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

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<tr>
<th></th>
<th>Ω xyz</th>
<th>Acc xyz</th>
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<tbody>
<tr>
<td><strong>Range</strong></td>
<td>±125°/s or ±300°/s</td>
<td>±6 g</td>
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<tr>
<td><strong>User Selectable Low Pass Filter</strong></td>
<td>13, 20, 46 or 300 Hz</td>
<td>13, 20, 46 or 300 Hz</td>
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<tr>
<td><strong>Sensitivity</strong></td>
<td>160 LSB/°/s or 80 LSB/°/s</td>
<td>4905 LSB/g</td>
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<td><strong>Offset Temperature Dependency (Typ)</strong></td>
<td>125/300 °/° ±0.06 °/°</td>
<td>(XY) ±0.1 mg</td>
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<tr>
<td><strong>RMS Noise (Typ, 13 Hz filter)</strong></td>
<td>125/300 (XY) ±0.007°/°</td>
<td>(XY) ±0.5 mg</td>
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<tr>
<td><strong>Bias Instability (Typ)</strong></td>
<td>125 (XY) ±0.9°/°</td>
<td>300 (XY) ±0.2°/°</td>
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