5V - 3.3V Buck Converter

Designed for 3.3V - 5V input

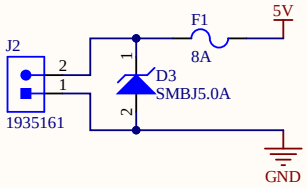
Route for 1A in

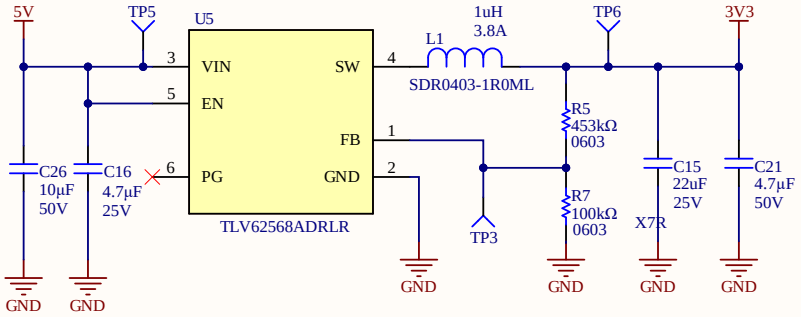
Inductor: SDR0403-1R0ML
1uH, 20%, 33mOhm DCR (max)
3.8A (rms), 5.5A (sat), 3.2mm tall

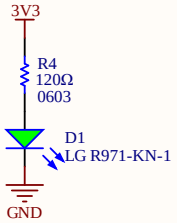
Maximum output current = 2A
Maximum output power = 6.6W
Expected efficiency at 1A = 94.3%

Route for 3A out

Power In







Current Calculations

Green LED voltage drop: 2.2V
- I = (3.3-2.2V)/120 = 9.17mA

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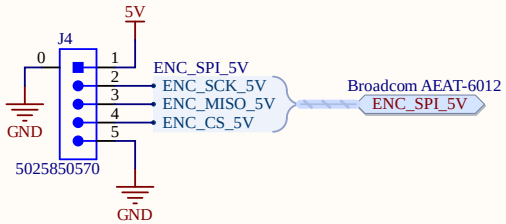
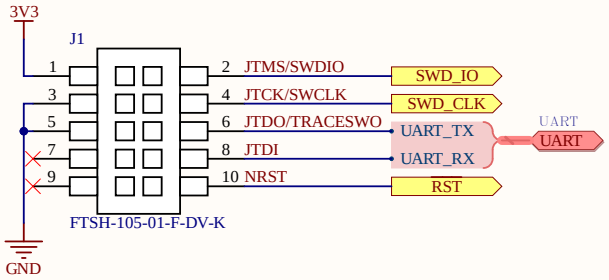
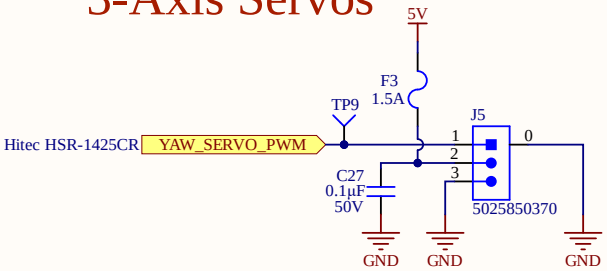
Encoder

