

PRESS RELEASE

NeoCortec & Embit to launch dual band and dual mode NeoMesh wireless network module using LoRa® modulation at Embedded World 2025

Smart buildings targeted by new Embit module combining low power, scalability and noise immunity

Embedded World, Nuremberg, Germany – March 11, 2025 – At Embedded World 2025 in Nuremberg Germany from 11th to 13th March 2025 in Hall 3 on Stand 426, NeoCortec, manufacturer of ultra-low-power bi-directional wireless mesh networking protocol stack, and in Hall 3 on stand 639, Embit, manufacturer of wireless modules, will launch a dual band (subGHz/2.4GHz), embedded LoRa-enabled NeoMesh wireless network module and LoRaWAN® stack. After the first demonstration of the ability to form a NeoMesh wireless network using LoRa modulation on a 2.4GHz wireless network module at electronica 2024, this new dual-band module enables the use of the new technology in many more applications and offers enhanced flexibility to customers. The combination of NeoMesh's simple and massive scalability and low power with Semtech's LoRa modulation's proven ability to perform well with a very long range in noisy environments, e.g. in buildings where there is lots of additional radio noise such as Wi-Fi and Bluetooth, significantly enhances the value proposition of the two leading wireless technologies.

"The rapidly evolving IoT landscape demands adaptable and versatile wireless connectivity to address diverse, critical use cases across industries," said Shahar Feldman, senior director of wireless ICs product marketing at Semtech. "This collaboration between NeoCortec and Embit delivers exactly that – combining LoRaWAN® and LoRa®-enabled Neomesh into a single, innovative and cost-effective device. By enhancing versatility while reducing costs, this solution represents a game changing step forward in IoT connectivity, enabling broader market expansion across multiple sectors."

Explains Thomas Steen Halkier, CEO of NeoCortec: “The various wireless connectivity technologies all exist because they all address different challenges. Now, designers can benefit from a combination of leading solutions. We expect this development to unlock many more wireless networking opportunities in smart buildings and other applications.”

The NeoMesh software stack is being implemented in a LoRa module manufactured by Embit S.R.L. Fully compliant with worldwide sub-GHz and 2.4GHz frequency band regulations and able to be used anywhere in the world, the EMB-LR1121-e module is based on Semtech’s LR1121 long range transceiver paired with a STM32 MCU. Details Fabio Bonizzi, CEO at Embit: “We are delighted to be able to unveil the first commercially-available dual-band and dual-mode wireless network module to feature both LoRaWAN and NeoMesh technologies at Embedded World 2025.”

In contrast to other mesh network technologies, NeoMesh is dynamic and scalable, supporting thousands of nodes which all operate on battery for many years. It is easy to install, requiring no repeaters or other mains powered devices. NeoMesh is also able to automatically reroute signals, self-healing the network, in the event of a node failure.

About NeoCortec

NeoCortec was founded in 2007 with the aim of developing and patenting several innovations related to Wireless Sensor Networks. The main product is NeoMesh. NeoMesh is a wireless communication protocol to be embedded in smart devices to enable communication between the devices as well as to the cloud. NeoMesh is built completely from the scratch to overcome some of the limitations that e.g. Zigbee, Zwave, Bluetooth and Thread have: Scalability in number of devices, range and power consumption. At NeoCortec, we aim towards making non-smart and large buildings smarter by using NeoMesh. Easy upgrade without cabling. NeoMesh is available on ultra-low-power bi-directional wireless mesh network communication modules as well as on a license basis on many various chipsets.

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