

# Synopsys Chosen by Juniper Networks to Accelerate Development of Photonic ICs for Next-Gen Data Centers

Synopsys OptoCompiler Platform Offers Unified, Proven Solution with Speed and Flexibility for Optical Communications



MOUNTAIN VIEW, Calif., Dec. 22, 2021 /PRNewswire/ -- [Synopsys, Inc.](#) (Nasdaq: [SNPS](#)) today announced that [Juniper Networks](#), a leader in secure, AI-driven networks, has adopted the Synopsys [OptoCompiler™](#) platform, including the [OptSim™](#) and [PrimeSim™ HSPICE®](#) simulation solutions, to accelerate the development of photonic-enabled chips for the next generation of optical communications. Juniper plans to use Synopsys solutions to design and optimize its hybrid silicon and InP optical platform to enable its customers to address optical connectivity in data centers and telecom networks, as well as new emerging applications in artificial intelligence (AI), LiDAR and other sensors.

The OptoCompiler design platform is the industry's first unified electronic and photonic design platform, combining mature and dedicated photonic technology with Synopsys' industry-proven custom tools to enable engineers to produce and verify complex photonic IC designs quickly and accurately.

"Synopsys offers a unique, unified photonic and electronic design suite, which accelerates customer design cycles and time-to-market," said Tom Mader, head of Silicon Photonics at Juniper Networks. "This will enable Juniper silicon photonics to bring our revolutionary hybrid integrated laser platform to a broad array of customers in several photonic market segments, with the potential to lower cost and eliminate product barriers to entry."

With its interactive design cockpit, the OptoCompiler platform helps shorten turnaround times and reduce risk of human error. It provides a schematic-driven layout flow with photonic-aware layout synthesis and automated features, such as assisted waveguide routing and auto-alignment of photonic circuits.

The OptSim solution brings together Synopsys' photonic system and circuit simulation capabilities and provides electro-optical (E/O) co-simulation with the Synopsys PrimeSim HSPICE Simulator, the industry's 'gold standard' for accurate circuit simulation and the cornerstone of the Synopsys PrimeSim Continuum Solution. It also integrates seamlessly with the Synopsys [PrimeWave™](#) design environment, the simulation and analysis environment of the OptoCompiler platform. The OptSim solution comes with an extensive photonic model library and is enabled for a wide variety of photonic IC foundries.

"Demand for higher bandwidth in intra-data center communications is driving companies like Juniper to

deploy silicon photonic solutions to achieve the next level in performance," said Aveek Sarkar, VP of Customer Success for Analog Mixed-Signal/Custom & Photonics at Synopsys. "Synopsys is a pioneering solution provider in delivering robust solutions for electrical/optical co-design and co-simulation to enable next-generation photonic chips."

### **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 an S&P 500 company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and offers the industry's broadest portfolio of application security testing tools and services. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing more secure, high-quality code, Synopsys has the solutions needed to deliver innovative products. Learn more at [www.synopsys.com](http://www.synopsys.com).

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