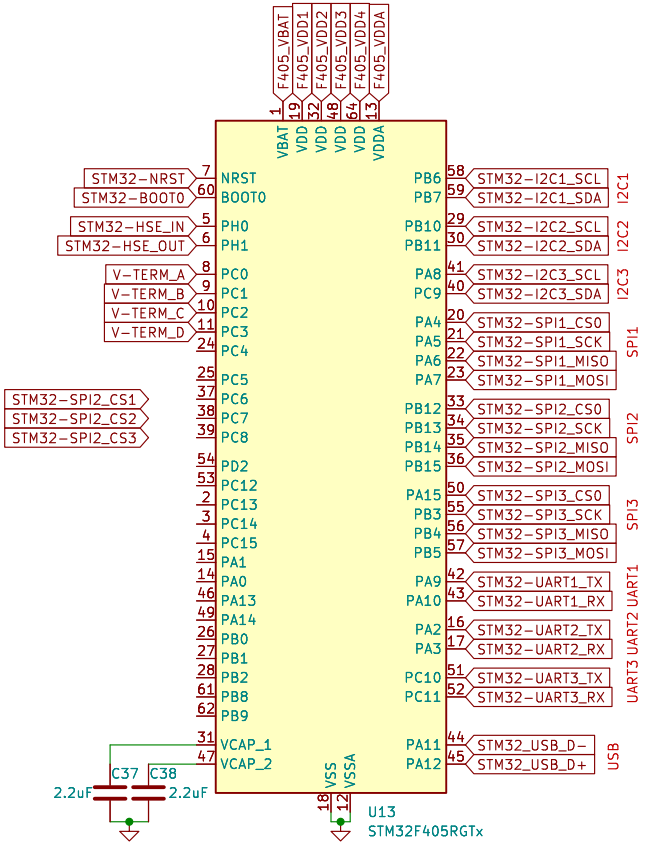
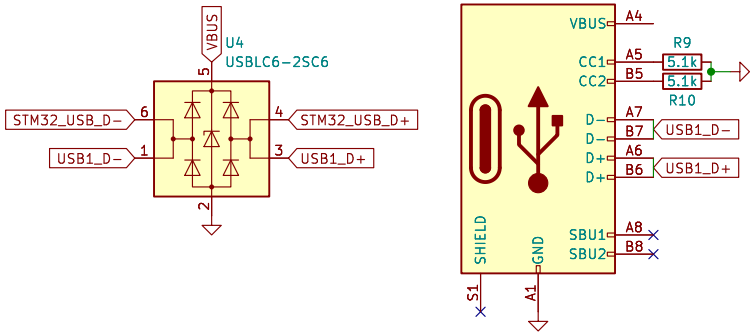
MCU – STM32

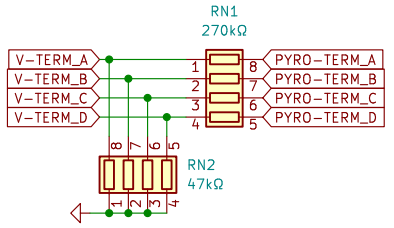


SDO – Serial Data Out –> Microcontroller In Sensor Out
SDI – Serial Data In –> Microcontroller Out Sensor In

USB–C (STM32)

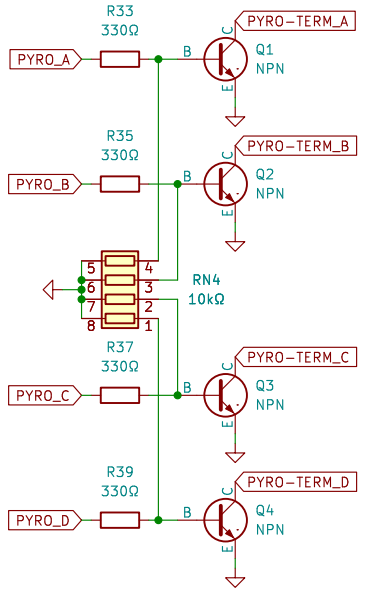


Pyro Voltage & Cont. (STM32)

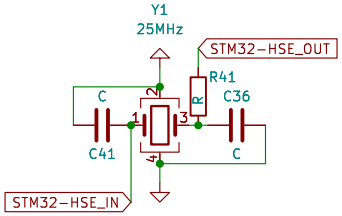


Pyro Terminals (STM32)

