Sensordynamics: new combo sensor detects angular rate and acceleration in all three spatial axes (6dof imu*)

I-Micronews

- Temperature-compensated and calibrated combined sensor SD746 integrates functionality of six discrete sensors in one small package
- Ideal for detecting motion and stabilization in consumer goods and industrial sectors

Here SensorDynamics is taking the next logical step toward higher density of integration in its robust and reliable inertial sensors. The SD746 features digital I²C and SPI interfaces plus wide measurement ranges of ±2048°/s for angular rate and ±8 g for acceleration. That makes it flexible enough to use in a wide range of measurement applications in the consumer goods industry and automation. Plus, the SD746 is temperature-compensated and factory calibrated, resulting in an extremely small offset error and temperature drift.

Sensor characteristics and applications

The SD746 is scaled for an operating voltage of 2.55 through 3.6 V and an operating temperature range of -40 to +85°C. The maximum offset error at room temperature is ±5°/s for the gyroscope signal and ±0.1g for the accelerometer signal. Sensitivity error at room temperature is ±2% for the gyroscope and acceleration signal, respectively. The SD746 also features a special power-off mode in which consumption is zero, the SPI interface remaining high-impedance so that the sensor need not be separated from the bus.

"*We're the first producer worldwide to go to market with a fully characterized and specified 6 x 6 x 1.2 mm 6DoF IMU including evaluation boards*," says SensorDynamics CEO **Hubertus Christ**.

Given its moderate power consumption and small-scale package, the SD746 is suitable for industrial applications and battery-powered consumer goods, such as cell phones and smart phones, notebooks and netbooks, remote controls, game consoles, or digital cameras and camcorders. The SD746 also integrates a continuously running self-test that makes it ideal for sophisticated instrumentation & control applications in industry, such as robot control and navigation.

For more technical details, refer to the attached short-form data sheet entitled "Combo sensor with 6 degrees of freedom (6 DoF IMU)," or visit www.sensordynamics.cc [1] .

Availability and price
The SD746 combined sensor is immediately available. Samples and evaluation

boards can be ordered at www.sensordynamics.cc [1]. If you wish for a competitive quote for series production, please contact your local SensorDynamics representative.

* 6 DoF IMU — six degrees of freedom inertial measurement unit

SensorDynamics - Leading in micro and wireless sensor products
SensorDynamics is a semi-fabless semiconductor company that focuses on innovative sensor solutions for high volume applications in automotive, industry and high-end consumer sectors.
SensorDynamics develops and supplies fail-safe micro and wireless semiconductor products for automotive, industry and high-end consumer key accounts and is certified under ISO/TS 16949. The company acts as a general contractor with in-house MEMS production and cooperates closely with leading international technology partners.
With its headquarters in Lebring near Graz, Austria, SensorDynamics has subsidiaries in Italy and Germany and a world-wide sales network.

SOURCE [2]

Source URL (retrieved on *07/12/2014 - 10:36am*):
http://www.mdtmag.com/news/2010/12/sensordynamics-new-combo-sensor-detects-angular-rate-and-acceleration-all-three-spatial-axes-6dof-imu

Links:
[1] http://www.sensordynamics.cc
[2] http://www.i-micronews.com/lectureArticle.asp?id=6035