

# Synopsys Accelerates High-Performance Computing SoC Designs with Industry's Broadest IP Portfolio for TSMC's 5nm Process Technology

High-Quality DesignWare Interface and Foundation IP Deliver Leading Power, Performance and Area

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## Highlights:

- DesignWare Interface PHY IP portfolio, including 112G/56G Ethernet, Die-to-Die, PCIe 5.0, CXL, CCIX, and Memory Interfaces, enables highest data rates
- High-Performance Memory Interface IP solution for DDR5, LPDDR5, and HBM2/2E delivers maximum memory bandwidth and power efficiency
- Die-to-Die PHYs for 112G USR/XSR connectivity and for High-Bandwidth Interconnect leveraging wide-parallel technology deliver reliable links with extremely low latency
- Optimized Foundation IP, such as logic libraries, multi-port memory compilers, and TCAMs, delivers maximum performance with low power consumption

Synopsys, Inc. (Nasdaq: SNPS) today announced the industry's broadest portfolio of high-quality IP on TSMC's 5nm process technology for high-performance computing system-on chips (SoCs). The [DesignWare® IP portfolio](#) on the TSMC process, encompassing interface IP for the most widely used high-speed protocols and foundation IP, accelerates development of SoCs for high-end cloud computing, AI accelerators, networking and storage applications. The combination of Synopsys' market-leading DesignWare IP and TSMC's 5nm process enables designers to achieve the aggressive performance, power, and density requirements of their designs, while lowering integration risk.

"Our long-term collaboration with Synopsys has resulted in delivering DesignWare IP on the most advanced TSMC processes, enabling our mutual customers to achieve many first-pass silicon successes in a wide range of markets including high-performance computing," said Suk Lee, senior director of the Design Infrastructure Management Division at TSMC. "Synopsys' broad DesignWare IP portfolio on TSMC's advanced process technologies helps designers quickly incorporate the necessary functionality into their designs, while benefiting from the significant power and performance boost of our 5nm process technology, the most advanced foundry solution."

"For nearly two decades, Synopsys has been at the forefront of delivering high-quality DesignWare IP with unmatched power, performance, and area for every generation of TSMC's process technologies," said John Koeter, senior vice president of marketing and strategy for IP at Synopsys. "By providing the industry's broadest interface and foundation IP portfolio on TSMC's 5nm process, Synopsys is helping our mutual customers speed development for a new era of high-performance computing SoCs."

## Availability and Resources

The DesignWare Interface and Foundation IP for TSMC's 5nm process technology targeting high-performance computing SoCs are scheduled to be available in late Q2 of 2020. For more information, visit the

- [DesignWare Interface Controller and PHY IP web page](#)
- [DesignWare Foundation IP web page](#)

## About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes logic libraries, embedded memories, embedded test, analog IP, wired and wireless interface IP, security IP, embedded processors, and subsystems. To accelerate prototyping, software development, and integration of IP into SoCs, Synopsys' IP Accelerated initiative offers IP prototyping kits, IP software development kits, and IP subsystems. Synopsys' extensive investment in IP quality, comprehensive technical support, and robust IP development methodology enable designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit <http://www.synopsys.com/designware>.

## 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 15th 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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