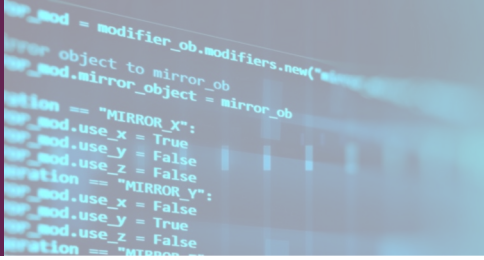
ICENI™

The World's Most Secure MCU



PRODUCT OVERVIEW

ICENI, the world's most secure MCU for securing against memory safety exploits, is a device family of 32-bit highly secure microcontrollers, delivering hardware-enforced memory safety and robust isolation of software at the edge.

ICENI is **secure by design**, eliminating entire classes of vulnerabilities through hardware-enforced memory safety. **It brings simplicity**, being tailored for low-power embedded applications and offering pin-compatibility with legacy MCUs to ensure seamless migration to memory-safe computing. At the same time, **ICENI delivers performance without compromise**, providing real-time responsiveness and deterministic execution.

APPLICATIONS AND USES

ICENI delivers the **performance** and **reliability** demanded by critical systems. Its robust, real-time architecture ensures **seamless** operation, even under the toughest conditions.

- **Secure** and fault-tolerant for uninterrupted uptime
- **Deterministic** and **responsive** for maximum efficiency
- Proven, compliant, and **scalable** for mission-critical use

Critical National Infrastructure

Industrial Automation

Aerospace

Medical

Automotive

Secure. Resilient. Uncompromising

SCI Semiconductor

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KEY FEATURES

Robust Security – Hardware-level CHERI-enabled security against cyber threats.

Advanced Performance – Optimized processing architecture with high throughput and low latency.

Energy Efficiency – Low-power design ensures reduced operational costs and improved sustainability.

Scalability – Modular platform for entry-level to enterprise-scale deployments.

Interoperability – Standards-based design for seamless integration.

Future-Proof Design – Ready for AI, ML, and data-intensive analytics.

CHERI OVERVIEW

CHERI (Capability Hardware Enhanced RISC Instructions) technology integrates security **directly** into hardware design, providing a robust foundation for digital systems. By **eliminating** memory safety vulnerabilities and enabling stronger **compartmentalization**, CHERI significantly reduces cyber risks and enhances system resilience. This built-in security empowers businesses to adopt digital technologies with confidence, unlocking greater **productivity** and **efficiency** across the economy.

The World's Most Secure Microcontroller

- Digital Security by Design
- 100% Memory Safety
- Hardware Compartmentalisation
- Fearless Code Reuse
- Scalable Device Roadmap

In partnership with

Microsoft Google

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