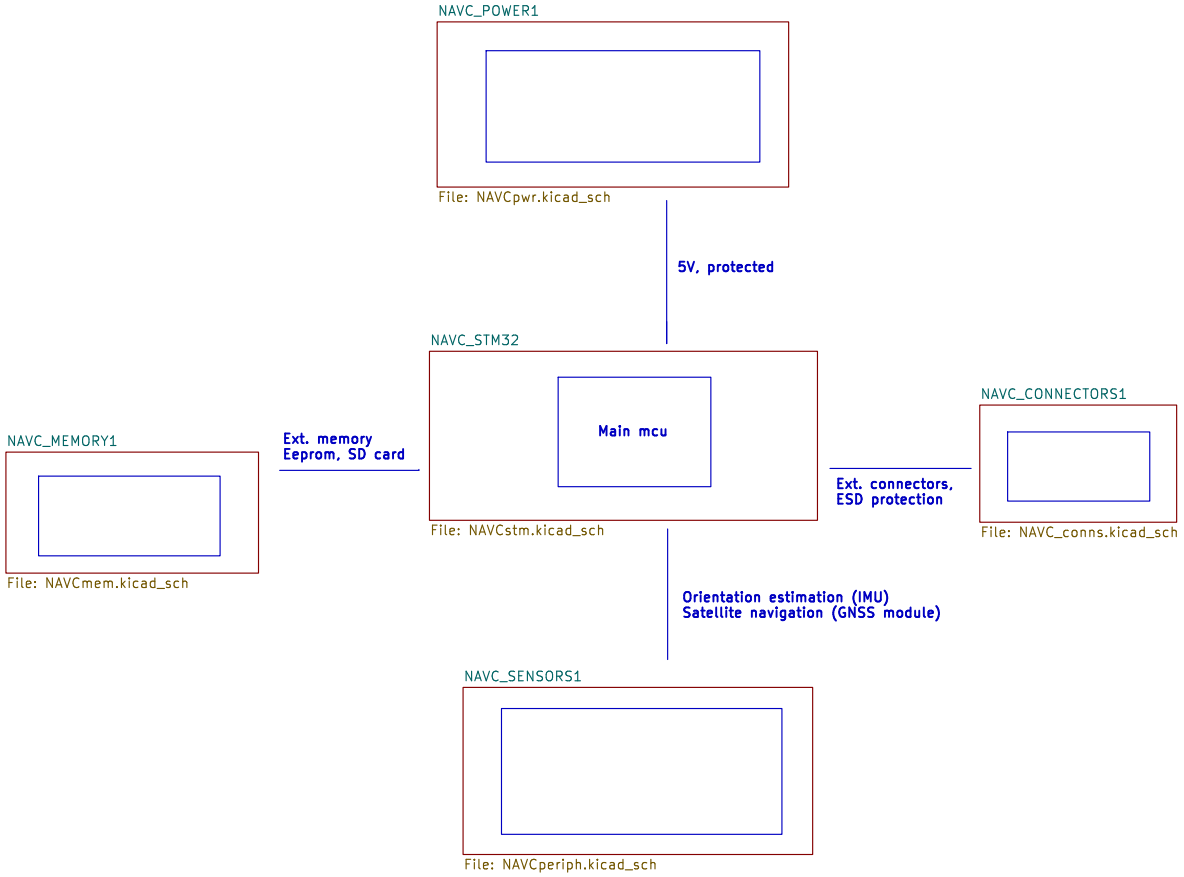
[1] Flight Controller Board – Top level Schematic



