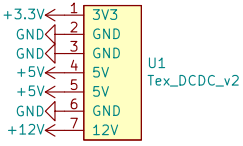
CAN POWER CONNECTORS

DCDC



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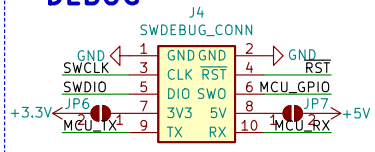
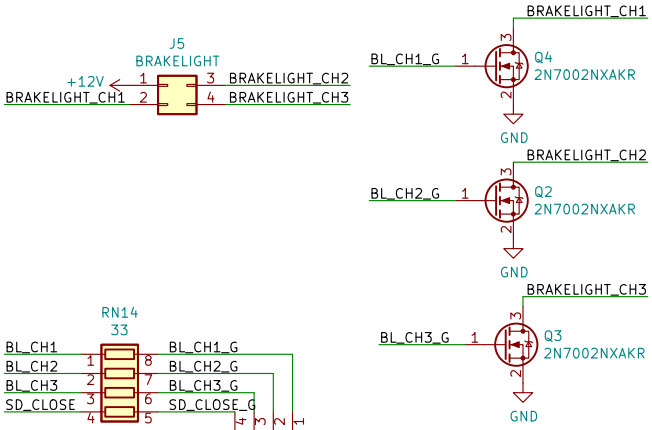
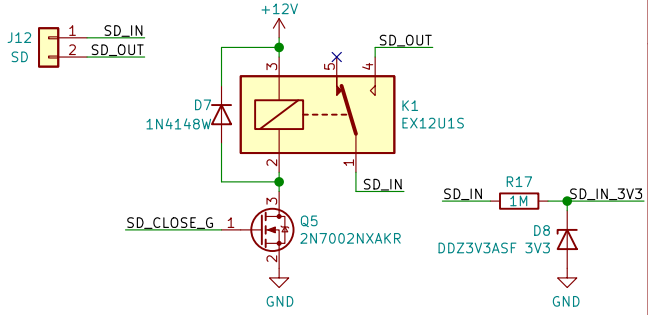
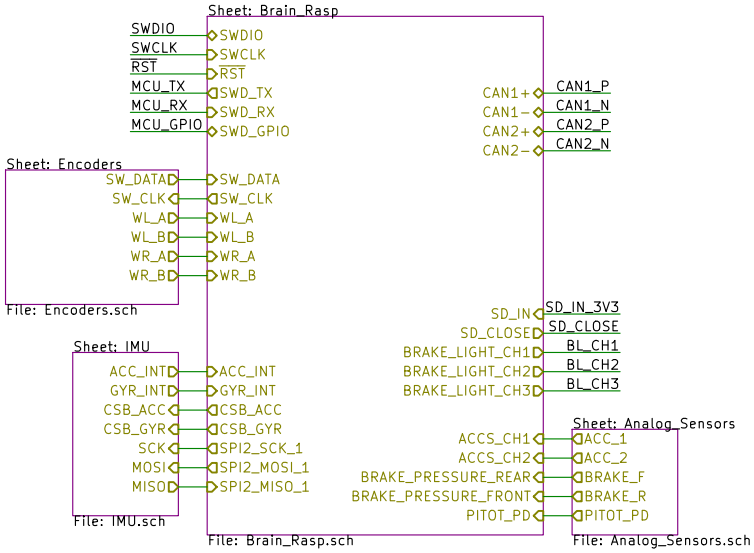


BRAKELIGHT



SHUTDOWN





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Title: DAS+ECU

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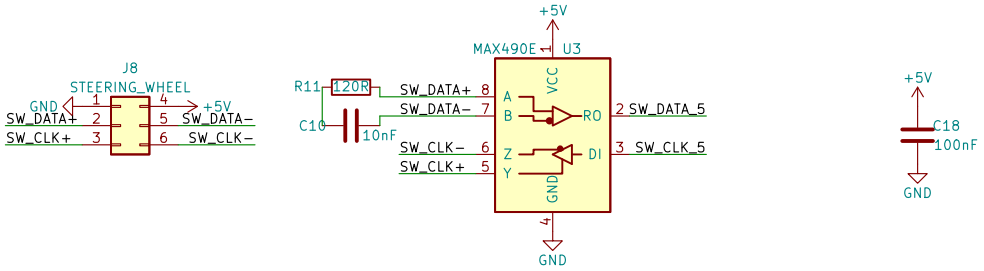
Steering Wheel Encoder

NOTE: The wires need to be connected to their opposite counterpart on the board, otherwise the encoder doesn't work.

