

6-DOF XYZ-Axis Gyroscope and XYZ-Axis Accelerometer with Digital SPI Interface

Features

- Single package 6DOF component for safety critical and AD applications
- ISO26262 compliant for systems up to ASIL-D
- Component level dynamic cross-axis calibration enables better than 0.3° cross-axis error over temperature
- Allan variance down to 0.9°/h
- Gyro RMS noise level below 0.007°/s
- Excellent vibration robustness
- Extensive self-diagnostics features
- ±125°/s or ±300°/s angular rate measurement range to cover various application needs
- ± 6 g acceleration measurement range
- 40°C...+110°C operating temperature range
- 3.0V...3.6V supply voltage
- SOIC housing body size 18.7 mm x 8.5 mm x 4.5 mm (l x w x h), 32 pins
- Qualified according to AEC-Q100 standard

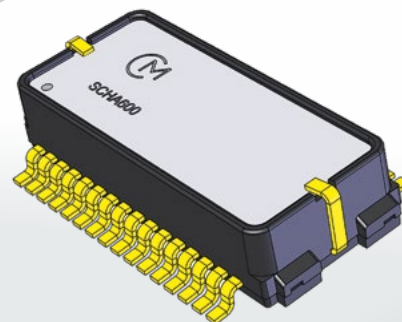
Applications

SCHA600 is targeted at applications demanding high performance with tough environmental requirements.

Typical applications include:

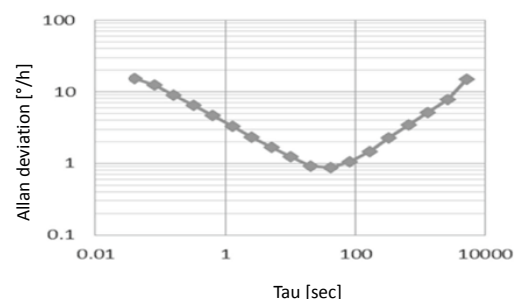
- Advanced Driver Assistant System (ADAS)
- Automated Driving (AD)
- Inertial Navigation for Dead Reckoning
- Lane Keeping Assistant (LKA)
- Motion and Position Measurements
- Platform Stabilization

Measurement characteristics	Ω xyz	Acc xyz
Range	±125 °/s or ±300 °/s	±6g
User Selectable Low Pass Filter	13, 20, 46 or 300 Hz	13, 20, 46 or 300 Hz
Sensitivity	160 LSB/°/s or 80 LSB/°/s	4905 LSB/g
Offset Temperature Dependency (Typ)	125/300 (Z) ±0.06 °/s 125/300 (XY) ±0.25 °/s	(XYZ) ±3 mg
RMS Noise (Typ, 13 Hz filter)	125/300 (XYZ) 0.007 °/s	(XYZ) 0.5 mg
Bias Instability (Typ)	125 (XYZ) 0.9 °/h 300 (XYZ) 1.2 °/h	(XYZ) 0.01 mg

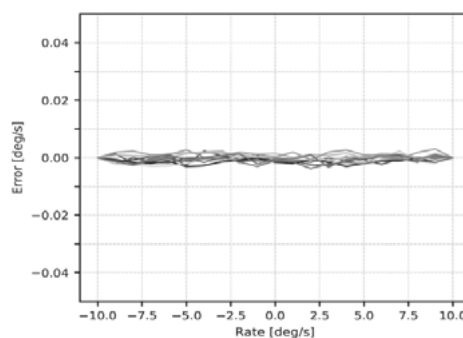


Size
18.7 x 8.5 x 4.5 mm

Z-Gyro (SCHA634-D01) Allan Deviation in °/h



Z-Gyro (SCHA634-D01) Linearity error in deg/s



Product Type	Ω xyz	Acc xyz
SCHA634-D01	(Z) ±125 °/s (XY) ±125 °/s	±6 g
SCHA634-D02	(Z) ±125 °/s (XY) ±300 °/s	±6 g
SCHA634-D03	(Z) ±300 °/s (XY) ±300 °/s	±6 g