



SPACEMANIC

Lodestone

Gyro&Mag module

SM-AD-LODESTONE

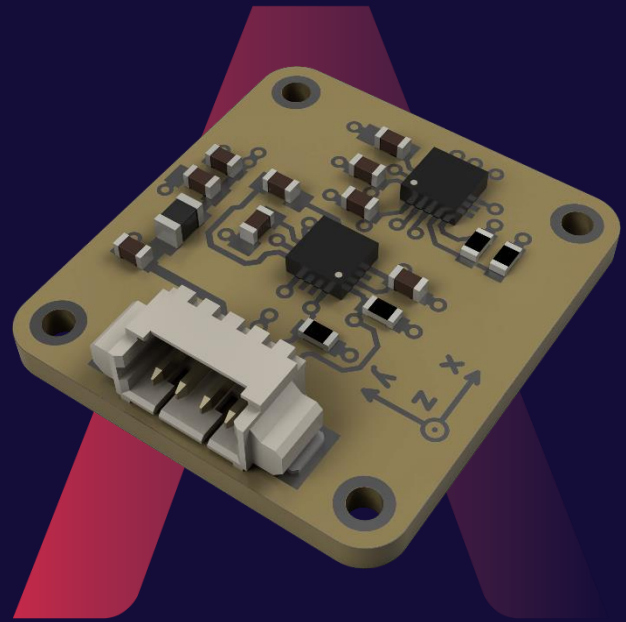
Module uniting a gyroscope and magnetometer for easy attitude determination of your nano-satellite

FEATURES

- Plug&Play design
- Small footprint for easy integration
- 3-axis gyroscope and 3-axis magnetometer in one module
- No need for external A/D converters

PRODUCT PROPERTIES

- Operating temperature: -40°C to +85°C
- Dimensions: 22x20x5 mm
- Power Supply: 3.3V
- Mass: 2g
- Power consumption:
 - In idle state: typ. 170µA
 - Under full load: typ. 3.15mA



FUNCTIONAL CHARACTERISTICS

- Gyroscope:
 - FSR from ± 15.625 up to $\pm 2000^\circ/\text{sec}$
 - Digitally programmable low-pass filter
 - Self-test capability
 - Integrated temperature sensor
- Magnetometer:
 - FSR $\pm 8\text{G}$ with 16bit/18bit operation
 - 0.25mG/0.0625mG per LSB resolution 0.4mG total RMS noise level
 - 0.1% typical linearity error
 - Integrated temperature sensor

INTERFACES

- I2C at 400kHz fast mode, 1.8V
- 2x interrupt signals
- Molex®PicoBlade 4/6-pin connector

TESTING & HERITAGE

- Flight Heritage Hardware