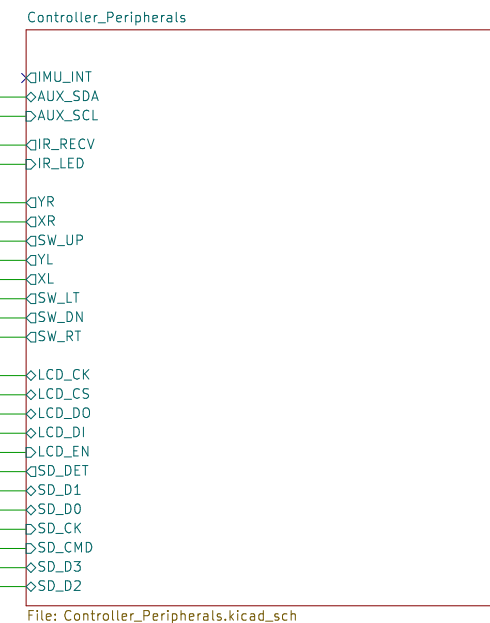
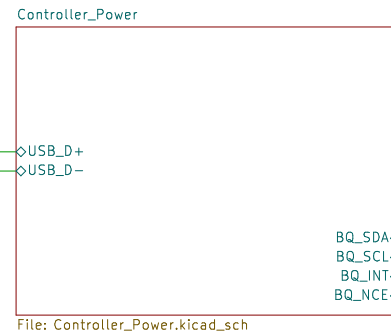
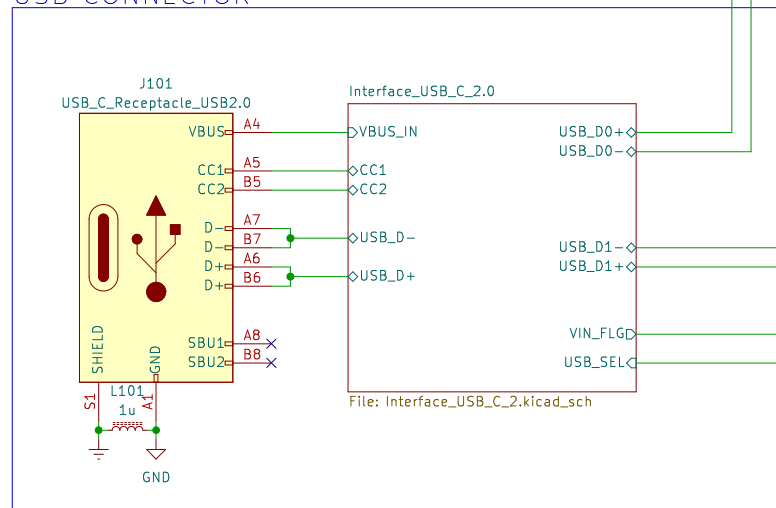


## USB CONNECTOR



sudo-junkie

Sheet:

File: Controller.kicad\_sch

Title: Controller

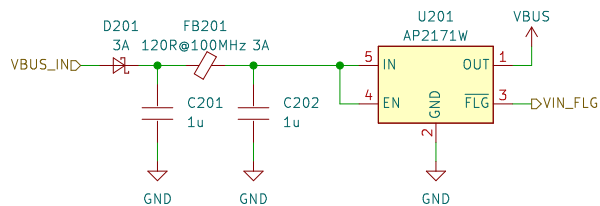
Size: A4 Date: 2023-10-05

KiCad E.D.A. kicad (7.0.0)

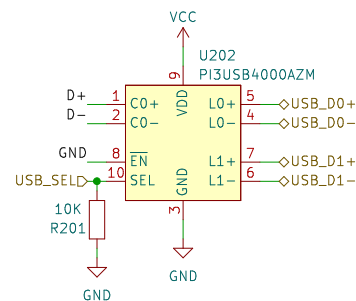
Rev: 1.0

Id: 1/5

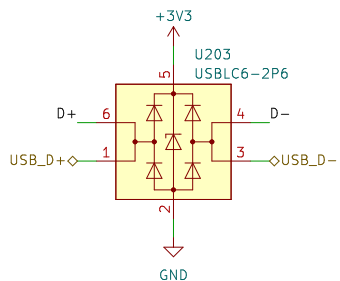
## INPUT CURRENT LIMITING



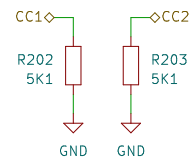
## USB SWITCH



## ESD PROTECTION



## CONFIGURATION CHANNELS



sudo-junkie

Sheet:

File: Interface\_USB\_C\_2.kicad\_sch

Title: Controller

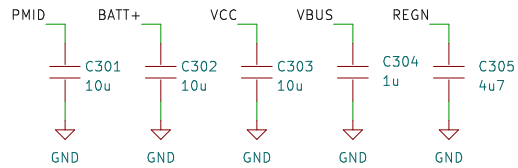
Size: A4 Date: 2023-10-05

KiCad E.D.A. kicad (7.0.0)

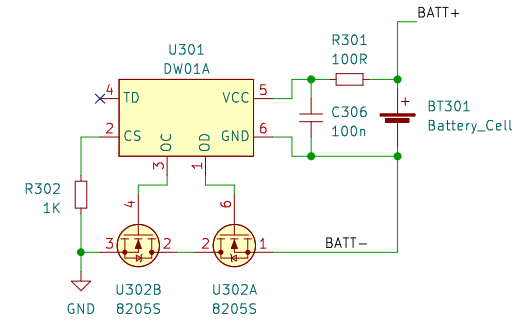
Rev: 1.0

Id: 2/5

## DECOUPLING CAPACITORS

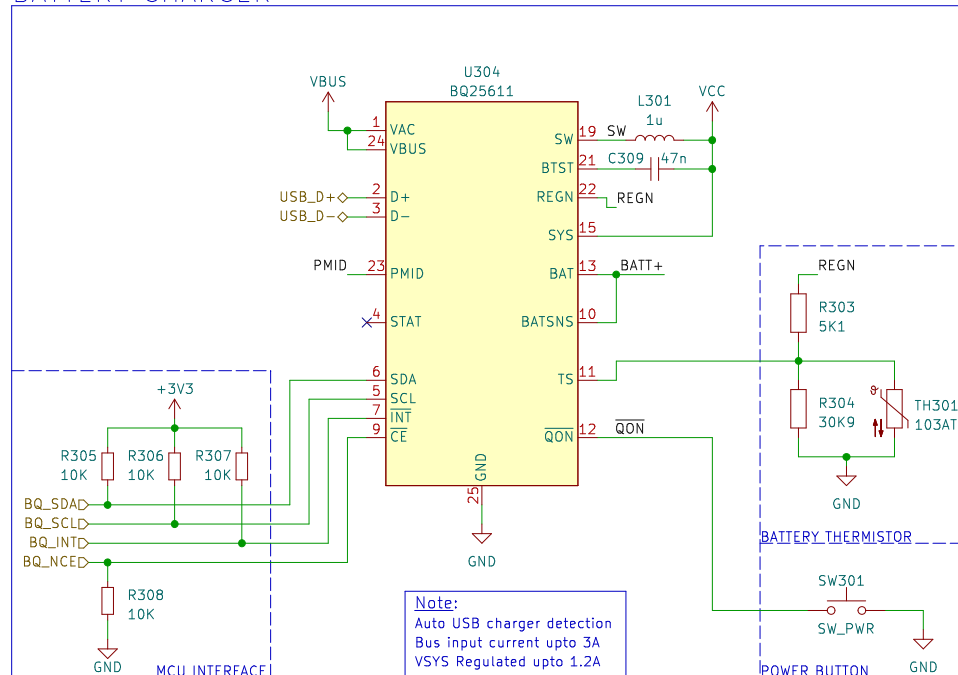


## BATTERY PROTECTION



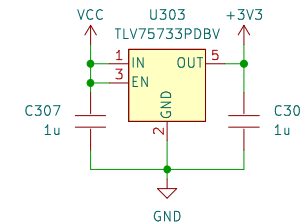
**Note:**  
Battery Stats  
Chemistry: Lithium  
Voltage: 2.5V - 4.2V  
Charge current: 2A

## BATTERY CHARGER



**Note:**  
Auto USB charger detection  
Bus input current upto 3A  
VSYS Regulated upto 1.2A

## 3V3 REGULATOR



sudo-junkie  
Sheet:  
File: Controller\_Power.kicad\_sch

Title: Controller

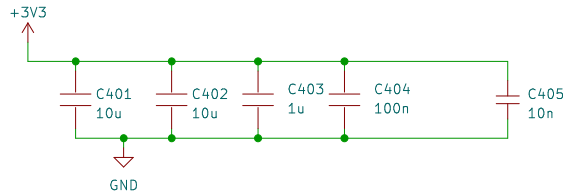
Size: A4 Date: 2023-10-05

KiCad E.D.A. kicad (7.0.0)

