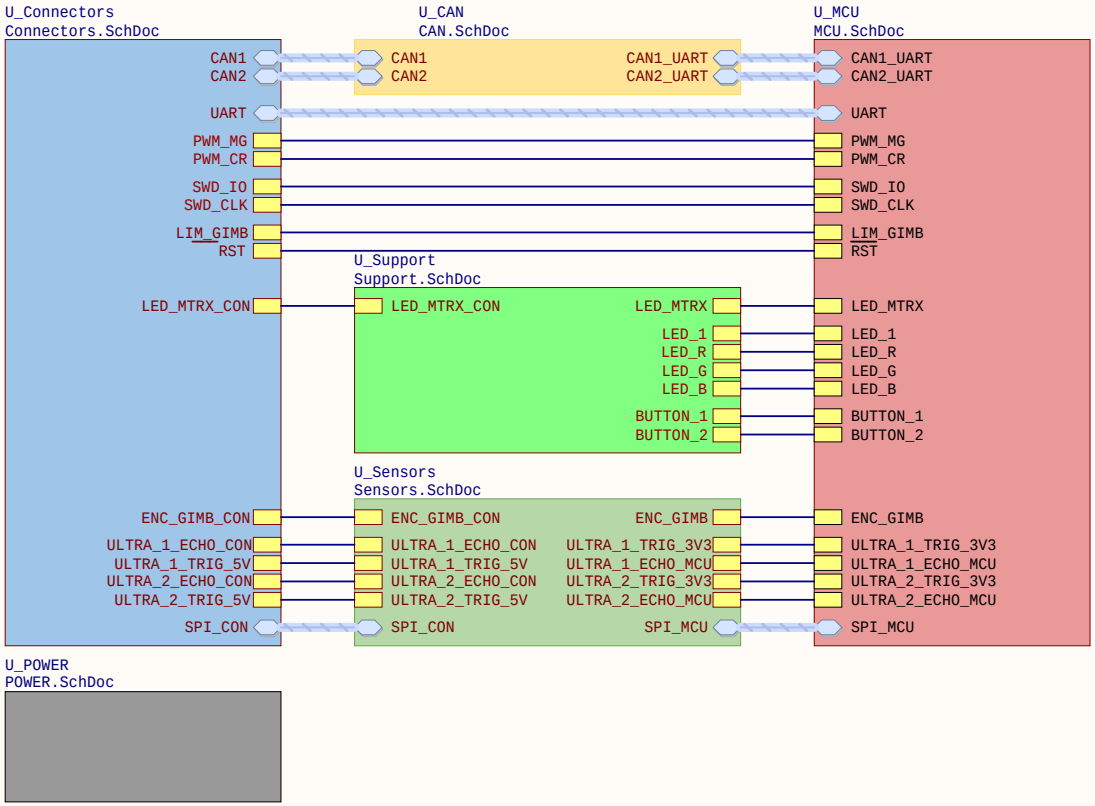

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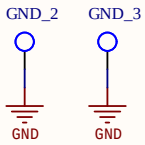
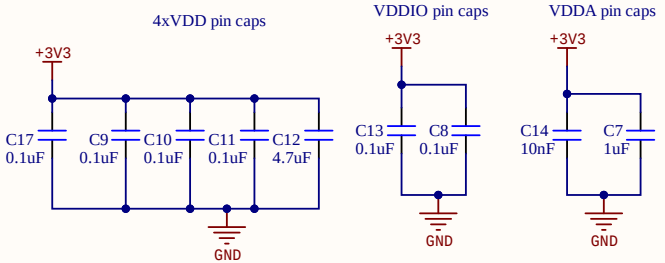
Test Points

