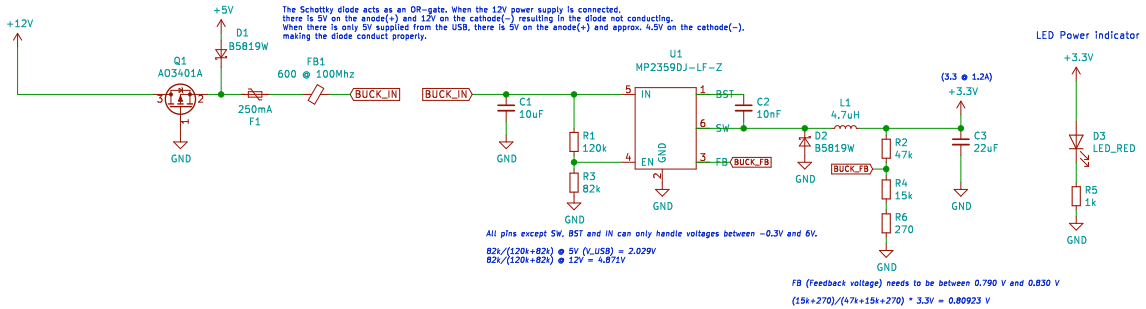
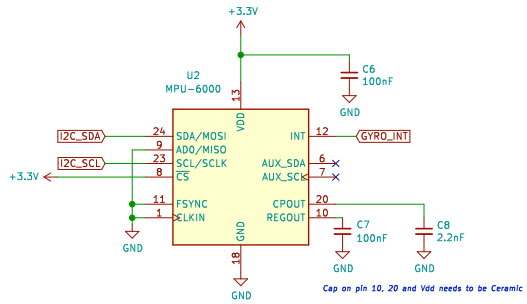
Power Supply & Filtering



Gyroscope MPU6000

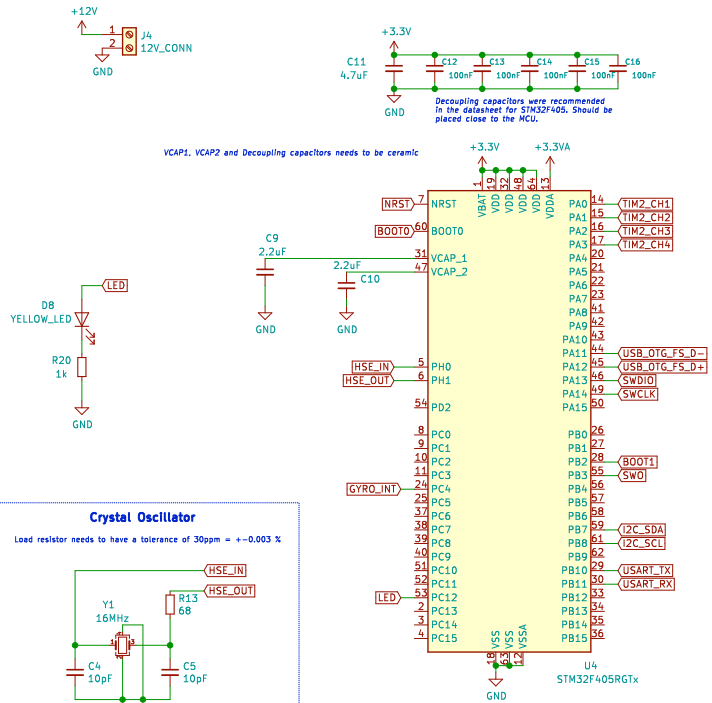


INT (Interrupt) pin which is an interrupt digital output pin and used to give indication to the MCU that data is available to read from the MPU6000.

FSYNC is used to sync the MP6000 with a videocamera etc. If unused, connect to ground according to datasheet.

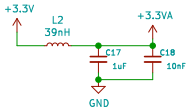
CLKIN is optional external reference clock input. If unused, connect to ground according to datasheet.

MCU STM32F405



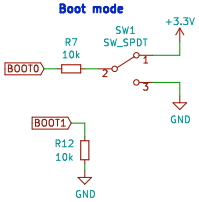
Analog power supply filtering

The Inductor together with the capacitors in parallel form a low pass filter with Fc =



Decoupling capacitors were recommended in the datasheet for STM32F405.

Boot mode

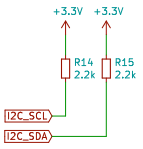


Crystal Oscillator

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

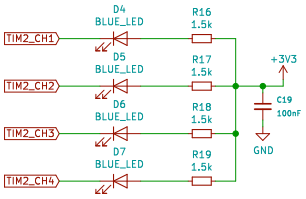
C = 2 * (C_load - C_stray)

I2C Pull-up resistors

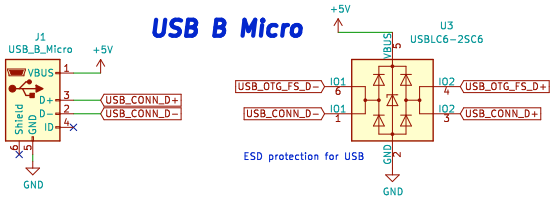


Pull-up resistors are needed for I2C to ensure the logical state. Should be in range 2k to 10k

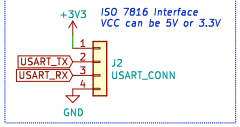
PWM LED



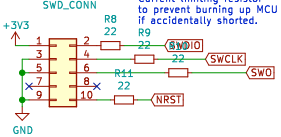
USB B Micro



USART



Serial Wire Debug



Sheet: /
File: STM32F405RG + Gyro + I2C.sch

Title: STM32F405RG-GYRO-I2C-UART-USB

Size: A3	Date:	Rev:
KiCad E.D.A. eeschema (5.1.2-1)-1		Id: 1/1