Greenerwave Press Release
Washington, DC, March 18, 2024

SATSHOW 2024:
Greenerwave unveils its first Satcom user terminal to meet the connectivity needs of LEO and GEO

Come meet Greenerwave at Satshow 2024: Exhibit Hall A & B — 1138

- ***Energy-efficient and cost-effective***
- ***Easily to integrate***
- ***Compatible with connexion on the move***
- ***Compatible with both LEO and GEO satellites***

Washington, DC, March 18, 2024 – Just one month after raising €15m in funding, Greenerwave, the deeptech start-up specialising in the control of electromagnetic waves, unveils its first satellite communications (SATCOM) user terminal designed to revolutionize the SATCOM landscape. Leveraging unique design and AI-driven technology, the terminal maintains high-speed connectivity between any type of GEO and LEO satellites, even when on the move. Agnostic, easy to integrate and transport, competitive, low-consumption, agile and universal, this Ku-band terminal can adapt its configuration in real time to meet all SATCOM needs, taking full advantage of its potential and making it accessible to a wider audience. Finally, a solution directly addressing new and future civilian and military challenges like on-the-move connectivity and the end of white zones!
This first terminal in Greenerwave's lineup is available for pre-order.

LEO satellites represent the future of telecom infrastructure, but their potential remains underutilized due to the lack of appropriate terminals. Traditional antennas (satellite dishes) do not fully meet the needs of a market seeking solutions that are easier to integrate. However, alternative solutions relying on intelligent electronic antennas are often energy-intensive, limiting their ability to satisfy the mass market demand targeted by mega-constellation operators.

With its competitive and energy-efficient technology, Greenerwave aims to support operators entering new markets with connectivity solutions that align with current demands.

A design unique in the world…
This is the challenge that Greenerwave addresses with its terminal designed and engineered to be compatible with all satellite communication use cases. The French deeptech company unveils a terminal with unparalleled performance and SWaP (Size, Weight, and Power), weighing less than 7kg, capable of directing waves towards a specific device - such as a geostationary satellite or a satellite in motion (LEO) - by adapting to its position in real-time. Designed entirely in-house, the terminal relies on a minimally complex hardware architecture and control software based on highly advanced algorithms that combine the worlds of physics and artificial intelligence. Configured by the software and optimized by AI, the terminal can seamlessly transition between beams and adjust its frequency range to establish a connection with any satellite according to the user's needs.

...Combined with a disruptive, competitive, and energy-efficient technology that unlocks the potential of SATCOM...
Greenerwave's Satcom terminal uses a unique technology based on the company's reconfigurable intelligent surfaces (RIS), and paves the way for democratizing communications for new constellations through its more cost-effective, lighter, and energy-efficient approach. This is a crucial issue at a time when companies, governments, and organizations - whether military or non-governmental - require stable satellite connections to maintain the continuity of their services.

... Including when on the move
This innovative flat user terminal also optimally meets the civilian and military needs for satellite communication both *on the pause* and *on the move*. It enables continuous communication between various vehicles/ships/aircraft/personnel regardless of terrain and elongation, and allows for seamless transition from LEO to GEO satellites if necessary. This is essential for ensuring the continuity of the link between units and command posts. For civilian applications, it effectively addresses challenges related to maritime and aeronautical transport where business continuity is essential.

The release of a user terminal operating in the Ka-band is scheduled for 2025.

Technical Specifications
Ku-Band Terminal

- ✓ Less than 7 kg / very low power consumption
- ✓ Easy transportation (dimensions compatible with "checked baggage")
- ✓ Seamless handover between satellites
- ✓ Applications: fixed, mobility, maritime, COTP, COTM.

How it works
Greenerwave designs metasurfaces comprising elements that “shape” electromagnetic waves, enabling directional beams to be generated and controlled. These metasurfaces consist of a group of centimetric-sized elements called pixels that act as micromirrors. Each pixel can modify the sign of the reflected wave. The interactions between pixels and microwaves are controlled by algorithms derived from the world of physics that direct waves after their reflection on the surface. Passive, low-cost and easy to manufacture, this technology aims to optimize the use of electromagnetic waves while drastically reducing the antenna energy consumption and production costs.

To access the press kit, please click here

About Greenerwave

Greenerwave is an industrial deeptech founded in 2016 by researchers Geoffroy Lerosey and Mathias Fink, spin-off from the Langevin Institute, dependent on CNRS and ESPCI-PSL (École supérieure de physique et de chimie industrielles de Paris). Specializing in the control and orientation of electromagnetic waves, Greenerwave designs and develops, in France, a revolutionary technology that drastically improves the energy efficiency of equipment, making it more economical, more environmentally friendly and less dependent on semi-conductors. This disruptive technology finds application across various sectors, ranging from the automotive industry to satellite communications and the Internet of Things.

To learn more, please visit www.greenerwave.com

Press contacts

Stéphane Laurain stephane@edifice-communication.com +33(0)6 98 58 38 35
Ilinca Spita ilinca@edifice-communication.com +33(0)6 64 75 12 98