N-Channel MOSFET
30V, 20 – 30 A
3.3V Gate

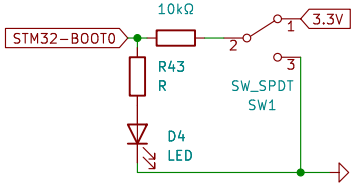


HSE Crystal

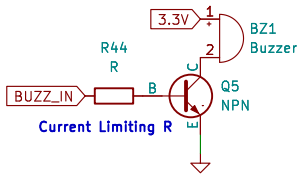


Do Math To Find CAP and R Values

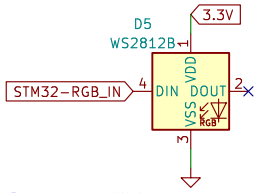
BOOT0 Switch



Buzzer

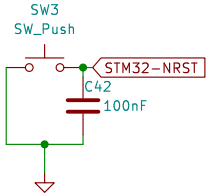


RGB Led

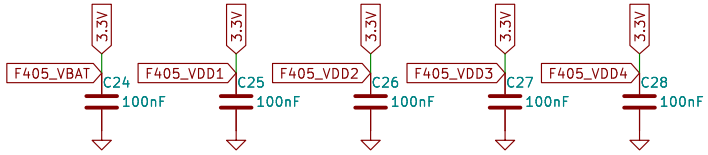


Replace with 'Mini'

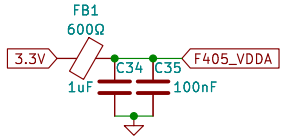
Reset Switch



MCU Decoupling Caps



EMI Filter



Do Math To Find CAP and R Values

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Aether Flight Computer

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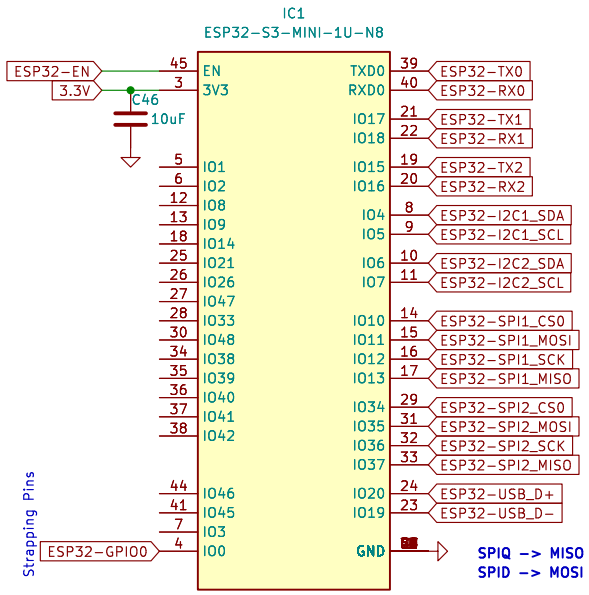
Sheet: /
File: aether.kicad_sch

