



FLEX LOGIX PARTNERS WITH INTRINSIC ID TO SECURE eFPGA PLATFORM

Intrinsic ID's SRAM Physical Unclonable Function (PUF) encrypts EFLX eFPGA data with a device-unique key that is never stored and invisible to hackers

MOUNTAIN VIEW, Calif. – July 19, 2022 – Flex Logix® Technologies, Inc., the leading supplier of reconfigurable computing solutions, architecture and software, today announced that it has partnered with Intrinsic ID to ensure that any device using its eFPGA remains secure and can't be modified maliciously, whether through physical attacks or remote hacking. The integration of Intrinsic ID SRAM Physical Unclonable Function (PUF) military-grade security IP with Flex Logix's EFLX® eFPGA provides a device unique silicon fingerprint that is used to secure confidential data contained in the bitstream of the eFPGA. If the device is attacked or found in the field, the eFPGA bitstream cannot be read, altered or copied because the root secret is never stored and therefore invisible and unclonable. This provides a mission-critical level of security to eFPGA customers.

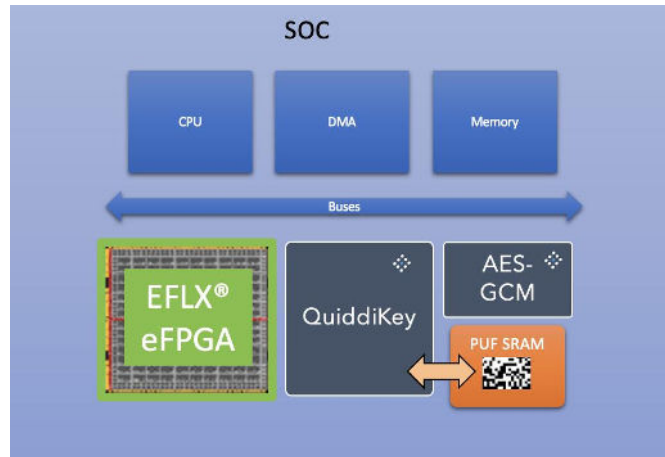
"With security being one of the top concerns for every SoC, encryption has become a critical technology to ensure the device remains secure from the rising threat of sophisticated hackers," said Andy Jaros, VP IP Sales, Marketing & Solutions Architecture for Flex Logix. "While there are several options available today for encryption, our technology integration with Intrinsic ID takes security to the next level, particularly when dealing with high-risk assets included in the eFPGA for obfuscation."

"In markets where eFPGA solutions are typically deployed, security is of vital importance, as these are often highly sensitive military, aerospace, and secure-computing applications," said Pim Tuyls, CEO and Co-Founder of Intrinsic ID. "This is why our strategic partnership with Flex Logix is so essential. We provide customers using EFLX eFPGA technology with a highly secure, flexible, and scalable security solution that protects their bitstream and supply chain."

Flex Logix and Intrinsic ID have published a white paper that describes how their partnership is taking eFPGA security to the next level. To access the white paper, click [here](#).

How the Intrinsic ID SRAM PUF Encryption Works

The Intrinsic ID SRAM PUF creates a device-unique fingerprint from which a cryptographic root key is extracted. A key derived from this device-unique root key is used to encrypt and authenticate the bitstream of the eFPGA. If the device is attacked or found in the field, the bitstream of the eFPGA cannot be altered, read, or copied to another device, because it is protected by a key that is never stored and therefore is invisible and unclonable for the attacker.



Caption: This diagram shows how QuiddiKey with SRAM PUF from Intrinsic ID can be implemented in a system with EFLX eFPGA from Flex Logix.

The main benefits of using the Intrinsic ID SRAM PUF technology over storing a key in non-volatile memory are:

- **High Security:** No key material programmed into device and no key present when it is not in use.
- **High Flexibility:** Key generation at any time and place in the supply chain without external provisioning.
- **Low Cost:** No dedicated security hardware required to protect the key, as it is never stored.
- **Highly Scalable:** It employs only standard logic, scaling effortlessly with shrinking technology nodes.

Benefits of Flex Logix eFPGA

Many markets – 5G, networking, cloud storage, defense, smart home, automotive, and others – are looking to eFPGA to save power and reduce cost. By removing the high-speed SERDES and other unnecessary I/Os or unused peripherals, the customer can save power and reduce latency. With embedded FPGA, the end product can take advantage of these benefits and still be reconfigurable in the field, saving time and money.

Flex Logix has become the number one eFPGA vendor because of several patented technologies that reduce the size of the eFPGA. One of these technologies is the Boundless Radix Interconnect technology, which can reduce the interconnect area by 45 percent. This results in higher utilization and uses just the lower layers in a metal stack making it compatible with most metal stacks. As more and more SOCs are integrating FPGAs, the question of security is being raised, and it's an important one.

About Intrinsic ID

Intrinsic ID is the world's leading provider of security IP for embedded systems based on PUF technology. The technology provides an additional level of hardware security utilizing the inherent uniqueness in each and every silicon chip. The IP can be delivered in hardware or software and can be applied easily to almost any chip – from tiny microcontrollers to high-performance FPGAs – and at any stage of a product's lifecycle. It is used as a hardware root of trust to protect sensitive military and government data and systems, validate payment systems, secure connectivity, and authenticate sensors. Intrinsic ID security has been deployed and proven in hundreds of millions of devices certified by EMVCo, Visa, CC EAL6+, PSA, ioXt, and governments across the globe.

About Flex Logix

Flex Logix is a reconfigurable computing company providing AI inference and eFPGA solutions based on software, systems and silicon. Its InferX™ X1 is the industry's most-efficient AI edge inference accelerator that will bring AI to the masses in high-volume applications by providing much higher inference throughput per dollar and per watt. Flex Logix eFPGA enables volume FPGA users to integrate the FPGA into their companion SoC resulting in a 5-10x reduction in the cost and power of the FPGA and increasing compute density which is critical for communications, networking, data centers, and others. Flex Logix is headquartered in Mountain View, California and has offices in Austin, Texas and Vancouver, Canada. For more information, visit <https://flex-logix.com>.

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