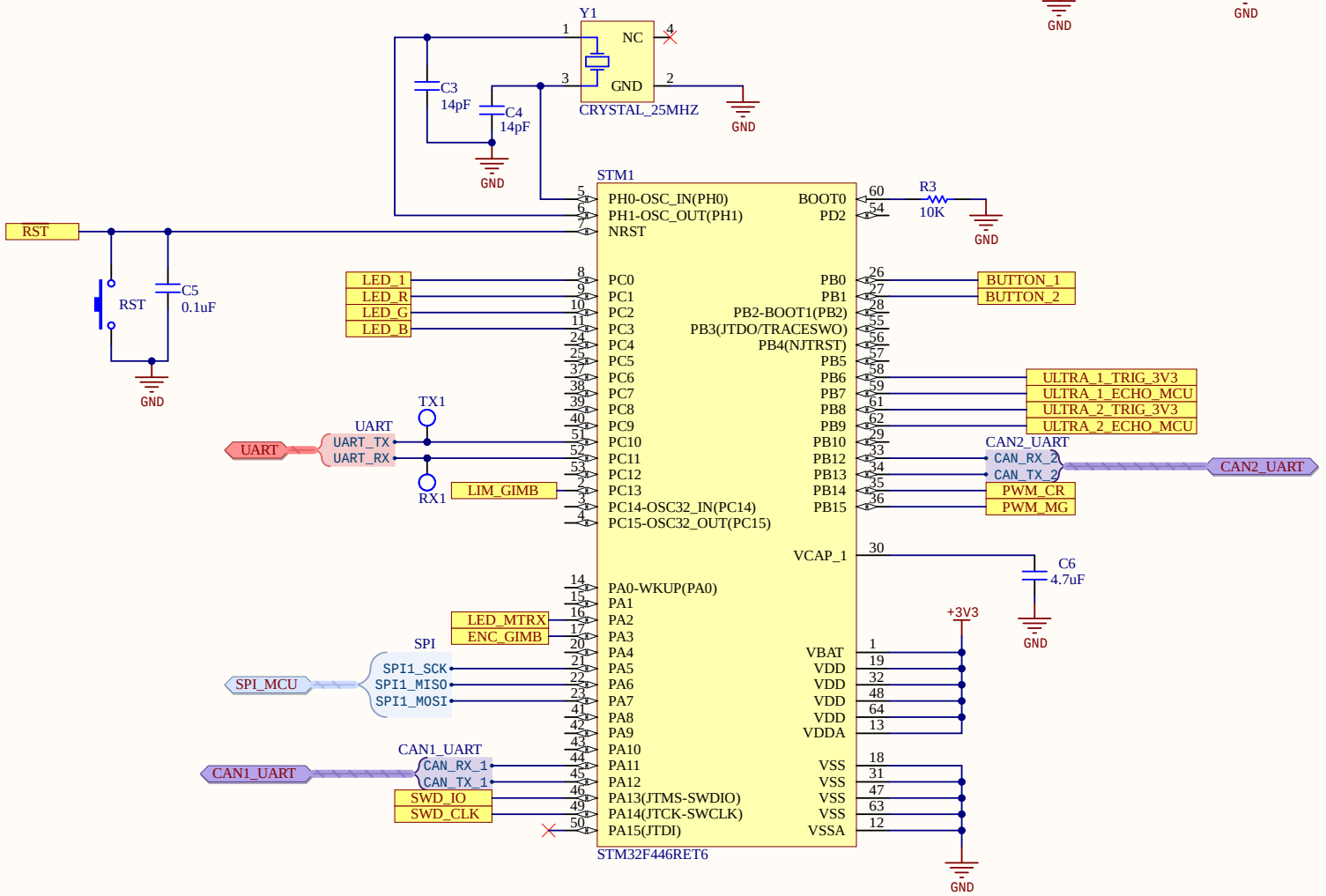
Extra Ground Testpoints



Decoupling Caps



STM32F446RET6



Title Gimbal - Microcontroller		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
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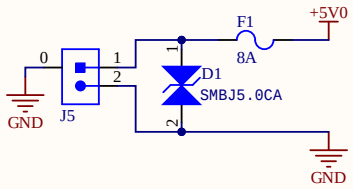
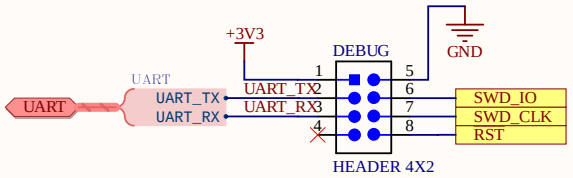
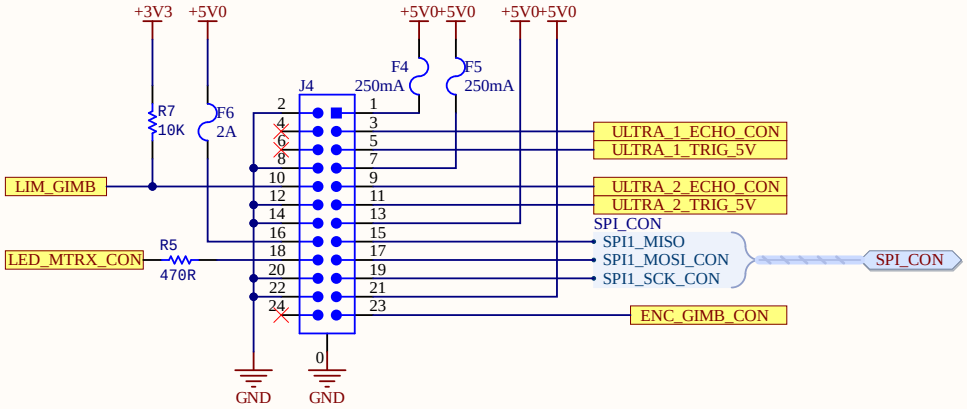
Power In



