

Combined X or Z-axis Gyroscope and 3-axis Accelerometer

Features

- Single axis X or Z-axis gyroscope with $\pm 125^\circ/\text{s}$ or $\pm 300^\circ/\text{s}$ measurement range
- 3-axis accelerometer with $\pm 2\text{g}$ or $\pm 6\text{g}$ measurement range
- Extensive self diagnostics features
- Excellent bias stability, low noise level and good vibration robustness
- SPI digital interface
- User selectable low pass filter via SPI
- $-40^\circ\text{C} \dots +125^\circ\text{C}$ operating range
- 3.0V...3.6V supply voltage
- Size 15.0 x 8.5 x 4.35 mm (l x w x h)
- Proven capacitive 3D-MEMS technology
- Product platform qualified according to AEC-Q100 standard

Applications

SCC2000 series is targeted at applications demanding high stability with tough environmental requirements. Typical applications include:

- Inertial Measurement Units (IMUs) for highly demanding environments
- Platform stabilization and control
- Machine control systems
- Electronic Stability Control (ESC)
- Hill Start Assist (HSA)
- Roll over detection
- Navigation systems

Part Numbers

Part number	Gyro Axis	Accelerometer Axis	Measurement ranges
SCC2230-E02	Z	X, Y, Z	$\pm 125^\circ/\text{s}$, $\pm 2\text{g}$
SCC2230-D08	Z	X, Y, Z	$\pm 125^\circ/\text{s}$, $\pm 6\text{g}$
SCC2130-D08	X	X, Y, Z	$\pm 125^\circ/\text{s}$, $\pm 6\text{g}$
SCR2100-D08	X	-	$\pm 125^\circ/\text{s}$

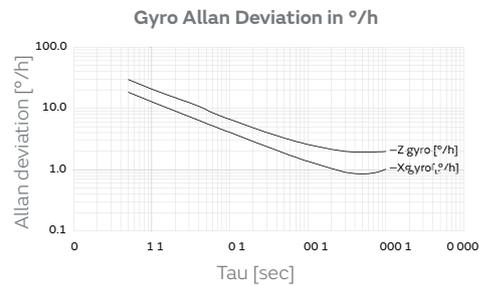


Size

15.0 x 8.5 x 4.35 mm

Gyro Performance Overview

Parameter	X gyro	Z gyro
Offset temperature error	$\pm 0.8^\circ/\text{s}$	$\pm 0.8^\circ/\text{s}$
Sensitivity error	$\pm 2.5\%$	$\pm 2.5\%$
Linearity $\pm 125^\circ/\text{s}$ range	$\pm 0.5^\circ/\text{s}$	$\pm 0.5^\circ/\text{s}$
Integrated noise (RMS)	$0.05^\circ/\text{s}$	$0.08^\circ/\text{s}$



Accelerometer Performance Overview

Parameter	Accel 2g	Accel 6g
Offset temperature error	$\pm 10\text{mg}$	$\pm 18\text{mg}$
Sensitivity error	$\pm 1\%$	$\pm 1\%$
Linearity $\pm 1\text{g}$ range	$\pm 5\text{mg}$	$\pm 5\text{mg}$
Linearity $\pm \text{FS}$ range	$\pm 10\text{mg}$	$\pm 50\text{mg}$
Integrated noise (RMS)	1.2 mg	2.7 mg

