power

File: power.kicad_sch

ESP32

File: ESP32.kicad_sch

sensors2

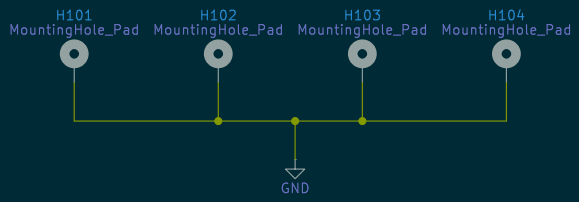
File: sensors2.kicad_sch

pyro

File: pyro.kicad_sch

sensors1

File: sensors1.kicad_sch



Drawn by :- Arudhran

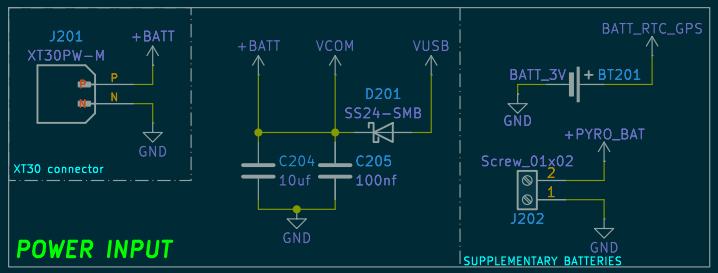
Sheet: /

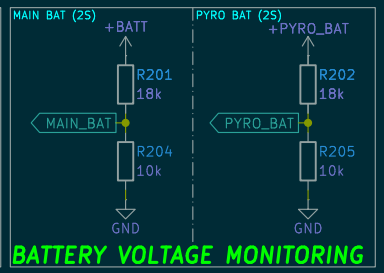
File: vectron.kicad_sch

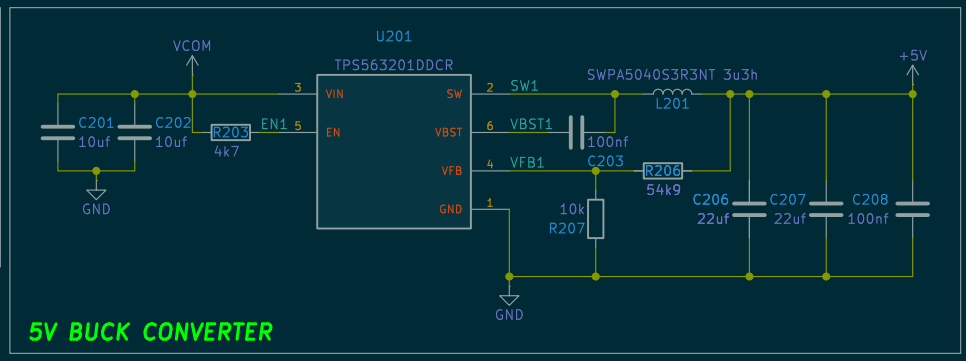
Title: VECTRON-V1

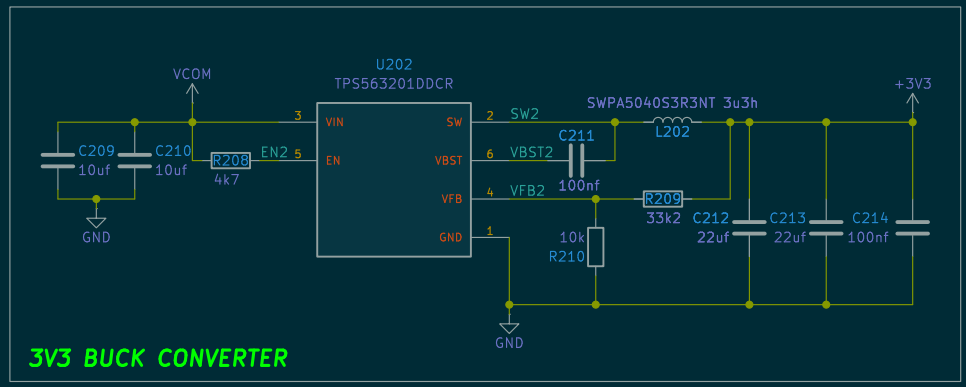
Size: A4 | Date: 2025-06-13 | Rev: 1.0.0

