

LAAS/CNRS

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File: omodri-laas.kicad_sch

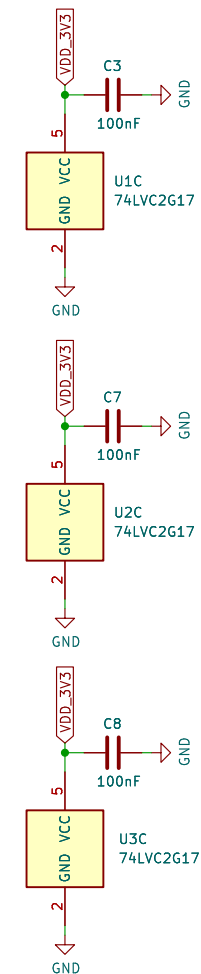
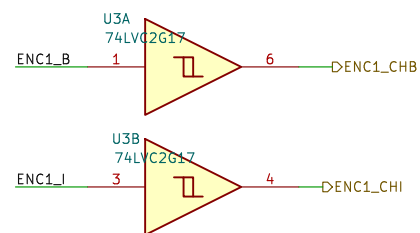
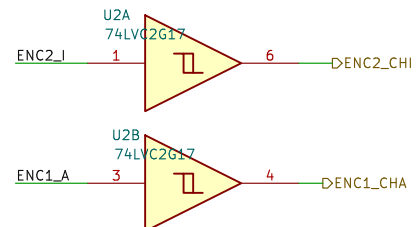
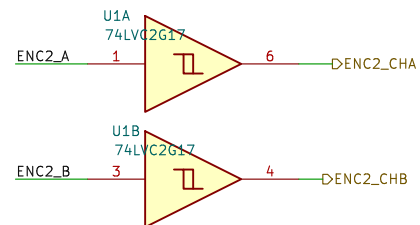
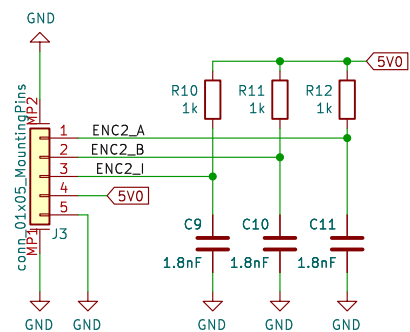
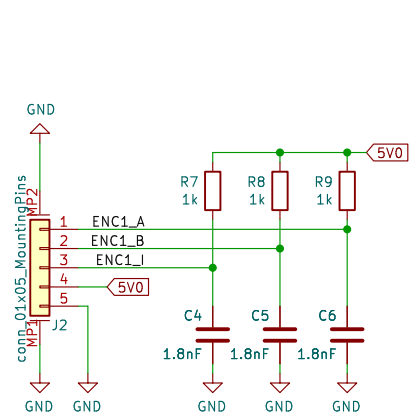
Title: Open MOr Motor Driver Initiative (OMODRI)

Size: A4 Date: 2022-11-24

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

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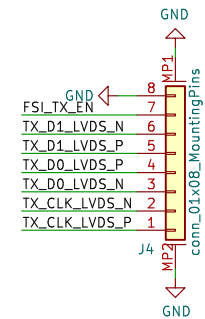
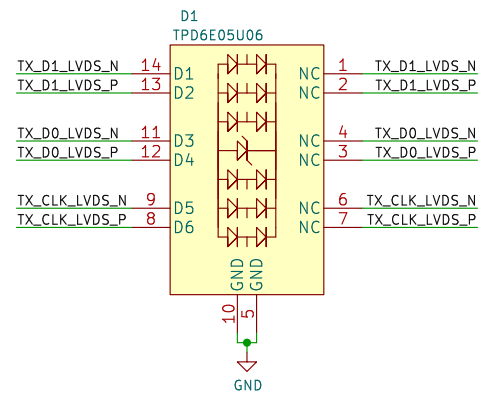
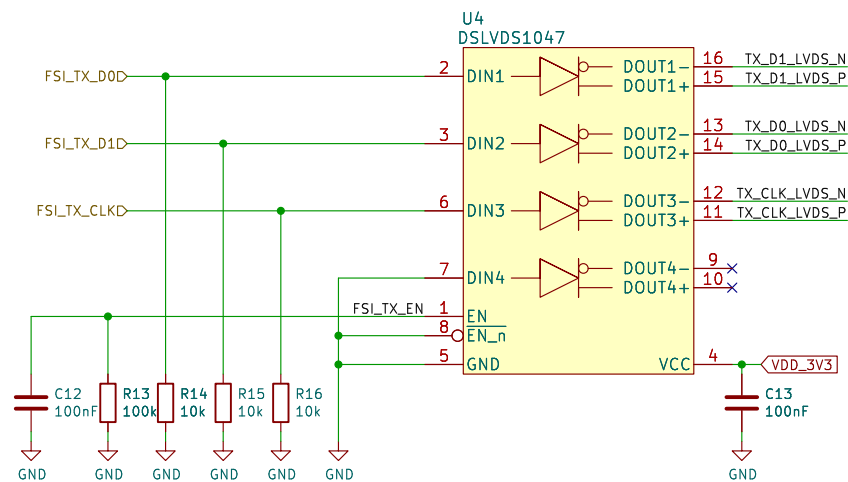
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Sheet: /OMODRI_QuadEncod/
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Title: Open MOror DRiver Initiative (OMODRI)