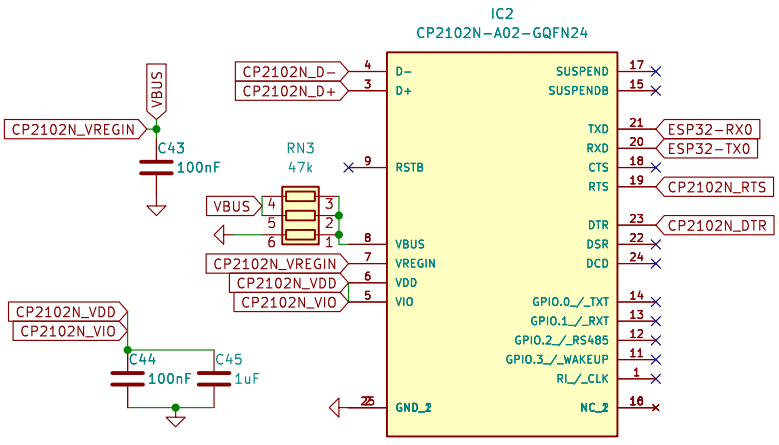
Title: MCU – STM32 Schematic

Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.6–0		Id: 1/5

MCU – ESP32

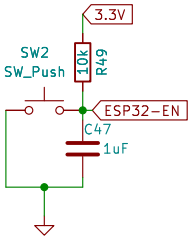


USB to UART Bridge

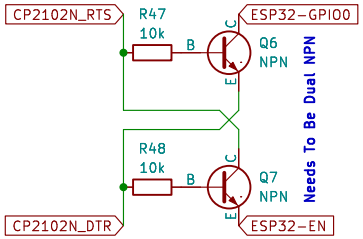


https://dl.espressif.com/dl/schematics/SCH_ESP32-S3-DEVKITM-1_V1_20210310A.pdf

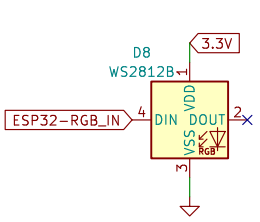
Reset Switch



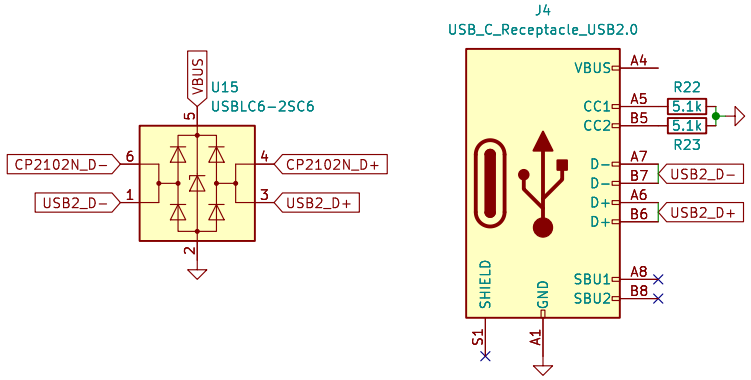
ESP32 Auto Reset



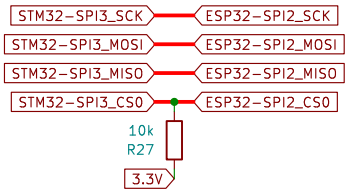
RGB Led



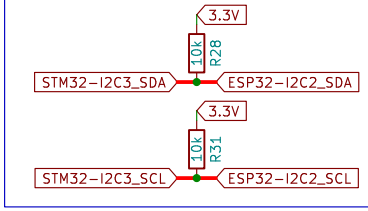
USB-C (ESP32)



SPI 3 (STM32) – SPI 2 (ESP32)



I2C 3 (STM32) – I2C 2 (ESP32)



UART 3 (STM32) – UART 2 (ESP32)

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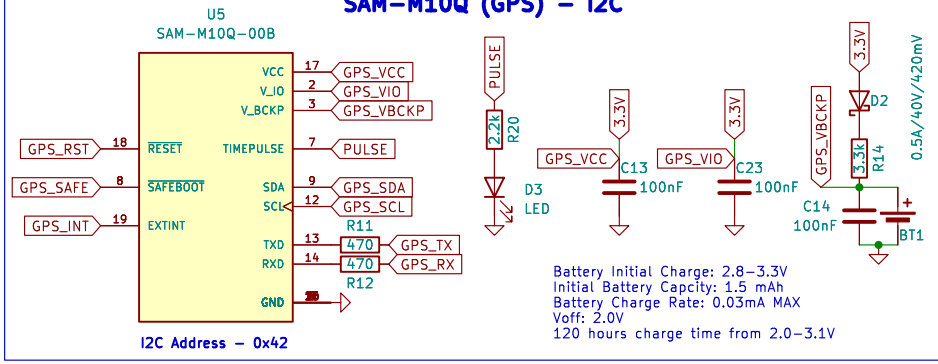
Sheet: /esp32/

