

# Texas Instruments MicroSiP™ Module Using AT&S ECP® Process

Reverse Costing Analysis

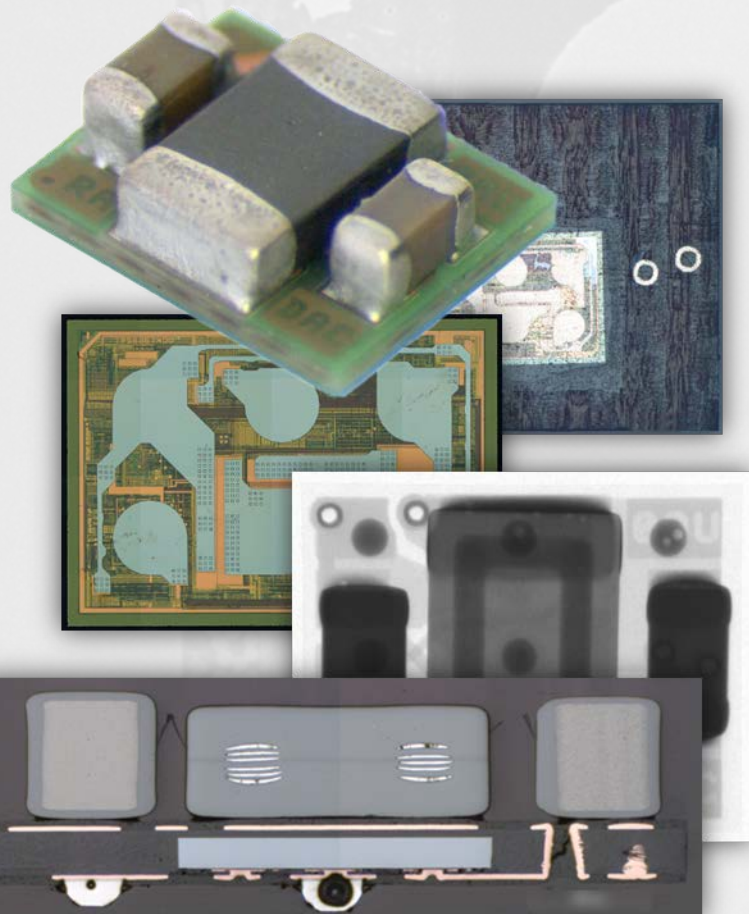
## Physical Analysis of the first high-volume embedded die packaging Step by Step Reconstruction of the Process Flow Cost of Manufacturing and Estimation of Selling Price

System Plus Consulting is proud to publish the first reverse costing report of the Texas Instruments MicroSiP™ module using AT&S Embedded Component Packaging (ECP®) process.

ECP® process from AT&S is an innovative SiP module packaging technology based on the emerging embedded die in laminate substrate concept. Most of the packaging assembly operations are done at the panel-scale level, and a fan-out area, with double side 3D interconnection routing path, is provided. This packaging technology extends the package size beyond the IC surface area and allows for mounting additional components such as discrete and passives on top of the laminate SiP module. The ball pitch is 1.0mm and features 8 pin-count IOs.

This report provides complete teardown of the MicroSiP™ package with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow
- In-depth economical analysis
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- Selling price estimation



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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.

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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.

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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.

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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?

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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.

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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.

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