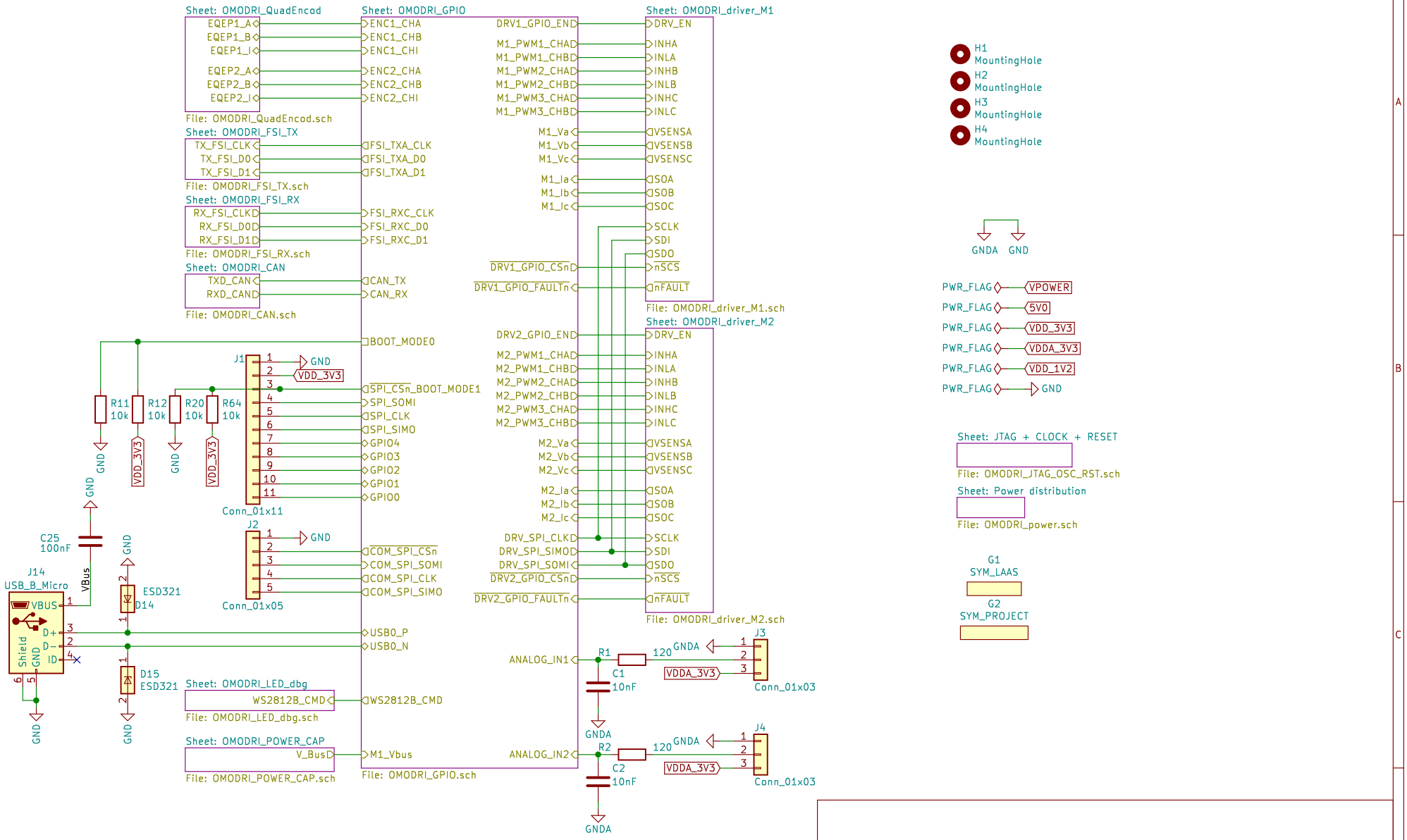
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EQEP1_A
EQEP1_B
EQEP1_I
EQEP2_A
EQEP2_B
EQEP2_I
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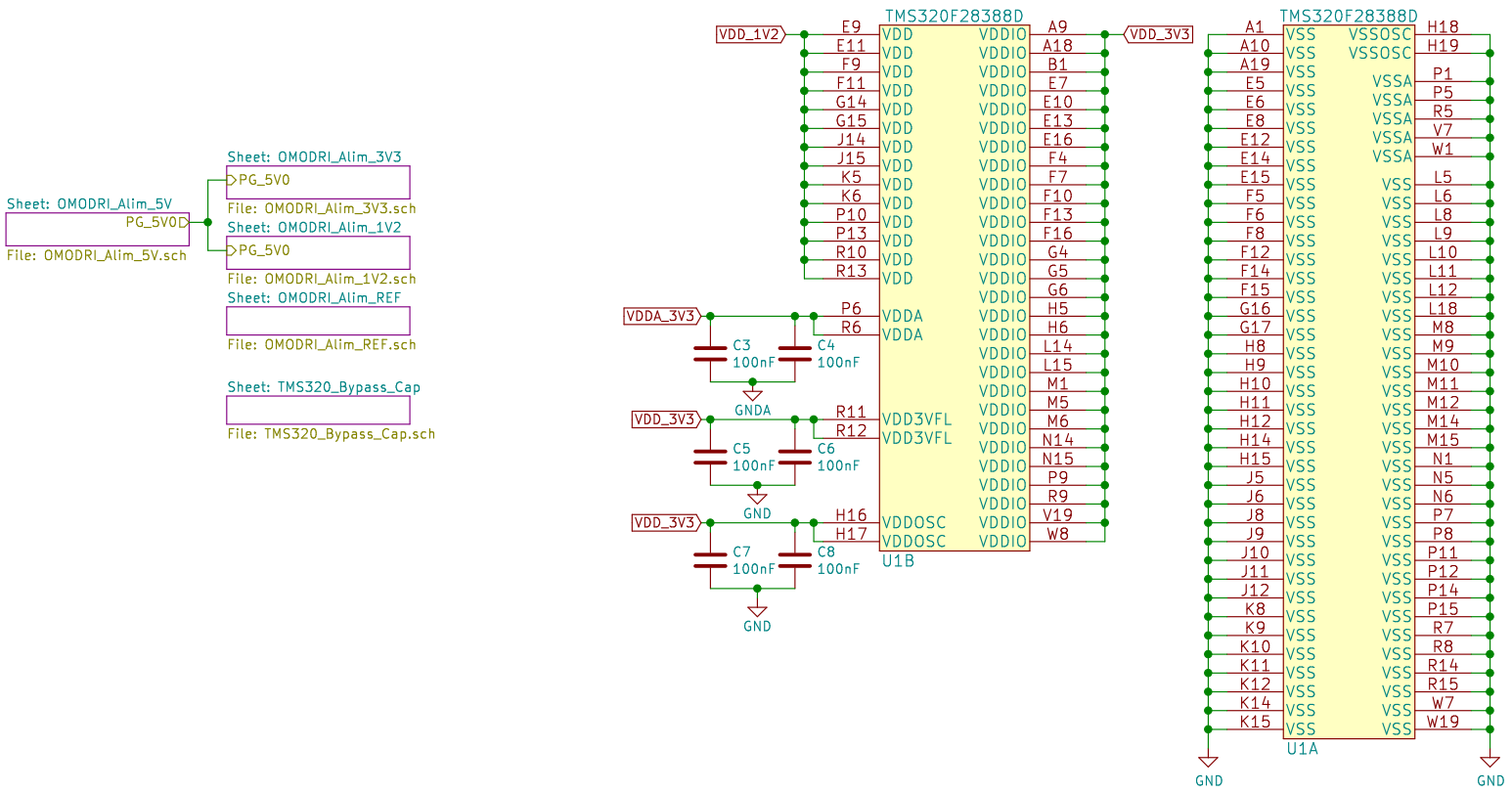
Sheet: OMODRI_GPIO
ENC1_CHA
ENC1_CHB
ENC1_CHI
ENC2_CHA
ENC2_CHB
ENC2_CHI
Sheet: OMODRI_FSI_TX
TX_FSI_CLK
TX_FSI_D0
TX_FSI_D1
File: OMODRI_FSI_TX.sch
FSI_TXA_CLK
FSI_TXA_D0
FSI_TXA_D1
Sheet: OMODRI_FSI_RX
RX_FSI_CLK
RX_FSI_D0
RX_FSI_D1
File: OMODRI_FSI_RX.sch
FSI_RXC_CLK
FSI_RXC_D0
FSI_RXC_D1
Sheet: OMODRI_CAN
TXD_CAN
RXD_CAN
File: OMODRI_CAN.sch
CAN_TX
CAN_RX
BOOT_MODE0
J1
Conn_01x11
GND
VDD_3V3
SPI_CSn_BOOT_MODE1
SPI_SOMI
SPI_CLK
SPI_SIMO
GPIO4
GPIO3
GPIO2
GPIO1
GPIO0
R11 10k
R12 10k
R20 10k
R64 10k
J2
Conn_01x05
COM_SPI_CSn
COM_SPI_SOMI
COM_SPI_CLK
COM_SPI_SIMO
C25 100nF
J14
USB_B_Micro
VBUS
D+
D-
ID
Shield
VBus
ESD321
D14
D15
USB0_P
USB0_N
Sheet: OMODRI_LED_dbg
WS2812B_CMD
File: OMODRI_LED_dbg.sch
Sheet: OMODRI_POWER_CAP
V_Bus
File: OMODRI_POWER_CAP.sch
M1_Vbus
File: OMODRI_GPIO.sch
Sheet: OMODRI_driver_M1
DRV1_GPIO_EN
DRV_EN
M1_PWM1_CHA
M1_PWM1_CHB
M1_PWM2_CHA
M1_PWM2_CHB
M1_PWM3_CHA
M1_PWM3_CHB
INHA
INLA
INHB
INLB
INHC
INLC
M1_Va
M1_Vb
M1_Vc
VSENSA
VSENSB
VSENSC
M1_Ia
M1_Ib
M1_Ic
SOA
SOB
SOC
SCLK
SDI
SDO
DRV1_GPIO_CSn
nSCS
DRV1_GPIO_FAULTn
nFAULT
File: OMODRI_driver_M1.sch
Sheet: OMODRI_driver_M2
DRV2_GPIO_EN
M2_PWM1_CHA
M2_PWM1_CHB
M2_PWM2_CHA
M2_PWM2_CHB
M2_PWM3_CHA
M2_PWM3_CHB
M2_Va
M2_Vb
M2_Vc
M2_Ia
M2_Ib
M2_Ic
DRV_SPI_CLK
DRV_SPI_SIMO
DRV_SPI_SOMI
DRV2_GPIO_CSn
DRV2_GPIO_FAULTn
File: OMODRI_driver_M2.sch
ANALOG_IN1
ANALOG_IN2
R1
R2
120
C1 10nF
C2 10nF
GNDA
J3
J4
Conn_01x03
H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole
PWR_FLAG
VPOWER
5V0
VDD_3V3
VDDA_3V3
VDD_1V2
Sheet: JTAG + CLOCK + RESET
File: OMODRI_JTAG_OSC_RST.sch
Sheet: Power distribution
File: OMODRI_power.sch
G1
SYM_LAAS
G2
SYM_PROJECT
LAAS/CNRS
Sheet: /
File: omodri_laas.sch
Title: Open MOtor DRiver Initiative (OMODRI)
Size: A4
Date:
Rev: 1.0
KiCad E.D.A. kicad (5.1.6)-1
Id: 1/19