File: esp32.kicad_sch

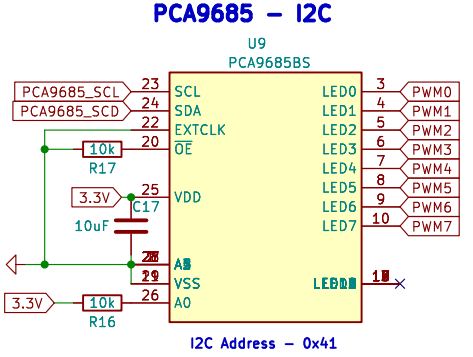
Title: MCU – ESP32 Schematic

Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.6-0		Id: 2/5

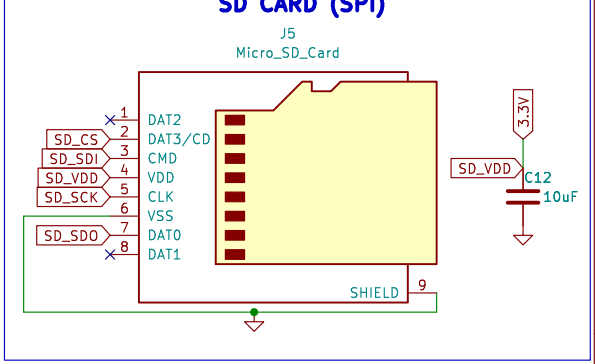
SAM-M10Q (GPS) – I2C



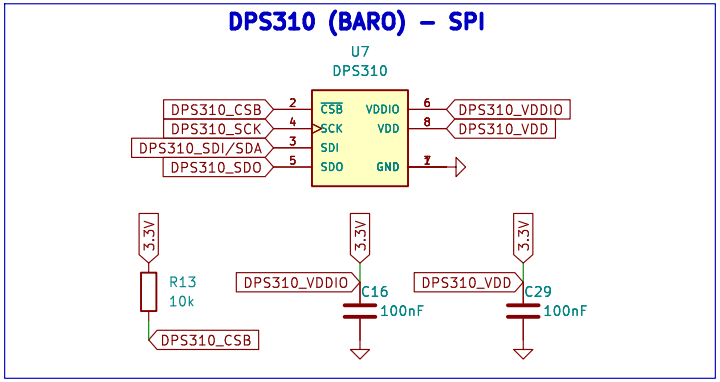
PCA9685 – I2C



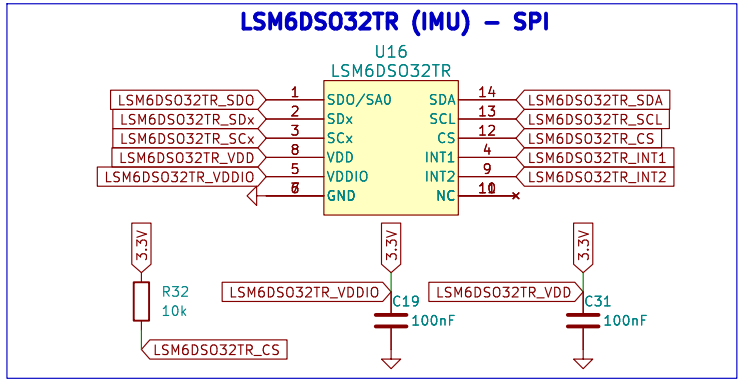
SD CARD (SPI)



