



# High performance digital Inertial MEMS sensors

With high stability and tolerance to vibrations



**AXO<sup>®</sup>300 accelerometers**

From  $\pm 0.5$  to  $\pm 15$  g

Composite bias repeatability 1 mg

VRE 20  $\mu\text{g}/\text{g}^2$



**GYPRO<sup>®</sup>4000 gyroscopes**

From  $\pm 10^\circ/\text{s}$  to  $\pm 500^\circ/\text{s}$

Bias stability & repeatability  $10^\circ/\text{h}$

ARW  $< 0.1^\circ/\sqrt{\text{h}}$

## Fast integration

- 24-bit SPI interface
- Factory-calibrated
- Built-in signal conditioning for simplified data processing

## Application-focused

- Operating temperature up to  $+125^\circ\text{C}$
- Configurable data rate, customizable bandwidth & latency
- Initial & continuous self-test

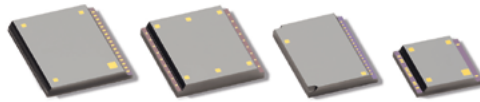
## Low SWAP

- Lower-cost alternative to entry-level quartz accelerometers and FOG gyros
- Hermetic ceramic SMD package
- No need for external ADC and filters



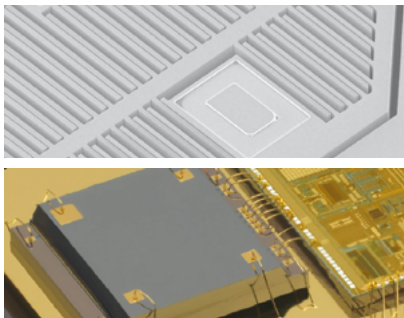
# Inertial MEMS foundry services

For capacitive accelerometers, gyros and vibration sensors



## Small dies size with high reliability and high signal to noise

- 1 to 6-axis capacitive sensing capability
  - In-plane interdigitated combs
  - Out-of-plane metal electrodes on cap
- High signal to noise and high reliability
- Small die size with vacuum / hermetic WLP
- Standard wire-bonding assembly
- AEC-Q100 reliability tests passed
- IATF 16949 certified manufacturing line



## Thick-SOI process with WLP or <10mTorr VWLP

- Hermetic / Vacuum WLP
  - <10mTorr for high Q-factor structures
  - Atmosphere for damped structures
- 60 or 80  $\mu\text{m}$  thick C-SOI
- DRIE aspect ratio up to 1:30
- 2 metal layers for electrodes and routing
- Top and bottom stoppers
- 100% static and dynamic tests

