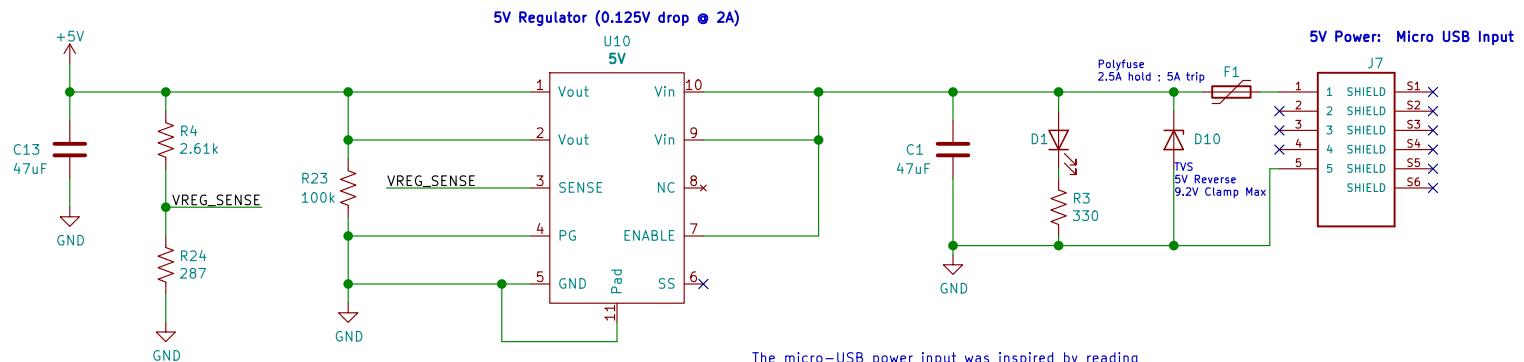


Designed By Aaron Jense
Zephyrus, Indoor Air Quality – Raspberry Pi HAT
 Sheet: /Multiplexed ADC/
 File: MultiplexedADC.sch

Title: Multiplexed Analog Input

Size: USLetter | Date: 2019-11-15
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Rev: A
 Id: 2/7



The micro-USB power input was inspired by reading the documents on the Raspberry Pi 3 B+ at the following link (Upper Left Hand Corner of Schematic):
https://www.raspberrypi.org/documentation/hardware/raspberrypi/schematics/rpi_SCH_3bplus_1p0_reduced.pdf

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No changes except for the voltage regulator that the micro-USB input feeds into.



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Sheet: /Power Management/
 File: PowerManagement.sch

Title: Power Management

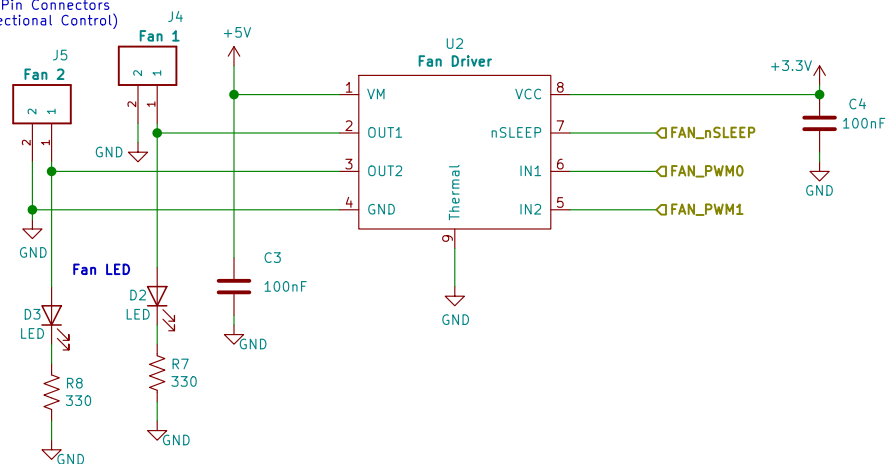
Size: USLetter Date: 2019-11-15

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Rev: A

Id: 3/7

Fan 2-Pin Connectors
(Unidirectional Control)



