#### 4.4.3.5 Gyroscope Driver

Also a driver for the ITG-3200 MEMS gyroscope is implemented and provides methods to get the measured values. The gyroscope driver is named "`b gyroscopedriver"' and has a source and header _le. It requires the I2C driver to access the sensor. As a basis of the code serves an old project.
During the initialization some settings are made for the gyroscope. This can be done by setting di_erent values in the con_guration registers of the sensor. The settings made by this driver are:
_ internal sample rate to 1kHz
_ sample rate divider to 10
_ full scale range to +/- 2000 degree/sec
_ digital low pass _lter bandwidth to 188Hz
_ PLL with X gyro reference
After this settings the sensor needs 80 ms to get ready for the _rst measurement.
For all three axis are methods available to get the single values or all three together at once. The values are 16-bit two's complement and have to be made up of two 8-bit registers.
The test-protocol for the gyroscope driver can be also found in tests.