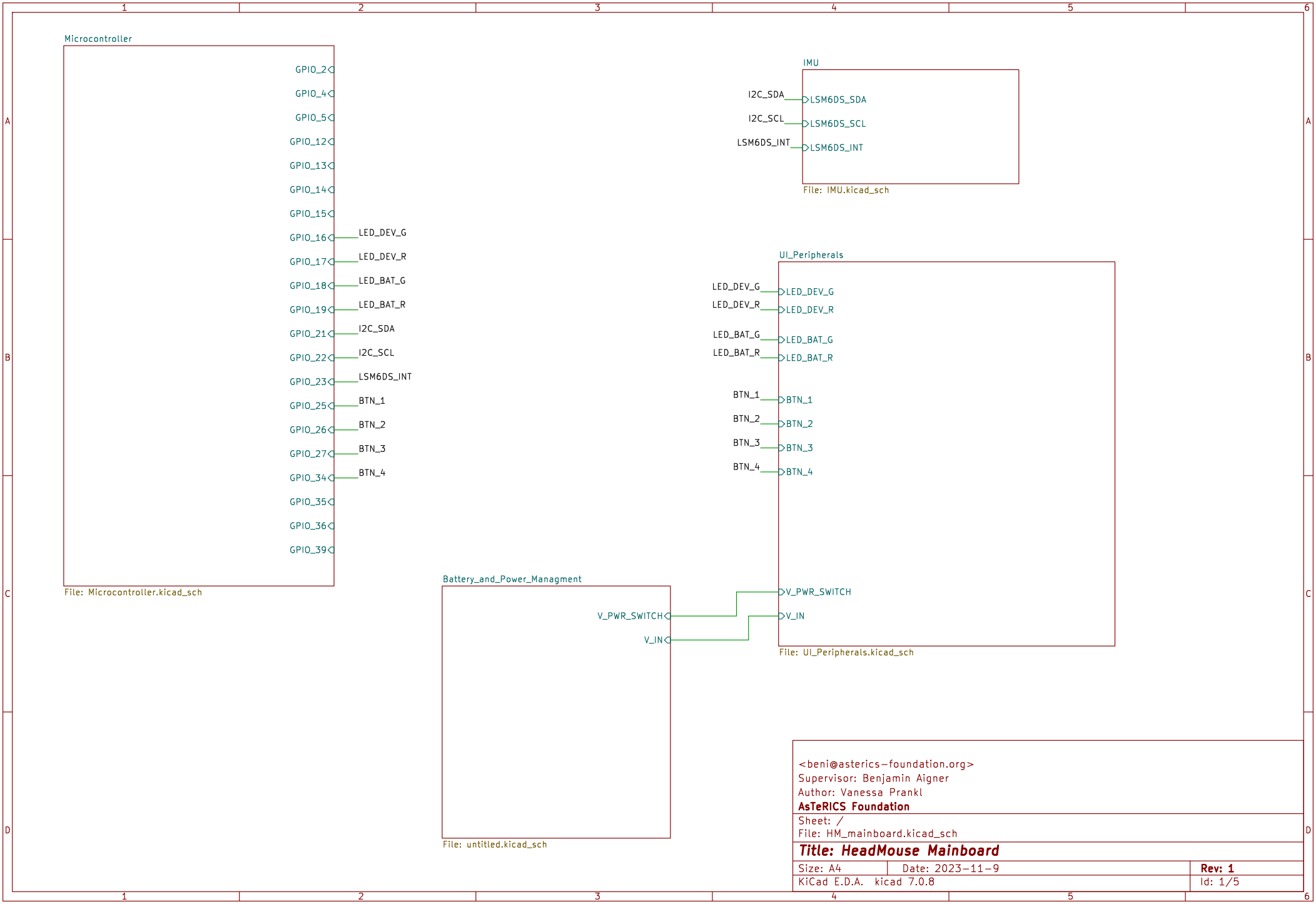
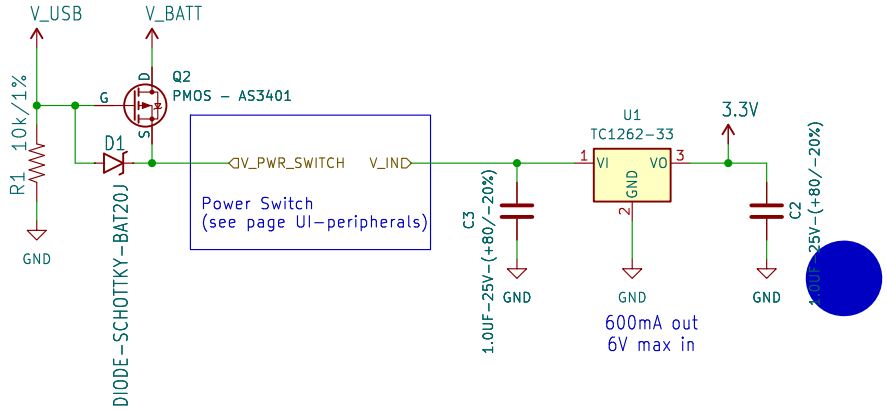
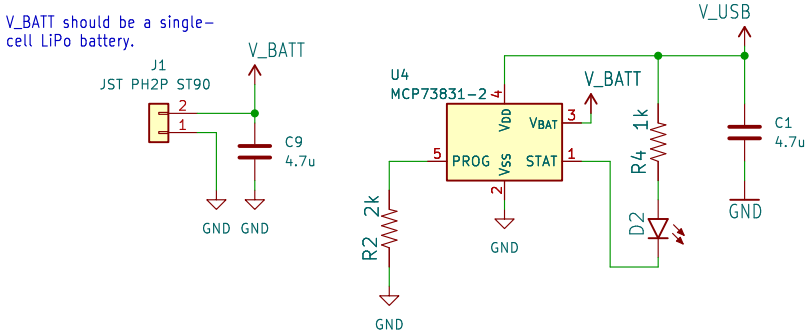

