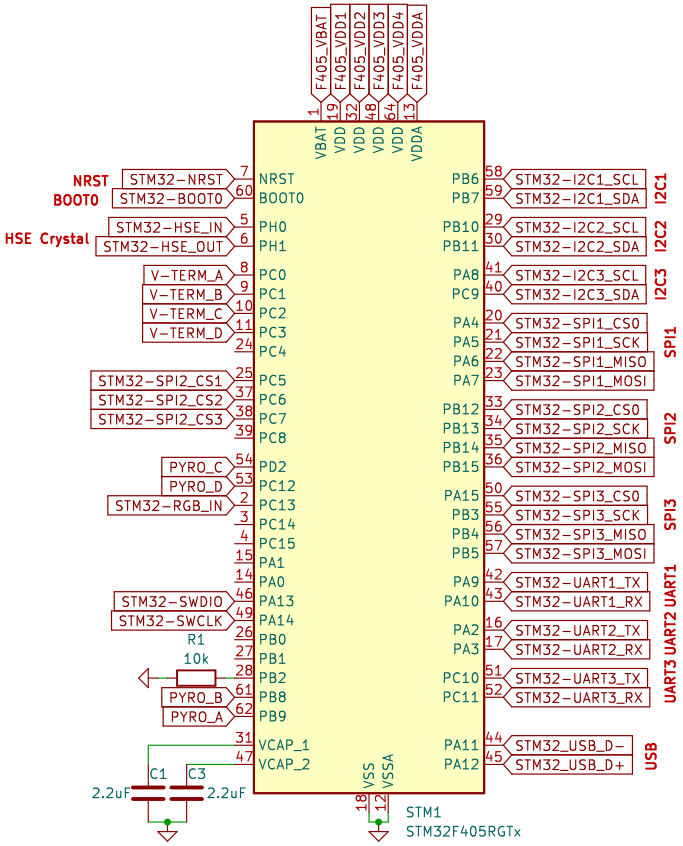
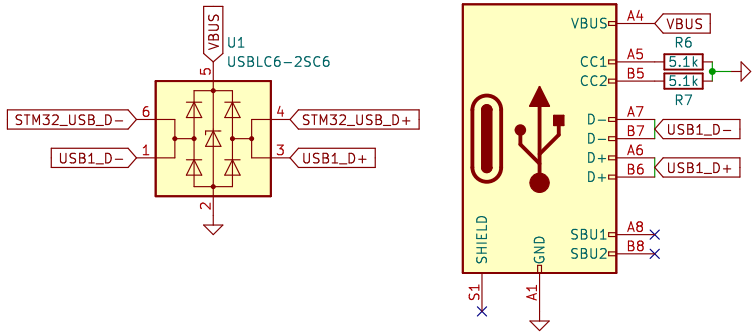
## MCU – STM32

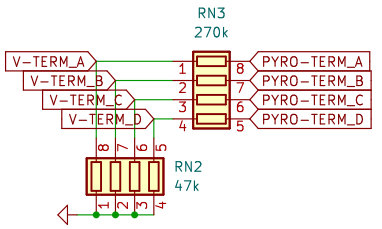



SDO – Serial Data Out –> Microcontroller In Sensor Out
SDI – Serial Data In –> Microcontroller Out Sensor In

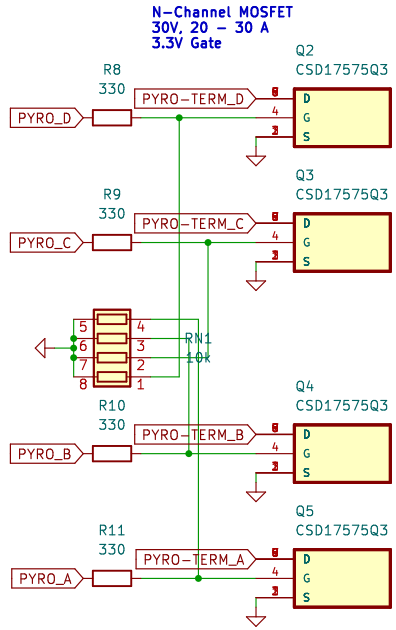
## USB-C (STM32)