Adam Iwachów

Sheet: /
File: SYSTEM_KONTROLI_LOTU.kicad_sch

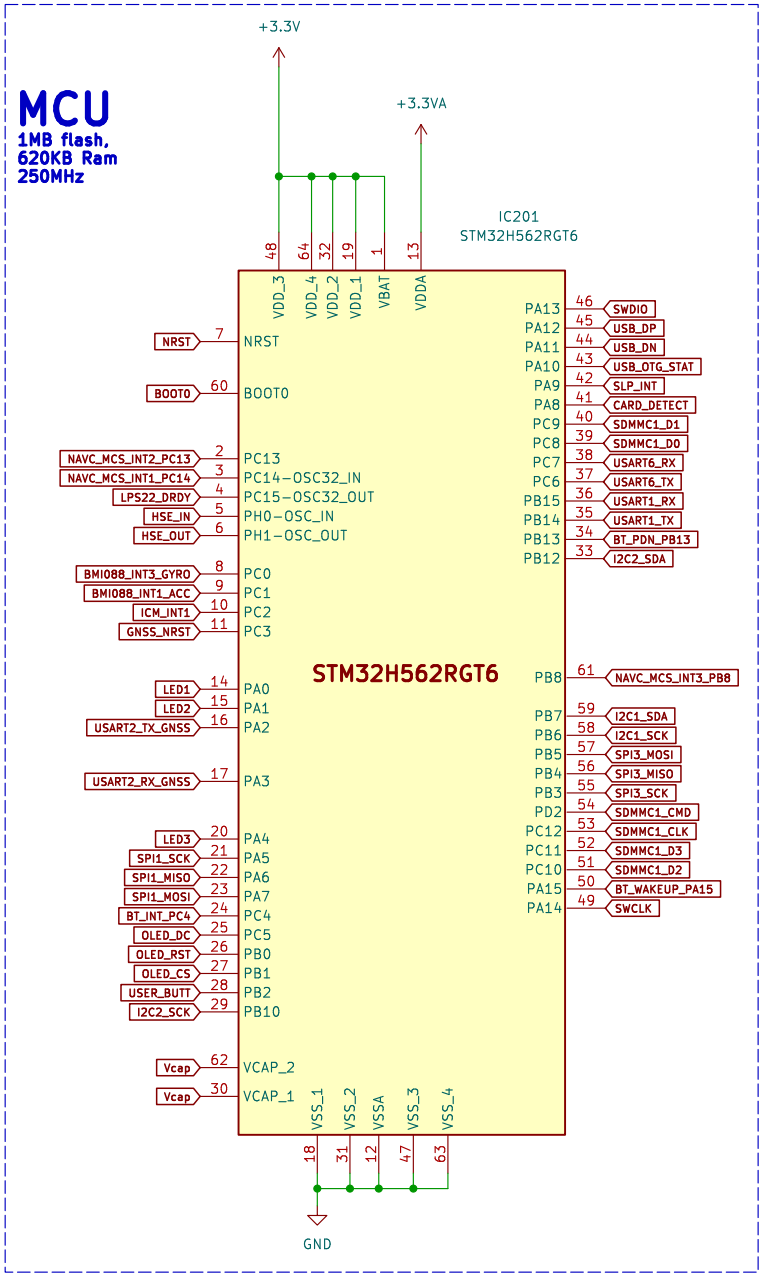
Title: NAVIGATION CONTROL BLOCK SCHEM

Size: A4	Date: 2023-09-30	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 1/6

