

SPECIAL CALL FOR PAPERS

04 – 06.11.2025 ANAHEIM | USA

The **embedded world Exhibition & Conference** is the world's premier event for the embedded systems industry. It brings together researchers and developers, industry and academia from all disciplines of the embedded systems ecosystem and drives the evolution of complex systems of systems and its manifold innovative aspects.

The **embedded world North America Conference in collaboration with Ambient IoT Alliance** invites proposals for a special session on Ambient IoT (AloT).

AloT represents a transformative shift in the embedded systems landscape. By enabling devices to harvest energy from their surroundings, a small battery can last significantly longer, beginning with extended lifetimes that outlast the product itself and eventually leading to the elimination of batteries altogether – paving the way for sustainable, maintenance-free deployments at scale. This new class of devices unlocks powerful use cases across industrial automation, smart homes and cities, food safety, pharmaceutical tracking, and more.

Recognizing the **transformative potential of AloT**, leading global companies have come together to form the Ambient IoT Alliance – a cross-industry coalition dedicated to accelerating the growth of the AloT ecosystem. The Alliance promotes the development of an open, harmonized, and multi-standard framework grounded in global communication standards, enabling manufacturers, integrators, suppliers, operators, and end users to build interoperable and scalable Ambient IoT solutions.



Topics will span pioneering use cases, energy harvesting at micro-scale, ultra-low power system design, ecosystem growth, security, and real-world deployments.

- **Visionary use cases for Ambient IoT:** Proposals for emerging or future Ambient IoT applications, particularly in industrial automation, smart environments, logistics, health, and agriculture.
- **Miniaturized energy harvesting in practice:** Contributions demonstrating the integration of miniature-scale energy harvesting into embedded systems.
- **Protocol and hardware co-design for ultra-low power (ULP) systems:** Share your ideas on optimizing data transmission, compute workloads, and wake-up mechanisms for intermittent or event-driven operation.
- **Ecosystem development and standardization efforts:** Submissions exploring standards work (e.g., IEEE, Bluetooth®, Wi-Fi, 3GPP), middleware platforms, cross-industry collaborations, or open-source enablers for interoperability and ecosystem maturity.
- **Security, privacy, and sustainability in a battery-less world:** Contributions on secured provisioning, pairing, data exchange integrity between mobile devices and battery less Ambient IoT nodes as well as edge intelligence, lifecycle management, and the role of Ambient IoT in circular economy models.
- **Ambient IoT in the wild – deployments and learnings:** Let's learn from your experiences! With lessons from deployments, scalability challenges, or surprises from the field.

 <https://www.embedded-world-na.com/special-cfps>

CONTACT for Members | Mr. Rakesh Taori, Rakesh.Taori@infineon.com

Important dates | Submission until **25 July 2025**, selecting the topic "11.9 Ambient IoT Alliance". Authors will be notified by early 01 September 2025.