

# Samsung Accelerates New Product Ramp for 7nm Technology Node Using Synopsys' Yield Explorer

Comprehensive Yield Learning Platform from Synopsys Enables Close Collaboration with Samsung and Its Fabless Customers During Production Ramp-up of New Products

MOUNTAIN VIEW, Calif., July 2, 2019 /PRNewswire/ --

## Highlights:

- Collaboration between Samsung and Synopsys results in fast product ramp for 10/8/7nm products and establishes a foundation for yield learning for 5/4/3nm technology nodes
- Secure solution enables Samsung and its fabless customers to work together in identifying systematic yield limiters while maintaining confidentiality of design and fab information
- Yield Explorer platform uses product design, fab, and test data, along with powerful datamining and visualization techniques, to quickly and accurately identify dominant causes of yield loss

**Synopsys, Inc.** (Nasdaq: SNPS) today announced successful deployment of Synopsys' Yield Explorer<sup>®</sup> yield learning platform for fast ramp-up of new products on Samsung's advanced FinFET technology nodes. Using the secure data exchange mechanism in Yield Explorer, Samsung is able to share the data required for yield analysis, such as chip design, fab, and test, with its customers while maintaining the confidentiality of proprietary information from each party.

"Our customers expect us to provide fast and cost-effective manufacturing for their products so they can meet demanding market requirements," said JY Choi, vice president of the Foundry Design Technology Team at Samsung Electronics. "The secure collaboration model using Yield Explorer has greatly helped us to work efficiently with key customers to achieve target production yields quickly. We look forward to expanding this cooperation with Synopsys as we ramp up production on our 5-nanometer technology node."

"Yield analysis is a complex task which requires collaboration between teams from different organizations. The speed and accuracy of identifying yield limiters is critical to achieving cost-effective high-volume production," said Howard Ko, general manager of the Silicon Engineering Group at Synopsys. "We are excited to work with Samsung on deploying Yield Explorer to facilitate cooperation with their customers and accelerate new product ramp."

Synopsys' Yield Explorer is a comprehensive yield learning platform used by product and yield engineering teams to perform root cause analysis using data from various sources. These sources include:

- Product design data: layout, netlist, test diagnosis, static timing analysis
- Fab data: inspection, metrology, wafer acceptance test (WAT)
- Product test data: Bin, parametric, system-level test

The powerful analysis engine in Yield Explorer employs advanced machine learning and data visualization techniques to deliver high-quality results with a fast turnaround time.

Yield Explorer is available now and is in production use at major semiconductor foundries and fabless customers.

## About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15<sup>th</sup> largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at [www.synopsys.com](http://www.synopsys.com).

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