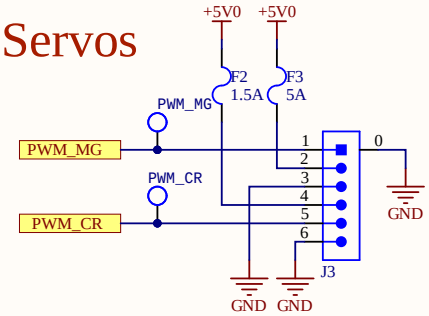
Debug/Programming



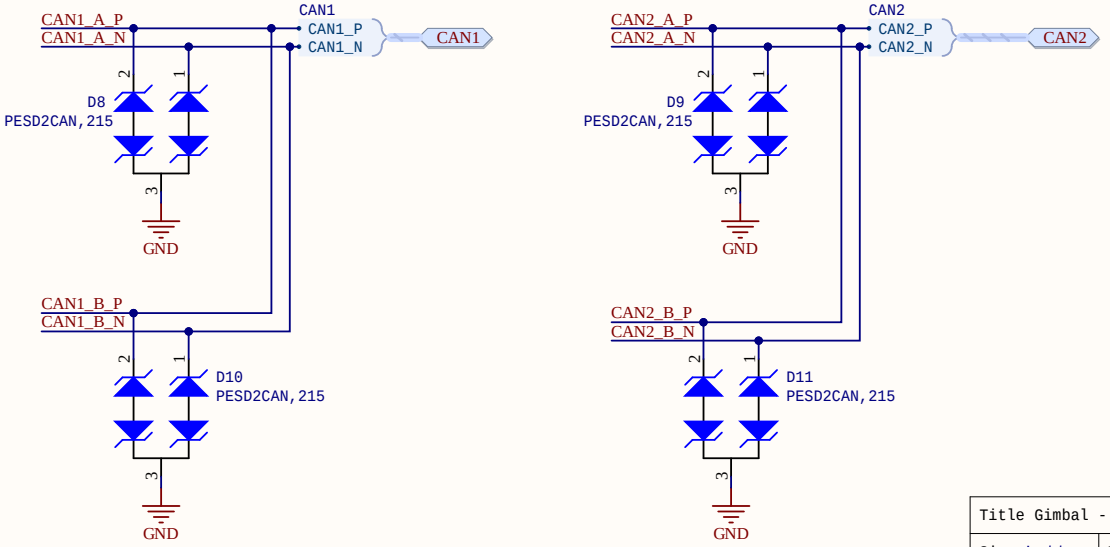
Sensors/Limit Switch/LED Matrix



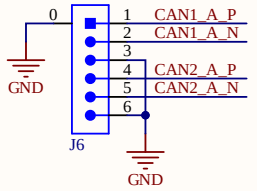
Servos



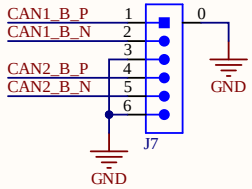
CAN Support



CAN Incoming



CAN Outgoing