Microcontroller
GPIO_2
GPIO_4
GPIO_5
GPIO_12
GPIO_13
GPIO_14
GPIO_15
GPIO_16
GPIO_17
GPIO_18
GPIO_19
GPIO_21
GPIO_22
GPIO_23
GPIO_25
GPIO_26
GPIO_27
GPIO_34
GPIO_35
GPIO_36
GPIO_39
LED_DEV_G
LED_DEV_R
LED_BAT_G
LED_BAT_R
I2C_SDA
I2C_SCL
LSM6DS_INT
BTN_1
BTN_2
BTN_3
BTN_4
File: Microcontroller.kicad_sch
IMU
I2C_SDA
I2C_SCL
LSM6DS_INT
LSM6DS_SDA
LSM6DS_SCL
LSM6DS_INT
File: IMU.kicad_sch
UI_Peripherals
LED_DEV_G
LED_DEV_R
LED_BAT_G
LED_BAT_R
BTN_1
BTN_2
BTN_3
BTN_4
V_PWR_SWITCH
V_IN
File: UI_Peripherals.kicad_sch
Battery_and_Power_Managment
V_PWR_SWITCH
V_IN
File: untitled.kicad_sch
<beni@asterics-foundation.org>
Supervisor: Benjamin Aigner
Author: Vanessa Prankl
AsTeRICS Foundation
Sheet: /
File: HM_mainboard.kicad_sch
Title: HeadMouse Mainboard
Size: A4
Date: 2023-11-9
Rev: 1
KiCad E.D.A. kicad 7.0.8
Id: 1/5

Voltage Regulator



Lithium-Polymer Battery Charger (1-cell)

