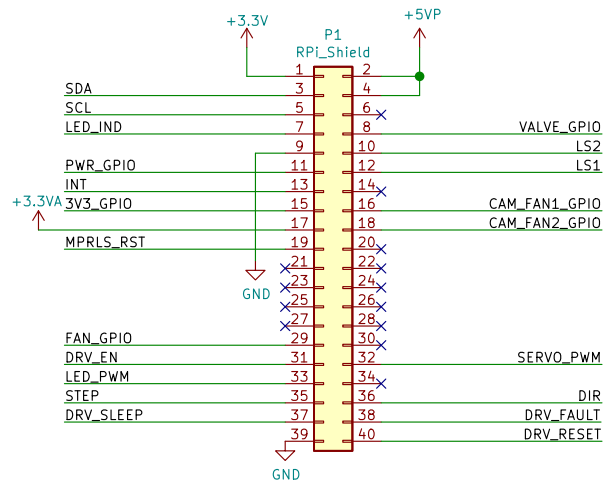


RPi GPIO

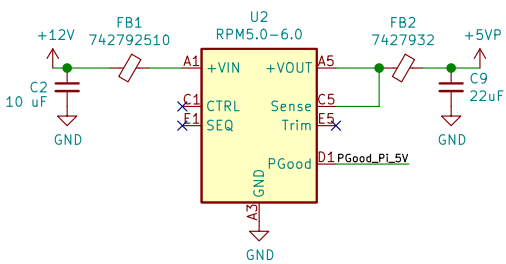
Use male-female headers, w/ male side up



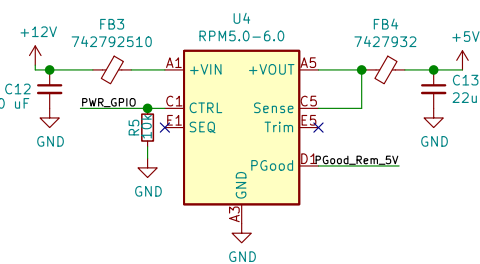
Power

Powered directly off 12V: 120mA (Fan), 0.4A (Motor)

3A (RPI) + 900mA (Coral peak) + 1 A (touchscreen?)

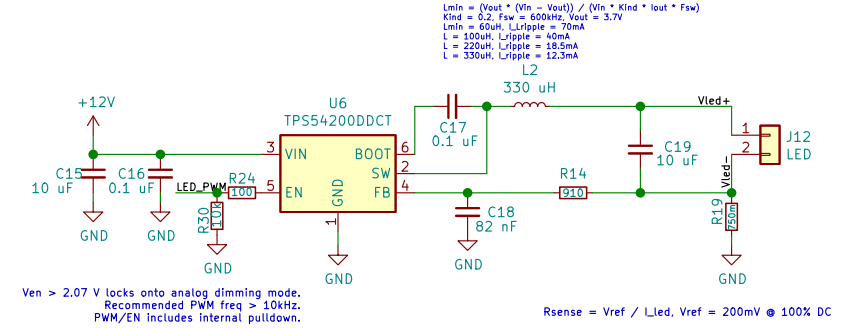


1.2A (Servo stalled) + 211 nA (MPRLS max)



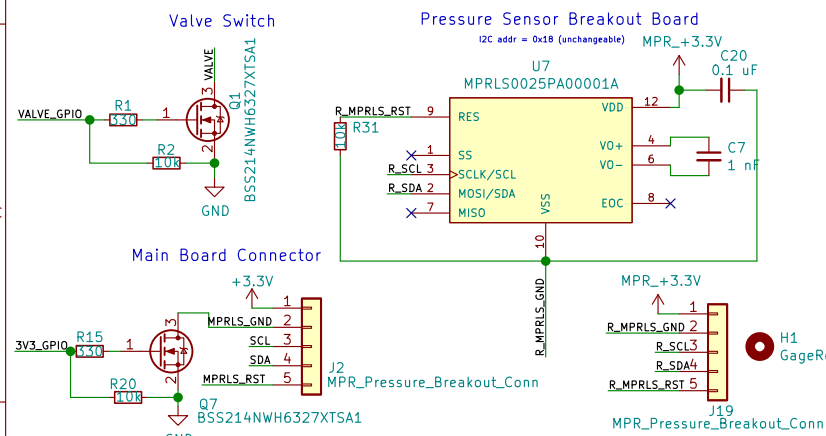
LED Driver

Vf,typ = 3.5V, If,typ = 500mA (run at 250mA)