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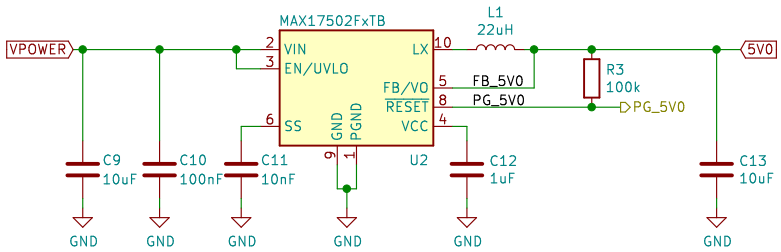
Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.6)-1		Id: 2/19



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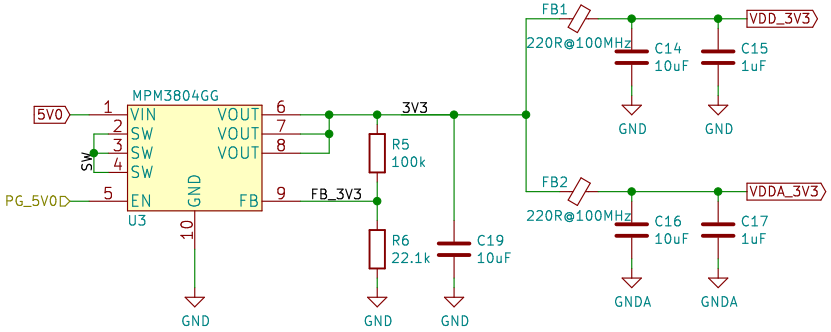

LAAS/CNRS

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Size: A4	Date:	**Rev: 1.0**
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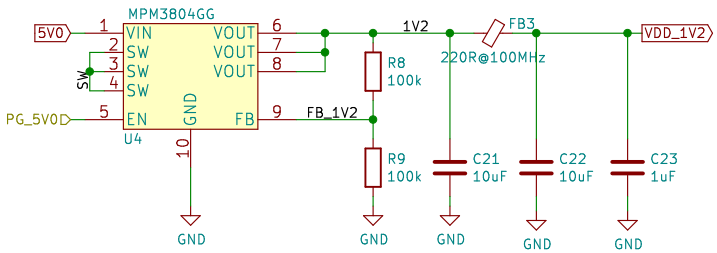