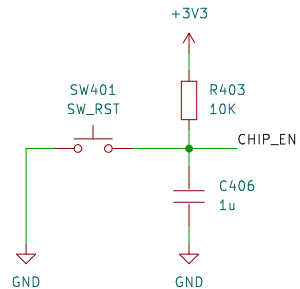
Rev: 1.0

Id: 3/5

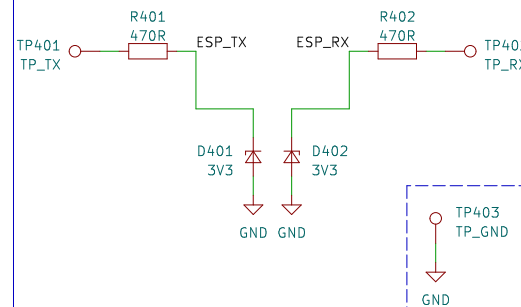
## POWER & DECOUPLING



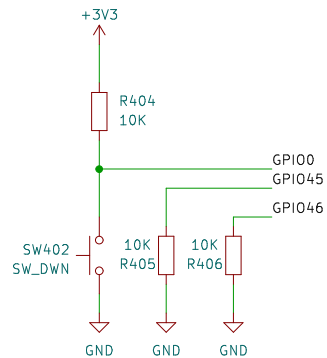
## RESET CIRCUIT



## UART PIN PROTECTION



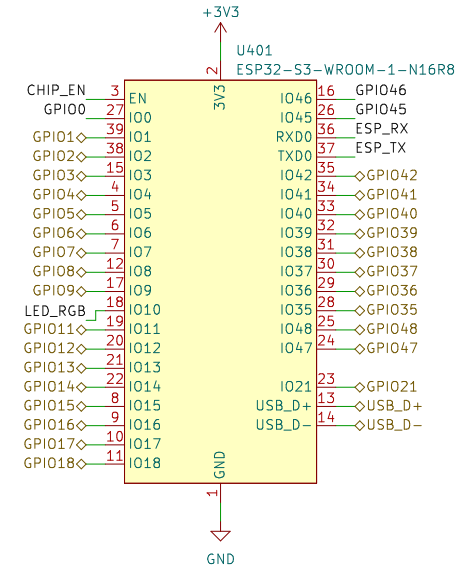
## BOOT MODE STRAPPING



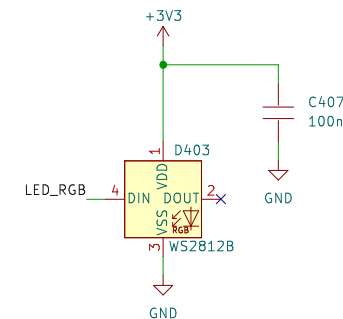
Boot Mode	GPIO0	GPIO46
Default Configuration	1 (Pull-up)	0 (Pull-down)
SPI Boot (default)	1	Any value
Download Boot	0	0
Invalid combination <sup>1</sup>	0	1

EFUSE_VDD_SPI_FORCE	GPIO45	eFuse <sup>1</sup>	Voltage	VDD_SPI power source <sup>2</sup>
0	0	Ignored	3.3 V	VDD3P3_RTC via R <sub>SP1</sub>
	1	Ignored	1.8 V	Flash Voltage Regulator
1	Ignored	0	1.8 V	Flash Voltage Regulator
	Ignored	1	3.3 V	VDD3P3_RTC via R <sub>SP1</sub>

## ESP32-S3-WROOM-1U



## RGB LED



sudo-junkie

Sheet:

File: RF\_MODULE\_ESP32-S3-WROOM-1U.kicad\_sch

Title: Controller

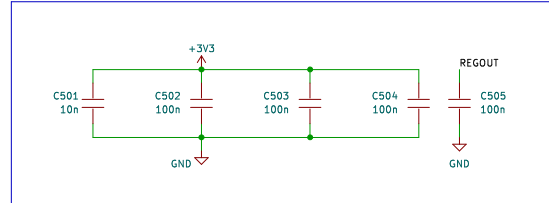
Size: A4 Date: 2023-10-05

KiCad E.D.A. kicad (7.0.0)

