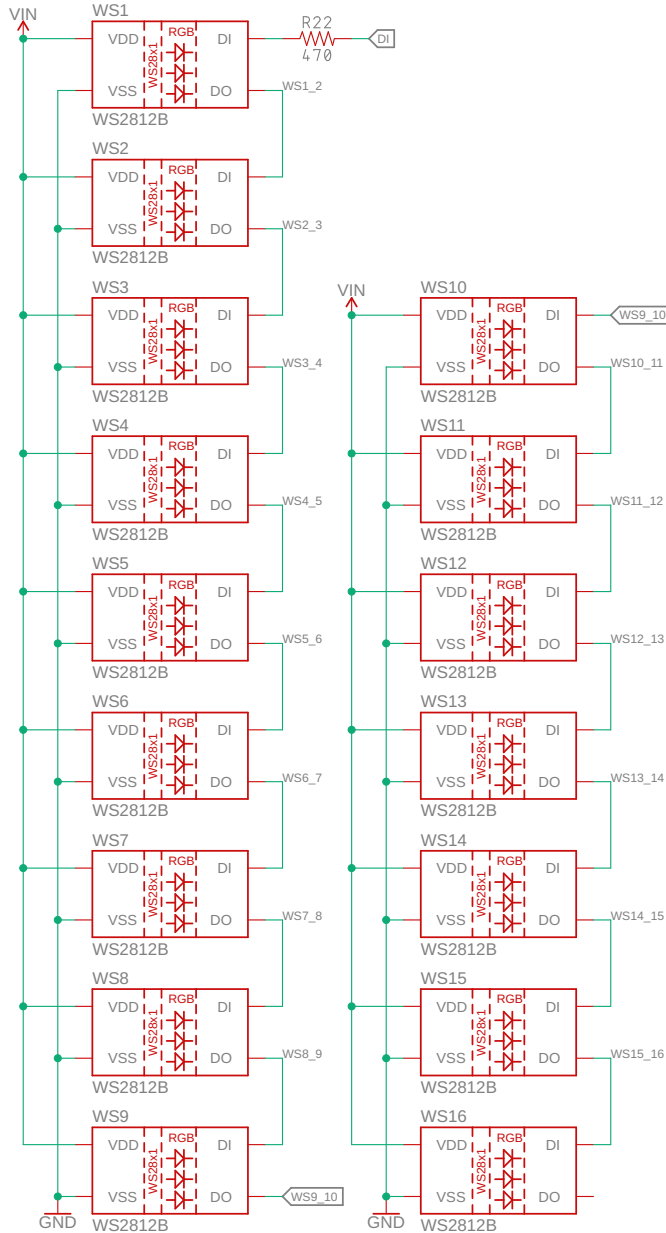


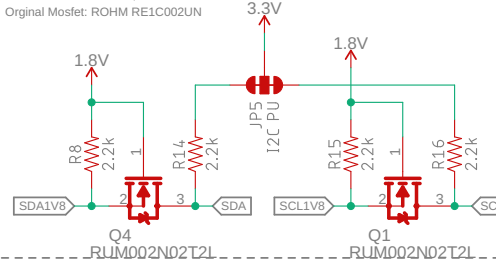
LED Ring

Wenn nur wenige LEDs aktiv sind sollte dies mit der Batterie-Spannung ausreichen.



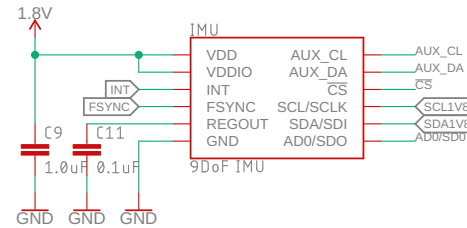
I2C Level Shifter - IMU

MOSFETs austauschen, da zu klein
Original Mosfet: ROHM RE1C002UN



IMU (ICM-20948)

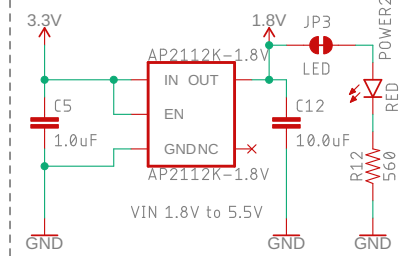
SparkFun 9DoF IMU Breakout - ICM-20948 (Qwiic)



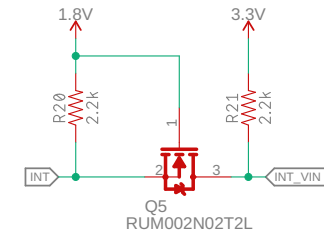
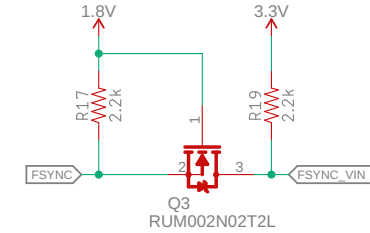
Touch Pins



