



Semiconductor Design, Prototyping & Production Go Online with the eSilicon STAR Platform

With the eSilicon STAR platform, you can streamline many aspects of IP evaluation and purchase, MPW and GDSII quoting and logistics tracking – all with a common user interface and all hosted online.

STAR tools are available at no cost or obligation.

Introducing STAR

The eSilicon® STAR platform delivers a comprehensive online environment for semiconductor design, prototyping and production. The STAR platform is an automated online secure environment that provides a self-service, transparent,

manufacturing. The platform includes four tools: Navigator, MPW Explorer, GDSII Explorer, and Tracker.

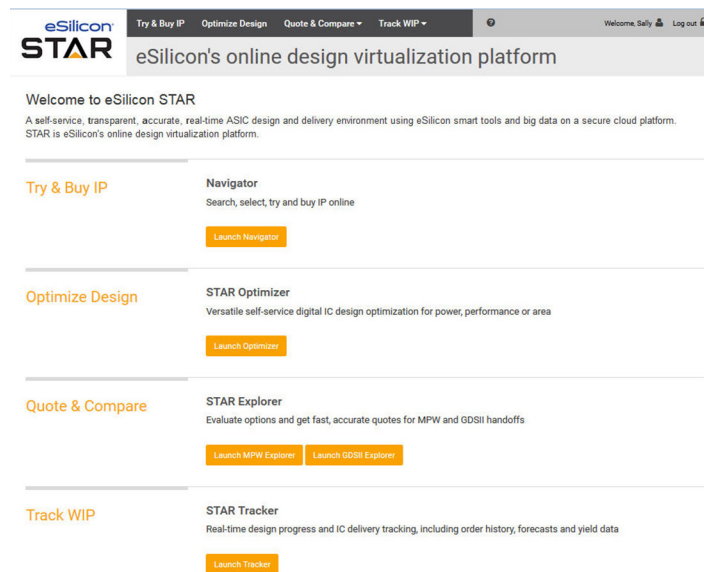
Try & buy IP online

Approximately half of the area of advanced system-on-chip (SoC) designs is composed of memory IP.

Optimizing the memory subsystem of an SoC requires exploration of hundreds to thousands of possible configurations to identify the optimal match for the chip's power, performance and area (PPA) requirements. This process can take weeks and traditionally designers and architects have not been able to fully explore all the options available

to them, resulting in sub-optimal memory architectures and design closure challenges.

eSilicon's Navigator tool addresses this challenge by allowing designers to choose, evaluate and procure eSilicon IP online.



The screenshot shows the eSilicon STAR web interface. At the top, there are navigation tabs: "Try & Buy IP", "Optimize Design", "Quote & Compare", and "Track WIP". Below the navigation is a header with the eSilicon STAR logo and the text "eSilicon's online design virtualization platform". A welcome message reads: "Welcome to eSilicon STAR. A self-service, transparent, accurate, real-time ASIC design and delivery environment using eSilicon smart tools and big data on a secure cloud platform. STAR is eSilicon's online design virtualization platform." Below this, there are four tool cards, each with a title, description, and a "Launch" button:

- Try & Buy IP**: Navigator. Search, select, try and buy IP online. [Launch Navigator](#)
- Optimize Design**: STAR Optimizer. Versatile self-service digital IC design optimization for power, performance or area. [Launch Optimizer](#)
- Quote & Compare**: STAR Explorer. Evaluate options and get fast, accurate quotes for MPW and GDSII handoffs. [Launch MPW Explorer](#) [Launch GDSII Explorer](#)
- Track WIP**: STAR Tracker. Real-time design progress and IC delivery tracking, including order history, forecasts and yield data. [Launch Tracker](#)

accurate, real-time experience from IC design through prototyping and volume ASIC production. The STAR online design virtualization platform helps you manage complexity and make the right decisions on your ASIC journey from concept to volume

Navigator

The Navigator interface includes the following filters and options:

- By IP Type:** Memory Products (68), IO Products (15), PHY Products (1)
- Foundry:** ALL, DONGBU, GLOBALFOUNDRIES, LFOUNDRY, SAMSUNG, SMIC, TSMC, UMC
- Technology node (nm):** ALL, 14, 16, 28, 40, 65, 90, 110, 130, 150, 180
- By Foundry:** Dongbu (20), GLOBALFOUNDRIES (1), LFoundry (4), Samsung (9), SMIC (2), TSMC (41), UMC (6)
- Flavor:** ALL, AN, ANJSO, BD, BDJSO, EF, FDSOI, FF+ GL, FF+ LL, G, GP, HK, HLP, HPC, HPM, LL, LP, LPE, LPP
- IP type:** ALL, Memory, IO Interface, PHY
- Memory/I/O type:** ALL, 1PRF, 2P ARF, 2PRF, 4PRF, BCAM, DP SRAM, DROM, eMMC, HBM, LVC MOS, LVDS, MDIO, P2P SRAM, PDP SRAM, SP Fast Cache, SP SRAM, TCAM, VROM
- Additional info:** ALL, Compiler, Library, Specialty Macro, PHY Library
- Architecture:** ALL, High Density, High Speed, Low Leakage, Low Power, Low Voltage
- By Technology:** 14nm (8), 16nm (4), 28nm (29)

