

Maxim Integrated MAX21000

3-Axis MEMS Gyroscope

The first MEMS Gyroscope from Maxim Integrated in industry smallest 3x3mm package

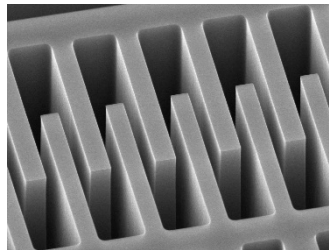
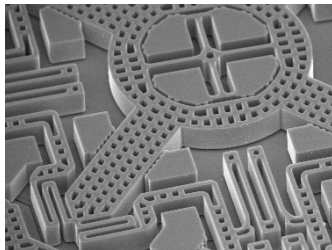
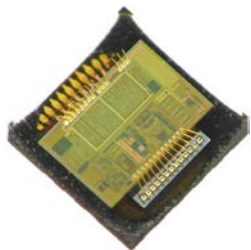
Following the purchase of MEMS manufacturer SensorDynamics in 2011, Maxim releases its first MEMS Gyroscope reference with a very accurate and cost effective component.

The MAX21000 continues to use the PSM-X2 process jointly developed by SensorDynamics and the Fraunhofer Institute for Silicon Technology. This technology platform includes a proprietary surface micromachining process to build the mechanical structures and a gold silicon eutectic wafer bonding allowing an hermetic encapsulation of the gyro sensor.

Assembled in a LGA 3.0x3.0x0.9mm package, the MAX21000 is a low power consumption (5.4mA) and high accuracy 3-axis gyroscope targeted for mobile applications.

The report is including a detailed technical and cost comparison with state of the art 3x3mm MEMS gyros from STMicroelectronics, Bosch Sensortec and InvenSense. Surprisingly, Maxim is able to provide a very competitive component due to an important silicon area reduction.

Discover all the details in the report!



REVERSE COSTING ANALYSIS

REPORT BY 

MEMS 3-Axis Gyroscope

135 pages

June 2014

Pdf file

Xls file

PRICE :

Full report: EUR 2,990

Technology report: EUR 1,990

COMPLETE TEARDOWN WITH:

- Detailed Photos
- Precise Measurements
- Material Analysis
- Manufacturing Process Flow
- Supply Chain Evaluation
- Manufacturing Cost Analysis
- Selling Price Estimation

TABLE OF CONTENTS

Glossary

Overview/Introduction , Maxim Company Profile

Physical Analysis

- Package
 - ✓ Package Views & Dimensions
 - ✓ Package Opening
 - ✓ Wire Bonding Process
 - ✓ Package Cross-Section
- ASIC Die
 - ✓ View, Dimensions & Marking
 - ✓ Delayering
 - ✓ Main Blocks Identification
 - ✓ Cross-Section
 - ✓ Process Characteristics
- MEMS Die
 - ✓ View, Dimensions & Marking
 - ✓ Bond Pad Opening
 - ✓ Cap Removed & Cap Details
 - ✓ Sensing Area Details
 - ✓ Cross-Section (Sensor, Cap & Sealing)
 - ✓ Process Characteristics
- Consumer 3-Axis Gyro Comparison

Manufacturing Process Flow

- Global Overview
- ASIC Front-End Process
- ASIC Wafer Fabrication Unit
- MEMS Process Flow
- MEMS Wafer Fabrication Unit
- Packaging Process Flow
- Package Assembly Unit

Cost Analysis

- Main steps of economic analysis
- Yields Hypotheses
- ASIC Front-End Cost
- ASIC Back-End 0 : Probe Test & Dicing
- ASIC Wafer & Die Cost
- MEMS Front-End Cost
- MEMS Back-End 0 : Probe Test & Dicing
- MEMS Front-End Cost per process steps
- MEMS Wafer & Die Cost
- Back-End : Packaging Cost
- Back-End : Packaging Cost per Process Steps
- Back-End : Final Test Cost
- MAX21000 Component Cost

Estimated Price Analysis

Distributed by



Performed by



ORDER FORM

Please process my order for "Maxim MAX21000 MEMS Gyroscope" Reverse Costing Analysis:

Ref.: SP14173

Full Reverse Costing report: EUR 2,990*

Technology Analysis** report: EUR 1,990

*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

** Technology Analysis report contains only Physical Analysis & Manufacturing Process Flow

SHIP TO

Name (Mr/Ms/Dr/Pr):

.....

Job Title:

.....

Company:

.....

Address:

.....

City:

State:

.....

Postcode/Zip:

.....

Country*:

.....

*VAT ID Number for EU members:

.....

Tel:

.....

Email:

.....

Date:

.....

Signature :

.....