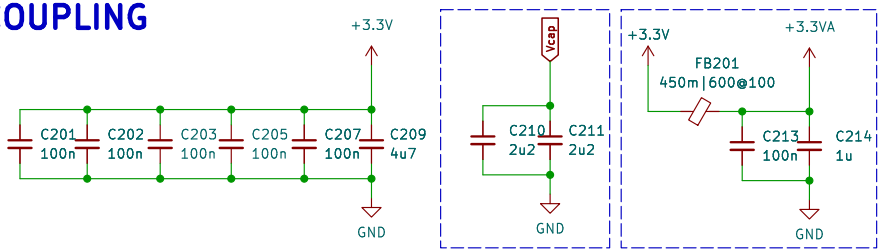
[2] Microcontroller

MCU

1MB flash,
620KB Ram
250MHz

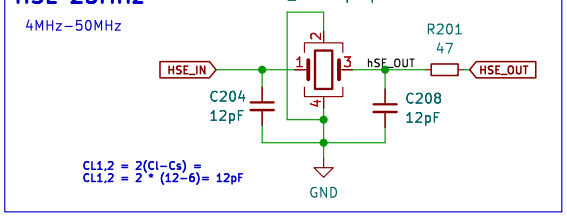


DECOUPLING

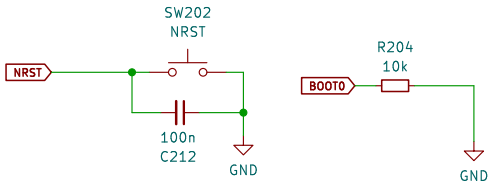


EXTERNAL CRYSTAL HSE 25MHz

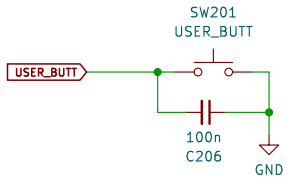
4MHz-50MHz



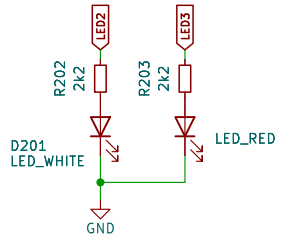
NRST & BOOT sw.



USER BUTTON



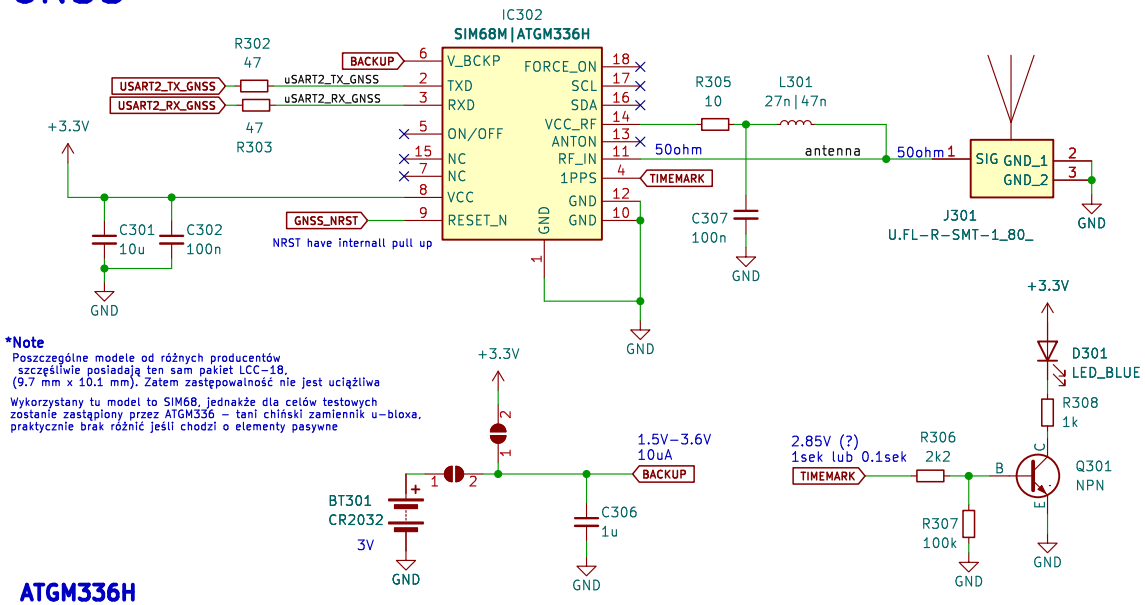
DEBUG & STATUS LEDs



Sheet: /NAVC_STM32 /		
File: NAVCstm.kicad_sch		
Title: MAIN MCU		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 2/6

