

Attracting Tomorrow



MEMS モーションセンサ

MEMS Motion Sensor

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MEMS Motion Sensor

Features

- 低ノイズで高感度
Lowest noise & highest sensitivity
- 低消費電力
Very low power consumption
- 業界最高レベルの解像度
Industry's highest resolution

Applications

- Smartphones
- AR / VR / Game controllers
- Robotics



Characteristics

Motion Sensors with UI & OIS interface	ICM-42602 Performance OIS	ICM-42622 Professional OIS	ICM-42633 Dual-OIS
GYRO Noise [mdps/ $\sqrt{\text{Hz}}$]	3.8	2.8 ^{VLN}	2.8 ^{VLN}
GYRO Offset Stability TC [mdps/ $^{\circ}\text{C}$]	10	5 ^{OCH}	5 ^{OCH}
GYRO Sensitivity Error [%]	0.5	0.25	0.25
GYRO LN Current [μA]	520	730 ^{VLN}	730 ^{VLN}
ACCEL Noise [$\mu\text{g}/\sqrt{\text{Hz}}$]	75	AXY: 60	AXY: 60
ACCEL Sensitivity Error [%]	0.5	0.25	0.25
ACCEL LN Current [μA]	250	320	320
ODR & Sample Synch	32 kHz; No RTC	YES – RTC	YES – RTC

Motion Sensors with UI for Sensorhub & AP	ICM-42605 Sensorhub	ICM-42686 Handheld Action	ICM-42688 HMD & Robotics
GYRO Noise [mdps/ $\sqrt{\text{Hz}}$]	3.8	5.8	2.8 ^{VLN}
GYRO Offset Stability TC [mdps/ $^{\circ}\text{C}$]	10	10	5 ^{OCH}
GYRO LN Current [μA]	520	520	0.25%
Range & Resolution	2000 dps; 16 bit	4000 dps; 16 / 19 bit	2000 dps; 16 / 19 bit
ACCEL Noise [$\mu\text{g}/\sqrt{\text{Hz}}$]	75	75	AXY: 60
ACCEL LN Current [μA]	250	250	320
Range & Resolution	16 g; 16 bit	32 g; 16 / 18 bit	16 g; 16 / 18 bit
ODR & Sample Synch	32 kHz; No RTC	32 kHz; No RTC	YES - RTC

VLN: very low noise
OCH: on chip heater

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Applications

Motion Sensors AP & Sensor Hub

ICM-4260x

- Leading performance (noise, stability, sensitivity)
- HW pedometer, optional stair counter with ICP-10100
- Built-in 'key gestures'
- <15uA WOM LPM



Android Smartphones & ARCore

Precision Sensors Image Stabilization

ICM-42622

- 4260x performance PLUS:
- VLN & eTS gyro
- Low-noise accel
- Sensitivity error <0.25%
- Sample synch with RTC
- 16/32 kHz ODR filtering
- Dual OIS camera modules



Action Sensors Handhelds/Wearables

ICM-42686-P

- 4260x performance PLUS:
- 32g / 4000dps FSR
- 20-bit high-def ADC enables 8x higher sensor resolution
- Sample synch with RTC
- TDK sensor fusion solutions



High-Def Sensors VR HMD / Robotics

ICM-42688-P

- 4260x performance PLUS:
- VLN & eTS gyro
- Low-noise accel
- Sample synch with RTC
- 20-bit high-def ADC enables 8x higher sensing resolution
- 16/32 kHz ODR filtering