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_FSI_TX/

File: OMODRI_FSI_TX.kicad_sch

Title: Open M^otor Driver Initiative (OMODRI)

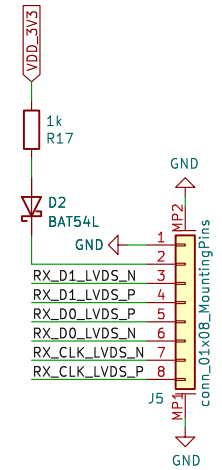
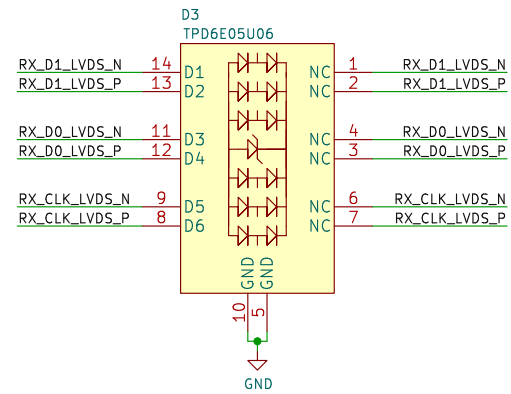
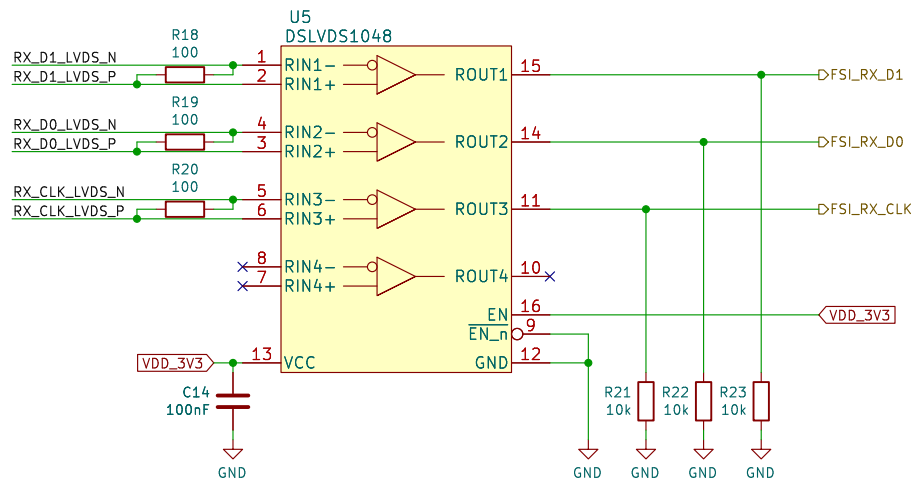
Size: A4

Date: 2022-11-24

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Sheet: /OMODRI_FSI_RX/
File: OMODRI_FSI_RX.kicad_sch

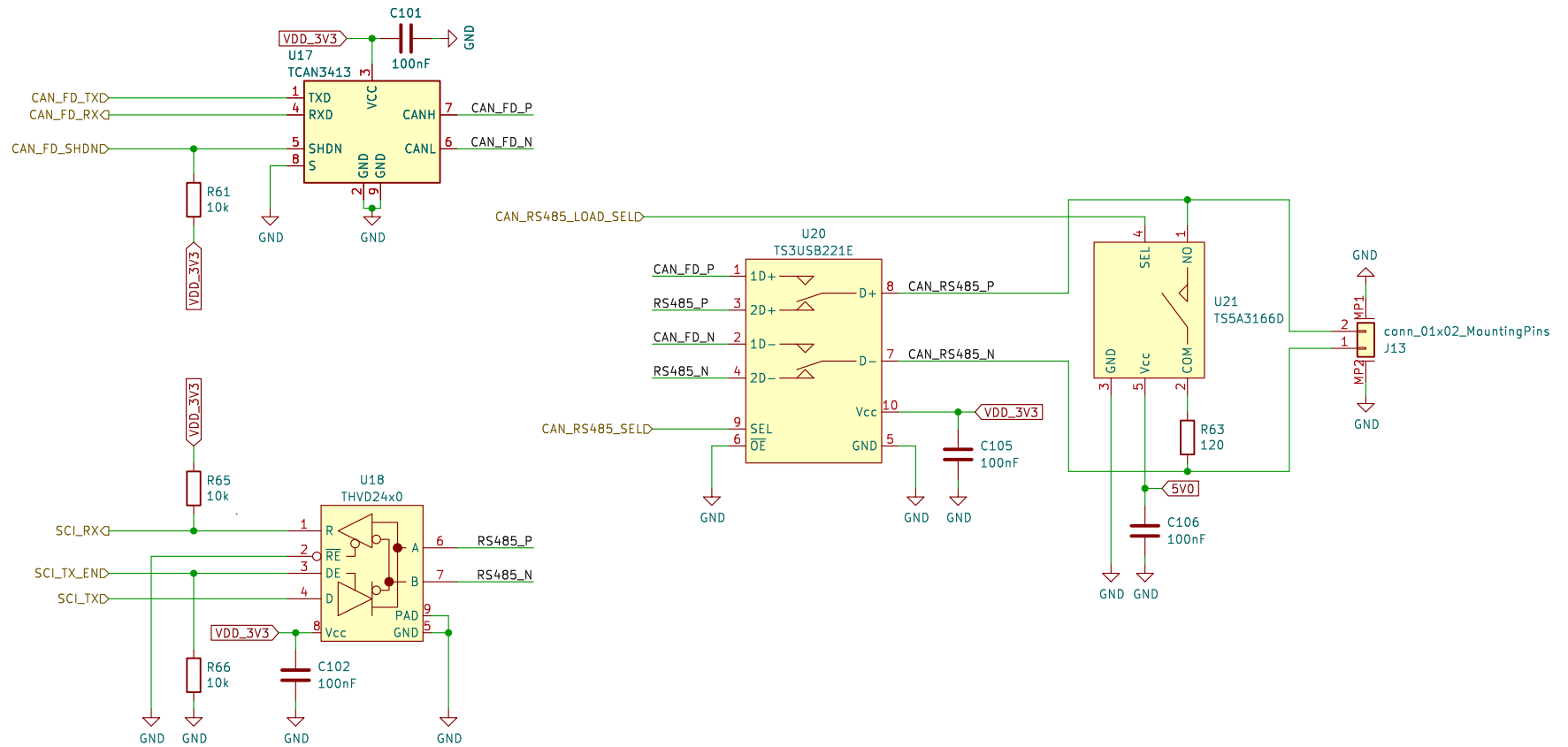
Title: Open MOror DRiver Initiative (OMODRI)

