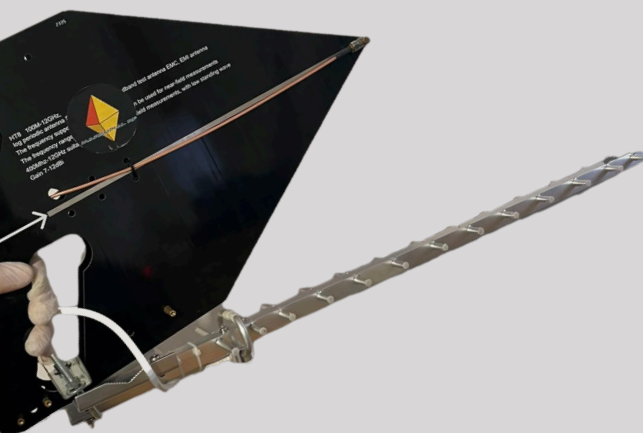
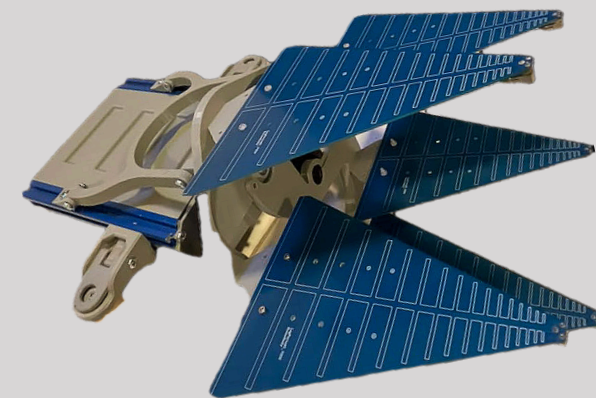
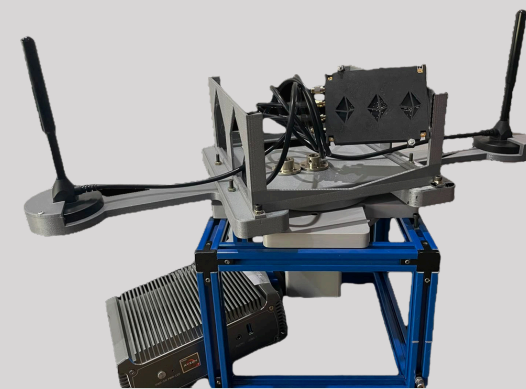


MARSUPIAL RF



C
A
T
A
L
O
G





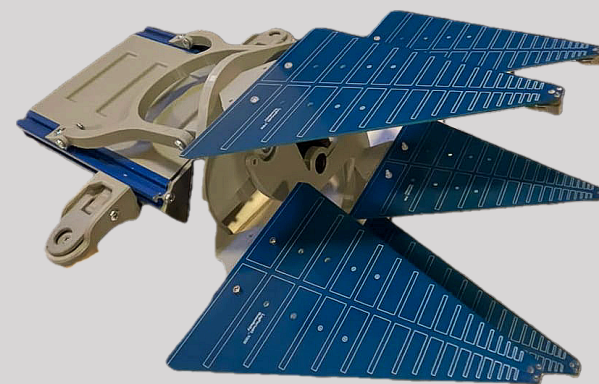
MARSUPIAL RF

Rapid-deployment electromagnetic solutions

for search and rescue, homeland security, and defense

What we do

We design and integrate RF systems, passive detection platforms, direction-finding solutions, and engineering services for mission-oriented projects.





