IC Price+

Cost & Price Tool For IC Devices

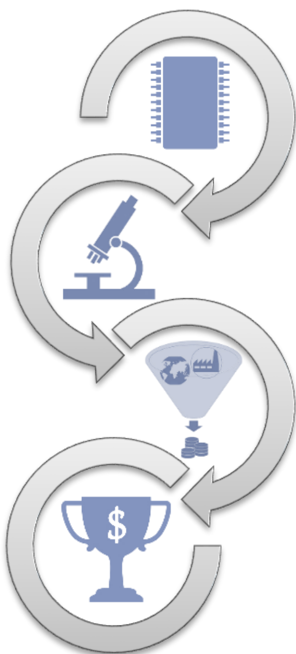
PARAMETRIC TOOL

THE MOST COMPLETE AND POWERFUL TOOL

From a short data input list, with no need for technical expertise, to a detailed data input list and fine tuning of electrical and physical parameters, IC Price+ will help you to calculate the production cost and selling price of any integrated circuit, ASIC, MCU, DSP, smart power device or System-in-Package.

Reference database includes fab units and technologies, IC manufacturers and packages.

HOW DOES IT WORK?



Describe your device
Die dimensions, technology node, etc.

Enter physical parameters
Technology description, wafer size, and process parameters, assembly options, package characteristics and test description.

Enter the manufacturing location
Fab unit description, wafer size, clean room and equipment parameters.

Get the manufacturing cost
Die cost breakdown, assembly cost breakdown, component cost breakdown, manufacturing cost and selling prices versus time, etc

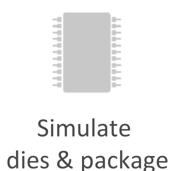
Why do you need this tool?

- Better estimate IC manufacturing cost
- Go further in supplier negotiations
- Benchmark products that use the same methodologies
- Identify the parameters influencing cost
- Compare different technological options
- Measure the influence of location, production volume or time on the cost and price

Who should buy this tool?

- Anyone involved in IC development
- Purchasing department
- Marketing department
- System makers, users of IC devices
- Component manufacturers

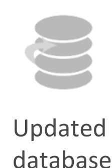
WHAT ARE THE MAIN ADDED VALUES?


Simulate dies & package

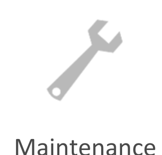
Compare up to 5 scenarios

Excel friendly

Easy to set up

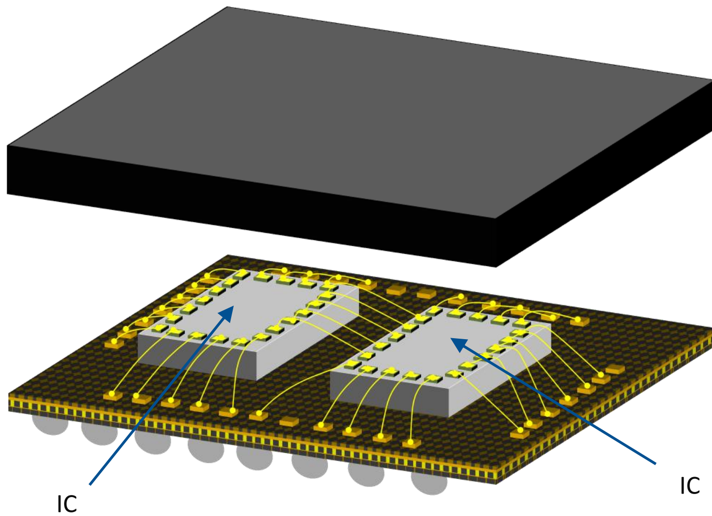

Updated database

Secured data


Maintenance

Share

EXAMPLE OF SUPPORTED IC DEVICE STUCTURE



2 IC dies in a FBGA package
(System-in-Package), 1 to more 10 ICs.
By System Plus Consulting

WHICH TECHNOLOGIES CAN BE SIMULATED?

Transistor: CMOS, Bipolar, lateral DMOS, BiCMOs, BCD

Substrate: silicon, SOI

Dispositif: logic, analog, SRAM, Flash, EEPROM, ROM, RF, Power

Technology node: 10µm up to 14nm

Technology option: 1 to 3 gate oxide thicknesses, deep trench insolation, polyimide, thick top metal layer, MIM capacitor

Yield: automatic yield model

Wafer level Package: redistribution, copper pillar, solder ball, backgrinding-thinning

Package: SOP, TSSOP, QFP, TQFP, QFN, PBGA, FBGA wire-bonding, FBGA flip- chip

System in Package: 1 to 10 dies, stacked dies

Supply chain: IDM, fabless + foundry, OSAT

HOW DOES IC Price+ LOOK LIKE?

