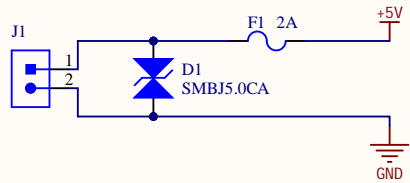
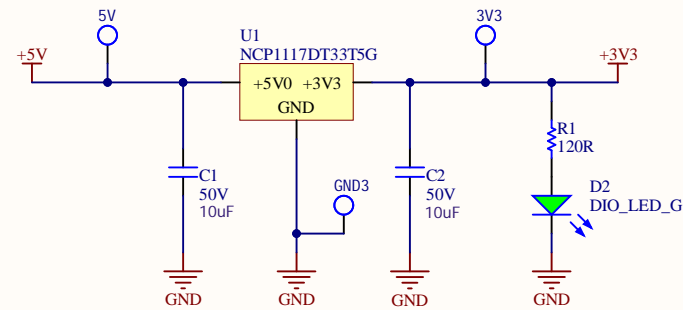


## Power In



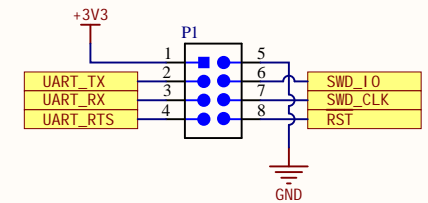
## 5V - 3.3V LDO



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

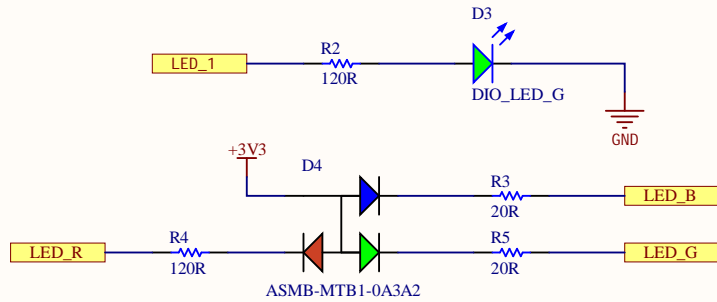
## Debug/Programming



**Current Calculations**

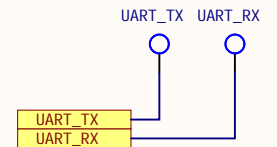
Green LED voltage drop: 2.2V  
 $I = (3.3 - 2.2V) / 120 = 10.83\text{mA}$