## Pyro Voltage & Cont. (STM32)

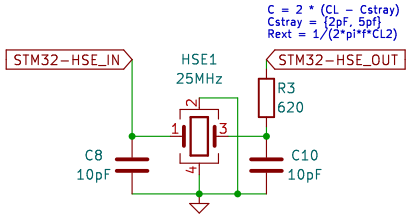



## Pyro Terminals (STM32)



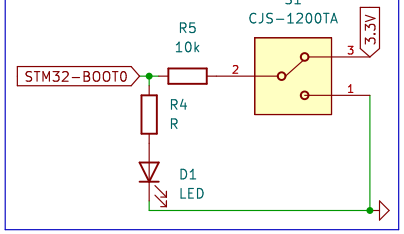

ABM8G-25.000MHZ-4Y-T3

## HSE Crystal



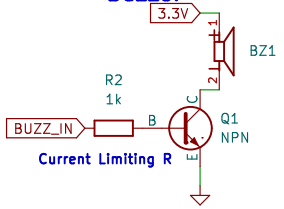

Do Math To Find CAP and R Values

## BOOT0 Switch

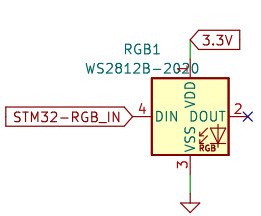



Do BOOT0 & RST Pins have internal pull-ups/pull-downs?

