

Samsung Strengthens its Foundry Customer Support with New SAFE™ Foundry Ecosystem Program

SAFE™ program provides comprehensive design solutions to develop leading-edge SoCs

Seoul, KOREA – Jan 25, 2018 – Samsung Electronics Co., Ltd., a world leader in advanced semiconductor technology, has announced today its continued commitment to first-pass silicon success for its foundry customers' chip designs by launching the Samsung Advanced Foundry Ecosystem (SAFE™) program.

The SAFE™ program ensures deep collaboration between the Samsung Foundry, ecosystem partners, and customers to deliver competitive and robust System on Chip (SoC) designs based on certified key design components including Process Design Kit (PDK), reference flows with Design Methodologies(DM), Intellectual Property (IP), and ASIC design support.

"We are very excited to provide the comprehensive, collaborative, and qualified Samsung Advanced Foundry Ecosystem to our customers to enable faster and more reliable SoC design success", said Jong Shik Yoon, executive vice president of Foundry Technology Development at Samsung Electronics. "Together with our SAFE™ partners, Samsung Foundry will provide certified design enablement solutions to existing strategic customers as well as innovative, new start-up customers. We welcome all current and future Ecosystem partners to join the new SAFE™ program."

The SAFE™ program is based on three pillars :

- EDA/DM : Provides extensively tested PDKs and reference flows (with design methodologies) that are backed by Samsung Foundry's certification.
- IP : Provides a full set of silicon qualified, application specific IP offerings from the early stage of process technology development. Customers can view a full list of IP solutions offered through SAFE™ by accessing Samsung Foundry's B2B site, CONNECT(<https://www.samsungfoundry.com>).
- Design Services : Connects mid- to small-sized companies with qualified ASIC design services and support. Using design service partners of SAFE™, customers will benefit from easy access to process technology information, competitive price conditions, and committed resources for their SoC design success.

For more information about Samsung Foundry, please visit <https://www.samsungfoundry.com>

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions. For the latest news, please visit the Samsung Newsroom at <http://news.samsung.com>.

Quotes from SAFE™ partner companies

- **Arm**, *Gus Yeung, vice president and general manager of Physical Design Group*

"The Samsung Advanced Foundry Ecosystem creates significant opportunities for the industry. Through our ongoing collaboration with the Samsung Foundry, we are enabling the ecosystem with access to leadership co-optimized physical IP solutions for enhancing next-generation SoC designs."

- **AlphaHoldings**, *Donggi Kim, CEO*

"It's honor to be one of the initial member of SAFE. As a Korean design service partner, we are ready to support Samsung Foundry's ASIC customers more effective way based on long-term collaboration with Samsung Foundry and competencies – leading edge process experiences, customer specific IP, high quality manpower, error free design capabilities, etc."

- **Cadence**, *KT Moore, vice president, product management*

"We've collaborated with Samsung Foundry for many years to enable our joint customers to achieve their aggressive design goals. We believe that the new SAFE foundry design program will facilitate innovation and help customers deliver designs to market even faster. Our support for Samsung Foundry's process technologies continues to expand with our broadened IP portfolio and full EDA tool enablement with comprehensive reference flows."

- **eSilicon**, *Hugh Durdan, vice president, strategy and products*

"Through our Tier 1 ASIC work with Samsung Foundry, we understand Samsung Foundry's advanced process technologies well. This allows us to offer differentiating IP targeted at the high-bandwidth networking, high-performance computing, artificial intelligence (AI) and 5G infrastructure markets using these advanced process technologies."

- **Faraday**, *Steve Wang, President*

"Samsung Foundry provides the most competitive grand ecosystem for the leading edge technologies. Since our establishment in 1993, Faraday has successfully delivered more than 2,200 ASIC mass production projects. Thus we are confident in our ability to leverage the SAFE program, targeting next-generation applications now and beyond."

- **Mentor**, *Joe Sawicki, vice president, Design to Silicon*

"Mentor is proud that it has been the signoff solution for Samsung's own design efforts over the last two decades and Samsung Foundry since the foundry was launched in 2005. We are pleased to be continuing our close partnership with Samsung as it expands its ecosystem interactions via the Samsung SAFE initiative."

- **Rambus**, *Luc Seraphin, senior vice president and general manager, Memory and Interfaces Division*

"As ASIC and SoC designs continue to increase in complexity, high-speed interfaces are integral to successful design. This strong partnership between Rambus and Samsung across multiple nodes, ensures that we are providing a broad portfolio of high-quality solutions to our end customers. We are pleased to collaborate with Samsung Foundry to provide designers with leading high-speed SerDes and memory PHY IP solutions for easy integration into their chip designs."

- **Synopsys**, *Deirdre Hanford, co-general manager, Design Group*

“Our collaboration with Samsung Foundry since 2005 has enabled mutual customers to deliver state-of-the-art designs across a wide range of Samsung’s process technologies. The SAFE program will help accelerate adoption of Synopsys’ high-quality IP, market-leading tools, and comprehensive design services supporting Samsung Foundry for development of their differentiated SoCs.”

- **VeriSilicon**, *Wayne Dai, President and CEO*

“Our experience in shipping high volume SoCs using Samsung 14nm and 10nm FinFET, as well as 28nm FD-SOI process demonstrates that Samsung Foundry has excellent potential for the China market. Now as a charter member of SAFE, we will expand our partnership to a new level enabling us to better support our mutual customers.”

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