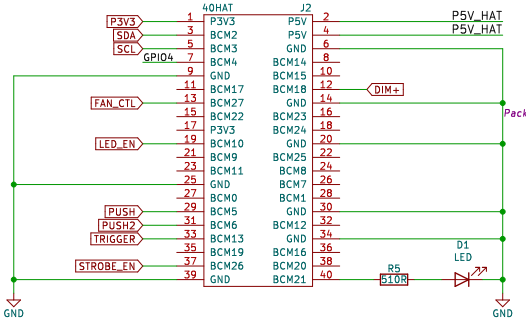
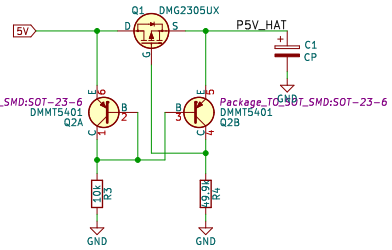
This is based on the official Raspberry Pi spec to be able to call an extension board a HAT.
https://github.com/raspberrypi/hats/blob/master/designguide.md

40-Pin HAT Connector

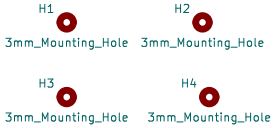


5V Powered HAT Protection

This is the recommended 5V rail protection for
a HAT with power going to the Pi.
See https://github.com/raspberrypi/hats/blob/master/designguide.md#back-powering-the-pi-via-the-j8-gpio-header