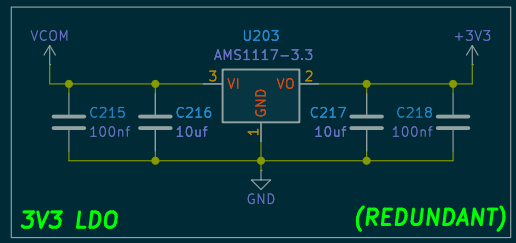
KiCad E.D.A. 9.0.2 | Id: 1/6

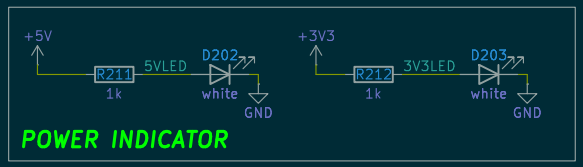


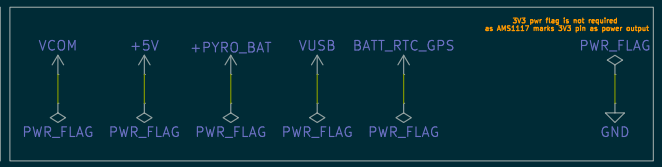












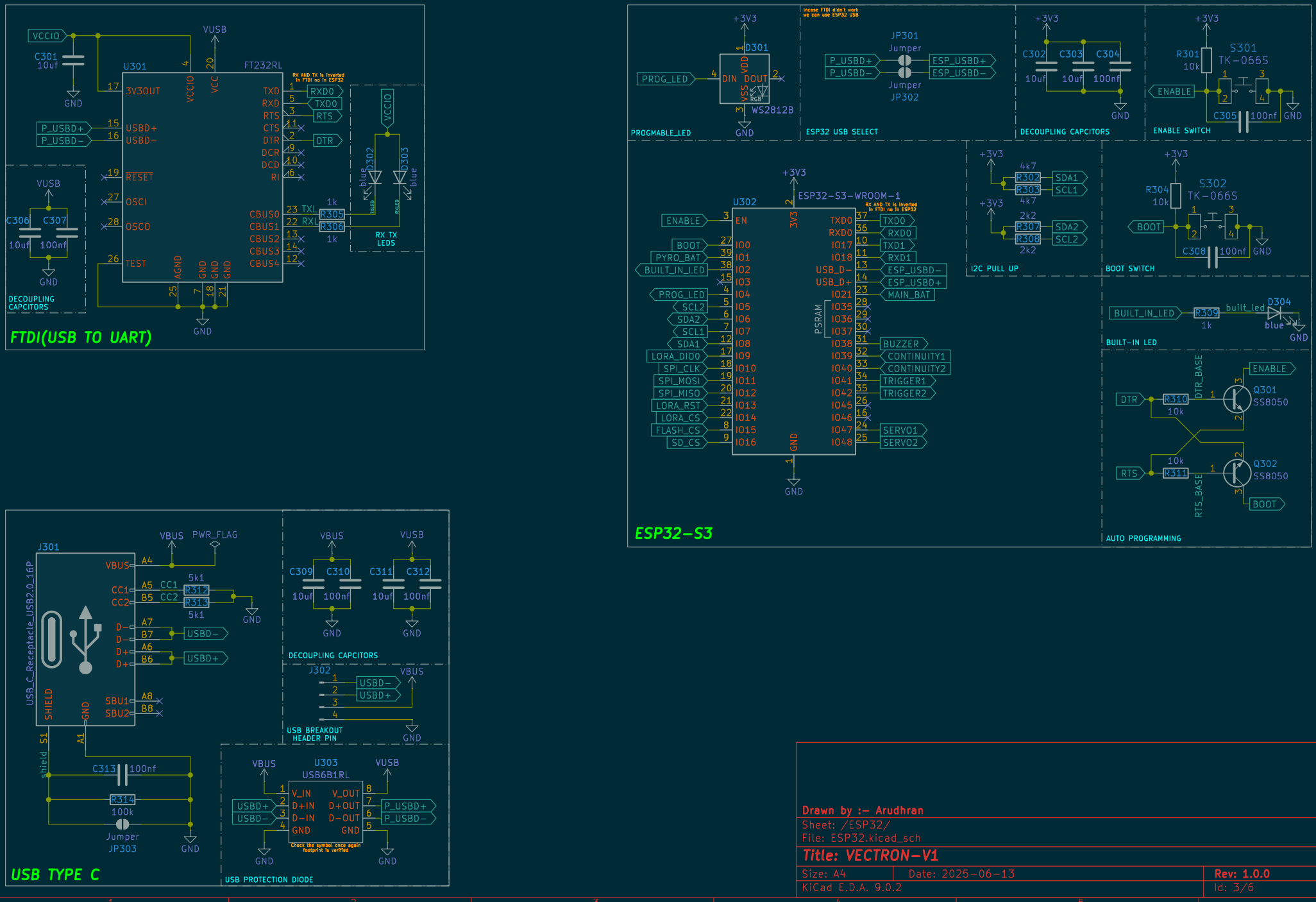
Drawn by :- Arudhran

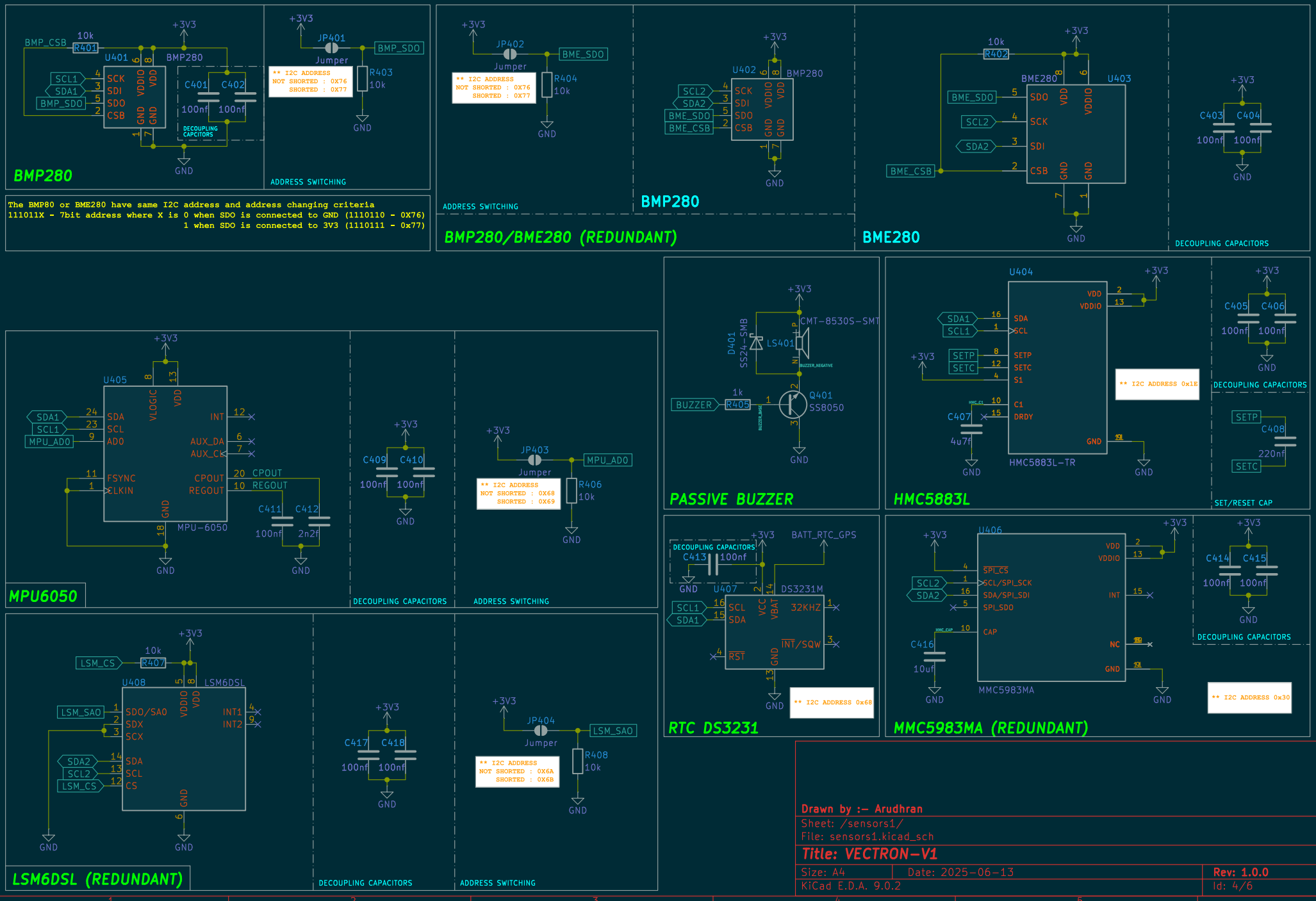
Sheet: /power/

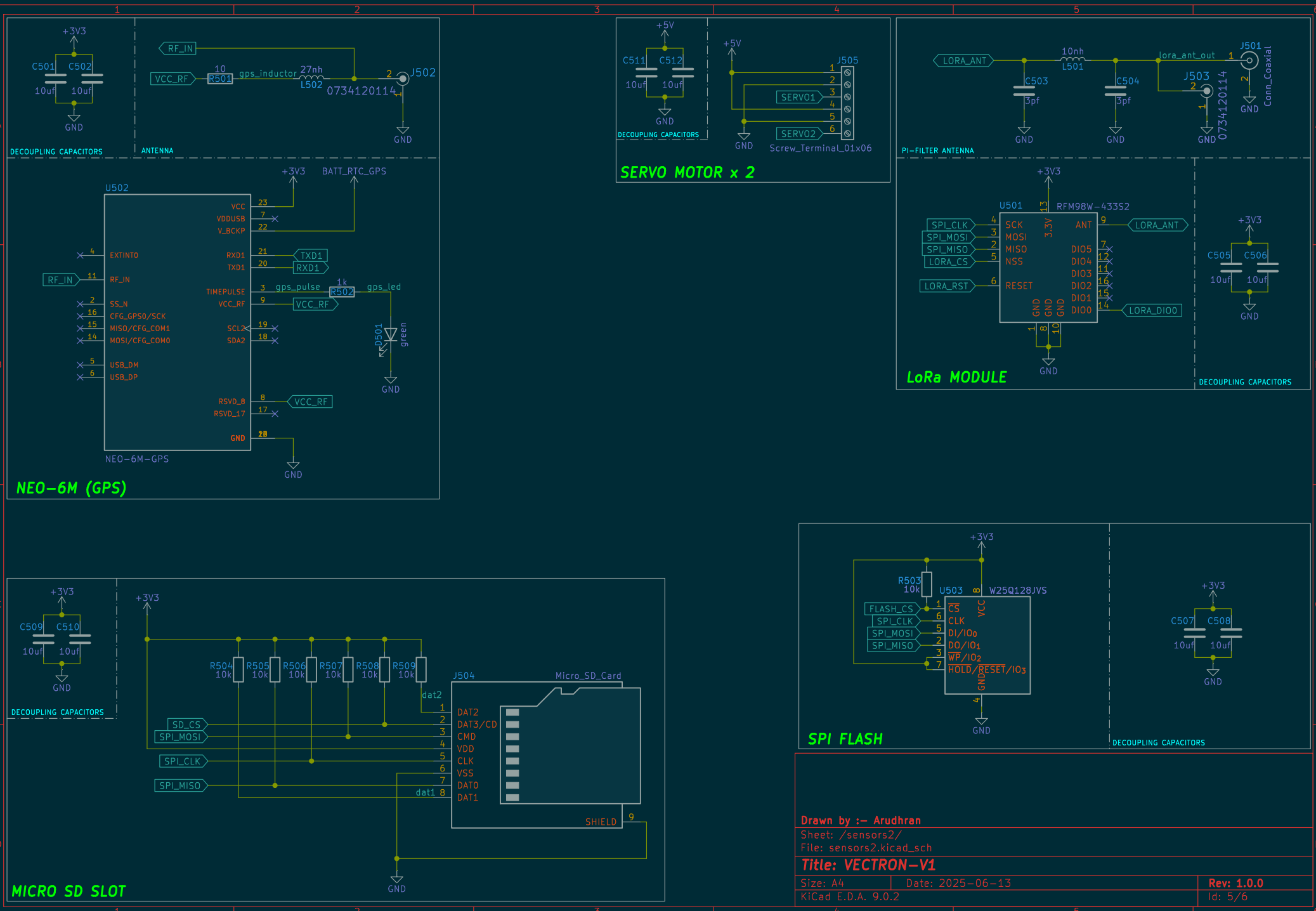
File: power.kicad_sch

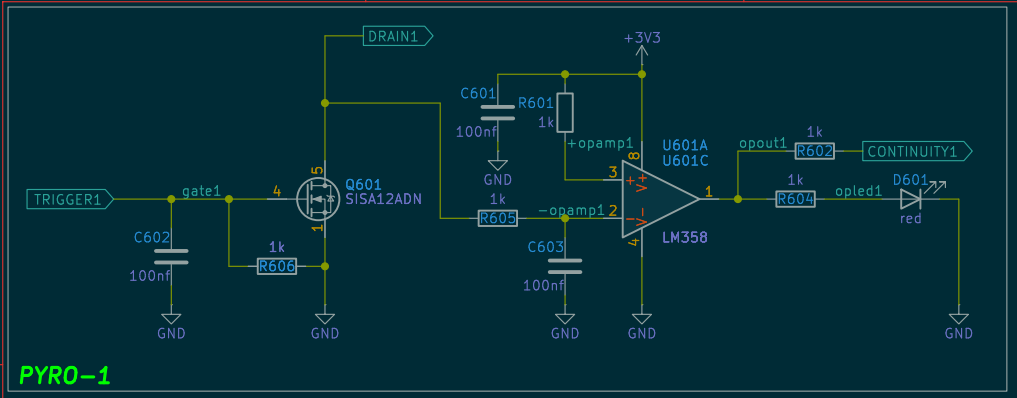
Title: VECTRON-V1

Size: A4	Date: 2025-06-13	**Rev: 1.0.0**
KiCad E.D.A. 9.0.2		Id: 2/6