[3] Sensors

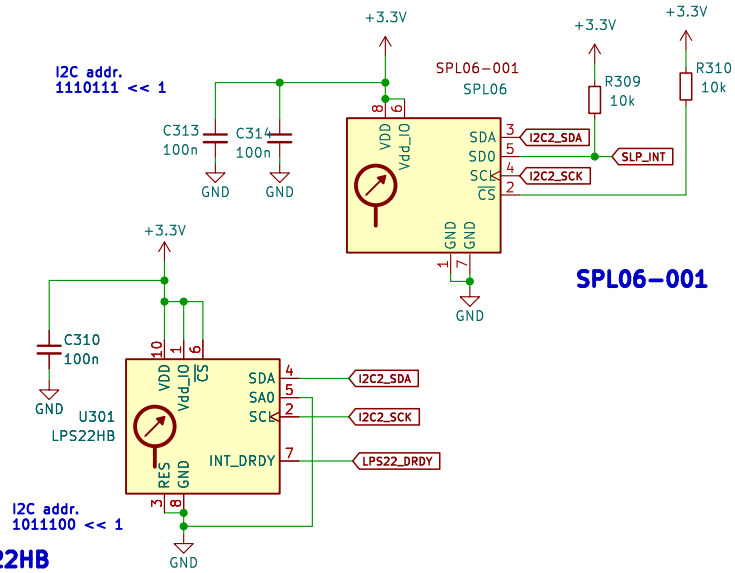
GNSS



ATGM336H

10 AXIS IMU

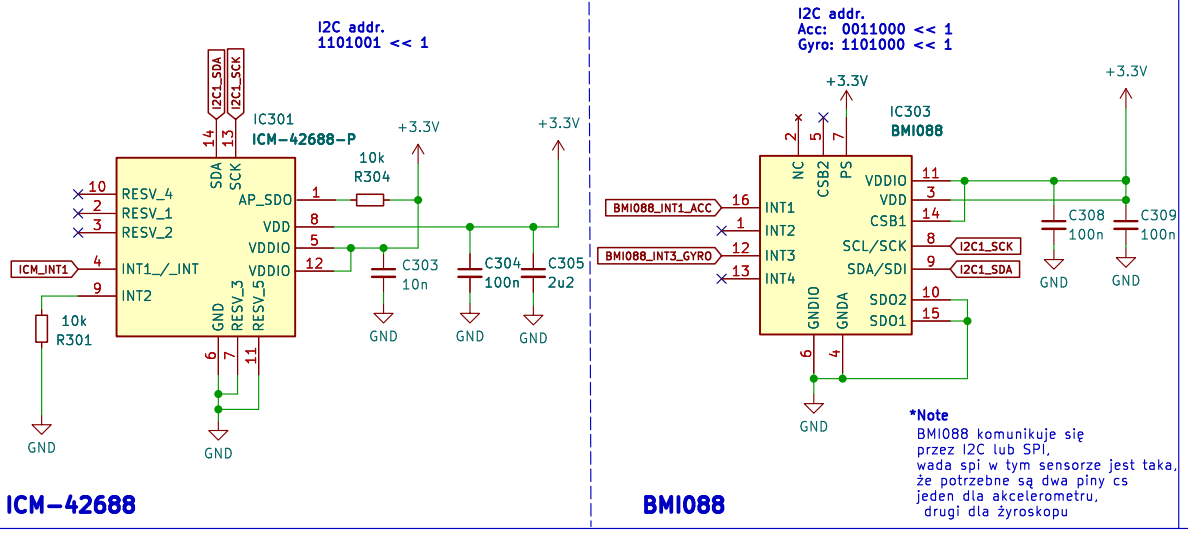
Press & temp



SPL06-001

LSP22HB

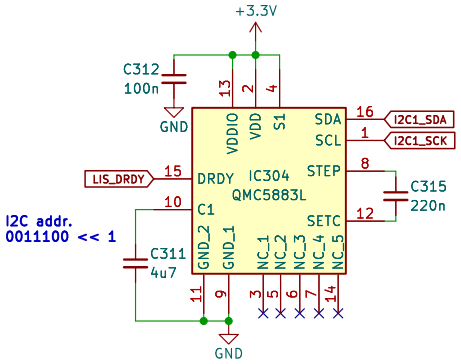
2x ACC & GYRO



ICM-42688

BMI088

Hall



QMC5883L

Sheet: /NAVC_SENSORS1/
File: NAVCperiph.kicad_sch

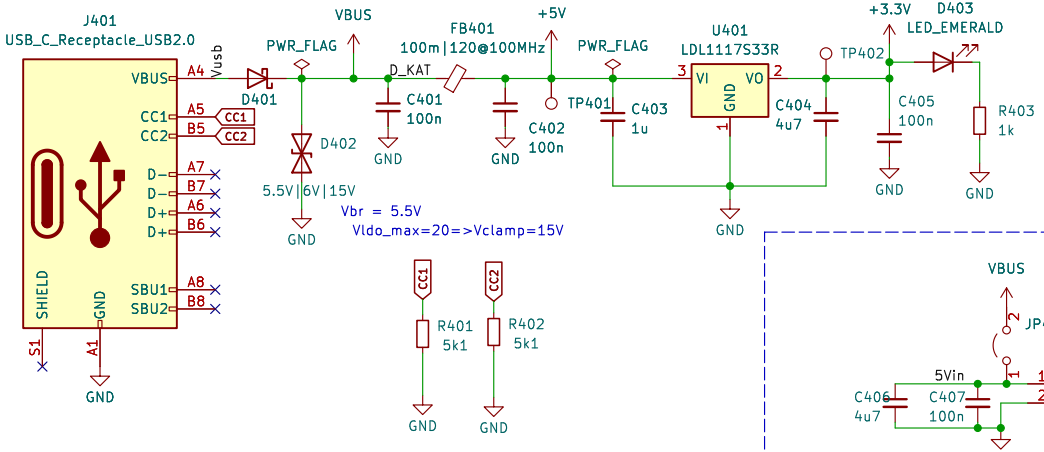