Some of our solutions

- Smart Jammers
- Directional Vehicle Radar
- Direction finding
- Radioimaging
- Synthetic Aperture Radar
- Coastal and Perimeter Defense Solutions
- Cellular Technology Payload
- Software-Defined Radio
- Ultralight Passive Radar





MARSUPIAL RF

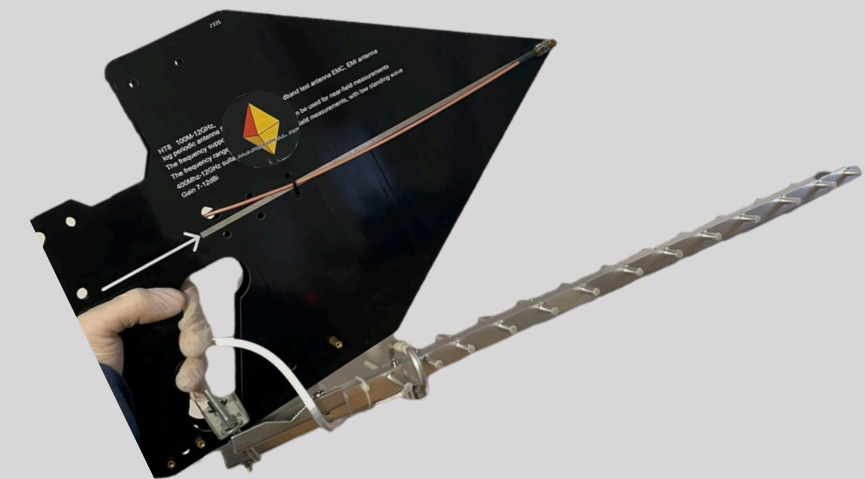


Smart Jammers

- **Jammer gun** against autonomous systems using links in civilian bands (LoRa, WiFi, GPS)
- Full-spectrum expansion capability **against frequency-hopping systems** (0.2-7 GHz)
- **Ultra-portable, miniaturized systems** (100 W) for special-use cases
- **Ultra-high-power systems for vehicle-mounted and fixed-site deployments**, with combined 5 kW output across HF, VHF, UHF, L, S and C bands
- Potencial **position and video decoding** for civilian-use systems
- Evaluation of implementation of proposals involving **GPS spoofing**

Directional Vehicle Radar

- **Rapid-deployment:** vehicle-mounted system
- **Traditional 3D version: active and directional**, operating in UHF, L and S bands, range > 2 km
- **Passive 2D version** based on communication signals, **with the operator undetectable by the target**
- Easily integrated with **ASTERIX** and **ATAK**





MARSUPIAL RF



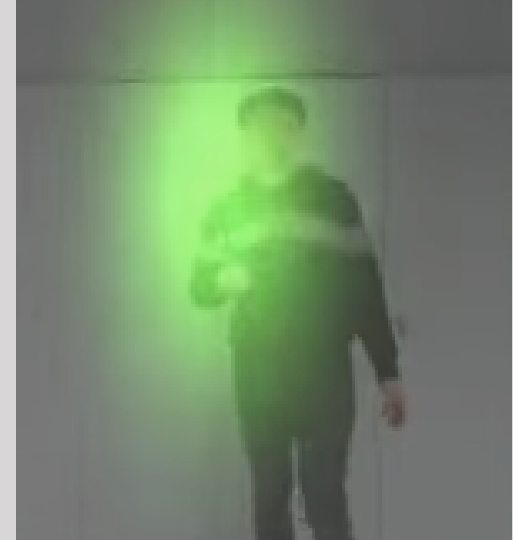
Direction finding

- **Autonomous multi-band stations**
- **HF, VHF, UHF, L, S and C bands**
- **Instantaneous bandwidth from 2 MHz to > 400 MHz**, ideal for **frequency-hopping systems**
- 8- to 16-bit ADCs and typical NF < 10 dB
- **Mobile deployment options** available
- **Interference classification** (deliberate, incidental)
- **Complete triangulation systems**
- Availability to consider specific requirements such as **GPS Spoofing**
- **Advanced training courses** for operators



Radioimaging

- **2D direction finding** (azimuth, elevation)
- Air-transportable system for instantaneous **GNSS jammer localization**
- Ground-based operation with **wall-penetration capability** for USAR and urban scenarios
- **ATAK and AR** systems integration
- **Training simulators**





MARSUPIAL RF



Rotating Synthetic Aperture Radar (ROSAR)

