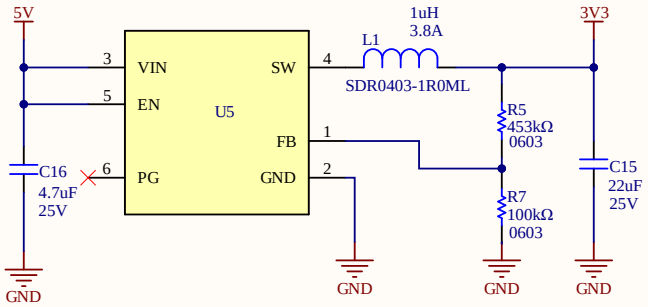
# 5V - 3.3V Buck Converter

Designed for 3.3V - 5V input

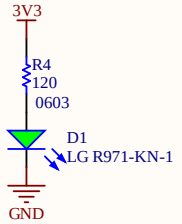
**Route for 1A in**

Inductor: SDR0403-1R0ML
1uH, 20%, 33mOhm DCR (max)
3.8A (rms), 5.5A (sat), 3.2mm tall

**Route for 3A out**



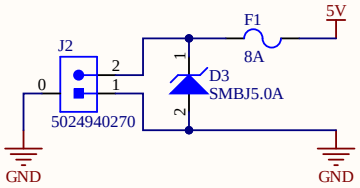

Maximum output current = 2A
Maximum output power = 6.6W
Expected efficiency at 1A = 94.3%



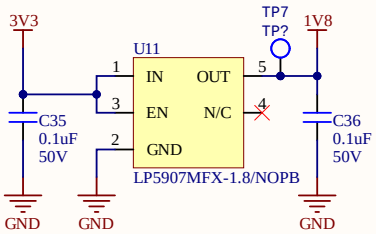

Current Calculations

Green LED voltage drop: 2.2V
- I = (3.3-2.2V)/120 = 10.83mA

## Power In




## 3.3V to 1.8V LDO

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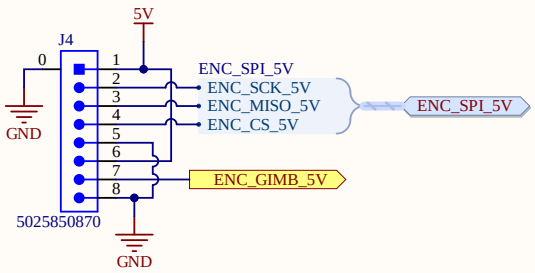
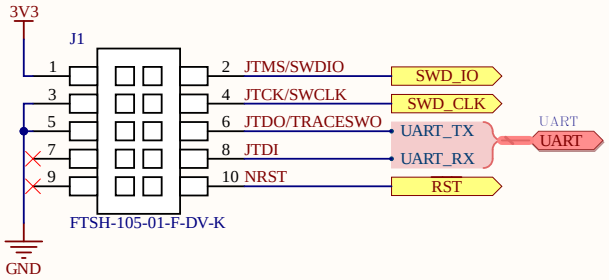
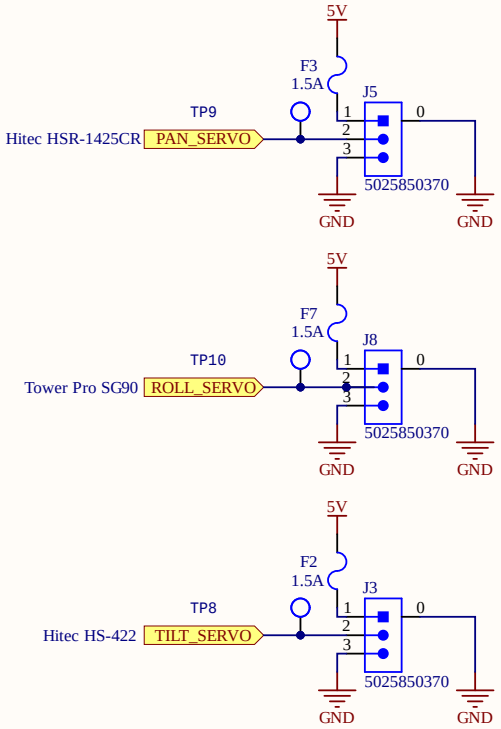
# Encoder



