Codasip selects Verilock to provide secure hardware authentication technology

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Implementing future-proof security functionality based on patented Entropy Extraction Device (EED) technology

Munich, Germany, 26 September 2023 – Codasip, the leader in RISC-V Custom Compute, and Verilock, a US-based hardware security company, have entered into an agreement for Codasip to exclusively provide its ASIC customers with future-proof security technology from Verilock. Codasip has chosen to work with Verilock to implement multiple security functions such as device authentication, firmware signing, original content provenance, and one-time pad encryption based on the patented Entropy Extraction Device (EED) technology. The technology is built on advanced research leveraging chaotic networks for a novel and virtually unbreakable authentication solution.

Industry sectors such as autonomous cars, Industry 4.0, privacy protection, and the IoT all have high-security requirements. From device authentication to over-the-air software updates and secure boot, data encryption based on random cryptographic key generation is a must. However, these innovations also come with threats and vulnerabilities that may not be covered by such a mechanism. ML/AI and quantum computers open the door to malicious behaviors including side-channel attacks.

Brett Cline, chief commercial officer at Codasip, commented: “The semiconductor industry needs authentication solutions infused into the hardware. We also need this technology to be sophisticated enough to stay a step ahead of the bad actors. This is exactly what the ingenious team at Verilock has developed. Through our collaboration, we can provide a unique, future-proof, and flexible approach.”

Verilock was founded in 2021 to commercialize pioneering work between Ohio State University and Potomac Research LLC in the field of dynamical chaotic networks. The company provides a virtually unbreakable authentication solution based on Entropy Extraction Device (EED) technology.

Jim Northup, chief executive officer at Verilock, said: “Current security solutions with hardware at their root have one or a handful of root keys or identifiers. This can be compromised by a motivated adversary using physical or machine learning-driven side-channel attacks. We have reinvented hardware authentication by leveraging chaotic networks. The result is truly quantum-safe systems with new possibilities for flexible and custom implementation. It’s a perfect fit with Codasip’s Custom Compute approach.”

Learn more about Codasip solutions at https://codasip.com/solutions/

About Codasip

Codasip is a processor technology company enabling system-on-chip developers to differentiate their products for competitive advantage. Customers leverage the transformational potential of the open RISC-V ISA in a unique way through Codasip’s custom compute offering: Codasip Studio design automation tools and a fully open architecture licensing model combine with a range of processor IP that can be easily customized. The company is proudly European and serves a global market, where billions of devices are already enabled by Codasip technology. Learn more at www.codasip.com

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