Size: A4 Date: 2022-11-24

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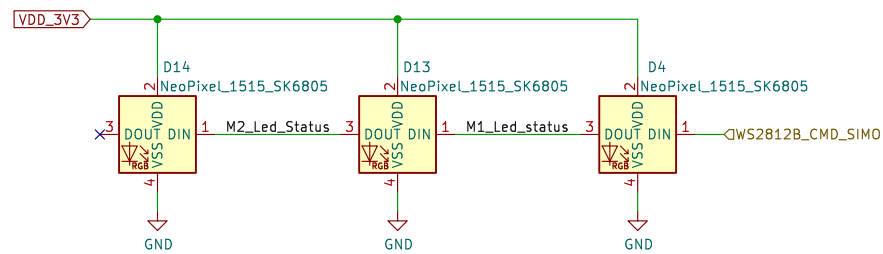
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File: OMODRI_CAN_RS845.kicad_sch

Title: Open M^otor 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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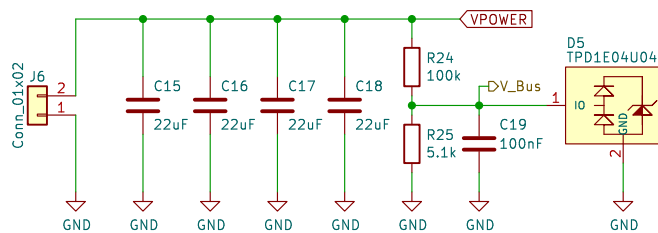
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Title: Open MOror DRiver Initiative (OMODRI)

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

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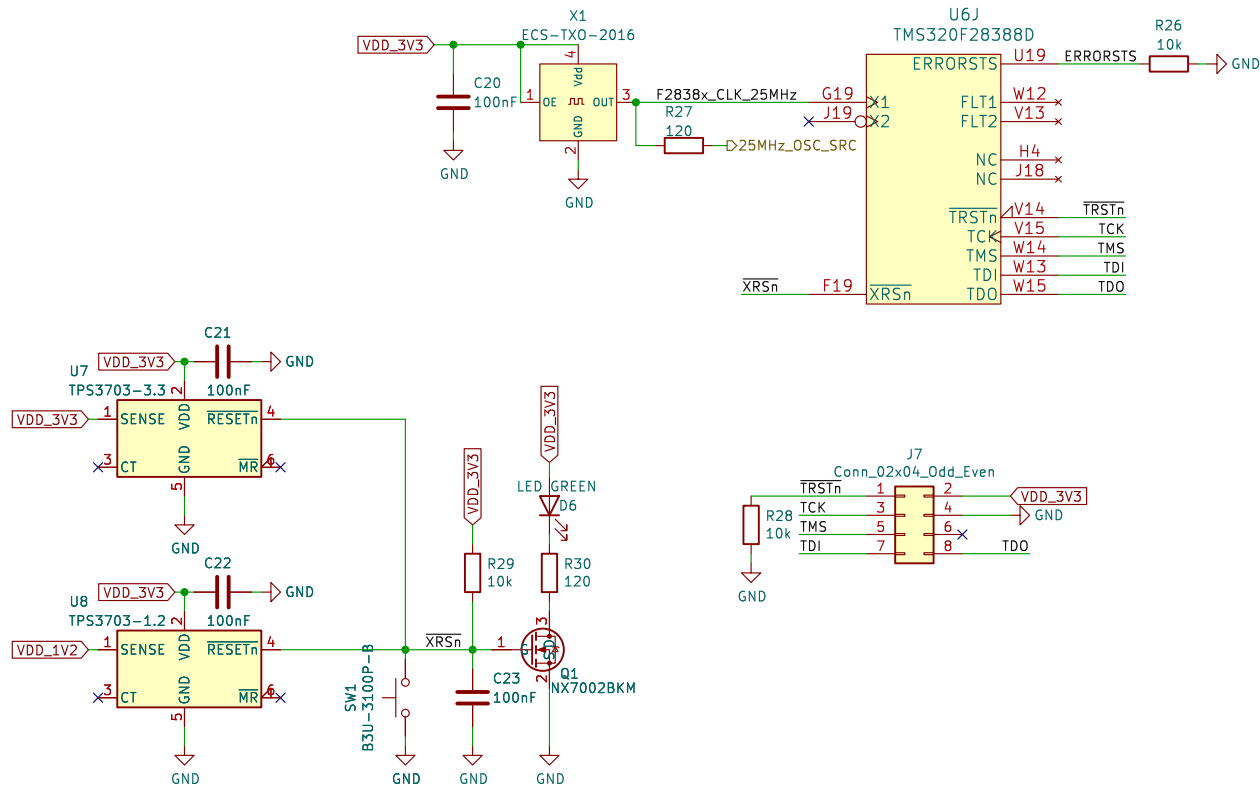


