



Bittium and KNL Collaborate to Deliver Seamless Hybrid Communications for Defense

Bittium Corporation
Press release

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Bittium, a leading supplier of resilient software-defined radio-based communications, and KNL, a pioneer in HF radio technology, have started a collaboration to provide advanced hybrid communications capabilities for defense. In hybrid networks, KNL's solutions operating on HF (High Frequency) bands complement Bittium's network solutions operating on VHF and UHF (Very High Frequency, Ultra High Frequency) bands. Through this cooperation, customers can be offered interoperable networks that cover distances of up to thousands of kilometres, enabling also resilient cross-border communications that strengthens situational awareness and supports operational superiority.

The jointly integrated, seamless hybrid communications solution combines Bittium's reliable Line-of-Sight (LOS) and Non-Line-of-Sight (NLOS) communications solutions, including the wideband, mobile TAC WIN backbone network and the new generation Tough SDR radios, with KNL's long-range, Beyond-Line-of-Sight (BLOS) cognitive HF radios. The interoperability of the solutions has been verified in joint demonstrations.

The combined solution enables connections between tactical networks and HF nodes located farther away. IP-level integration allows networks to be expanded freely and flexibly. The network can also be extended seamlessly with the ESSOR High Data Rate Waveform, which NATO has approved as the interoperability standard for tactical communications. The waveform can be used with Bittium's Tough SDR radios to connect allied forces into the same network.

"The cooperation with KNL brings a new long-range dimension to Bittium's tactical networks, enabling seamless hybrid communications across multi-domain operations. Thanks to IP-level integration, networks can be expanded flexibly across wide geographical areas, improving command and control and strengthening interoperability between nations. This is also essential from the perspective of European sovereignty. We are entering an era in which defense networks are increasingly complex and combine several different technologies. Bittium's and KNL's technologies interconnect into a single resilient entity that scales dynamically according to operational needs. The goal is a comprehensive network in which every connection, whether HF, satellite, or commercial 5G, functions seamlessly as part of the same IP-based architecture, providing continuous situational awareness for command and control in all conditions", says Tommi Kangas, Senior Vice President of Bittium's Defense & Security Business Segment.

"This isn't traditional HF communication with two operators holding handsets. It's data flowing directly from beyond the horizon into tactical IP networks and command systems – and vice versa. Our combined solution enables connecting tactical bubbles across the scattered battlefield and extension of core network services even to the most remote soldiers operating beyond the enemy lines. The collaboration with Bittium demonstrates how modern HF functions as a natural part of IP-based battle management systems", says Toni Lindén, CEO of KNL.

Further information:

Tommi Kangas
Senior Vice President, Defense & Security
Tel. +358 40 344 2789 (group communications)
Email: defense@bittium.com

Distribution:

Main media

About Bittium – Defense & Security

As a trusted supplier in the Defense & Security market with 40 years of experience in advanced radio communication technologies, we provide next-generation resilient and mobile tactical communications systems for defense 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 Defense & 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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About KNL

KNL is a technology company with beyond-line-of-sight communication solutions. Our software defined radios adapt to the needs and requirements of modern military and security operations with fast and reliable data links in any operating environment. We operate globally in the field of Defence and Security. Our purpose is to get our customers connected. We are part of Telenor Group – leading telecommunications company across the Nordics. KNL's HQ is located in Oulu Finland and our skilled team of professionals are passionate about shaping the future of defence communications. For more information about us, see knl.fi.