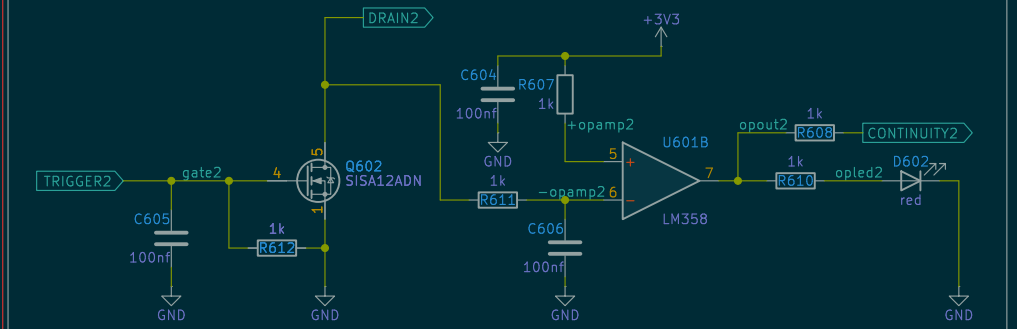

FTDI(USB TO UART)
U301
FT232RL
VCCIO
VUSB
C301 10uf
C306 C307 10uf 100nf
DECOUPLING CAPCITORS
P_USBD+
P_USBD-
RESET
OSCI
OSCO
TEST
TXD
RXD
RTS
CTS
DTR
DCR
DCD
RI
CBUS0
CBUS1
CBUS2
CBUS3
CBUS4
RXD0
TXD0
RTS
DTR
R305 1k
R306 1k
D302 blue
D303 blue
RX TX LEDS
RX AND TX is inverted in FTDI no in ESP32
ESP32-S3
U302
ESP32-S3-WROOM-1
ENABLE
BOOT
PYRO_BAT
BUILT_IN_LED
PROG_LED
SCL2
SDA2
SCL1
SDA1
LORA_DIO0
SPI_CLK
SPI_MOSI
SPI_MISO
LORA_RST
LORA_CS