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Sheet: /OMODRI_POWER_CAP/
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Title: Open M_Otor Driver Initiative (OMODRI)

Size: A4	Date: 2022-11-24	Rev: 3.0
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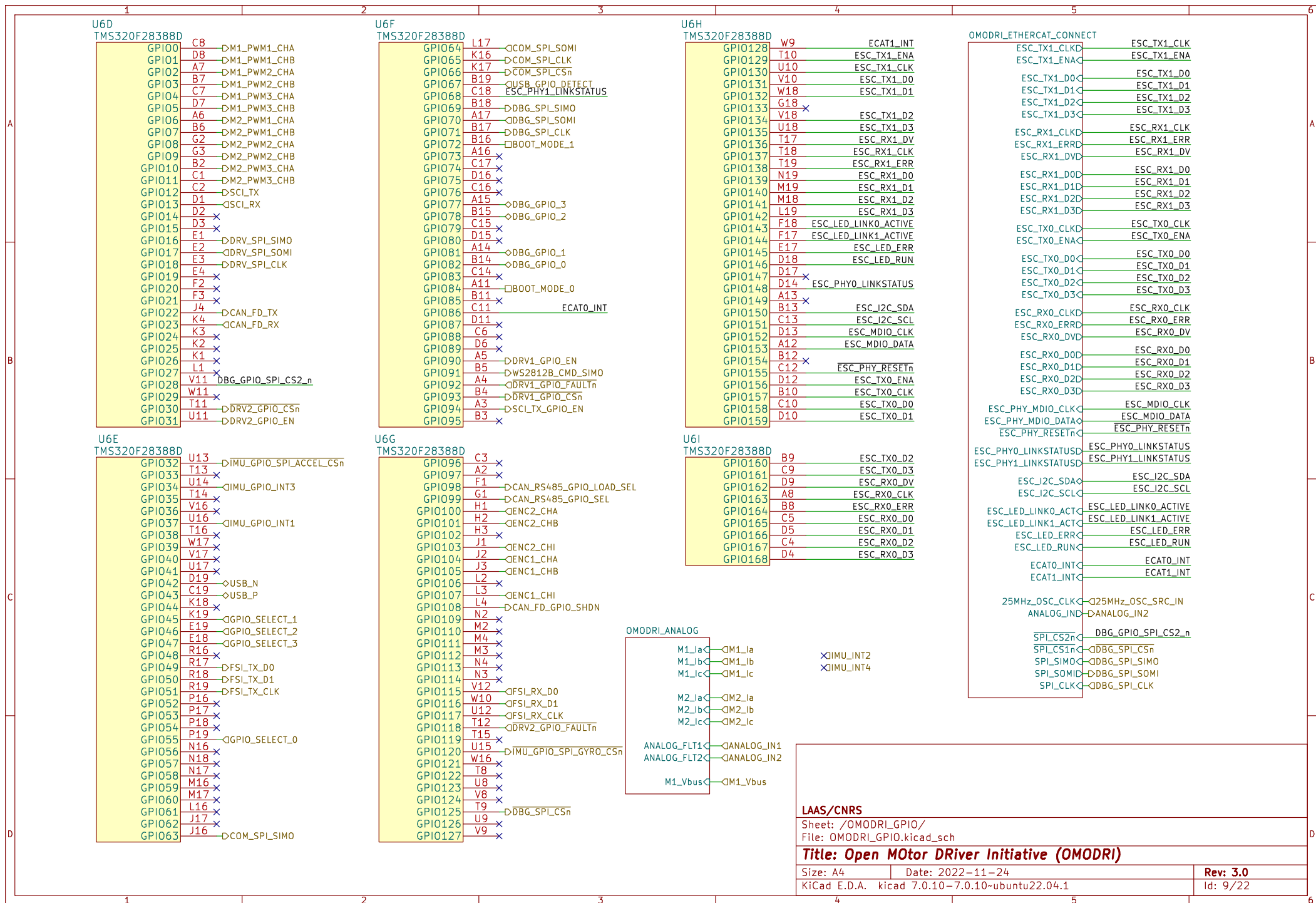
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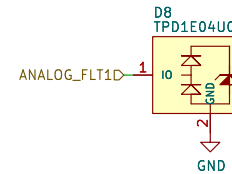
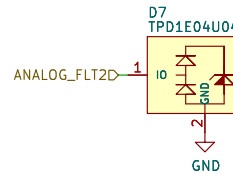
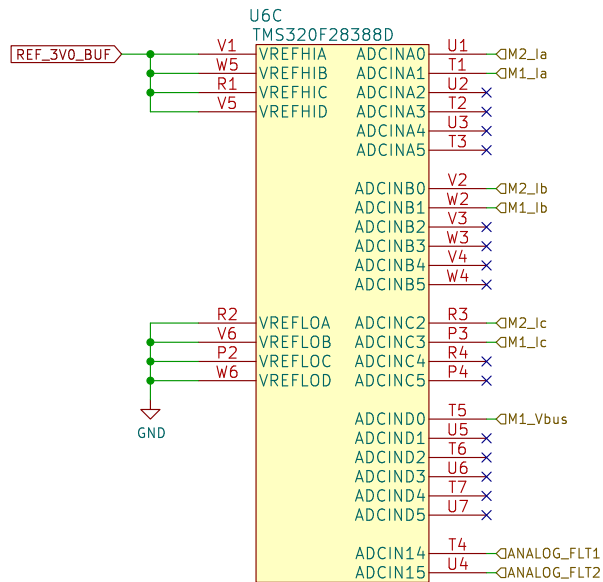
Sheet: /JTAG + CLOCK + RESET/
File: OMODRI_JTAG_OSC_RST.kicad_sch

