



ELTGROUP

SHARP

Passive RF Monitoring System on HAPS Platform



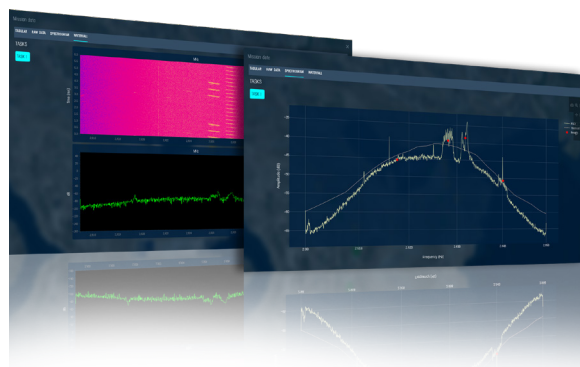
SHARP

↳ Passive RF Monitoring System on HAPS Platform

The SHARP system is designed for persistent passive RF spectrum monitoring, installed on a HAPS (High Altitude Pseudo Satellite) platform. The latter is an unmanned aircraft designed to fly continuously for over 6 months at high altitudes (12-15 km), powered by solar panels. The platform was developed to overcome the limitations of conventional satellites that cannot monitor the same area for extended periods. High Altitude Pseudo Satellites (HAPS) offer significant advantages over traditional airplane-based monitoring solutions, primarily due to their ability to fly for extended periods and at altitudes that ensure extremely high Line of Sight (LOS) of hundreds of Km.

Operational Features:

- **Persistent Monitoring:** The capability of high-altitude and low-speed flight, combined with electronic warfare equipment, enables continuous monitoring of specific targets for over 6 months
- **Low Observability:** The platform is designed to have a reduced radar signature and ensures silent surveillance thanks to its shape and installed passive systems
- **Mission Versatility:** Equipped with RF monitoring instrumentation, it can be employed for various missions, including interference detection and updating air and maritime traffic awareness



Technical Capabilities:

- **Geolocation:** The platform can operate in formation with other platforms to achieve accurate real-time emitter geolocation
- **Mission Support:** Includes a planning station that assists the client in determining optimal platform utilization based on mission requirements
- **Data Management:** The payload is equipped with flexible software to adapt to various mission profiles and manage different storage and transmission requirements

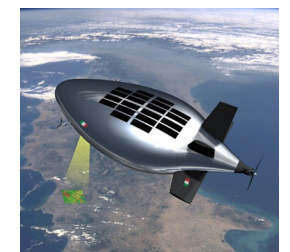


POD Technical Specifications:

- Power: 150W
- Mass: approximately 10kg
- Volume: 600mm x 150mm x 150mm
- Rx Polarization: Circular
- Coverage:
 - Azimuth: -60° to +60°
 - Elevation: -50° to 0°

The system is designed to operate in low atmospheric pressure and low-temperature conditions typical of the stratospheric environment. Energy efficiency and durability are guaranteed by solar power, enabling prolonged operations without the need for frequent maintenance or refueling.

Potential Applications





ELTGROUP

Via Tiburtina Valeria Km 13,700 - 00131 Rome - Italy - Tel +39 06 41541
eltgroup.net - info@elt.it