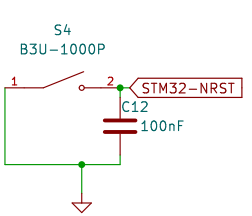
## Buzzer



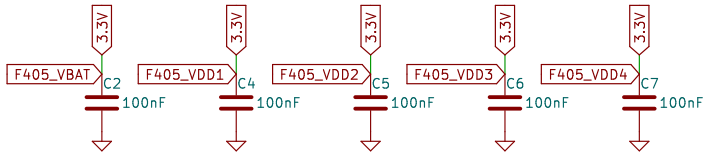

## RGB Led



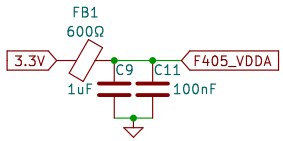

## Reset Switch




## MCU Decoupling Caps




## EMI Filter




Do Math To Find CAP and R Values

nyuad.space

open source hardware

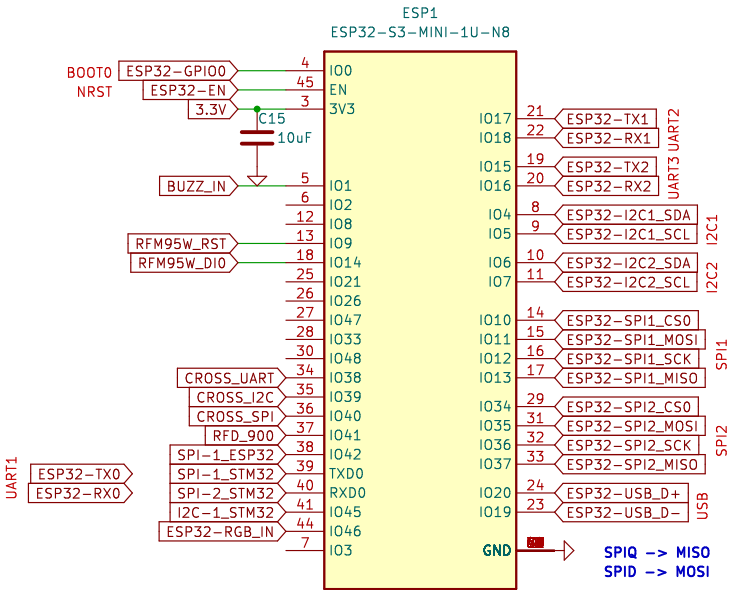
Aether Flight Computer

Sheet: /
File: aether.kicad_sch

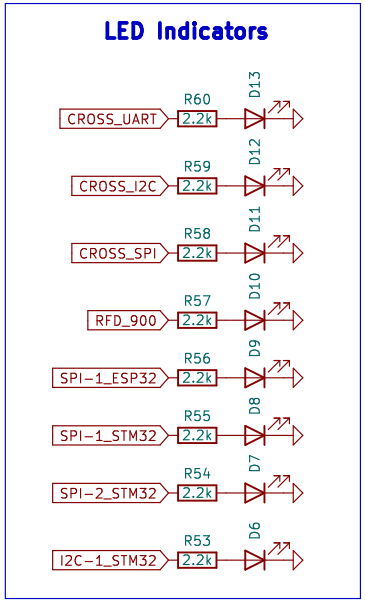
**Title: MCU – STM32 Schematic**

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

## MCU – ESP32

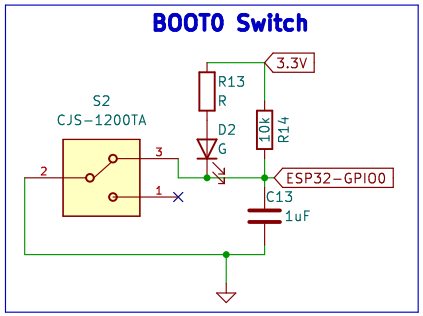



## LED Indicators

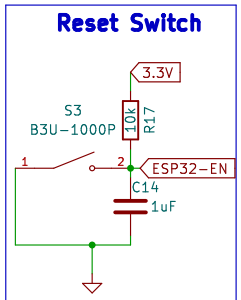



Do BOOT0 & RST Pins have internal pull-ups/pull-downs?

