

MIN-900-2 Miniature IMU gyro measurement system

1 .Product Description

Miniature IMU gyro measurement system MIN-900-2 combines three directions angular rate gyroscope, three-way accelerometer, three-axis magnetometer, mixing operator, 16bit analog to digital converter, microcontrollers, through innovative algorithm both in static and dynamic can give precise direction and attitude. Operating in 360-degree three-axis motion, providing Euler angle pose.

2. Product Principle

MIN-900-2 dynamic triaxial gyro angle tracking system, three-axis accelerometer and magnetometer tracking static point of view, while the built-in processors and controllers, and by filtering algorithms, real-time output angle (both in static or dynamic), which provides a fast response when under vibration and rapid motion and no drift. Stable output provided by the digital format is easy to use.

3. Main parameters

Direction Range	360, arbitrary axis
Sensor range	Gyro: +/-300 deg/s
	Acceleration: +/- 6g
	magnetic field: +/-2 Gauss FS
A / D resolution	16 bits
Acceleration Linearity	+/- 40mg
Accelerometer bias stability	5mg
Gyro linearity (full temperature)	+/-1 degrees/sec
Gyro bias stability (short-term)	2.1 degrees/h
Magnetometer linearity	0.1% FS
Magnetometer bias stability	0.005 Gauss

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Directional Resolution	< 0.1 deg
Repeatability	0.20 deg
Accuracy	+/-0.5 deg (course), +/-0.3 deg (Pitch roll)
Output Format	Euler
Serial Digital Output	RS-232
Frequency response	100Hz
Serial data rate	115.2 Kb
Supply voltage	12V DC
Supply current	150 mA
Operating temperature	-40 to +70 °C
size	58 x 47x 31 mm
Attack	1000 G's (Nonoperating), 500 G's (Working condition)

