Tropic Square Announces Official Launch & General Availability of TROPIC01 - The Industry's First Open Architecture Tamper-proof Secure Element

A New Era of Secure Elements Built on Transparency and Verifiable Trust.

Prague, Czech Republic February 24, 2025 – Tropic Square, a fabless semiconductor company that develops secure hardware through open architecture, today announced the official launch and general availability of its first-generation secure element, TROPIC01.

TROPIC01 is the industry's first open-architecture hardware security element. The chip is auditable and designed to meet the increasing demand for transparency in hardware security. This tamper-proof solution offers a secure alternative to existing closed architecture chips, making it ideal for the security needs of IoT devices, crypto hardware wallets, digital identity devices, and hardware authenticators.

"TROPIC01 provides the disruption that traditional hardware security needs," stated John Sirianni, CEO of Tropic Square. "It's the industry's first auditable, open-source solution – transparency to this degree has been unheard of to date. With the evolving sophistication and frequency of cyber threats and increasing regulatory demands, transparency is no longer optional—it's essential. TROPIC01 provides the semiconductor innovation that the market is demanding."

Considering that cybercrime is reported to cost the world an estimated $13.82 trillion by 2028[1], there is an urgent need for robust security elements such as TROPIC01. Providing advanced security against side-channel, laser, and other advanced attacks, TROPIC01 has been developed with fully verifiable cryptographic implementations, granting enterprises and developers unprecedented control over their security infrastructure.

"We are excited to launch the industry's first truly open and auditable secure element chips," said Jan Pleskac, CTO and Co-Founder of Tropic Square. "Existing closed-source secure elements don't allow for auditing; hence engineers and security experts cannot confirm whether vulnerabilities or backdoors exist. TROPIC01, on the other hand, allows engineers to verify the security implementation for themselves, giving them confidence in what they are embedding into their devices."

TROPIC01's open architecture allows electronic manufacturers and designers to verify the security implementation and claims. This provides engineers more control of their

design process without being restricted by NDAs or the limitations of traditional black box secure elements.

"This chip is exactly what the security industry needs," said Miro Sveltik, CEO of ContentWise, a Deep Tech design house currently prototyping with TROPIC01. "Security is critical for our customers. We cannot truly stand behind solutions we offer to the market unless we can verify its security implementation."

TROPIC01 supports use cases such as secure boot, firmware updates, and key management– critical security features that enable product readiness for compliance with regulations such as the European Cyber Resilience Act (CRA).

Product Availability & Shipping

TROPIC01 development kits and engineering samples have been available since early February 2025, and now the chip is available for wide-scale production orders. Secure provisioning, customization, and shipping logistics are managed in partnership with EPS Global.

Companies building secure devices such as blockchain-enabled hardware, DePIN solutions, and IoT devices (including industrial, medical, etc.) can order TROPIC01 samples to evaluate product feasibility.

Awards and Recognition – Embedded World Nuremberg 11-13 March 2025

In recognition of its innovative approach to safety and security in embedded systems, TROPIC01 has been nominated for an Embedded Award in the Safety and Security category. The Embedded Awards honour outstanding innovations in the field of secure embedded technologies, highlighting products that set new standards in quality and functionality.

At the Embedded World 2025 event in Nuremberg, Germany, Tropic Square will offer live demonstrations of TROPIC01's capabilities and provide insights into its development process. Attendees are invited to visit the Tropic Square booth (5-373) to learn more about how TROPIC01 can enhance the security of embedded systems.

Additional information about TROPIC01 can be found at:

https://www.tropicsquare.com/tropic01

About Tropic Square

Tropic Square, a SatoshiLabs company, develops open-architecture secure elements for applications ranging from IoT and crypto wallets to any modern application that prioritizes security.

By placing transparency at the core of our design philosophy, we invite industry experts and members of the open-source community to test, validate, and strengthen our security implementation.

For more information, visit www.tropicsquare.com

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[1] https://www.statista.com/chart/28878/expected-cost-of-cybercrime-until-2027/