Handschuh
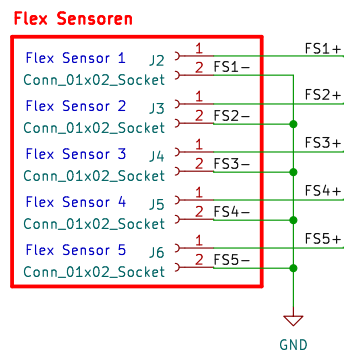
Power

3.7V LiPo Akku -> Lademodul -> Boost Converter -> Vin 5V

+5V

J7
Conn_01x02_Socket

GND

Flex Sensoren

Flex Sensor 1 J2 — FS1+ FS1−
Conn_01x02_Socket

Flex Sensor 2 J3 — FS2+ FS2−
Conn_01x02_Socket

Flex Sensor 3 J4 — FS3+ FS3−
Conn_01x02_Socket

Flex Sensor 4 J5 — FS4+ FS4−
Conn_01x02_Socket

Flex Sensor 5 J6 — FS5+ FS5−
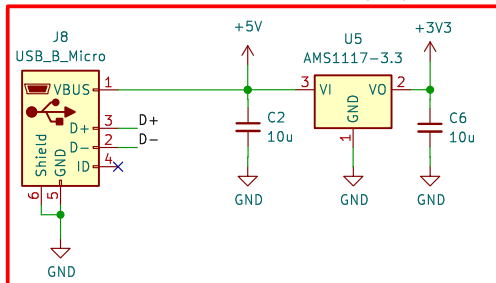Conn_01x02_Socket

GND
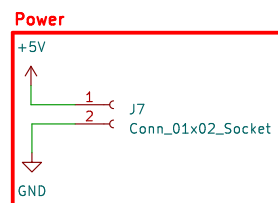
Multiplexer, Messschaltung, ADC

IC1
MUX508IDR

A0_multipl — A0 A1 — A1_multipl
EN_multpl — EN A2 — A2_multipl
VSS GND
FS1+ — S1 VDD
S2 S5 — FS5+
S3 S6 — FS4+
S4 S7 — FS3+
Flexsensor — D S8 — FS2+
GND

+5V +3V3 +5V

R11 R10 U2 R5
240R 1k1 INA129 120R

to_ADC

Flexsensor

C7 R6
68n 10k

GND +1V0 GND GND

to_ADC

U6
MAX11613

AIN0 Vdd
AIN1 SCL — SCL
AIN2 SDA — SDA
AIN3/REF
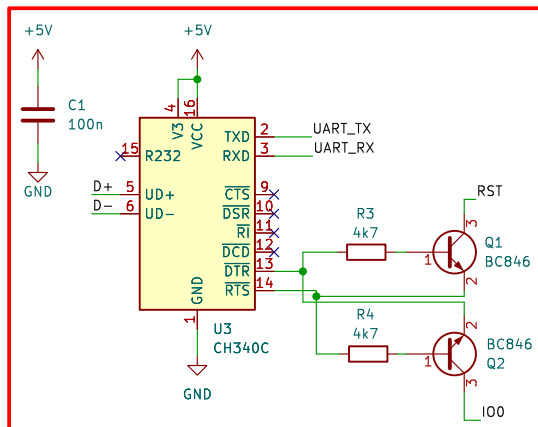GND

MAX11607 I2C Slave Address: 0110100

+3V3

GND
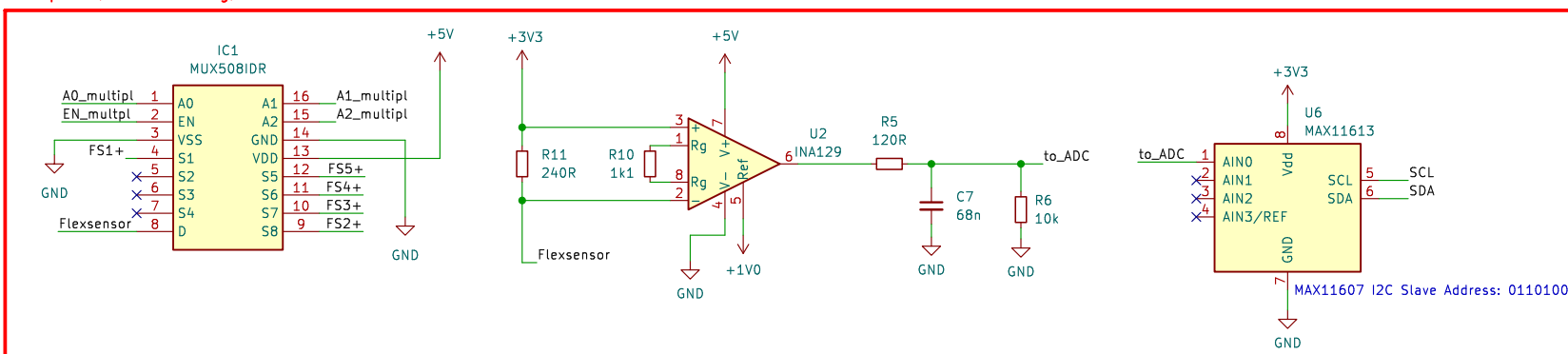
H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole