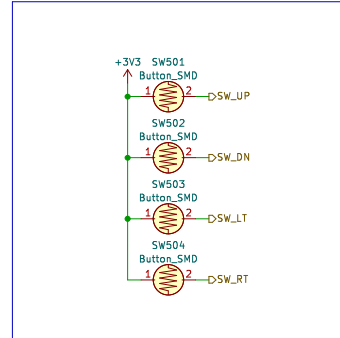
Rev: 1.0

Id: 4/5

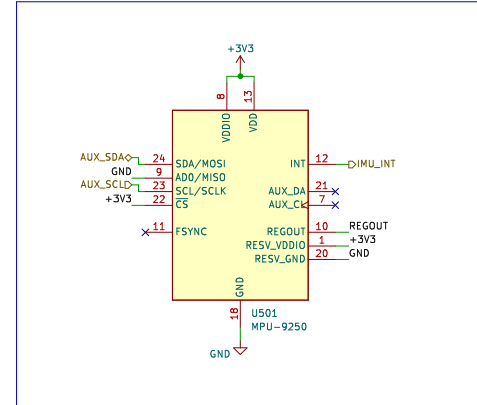
## DECOUPLING CAPACITORS



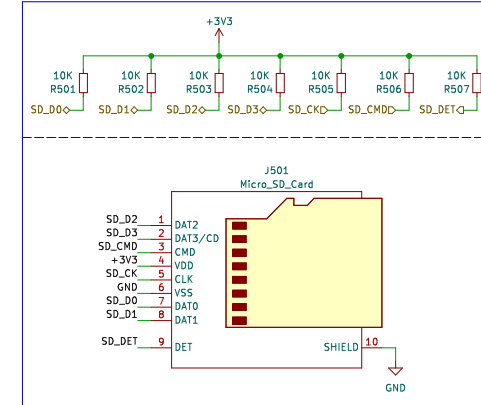
## PRESSURE SENSITIVE BUTTONS



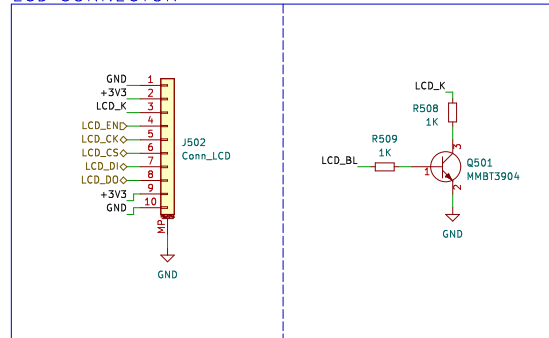
## ACCEL + GYRO + MAGNETOMETER



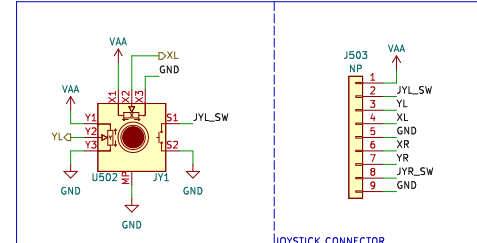
## SDCARD INTERFACE



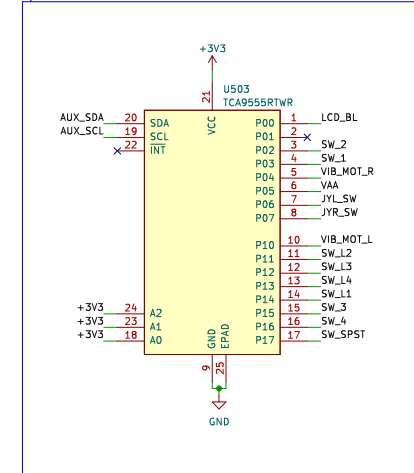
## LCD CONNECTOR



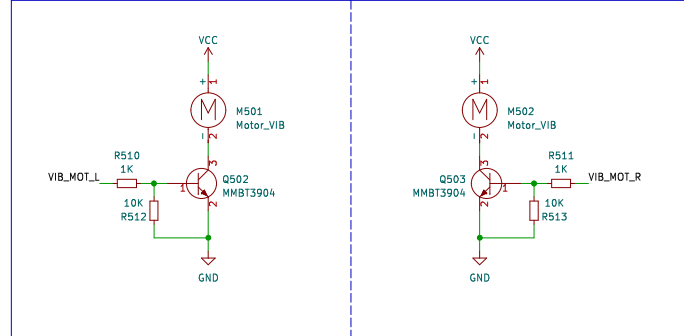
## THUMB JOYSTICKS



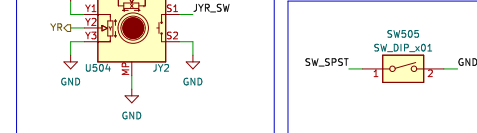
## I/O EXPANDER



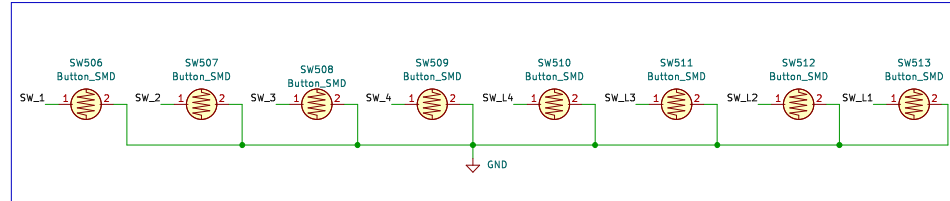
## HAPTIC FEEDBACK



## TOGGLE SWITCH



## AUXILIARY BUTTONS



## INFRARED TX/RX

