Sensors

**IMU (Accelometer, Gyroscope, Magnetometer)**

Plug-in board with a LSM9DS1 chip.

Operating voltage: 3.3V

I2C serial interface with the MCU

**Ultrasonic sensors**

Use 4 of them (two on each side)

Operating voltage: 5V

Analog interface (trigger and measuring length of the echo signal)

**Voltage measurement**

Voltage divider + low pass filter + ADC of the microcontroller

**Current measurement**

Shunt resistor + low pass filter + (op-amp)+ ADC of the microcontroller