The Clock+ (white) and Clock− (brown) wires need to be connected to SW_CLK− and SW_CLK+ respectively.
The Data+ (green) and Data− (yellow) wires need to be connected to SW_DATA− and SW_DATA+ respectively.

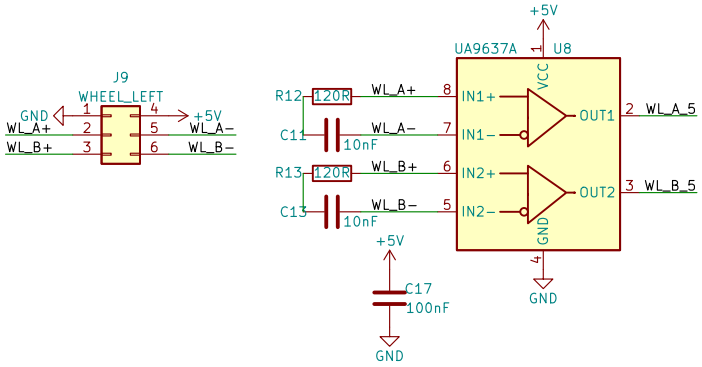
Steering Wheel Encoder:
RLS RM44SC0012B10F2F10

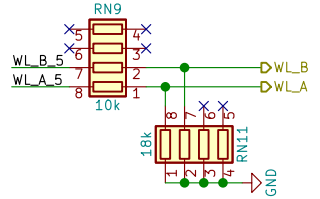
Cable:
−Vdd: Red
−GND: Blue
−Clock+: White
−Clock−: Brown
−Data+: Green
−Data−: Yellow

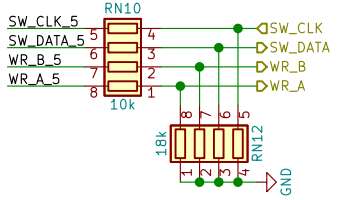


LEFT WHEEL ENCODER

Radial incremental magnetic rings:
RLS MR075E060A120B00
−outer diameter: 57mm
−cross section height: 10mm
−radial magnetisation
−inner diameter: 85mm
−with reference mark
−number of poles: 120



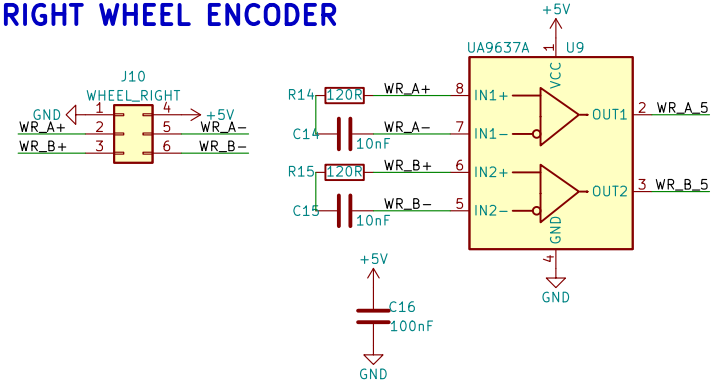




Wheel Encoder:
RLS LM13ICD40AB10F00
−RS422
−interpolation factor: 400

Cable:
−5V: Brown
−GND: White
−A+: Green
−A−: Yellow
−B+: Blue
−B−: Red

RIGHT WHEEL ENCODER



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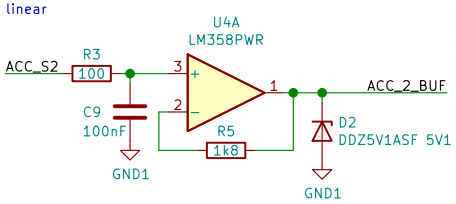
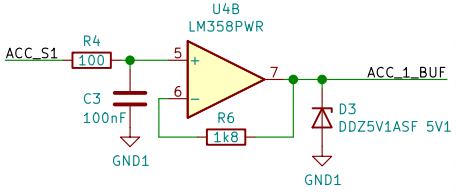
ACCELERATOR

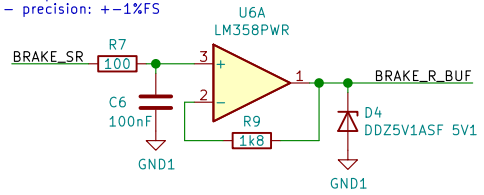
Accelerator potentiometer:
Aviorace DIA95-25
- resistance: 1.7kOhm
- linear

