power

File: power.kicad_sch

ESP32

File: ESP32.kicad_sch

sensors2

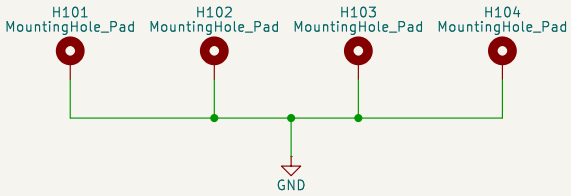
File: sensors2.kicad_sch

pyro

File: pyro.kicad_sch

sensors1

File: sensors1.kicad_sch

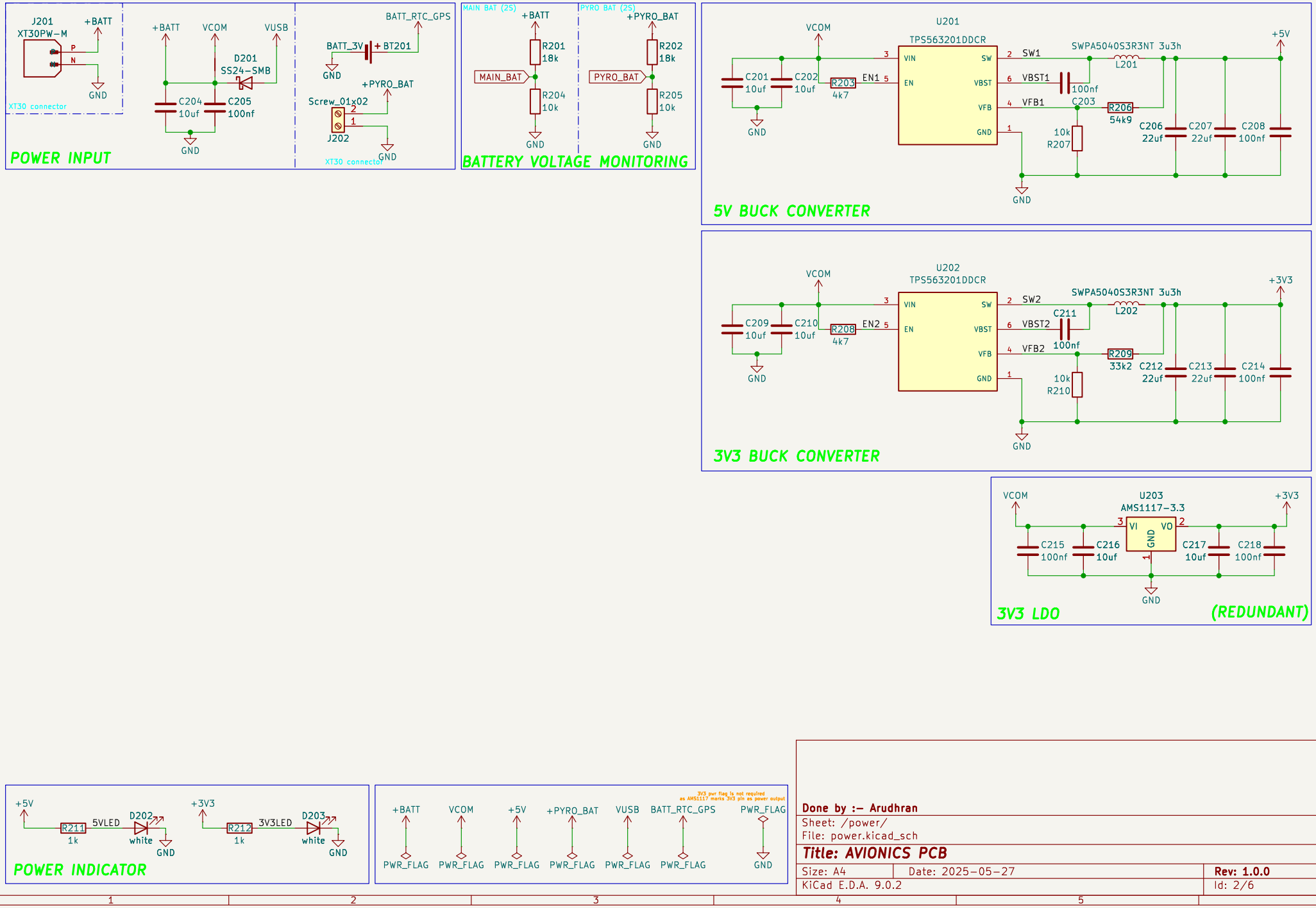


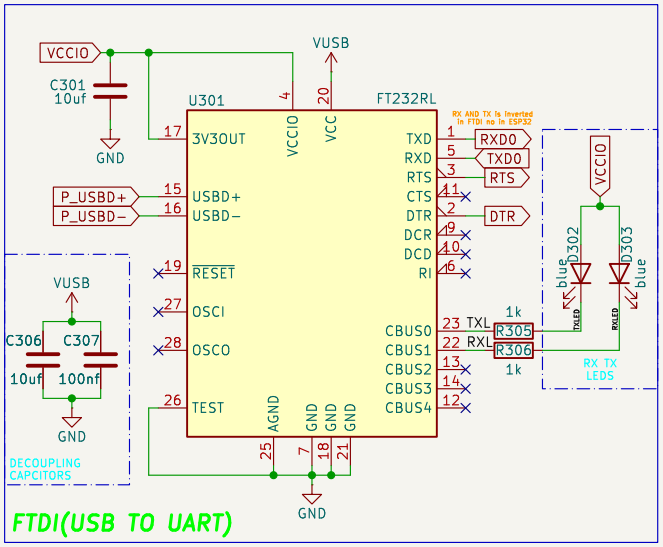
Done by :– Arudhran

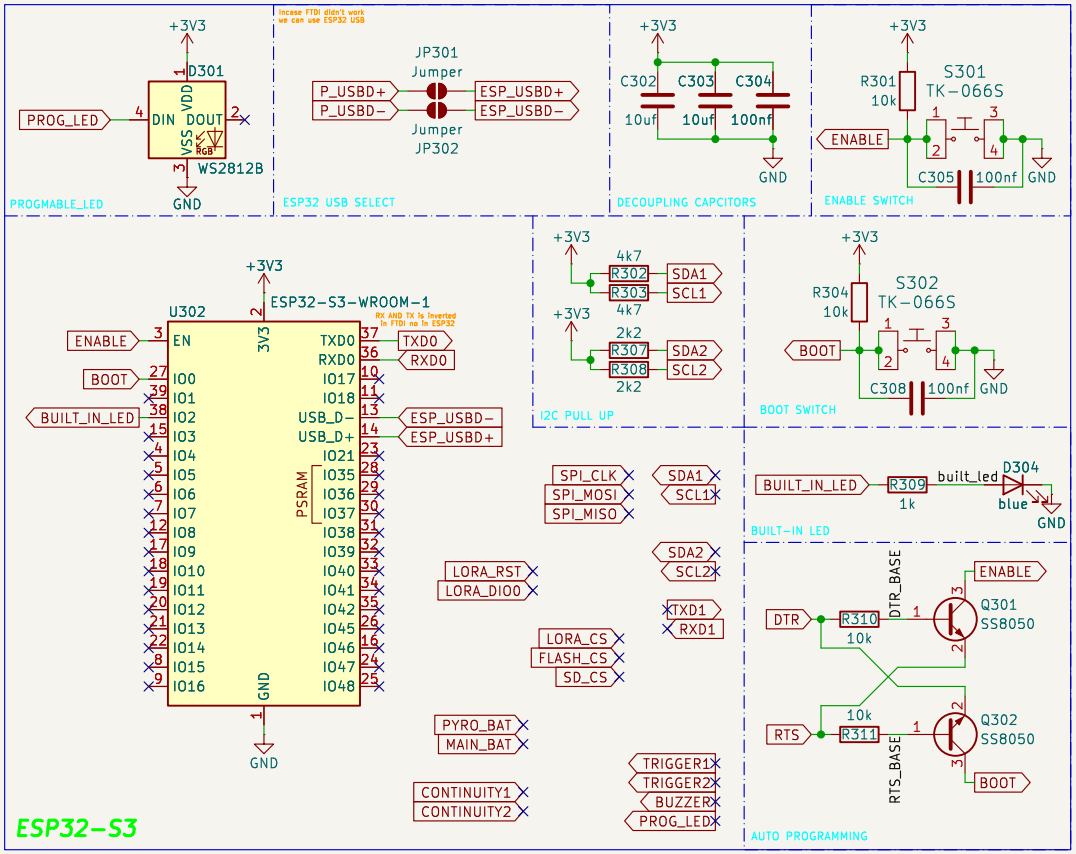
Sheet: /
File: vectron.kicad_sch

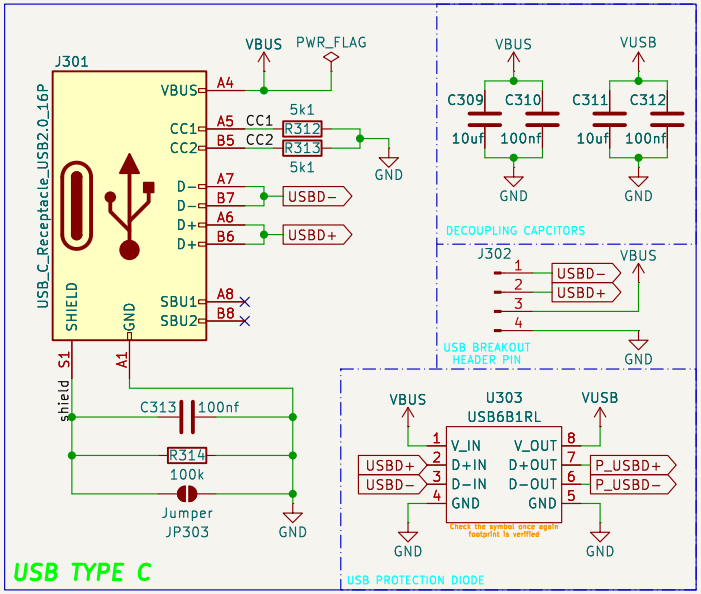
Title: AVIONICS PCB

Size: A4	Date: 2025-05-27	**Rev: 1.0.0**
KiCad E.D.A. 9.0.2		Id: 1/6


J201
XT30PW-M
+BATT
P
N
GND
XT30 connector
POWER INPUT
+BATT
VCOM
VUSB
D201