FLASH_CS
SD_CS
PSRAM
BUZZER
CONTINUITY1
CONTINUITY2
TRIGGER1
TRIGGER2
SERVO1
SERVO2
MAIN_BAT
ESP_USBD-
ESP_USBD+
PROGMABLE_LED
D301
WS2812B
Incase FTDI didn't work we can use ESP32 USB
JP301 Jumper
JP302 Jumper
ESP32 USB SELECT
C302 C303 C304 10uf 10uf 100nf
DECOUPLING CAPCITORS
R301 10k
S301 TK-066S
C305 100nf
ENABLE SWITCH
4k7
2k2
I2C PULL UP
R304 10k
S302 TK-066S
C308 100nf
BOOT SWITCH
D304 built_led blue
BUILT-IN LED
Q301 SS8050
Q302 SS8050
DTR_BASE
RTS_BASE
AUTO PROGRAMMING
USB TYPE C
J301
USB_C_Receptacle_USB2.0_16P
VBUS
PWR_FLAG
CC1
CC2
5k1
USBD-
USBD+
SHIELD
SBU1
SBU2
C313 100nf
R314 100k
Jumper JP303
C309 C310 C311 C312 10uf 100nf
DECOUPLING CAPCITORS
J302
USB BREAKOUT HEADER PIN
U303
USB6B1RL
V_IN
V_OUT
D+IN
D+OUT
D-IN
D-OUT
Check the symbol once again footprint is verified
USB PROTECTION DIODE
Drawn by :- Arudhran
Sheet: /ESP32/
File: ESP32.kicad_sch
Title: VECTRON-V1
Size: A4
Date: 2025-06-13
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 3/6


