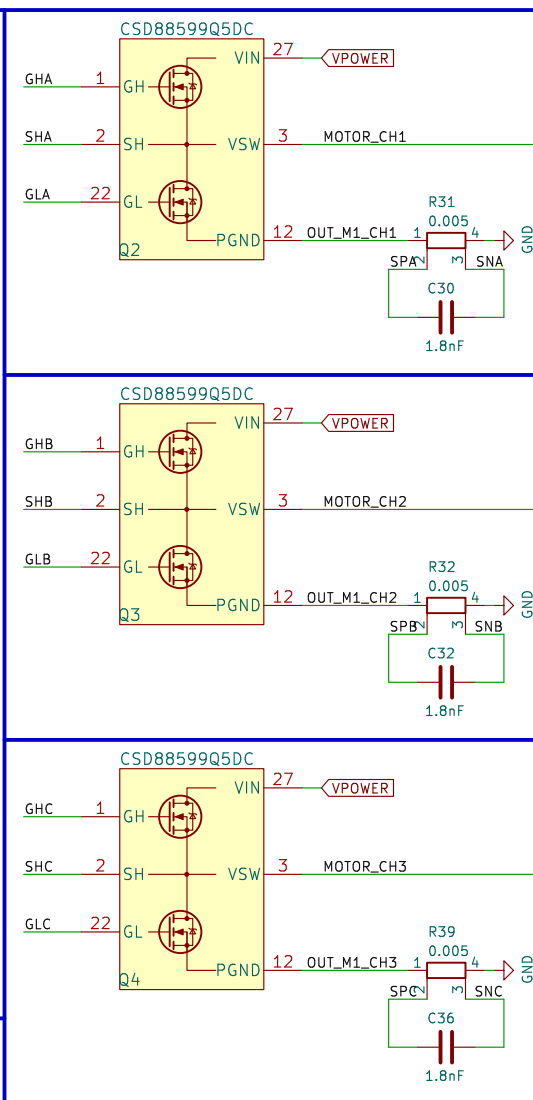
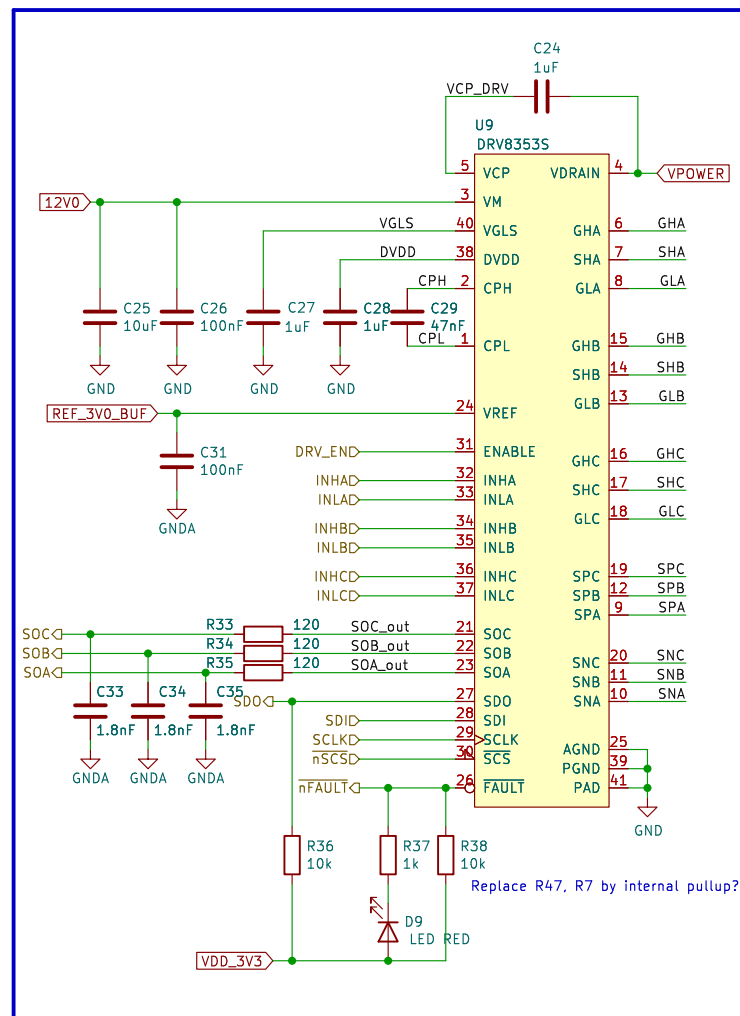
**Title: Open MOror DRiver Initiative (OMODRI)**