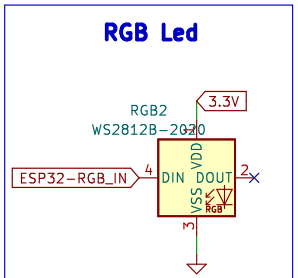
## BOOT0 Switch



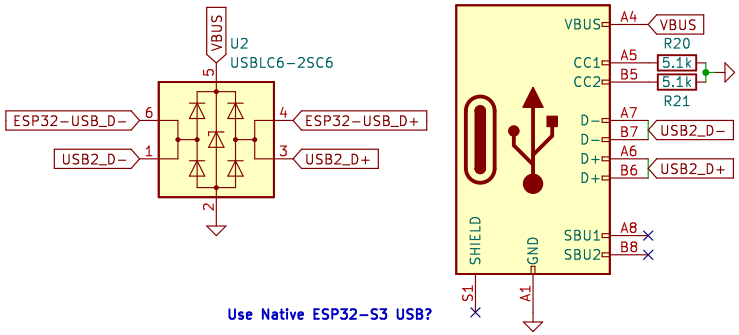

## Reset Switch



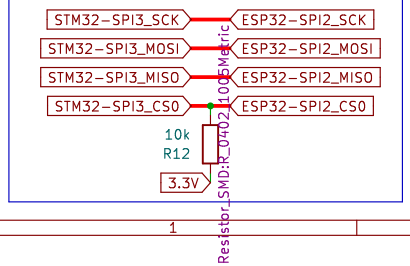

## RGB Led



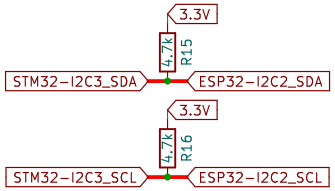

## USB-C (ESP32)



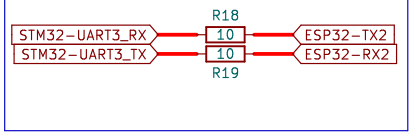

## SPI 3 (STM32) – SPI 2 (ESP32)




## I2C 3 (STM32) – I2C 2 (ESP32)




## UART 3 (STM32) – UART 2 (ESP32)




nyuad.space

Aether Flight Computer

open source hardware

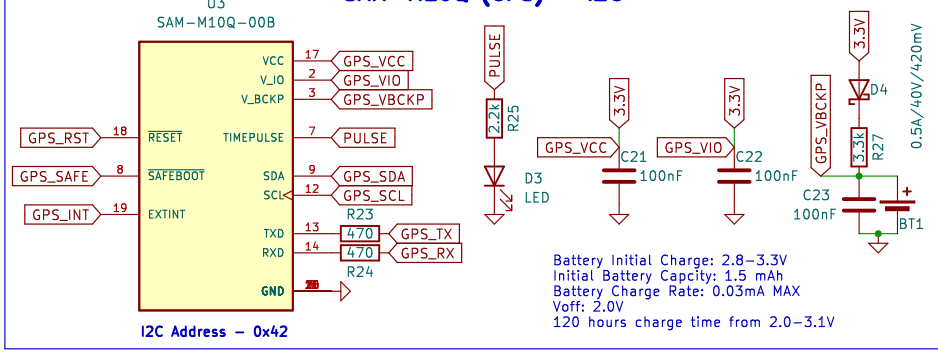
Sheet: /esp32/

File: esp32.kicad_sch