- VHF, UHF, L, S and C bands
- Potential **scientific applications** in geology and related fields
- **Fixed installation with 360°:** active 3D radar at a cost comparable to autonomous threats
- Mobile and passive deployment over communication networks: **3D information with an undetectable operator**



Coastal and perimeter defense solutions

- VHF and UHF radar coverage
- **Sensor networks**
- **Passive solutions with no electromagnetic signature**
- Active solutions with **up to 0.2 kW** output power
- Coverage by **quadrants or motorized platforms**
- **ASTERIX** or customizable interface for easy integration
- Option to **extend to HF to increase coverage range**
- Optional **polarization discrimination** available



MARSUPIAL RF

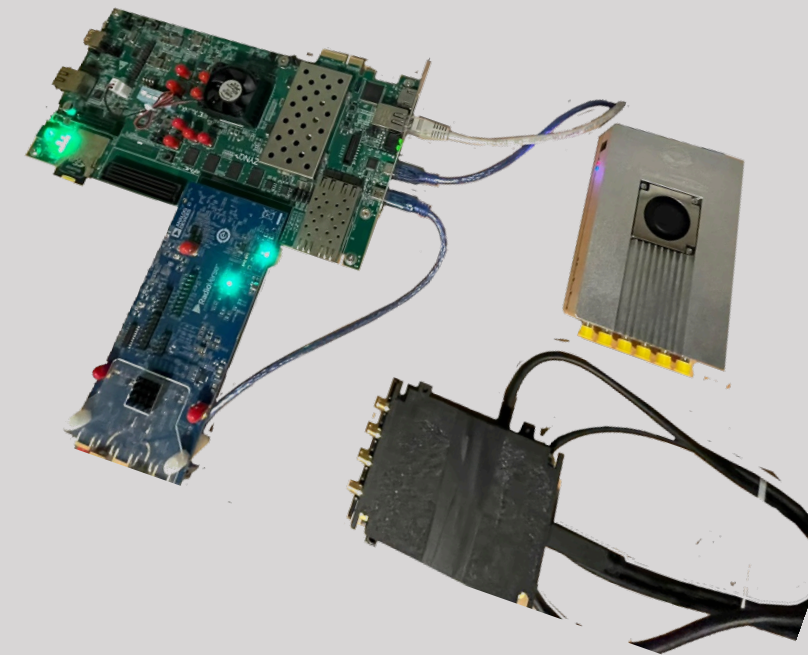


Cellular Technology Payload

- **Portable GSM and LTE transmitters** for search and rescue and related applications
- **100 W power** in a **discreet form factor**
- **Advanced training courses** for operators
- **Vehicle-transportable and ground-operation-portable versions**
- **Cellular localization** for **ground, aerial, and hybrid missions**
- Compatible with **cellular device counting, selective inhibition**, and related missions
- **Proprietary techniques**, optimized for **minimum search times**