LAAS/CNRS

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File: OMODRI_Alim_1V2.sch

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Size: A4	Date:	**Rev: 1.0**
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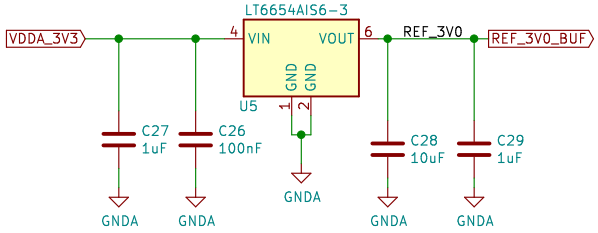

LAAS/CNRS

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Size: A4	Date:	**Rev: 1.0**
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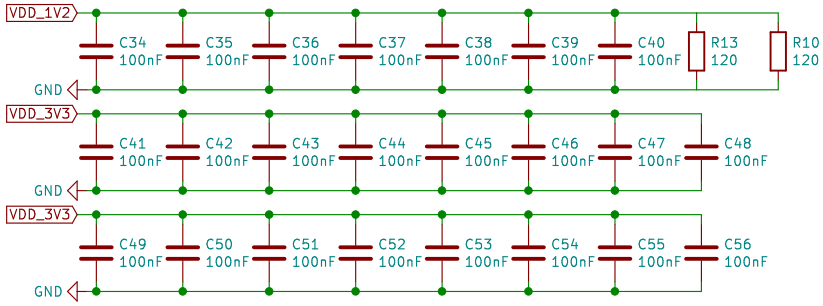

LAAS/CNRS

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Title: Open MOtor DRiver Initiative (OMODRI)

Size: A4	Date:	**Rev: 1.0**
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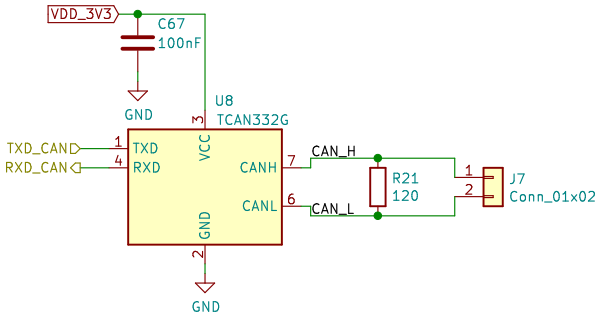

LAAS/CNRS

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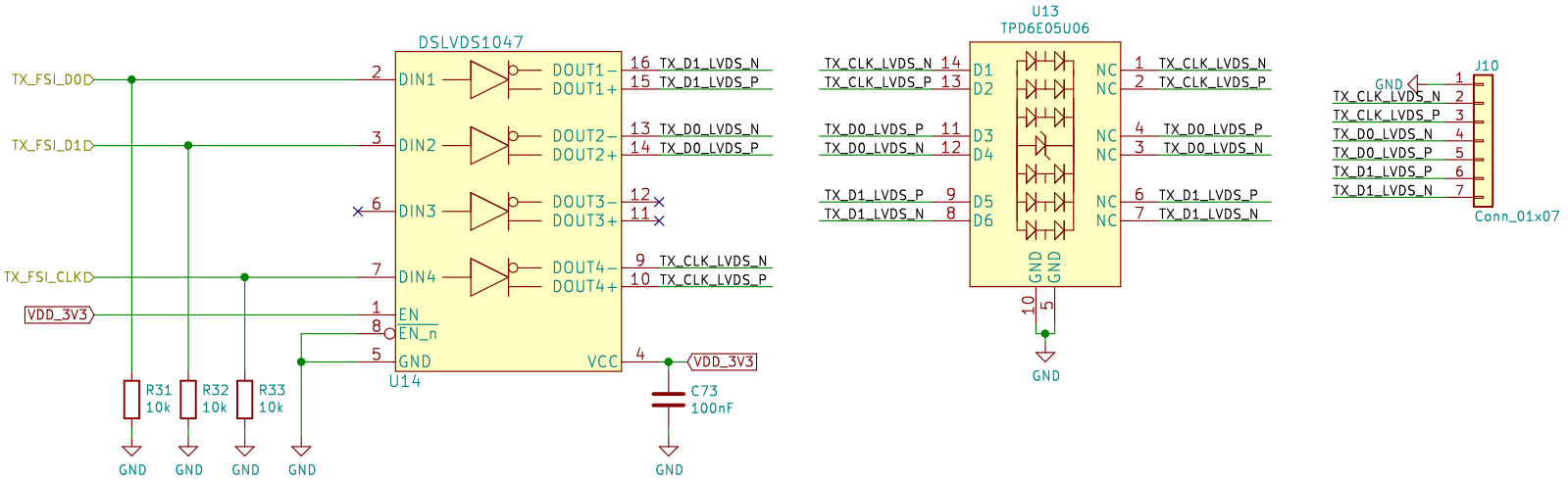
Title: Open MOtor DRiver Initiative (OMODRI)

Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.6)-1		Id: 8/19



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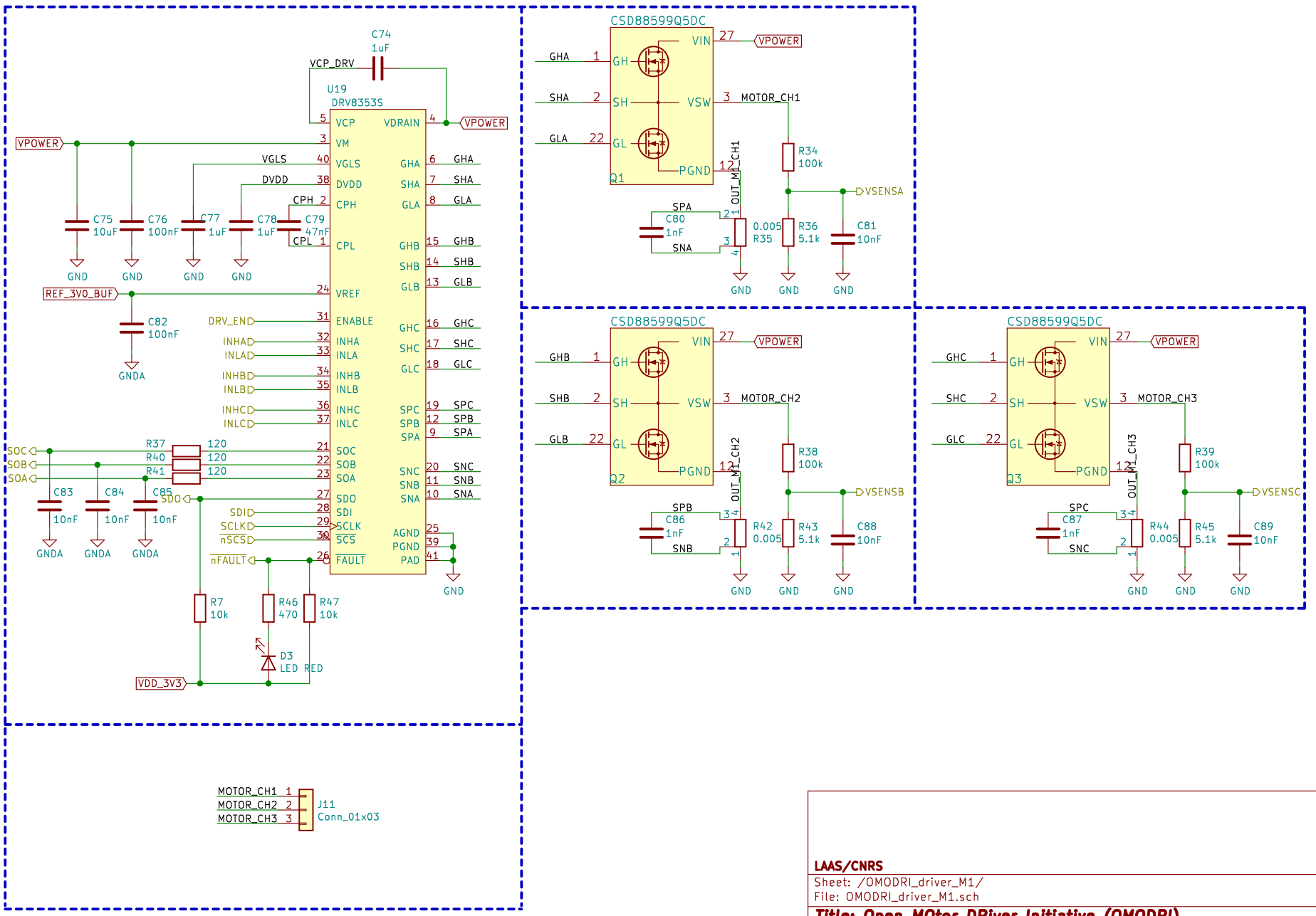
Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad (5.1.6)-1		Id: 9/19



