Synopsys Delivers Industry's First Integrity and Data Encryption Security IP Modules for PCI Express 5.0 and Compute Express Link 2.0 Specifications

DesignWare IDE Security IP Modules Protect Against Data Tampering and Physical Attacks in High-Performance Cloud Computing SoCs

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Highlights

- DesignWare Integrity and Data Encryption Security Modules protect data transfers for SoCs using the PCI Express® 5.0 or CXL™ 2.0 architectures
- Pre-verified with DesignWare Controller IP for PCI Express technology and CXL enables fast integration and lowers risk
- Efficient encryption/decryption and authentication with AES-GCM helps ensure data confidentiality and integrity for high-performance systems

Synopsys, Inc. (Nasdaq: SNPS) today announced the availability of theDesignWare® Integrity and Data Encryption (IDE) Security Modules to help designers protect against data tampering and physical attacks in high-performance computing (HPC) SoCs using the PCI Express® (PCIe®) 5.0 architecture or Compute Express Link™ (CXL™) 2.0 interface. The DesignWare IDE Security Modules protect sensitive data with efficient encryption, decryption, and authentication based on AES-GCM algorithms while meeting PCIe 5.0 specification and CXL 2.0 IP performance and latency requirements. The DesignWare IDE Security Modules are designed to the latest PCIe 5.0 specification and CXL 2.0 interface standards and are designed and validated with Synopsys' DesignWare Controller IP to accelerate SoC integration.

"The IDE cryptographic features in the PCIe 5.0 specification are aligned to industry-standard design requirements and can be flexibly extended as security requirements evolve," said Al Yanes, PCI-SIG® chairman and president. "By offering the unique combination of interface and security IP for the PCIe 5.0 specification, Synopsys is enabling the design community to quickly implement necessary security functionality into their systems."

"Security is a cornerstone for the success of any technology, and adding IDE security functionality to the CXL 2.0 specification supports the creation of a more secure ecosystem," said Jim Pappas, chairman at CXL Consortium. "We're pleased to have Synopsys' support as a member of the CXL Consortium to help enable designers integrate security functionality into advanced cloud and HPC systems."

"With the tremendous Internet traffic growth in hyperscale cloud data centers, security is becoming essential to protecting the data transfer in these systems," said John Koeter, senior vice president of marketing and strategy for IP at Synopsys. "The combination of Synopsys' innovative DesignWare IDE Security IP Modules with our DesignWare Controllers for PCIe 5.0 technology and CXL 2.0, enables designers to integrate standards-compliant security functionality at the chip level in high-performance cloud computing systems with significantly less risk."

Availability & Additional Resources
DesignWare IDE Security IP Modules for PCI Express 5.0 architecture and CXL 2.0 are available now. DesignWare Controllers, PHYs, and verification IP for PCI Express 5.0 technology and CXL 2.0 are also available now.

- Download the DesignWare IDE Security IP datasheets forPCIe 5.0 architecture or CXL 2.0
- Learn more about DesignWare IP for Cloud Computing / HPC SoCs
- Read more about DesignWare IDE Security IP Modules in the Synopsys blog

About Synopsys DesignWare IP
Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad Synopsys 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 enables designers to reduce integration risk and accelerate time-to-market. For more information on Synopsys DesignWare IP, visit https://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 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.

About PCI-SIG
PCI-SIG is the consortium that owns and manages PCI specifications as open industry standards. The organization defines industry standard I/O (input/output) specifications consistent with the needs of its members. Currently, PCI-SIG is comprised of over 830 industry-leading member companies. To join PCI-SIG, and for a list of the Board of Directors, visit www.pcisig.com.

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