

Press Release
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FID 2025 : Greenerwave and the French Defence Procurement Agency (DGA) unveil a new generation of sovereign, low-power SATCOM antennas



At the Forum Innovation Défense (FID), Greenerwave showcases, alongside the French Defence Procurement Agency (DGA) and the French Defence Innovation Agency (AID), the major advances achieved within the m3SFA program, selected as one of the success stories of the 2025 edition. Supported for several years by the DGA and the AID, this project aims to develop a new generation of Ka-band SATCOM terminals, full duplex and featuring a single-aperture architecture, capable of fundamentally reshaping military connectivity thanks to a redesigned electronically steered flat antenna.

A sovereign technology boosting strategic autonomy

In a context marked by geopolitical competition and a war-economy environment, France and Europe must rely on critical technologies that are locally designed and industrialised. Greenerwave addresses this imperative by developing a 100% French solution, passive, frugal in semiconductors, and extremely energy efficient, perfectly suited to future military SATCOM needs, whether in fixed settings or mobility scenarios (Satcom On-the-Pause and On-the-Move). Unlike conventional electronically steered antennas, Greenerwave's antennas are inherently independent of microwave integrated circuits (MMICs). They therefore do not rely on American or Asian supply chains for these components, significantly reinforcing the sovereignty of the solution.

The m3SFA program builds on a previous AID-funded project already highlighted at FID 2021, marking a decisive step toward the emergence of a sovereign Ka-band terminal, expected to reach product stage by 2027 with both military and civilian applications. It follows the successful achievements of Greenerwave's Ku-band developments, supporting the company's ambition to offer multi-orbit, resilient, compact and accessible terminals, compatible with current and future constellations (LEO, GEO, IRIS²).

A structuring collaboration with the DGA and the AID

As the result of several years of R&D, the m3SFA project has reached key milestones:

- 2022: development of the first dual-aperture full-duplex antenna
- July 2022: first satellite phone call and file transfer via Athena-Fidus
- March 2024: video call via Syracuse 4A and simultaneous reception from Athena-Fidus and Syracuse 4A
- December 2024: validation of the single-aperture full-duplex version, controlled through a digital twin
- July 2025: integration into a complete terminal and DGA-MI test campaign on Syracuse 4B (auto-pointing + video calls in mobility)

These achievements confirm the growing maturity of a unique technology, positioning France at the forefront of low-power SATCOM innovations, essential for the mobility of deployed forces and for information sovereignty.

According to Geoffroy Lerosey, CEO and co-founder of Greenerwave, « *The FID is a strategic opportunity to demonstrate how a French technology, born in our laboratories, can directly support operational sovereignty. Together with the DGA and the AID, we have built a credible, sustainable alternative to foreign technologies — one that is frugal, high-performance, and fully sovereign in its approach to satellite communications*»

About Greenerwave

Greenerwave is an industrial deeptech founded in 2015 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 semiconductors. This disruptive technology finds application across various sectors, ranging from the automotive industry to satellite communications and the Internet of Things.

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