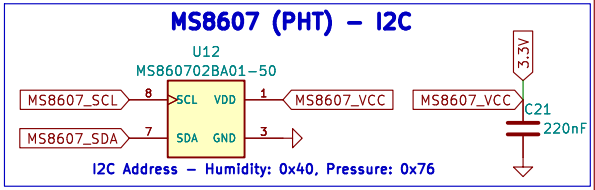
DPS310 (BARO) – SPI



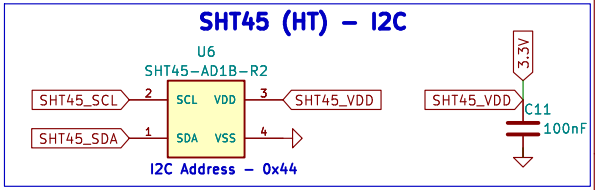
LSM6DSO32TR (IMU) – SPI



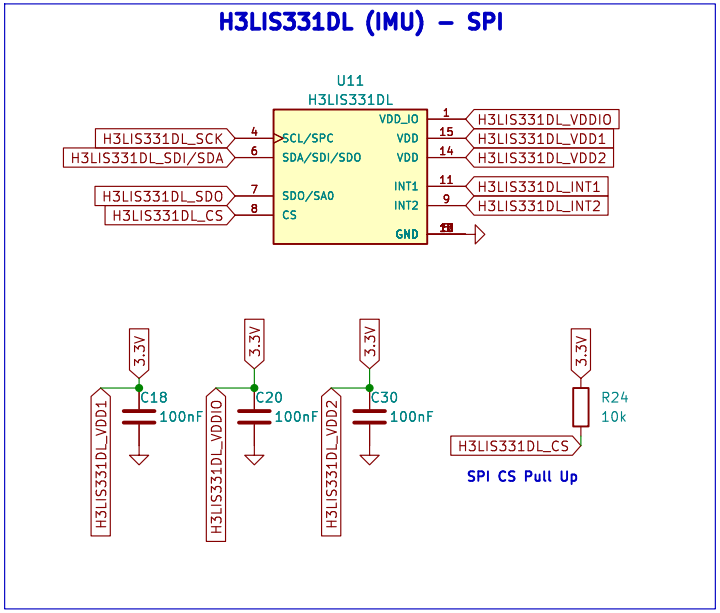
MS8607 (PHT) – I2C



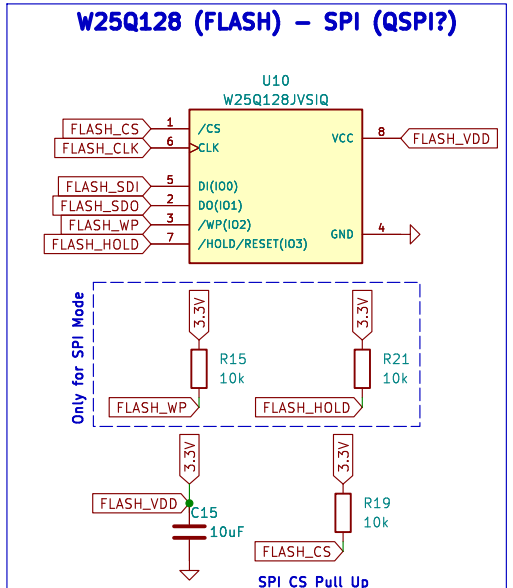
SHT45 (HT) – I2C



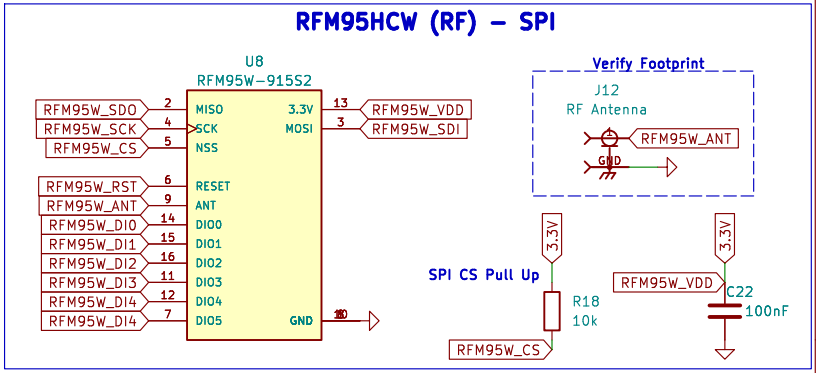
H3LIS331DL (IMU) – SPI



W25Q128 (FLASH) – SPI (QSPI?)



RFM95HCW (RF) – SPI



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Aether Flight Computer

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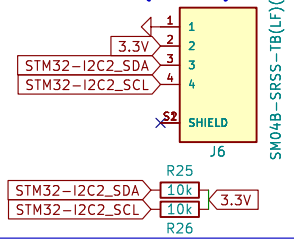
File: sensors.kicad_sch

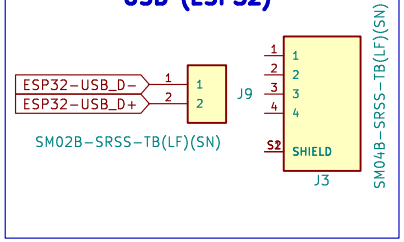
Title: Sensors & Active Components

Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.6-0		Id: 3/5

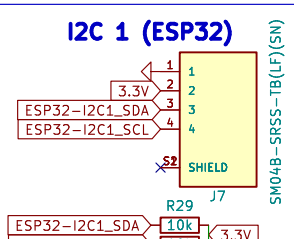
I2C 2 (STM32)



