

A

A

B

B

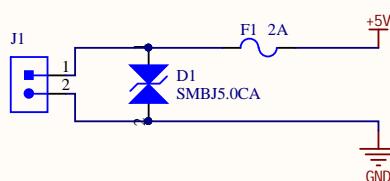
C

C

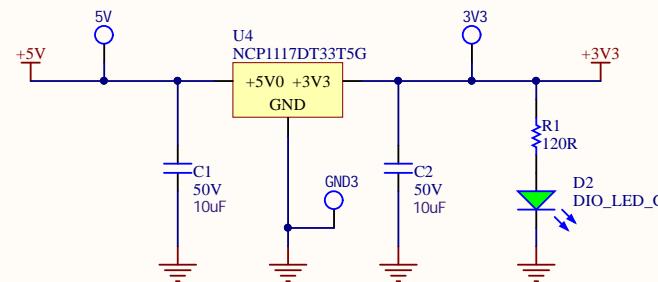
D

D

Power In

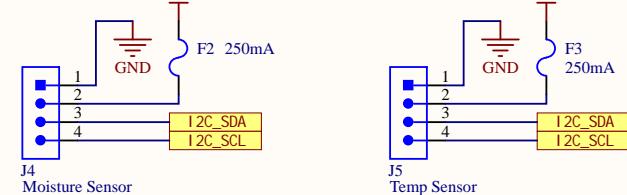
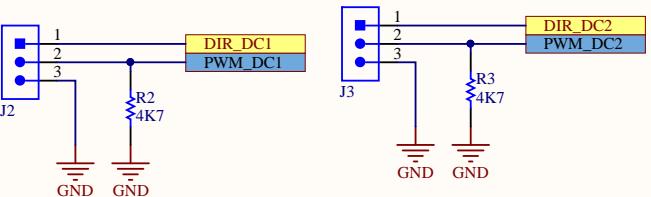


