

# Artosyn Selects Synopsys DesignWare Security IP for Drone SoC

Comprehensive Security IP Solution with Hardware Root of Trust Delivers High Level of Protection During SoC Power Off, Power Up, and Runtime

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## Highlights:

- DesignWare tRoot Hardware Secure Module with Root of Trust protects sensitive information within an SoC
- Multi-stage secure boot validates software and data integrity of the host CPU
- Public key, symmetric and hash cryptography accelerators provide up to 100x increased performance compared to software-only implementations
- Standards-compliant True Random Number Generator, certified in customer field deployments, provides the foundation of protection against malicious attacks

Synopsys, Inc. (Nasdaq: SNPS) today announced that Artosyn Microelectronics, a leading supplier of drone system-on-chips (SoCs) in China, has adopted the [DesignWare® tRoot™ Hardware Secure Module \(HSM\)](#) with Root of Trust, [True Random Number Generator \(TRNG\)](#) and [cryptography accelerators](#) for its latest drone SoC. After evaluating other vendors, Artosyn selected Synopsys DesignWare Security IP due to its high level of protection against threats and tampering during SoC power off, power-up, and runtime phases, including communications with other devices.

"In our fast-moving, dynamic markets, bringing differentiated solutions that can withstand evolving security threats is critical to our success," said Bo Shen, chief technology officer of Artosyn. "Synopsys' DesignWare tRoot HSM with cryptographic accelerators provides all of the security functions we need, enabling us to add high-grade security to our SoC quickly and bring robust solutions to market faster."

The tRoot HSM provides SoC-level runtime tamper detection and response, as well as code privacy protection without the added cost of more secure memory. The tRoot HSM's encrypted and authenticated firmware resides in any non-secure memory space, reducing system complexity and cost. The TRNG combines a whitening circuit with a noise source that provides automatic seeding of the random number stream and an ongoing source of entropy to the core.

The RSA, ECC, AES and SHA hardware cryptography accelerators accelerate asymmetric, symmetric, and hash cryptography required in security protocols to reach performance and energy efficiency levels that are not achievable in software-only solutions.

"As security threats continue to emerge in a wide range of applications, such as drones and surveillance, designers need to incorporate high-grade security that protects the SoC at all levels of operation and meets the highest performance standards," said John Koeter, vice president of marketing for IP at Synopsys. "By providing comprehensive, silicon-proven security IP, Synopsys enables companies such as Artosyn to create differentiated products and deploy them quickly and with less risk."

## Availability

The DesignWare tRoot HSM, TRNG, and cryptography accelerators are available now.

## 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 [www.synopsys.com/designware](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 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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