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Size: A4	Date:	**Rev: 1.0**
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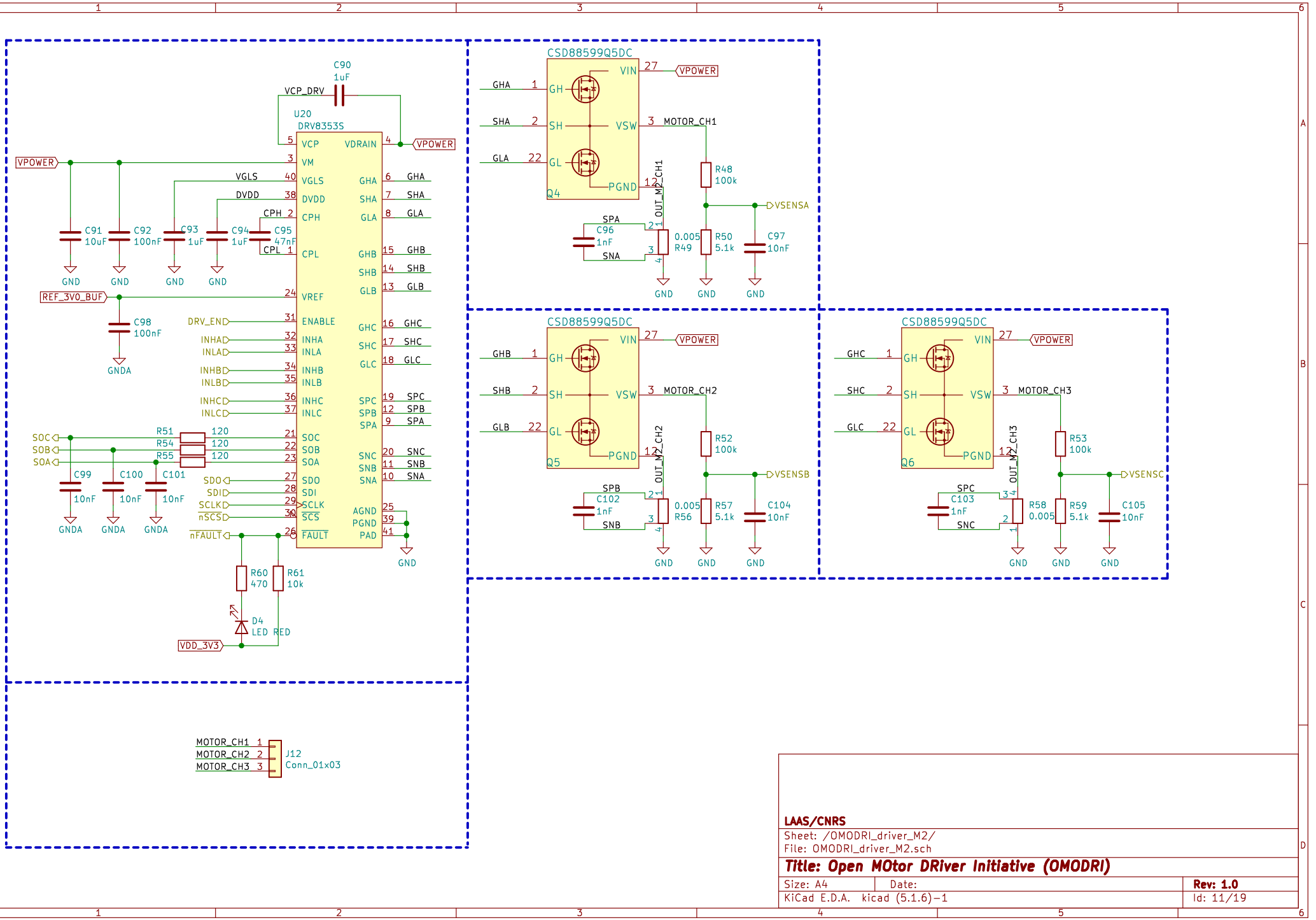
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U20
DRV8353S
VCP
VDRAIN
VPOWER
VM
VGLS
DVDD
CPH
CPL
VREF
ENABLE
INHA
INLA
INHB
INLB
INHC
INLC
SOC
SOB
SOA
SDO
SDI
SCLK
SCS
FAULT
GHA
SHA
GLA
GHB
SHB
GLB
GHC
SHC
GLC
SPC
SPB
SPA
SNC
SNB
SNA
AGND
PGND
PAD
C91 10uF
C92 100nF
C93 1uF
C94 1uF
C95 47nF
C98 100nF
C99 10nF
C100 10nF
C101 10nF
R51 120
R54 120
R55 120
R60 470
R61 10k
D4
LED RED
VDD_3V3
REF_3V0_BUF
DRV_EN
nSCS
nFAULT
GND
GNDA
CSD88599Q5DC
Q4
Q5
Q6
VIN
VSW
PGND
MOTOR_CH1
MOTOR_CH2
MOTOR_CH3
OUT_M2_CH1
OUT_M2_CH2
OUT_M2_CH3
R48 100k
R49 0.005
R50 5.1k
C96 1nF
C97 10nF
R52 100k
R56 0.005
R57 5.1k
C102 1nF
C104 10nF
R53 100k
R58 0.005
R59 5.1k
C103 1nF
C105 10nF
VSENSA
VSENSB
VSENSC
J12
Conn_01x03
LAAS/CNRS
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File: OMODRI_driver_M2.sch
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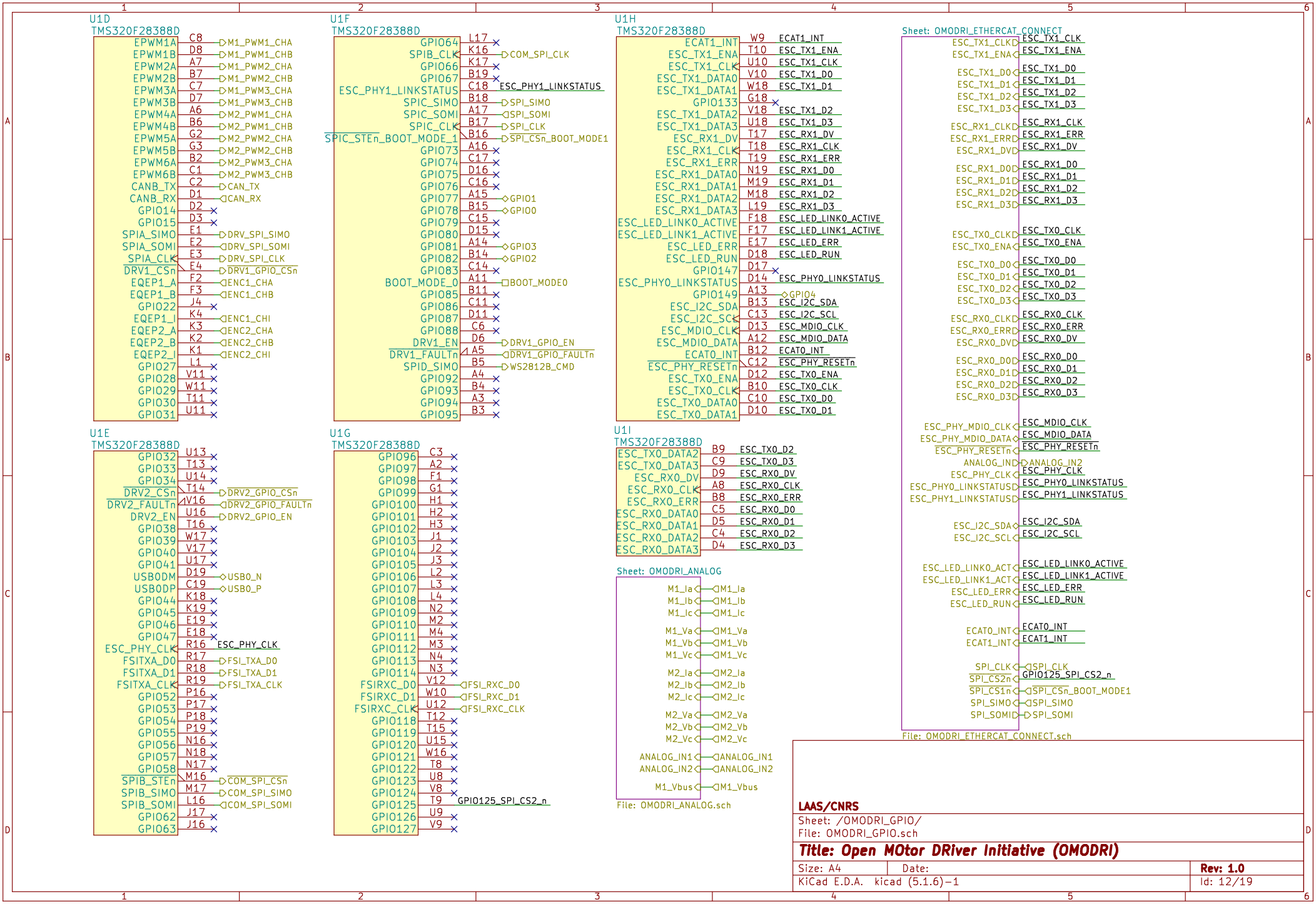
Date:
Rev: 1.0
KiCad E.D.A. kicad (5.1.6)-1
Id: 11/19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TMS320F28388D
EPWM1A C8 M1_PWM1_CHA
EPWM1B D8 M1_PWM1_CHB
EPWM2A A7 M1_PWM2_CHA
EPWM2B B7 M1_PWM2_CHB
EPWM3A C7 M1_PWM3_CHA
EPWM3B D7 M1_PWM3_CHB
EPWM4A A6 M2_PWM1_CHA
EPWM4B B6 M2_PWM1_CHB
EPWM5A G2 M2_PWM2_CHA
EPWM5B G3 M2_PWM2_CHB
EPWM6A B2 M2_PWM3_CHA
EPWM6B C1 M2_PWM3_CHB
CANB_TX C2 CAN_TX
CANB_RX D1 CAN_RX
GPIO14 D2
GPIO15 D3
SPIA_SIMO E1 DRV_SPI_SIMO
SPIA_SOMI E2 DRV_SPI_SOMI
SPIA_CLK E3 DRV_SPI_CLK
DRV1_CSn E4 DRV1_GPIO_CSn
EQEP1_A F2 ENC1_CHA
EQEP1_B F3 ENC1_CHB
GPIO22 J4
EQEP1_I K4 ENC1_CHI
EQEP2_A K3 ENC2_CHA
EQEP2_B K2 ENC2_CHB
EQEP2_I K1 ENC2_CHI
GPIO27 L1
GPIO28 V11
GPIO29 W11
GPIO30 T11
GPIO31 U11
U1F
TMS320F28388D
GPIO64 L17
SPIB_CLK K16 COM_SPI_CLK
GPIO66 K17
GPIO67 B19
ESC_PHY1_LINKSTATUS C18 ESC_PHY1_LINKSTATUS
SPIC_SIMO B18 SPI_SIMO
SPIC_SOMI A17 SPI_SOMI
SPIC_CLK B17 SPI_CLK
SPIC_STEn_BOOT_MODE_1 B16 SPI_CSn_BOOT_MODE1
GPIO73 A16
GPIO74 C17
GPIO75 D16
GPIO76 C16
GPIO77 A15 GPIO1
GPIO78 B15 GPIO0
GPIO79 C15
GPIO80 D15
GPIO81 A14 GPIO3
GPIO82 B14 GPIO2
GPIO83 C14
BOOT_MODE_0 A11 BOOT_MODE0
GPIO85 B11
GPIO86 C11
GPIO87 D11
GPIO88 C6
DRV1_EN D6 DRV1_GPIO_EN
DRV1_FAULTn A5 DRV1_GPIO_FAULTn
SPID_SIMO B5 WS2812B_CMD
GPIO92 A4
GPIO93 B4
GPIO94 A3
GPIO95 B3
U1H
TMS320F28388D
ECAT1_INT W9 ECAT1_INT
ESC_TX1_ENA T10 ESC_TX1_ENA
ESC_TX1_CLK U10 ESC_TX1_CLK
ESC_TX1_DATA0 V10 ESC_TX1_D0
ESC_TX1_DATA1 W18 ESC_TX1_D1
GPIO133 G18
ESC_TX1_DATA2 V18 ESC_TX1_D2
ESC_TX1_DATA3 U18 ESC_TX1_D3
ESC_RX1_DV T17 ESC_RX1_DV
ESC_RX1_CLK T18 ESC_RX1_CLK
ESC_RX1_ERR T19 ESC_RX1_ERR
ESC_RX1_DATA0 N19 ESC_RX1_D0
ESC_RX1_DATA1 M19 ESC_RX1_D1
ESC_RX1_DATA2 M18 ESC_RX1_D2
ESC_RX1_DATA3 L19 ESC_RX1_D3
ESC_LED_LINK0_ACTIVE F18 ESC_LED_LINK0_ACTIVE
ESC_LED_LINK1_ACTIVE F17 ESC_LED_LINK1_ACTIVE
ESC_LED_ERR E17 ESC_LED_ERR
ESC_LED_RUN D18 ESC_LED_RUN
GPIO147 D17
ESC_PHY0_LINKSTATUS D14 ESC_PHY0_LINKSTATUS
GPIO149 A13 GPIO4
ESC_I2C_SDA B13 ESC_I2C_SDA
ESC_I2C_SCL C13 ESC_I2C_SCL
ESC_MDIO_CLK D13 ESC_MDIO_CLK
ESC_MDIO_DATA A12 ESC_MDIO_DATA