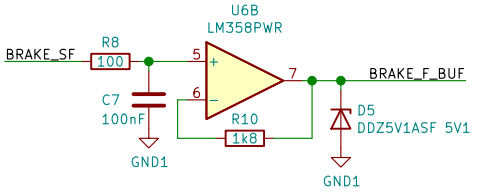


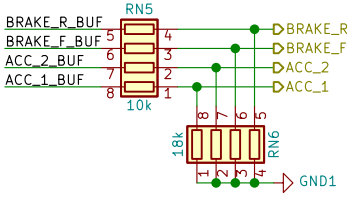


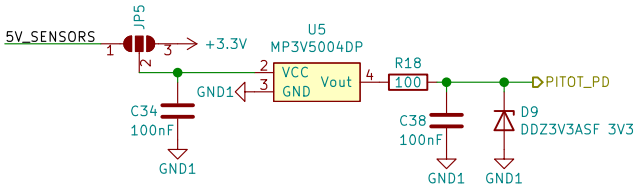
BRAKES

Brake pressure transducers:
Aviorace SP100
- ratiometric
- input: 0-100 bar
- output: 0.5-4.5 V
- precision: +-1%FS





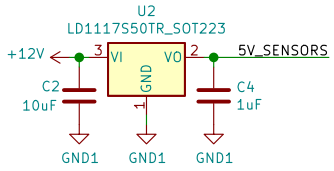


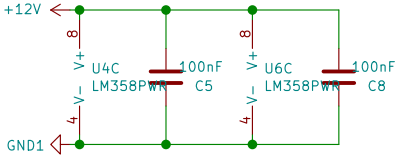


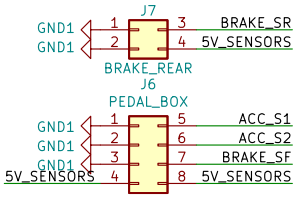
POWER

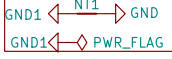
Output current @5V:
- Brake transducers: 2x5.5mA=11mA
- Accelerator potentiometers: 2x3mA=6mA