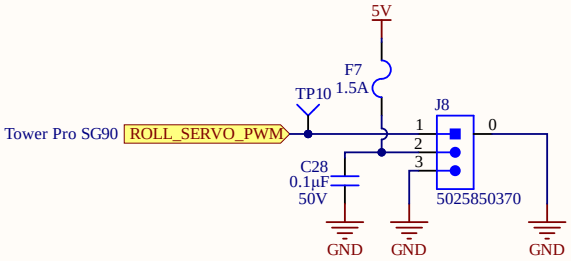


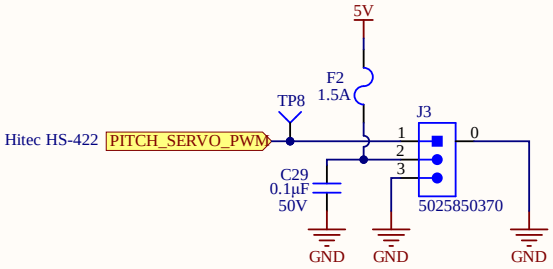
Debug/Programming



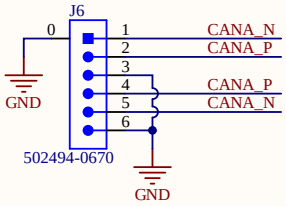
3-Axis Servos

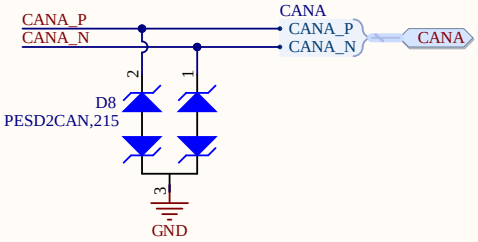




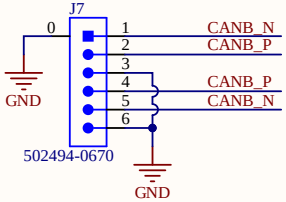


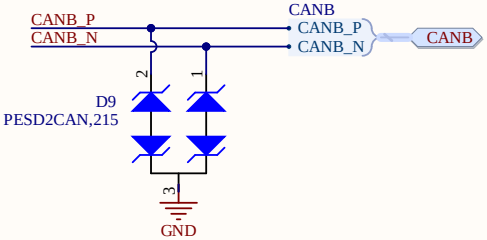
CAN BUS A





CAN BUS B





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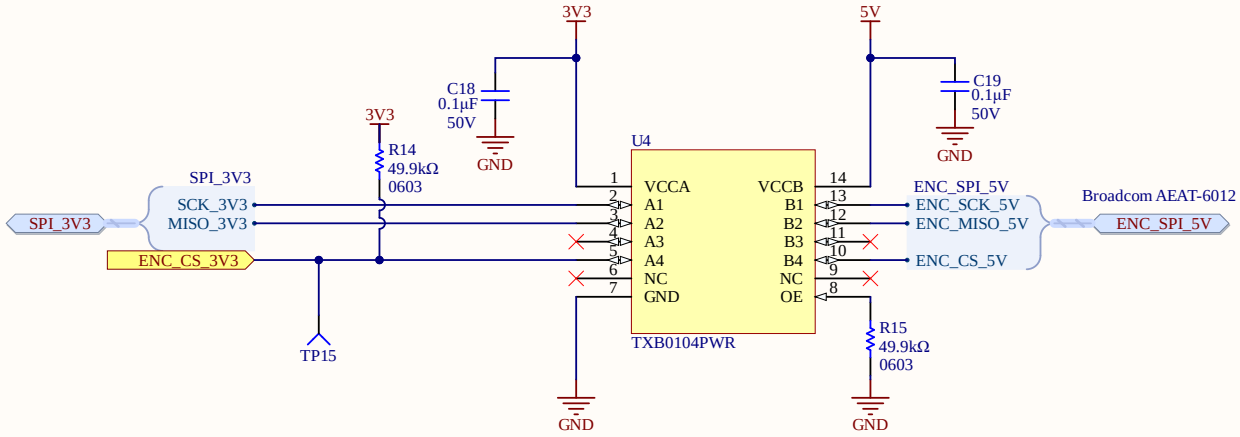
SPI Encoder Level Shifter



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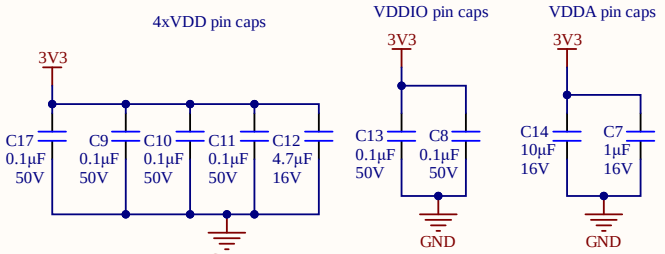
Decoupling Caps