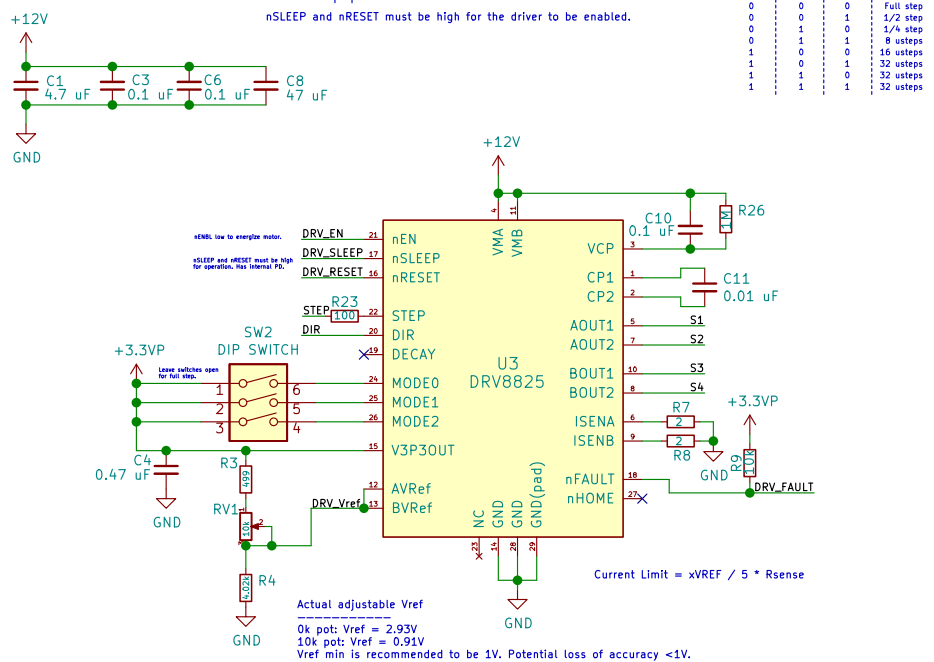
Pneumatic Control

Pressure sensor breakout board will be mounted separately from the PCB.



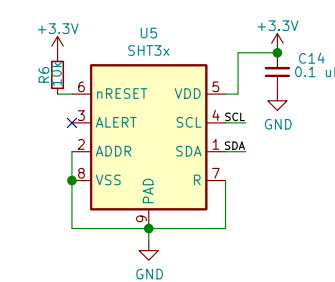
Stepper Motor Control

nSLEEP and nRESET must be high for the driver to be enabled.