PAYMENT

DELIVERY on receipt of payment:

By credit card:

Number: _____ Expiration date: __/__/____

Card Verification Value: _____



By bank transfer:

HSBC – CAE- Le Terminal -2 rue du Charron- 44800 St Herblain France
BIC code : CCFRFRPP

In EUR

Bank code : 30056 - Branch code : 00955 - Account : 09550003234
IBAN : FR76 3005 6009 5509 5500 0323 439

In USD

Bank code : 30056 - Branch code : 00955 - Account : 09550003247
IBAN : FR76 3005 6009 5509 5500 0324 797

Return order by:

FAX: +33 (0)253 55 10 59

MAIL: SYSTEM PLUS CONSULTING

21 rue La Nouë Bras de Fer

44200 Nantes – France

Contact:

sales@systemplus.fr - Tel: +33 (0)240 18 09 16

BILLING CONTACT

Name:

Email:.....

Phone:.....

Our prices are subject to change.

Please check our new releases and price changes on www.systemplus.fr

The present document is valid 6 months after its publishing date: June 04th, 2014.

ABOUT SYSTEM PLUS CONSULTING

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

« Purchaser » tools

- ✓ IC Price+ to estimate the cost of any integrated circuit
- ✓ Power Price+ for any power component or module

- ✓ PCB Price+ for printed circuit boards
- ✓ SYS.Cost for electronic boards and systems

Cost Simulation Tools, process flow based

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

- ✓ Sapphire CoSim+

Other costing models can be developed according to customer specifications

Distributed by



Performed by



TERMS AND CONDITIONS OF SALES

1. INTRODUCTION

The present terms and conditions apply to the offers, sales and deliveries of services managed by System Plus Consulting except in the case of a particular written agreement.

Buyer must note that placing an order means an agreement without any restriction with these terms and conditions.

2. PRICES

Prices of the purchased services are those which are in force on the date the order is placed. Prices are in Euros and worked out without taxes. Consequently, the taxes and possible added costs agreed when the order is placed will be charged on these initial prices.

System Plus Consulting may change its prices whenever the company thinks it necessary. However, the company commits itself in invoicing at the prices in force on the date the order is placed.

3. REBATES and DISCOUNTS

The quoted prices already include the rebates and discounts that System Plus Consulting could have granted according to the number of orders placed by the Buyer, or other specific conditions. No discount is granted in case of early payment.

4. TERMS OF PAYMENT

System Plus Consulting delivered services are to be paid within 30 days end of month by bank transfer except in the case of a particular written agreement.

If the payment does not reach System Plus Consulting on the deadline, the Buyer has to pay System Plus Consulting a penalty for late payment the amount of which is three times the legal interest rate. The legal interest rate is the current one on the delivery date. This penalty is worked out on the unpaid invoice amount, starting from the invoice deadline. This penalty is sent without previous notice.

When payment terms are over 30 days end of month, the Buyer has to pay a deposit which amount is 10% of the total invoice amount when placing his order.

5. OWNERSHIP

System Plus Consulting remains sole owner of the delivered services until total payment of the invoice.

6. DELIVERIES

The delivery schedule on the purchase order is given for information only and cannot be strictly guaranteed. Consequently any reasonable delay in the delivery of services will not allow the buyer to claim for damages or to cancel the order.

7. ENTRUSTED GOODS SHIPMENT

The transport costs and risks are fully born by the Buyer. Should the customer wish to ensure the goods against lost or damage on the base of their real value, he must imperatively point it out to System Plus Consulting when the shipment takes place. Without any specific requirement, insurance terms for the return of goods will be the carrier current ones (reimbursement based on good weight instead of the real value).

8. FORCE MAJEURE

System Plus Consulting responsibility will not be involved in non execution or late delivery of one of its duties described in the current terms and conditions if these are the result of a force majeure case. Therefore, the force majeure includes all external event unpredictable and irresistible as defined by the article 1148 of the French Code Civil?

9. CONFIDENTIALITY

As a rule, all information handed by customers to system Plus Consulting are considered as strictly confidential.

A non-disclosure agreement can be signed on demand.

10. RESPONSABILITY LIMITATION

The Buyer is responsible for the use and interpretations he makes of the reports delivered by System Plus Consulting. Consequently, System Plus Consulting responsibility can in no case be called into question for any direct or indirect damage, financial or otherwise, that may result from the use of the results of our analysis or results obtained using one of our costing tools.

11. APPLICABLE LAW

Any dispute that may arise about the interpretation or execution of the current terms and conditions shall be resolved applying the French law.

If the dispute cannot be settled out-of-court, the competent Court will be the Tribunal de Commerce de Nantes.