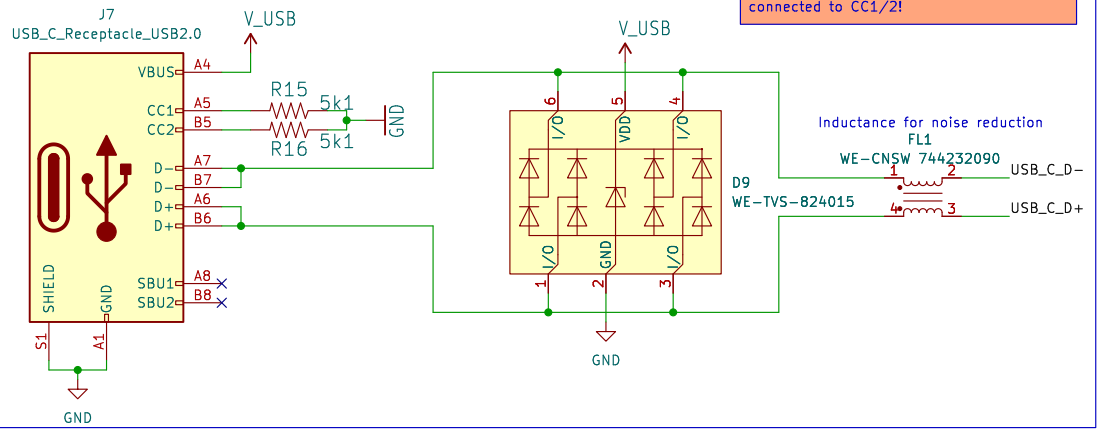


Charge current:
I_CHG = 1000 / R_PROG
R_PROG=2k : I_CHG=500mA

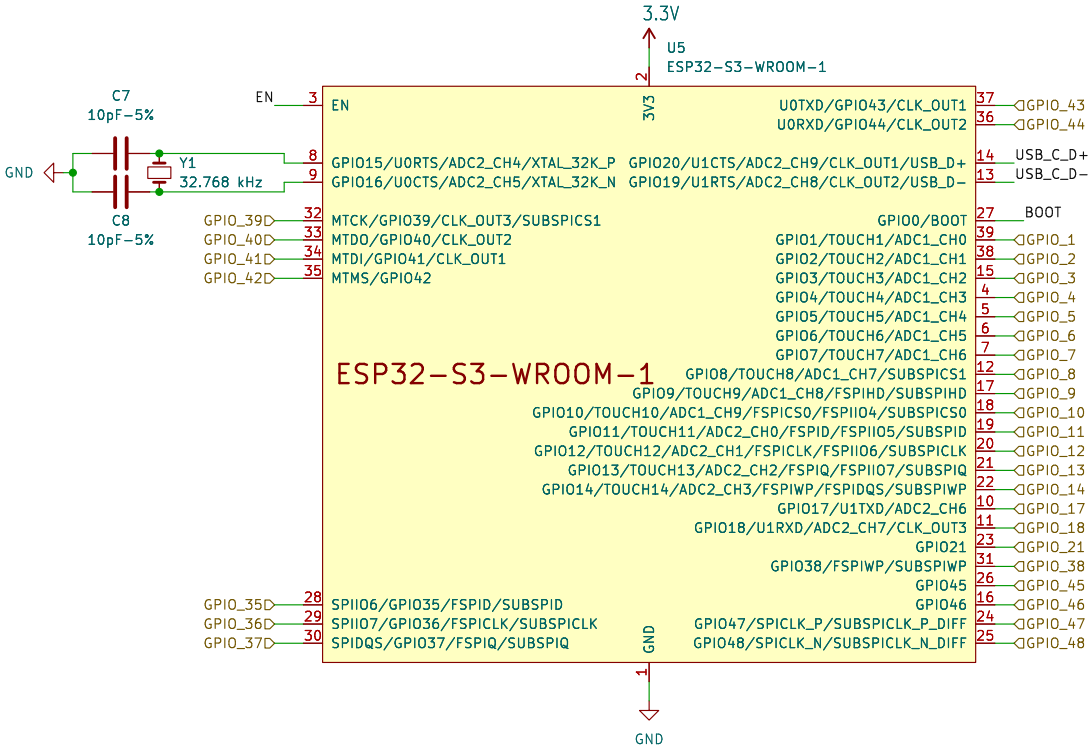
Sheet: /Battery_and_Power_Managment/		
File: untitled.kicad_sch		
Title: Battery and Power Management		
Size: A4	Date:	**Rev: V1**
KiCad E.D.A. kicad 7.0.8		Id: 2/5

USB-C Plug for flashing and battery charging

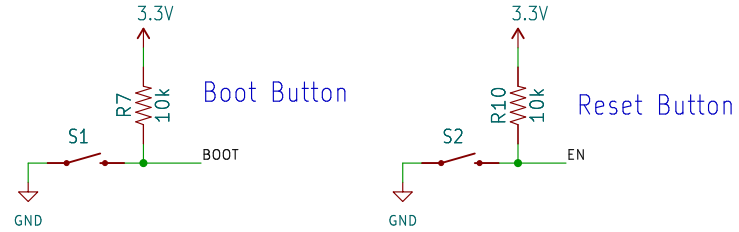
NOTE
USB-C suplly max. 2,5 W (= 5V, 500 mA)
Otherwise PD-Controller needs to be connected to CC1/2!



Microcontroller and Bluetooth Module



Manual-Reset

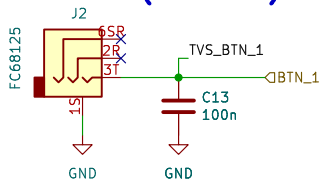


Sheet: /Microcontroller/
File: Microcontroller.kicad_sch

Title: Microcontroller and USB-C Connector

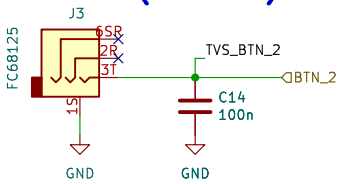
Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.8		Id: 3/5

Button 1 (external)



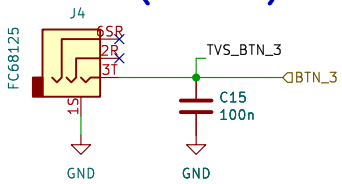
Jacks (same as on FABI)
Cliff FC68125
RS Pro 805-1655
Lumberg 1503 19
Aliexpress: "PJ321C" hard to find, here is a link:
www.aliexpress.com/item/32665420060.html
Note: might not fit that well!