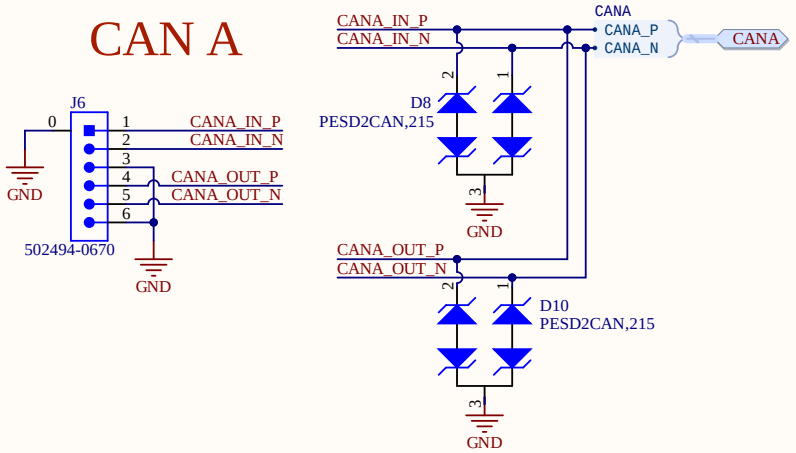

# Debug/Programming



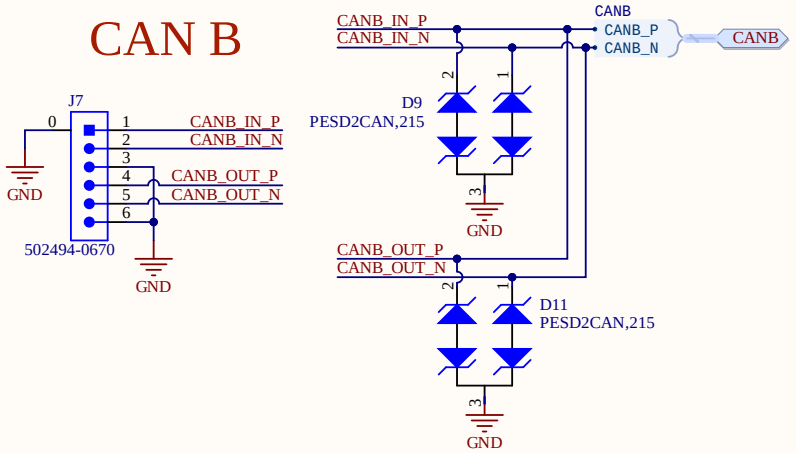

# 3-Axis Servos




# CAN A




# CAN B

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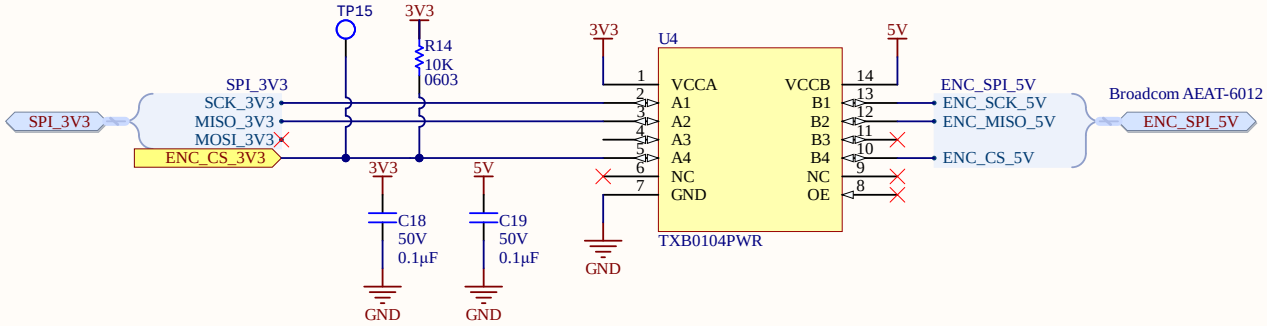
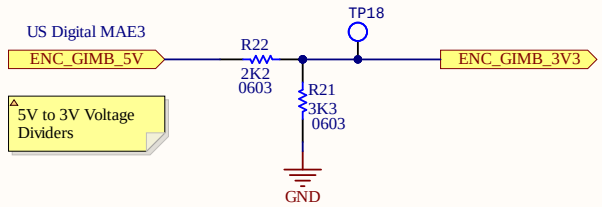
# SPI Encoder Level Shifter




