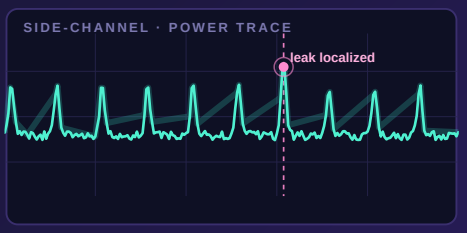
NESTRIA.AI

Agentic AI for hardware security validation & assurance

Nestria helps hardware teams turn slow security research and validation into scalable, repeatable, evidence-driven AI-enabled workflows.



WHERE WE HELP

Hardware Security R&D

Agentic lab assistant for paper-to-lab testing, validation, and reusable knowledge preservation.

Crypto, PQC & Firmware Validation

Agent-led implementation checks for cryptography, secure boot, and key handling for compliance conformity.

Design-Stage Security Hardening

Automate side-channel & fault-injection leakage analysis across RTL-to-layout simulation, securing IP in-house.

Assurance Evidence Automation

Structured reports, evidence maps, and pre-certification packs from fragmented validation work.

WHO WOULD IT HELP

For Product Security leaders, Crypto / Security validation leads, Hardware / Firmware security R&D, and Embedded systems engineering leads.

Sectors & products: semiconductors · secure elements & HSMs · storage devices · automotive & IoT · satellite & critical systems · firmware-rich platforms

WHAT YOU GAIN

- **Secure-by-design hardware** — Fix hardware security leakages earlier with automated RTL simulations and higher-order coverage.
- **Faster time-to-market** — Agent-led continuous validation compressing expert-bound cycles.
- **Accelerated R&D** — Agentic paper-to-lab iteration and validation loops with human in control.
- **Advanced algorithm & PQC validation** — Automate complex cryptography and PQC testing.
- **Evidence & traceability automation** — Audit-ready evidence for pre-certification, EU CRA, and other urgent security deadlines.

Built for **high-assurance AI** — controlled reasoning, traceability, evidence capture, and deployment across on-prem, private cloud, or air-gapped environments. Not a generic chatbot.

Built by a multidisciplinary team with 30+ combined years of experience across AI, cryptography, hardware security, embedded systems, and enterprise product, bringing deep expertise from semiconductor, security evaluation, automotive, and global technology environments.

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High-assurance agentic AI · Singapore