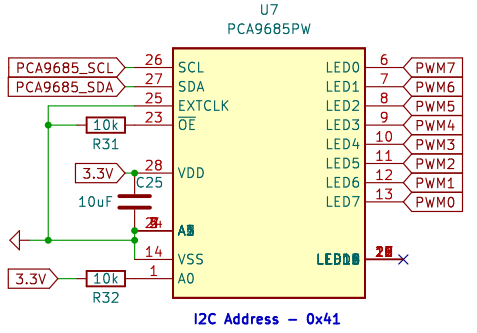
**Title: MCU – ESP32 Schematic**

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

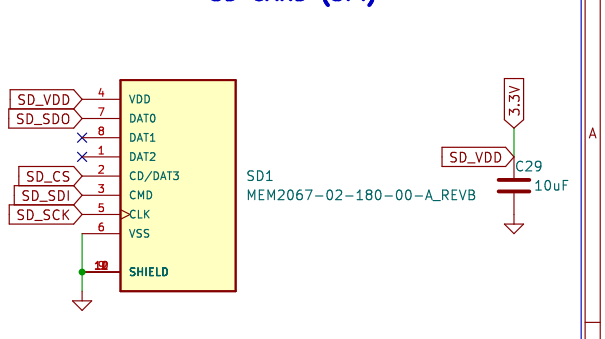
## SAM-M10Q (GPS) – I2C



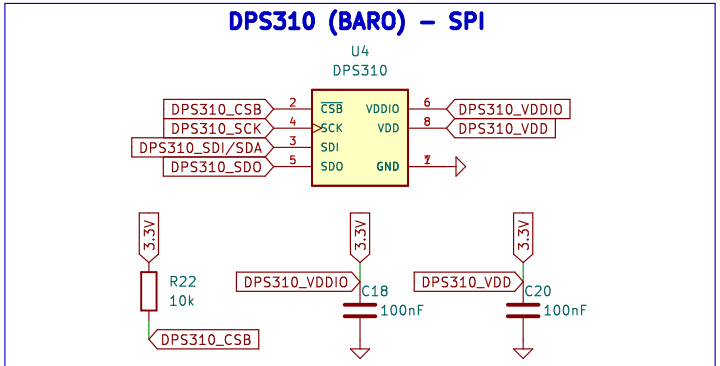

## PCA9685 – I2C



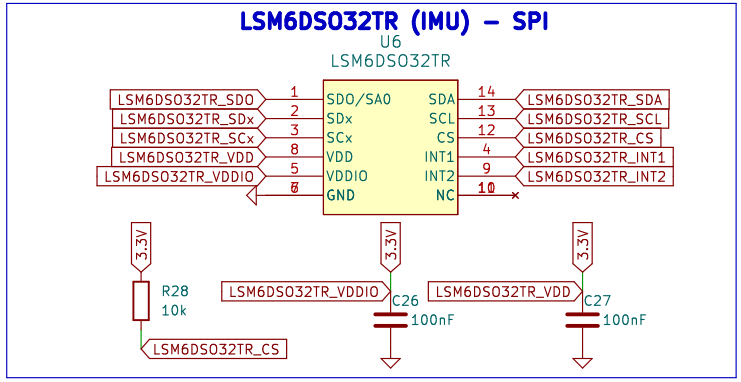

## SD CARD (SPI)



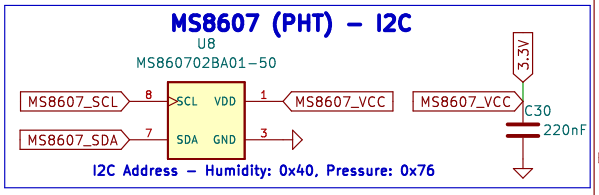

## DPS310 (BARO) – SPI



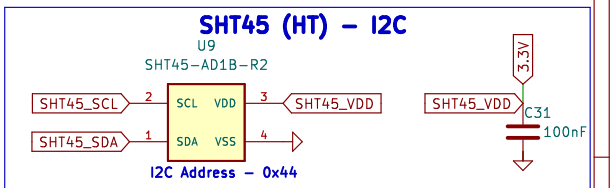

## LSM6DSO32TR (IMU) – SPI



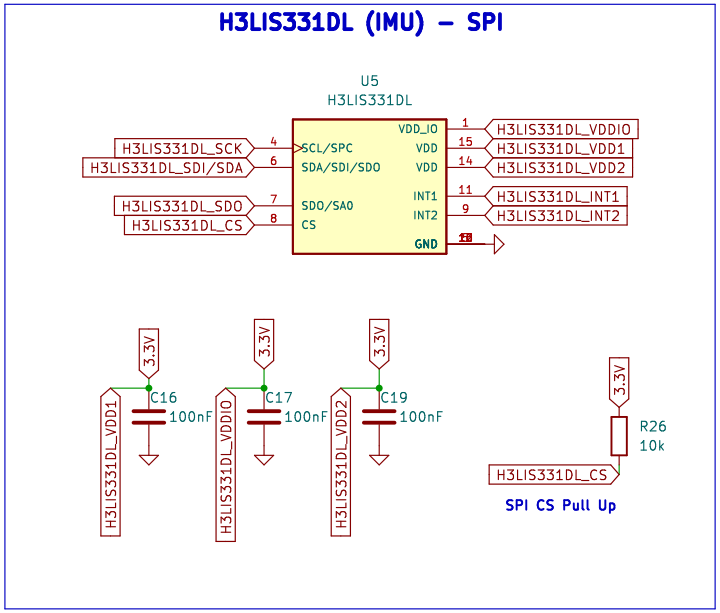

## MS8607 (PHT) – I2C



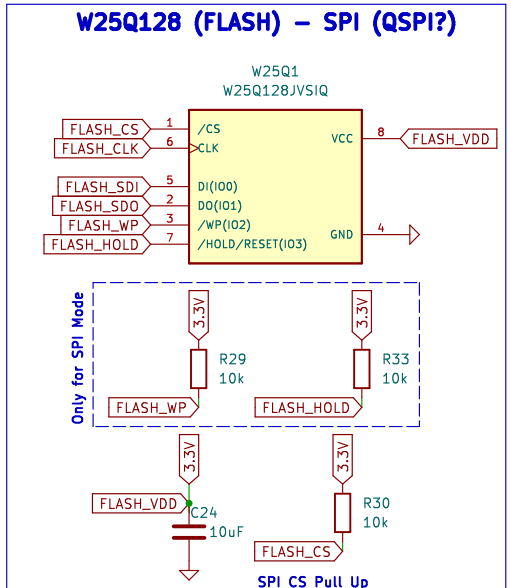