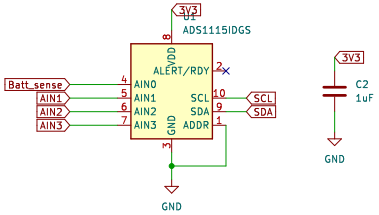


Mounting Holes

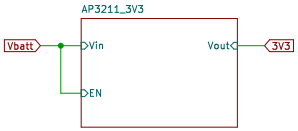


Connector for Battery

ADC for RPI

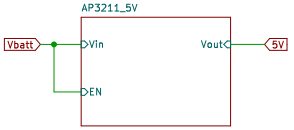


3.3V Regulator

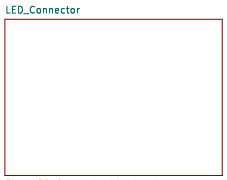


File: AP3211_3V3.kicad_sch

5V Regulator

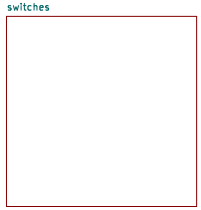


File: AP3211_5V.kicad_sch



File: LED_Connector.kicad_sch

File: sensors.kicad_sch



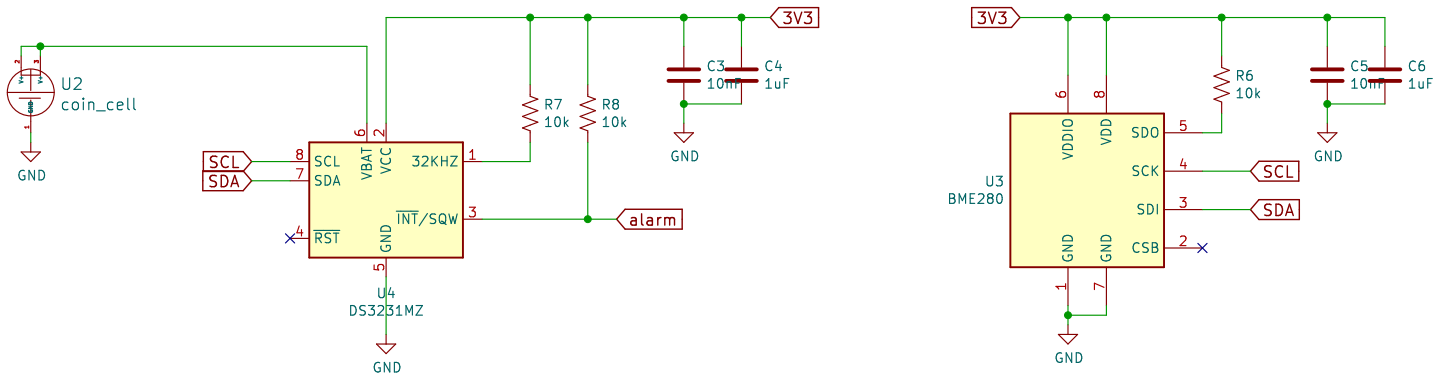
File: switches.kicad_sch

CoralScope Hat

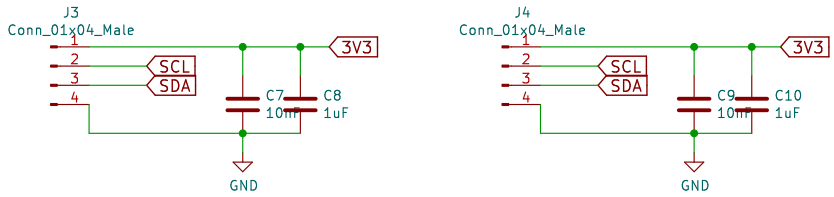
Sheet: /
File: dIPAX_piHat_rev01a.kicad_sch
P. Lertvilai

Title: CoralScope HAT

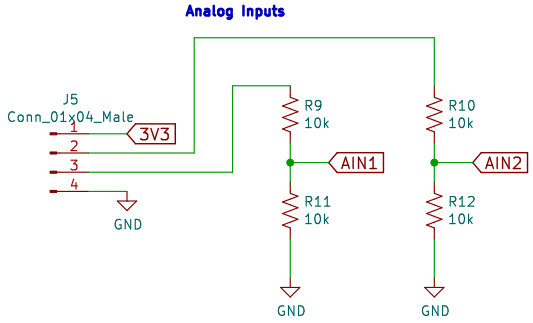
Size: A3	Date: November 2022	Rev: A Rev02.a
KiCad E.D.A. kicad (6.0.4)		Id: 1/6



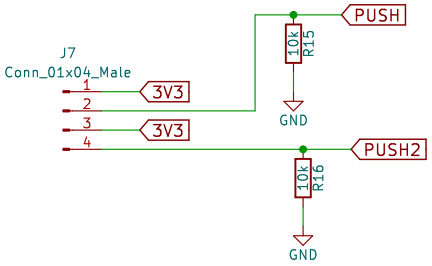
I2C Sensors

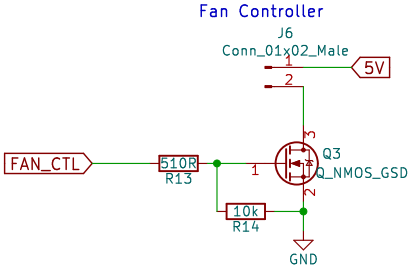


Analog Inputs



Sheet: /sensors/		
File: sensors.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.4)		Id: 3/6