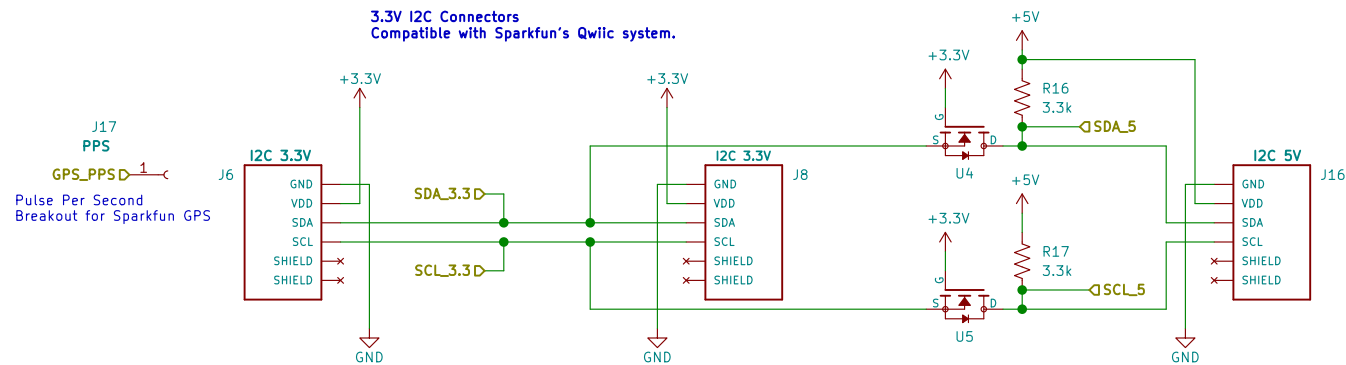
Designed By Aaron Jense
Zephyrus, Indoor Air Quality – Raspberry Pi HAT
 Sheet: /Fan Control/
 File: FanControl.sch

Title: Motor Driver for Fans

Size: USLetter Date: 2019-11-15
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Rev: A
 Id: 4/7

3.3V and 5V I2C Connectors



The Bi-Directional logic level shift using the BSS138 was inspired by reading Sparkfun's schematic https://cdn.sparkfun.com/datasheets/BreakoutBoards/Logic_LevelBidirectional.pdf

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Changes:
There is no Pull-Up on the Source, because of the interl Raspberry Pi 1.8k Pull-Ups



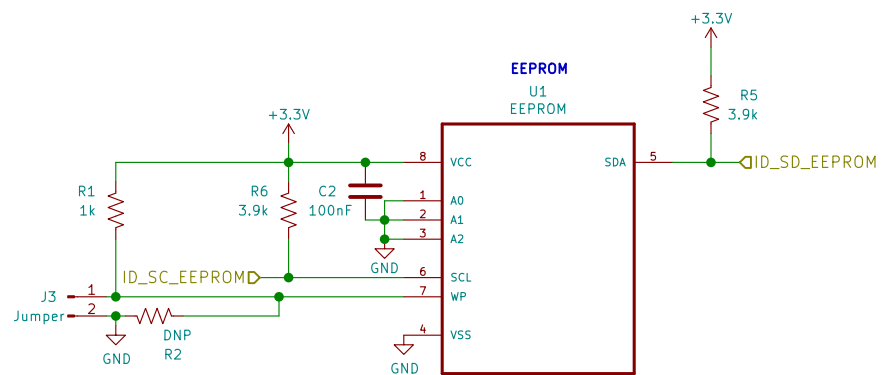
Designed By Aaron Jense
Zephyrus, Indoor Air Quality – Raspberry Pi HAT

Sheet: /I2C/
File: I2C.sch

Title: I2C Connectors and Logic Level Conversion

Size: USLetter Date: 2019-11-15
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Rev: A
Id: 5/7



At boot time this I2C interface will be interrogated to look for an EEPROM that identifies the attached board and allows automatic setup of the GPIOs (and optionally, Linux drivers).



Designed By Aaron Jense
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 Sheet: /EEPROM/
 File: EEPROM.sch

Title: Raspberry Pi HAT Specifications

Size: USLetter Date: 2019-11-15
 KiCad E.D.A. kicad (5.1.4)-1

Rev: A
 Id: 7/7