4.4.3.6 Magnetometer Driver

This driver provides methods to use the HMC5883L magnetometer. It initializes the sensor and reads the measured values. The source _le is named "`b CompassDriver.c"' and the header _le "`b CompassDriver.h"'. Both can be found in the code folder within the driver subdirectory. For this driver a basis from an old project also existed.

First the initialization method should be called, so the measurements work well. Through the initialization the sensor is set to the following configuration:

_ 8 samples averaged per measurement output
_ Data output rate to 15 Hz
_ Gain to 5
_ continuous measurement mode

Finally it sleeps 100ms, so the sensor can adopt the settings.

A function was implemented to read the raw values of the measurement. It reads the 8-bit registers of every axis and combines them to 16-bit two's compliment numbers.

Then a function exists, which should get calibrated values after running the calibration function. Till now these functions doesn't work very well.

For a test documentation look in tests.