

InvenSense MPU-6500

6-Axis MEMS IMU

REVERSE COSTING ANALYSIS – November 2013

The Smallest 6-Axis IMU (3-Axis Gyro + 3-Axis Accelero on the same die) *InvenSense's Second Generation 6-Axis Devices for Consumer Applications*

In a market very disputed with STMicroelectronics and Bosch, InvenSense is still at the leading edge technically by providing 6-Axis IMU with a high level of integration.

With a package size of 3x3mm (45% footprint reduction compared to the previous generation), the MPU-6500 is the smallest 6-Axis IMU for consumer applications. This package reduction has been made possible thanks to a new design of the 3-axis gyroscope which now uses a single structure vibratory compared to three different structures for the previous generation of gyros. This new design results in a shrink of 40% of the 3-axis gyro area. The second benefice of this new design is that Nasiri process has been changed: cavities which were traditionally etched in the ASIC to allow MEMS structures moving are no longer used, thus resulting in cost reduction.

The MPU-6500 still use a QFN package thus giving cost advantage compared to LGA packages for the competitors.

This report will provides a complete teardown of the MEMS IMU with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow
- In-depth manufacturing cost analysis
- Supply chain evaluation
- Selling price estimation

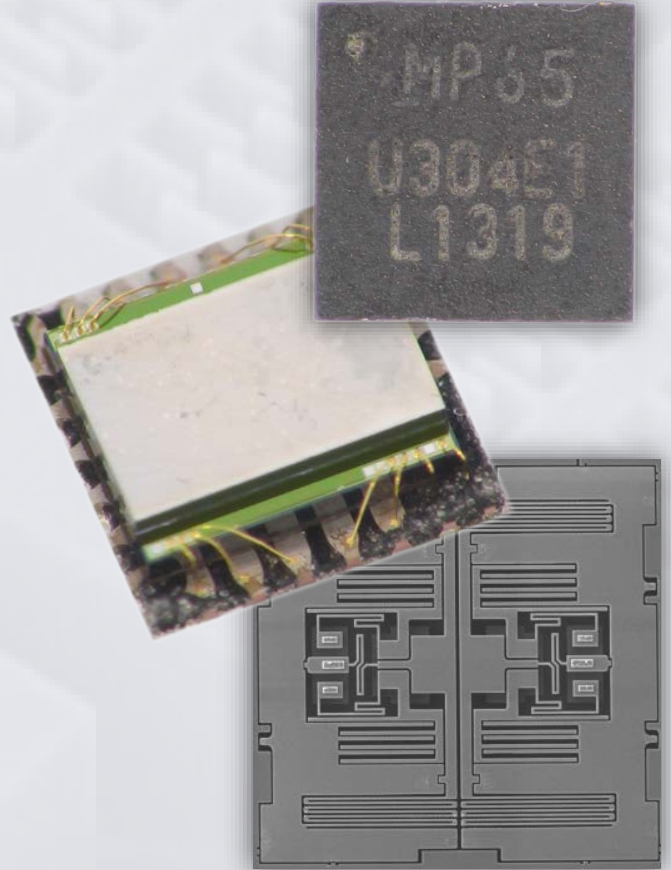


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Please process my order for "InvenSense MPU-6500" Reverse Costing Analysis:

Ref.: SP13142

Multi-User License Price:
EURO 2,490*

*For price in dollars please use the day's exchange rate

*All reports are delivered electronically in pdf format

*For French customer, add 20 % for VAT

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System Plus Consulting specializes in the **cost analysis** of electronics, from **semiconductor devices** to **electronic systems**, and has developed a complete range of services and costing tools to provide **in-depth production cost studies** and to estimate the **objective selling price** of a product.

COSTING SERVICES

- ✓ **On demand Reverse Costing studies** are performed on ICs, ASICs, MEMs, Power Devices, ECUs, electronic boards and full electronic systems.
- ✓ **The catalog of available reports** includes cost analyzes on MEMS, LEDs, Modules and Electronic systems.

All these analyses are performed using in-house developed, proprietary costing tools and their technological databases.

COSTING TOOLS

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- ✓ IC Price+ to estimate the cost of any integrated circuit
- ✓ PCB Price+ for printed circuit boards
- ✓ Power Price+ for any power component or module
- ✓ SYS.Cost for electronic boards and systems

Cost Simulation Tools, process flow based

- ✓ MEMS CoSim+
- ✓ Power CoSim+
- ✓ Sapphire CoSim+
- ✓ LED CoSim+
- ✓ TSV CoSim+ (thru silicon vias)

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