Title Gimbal - Connectors		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
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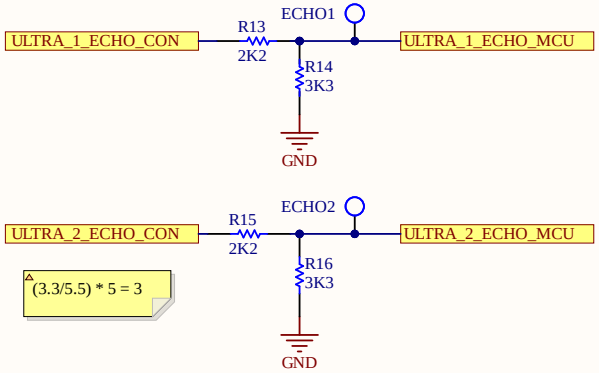
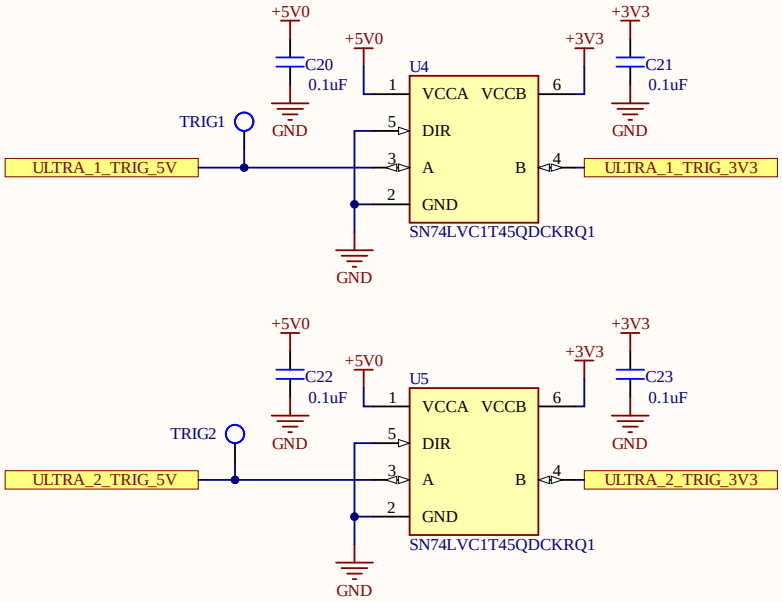
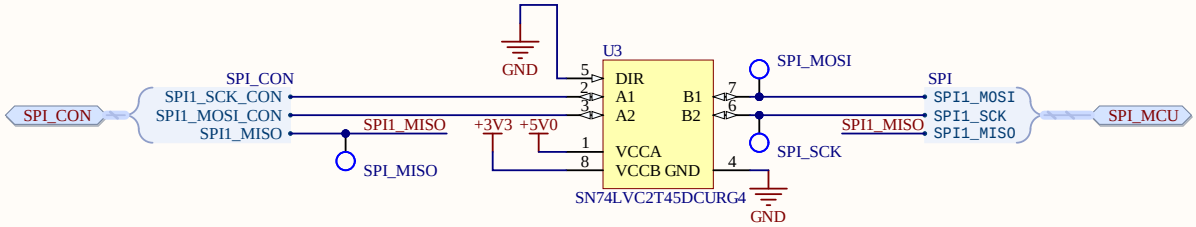
Ultrasonic Voltage Dividers