Button 2 (external)



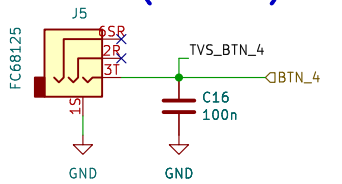
Jacks (same as on FABI)
Cliff FC68125
RS Pro 805-1655
Lumberg 1503 19
Aliexpress: "PJ321C" hard to find, here is a link:
www.aliexpress.com/item/32665420060.html
Note: might not fit that well!

Button 3 (external)



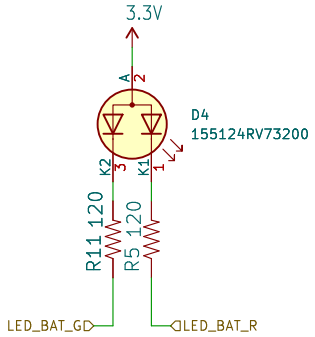
Jacks (same as on FABI)
Cliff FC68125
RS Pro 805-1655
Lumberg 1503 19
Aliexpress: "PJ321C" hard to find, here is a link:
www.aliexpress.com/item/32665420060.html
Note: might not fit that well!

Button 4 (external)

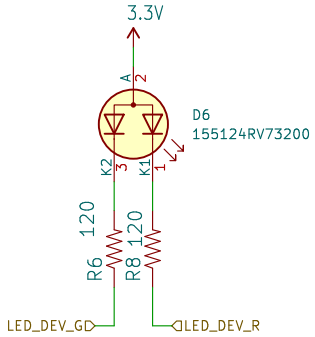


Jacks (same as on FABI)
Cliff FC68125
RS Pro 805-1655
Lumberg 1503 19
Aliexpress: "PJ321C" hard to find, here is a link:
www.aliexpress.com/item/32665420060.html
Note: might not fit that well!

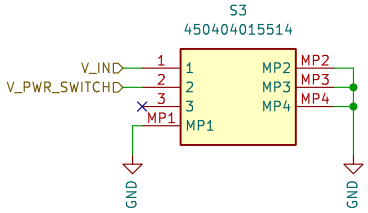
Battery Status LED (bi-color red-green)



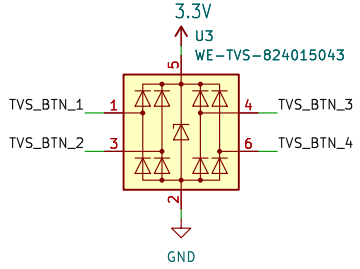
Device Status LED (bi-color red-green)



Power Switch

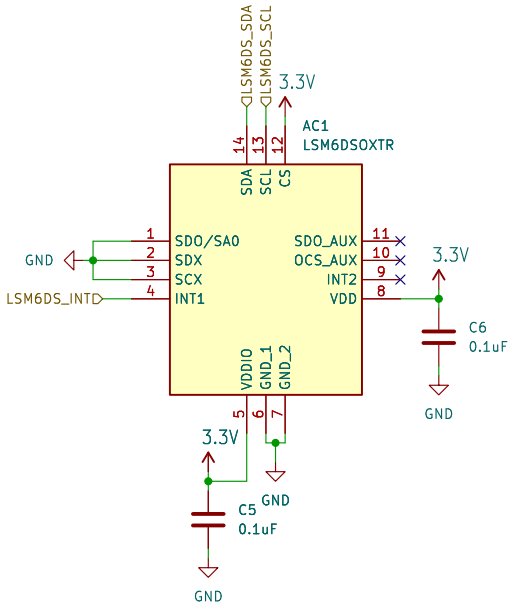


TVS Diodes for Button Jacks



Sheet: /UI_Peripherals/		
File: UI_Peripherals.kicad_sch		
Title: User_Interface_Peripherals		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 4/5

6-Axis IMU



9-Axis IMU

Sheet: /IMU/		
File: IMU.kicad_sch		
Title: Intertia_Measurement_Unit		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 5/5