ECAT0_INT B12 ECAT0_INT
ESC_PHY_RESETn C12 ESC_PHY_RESETn
ESC_TX0_ENA D12 ESC_TX0_ENA
ESC_TX0_CLK B10 ESC_TX0_CLK
ESC_TX0_DATA0 C10 ESC_TX0_D0
ESC_TX0_DATA1 D10 ESC_TX0_D1
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ESC_TX1_CLK ESC_TX1_CLK
ESC_TX1_ENA ESC_TX1_ENA
ESC_TX1_D0 ESC_TX1_D0
ESC_TX1_D1 ESC_TX1_D1
ESC_TX1_D2 ESC_TX1_D2
ESC_TX1_D3 ESC_TX1_D3
ESC_RX1_CLK ESC_RX1_CLK
ESC_RX1_ERR ESC_RX1_ERR
ESC_RX1_DV ESC_RX1_DV
ESC_RX1_D0 ESC_RX1_D0
ESC_RX1_D1 ESC_RX1_D1
ESC_RX1_D2 ESC_RX1_D2
ESC_RX1_D3 ESC_RX1_D3
ESC_TX0_CLK ESC_TX0_CLK
ESC_TX0_ENA ESC_TX0_ENA
ESC_TX0_D0 ESC_TX0_D0
ESC_TX0_D1 ESC_TX0_D1
ESC_TX0_D2 ESC_TX0_D2
ESC_TX0_D3 ESC_TX0_D3
ESC_RX0_CLK ESC_RX0_CLK
ESC_RX0_ERR ESC_RX0_ERR
ESC_RX0_DV ESC_RX0_DV
ESC_RX0_D0 ESC_RX0_D0
ESC_RX0_D1 ESC_RX0_D1
ESC_RX0_D2 ESC_RX0_D2
ESC_RX0_D3 ESC_RX0_D3
ESC_PHY_MDIO_CLK ESC_MDIO_CLK
ESC_PHY_MDIO_DATA ESC_MDIO_DATA
ESC_PHY_RESETn ESC_PHY_RESETn
ANALOG_IN2 ANALOG_IN2
ESC_PHY_CLK ESC_PHY_CLK
ESC_PHY0_LINKSTATUS ESC_PHY0_LINKSTATUS
ESC_PHY1_LINKSTATUS ESC_PHY1_LINKSTATUS
ESC_I2C_SDA ESC_I2C_SDA
ESC_I2C_SCL ESC_I2C_SCL
ESC_LED_LINK0_ACT ESC_LED_LINK0_ACTIVE
ESC_LED_LINK1_ACT ESC_LED_LINK1_ACTIVE
ESC_LED_ERR ESC_LED_ERR
ESC_LED_RUN ESC_LED_RUN
ECAT0_INT ECAT0_INT
ECAT1_INT ECAT1_INT
SPI_CLK SPI_CLK
SPI_CS2n GPIO125_SPI_CS2_n
SPI_CS1n SPI_CSn_BOOT_MODE1
SPI_SIMO SPI_SIMO
SPI_SOMI SPI_SOMI
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U1E
TMS320F28388D
GPIO32 U13
GPIO33 T13
GPIO34 U14
DRV2_CSn T14 DRV2_GPIO_CSn
DRV2_FAULTn V16 DRV2_GPIO_FAULTn
DRV2_EN U16 DRV2_GPIO_EN
GPIO38 T16
GPIO39 W17
GPIO40 V17
GPIO41 U17
USB0DM D19 USB0_N
USB0DP C19 USB0_P
GPIO44 K18
GPIO45 K19
GPIO46 E19
GPIO47 E18
ESC_PHY_CLK R16 ESC_PHY_CLK
FSITXA_D0 R17 FSI_TXA_D0
FSITXA_D1 R18 FSI_TXA_D1
FSITXA_CLK R19 FSI_TXA_CLK
GPIO52 P16
GPIO53 P17
GPIO54 P18
GPIO55 P19
GPIO56 N16
GPIO57 N18
GPIO58 N17
SPIB_STEn M16 COM_SPI_CSn
SPIB_SIMO M17 COM_SPI_SIMO
SPIB_SOMI L16 COM_SPI_SOMI
GPIO62 J17
GPIO63 J16
U1G
TMS320F28388D
GPIO96 C3
GPIO97 A2
GPIO98 F1
GPIO99 G1
GPIO100 H1
GPIO101 H2
GPIO102 H3
GPIO103 J1
GPIO104 J2
GPIO105 J3
GPIO106 L2
GPIO107 L3
GPIO108 L4
GPIO109 N2
GPIO110 M2
GPIO111 M4
GPIO112 M3
GPIO113 N4
GPIO114 N3
FSIRXC_D0 V12 FSI_RXC_D0
FSIRXC_D1 W10 FSI_RXC_D1
FSIRXC_CLK U12 FSI_RXC_CLK
GPIO118 T12
GPIO119 T15
GPIO120 U15
GPIO121 W16
GPIO122 T8
GPIO123 U8
GPIO124 V8
GPIO125 T9 GPIO125_SPI_CS2_n
GPIO126 U9
GPIO127 V9
U1I
TMS320F28388D
ESC_TX0_DATA2 B9 ESC_TX0_D2
ESC_TX0_DATA3 C9 ESC_TX0_D3
ESC_RX0_DV D9 ESC_RX0_DV
ESC_RX0_CLK A8 ESC_RX0_CLK
ESC_RX0_ERR B8 ESC_RX0_ERR
ESC_RX0_DATA0 C5 ESC_RX0_D0
ESC_RX0_DATA1 D5 ESC_RX0_D1
ESC_RX0_DATA2 C4 ESC_RX0_D2
ESC_RX0_DATA3 D4 ESC_RX0_D3
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M1_Ia M1_Ia
M1_Ib M1_Ib
M1_Ic M1_Ic
M1_Va M1_Va
M1_Vb M1_Vb
M1_Vc M1_Vc
M2_Ia M2_Ia
M2_Ib M2_Ib
M2_Ic M2_Ic
M2_Va M2_Va
M2_Vb M2_Vb
M2_Vc M2_Vc
ANALOG_IN1 ANALOG_IN1
ANALOG_IN2 ANALOG_IN2
M1_Vbus M1_Vbus
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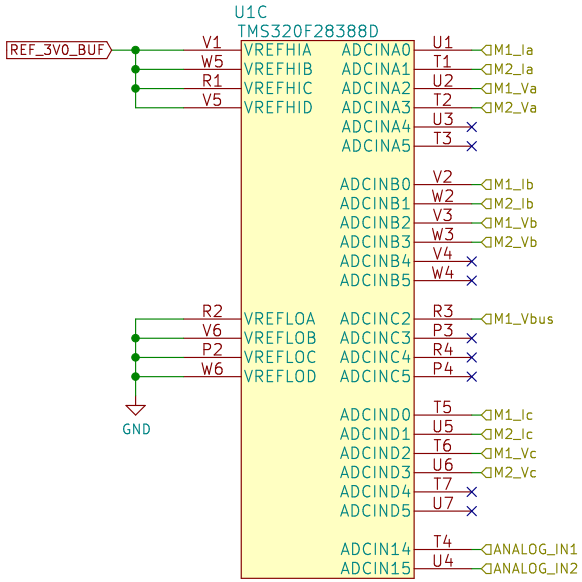
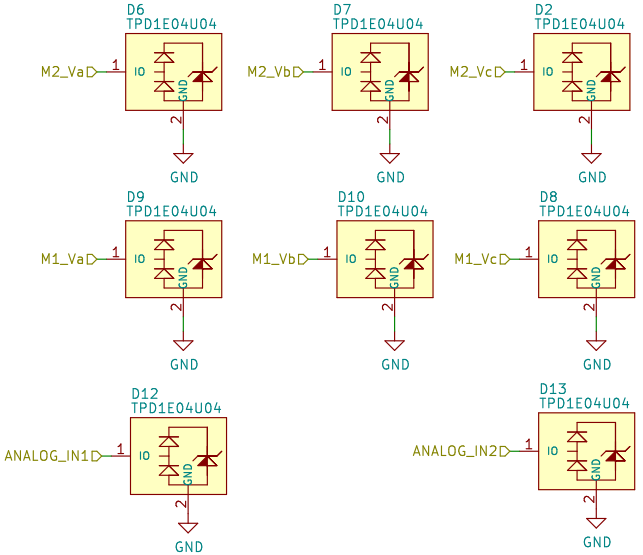
Size: A4
Date:
Rev: 1.0
KiCad E.D.A. kicad (5.1.6)-1
Id: 12/19