Title: SENSORS & GNSS

Size: A4 | Date: 2023-11-05 | Rev:

KiCad E.D.A. kicad 7.0.8 | Id: 7/6

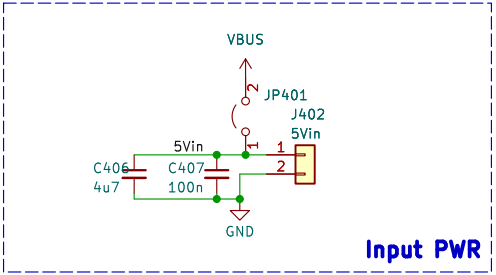
[4] PWR & PWR FILTERING

USB C CONN



LDO

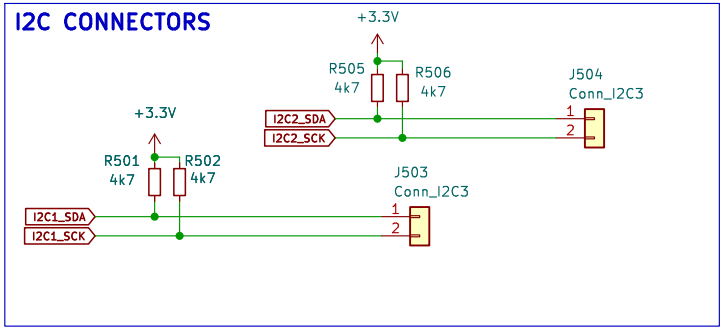
*Note
Jako, że dla całego systemu będzie dedykowana płyta z dystrybucją energii, używam tutaj małowyrafinowanego LDO
Up to 1.2A
0.35V dropout



