

Project: RWHardware.PrjPcb			
Document: Main.SchDoc			
Size: A3	Sheet 0 of 4	Revision: A	
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Checked by: *			19:25:09
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NRST pin has internal pull-up.

C104  
100n

S100

Ceramic capacitor (Low ESR, ESR<1ohm)

R102 10k

C105 4u7

VCAP1 30

HSE\_IN 5

HSE\_OUT 6

R100 0R

H R EXT

X100

C100 27p

C102 27p

MD\_PWM

FT232\_TX

USART3\_RX

MAG\_SDA

I2C3\_SDA

INT\_MAG

EXTI10

INT1\_XL

EXTI11

MOSI

SPI3\_MOSI

LSE\_IN 3

LSE\_OUT 4

R101 0R

L R EXT

X101

C101 4p3

C103 4p3

MCU\_LED

D100

MCU\_LED-K

R103 270R

U100  
STM32F446RET6

PA15 50 SPI3\_SS SS

PA14 49 SWCLK

PA13 46 SWDIO

PA12 45 Buzzer

PA11 44 EXT\_MD\_SIG2

PA10 43 EXT\_MD\_SIG1

PA9 42 EXT\_MD\_SIG3

PA8 41 I2C3\_SCL MAG\_SCL

PA7 23 MD\_ENA

PA6 22 MD\_CS

PA5 21 MD\_ENB

PA4 20 MD\_INB

PA3 17 V\_SENSE

PA2 16

PA1 15 TRIGGER\_B

PA0 14 TRIGGER\_A

PB15 36

PB14 35 MD\_INA

PB13 34 SENSOR\_EN

PB12 33 MCU\_LED

PB10 29 USART3\_TX FT232\_RX

PB9 62 EXT19 INT\_ACC

PB8 61 EXT18 INT\_GYRO

PB7 59 I2C1\_SDA IMU\_SDA

PB6 58 I2C1\_SCL IMU\_SCL

PB5 57 EXT15 INT2\_XL

PB4 56 SPI3\_MISO MISO

PB3 55 SPI3\_SCK SCK

PB2 28

PB1 27

PB0 26

NRST 7

BOOT0 60

VCAP1 30

PH0-OSC\_IN 5

PH1-OSC\_OUT 6

PD2 54

PC0 8

PC1 9

PC2 10

PC3 11

PC4 24

PC5 25

PC6 37

PC7 38

PC8 39

PC9 40

PC10 51

PC11 52

PC12 53

PC13 2

PC14-OSC32\_IN 3

PC15-OSC32\_OUT 4

VDDA/VREF+ 13

3V3 19

VDD 32

VDD 48

VDD 6

VDD 1

VBAT 1

VSS 31

VSS 47

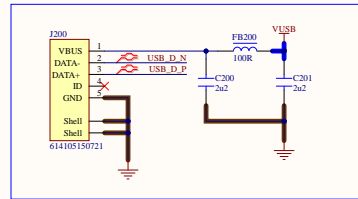
VSS 8

VSS 12

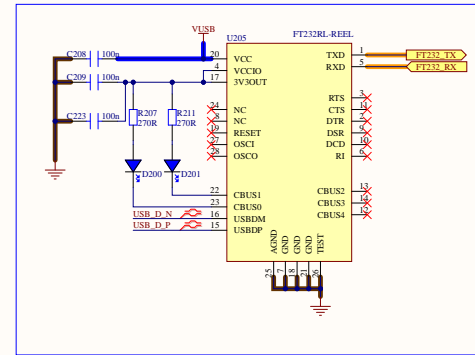
VSSA/VREF- 1

The diagram illustrates a 3-wire bus system with three parallel signal lines. Each line consists of a red conductor and a purple shield. The lines are labeled VBCKP, VLOAD, and 3V3. Each label is shown in a yellow box at the source end and connected to a ground symbol at the destination end.