LDO Voltage Regulator

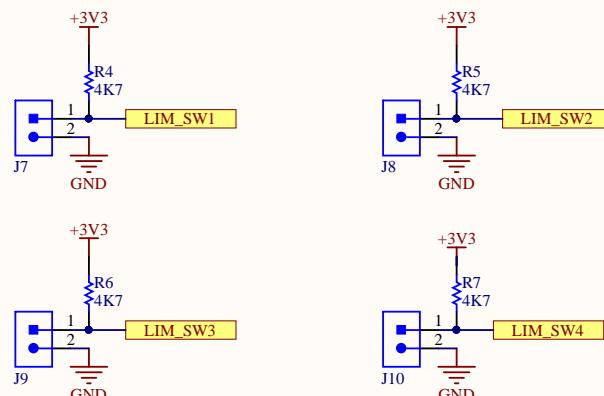
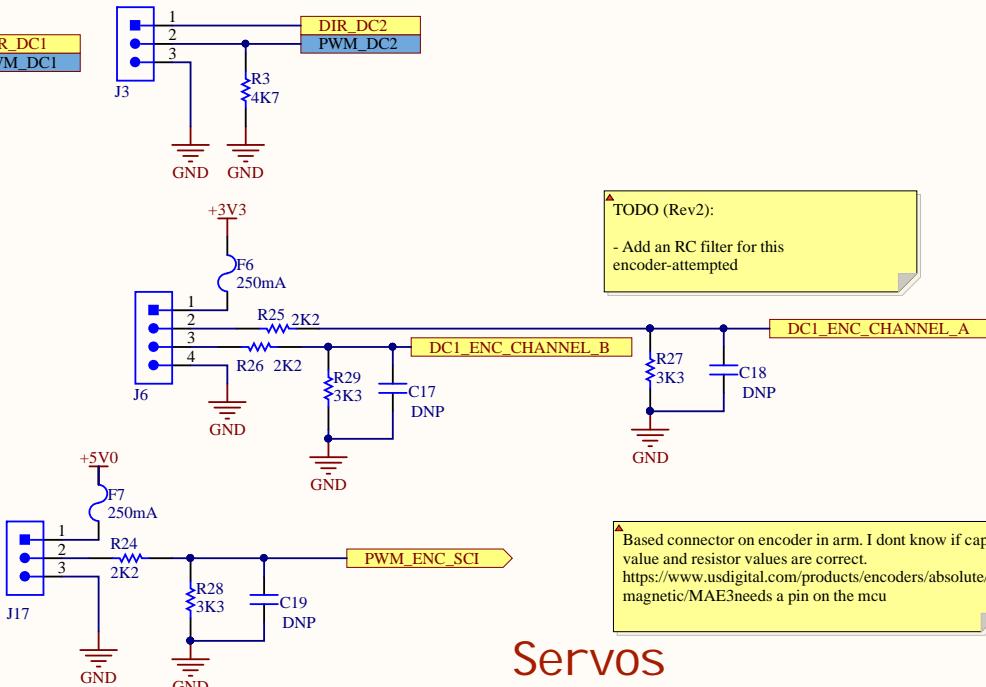
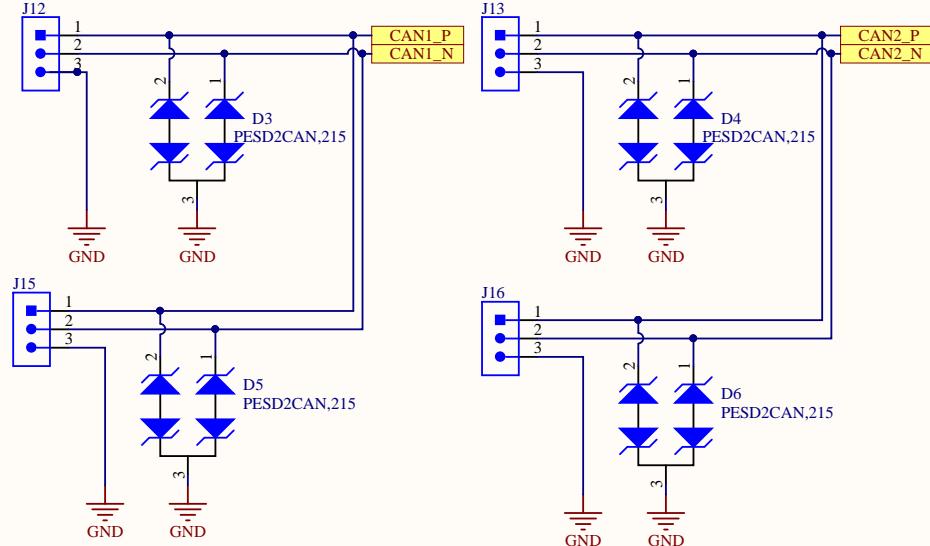


LED forward voltage: 2.2V
 $I = (3.3 - 2.2) / 120 = 9.17\text{mA}$

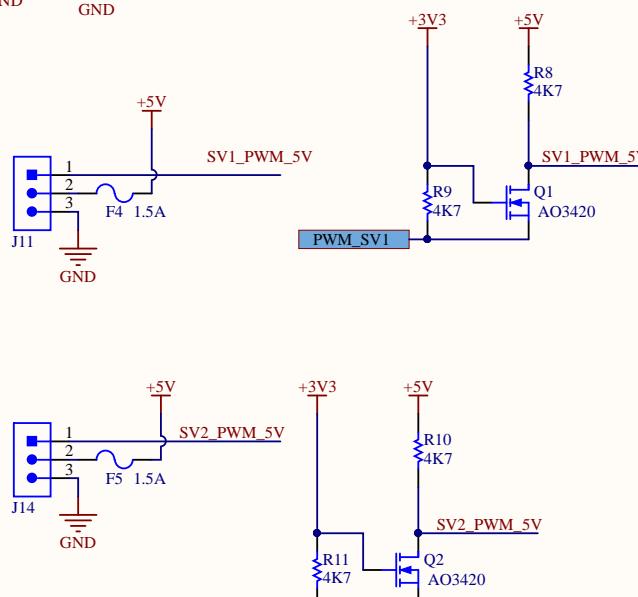
- V2: Replace LDO with an LDO with less ESR requirements
- Explore adding bulk capacitor

