



# Celeste Technologies Completes Successful 5G NR-NTN Interoperability Tests with Sateliot's D2D Constellation Payload.

**Castel San Pietro Terme (Italy), February 2026** – Celeste Technologies today announced the successful completion of a 5G NR-NTN interoperability test campaign at the Qualcomm Technologies, Inc. laboratories in Lannion, France, marking a significant milestone with Sateliot's Payload for the sovereign European low-Earth orbit (LEO) direct-to-device (D2D) constellation.

## Successful NTN Interoperability Campaign

The joint campaign focused on 3GPP Release 17 Non-Terrestrial Networks (NTN), validating end-to-end interoperability between Celeste's SmartgNB and a mobile test device powered by Qualcomm® 5G Modem-RF. Tests were executed using Celeste's fully software-based SmartgNB running on a multi-core SoC platform, without hardware acceleration, in combination with a Keysight Prosim channel emulator and a Mobile Test Platform (MTP) from Qualcomm Technologies.

The trials successfully covered GEO and LEO scenarios, both transparent and regenerative payload profiles, demonstrating that Celeste's gNB can interoperate with Qualcomm Technologies' NTN-capable device stack under realistic satellite conditions. The tests successfully achieved end-to-end traffic between the SmartgNB and the MTP, validating complete protocol stack functionality. This activity took place within Sateliot's broader initiative to develop a European LEO constellation for 5G NR-NTN D2D services in S-band.

## Celeste SmartgNB for Regenerative Satellites

Celeste's SmartgNB is a fully software-based, 3GPP Release 17-compliant gNB protocol stack designed for regenerative satellite payloads and on-board processing. The solution runs entirely in software from Layer 1 to Layer 3, with CU/DU splits and platform independence across x86, ARM, and RISC-V CPU architectures.

By demonstrating efficient operation on an SoC without hardware accelerators, the test campaign confirms the suitability of SmartgNB for integration into next-generation regenerative payloads and multi-operator LEO constellations.



## Sateliot's LEO 5G NR-NTN Constellation Vision

Sateliot is deploying a LEO-based 5G NR-NTN payload in S-band, the corresponding space platform and the software ground segment, designed to provide reliable, continuous coverage and low-latency connectivity for IoT and D2D communication scenarios. This new 5G NR-NTN constellation will complement Sateliot's existing NB-IoT NTN service, adding capabilities tailored to automotive, civil security, and defense use cases where 5G NR is the appropriate radio interface.

With an always-on, fully connected constellation including inter-satellite links and a proprietary ground-station network, Sateliot aims to be a key European player for discretionary services and sovereignty in security and defense communications.

## Leadership Quotes

### Qualcomm Technologies, Inc.

"This successful 5G NR-NTN interoperability test demonstrates the maturity of a standards-based, direct-to-device ecosystem. Conducted in our Lannion labs with Celeste and Sateliot, it validates end-to-end performance and brings space-based connectivity a step closer to commercial reality for IoT and D2D use cases across Europe," said **Francesco Grilli, Vice President, Product Management, Qualcomm Technologies, Inc.** "NTN interoperability campaign demonstrates the maturity of a standards-based, direct-to-device ecosystem, and Qualcomm Technologies remains committed to advancing NTN with our partners to complement terrestrial 5G with resilient, global coverage."

### Celeste Technologies

"Celeste Tech. is extremely grateful to Qualcomm Technologies and Sateliot for a collaboration that is paving the way toward a fully European LEO infrastructure, in which Celeste is playing a fundamental role," said **Remo Ricci, CEO, Celeste Technologies.** "We sincerely thank the Qualcomm Technologies teams in Lannion for their outstanding professionalism and support throughout the entire test campaign."

"These tests clearly demonstrate the maturity and efficiency of Celeste's technology," said **Alessandro Vanelli-Coralli, Scientific and Technical Advisor of Celeste Technologies.** "Our SmartgNB runs efficiently on a computing platform ready to be integrated into next-generation regenerative payloads, and these tests prove that D2D constellations based on 3GPP standards and smart design are a reality."



## Sateliot

“This achievement is a key step in Sateliot’s roadmap to deliver a 5G NR-NTN constellation providing real-time, continuous coverage for IoT and D2D services, including demanding automotive, civil security, and defense applications,” said **Jaume Sanpera, CEO, Sateliot**. “By validating interoperability between Celeste’s SmartgNB and Qualcomm Technologies’ NTN platforms with our unique technology payload, we are strengthening Europe’s position in secure, sovereign, space-based connectivity.”

## About the Companies

**Celeste Technologies** develops a fully software-based, 3GPP-compliant NTN gNB solutions for regenerative satellites, offering software licensing, customization, and support for multi-operator 5G and future 6G constellations.

**Sateliot** is building a LEO 5G NR-NTN constellation in S-band, complementing its NB-IoT NTN service to address IoT, automotive, civil security, and defense use cases, with a strong focus on European sovereignty and discretionary services.

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