# PWM Encoder Voltage Divider

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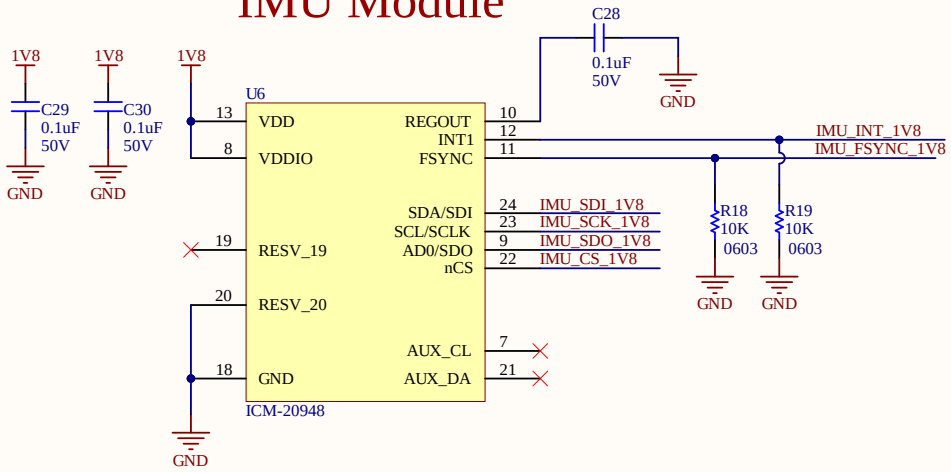
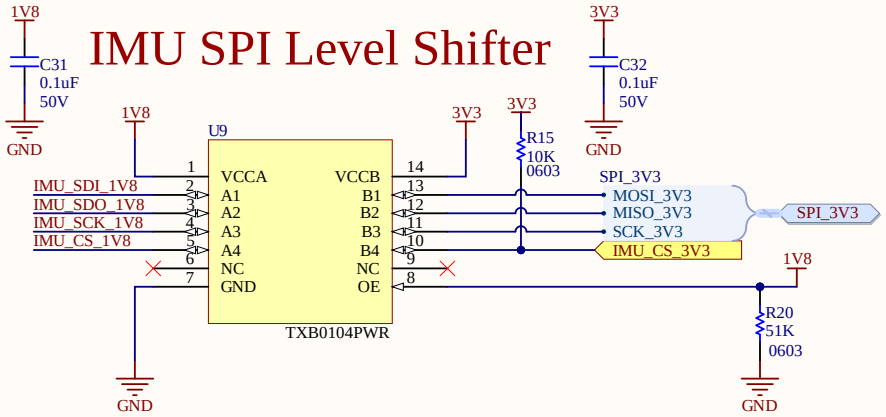
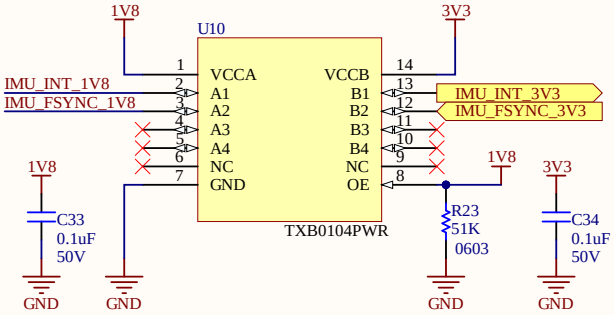
# IMU Module




# IMU SPI Level Shifter




# IMU Interrupts Level Shifter

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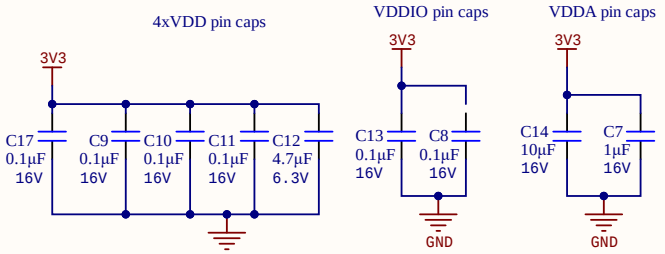
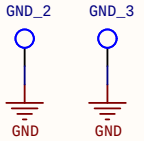
# Decoupling Caps