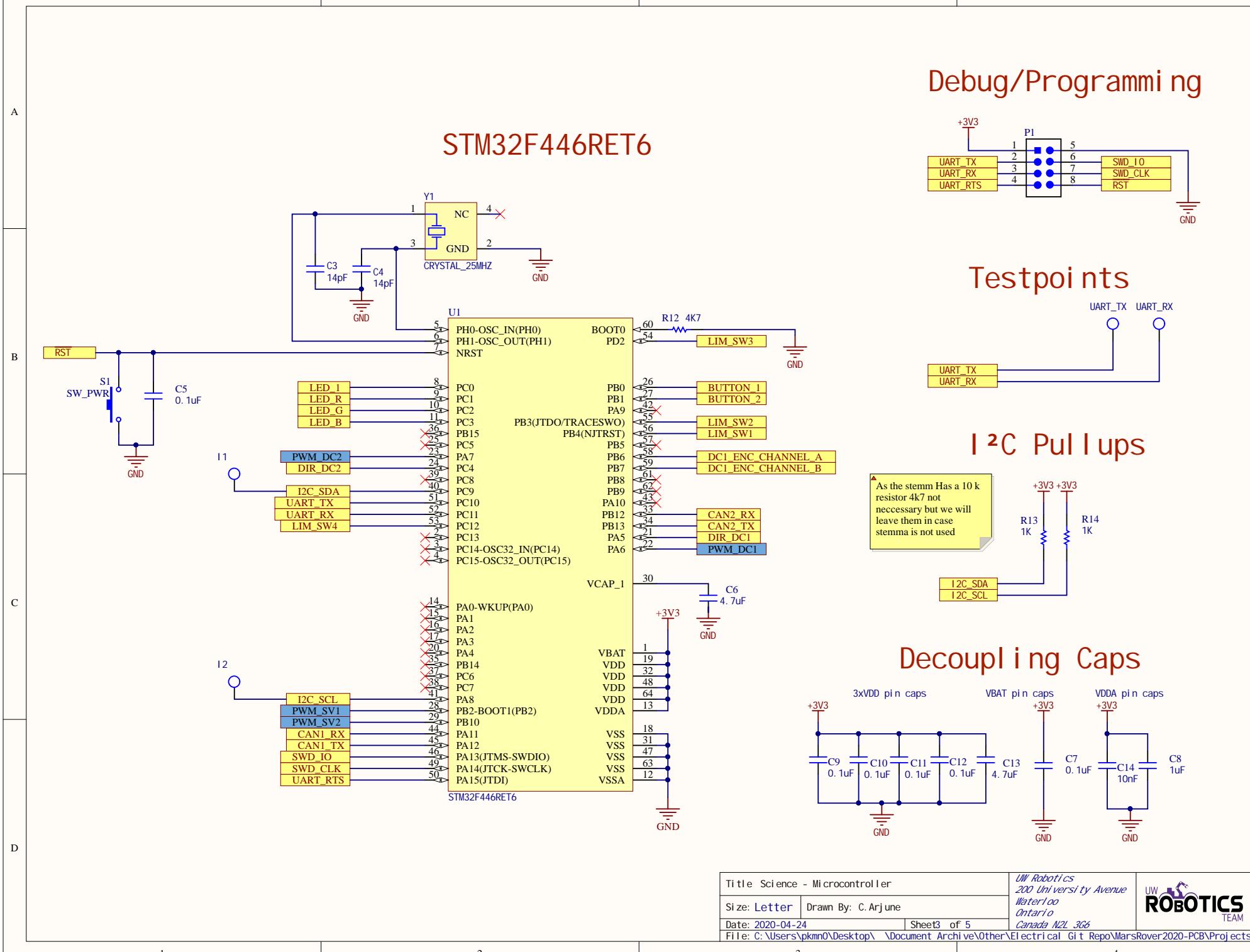
Sensors**DC Motors**

▲ TODO (Rev2):
- Add an RC filter for this encoder-attempted

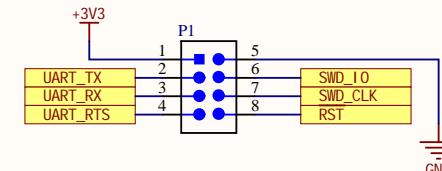
Limit Switches**CAN Connectors**

▲ Based connector on encoder in arm. I dont know if cap value and resistor values are correct.
<https://www.usdigital.com/products/encoders/absolute/magnetic/MAE3needs a pin on the mcu>