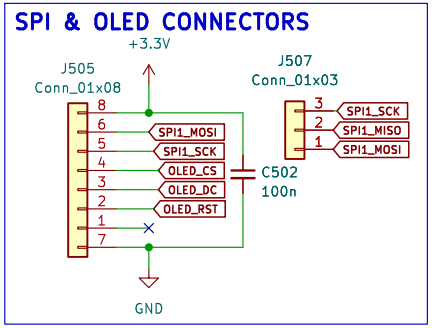
Sheet: /NAVC_POWER1/		
File: NAVCpwr.kicad_sch		
Title: POWER		
Size: A5	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 8/6

[5] Connectors

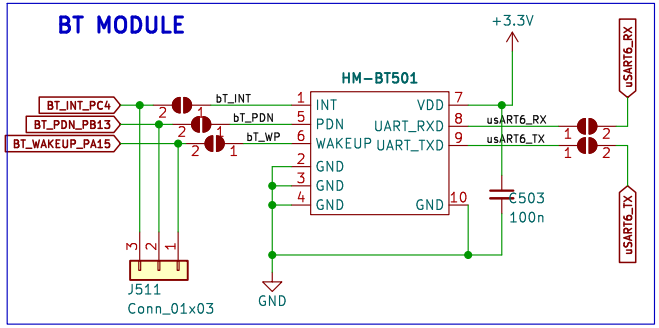
I2C CONNECTORS



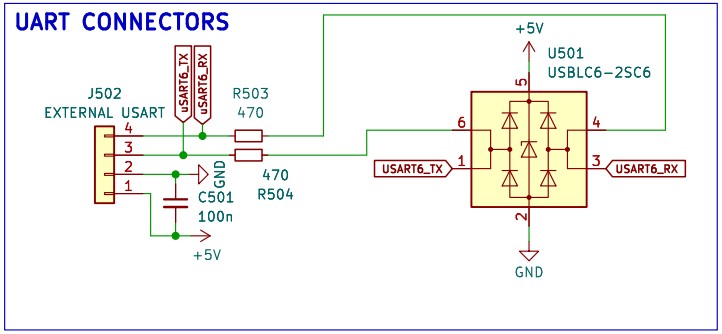
SPI & OLED CONNECTORS



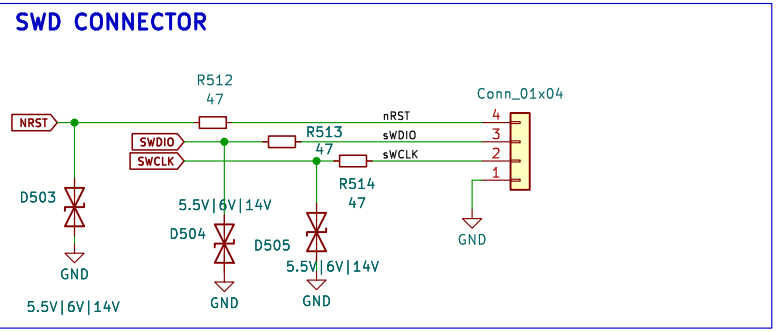
BT MODULE



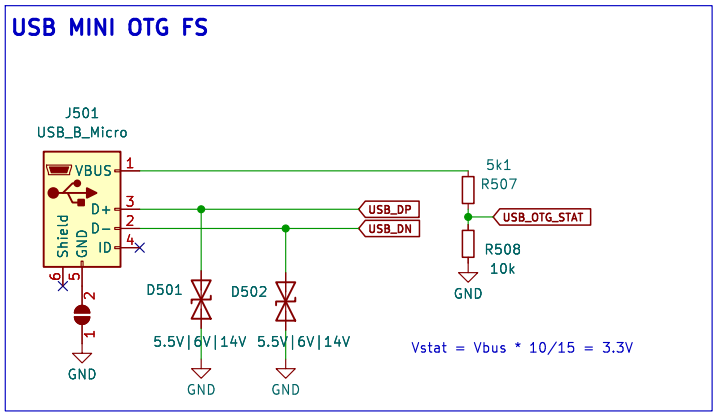
UART CONNECTORS



SWD CONNECTOR

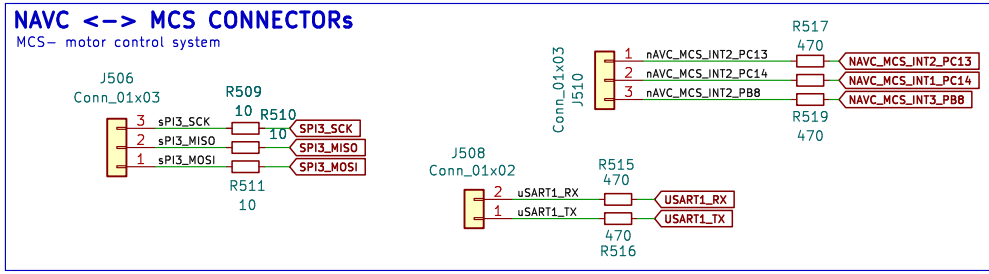


USB MINI OTG FS



NAVC <-> MCS CONNECTORs

MCS- motor control system