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



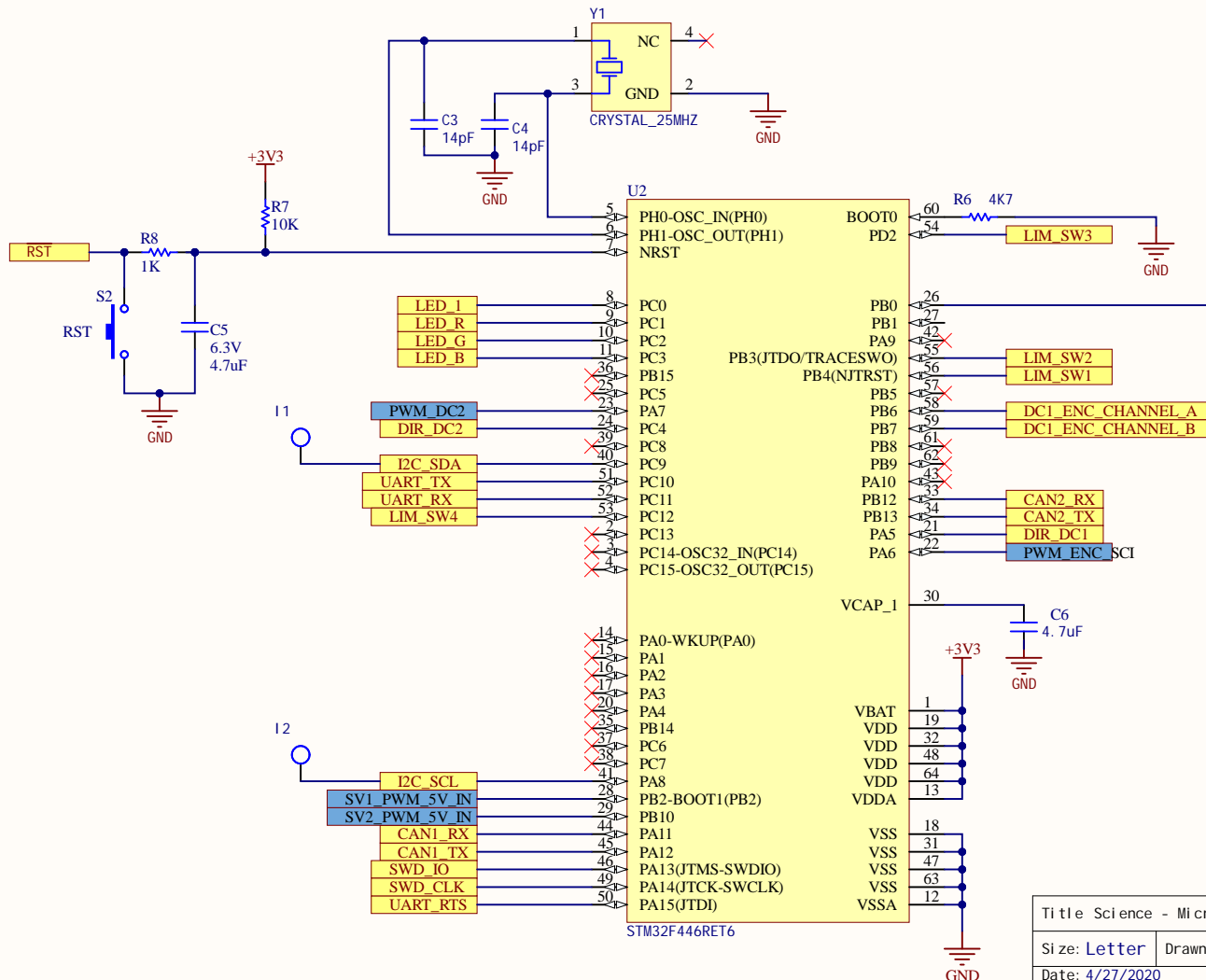
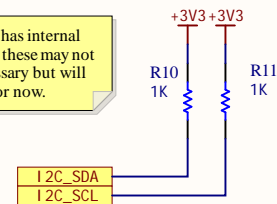
## STM32F446RET6