Size: A4 Date: 2022-11-24

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Rev: 2.0

Id: 11/22



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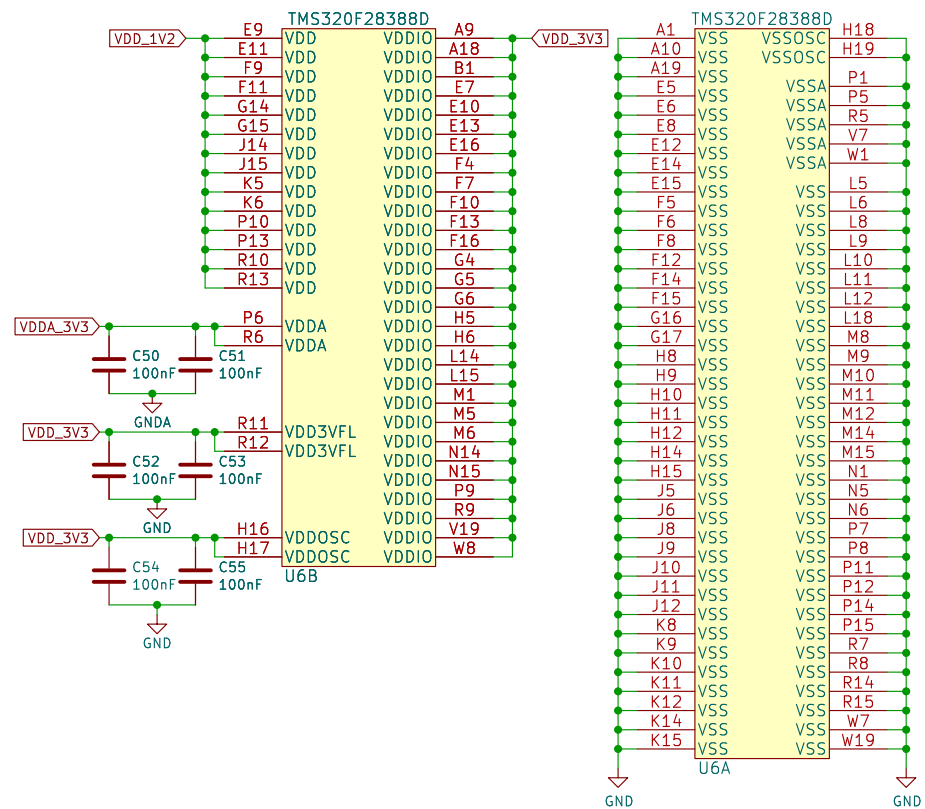
Sheet: /OMODRI\_driver\_M1/  
File: OMODRI\_driver\_M1.kicad\_sch

**Title: Open MOrtor DRiver Initiative (OMODRI)**

Size: A4	Date: 2022-11-24
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1	

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Id: 14/22

TODO note: change references link and MPN for all resistor and capa

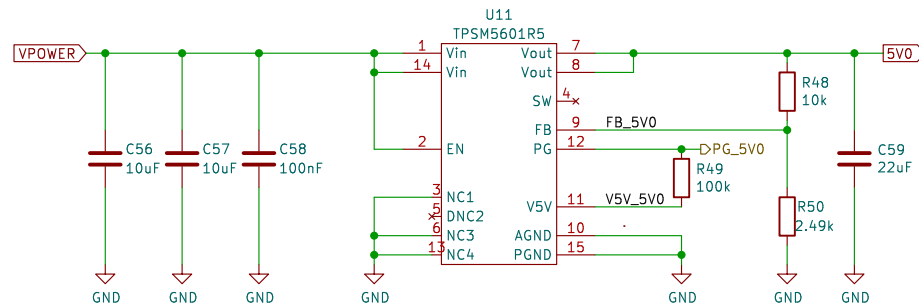
TODO note:

U11.4 : SW – Switch node. Do not place any external component on this pin or connect this pin to any signal.  
U11.5 : DNC – Do not connect. Do not connect this pin to ground, to another pin, or to any other voltage. This pin is connected to the internal bootstrap capacitor. This pin must be soldered to an isolated pad.  
U11.3, U11.6, U11.13 : NC – these pins to the PGND plane can help enhance shielding and thermal performance.  
U11.12 : PGOOD – A 10–kohm to 100–kohm pullup resistor is required and can be tied to the V5V pin or other DC voltage less than 18V.

R48 = 10kohm (recommended)  
R50 = 2.49kohm ( $R50 = R48 / (5V - 1)$ )

Cin > 9.4uF  
C56 + C57 + C58 = (10uF + 10uF + 100nF) rated @ 75V.

Cout > 15uF (according figure 7–2 in datasheet SLVSG72 / TPSM560R6H)  
C59 = 22uF/25V



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Sheet: /Power distribution/OMODRI\_Alim\_5V/  
File: OMODRI\_Alim\_5V.kicad\_sch

**Title: Open Motor Driver Initiative (OMODRI)**

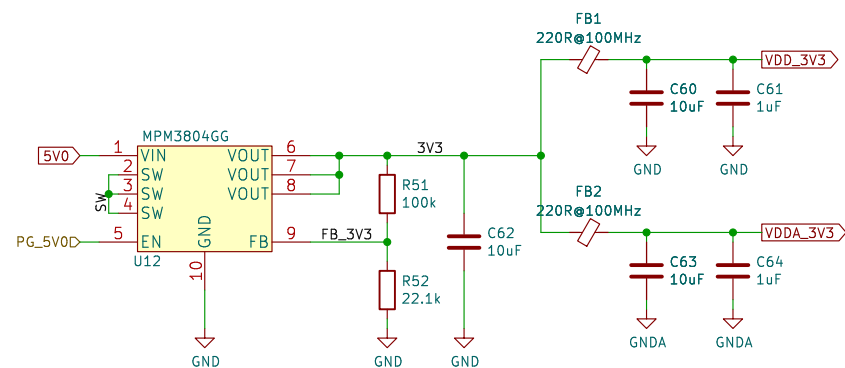
Size: A4

Date: 2022-11-24

Rev: 2.0

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Id: 15/22



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Sheet: /Power distribution/OMODRI\_Alim\_3V3/

File: OMODRI\_Alim\_3V3.kicad\_sch

**Title: Open M<sub>O</sub>tor Driver Initiative (OMODRI)**

Size: A4

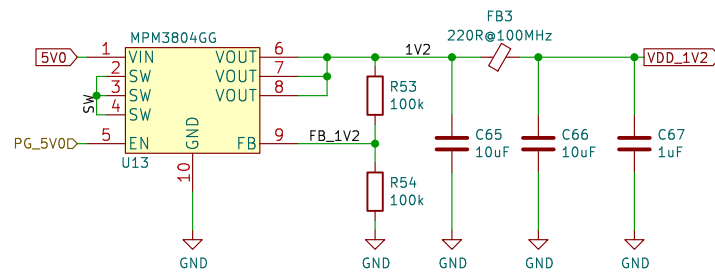
Date: 2022-11-24

Rev: 2.0

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Id: 16/22



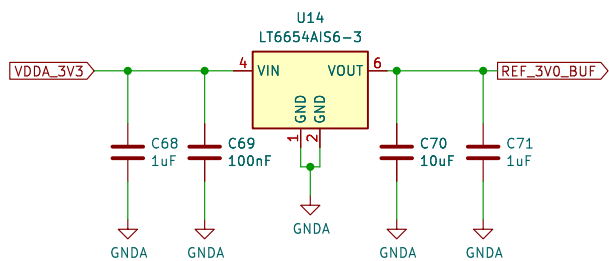


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Sheet: /Power distribution/OMODRI\_Alim\_1V2/  
File: OMODRI\_Alim\_1V2.kicad\_sch

