### PRIMARY APPLICATIONS

- **Navigation Systems Aids for Dead Reckoning**
  - Low noise and superior stability for accurate positioning up to 105°C

- **ADAS Vision Systems and Camera Stabilization**
  - High sensor output data rate (up to 1kHz), F-sync pin for camera frame synchronization, small size fits into camera module

- **Telematics and Car Alarm**
  - Programmable Wake-on-Motion embedded interrupt, Low power feature to minimize application’s current consumption

- **Door Control**
  - Integrated 6-axis for free mounting orientation, up to 4k byte embedded FIFO to underload host processor

### FEATURED PRODUCTS

**IAM-20680HT**

- High temperature 6-axis Motion Tracking device for Automotive non-safety applications with extended temperature range up to 105°C.
- IAM-20680HT provides best-in-class low noise performance, superior stability, on-chip 16-bit ADCs, and industry-leading sensitivity tolerance.

**DK-20680HT**

- Comprehensive development platform designed around Microchip G55 MCU to be used by developers for rapid evaluation and development of IAM-20680HT based solutions.

### PRODUCT CATEGORIES

**IAM-20680HT**

  - High temperature Motion Tracking device
  - Operating temperature range (-40°C / 105°C)
  - Embedded features: Wake-on-Motion, two interrupt lines
  - Reliability testing performed according to AEC–Q100 Grade 2

**IAM-20680HP**

  - High performance Motion Tracking device
  - Operating temperature range (-40°C / 105°C)
  - Enhanced factory calibration procedure, providing superior stability over temperature and lifetime
  - Part-by-part temperature compensation up to 105°C
  - Reliability testing performed according to AEC–Q100 Grade 2

**IAM-20685**

- High performance IMU for systems up to ASIL-B for ADAS & Autonomous Drive Applications
  - Smallest 6-axis ASIL-rated Motion Tracking device
  - Lowest current consumption failsafe Inertial Measurement Unit for Automotive Applications
  - Developed according to ISO-26262

### PRODUCT DETAILS

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Package (mm)</th>
<th>Gyro FSR (dps)</th>
<th>Gyro offset variation over T (dps typ)</th>
<th>Accel FSR (g)</th>
<th>Accel offset variation over T (mg typ)</th>
<th>Digital Output</th>
<th>Operating Voltage (g)</th>
<th>Operating Voltage (gyr)</th>
<th>ISO26262 Rating</th>
<th>Interrupt Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAM-20680HT</td>
<td>3 × 3 × 0.75</td>
<td>±250 to ±2000</td>
<td>±1</td>
<td>±2 to ±16</td>
<td>±50</td>
<td>I2C or SPI</td>
<td>4Hz to 8kHz (gyro)</td>
<td>4Hz to 4kHz (accel)</td>
<td>1.7 to 3.6</td>
<td>n/a</td>
</tr>
<tr>
<td>IAM-20680HP</td>
<td>3 × 3 × 0.75</td>
<td>±250 to ±2000</td>
<td>±0.9 (***)</td>
<td>±2 to ±16</td>
<td>±15 (***)</td>
<td>I2C or SPI</td>
<td>4Hz to 8kHz (gyro)</td>
<td>4Hz to 4kHz (accel)</td>
<td>1.7 to 3.6</td>
<td>n/a</td>
</tr>
<tr>
<td>IAM-20685</td>
<td>4.5 × 4.5 × 1.1</td>
<td>±41 to ±1966</td>
<td>(*)</td>
<td>±2 to ±16</td>
<td>(*)</td>
<td>SPI w/ CRC</td>
<td>8kHz</td>
<td>Up to ASIL-B</td>
<td>3.0 to 5.5</td>
<td>Up to ASIL B</td>
</tr>
</tbody>
</table>

(*) please contact your local TDK InvenSense Sales Office for full datasheet
(**) min/max values are ~2x better compared to IAM-20680HT