

Powercast and InPlay Introduce Battery-Free Bluetooth® Low Energy Sensor Tag for Temperature and Humidity Monitoring

Joint innovation delivers ultra-thin, maintenance-free IoT sensors powered wirelessly by RF energy.

PITTSBURGH, PA, UNITED STATES, October 21, 2025 /EINPresswire.com/ -- Powercast Corporation, the leader in radio-frequency (RF) wireless power technology, and [InPlay](#) Inc., inventor of programming-free, ultra-low-power Bluetooth® sensor technology, today announced a new battery-free Bluetooth® Low Energy (BLE) temperature and humidity sensor tag for next-generation IoT applications.

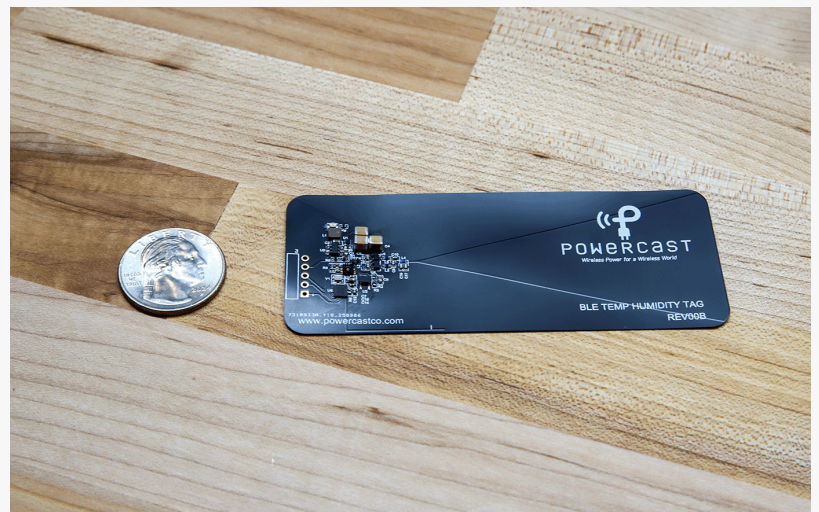
The ultra-thin (1.2 mm) tag combines Powercast's far-field RF-to-DC power harvesting with InPlay's NanoBeacon™

BLE System-on-Chip (SoC) to deliver accurate environmental sensing and real-time data transmission — all without batteries or maintenance. It can receive wireless power over distances of up to 85 feet and supports frequent BLE sensor beacons even at long range, enabling continuous monitoring for years of operation.

Designed for retail, medical, warehousing, and industrial environments, the tag provides precise temperature (−40°C to +85°C, ±0.1°C accuracy) and humidity (±1.5% RH accuracy) readings, along with a unique device ID that allows multiple sensors to operate simultaneously in dense environments. The form factor matches a standard RAIN RFID tag, adding active sensing and BLE connectivity in the same footprint.

"Powercast's and InPlay's technologies combine to make every microwatt count toward sustainable IoT data," said Charles Goetz, CEO of Powercast. "Together, we're enabling ultra-thin, battery-free sensors that feed AI systems continuous, real-time data across retail, logistics, and industrial sectors."

"Maintaining billions of battery-powered IoT devices is a major challenge," said Jason Wu, co-



Powercast's RF-powered BLE sensor tag featuring InPlay's NanoBeacon™ chip operates entirely without batteries, receiving wireless power from RF sources up to 85 feet away for accurate temperature and humidity monitoring. (Quarter shown for scale.)



Powercast's and InPlay's technologies combine to make every microwatt count toward sustainable IoT data... enabling ultra-thin, battery-free sensors that feed AI systems continuous, real-time data."

Charles Goetz, CEO, Powercast

founder and CEO of InPlay. "By leveraging Powercast's RF technology, our customers can now design truly maintenance-free wireless sensors—extending the reach of our NanoBeacon™ platform for easy, cost-effective deployment."

This collaboration gives developers and solution providers a new way to design low-cost, maintenance-free wireless sensor systems that are ready for large-scale deployment. The result is a sustainable alternative to traditional battery-powered or passive RFID systems—delivering active sensing, longer range, and richer data for IoT and AI-

powered applications.

Both companies will showcase the new tag on October 22-23 at WIoT Tomorrow 2025 in Wiesbaden, Germany (Powercast booth L1-10 and InPlay booth L1-11). Developers can contact Powercast for more information on obtaining a development kit or reference designs at contact@powercastco.com.

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About Powercast

Powercast Corporation, founded in 2003 and based in Pittsburgh, PA, is the go-to resource for wireless charging solutions, ranging from short to long distances and from microwatts to kilowatts, with the industry's broadest technology portfolio backed by over 300 patents worldwide. We design, develop, and manufacture semiconductor chips as well as complete wirelessly powered products, enabling various levels of customer integration.

Powercast's solutions include RF power-over-distance charging, high-performance inductive charging systems, and low-power sensors with up to 25-year battery life. With flexible magnetic resonance systems, Powercast positions itself as the industry's most comprehensive source for wireless power technology. For more information, visit www.powercastco.com.

About InPlay

InPlay Inc. designs ultra-low-power Bluetooth® System-on-Chips (SoCs) that enable the next generation of connected sensors and smart devices. Its NanoBeacon™ product line empowers developers and manufacturers to build scalable, cost-efficient, and easy-to-deploy wireless solutions for asset tracking, environmental sensing, healthcare, and industrial IoT applications. Headquartered in Irvine, California, InPlay is part of Trackonomy's global innovation ecosystem, advancing intelligent, power-optimized connectivity that bridges the physical and digital worlds. Learn more at www.inplay-tech.com

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