**SmartMotion®**

### PRIMARY APPLICATIONS

**Mobile Devices**
- APEX, raise to wake/sleep, significant motion detection, and the smallest and thinnest LGA package

**Wearables & Hearables**
- Captures wrist gestures, fitness activities, exercise motion, sleep signatures, and accurately detects head orientation for spatial 360° audio, all with low power consumption

**AR & VR**
- 19-bits of gyroscope data & 18-bits of accelerometer data, external clock input, tilt detection, tap detection, and significant motion detection

**Robotics**
- 20-bits format support for high-data resolution, 20,000g shock tolerance, external clock input, and programmable digital filters for sensitive and rugged robotics applications

### FEATURED PRODUCTS

**ICM-42670-P**
- High-performance 6-Axis Motion Tracking IMU targeted at consumer and IoT applications that require ultra-low power to drive longer battery lives. It also features user-programmable digital filters for gyro, accel, and temp sensors.

**DK-42670-P**
- Comprehensive development platform designed around Microchip GSS MCU to be used by developers for rapid evaluation and development of ICM-42670-P based solutions.

### PRODUCT CATEGORIES

**ICM-42670-P**
- Intelligent Sensors
- Wearables, Hearables, Gaming
  - Lowest sleep current (3.5 µA) and Accel LP mode current (4.4 µA)
  - Small package size with lowest Z-height: 0.76 mm
  - Embedded Features: APEX pedometer, built-in gestures
  - Smart Home, Gaming, Wearables, Hearables, IoT

**ICM-42605**
- High-Performance Sensors
- Mobile Devices, IoT
  - Low noise and high temperature stability
  - Perfect balance of high performance and low power
  - On-chip APEX (WOM, SMD, Tap, Pedometer, Activity Classification)
  - Smartphones, Tablets, Wearables, Sports, IoT

**ICM-42688-P**
- High-Definition Sensors
- AR/VR HMD, Robotics
  - Industry’s lowest noise
  - Leading temperature stability
  - Sample sync with RTC
  - 16/32 kHz real-time ODR
  - Hi-def ADC enables 8x higher sensor resolution
  - Robotics, Gaming, AR/VR, Navigation, Drones, Robo Vacs

### PRODUCT DETAILS

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Package Size (mm)</th>
<th>Gyro FSR (°/s)</th>
<th>Gyro Sensitivity (LSB/°/sec)</th>
<th>Accel FSR (g)</th>
<th>Accel Sensitivity (LSB/g)</th>
<th>Digital Output</th>
<th>Output Data Rate</th>
<th>Operating Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICM-42670-P</td>
<td>2.5 x 3 x 0.76</td>
<td>±250 to ±2000</td>
<td>16.4 – 131</td>
<td>±2 – ±16</td>
<td>2048 – 16384</td>
<td>Single Interface</td>
<td>Up to 1.6 kHz</td>
<td>1.71 – 3.6</td>
</tr>
<tr>
<td>ICM-42605</td>
<td>2.5 x 3 x 0.91</td>
<td>±15.625 to ±2000</td>
<td>16.4 – 2097.2</td>
<td>±2 – ±16</td>
<td>2048 – 16384</td>
<td>Single Interface</td>
<td>Up to 32 kHz</td>
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<td>Single Interface</td>
<td>Up to 8 kHz</td>
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</tr>
</tbody>
</table>

Scan Here for additional materials and information.