

High Stability, Minimal Drift with the Epson Q-MEMS Technology

Epson's Inertial Measurement Units (IMU) represent a unique class of high-performance motion sensors engineered for demanding industrial, aerospace, robotics and defense applications. Unlike many conventional MEMS-IMUs, Epson modules leverage proprietary crystal-based sensor technology and in-house ASIC design, offering ultra-low drift, exceptional stability and precise angular rate detection in compact forms.

GYRO BIAS INSTABILITY

DOWN TO **0.5 °/h**
M-G570PR2

ANGULAR RANDOM WALK

DOWN TO **0.03 °/√h**
M-G370PDT

INTERFACES

RS-422 · CANopen
65 × 60 × 30 mm housing

CURRENT CONSUMPTION

16 mA
@ 3.3 V · SPI / UART



M-G570PR · 65 × 60 × 30 MM



M-G370 · 24 × 24 × 10 MM

01 FEATURES

- ◆ 6 DOF-IMU
- ◆ Small size & light weight:
24 × 24 × 10 mm, 10 g | 65 × 60 × 30 mm, 115 g
- ◆ **Low-noise, high-stability:**
Gyro bias instability down to 0.5 °/h
Angular random walk down to 0.03 °/√h
- ◆ Low current consumption:
16 mA @ 3.3 V | 32 mA @ 12 V
- ◆ Calibration temperature: -40 °C to +85 °C
- ◆ **Solid case: IP67 available**
- ◆ Built-in Dynamic Tilt Function (EKF) available
- ◆ Different interfaces:
CANopen, RS-422, SPI, UART

02 TARGET APPLICATIONS

- ◆ Autonomous Navigation
- ◆ Platform Stabilization
- ◆ Predictive Maintenance
- ◆ Mapping & Georeferencing
- ◆ Tilt & Inclination Monitoring
- ◆ Motion Control for Robotics

GET YOUR EVALUATION KIT

INCLUDES

- ✓ Evaluation Board
- ✓ USB cable (M-G32EV041 Board)
- ✓ Epson "IMU Logger" Software
- ✓ User Manuals

CONTACT

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YOUR PATH WITH AMCORIS

From idea to series production

- | | | | |
|---------------------------------------|--------------------------|---------------------------------|---------------------------|
| 01 | 02 | 03 | 04 |
| Consulting | Evaluation | Design-in | Series |
| Sensor selection for your application | Kits, samples & software | Integration & technical support | Reliable long-term supply |

WE ENABLE **ORIENTATION** WHEREVER MACHINES MAKE **AUTONOMOUS** DECISIONS

EPSON IMU PRODUCT LINE-UP

LINE-UP 01

PART	GYRO RANGE [°/s]	BIS [°/h]	ARW [°/√h]	ACCL. RANGE [g]	INTERFACE	SIZE [mm]	OPERATING TEMP. [°C]	TYPE
M-G370PDT	±200	0.8	0.03	±8/16	SPI/UART	24×24×10	-40/+85	Premium
M-G370PDG	±450	0.8	0.06	±8/16	SPI/UART	24×24×10	-40/+85	High-Performance
M-G366PDG	±450	1.2	0.08	±8/16	SPI/UART	24×24×10	-40/+85	Best SWaP-C
M-G355QDG	±450	1.2	0.08	±8/16	SPI/UART	24×24×10	-40/+85	Functional Safety IEC 61508 SIL1
M-G330PDG	±400	3	0.1	±8/16	SPI/UART	24×24×10	-40/+85	Entry
M-G570PR2	±475	0.5	0.04	±15	RS-422	65×60×30	-30/+70	High End
M-G552PR3	±450	1.2	0.08	±8/16	RS-422	65×60×30	-30/+80	IP67 Dust-/Water-Proof
M-G552PR8	±450	0.8	0.06	±8/16	RS-422	65×60×30	-30/+80	IP67 Dust-/Water-Proof
M-G552PC3	±450	1.2	0.08	±8/16	CANopen	65×60×30	-30/+80	IP67 Dust-/Water-Proof
M-G552PC8	±450	0.8	0.06	±8/16	CANopen	65×60×30	-30/+80	IP67 Dust-/Water-Proof