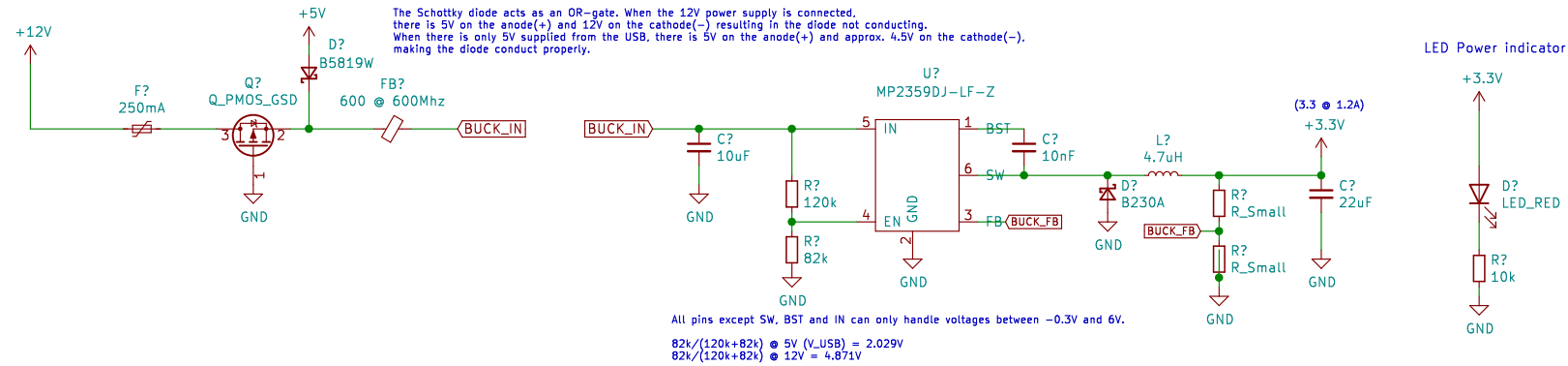
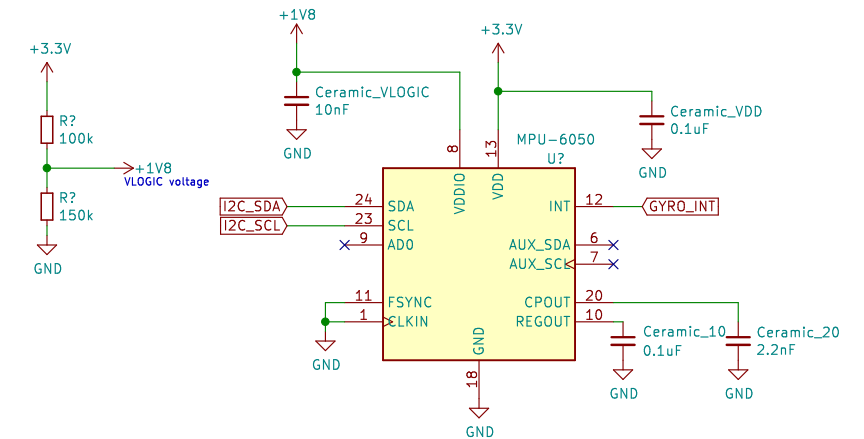


## Power Supply & Filtering



## Gyroscope MPU6050



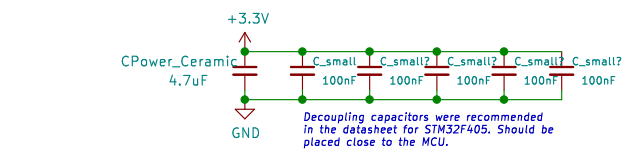
AD0 (Address select pin) which is a I2C slave address select pin.  
 Won't need since we won't connect two of the same gyros to the same I2C.

INT (Interrupt) pin which is an interrupt digital output pin and used to give indication to the MCU that data is available to read from the MPU6050.

FSYNC is used to sync the MP6050 with a videocamera etc.  
 If unused, connect to ground according to datasheet.

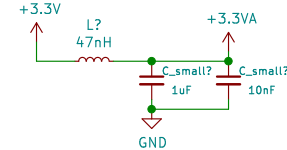
CLKIN is optional external reference clock input. If unused, connect to ground according to datasheet.

## MCU STM32F405

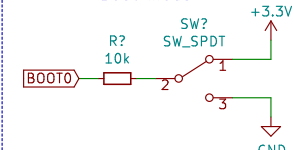


### Analog power supply filtering

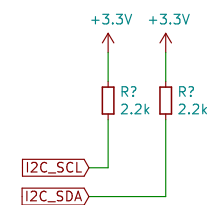
The inductor together with the capacitors in parallel form a low pass filter with  $F_c = 730.484 \text{ kHz}$



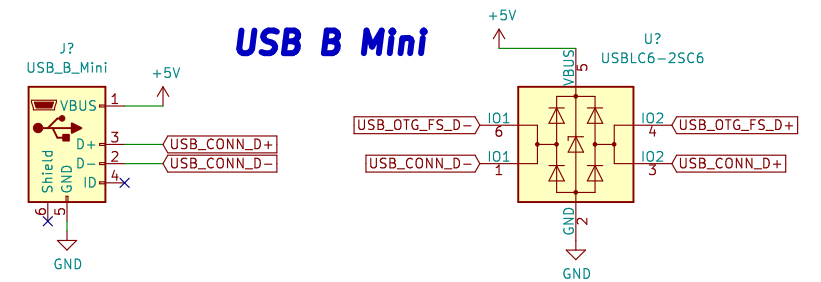
### Boot mode



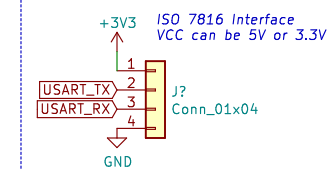
### I2C Pull-up resistors



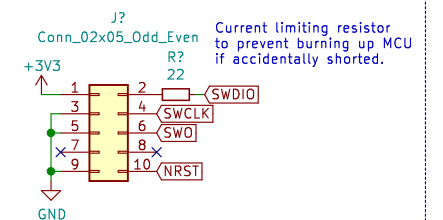
## USB B Mini



## USART

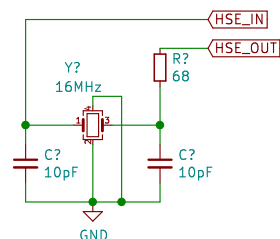


## Serial Wire Debug



### Crystal Oscillator

Load resistor needs to have a tolerance of 30ppm = +-0.003 %



Sheet: /  
 File: STM32F405RG + Gyro + I2C.sch  
**Title: STM32F405RG-GYRO-I2C-UART-USB**

Size: A3 Date: Rev:  
 KiCad E.D.A. kicad (5.1.10)-1 Id: 1/1