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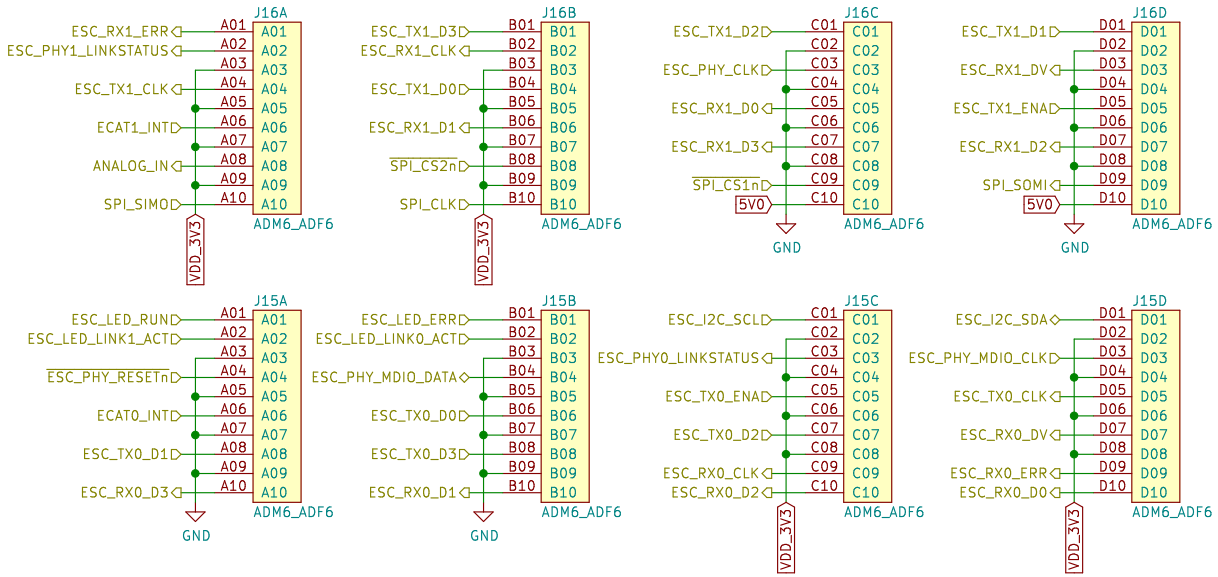