## SHT45 (HT) – I2C



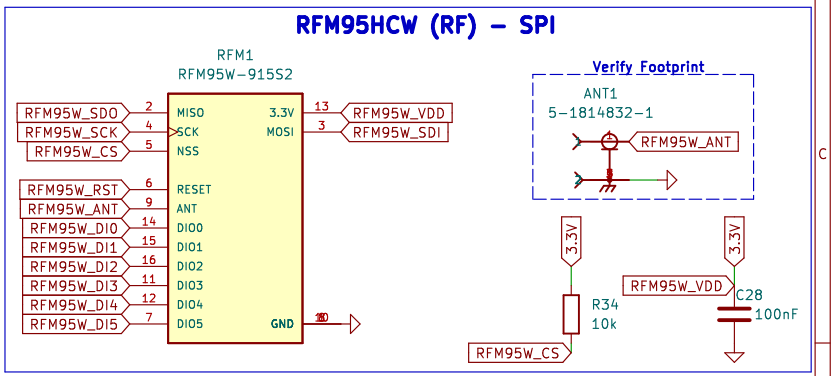

## H3LIS331DL (IMU) – SPI




## W25Q128 (FLASH) – SPI (QSPI?)




## RFM95HCW (RF) – SPI




nyuad.space

open source hardware

**Aether Flight Computer**

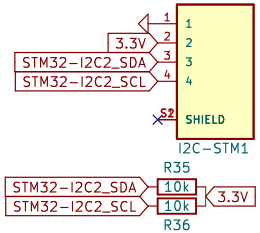
Sheet: /sensors/

File: sensors.kicad_sch

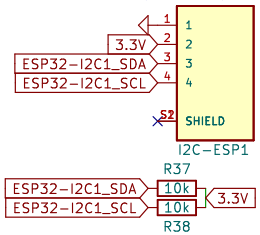
***Title: Sensors & Active Components***

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

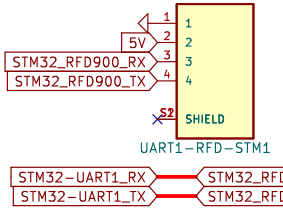
## I2C 2 (STM32)