Power dissipated: 0.12W









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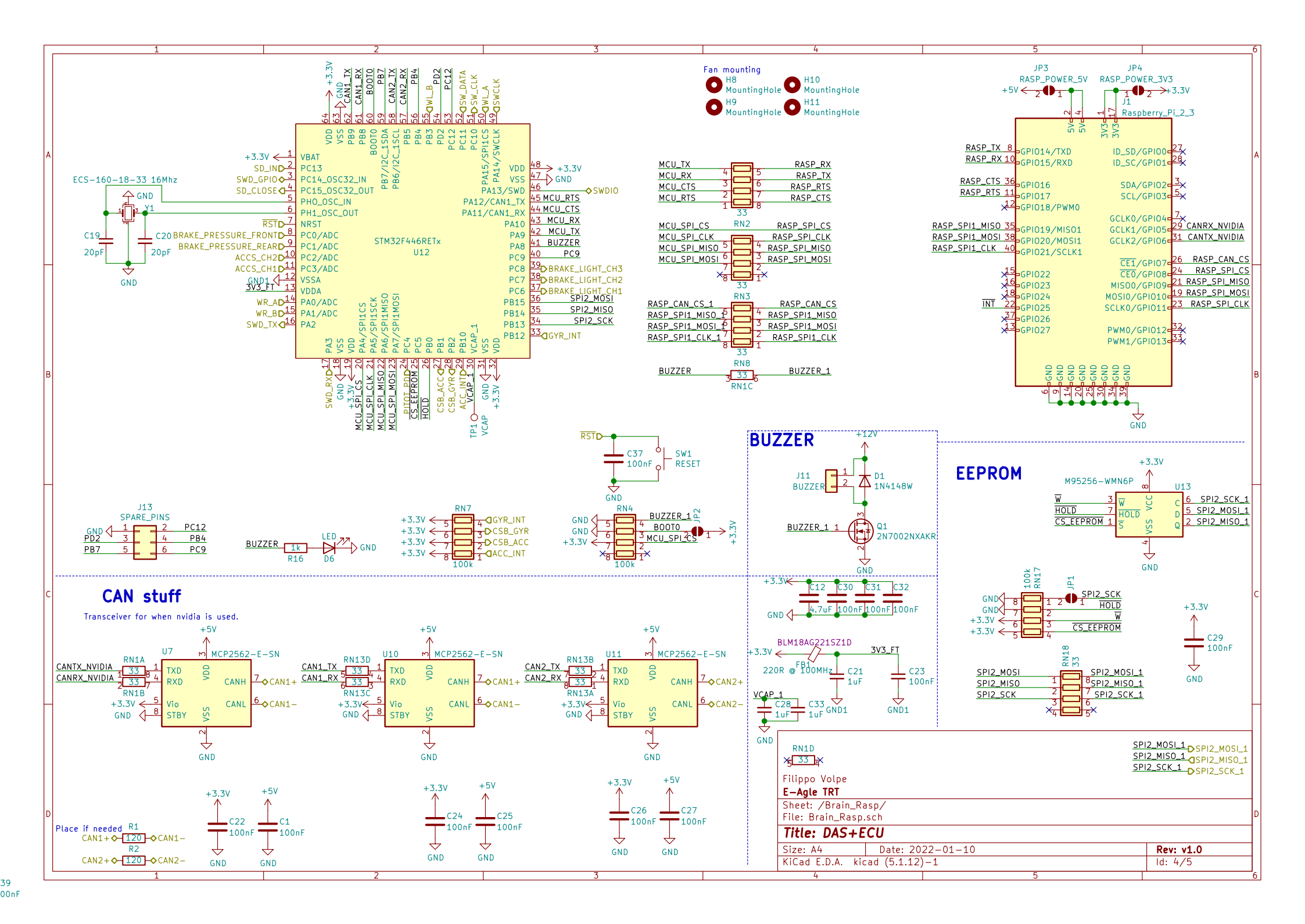
Fan mounting
H8 MountingHole
H9 MountingHole
H10 MountingHole
H11 MountingHole
STM32F446RETx
U12
ECS-160-18-33 16Mhz
Y1
C19 20pF
C20 20pF
BRAKE_PRESSURE_FRONT
BRAKE_PRESSURE_REAR
ACCS_CH2
ACCS_CH1
SWD_GPIO
SD_CLOSE
SD_IN
RST
GND1
3V3_FT
WR_A
WR_B
SWD_TX
SWDIO
BUZZER
BRAKE_LIGHT_CH3
BRAKE_LIGHT_CH2
BRAKE_LIGHT_CH1
SPI2_MOSI
SPI2_MISO
SPI2_SCK
GYR_INT
MCU_TX
MCU_RX
MCU_CTS
MCU_RTS
MCU_SPI_CS
MCU_SPI_CLK
MCU_SPI_MISO
MCU_SPI_MOSI
RASP_CAN_CS_1
RASP_SPI1_MISO_1
RASP_SPI1_MOSI_1
RASP_SPI1_CLK_1
BUZZER_1
JP3 RASP_POWER_5V
JP4 RASP_POWER_3V3
J1 Raspberry_Pi_2_3
RASP_TX
RASP_RX
RASP_CTS
RASP_RTS
RASP_SPI1_MISO
RASP_SPI1_MOSI
RASP_SPI1_CLK
INT
RASP_CAN_CS
RASP_SPI_CS
RASP_SPI_MISO
RASP_SPI_MOSI
RASP_SPI_CLK
CANRX_NVIDIA
CANTX_NVIDIA
J13 SPARE_PINS
LED
D6
R16 1k
C37 100nF
SW1 RESET
BUZZER
J11 BUZZER
D1 1N4148W
Q1 2N7002NXAKR
BUZZER_1
BOOT0
JP2
EEPROM
M95256-WMN6P
U13
W
HOLD
CS_EEPROM
SPI2_SCK_1
SPI2_MOSI_1
SPI2_MISO_1
JP1
SPI2_SCK
SPI2_MOSI
SPI2_MISO
CAN stuff
Transceiver for when nvidia is used.
MCP2562-E-SN
U7
U10
U11
CANH
CANL
CAN1+
CAN1-
CAN2+
CAN2-
TXD
RXD
Vio
STBY
VSS
VDD
Place if needed
R1 120
R2 120
C22 100nF
C1 100nF
C24 100nF
C25 100nF
C26 100nF
C27 100nF
C12 4.7uF
C30 100nF
C31 100nF
C32 100nF
BLM18AG221SZ1D
FB1 220R @ 100MHz
C21 1uF
C23 100nF
C28 1uF
C33 1uF
C29 100nF
VCAP_1
3V3_FT
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Rev: v1.0
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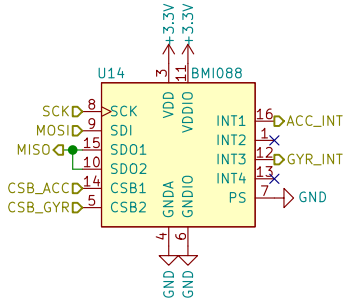

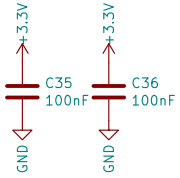

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