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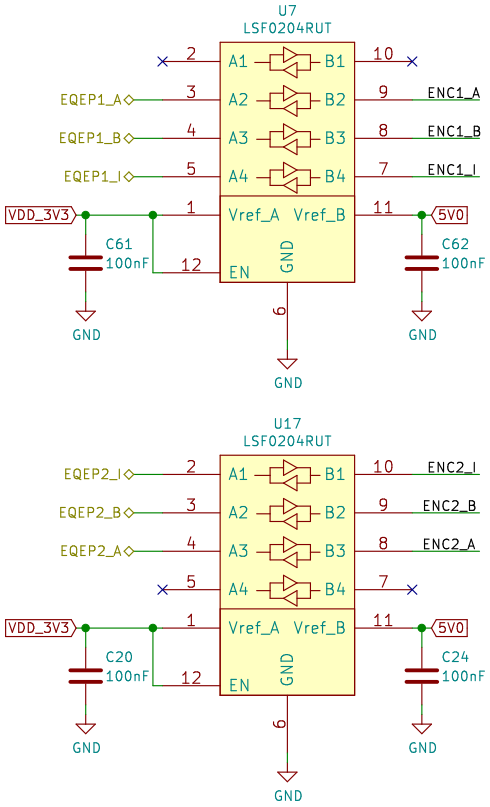