SS24-SMB
C204
10uf
C205
100nf
GND
BATT_RTC_GPS
BATT_3V
BT201
GND
+PYRO_BAT
Screw_01x02
2
1
J202
GND
XT30 connector
MAIN BAT (2S)
PYRO BAT (2S)
+BATT
R201
18k
MAIN_BAT
R204
10k
GND
+PYRO_BAT
R202
18k
PYRO_BAT
R205
10k
GND
BATTERY VOLTAGE MONITORING
U201
TPS563201DDCR
VCOM
C201
10uf
C202
10uf
R203
4k7
EN1
VIN
EN
SW
VBST
VFB
GND
SW1
VBST1
VFB1
SWPA5040S3R3NT 3u3h
L201
100nf
C203
R206
54k9
10k
R207
C206
22uf
C207
22uf
C208
100nf
+5V
GND
5V BUCK CONVERTER
U202
TPS563201DDCR
VCOM
C209
10uf
C210
10uf
R208
4k7
EN2
SW2
VBST2
VFB2
SWPA5040S3R3NT 3u3h
L202
C211
100nf
R209
33k2
10k
R210
C212
22uf
C213
22uf
C214
100nf
+3V3
GND
3V3 BUCK CONVERTER
U203
AMS1117-3.3
VCOM
VI
VO
GND
C215
100nf
C216
10uf
C217
10uf
C218
100nf
+3V3
GND
3V3 LDO
(REDUNDANT)
+5V
R211
1k
5VLED
D202
white
GND
+3V3
R212
1k
3V3LED
D203
white
GND
POWER INDICATOR
3V3 pwr flag is not required as AMS1117 marks 3V3 pin as power output
+BATT
VCOM
+5V
+PYRO_BAT
VUSB
BATT_RTC_GPS
PWR_FLAG
PWR_FLAG
PWR_FLAG
PWR_FLAG
PWR_FLAG
PWR_FLAG
PWR_FLAG
GND
Done by :- Arudhran
Sheet: /power/
File: power.kicad_sch
Title: AVIONICS PCB
Size: A4
Date: 2025-05-27
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 2/6