ICP2xl.xlsm - Excel

File | IC Price+ | Home | Insert | Page Layout | Formulas | Data | Review | View | Developer | Tell me what you want to do

Open, New, Save as, Properties, Import, Export, Close (Project) · Delivery Schedule, BoM builder (Builder) · FE Techno, Fab Unit, BEO Techno (Front-End) · Assembly parameters, Final test (Back-End) · BoM Parts, Final product (Economics) · Results (Results) · Edit mode: Main project, Add, Del. (Scenarios) · Edit Table (Reference data) · About, Config, Admin (System)

A69 | -14

Project type: Packaged IC
Project name: Packaged IC example
Project currency: EUR

Legend
Uncomplete: To be completed
Complete: To be validated

1 x

Final product characteristics — Description; Name: Packaged IC example; Manufacturer: Freescale - Avg 2010-2013

Back-End description — Assembly; Package type: QFN; Outputs: 64 pins; Description: Wire Bond. on leadframe

Delivery schedule — Date / Quantity: 01/01/2013 / 100 000; 01/01/2014 / 100 000; 01/01/2015 / 100 000; 01/01/2016 / 100 000; 01/01/2017 / 100 000

Final test description — Equipment: High-performance microcontroller (< 400MHz) medium pin number; Equipment Price: $407 200; Paralelism: 6 in //; Test nb: 1; Test duration: 4,16 sec

Economical description — Final product manufacturer; Manufacturer financial income: Freescale - Avg 2010-2013; Cost of Sales: 58,10%; Life cycle: Standard; Intro date: 01/01/2013

Die characteristics — Description; Name: IC die example 1; Type: Standard; Manufacturer: (same as product); Die: Width 4,000 mm; Length 3,000 mm; Area 12,000 mm2; Pad number 65; Stack option; Core area 11,351 mm2

Front-End description — Technology; Material: Si; Min. dimension: 0,130 µm; Start production: 17/07/2002; Functions: Digital; Parameters: Device CMOS; Gate oxide nb 2 ox; Polysilicon nb 1 poly; Metal layers 6 met; Litho steps 31 lithos

Fab Unit Description — Name: Intel - Fab 17; Country: USA; City: Hudson (Massachusetts); Parameters: Minimum dim. 0,130 µm; Wafer size 200 mm; Creation Date 01/01/1994; Capacity 27000 W/m; Type: All products in low volume. More than 20 different technologies.

Back-End 0 description — Probe test equipment: High-performance microcontroller (< 400MHz) medium pin number; Equipment Price: $407 200; Paralelism: 6 in //; Test nb: 1; Test duration: 3,20 sec; Other operations: Dicing: Mechanical sawing

Economical description — Part Outsourcer; Outsourcer financial income; Cost of Sales; Life cycle; Intro date: 01/01/2013; IC Foundry; Foundry financial income; Cost of Sales

Scenario: Packaged IC example - 1M

1 x

Final product characteristics — Description; Name: Packaged IC example - 1M; Manufacturer: Freescale - Avg 2010-2013

Back-End description — Assembly; Package type: QFN; Outputs: 64 pins; Description: Wire Bond. on leadframe

Delivery schedule — Date / Quantity: 01/01/2013 / 1 000 000; 01/01/2014 / 1 000 000; 01/01/2015 / 1 000 000; 01/01/2016 / 1 000 000; 01/01/2017 / 1 000 000

Final test description — Equipment: High-performance microcontroller (< 400MHz) medium pin number; Equipment Price: $407 200; Paralelism: 6 in //; Test nb: 1; Test duration: 4,16 sec

Economical description — Final product manufacturer; Manufacturer financial income: Freescale - Avg 2010-2013; Cost of Sales: 58,10%; Life cycle: Standard; Intro date: 01/01/2013

Die characteristics — Description; Name: IC die example 1; Type: Standard; Manufacturer: (same as product); Die

Front-End description — Technology; Material: Si; Min. dimension: 0,130 µm; Start production: 17/07/2002; Functions: Digital; Parameters

Fab Unit Description — Name: Intel - Fab 17; Country: USA; City: Hudson (Massachusetts); Parameters

Back-End 0 description — Probe test equipment: High-performance microcontroller (< 400MHz) medium pin number; Equipment Price: $407 200; Paralelism: 6 in //; Test nb: 1; Test duration: 3,20 sec; Other operations

Economical description — Part Outsourcer; Outsourcer financial income; Cost of Sales; Life cycle; Intro date: 01/01/2013; IC Foundry

CONTACT

Contact
For any question, please contact our headquarters in France:
sales@systemplus.fr - +33 2 40 18 09 16