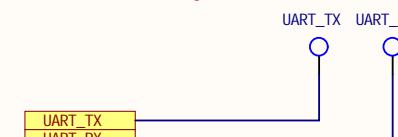
Servos



Debug/Programming

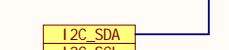


Testpoints

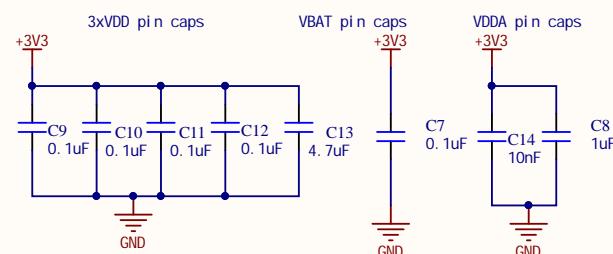


I²C Pull-ups

As the stemm Has a 10 k resistor 4k7 not necessary but we will leave them in case stemma is not used



Decoupling Caps



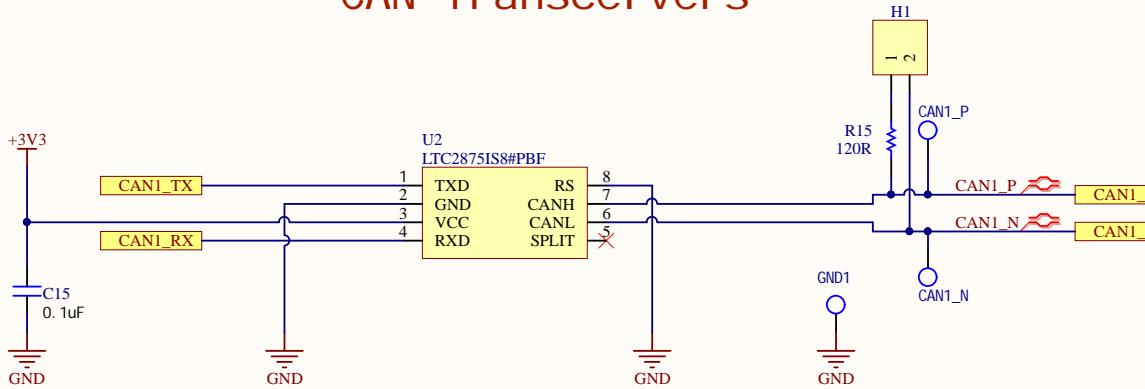
A

A

CAN Transceivers

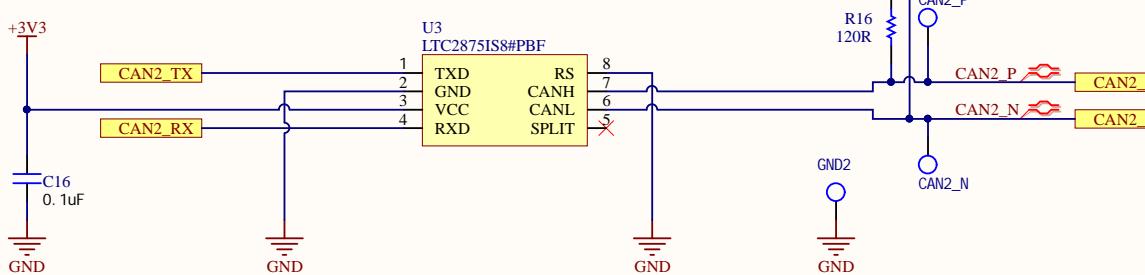
B

B



C

C

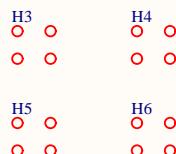


D

D

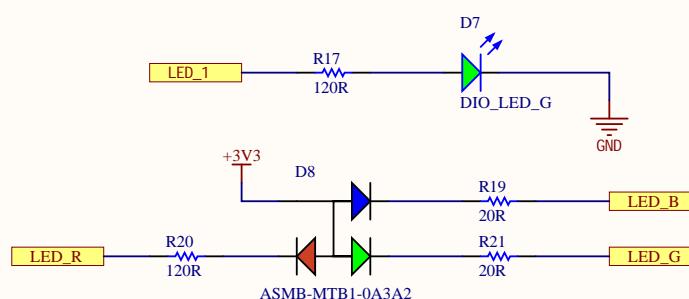
A

Mounting Holes



B

Test LEDs



C

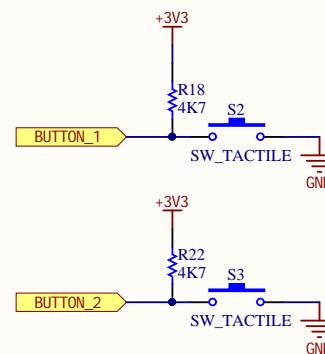
Current Calculations

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

RGB LED voltage drops:
 - Red: 2.1V; $I = (3.3-2.1V)/120 = 10mA$
 - Blue: 3.1V; $I = (3.3-3.1V)/20 = 10mA$
 - Green: 3.1V; $I = (3.3-3.1V)/20 = 10mA$