STM32F446RET6

GND Test Point

MOUNTING_HOLES

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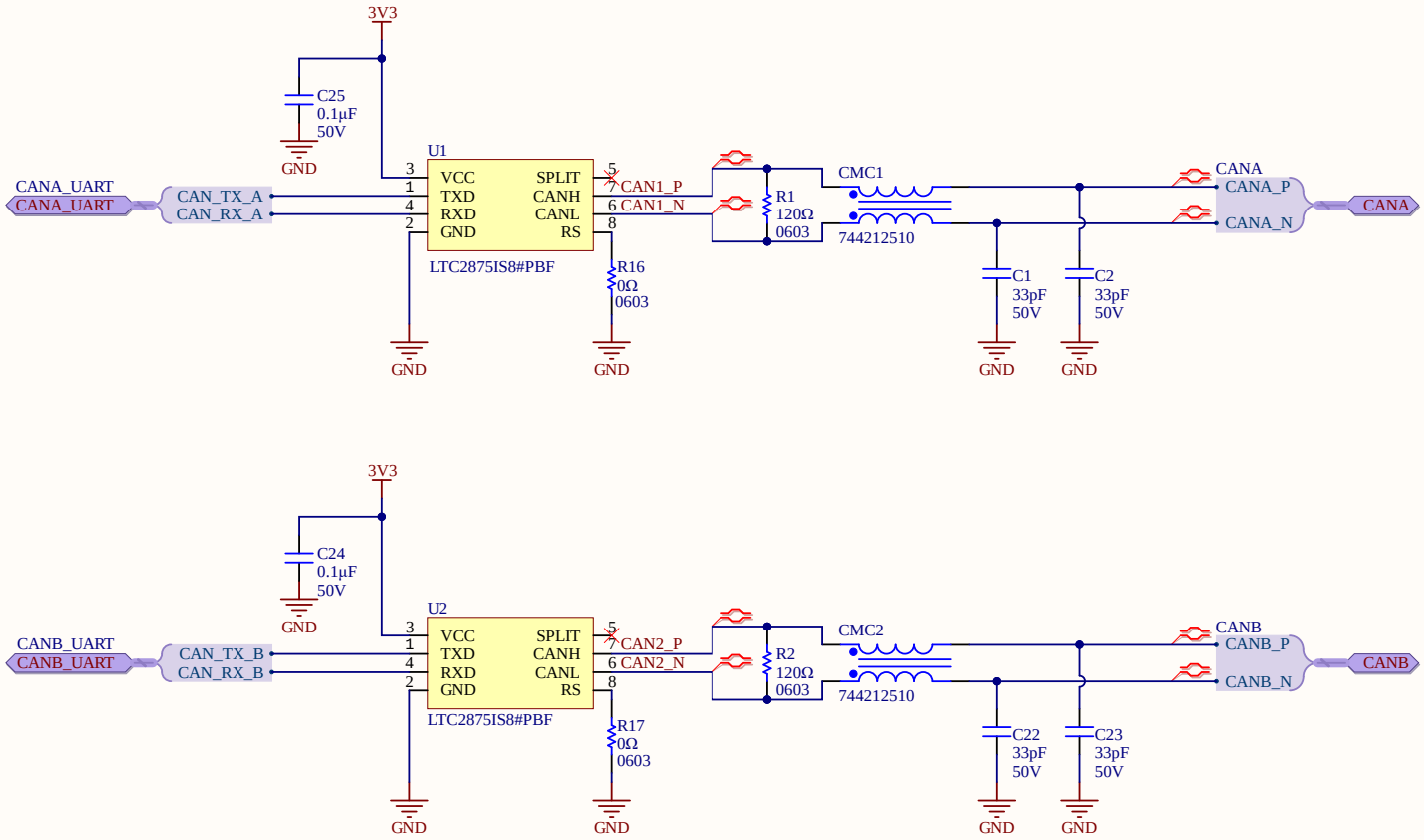
CAN Transceivers



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