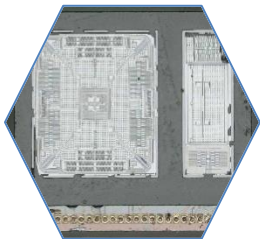
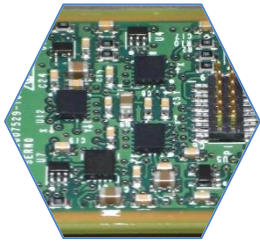




Honeywell HG1120CA50 9-Axis MEMS Inertial Sensor

The first high reliability and highly rugged 9-axis IMU for industrial applications from Honeywell.



Accurate motion capture sensors are critical to the successful development of robots, smart agriculture, autonomous cars and drones. This requires high accuracy and reliability, and long mission life, which are not provided by standard consumer solutions. Honeywell has thus developed the HG1120CA50 inertial sensor to address what it calls ‘the Internet of Moving Things’ and related applications.

The HG1120CA50 is a compact 44 mm × 47 mm × 14 mm module designed to serve platform control, navigation and robotics applications. Mixing technologies developed for military applications and harsh environments with selected consumer MEMS sensors, the HG1120CA50 is a 9-axis inertial measurement unit (IMU) with $\pm 500^\circ/\text{sec}$ digital gyroscope sensing, a 16g accelerometer and a ± 16 gauss magnetometer. It uses a low-cost MEMS technology based on STMicroelectronics’ device process.

In order to achieve a cost effective and small module, Honeywell uses five MEMS components from STMicroelectronics

developed for the smartphone industry. This design allows Honeywell to exploit STMicroelectronics’ low-cost portfolio and thus to optimize manufacturing cost.

The report contains a detailed physical analysis with a process description and manufacturing cost analysis. Also, a full comparison with the Sensoror STIM210 and the ADIS16460 is included.

COMPLETE TEARDOWN WITH

- Detailed photos
- Precise measurements
- Material analysis
- Manufacturing process flow
- Supply chain evaluation
- Manufacturing cost analysis
- Selling price estimation
- Comparison with Sensoror STIM210 and ADI ADIS16460 industrial IMU

Title: Honeywell HG1120CA50 IMU

Pages: 102

Date: January 2019

Format: PDF & Excel file

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AUTHORS



Sylvain Hallereau is in charge of costing analyses for IC, power and MEMS. He has more than 10 years of experience in power device manufacturing cost analysis and has studied a wide range of technologies.

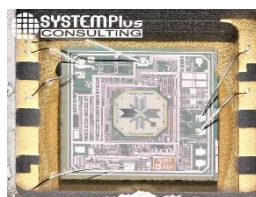


Philippe Vandar has joined System Plus Consulting as a Costing Analyst in Electronic Systems in 2018. He is in charge of reverse costing, with a focus on electronic boards and systems. He previously worked for PSA Group, where he was in charge of costing.

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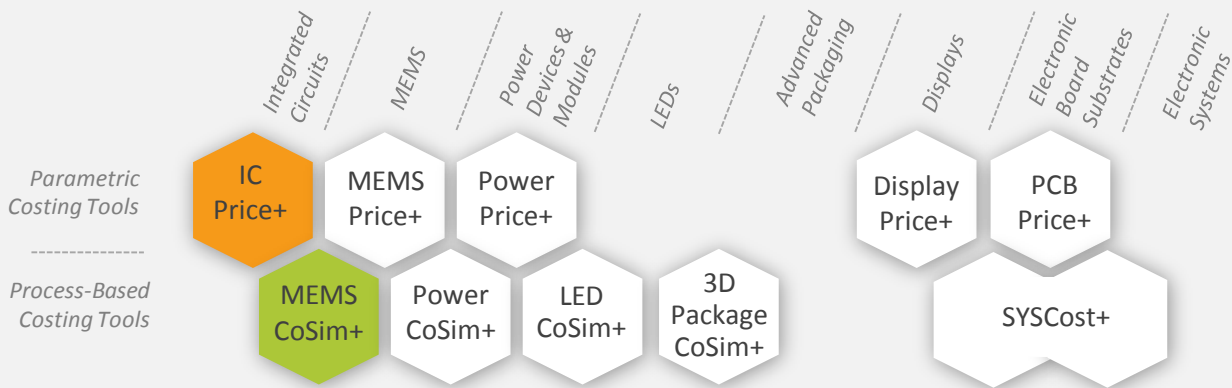


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The tool performs the necessary cost simulation of any Integrated Circuit: ASICs, microcontrollers, memories, DSP, smartpower...

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