

IMU (Inertial Measurement Unit): M-G370PDG0

Features

- Small Size, Lightweight : 24 x 24 x 10 mm, 10 grams
- Low-Noise, High-Stability
 - Gyro Bias Instability : 0.8 °/h
 - Angular Random Walk : 0.06 °/√h
- Initial Bias Error : 360 °/h (1σ) / 2 mG (1σ)
- 6 Degrees Of Freedom
 - Triple Gyroscopes : ±450 °/s
 - Tri-Axis Accelerometer : ±8 G/±16 G
- 16/32-bit Data Resolution
- Digital Serial Interface : SPI / UART
- Calibrated Stability
(Bias, Scale Factor, Axial Alignment)
- Data Output Rate (Max.) : ~2k Sps
- External Trigger Input / External Counter Reset Input
- Delta Angle / Delta Velocity Output
- Calibration Temperature Range : -40 °C to +85 °C
- Operating Temperature Range : -40 °C to +85 °C
- Single Voltage Supply : 3.3 V
- Low Power Consumption : 16 mA (Typ.)



Product Name and Number
M-G370PDG0 : X2G000221000100



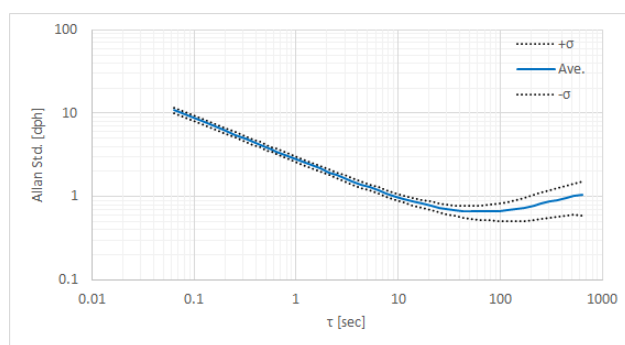
Description

The M-G370PDG0 is a small form factor inertial measurement unit (IMU) with 6 degrees of freedom: triaxial angular rates and linear accelerations, and provides high-stability and high-precision measurement capabilities with the use of high-precision compensation technology. A variety of calibration parameters are stored in memory of the IMU, and are automatically reflected in the measurement data being sent to the application after the power of the IMU is turned on. With general-purpose SPI / UART support for host communications, the M-G370PDG0 reduces technical barriers for users to introduce inertial measurement and minimizes design resources to implement inertial movement analysis and control applications. The features of the IMU such as high stability, high precision, and small size make it easy to create and differentiate applications in various fields of industrial systems.

Application

- Antenna Platform Stabilization
- Camera Gimbals
- Navigation Systems
- Vibration Control and Stabilization
- Pointing and Tracking Systems
- Autonomous Vehicle

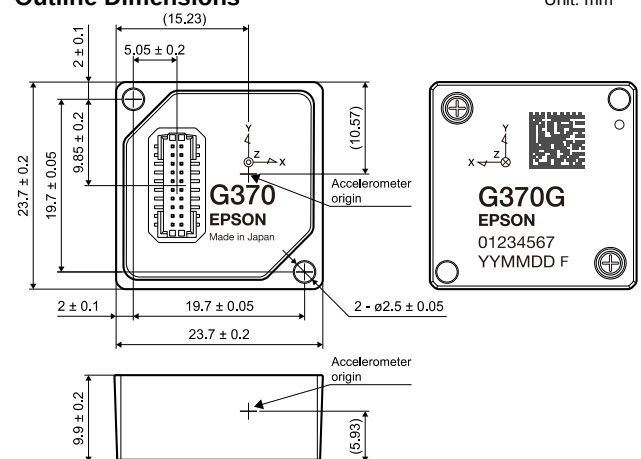
Typical Performance Characteristic



Gyro Allan Variance Characteristic

Outline Dimensions

Unit: mm



Block Diagram