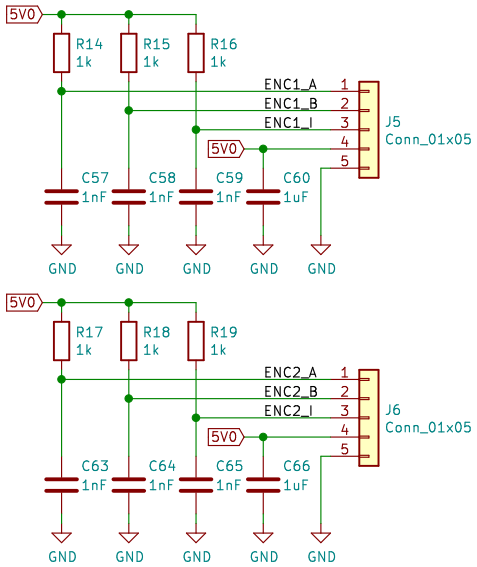

LAAS/CNRS		
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Size: A4	Date:	**Rev: 1.0**
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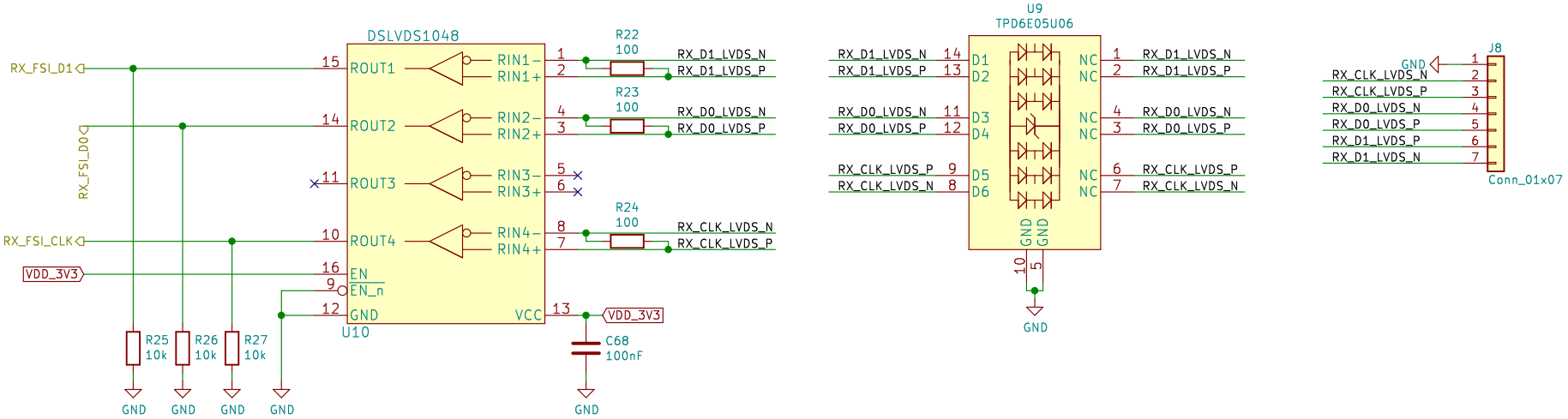

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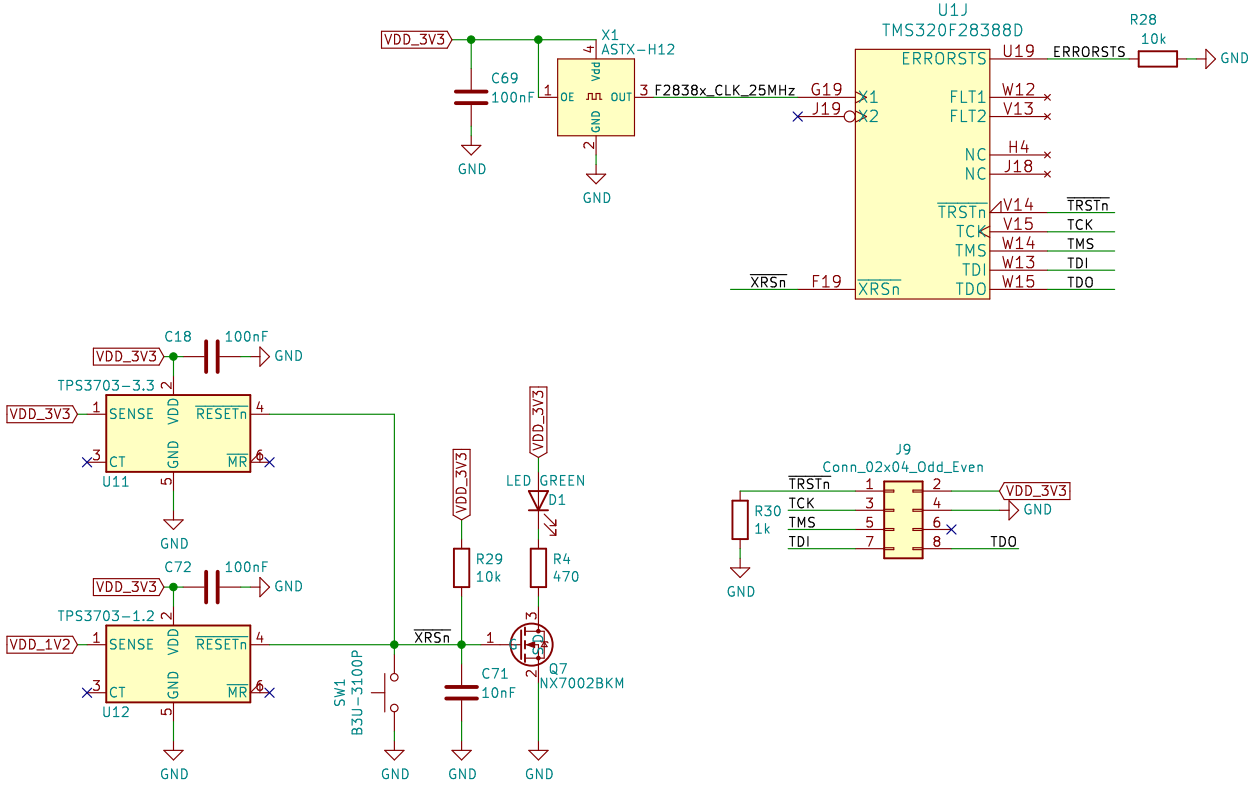

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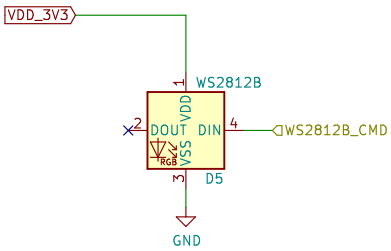
KiCad E.D.A. kicad (5.1.6)-1		Id: 17/19



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Size: A4	Date:	**Rev: 1.0**
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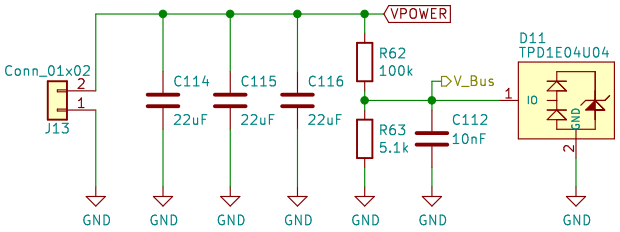

LAAS/CNRS		
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Size: A4	Date:	**Rev: 1.0**
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