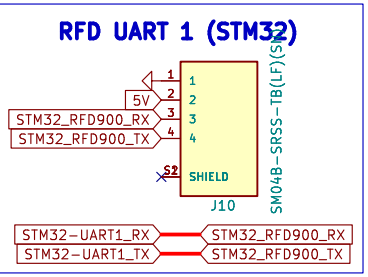
USB (ESP32)



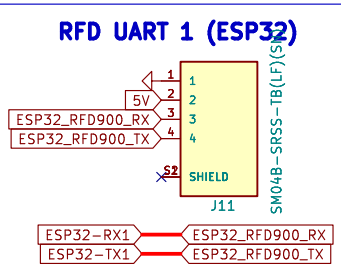
I2C 1 (ESP32)



RFD UART 1 (STM32)

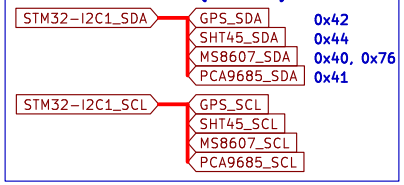


RFD UART 1 (ESP32)



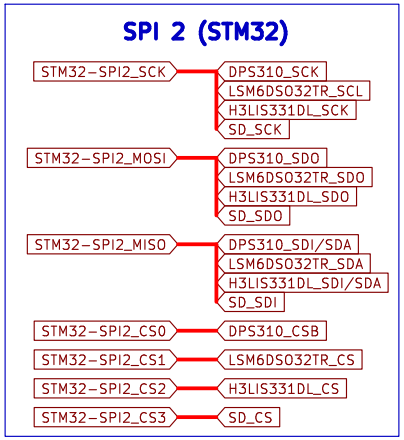
UART2 (STM32)

I2C 1 (STM32)

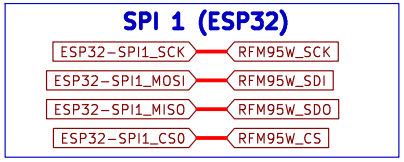


SPI 1 (STM32)

SPI 2 (STM32)



SPI 1 (ESP32)



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Aether Flight Computer

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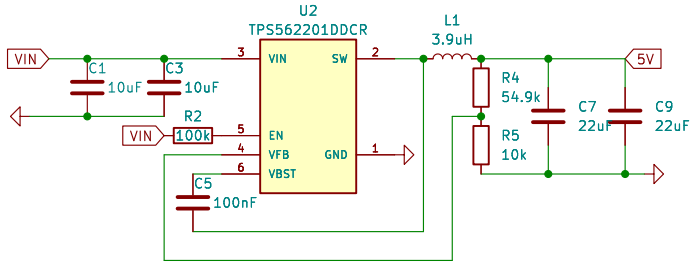
File: connectors.kicad_sch

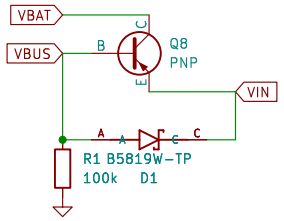
Title: Connections & Peripherals

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.6-0		Id: 4/5

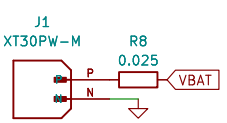
5V Buck Converter



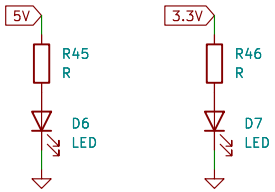
VBAT/VBUS Logic



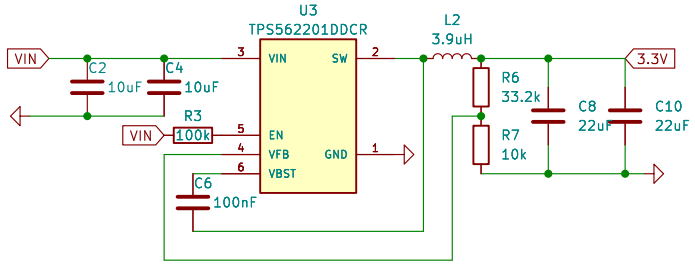
Power Input



Power Leds



3.3V Buck Converter



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Aether Flight Computer

Sheet: /power/
File: power.kicad_sch

Title: Power Schematics

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