



SINTRONES Showcases IEC 62443-Aligned Edge AI with Built-In Reliability and Cybersecurity for Mission-Critical Applications at Embedded World 2026

Descrizione

COMUNICATO STAMPA â?? CONTENUTO PROMOZIONALE

NUREMBERG, Germany, March 6, 2026 /PRNewswire/ â?? SINTRONES, a global provider of rugged embedded and Edge AI computing solutions, will present its latest innovations at Embedded World 2026 (Hall 3, Booth 3-458), featuring the ThermoSiphonâ?¢ Edge AI Computer alongside a world-leading lightweight compact Edge AI system. Developed under IEC 62443-4-1 certified secure development processes, SINTRONESâ?? Edge AI solutions are designed for mission-critical applications, including industrial automation, transportation mobility, and military and defence, where real-time perception, local decision-making, long-term operational reliability, and cyber resilience are essential. Demonstrations will include practical AI scenarios such as dangerous material and weapon detection, illustrating how on-device inference enhances situational awareness and response time in safety and security sensitive environments.

Patented ThermoSiphonâ?¢ Edge AI Computer: Advanced Passive Cooling

A central element of the showcase is SINTRONESâ?? ThermoSiphonâ?¢ Edge AI Computer, ABOX-5221, engineered for sustained high-performance Edge AI computing under extreme thermal conditions. Its patented self-circulating, phase-change cooling architecture enables continuous operation without active cooling components such as fans or pumps. By eliminating mechanically driven cooling elements, this design reduces maintenance requirements and supports stable AI inference over extended operating periods. The ThermoSiphonâ?¢ platform is intended for long-term stationary deployments across industrial automation and military and defence environments, where thermal stability, system reliability, and continuous uptime are critical.

World-Leading Lightweight Edge AI for Autonomous Mobility

Also featured is the IBOX-604-G2, positioned as a world-leading lightweight compact Edge AI system, weighing only about 0.3 kg, purpose-built for autonomous mobility in transportation systems and mobile defence applications. The platform enables AI inference directly on autonomous vehicles, unmanned

systems, and mobile robotic platforms, where size, weight, and power efficiency are critical constraints. By processing sensor and vision data locally, the system supports real-time perception and decision-making for autonomous navigation, mobile inspection, and onboard safety monitoring. Local AI processing reduces latency and ensures reliable operation even when network connectivity is limited or intermittent—an essential requirement for both transportation mobility and military and defence applications.

Cybersecurity and Ecosystem Collaboration: IEC 62443 and Industry Partnerships

Cybersecurity is addressed at the organisational level. SINTRONES's product development lifecycle is certified to IEC 62443-4-1, reflecting a corporate commitment to secure development practices for industrial automation and control systems. This certification defines how products are designed, developed, maintained, and supported throughout their lifecycle, helping customers strengthen OT cybersecurity and supply-chain trust. In parallel, SINTRONES collaborates with ecosystem partners including Intel in long-term technology roadmaps, and broad software support to accelerate Edge AI deployment across industrial, transportation, and military and defence applications.

About SINTRONES

Founded in 2009, SINTRONES Technology (TWSE: 6680) is a global provider of rugged industrial and Edge AI computing solutions. The company designs modular, certified platforms that enable real-time decision-making at the edge for mission-critical applications across transportation, industrial automation, and military and defence environments. For more info, please visit www.sintrones.com

Photo

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