BMP280
BMP_CSB
10k
R401
U401
BMP280
+3V3
SCL1
SDA1
BMP_SDO
SCK
SDI
SDO
CSB
VDDIO
VDD
GND
C401
C402
100nf
DECOUPLING CAPCITORS
JP401
Jumper
R403
ADDRESS SWITCHING
** I2C ADDRESS
NOT SHORTED : 0X76
SHORTED : 0X77
The BMP80 or BME280 have same I2C address and address changing criteria
111011X - 7bit address where X is 0 when SDO is connected to GND (1110110 - 0X76)
1 when SDO is connected to 3V3 (1110111 - 0x77)
JP402
R404
BMP280/BME280 (REDUNDANT)
SCL2
SDA2
U402
BME280
BME_SDO
BME_CSB
U403
R402
SDO
SCK
SDI
CSB
C403
C404
DECOUPLING CAPACITORS
MPU6050
U405
SDA1
SCL1
MPU_ADO
VLOGIC
INT
AUX_DA
AUX_CK
FSYNC
CLKIN
CPOUT
REGOUT
MPU-6050
C409
C410
C411
C412
2n2f
JP403
R406
PASSIVE BUZZER
D401
SS24-SMB
LS401
CMT-8530S-SMT
BUZZER_NEGATIVE
BUZZER
R405
1k
Q401
SS8050
HMC5883L
U404
HMC5883L-TR
** I2C ADDRESS 0x1E
C407
4u7f
SETP
SETC
S1
C1
DRDY
C405
C406
C408
220nf
SET/RESET CAP
RTC DS3231
DECOUPLING CAPACITORS
C413
BATT_RTC_GPS
U407
DS3231M
SCL
SDA
VCC
VBAT
32KHZ
INT/SQW
RST
** I2C ADDRESS 0x68
MMC5983MA (REDUNDANT)
U406
MMC5983MA
SPI_CS
SCL/SPI_SCK
SDA/SPI_SDI
SPI_SDO
CAP
NC
C416
10uf
C414
C415
** I2C ADDRESS 0x30
LSM6DSL (REDUNDANT)
LSM_CS
R407
U408
LSM6DSL
LSM_SAO
SDO/SA0
SDX
SCX
INT1
INT2
CS
C417
C418
JP404
R408
** I2C ADDRESS
NOT SHORTED : 0X6A
SHORTED : 0X6B
Drawn by :- Arudhran
Sheet: /sensors1/
File: sensors1.kicad_sch
Title: VECTRON-V1
Size: A4
Date: 2025-06-13
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 4/6

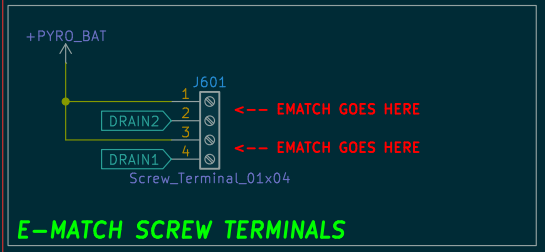

DECOUPLING CAPACITORS
ANTENNA
SERVO MOTOR x 2
PI-FILTER ANTENNA
NEO-6M (GPS)
LoRa MODULE
MICRO SD SLOT
SPI FLASH
Drawn by :- Arudhran
Sheet: /sensors2/
File: sensors2.kicad_sch
Title: VECTRON-V1
Size: A4
Date: 2025-06-13
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 5/6



PYRO−1



PYRO−2



E−MATCH SCREW TERMINALS

Drawn by :− Arudhran		
Sheet: /pyro/		
File: pyro.kicad_sch		
Title: VECTRON−V1		
Size: A4	Date: 2025−06−13	Rev: 1.0.0
KiCad E.D.A. 9.0.2		Id: 6/6