D

Test Buttons



A

A

B

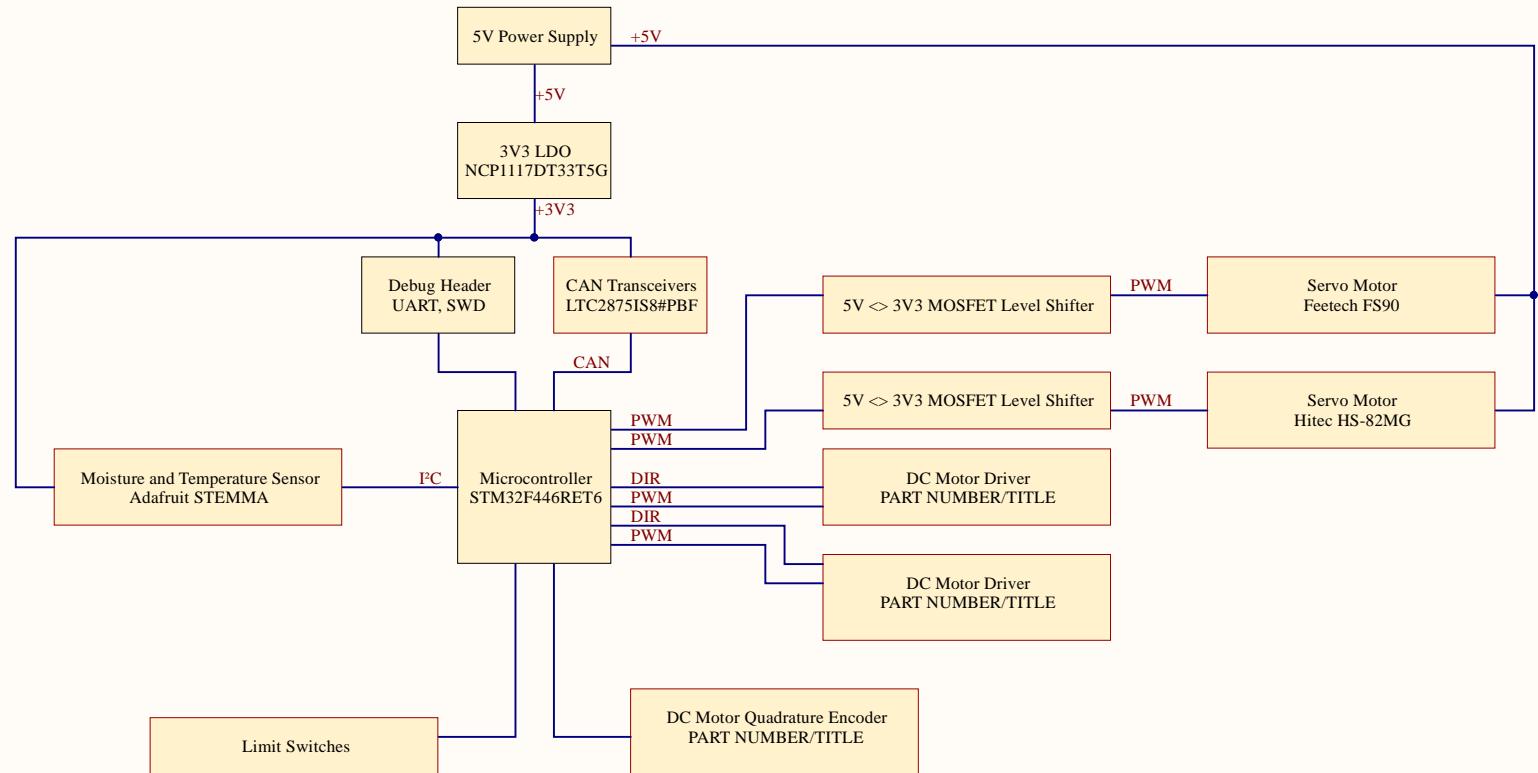
B

C

C

D

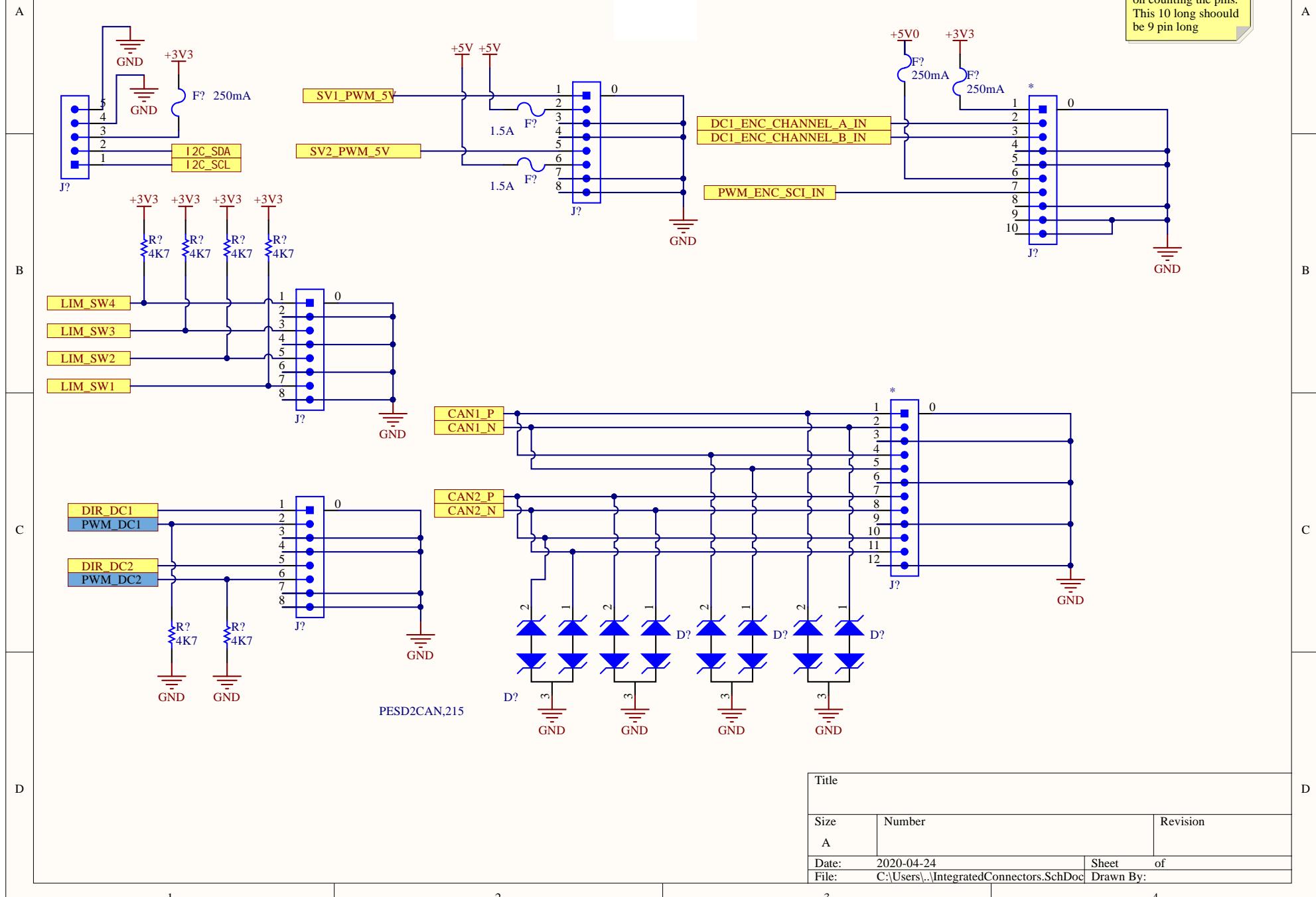
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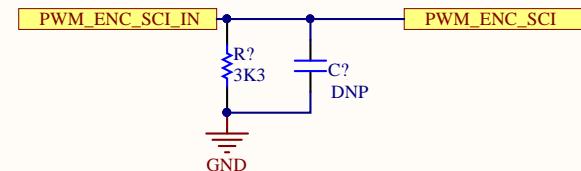
Consolidated connectors