Title: Open M^oTor 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_GPIO/OMODRI_ANALOG/
File: OMODRI_ANALOG.kicad_sch

Title: Open MOror DRiver Initiative (OMODRI)

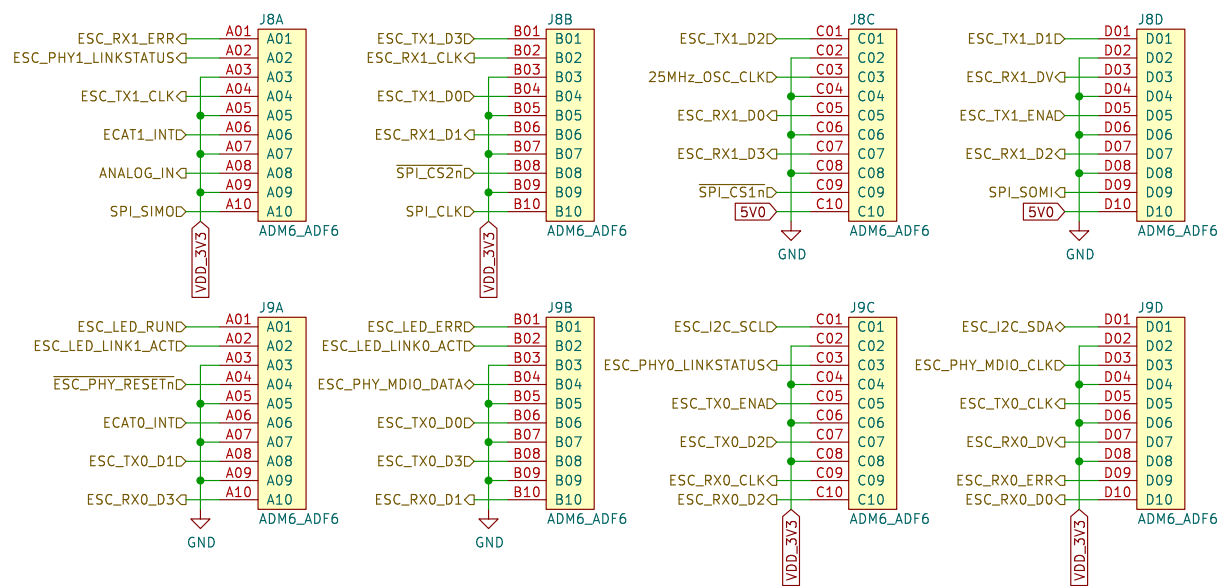
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Date: 2022-11-24

Rev: 3.0

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

Id: 10/22



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Sheet: /OMODRI_GPIO/OMODRI_ETHERCAT_CONNECT/
File: OMODRI_ETHERCAT_CONNECT.kicad_sch