## Testpoints

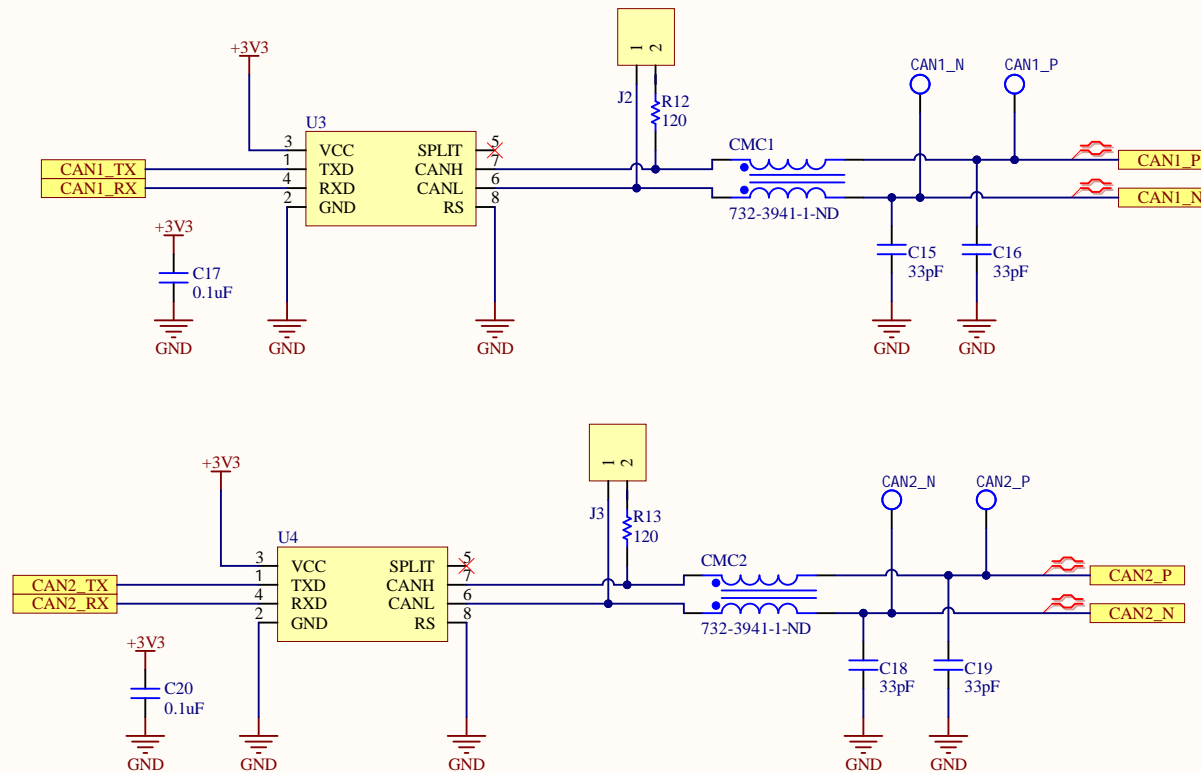


## I<sup>2</sup>C Pullups

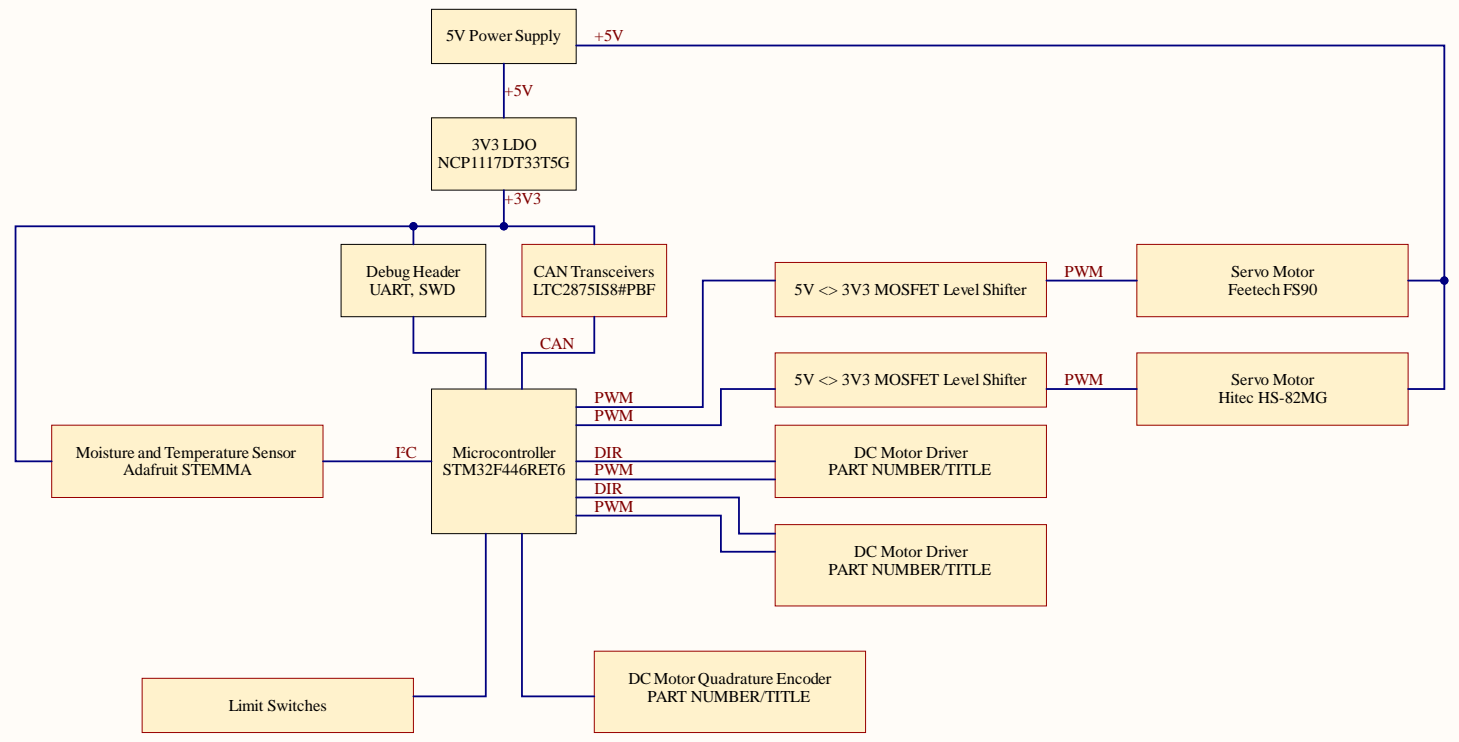
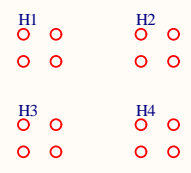
Stemma has internal pullups; these may not be necessary but will be left for now.



