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Bittium Corporation
Press Release

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Bittium and MarshallAI have partnered to turn tactical radios into AI powered electronic warfare sensors using software alone. Every radio already in the field is now a potential intelligence asset.

Bittium has been leveraging AI in tactical defence communications for years. The strategic partnership signed last year with the Finnish AI specialist MarshallAI now takes the development of AI use a decisive step forward: every radio in the field is transformed into an intelligent sensor that detects, analyses, and monitors the electromagnetic operating environment in real time.

A software upgrade turns Bittium's tactical radios into ISTAR-capable electronic warfare sensors. They automatically scan a broad radio-frequency spectrum, detect unknown signals, and switch to safer channels before jamming cuts communications. Crucially, the radio handles communications and sensing simultaneously, without compromise.

Imagine a patrol detecting an unknown emission on the horizon: the system flags the anomaly instantly, characterises it, and provides an approximate indication of its direction, without the soldier lifting a finger. Rather than enabling target designation, this capability strengthens force protection by alerting troops to unusual activity in the electromagnetic environment and giving them situational awareness of where a potential threat may be emerging. That information can then be fed into command and control (C2) systems as part of the wider operational picture.

Traditionally, electronic warfare has relied on large, specialist systems, powerful, expensive, and few in number. That makes them obvious targets. Take one out and the capability is gone. Bittium complements the existing systems with a fabric of distributed sensor network. Every radio in the network becomes a sensor, there is no single system to target. An adversary facing dozens, or hundreds, of AI enabled radios spread across the whole force cannot simply knock out the EW capability with one strike. The sensors are everywhere, and they are indistinguishable from ordinary communications equipment.

Because all AI processing happens on the device itself, not sent to a central server, sensor data is pre-filtered at the edge, dramatically reducing network traffic and keeping the operational picture fast and local. Development is already underway to scale this into a mass-sensor network, with audio, video and other sensor types joining the picture through ongoing partnerships.

"The most deployable sensor is one that is already deployed. Soldiers have been carrying capable hardware for years. Now it is watching their backs in the electromagnetic domain as well." says **Matti Passoja, Director of Product Management at Bittium**.

The technology is designed to be invisible to the user. Soldiers do not need to become EW specialists. The system works automatically in the background, detecting anomalies, issuing warnings, optimising communications, without adding a single extra demand on an already

pressured operator. The benchmark is uncompromising: simple enough for a six-month conscript to use.

MarshallAI brings deep expertise in AI driven signal processing, developed since 2016 with a focus on defence and critical communications. Bittium acquired a 24.9% stake in the company in September 2025 and has licensed its core AI platform, with both companies now jointly developing the technology across Bittium's product families.

"We can introduce even more features and analysis layers on top of the sensor information," says **Marcus Nordström, CEO of MarshallAI.** "They will be completely turnkey and automated for users, while adding wholly new capabilities."

Security is non-negotiable. All AI processing runs locally on the device, no data leaves the unit, no cloud dependency, no exposure to network disruption.

Bittium and MarshallAI are building the nervous system of the AI enabled missions. The hardware is already in the field. The intelligence is now switched on.

Bittium is at Eurosatory, stand G146, Hall 6.

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Bittium Defence & Security

As a trusted supplier in the Defence & Security market with 40 years of experience in advanced radio communication technologies, we provide next-generation resilient and mobile tactical communications systems for defence forces and secure communication solutions for governments and authorities. Our products and systems for tactical communications bring broadband data and voice seamlessly to all troops across multi-domain operations. The offering is completed by mobile devices and cyber security solutions certified up to CONFIDENTIAL and NATO Restricted levels.

In addition to the products and systems supplied to the Defence & Security market, Bittium offers solutions focused on measuring and processing of biosignals as well as R&D services and wireless embedded solutions. Bittium’s net sales in 2025 were EUR 119.3 million and operating profit EUR 19.4 million. Bittium is listed on Nasdaq Helsinki. **www.bittium.com**

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