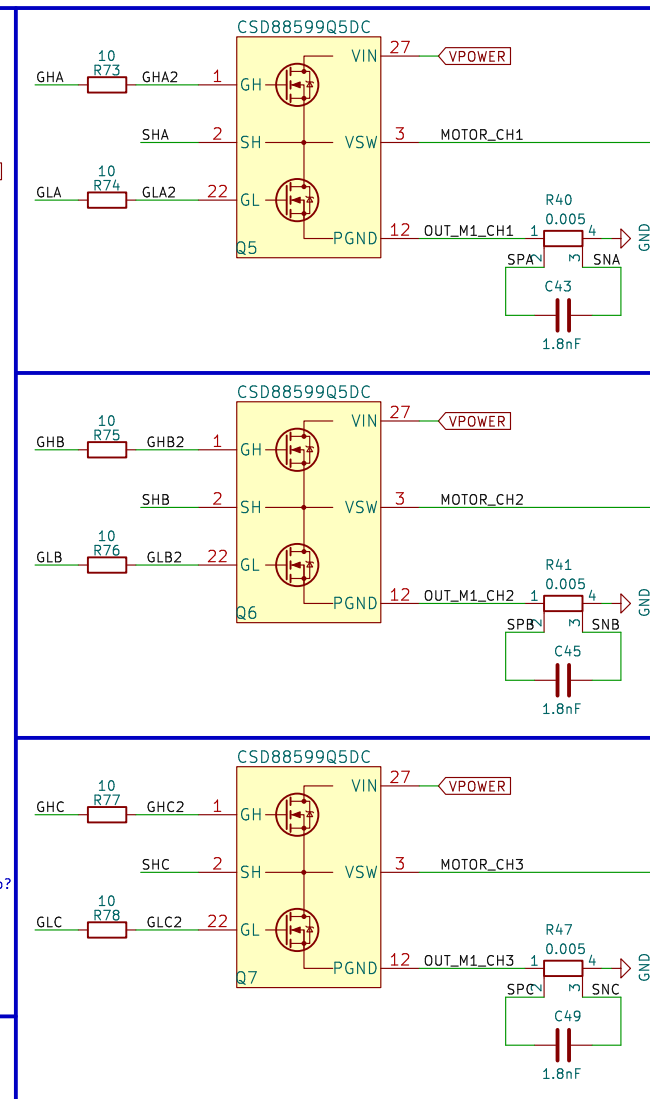
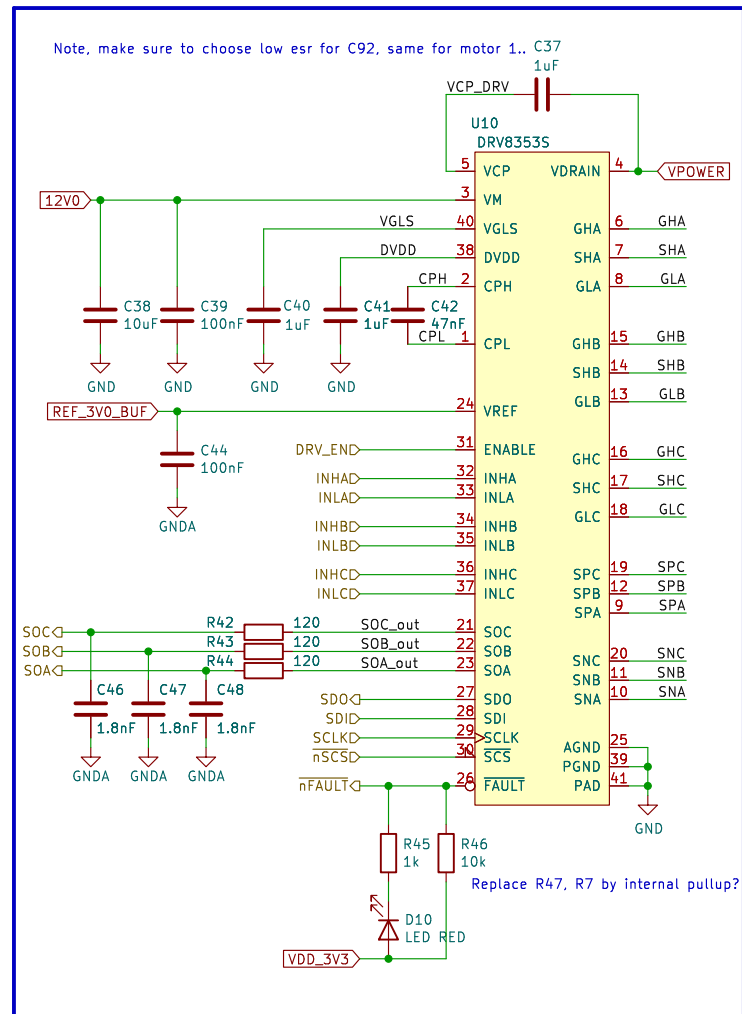
Title: Open MOror DRiver Initiative (OMODRI)

Size: A4 Date: 2022-11-24

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

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Sheet: /OMODRI_driver_M2/

File: OMODRI_driver_M2.kicad_sch

Title: Open Motor Driver Initiative (OMODRI)