Voltage Regulator 1.8V



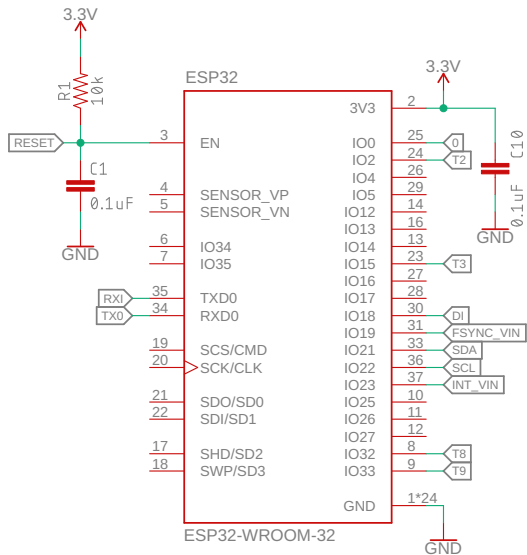
Interrupt Level Shifting



Titel: Navitron	
Ausarbeitung für Embedded Systems 1	
Erstellt von: André Kuhlmann	Rev: v1
Datum: 21.06.2020	Seite: 2/2

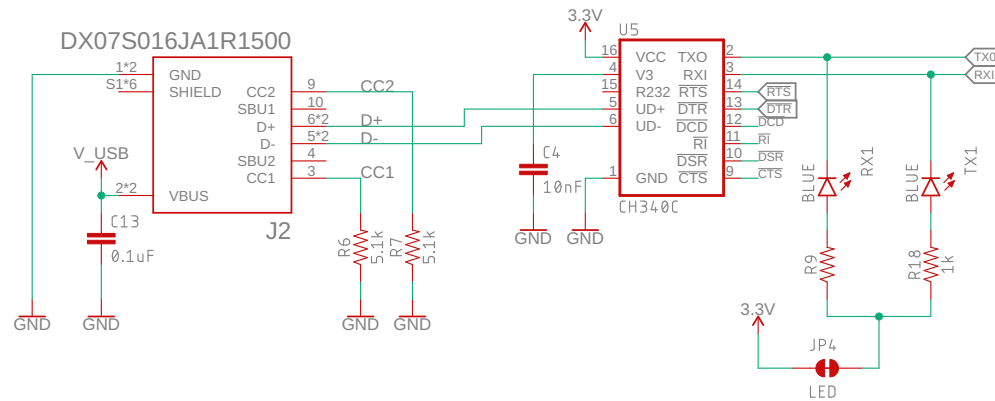
ESP32

Basiert auf: Sparkfun LoRa Gateway - 1-Channel (ESP32)

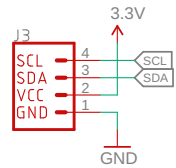


USB to Serial

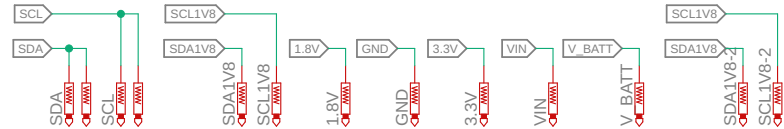
Basierend auf: SparkFun Serial Basic Breakout - CH340C and USB-C
D+ / D- müssen direkt mit UD+ / UD- verbunden werden



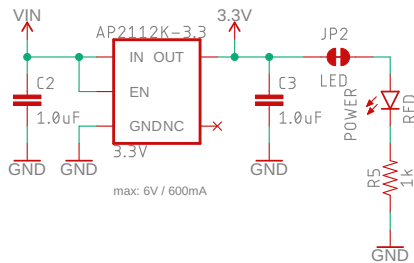
I2C Extension Header



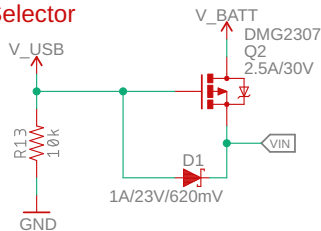
Testpads



Voltage Regulator 3.3V



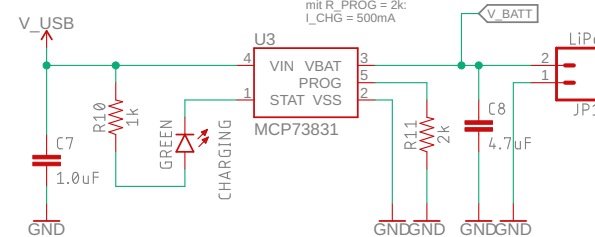
Voltage Selector



Lithium-Polymer Charger

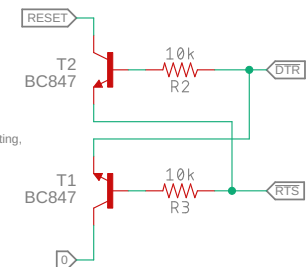
Basiert auf: SparkFun Thing Plus - ESP32 WROOM

Charge current:
 $I_{CHG} = 1000 / R_{PROG}$
mit $R_{PROG} = 2k$:
 $I_{CHG} = 500mA$



Auto-Reset

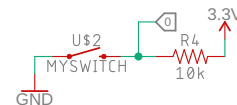
Boot Mode Configuration
Pin Default Boot Download
GPIO0 1 1 0
U0TXD 1 1 x
GPIO2 0 x 0
GPIO4 0 x x
MTD0 1 x x
GPIO5 1 1 x
If U0TXD, GPIO2, GPIO5 are floating,
GPIO0 determines boot mode



Reset Button



GPIO0 Button



Titel: Navitron

Ausarbeitung für Embedded Systems 1

Erstellt von: André Kuhlmann Rev: v1

Datum: 21.06.2020 Seite: 1/2