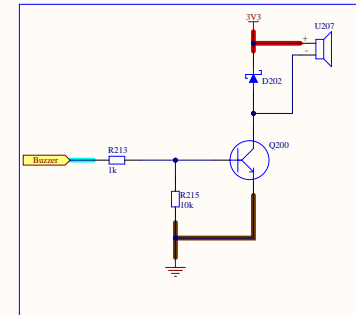
## USB MICRO - B Connector



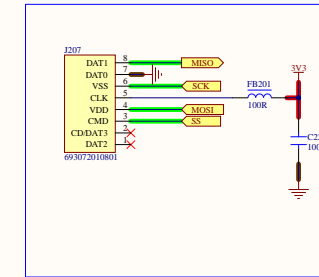
## FT232RL USB to Serial Interface



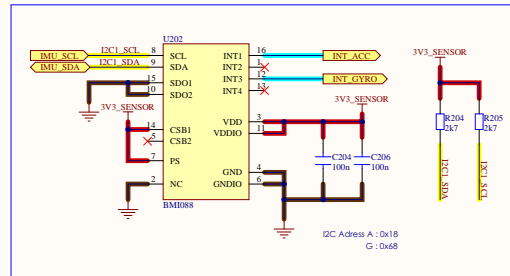
## YX-YT9503 BUZZER



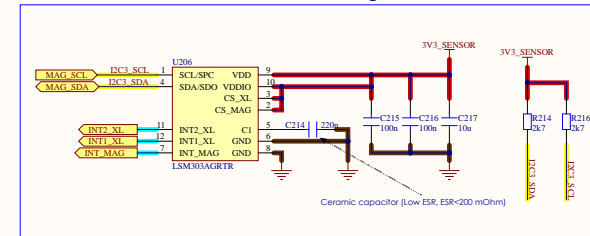
## Micro SD Card Connector



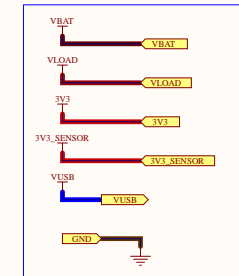
## BMI088 Inertial Measurement Unit



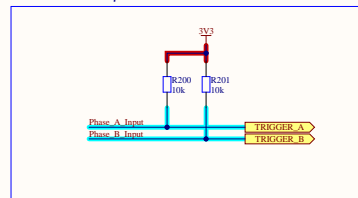
## LSM303AGRTR Accelerometer and Magnetometer



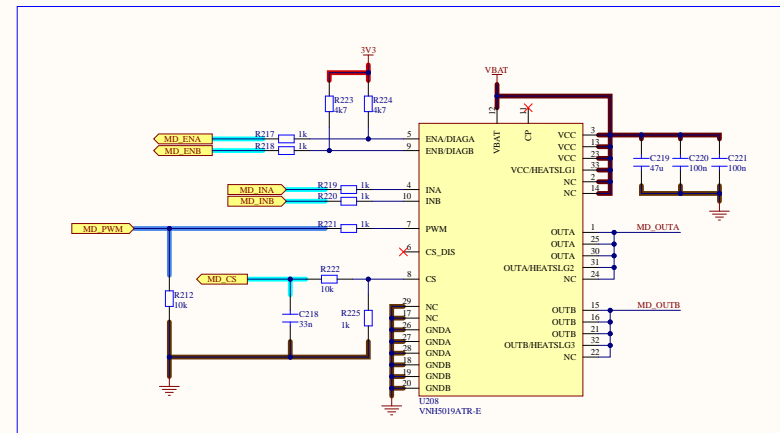
## Global Ports



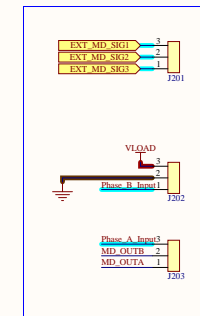
## Encoder Input



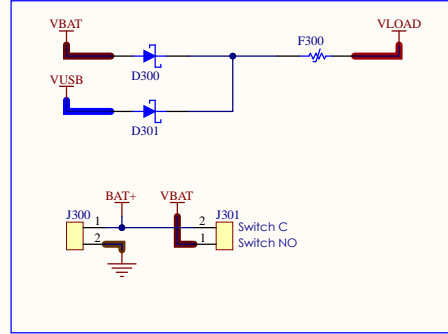
## DC Motor Driver



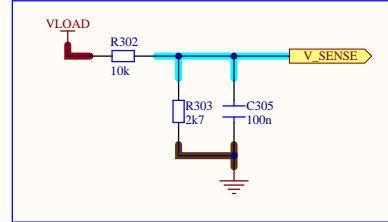
## Motor Driver and Encoder Connectors



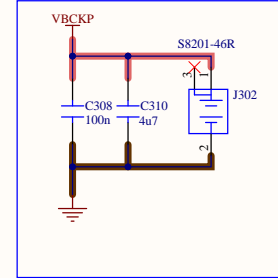
## Battery and Switch Connector



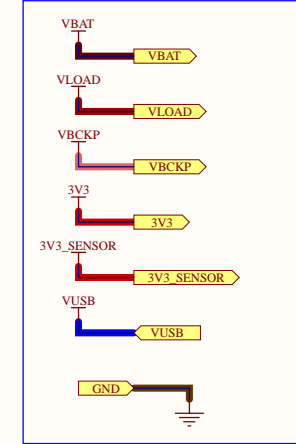
## Voltage Sense



## Backup Battery



## Global Ports



## MIC5205-3.3YM5-TR 3V3 Regulator