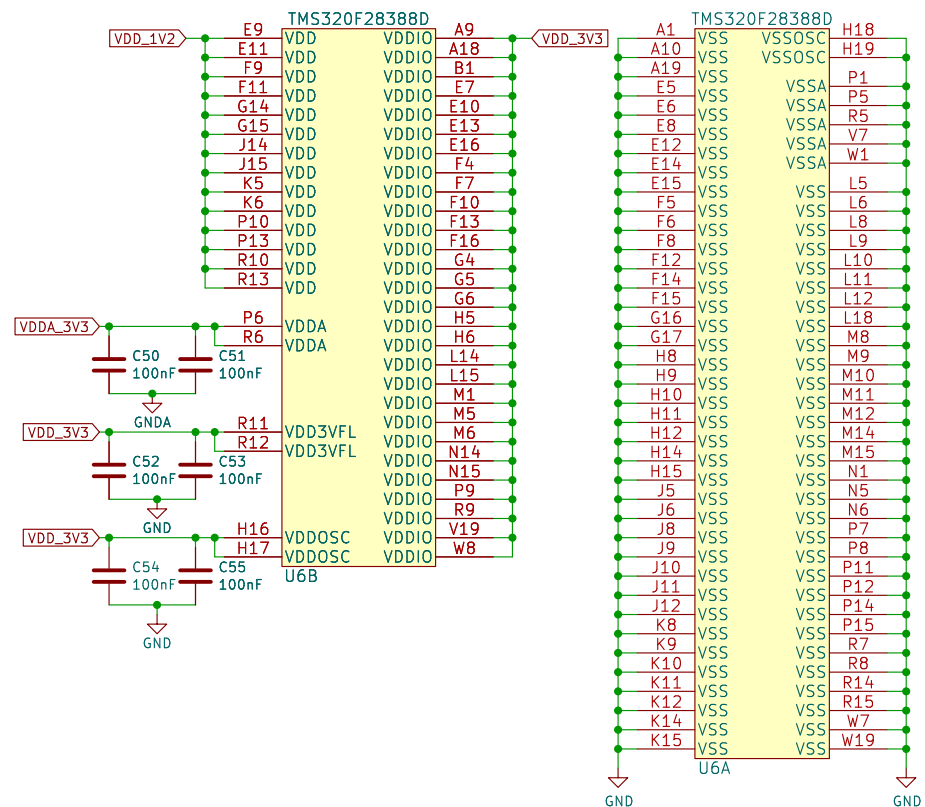
Size: A4

Date: 2022-11-24

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

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

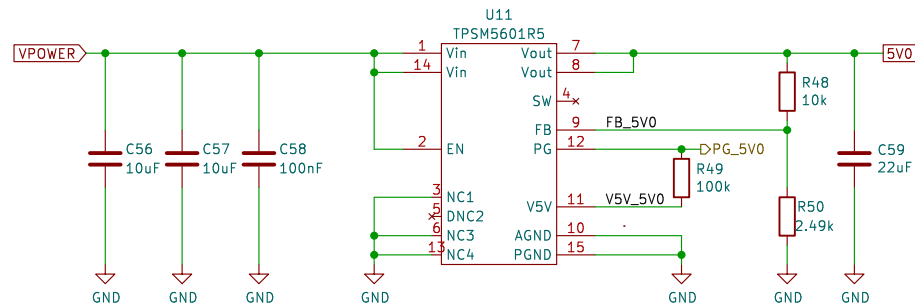
TODO note:

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 ($R50 = R48 / (5V - 1)$)

$C_{in} > 9.4\mu F$
 $C56 + C57 + C58 = (10\mu F + 10\mu F + 100nF)$ rated @ 75V.

$C_{out} > 15\mu F$ (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)

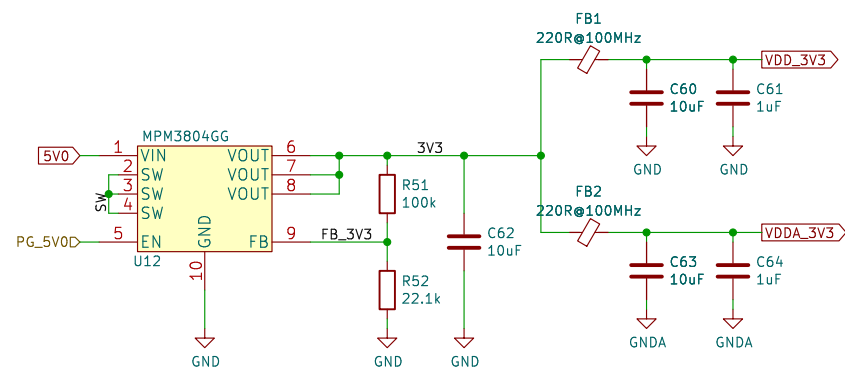
Size: A4

Date: 2022-11-24

Rev: 3.0

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

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Sheet: /Power distribution/OMODRI_Alim_3V3/

File: OMODRI_Alim_3V3.kicad_sch

Title: Open M_Otor Driver Initiative (OMODRI)

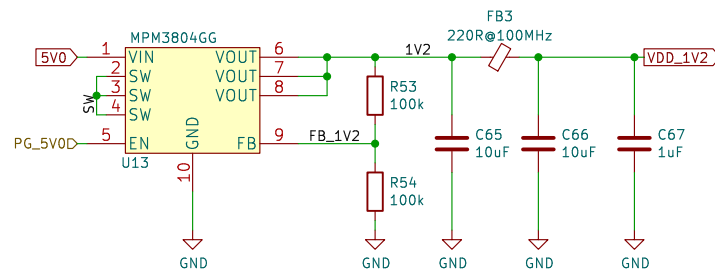
Size: A4

Date: 2022-11-24

Rev: 3.0

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

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Sheet: /Power distribution/OMODRI_Alim_1V2/
File: OMODRI_Alim_1V2.kicad_sch

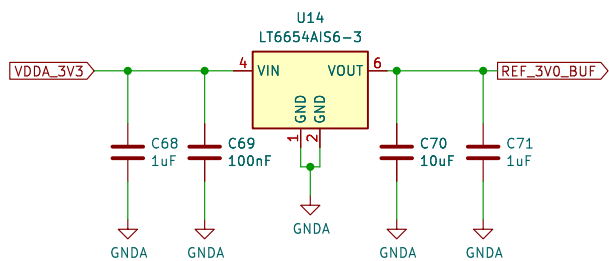
Title: Open Motor Driver Initiative (OMODRI)

Size: A4 Date: 2022-11-24

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

Rev: 3.0

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Sheet: /Power distribution/OMODRI_Alim_REF/
File: OMODRI_Alim_REF.kicad_sch

Title: Open MOror DRiver Initiative (OMODRI)