**Title: Open Motor Driver Initiative (OMODRI)**

Size: A4	Date: 2022-11-24	Rev: 2.0
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1	Id: 17/22	

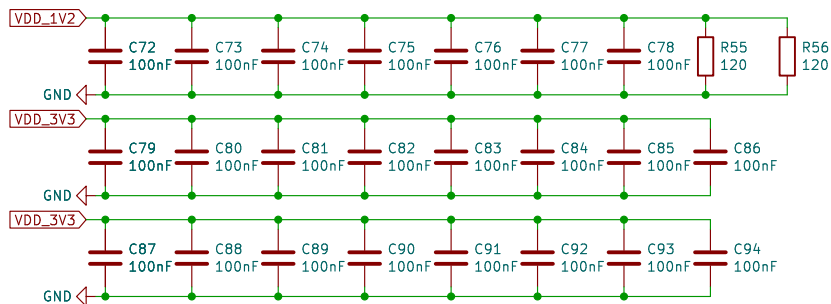


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Sheet: /Power distribution/OMODRI\_Alim\_REF/  
File: OMODRI\_Alim\_REF.kicad\_sch

**Title: Open MOror DRiver Initiative (OMODRI)**

Size: A4	Date: 2022-11-24	Rev: 2.0
KiCad E.D.A.	kicad 7.0.10-7.0.10-ubuntu22.04.1	Id: 18/22



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Sheet: /Power distribution/TMS320\_Bypass\_Cap/  
File: TMS320\_Bypass\_Cap.kicad\_sch

**Title: Open MOror DRiver Initiative (OMODRI)**

Size: A4	Date: 2022-11-24	Rev: 2.0
KiCad E.D.A.	kicad 7.0.10-7.0.10-ubuntu22.04.1	Id: 19/22

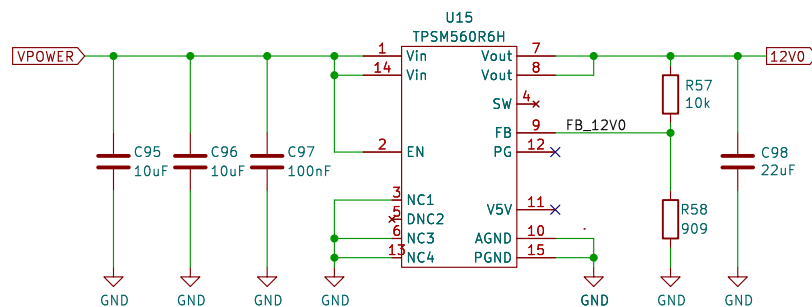
TODO note:

U15.4 : SW – Switch node. Do not place any external component on this pin or connect this pin to any signal.  
U15.5 : DNC – Do not connect. Do not connect this pin to ground, to another pin, or to any other voltage. This pin is connected to the internal bootstrap capacitor. This pin must be soldered to an isolated pad.  
U15.3, U15.6, U15.13 : NC – these pins to the PGND plane can help enhance shielding and thermal performance.  
U15.12 : PG00D – If not used, this pin can be left open or connected to PGND.

R57 = 10kohm (recommended)  
R58 = 909ohm ( $R58 = R57 / (12V - 1)$ )

Cin > 9,4uF  
C95 + C96 + C97 = (10uF + 10uF + 100nF) rated @ 75V.

Cout > 15uF (according figure 7-2 in datasheet SLVSG72 / TPSM560R6H)  
C98 = 22uF/25V



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Sheet: /Power distribution/OMODRI\_Alim\_12V/