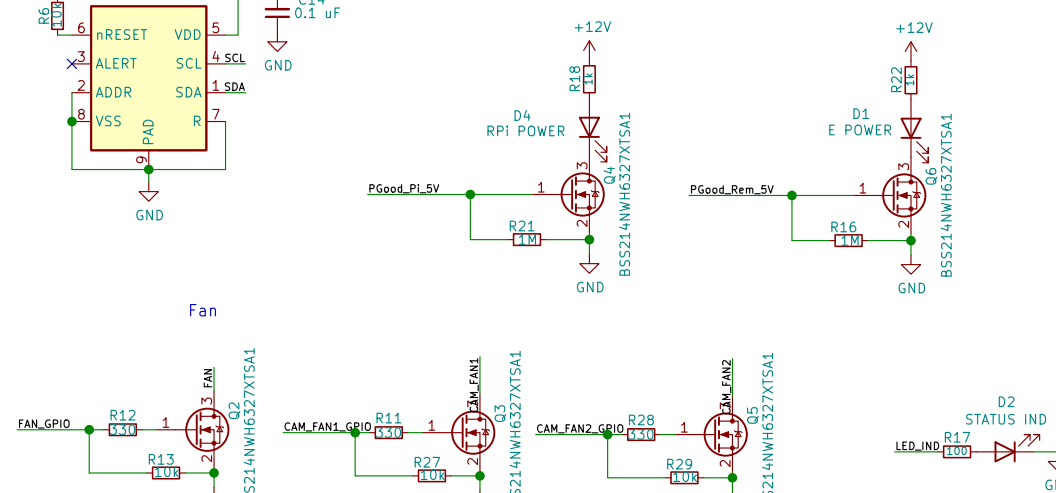
Temp/Humidity Sensor

I2C addr = 0x44

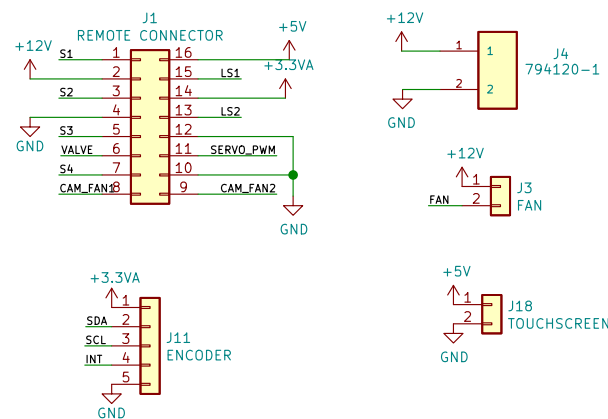


Peripherals

Vf = 2.15V, If (ideal) = approx. 20mA
LED Indicators



Shield Connectors



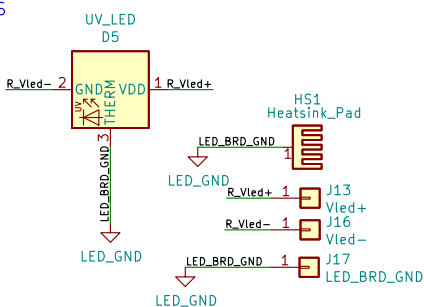
Off Board Components

Sheet with components that are mounted off board, but connect to the PCB.

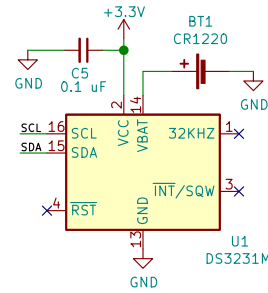
Sheet: Off_Board_Components

File: off_board_components.sch

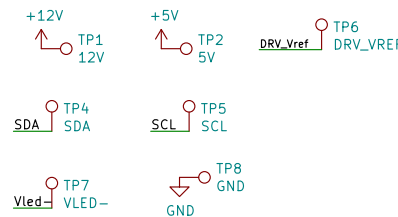
LED Board



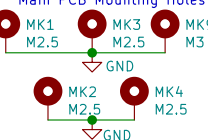
Real Time Clock



Test Points



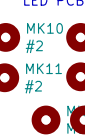
Main PCB Mounting Holes



Remote PCB



LED PCB



PN: 5-0005, 5-0006, 5-0008
Bioengineering Platform
Chan Zuckerberg Biohub

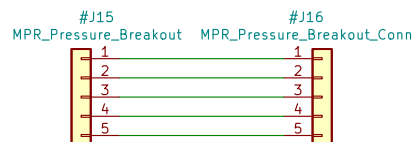
Sheet: /
File: ulc-mm.sch

Title: Label Free Malaria Scope

Size: A3 Date: 2021-09-14
KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev: A
Id: 1/2

Main Board Components



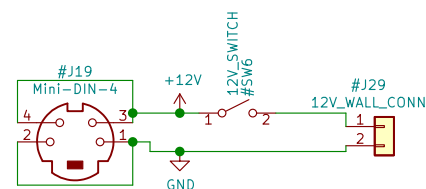
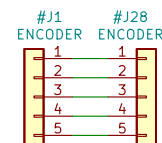
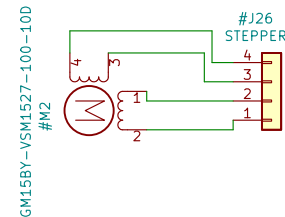
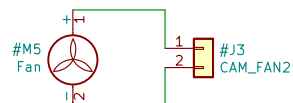
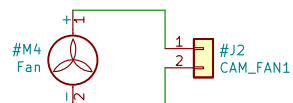
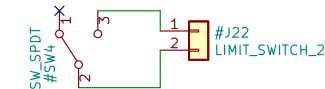
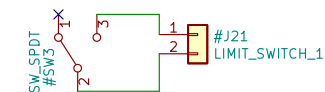
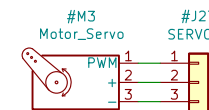
Use regular P2.54mm male pins on breakout board

Board to board cable assembly. Female-female IDC headers on a ribbon cable.



Remote Board Components

Servo comes with female headers, but we may need to replace it w/ the proper mating component for the male headers so that there is a good friction lock.



PN: 5-005

Bioengineering Platform

Chan Zuckerberg Biohub

Sheet: /Off Board Components/

File: off_board_components.sch

Title: Off Board Components

Size: A4

Date: 2021-09-21

Rev: A

KiCad E.D.A. kicad (5.1.10-1-10_14)

Id: 2/2