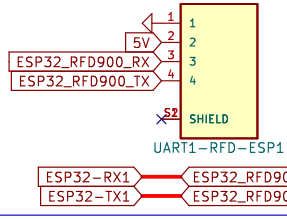

## I2C 1 (ESP32)



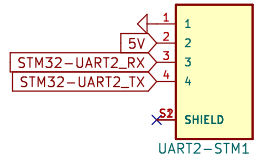

## RFD UART 1 (STM32)



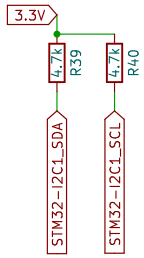

## RFD UART 1 (ESP32)



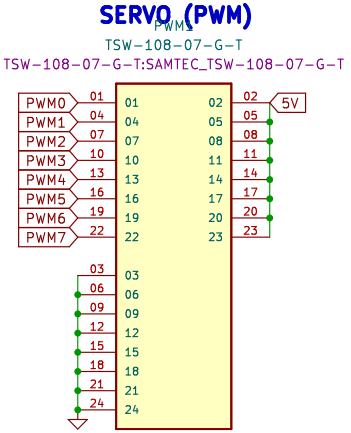

## UART2 (STM32)



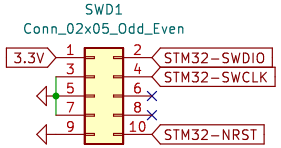

## I2C 1 Pull Ups (STM32)



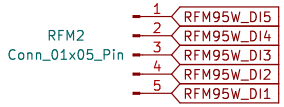

## SERVO (PWM)



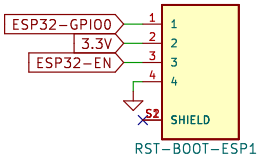

## SWD Connector (STM32)



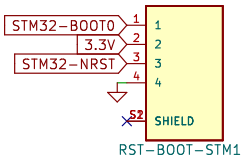

## RFM 95 Breakouts (STM32)



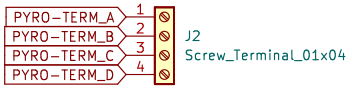

## RST + BOOT (ESP32)



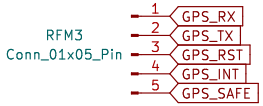

## RST + BOOT (STM32)



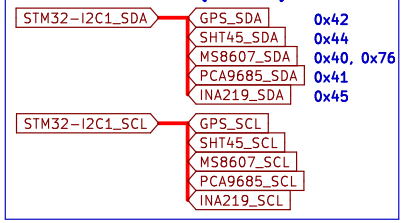

## PYRO (STM32)



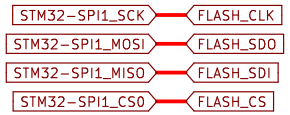

## GPS Breakouts



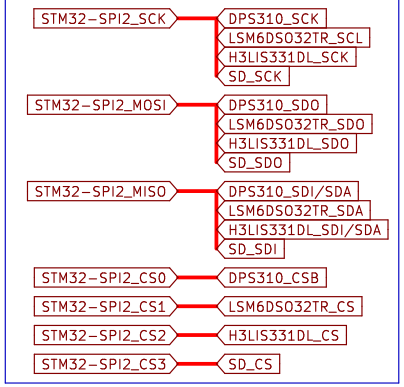

## I2C 1 (STM32)




## SPI 1 (STM32)




## SPI 2 (STM32)




## SPI 1 (ESP32)


nyuad.space

open source hardware

Aether Flight Computer

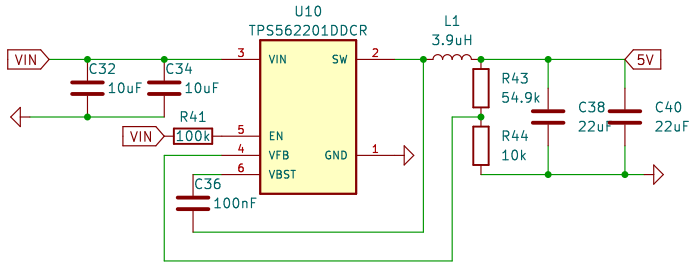
Sheet: /connectors/

File: connectors.kicad_sch

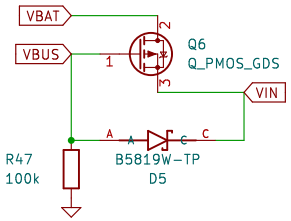
**Title: Connections & Peripherals**

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

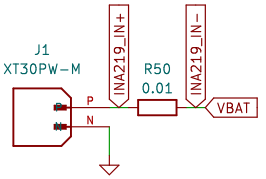
## 5V Buck Converter



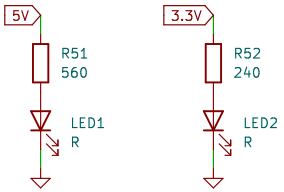

## VBAT/VBUS Logic



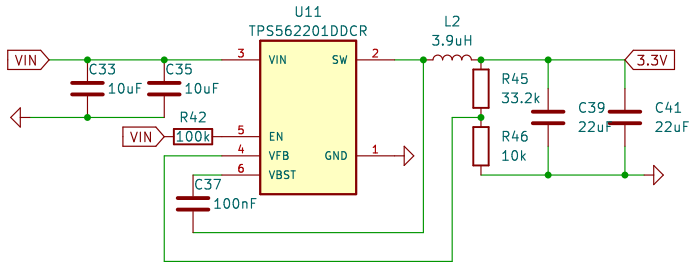

## Power Input



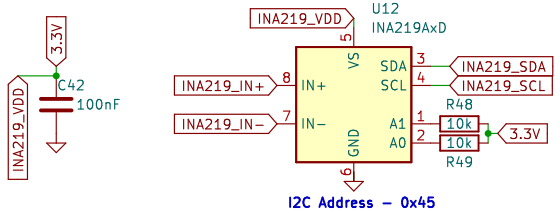

## Power Leds




## 3.3V Buck Converter




## INA219 (CURRENT) – I2C




nyuad.space

open source hardware

Aether Flight Computer

Sheet: /power/

File: power.kicad_sch

**Title: Power Schematics**

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