Micro USB Anschluss für ESP32 , Spannungsregler 5V zu 3V3

J8
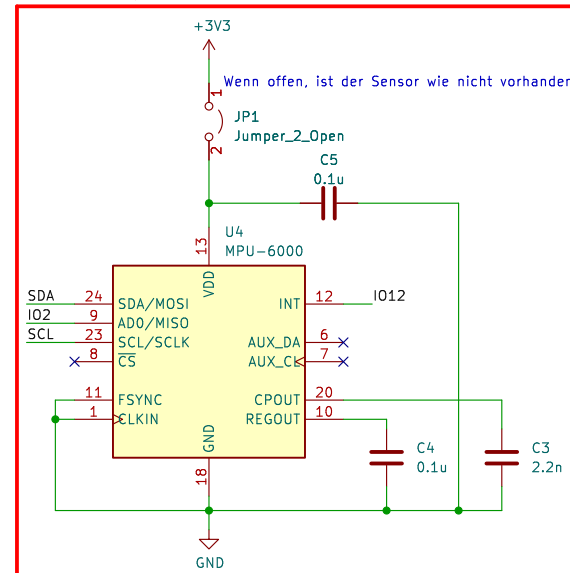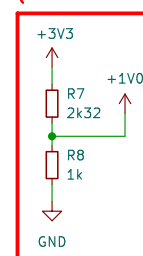USB_B_Micro

VBUS
D+ D+
D− D−
ID
Shield GND

+5V U5 +3V3
AMS1117−3.3
VI VO

C2 C6
10u 10u

GND GND GND

GND

Bustreiber für Micro USB Anschluss

+5V +5V

C1
100n

GND

R232
VCC V3
TXD — UART_TX
RXD — UART_RX
UD+ CTS
UD− DSR
RI
DCD
DTR
RTS
GND

U3
CH340C

R3
4k7 RST
Q1
BC846

R4
4k7
Q2
BC846

IO0

GND

Adressing for MUX508 Multiplexer

+5V

JP2 R9
Jumper_2_Open 10k
A0_multipl

JP3 R12
Jumper_2_Open 10k
A1_multipl

JP4 R13
Jumper_2_Open 10k
A2_multipl

JP5 R14
Jumper_2_Open 10k
EN_multpl

Open = 0
Closed = 1

GND

ESP32−WROOM−32

+3V3 +3V3

Upload Button
SW2
SW_Push_Dual

Reset Button R1
SW1 4k7
SW_Push_Dual

U1
ESP32−WROOM−32

RST EN IO0 — IO0
TXD0/IO1 — UART_RX
SENSOR_VP IO2 — IO2
SENSOR_VN RXD0/IO3 — UART_TX
IO4
IO5
IO12 — IO12
IO13
IO14
IO15
IO16
IO17
SDA — SDO/SD0 IO18
SDI/SD1 IO19
SHD/SD2 IO21
SWP/SD3 IO22
SCL — SCK/CLK IO23
SCS/CMD IO25
IO26
IO27
IO32
IO33
IO34
IO35
GND

GND

MPU−6000 Gyro Sensor

+3V3

Wenn offen, ist der Sensor wie nicht vorhanden

JP1
Jumper_2_Open

U4
MPU−6000

C5
0.1u

SDA — SDA/MOSI VDD
IO2 — AD0/MISO INT — IO12
SCL — SCL/SCLK
CS AUX_DA
AUX_CL
FSYNC CPOUT
CLKIN REGOUT
GND

C4 C3
0.1u 2.2n

GND

3.3V to 1V Converter (Vref for INA129)

+3V3

R7 +1V0
2k32

C5
0.1u

R8
1k

GND