## CAN Transceivers



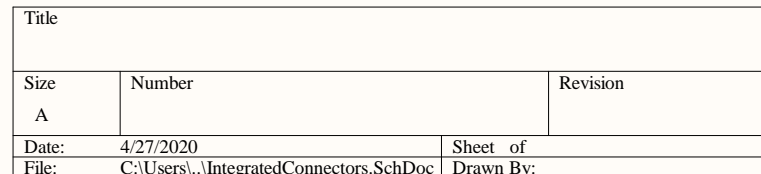
Mounting Holes



Title		
Size	Number	Revision
A4		
Date:	4/27/2020	Sheet of
File:	C:\Users\...\Block Diagram.SchDoc	Drawn By:

## ensors

△ Mistakes were made on counting the pins. This 10 long shoould be 9 pin long



A

A

B

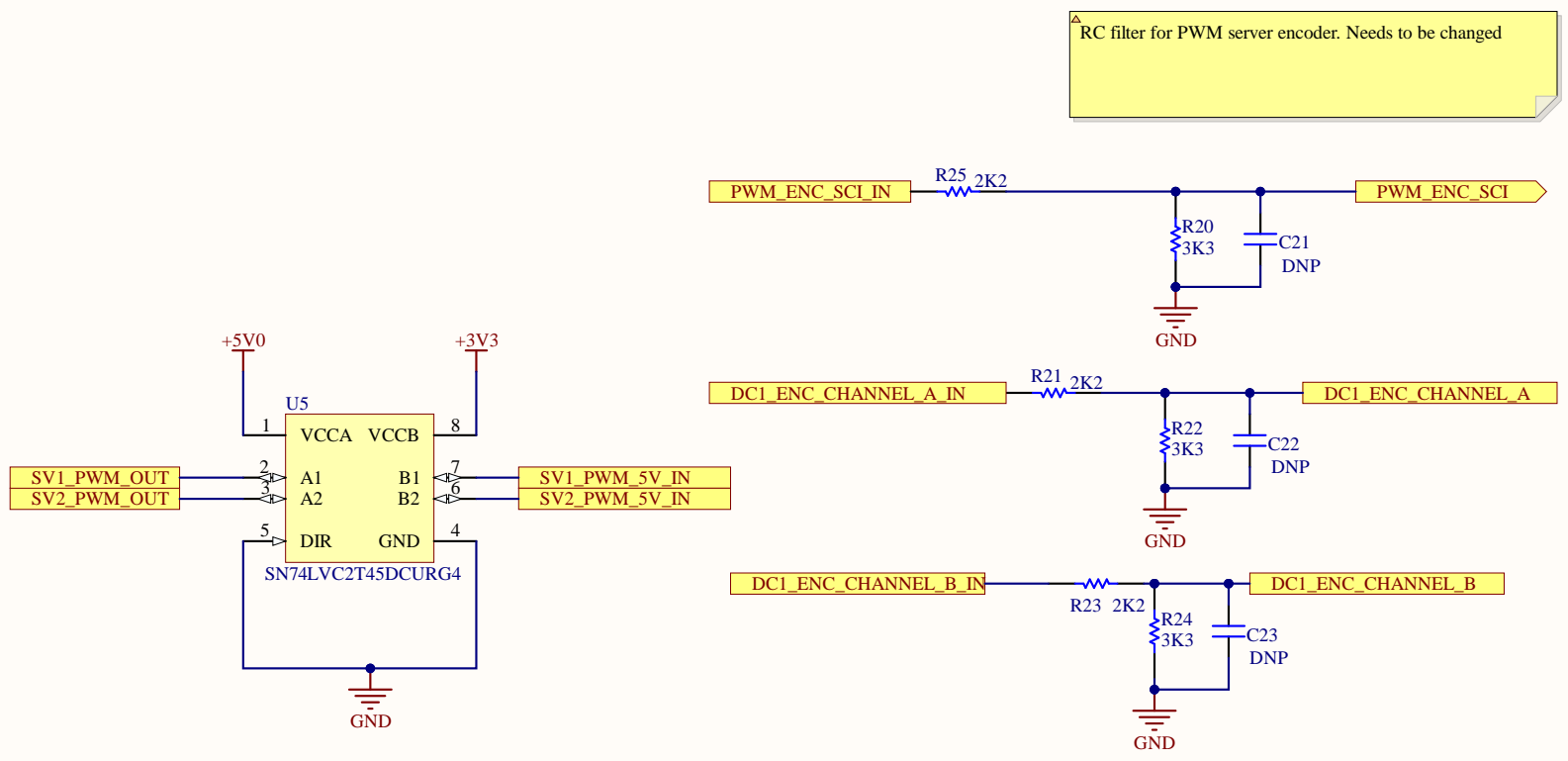
B

C

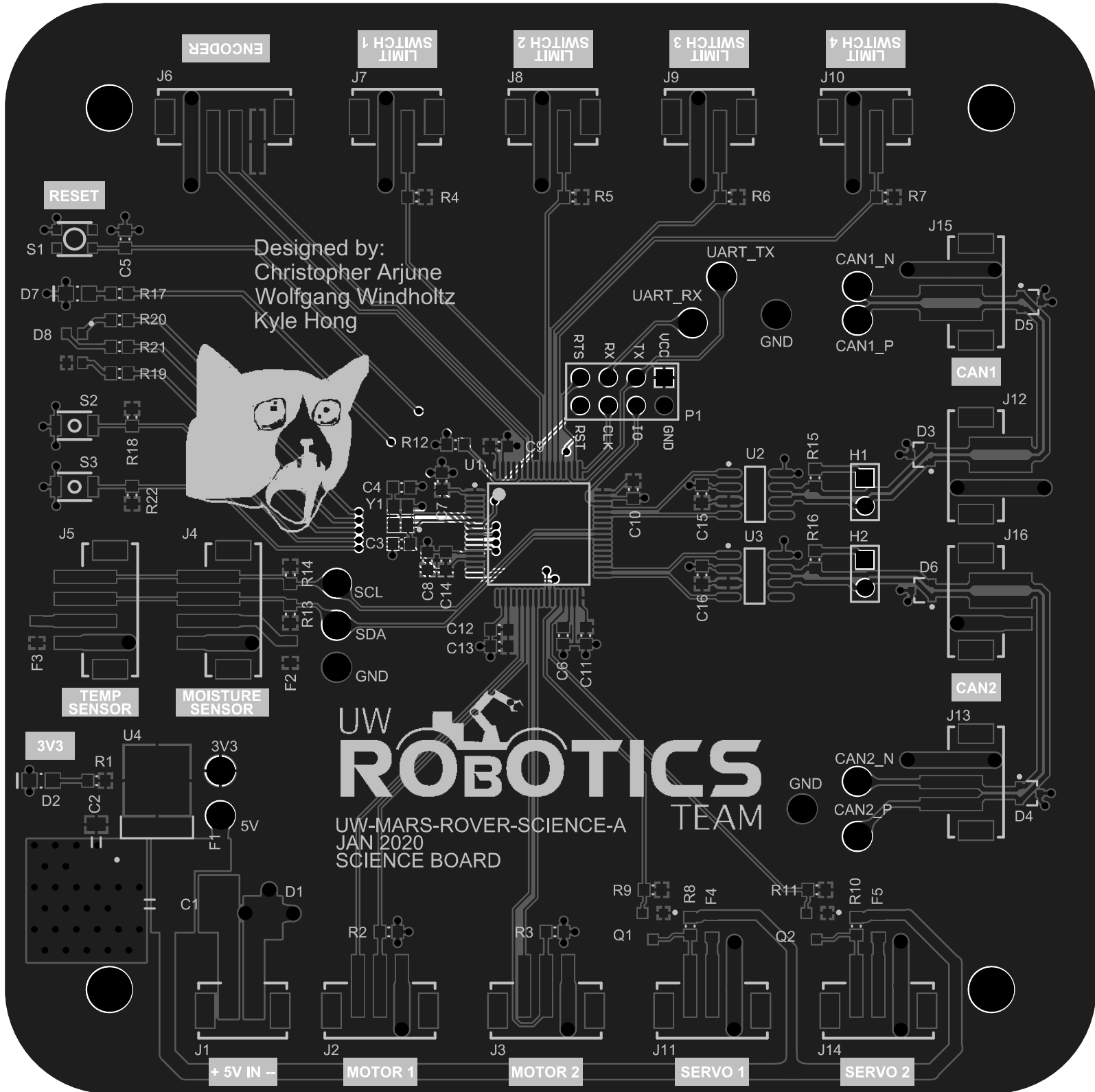
C

D

D



Title		
Size	Number	Revision
A		
Date:	4/27/2020	Sheet of
File:	C:\Users\...\Servo and Encoders.SchDoc	Drawn By:



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