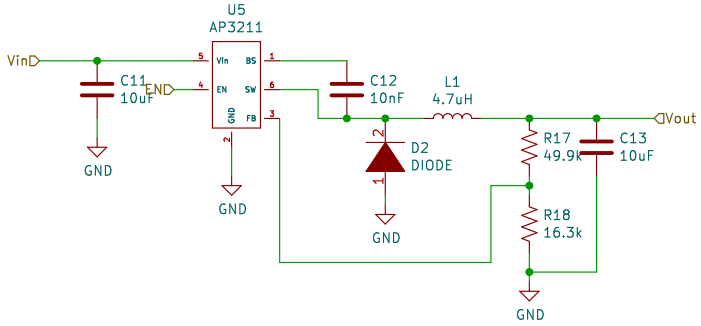


Switches and Auxiliary

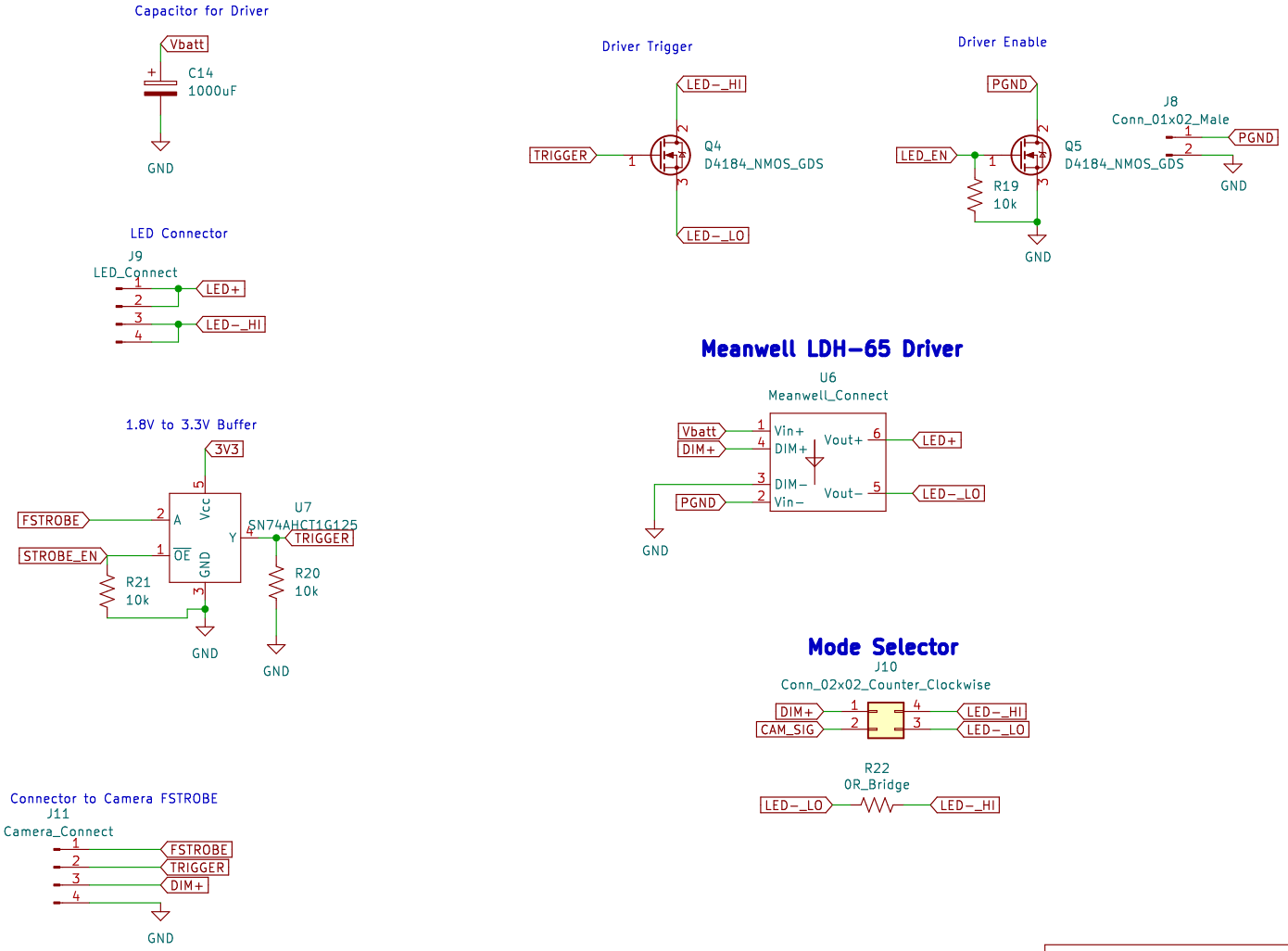
Sheet: /switches/
File: switches.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.4)		Id: 4/6

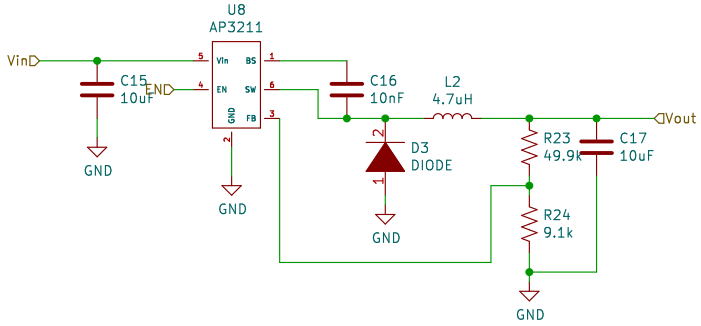


Sheet: /AP3211_3V3/		
File: AP3211_3V3.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.4)		Id: 5/6



LED Trigger

Sheet: /LED_Connector/		
File: LED_Connector.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.4)		Id: 6/6



Sheet: /AP3211_5V/		
File: AP3211_5V.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.4)		Id: 6/6