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### **News Release**

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October 12, 2015

#### **Contact Intel PR**

This news release was originally published on the newsroom of Altera, which is now a part of Intel.

San Jose, Calif., —October 12, 2015—Altera Corporation (NASDAQ: ALTR) and Intrinsic-ID, a leading provider of Physically Unclonable Function ("PUF") technology, announced their collaboration on the integration of advanced security solutions into Altera's Stratix® 10 FPGAs and SoCs. PUF-based key storage is a new requirement for many defense and infrastructure applications today to secure and bind software to hardware functions and prevent the cloning of systems. The integration of Intrinsic-ID's PUF technology within Stratix 10 FPGAs and SoCs greatly enhances the security capabilities of the devices, addressing the growing need for security for all components used in systems.

Today's FPGAs and SoC FPGAs are sophisticated, multi-function components that demand the latest advancements in hardware security as a defense against greater adversarial challenges. Intrinsic-ID's PUF security solution adds strong anti-tamper protection to Stratix 10 FPGA-based systems by binding proprietary and sensitive design information to the unique physics of each individual device. Binding hardware functions and software to a PUF provides a very strong device authentication method and protection against cloning. The inclusion of PUF technology and the use of a Secure Device Manager (SDM) for security management make Stratix 10 FPGAs and SoCs an ideal solution for use in military, cloud security and IoT infrastructure, where multi-layered security and partitioned IP protection are paramount.

The partnership between Altera and Intrinsic-ID enables users of Stratix 10 FPGAs and SoCs to license Intrinsic-ID's PUF technology for a variety of security use cases in their designs. Customer and user support will be enabled by Intrinsic-ID and by their support partner EndoSec for U.S. customers.

"Intrinsic-ID are industry leaders in offering PUF technology and our partnership with them enables us to build into our high-performance FPGAs and SoCs security features that are unmatched in the industry," said Dan McNamara, vice president of the embedded division at Altera. "The solutions we jointly develop will enable us to enhance our standard FPGA configuration file design security, but will also enable device authentication in sensitive applications running on FPGAs."

"Intrinsic-ID has enjoyed a long market lead in the development of PUF technology, and as a result of our collaboration, we expect Altera customers in highly sensitive fields such as military, communications, data center, cloud security and supply chain management to benefit greatly," said Pim Tuyls, CEO of Intrinsic-ID. "Stratix 10 FPGAs and SoCs with Intrinsic-ID PUF technology will deliver superior anti-tamper and anti-cloning features and we are very excited to work with Altera to deliver these advanced security solutions to the FPGA market."

# Security Features in Stratix 10 FPGAs and SoCs

Stratix 10 FPGAs and SoCs deliver the highest performance along with the highest levels of system integration. The device family features a new Secure Device Manager (SDM) available in all densities and family variants. Serving as the central command center for the entire FPGA, the Secure Device Manager controls key operations such as configuration, device security, single event upset (SEU) responses and power management. The Secure Device Manager creates a unified, secure management system for the entire device, including the FPGA fabric, hard processor system (HPS) in SoC devices, embedded hard IP blocks, and I/O blocks. More information about the security features in Stratix 10 FPGAs and SoCs are available in Altera's Secure Device Manager white paper located at www.altera.com/stratix10.

#### **About Intrinsic ID**

Intrinsic-ID (intrinsic-id.com) is a world leader in the field of Cyber Physical Security Systems as a provider of "Physical Unclonable Functions" (PUF). Using our patented PUF technology, secret keys and identifiers are reliably extracted from the physical properties of chips. Much like the electronic equivalent of a human fingerprint, the PUF uniquely identifies and authenticates any electronic device. PUFs can be used for secure hardware key management, to establish a hardware root of trust or to protect the electronic supply chains against clones and counterfeits. Intrinsic-ID's wide range of security solutions serve the following markets: Embedded systems, IoT, Identification, automotive, communications, content distribution, pay TV, government and defense. Intrinsic-ID is a spin-off from Philips Electronics. The company is headquartered in Eindhoven, The Netherlands and has sales offices in San Jose, Tokyo and Seoul.

# **About Altera**

Altera® programmable solutions enable designers of electronic systems to rapidly and cost effectively innovate,

differentiate and win in their markets. Altera offers **FPGA**, **SoC**, **CPLD**, and complementary technologies, such as **power solutions** to provide high-value solutions to customers worldwide. Visit Altera at www.altera.com.

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