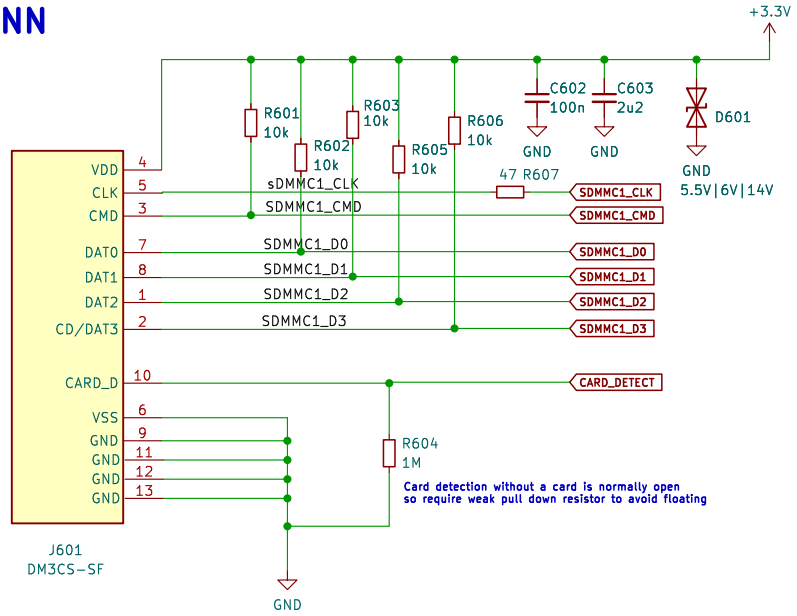
Sheet: /NAVC_CONNECTORS1/
File: NAVC_conns.kicad_sch

Title: CONNECTORS

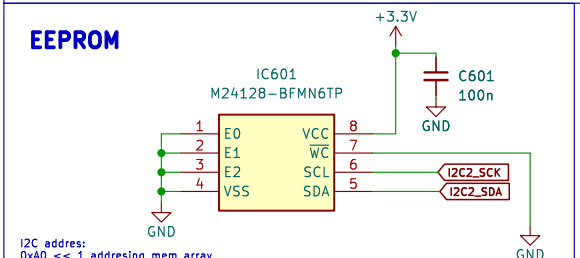
Size: A4	Date:	Rev:
KiCad E.D.A. kicad 7.0.8		Id: 9/6

SD CARD CONN

Zgodnie z specyfikacją kart sd
wszystkie linie data oraz cmd
powinny byc podciągnięte
przez rezystor 10k-100k do vcc



EEPROM



I2C addres:
0xA0 << 1 addresing mem array
0xB0 << 1 accessing identification pagge

Sheet: /NAVC_MEMORY1/
File: NAVCmem.kicad_sch

Title: EXTERNAL MEMORY

Size: A5	Date:	Rev:
KiCad E.D.A. kicad 7.0.8		Id: 10/6