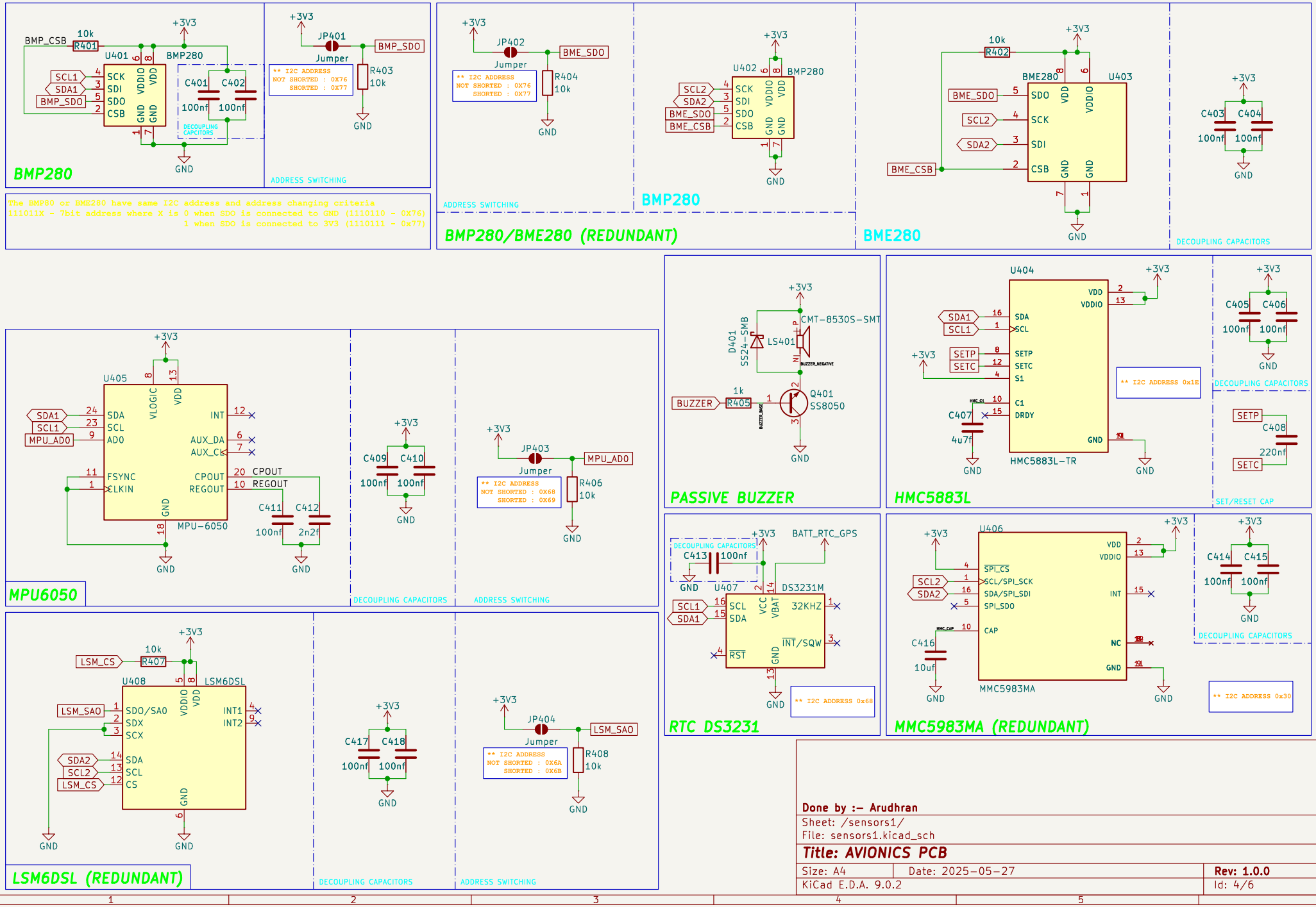
Done by :- Arudhran

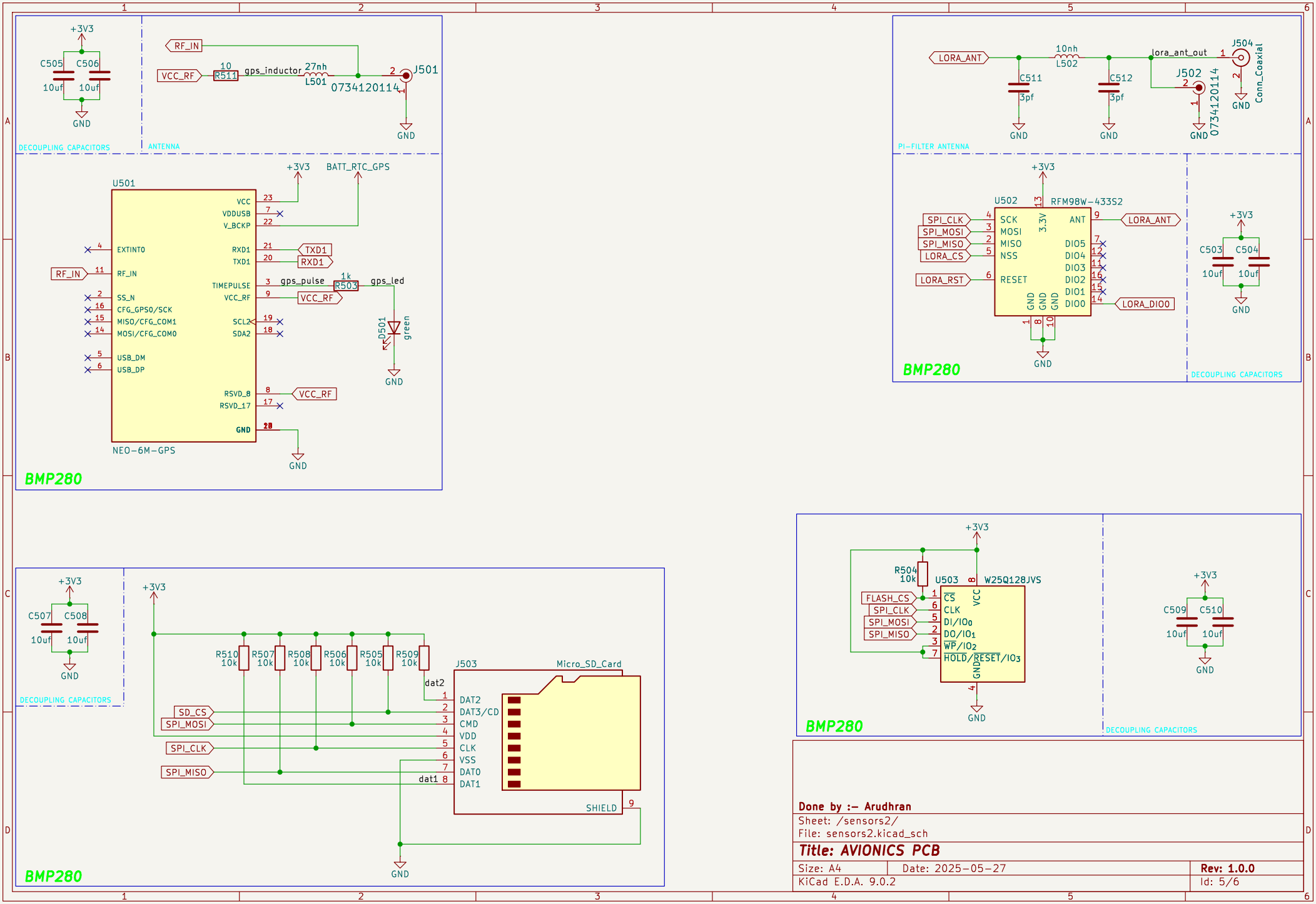
Sheet: /ESP32/

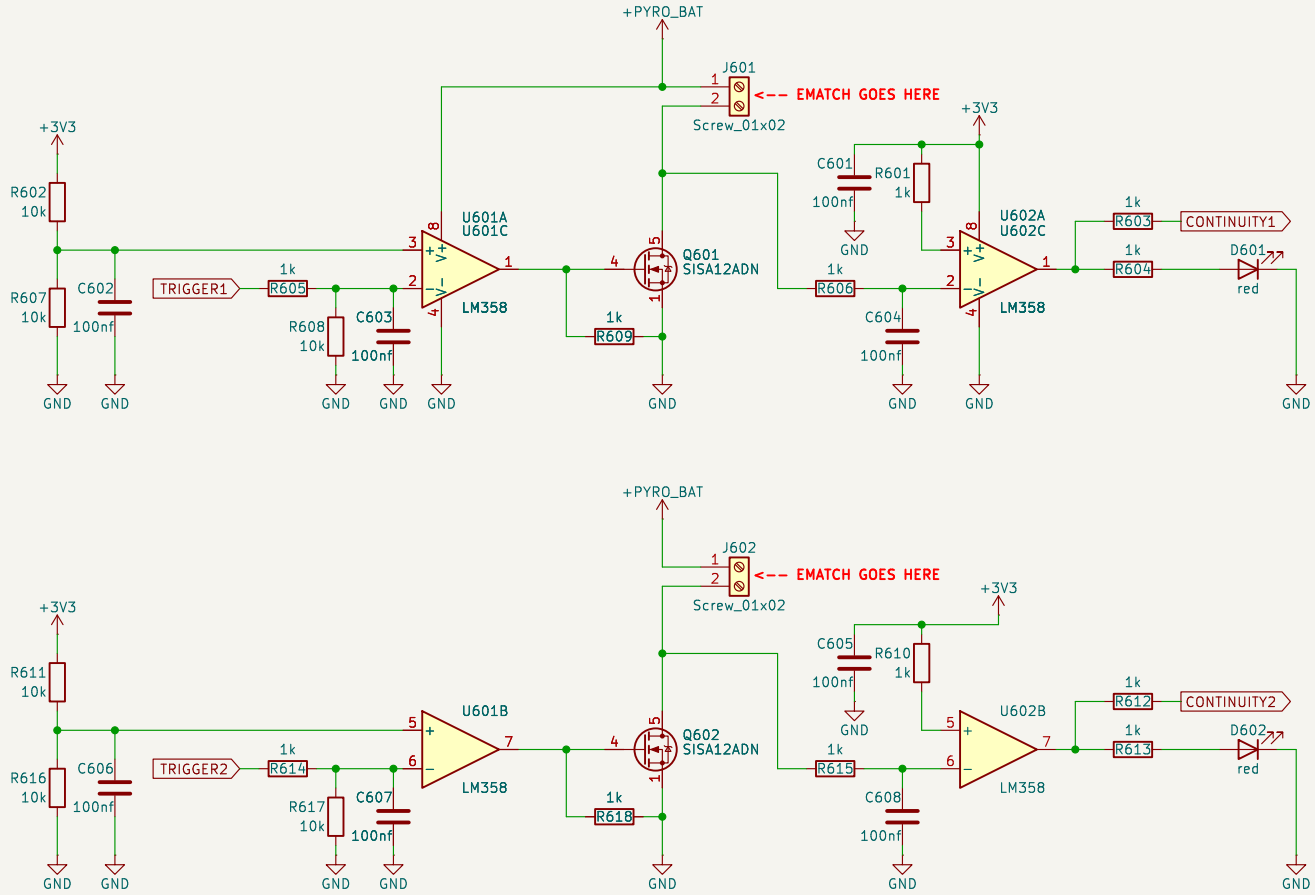
File: ESP32.kicad_sch

Title: AVIONICS PCB

Size: A4	Date: 2025-05-27	**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
ADDRESS SWITCHING
JP401
Jumper
** I2C ADDRESS
NOT SHORTED : 0X76
SHORTED : 0X77
R403
10k
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)
BMP280/BME280 (REDUNDANT)
JP402
R404
U402
SCL2
SDA2
BME_SDO
BME_CSB
BME280
U403
R402
SDO
SCK
SDI
CSB
C403
C404
DECOUPLING CAPACITORS
MPU6050
U405
VLOGIC
INT
AUX_DA
