ByteSnap Powers Industrial IoT Breakthrough with King's Award Winner's WAND HDC at EDS 2025

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Leading embedded consultancy showcases third-generation pipe thickness monitoring technology - comprehensive redesign delivers market-leading performance

[ByteSnap Design](#) **will demonstrate the revolutionary third-generation WAND Handheld Data Collector (WAND HDC) at the Engineering Design Show in Coventry this October. Developed in collaboration with King's Award for Innovation winner Inductosense, this breakthrough industrial sensor represents a quantum leap in pipe wall thickness monitoring technology and will be showcased on stand H52.**

Building on the success with their ELEKTRA 2022 IoT Product of the Year-winning WAND RDC, Inductosense and ByteSnap Design has delivered one of the most advanced handheld industrial sensors of its generation. The WAND HDC demonstrates how ByteSnap's embedded systems mastery—applied to Inductosense's patented sensing innovation—continues to drive global industrial IoT advancement through British engineering excellence.

Engineering Transformation Delivers Market-Leading Performance

ByteSnap Design's comprehensive electronics and core cartridge redesign has transformed virtually every aspect of the device's performance. The third-generation WAND HDC delivers lower unit costs, dramatically improved operating speeds, extended battery life, enhanced high-speed communications, and an intuitive new user interface—all whilst meeting the latest IoT cybersecurity requirements that are increasingly critical for industrial deployments.

"This project exemplifies the power of British engineering collaboration," said Dunstan Power, Director at ByteSnap Design. "Working with Inductosense—a King's Award winner at the absolute forefront of industrial sensing innovation—we've been able to apply our embedded systems expertise to enhance nearly every aspect of their already exceptional technology. From operating speed and battery life to cybersecurity compliance, this represents a classic improvement of an existing product using the latest technology to achieve maximum resilience and world-class performance."

The enhanced WAND HDC maintains Inductosense's core breakthrough - precise, non-invasive pipe wall thickness measurements using patented wireless ultrasonic sensor technology - whilst delivering the performance upgrades that today's industrial environments demand.

Award-Winning Innovation Meets Embedded Excellence

Inductosense's remarkable journey from University of Bristol research project to King's Award recognition demonstrates the transformative potential of British innovation. With over 40 employees and thousands of WAND sensors deployed globally across oil & gas, chemical, mining, renewables and nuclear sectors, the company has established itself as the definitive leader in wireless corrosion monitoring.

ByteSnap Design, recognised as one of the UK's leading embedded electronics consultancies, brought its award-winning engineering capabilities to bear on this challenging redesign. The company's deep technical expertise—spanning embedded Linux, FPGA development, IoT cybersecurity, and ultra-low power design—proved instrumental in delivering the performance breakthroughs that define the third-generation device.

"The collaboration between Inductosense's first-class sensing innovation and ByteSnap's embedded engineering mastery has produced something truly exceptional," noted Dr. Chenghuan Zhong, founder and Chief Technology Officer at Inductosense. "This third-generation device wouldn't exist without ByteSnap's technical excellence in electronics design and its deep understanding of what industrial environments demand."

Critical Infrastructure Monitoring Evolved

The WAND HDC addresses escalating challenges in industrial asset management, where internal corrosion and erosion represent major operational risks. Unlike traditional manual inspection methods,

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the WAND system provides continuous, accurate monitoring that enables predictive maintenance and helps prevent costly unplanned shutdowns.

The device's enhanced capabilities make it ideal for critical infrastructure monitoring across sectors including energy, utilities, and manufacturing, where precise wall thickness data can mean the difference between safe operation and catastrophic failure.

Experience ByteSnap's Engineering Excellence at EDS 2025

Industry professionals are invited to visit ByteSnap's stand H52 to witness this exceptional collaboration in action. ByteSnap's experts will demonstrate how their embedded systems mastery, applied to Inductosense's innovative sensing technology, is driving the future of industrial IoT.

The WAND HDC represents more than technological advancement—it showcases how ByteSnap's engineering excellence helps transform breakthrough innovations into market-leading solutions, solving real-world industrial challenges through collaborative British engineering.

Dunstan Power, Director at ByteSnap, will also be speaking at the event at on 8 October in a session entitled Breaking the Reactive Cycle: Strategic Approaches to Component Obsolescence Management; and is also a panellist on supply chain forum on 9 October. The panel will discuss supply chain security and resilience in the age of tariffs and moving goal posts.

For more information or to arrange a demonstration at stand H52, contact ByteSnap Design at info@bytesnap.co.uk or visit www.bytesnap.com

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About Inductosense
King's Award for Innovation winner Inductosense designs and manufactures wireless, battery-free ultrasonic sensors for monitoring internal corrosion, cracks and erosion. Founded as a University of Bristol spin-out in 2015, the company now employs 40 people with thousands of sensors deployed globally, allowing customers to reduce costs and digitalise their corrosion monitoring.

About ByteSnap Design
ByteSnap Design is one of the UK's leading electronics engineering consultancies, trusted by businesses worldwide to develop next-generation technology products. With over 17 years of experience and award-winning expertise including embedded Linux, IoT, ATEX & FPGA development, and cybersecurity, ByteSnap Design delivers world-class embedded systems for clients from innovative start-ups to global corporations.

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