Designers can access a wide variety of memory and I/O options online to find the best configuration for their design. With the latest enhancements to Navigator, designers can now get quotes for their chosen IP online and procure it by uploading a valid purchase order. Designers are now in control of specifying and purchasing the most appropriate IP for their projects.

Real-time quotations

STAR Explorer allows you to quickly explore options, generate accurate, executable quotes and submit your design online for multi-project wafer (MPW) shuttle services or GDSII handoffs in a few minutes. With instant pricing, you can see, in real time, how

MPW Explorer

The MPW Explorer interface includes the following fields and options:

- Project name:** [Text input]
- Foundry:** ALTIS, CSMC, GLOBALFOUNDRIES, SMIC, TSI, TSMC, UMC
- Technology node (nm):** 10, 16, 28, 40, 45, 55, 65, 85, 90, 110, 130, 150, 152, 180, 220, 250, 350, 500
- Flavor:** FF
- MPW die area:** [Text input] mm²
- Price:** \$ ---
- Quote:** [Button]
- Foundry block size:** 3mm² | **Number of blocks (min. 1):** 1 block
- Multiple die within MPW area:** No
- Bump:** No, Yes
- Package:** No, Wirebond BGA, Wirebond leadframe
- TT wafers:** 1 | TT die: 100
- FF wafers:** | FF die: 0
- FS wafers:** | FS die: 0
- SF wafers:** | SF die: 0
- SS wafers:** | SS die: 0
- TOTAL WAFERS:** 1 | **TOTAL DIE:** 100

different options affect your final cost. These same tasks can take days to weeks using conventional methods. Multiple foundries and technologies are available to explore.

MPW sharing and instant pricing

Foundry minimum-block sizes are often larger than semiconductor projects require. eSilicon removes these restrictions with its worldwide MPW sharing program. We'll find the partners you need for right-size, cost-efficient MPW block sharing, down to one square millimeter. Now MPW Explorer includes instant pricing for sub-minimum area projects. You'll see exactly what different options cost, even if your project is under the foundry minimum.

Sample MPW Tile Sharing Opportunities

Tapeout Month	Technology	Metal Stack	I/O	Price/mm ²	Minimum Area	Final GDSII Due	Tapeout Date	Estimated Ship Date
September	65nm MS RF GP	1P9M_6x1z1u	2.5V	\$4,700	1mm ²	September 19	September 21	November 23
	180nm MS RF G	1P6M_4x1u	3.3V	\$1,000	5mm ²	September 26	September 28	November 9
October	40nm MS RF G	1P10M_7x1z1u	1.8V	\$7,500	1mm ²	October 2	October 4	December 19
	65nm MS RF GP	1P9M_6x1z1u	2.5V	\$4,700	1mm ²	October 10	October 12	November 23
	65nm MS RF LP	1P9M_6x1z1u	2.5V	\$4,700	1mm ²	October 10	October 12	November 23
November	180nm MS RF G	1P6M_4x1u	3.3V	\$1,000	5mm ²	October 24	October 26	December 7
	40nm MS RF LP	1P10M	1.8V	\$7,500	1mm ²	October 31	November 2	January 17

MPW access for university researchers

Besides fast, accurate access to foundry pricing and schedule information, university researchers require cost-effective access to MPW prototyping. eSilicon's eMUSE Program (eSilicon MPW University Services) provides a number of services for universities, including MPW sharing, a highly automated project management system and free IP and I/Os.

Logistics information at your fingertips

STAR Tracker links customers electronically to their global supply chain so you can efficiently monitor and manage project details. Tracker integrates customer order information with work-in-process (WIP) production data, refreshed multiple times daily.

Integrating STAR

eSilicon has integrated STAR to form a seamless interface to its business. Cost, technology and schedule data from its worldwide supply chain drives the quotation process for Explorer. Our proprietary IP drives Navigator, and online interfaces to all eSilicon's global manufacturing partners drives Tracker. The result is a fully integrated customer experience, from concept through production delivery.

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