File: OMODRI\_Alim\_12V.kicad\_sch

**Title: Open MOror DRiver Initiative (OMODRI)**

Size: A4

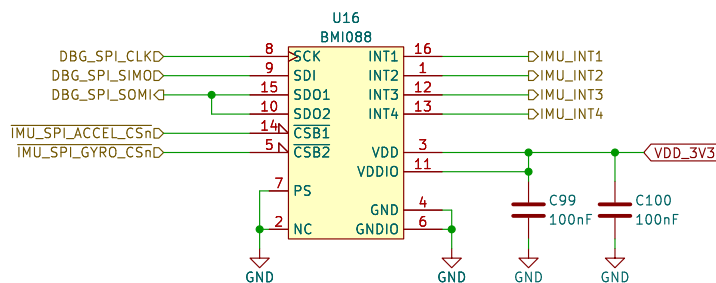
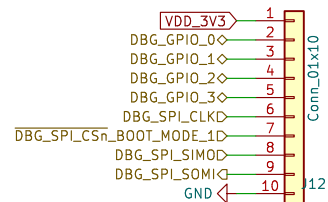
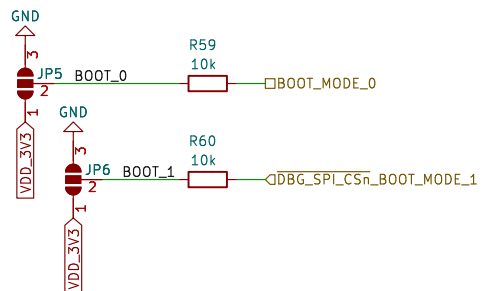
Date: 2022-11-24

Rev: 2.0

KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

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JP2      JP1      BOOT Mode  
0      0      Parallel IO  
1      1      SCI / Wait Boot  
1      1      CAN  
1      1      Flash / USB



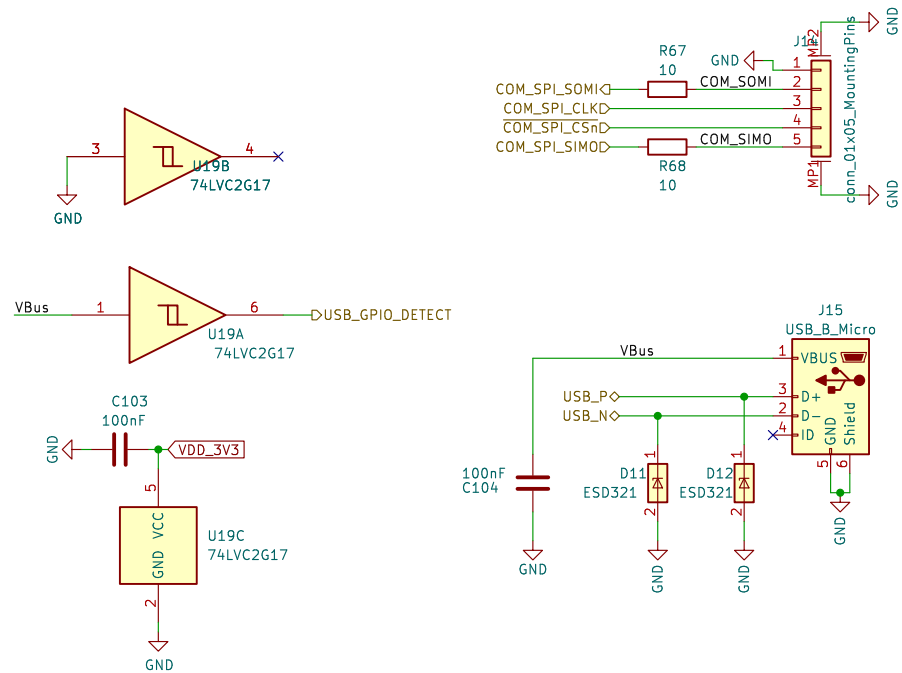
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Sheet: /OMODRI\_IMU\_DBG/  
File: OMODRI\_IMU\_DBG.kicad\_sch

**Title: Open MOror DRiver Initiative (OMODRI)**

Size: A4      Date: 2022-11-24  
KiCad E.D.A.      kicad 7.0.10-7.0.10-ubuntu22.04.1

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Sheet: /OMODRI\_COM\_SPI\_USB/  
File: OMODRI\_COM\_SPI\_USB.kicad\_sch

**Title: Open MOr Motor Driver Initiative (OMODRI)**

Size: A4  
KiCad E.D.A. kicad 7.0.10-7.0.10-ubuntu22.04.1

Date: 2022-11-24  
Rev: 2.0  
Id: 22/22