AUX_CL
FSYNC
CLKIN
CPOUT
REGOUT
MPU-6050
C409
C410
C411
C412
100nf
2n2f
JP403
MPU_AD0
R406
PASSIVE BUZZER
D401
SS24-SMB
LS401
CMT-8530S-SMT
BUZZER
R405
1k
Q401
SS8050
HMC5883L
U404
HMC5883L-TR
SETP
SETC
S1
C1
DRDY
C407
4u7f
** I2C ADDRESS 0x1E
C405
C406
C408
220nf
SET/RESET CAP
RTC DS3231
BATT_RTC_GPS
C413
U407
DS3231M
32KHZ
INT/SQW
RST
VCC
VBAT
** 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
SDO/SA0
SDX
SCX
SDA
SCL
CS
INT1
INT2
C417
C418
JP404
LSM_SAO
R408
** I2C ADDRESS
NOT SHORTED : 0X6A
SHORTED : 0X6B
Done by :- Arudhran
Sheet: /sensors1/
File: sensors1.kicad_sch
Title: AVIONICS PCB
Size: A4
Date: 2025-05-27
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 4/6


DECOUPLING CAPACITORS
+3V3
C505
C506
10uf
10uf
GND
ANTENNA
RF_IN
VCC_RF
R511
10
gps_inductor
27nh
L501
0734120114
J501
GND
U501
NEO-6M-GPS
BATT_RTC_GPS
VCC
VDDUSB
V_BCKP
EXTINT0
RF_IN
SS_N
CFG_GPS0/SCK
MISO/CFG_COM1
MOSI/CFG_COM0
USB_DM
USB_DP
RXD1
TXD1
TIMEPULSE
VCC_RF
SCL2
SDA2
RSVD_8
RSVD_17
GND
gps_pulse
R503
1k
gps_led
D501
green
BMP280
PI-FILTER ANTENNA
LORA_ANT
C511
3pf
L502
10nh
C512
lora_ant_out
J502
J504
Conn_Coaxial
U502
RFM98W-433S2
SPI_CLK
SPI_MOSI
SPI_MISO
LORA_CS
LORA_RST
SCK
MOSI
MISO
NSS
RESET
3.3V
ANT
DIO5
DIO4
DIO3
DIO2
DIO1
DIO0
LORA_DIO0
C503
C504
C507
C508
R510
R507
R508
R506
R505
R509
10k
J503
Micro_SD_Card
DAT2
DAT3/CD
CMD
VDD
CLK
VSS
DAT0
DAT1
SHIELD
dat2
dat1
SD_CS
SPI_MOSI
SPI_CLK
SPI_MISO
R504
U503
W25Q128JVS
FLASH_CS
CS
DI/IO0
DO/IO1
WP/IO2
HOLD/RESET/IO3
C509
C510
Done by :- Arudhran
Sheet: /sensors2/
File: sensors2.kicad_sch
Title: AVIONICS PCB
Size: A4
Date: 2025-05-27
Rev: 1.0.0
KiCad E.D.A. 9.0.2
Id: 5/6



Done by :- Arudhran

Sheet: /pyro/
File: pyro.kicad_sch

Title: AVIONICS PCB

Size: A4	Date: 2025-05-27	**Rev: 1.0.0**
KiCad E.D.A. 9.0.2		Id: 6/6