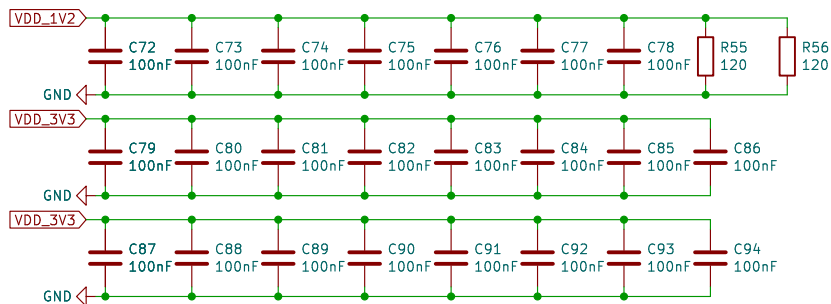
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Date: 2022-11-24

Rev: 3.0

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

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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: 3.0

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

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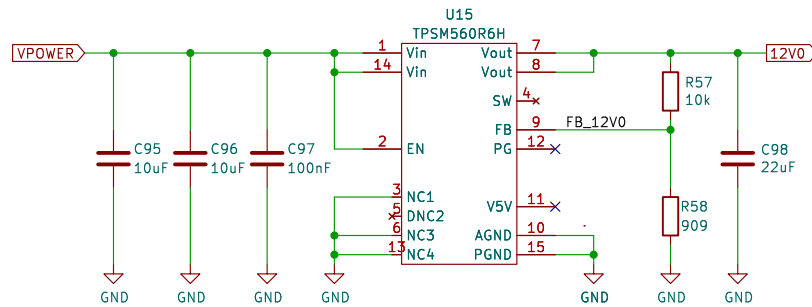
TODO note:

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 ($R58 = R57 / (12V - 1)$)

$C_{in} > 9,4\mu F$
 $C95 + C96 + C97 = (10\mu F + 10\mu F + 100nF)$ rated @ 75V.

$C_{out} > 15\mu F$ (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

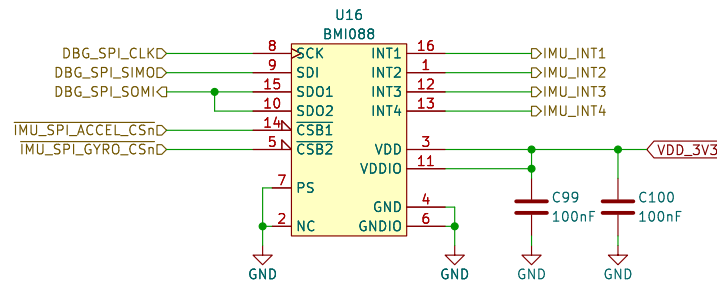
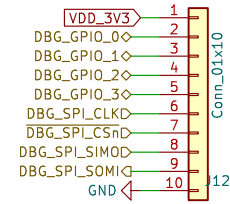
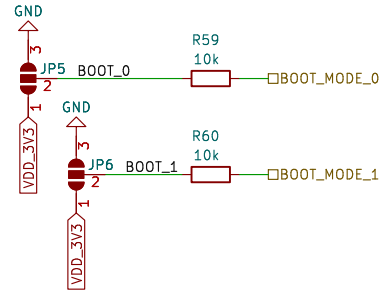
Date: 2022-11-24

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



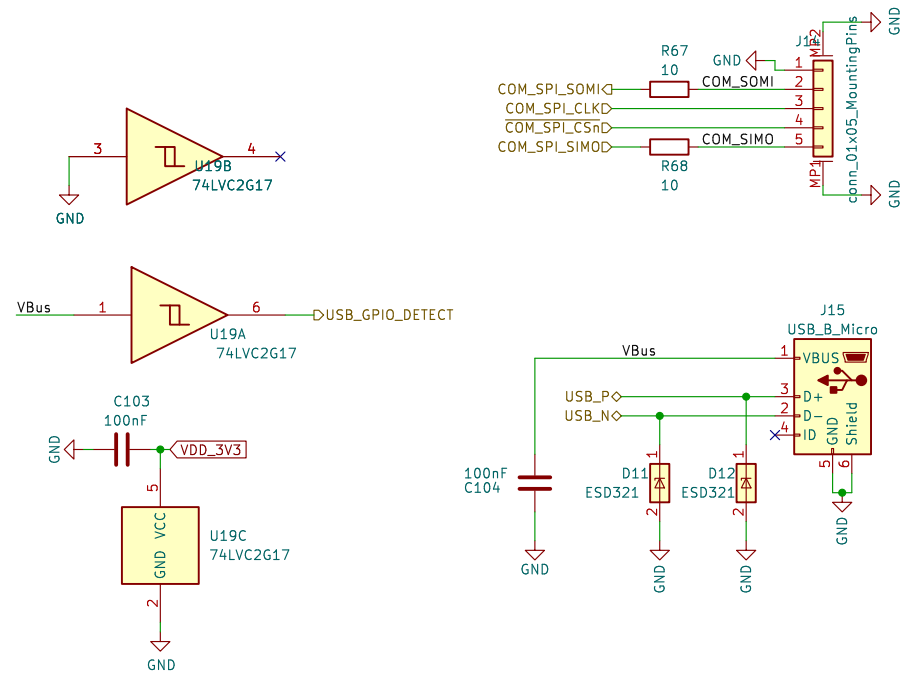
LAAS/CNRS

Sheet: /OMODRI_IMU_DBG/
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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 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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