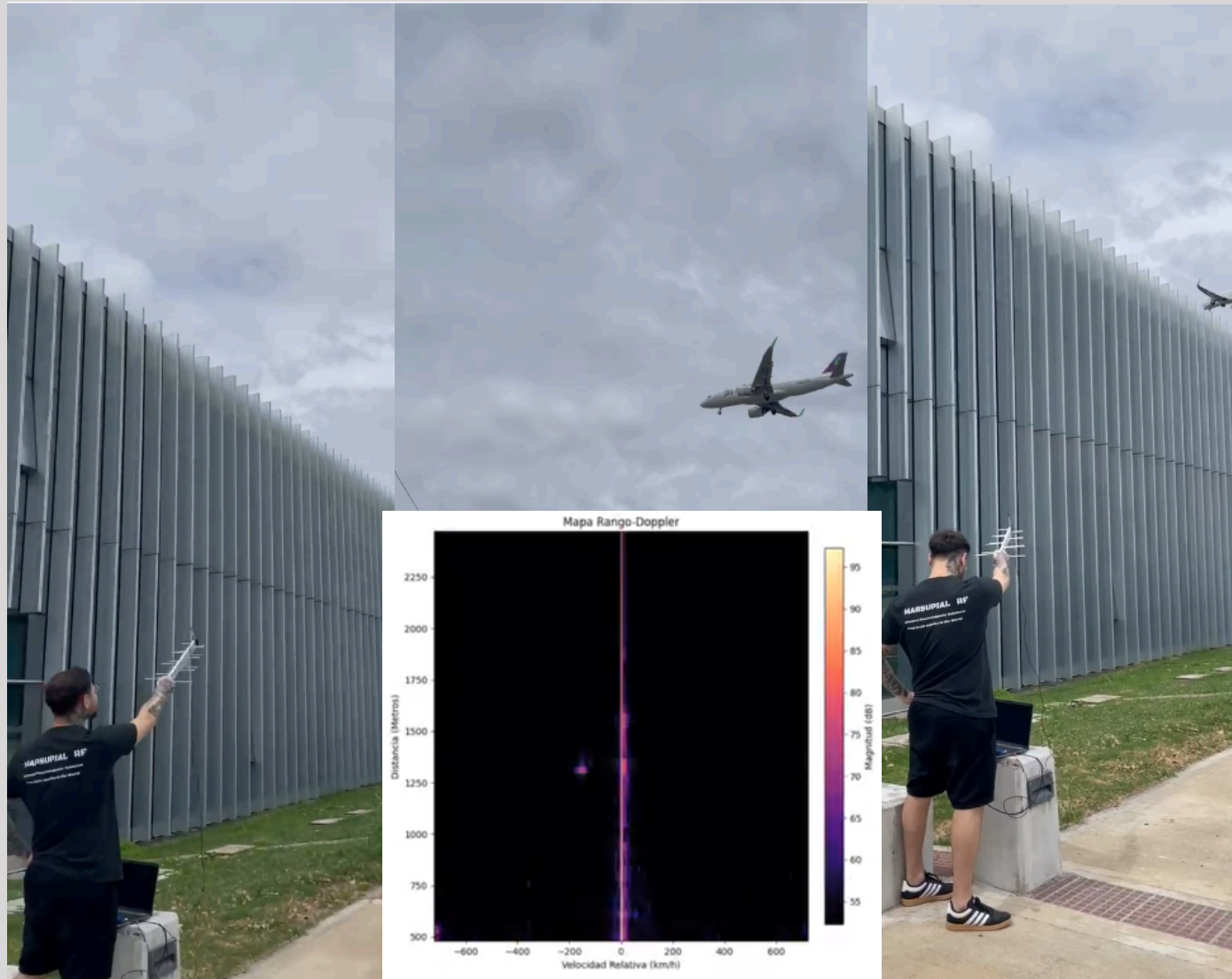
Software-Defined Radios

- **Training access service for software-defined radios**
- **Advanced training courses** for engineering teams
- **Proprietary platforms** to accelerate local development:
 - **HF, VHF, UHF, L, S and C bands**
 - Modular system with **aggregated instantaneous bandwidth** from **2 MHz to > 180 MHz**
 - **Coherent multichannel system**, 70-6000 MHz, 12-bit, with 6 to 18 channels
 - Capability for 1 GHz coherent instantaneous bandwidth (iBW) in UHF, L and S band for SAR development
 - AD9361, ADRV9009, and other chips, with a focus on HF bands
 - High-power transmitter arrays for communications





MARSUPIAL RF



Ultralight Passive Radar

- **Single-operator portable radar**
- **2D versions** (azimuth, elevation) and **binary system** (alarm)
- **Low unit cost and ease of mass production**, comparable to loitering munitions
- Does not require the target to transmit: **motion-based detection** (including fiber-optic links)
- **Zero electromagnetic signature**: undetectable operator
- Effective at **short range (<1 km)**
- Designed **for urban and rural environments with communication signals present**
- Extendable to an **operational coverage bubble in a bistatic configuration** for border areas and/or signal-denied environments, with configurations offering **>10 km range**



MARSUPIAL RF

If you are interested in any of these applications,
contact us!



www.marsupialrf.com

 +54 9 11 2612-6091



defensa@marsupialrf.com

 @marsupial.rf