# STM32F446RET6




# GND Test Points




MOUNTING_HOLES

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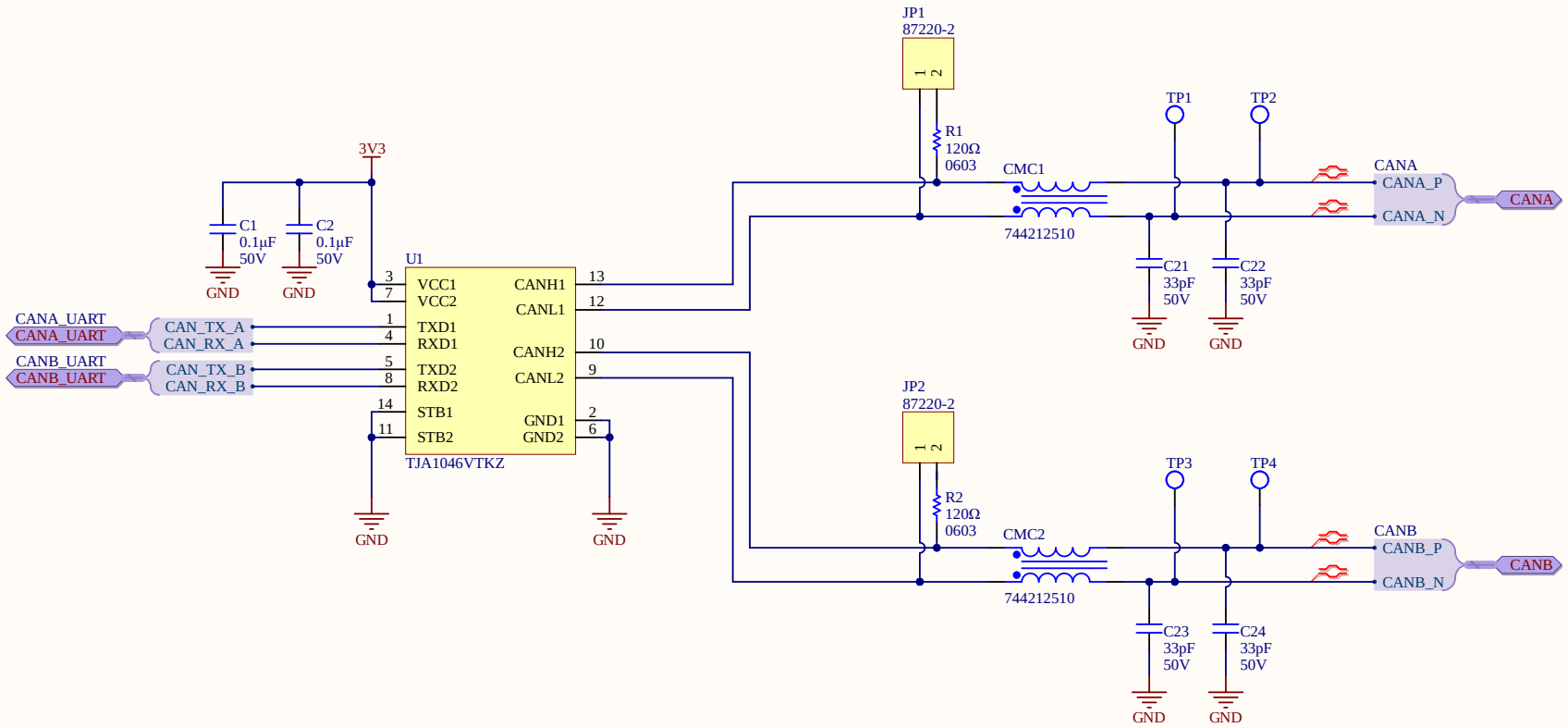
# CAN Transceivers

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