Sensors



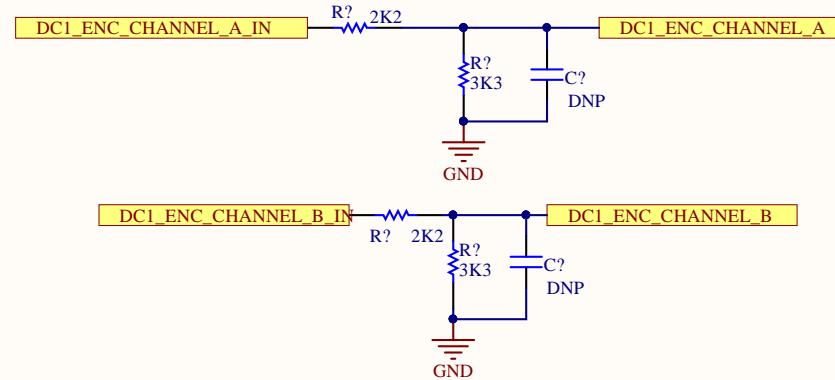
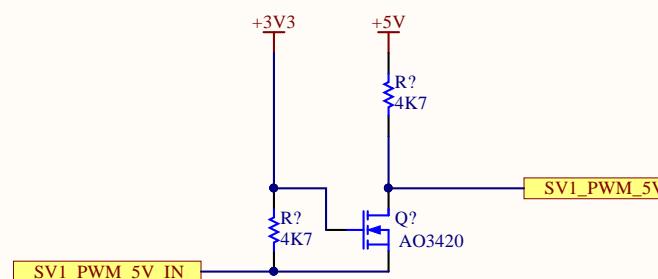
A

A



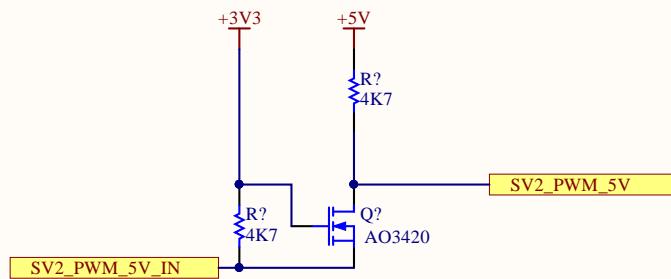
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C

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D

Title		
Size	Number	Revision
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