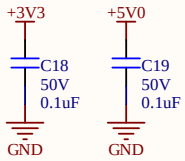


Ultrasonic Level Shifters

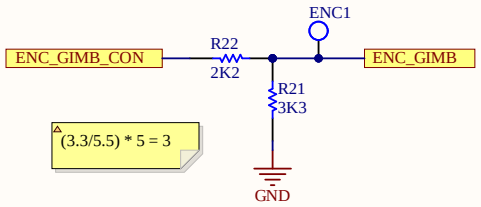


SPI Encoder Level Shifter





PWM Encoder Voltage Divider



Title Gimbal - Sensors		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
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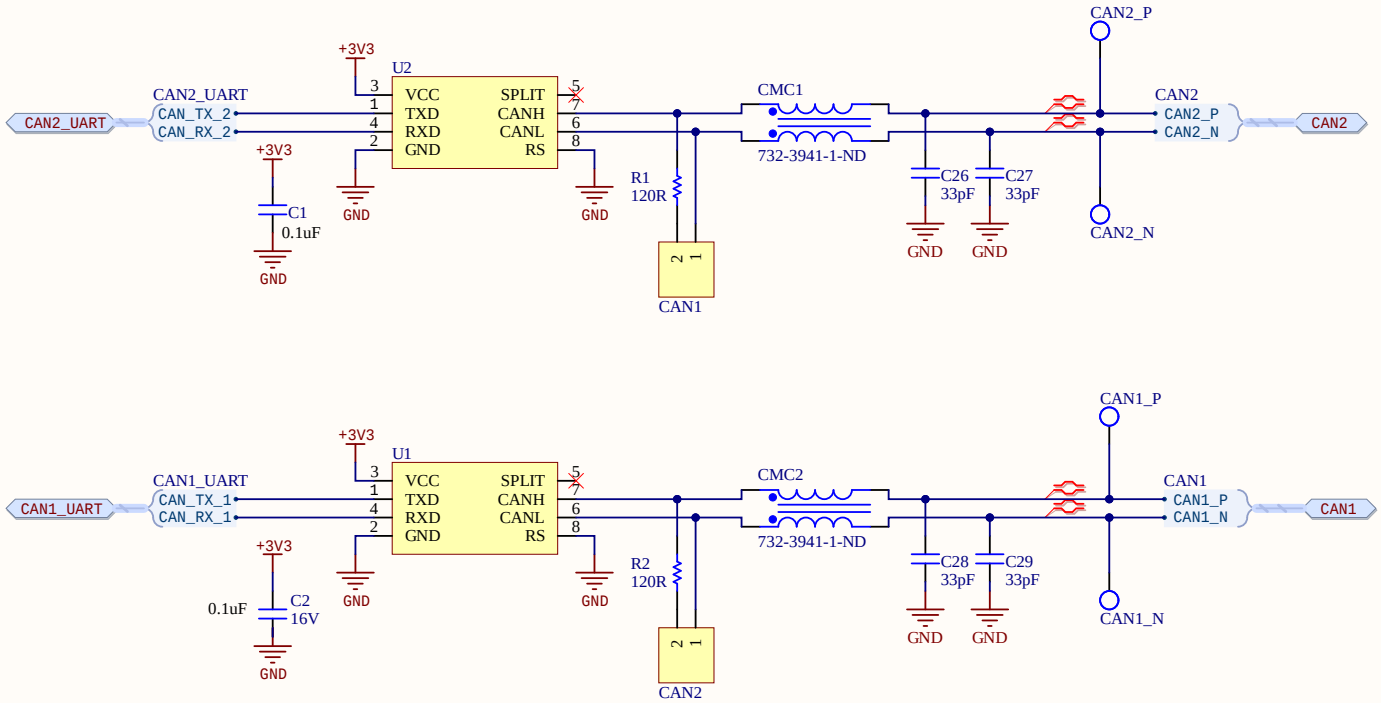
CAN Transceivers



Title Gimbal CAN Schematic			UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
Size: Letter	Drawn By: Jing Hao Yao & Aidan Gratton		
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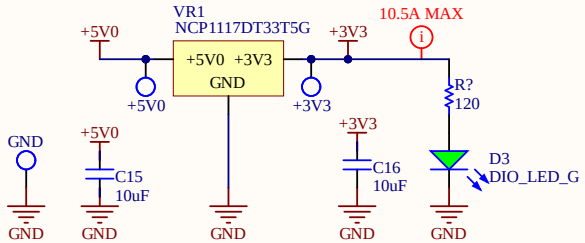

Title Gimbal - Power		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6	UW ROBOTICS TEAM
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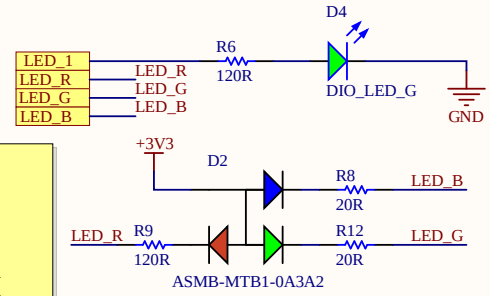
Test LEDs

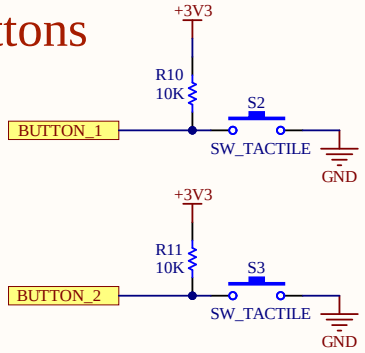


Current Calculations

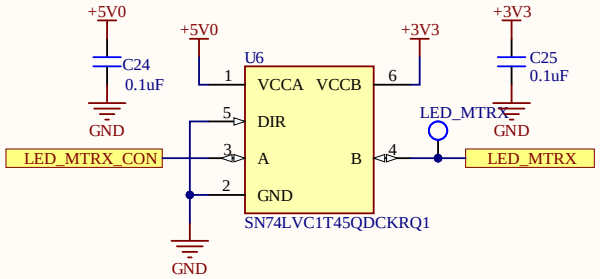
Green LED voltage drop: 2.2V
- I = (3.3-2.2V)/120 = 10.83mA

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

Test Buttons



LED Matrix Level Shifter



Title Gimbal Support Schematic		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
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