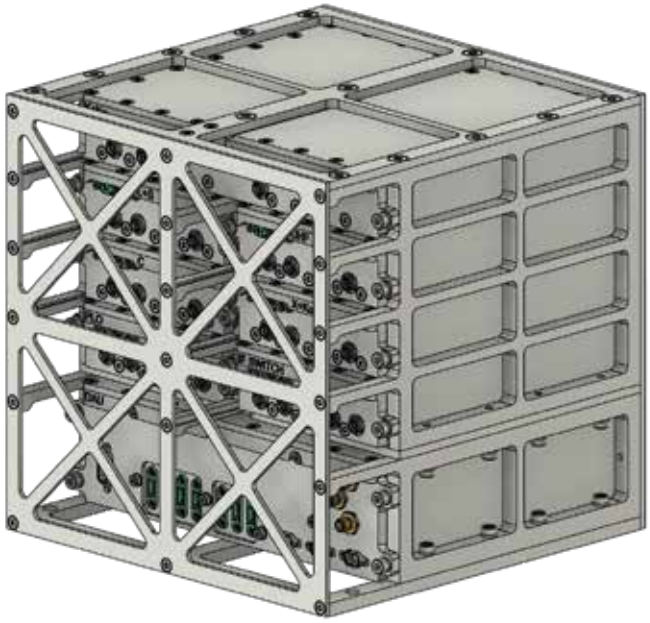
RFI MON
Interference Monitoring for Space Missions

ABOUT

Signal Intelligence / Electronic Intelligence (SIGINT/ELINT) system designed for on-satellite assembly to detect and locate sources of radio frequency, hostile interference (jamming, spoofing) from Earth towards satellite constellations.

The device uses satellites in Low Earth Orbit (LEO) and Medium Earth Orbit (MEO). The system operates across frequency bands from UHF to Ka and enables the detection, classification and localisation of interference sources in monitored areas on Earth.
The system is intended for Q0 class 3 missions (LEO orbits, lifetimes over 3 years). It is capable of acquiring signals below the thermal noise level of Earth through advanced digital processing.



Technology Readiness Levels roadmap:

- 2027: TRL 5
- 2029: TRL 9

FEATURES

- Power consumption: 15 to 30 W *
- Size: 8U (0.2x0.2x0.2m³)/ 4U (0.2x0.2x0.1 m³) *
- Mass: 4 - 9 kg *
- Frequency monitoring range: from UHF up to Ka (406 MHz to 37GHz) *
- Localization accuracy: constellation dependant
- Orbit of operation: default LEO, in the future system may be capable of operating at MEO
- High modularity and redundancy: adjustability of satellite unit
- The data is cryptographically secured using RSA-2048 and AES-256

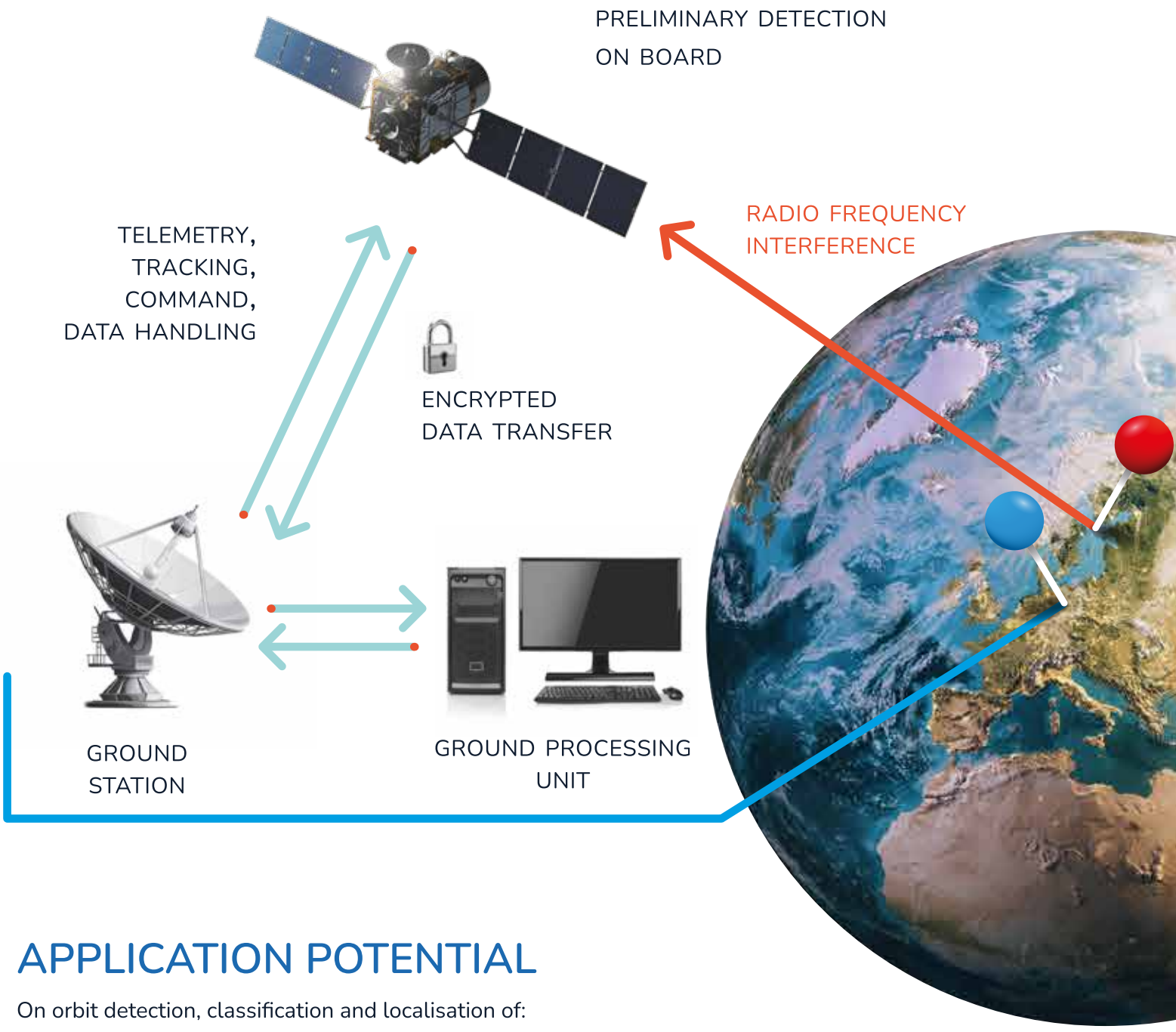
**configuration dependent*

WiRan sp. z o.o.
Al. Zwycięstwa 96/98, 81-451 Gdynia
NIP 9581424107

+48 58 663 10 10
info@wiran.pl
www.wiran.pl

RFI MON
Interference Monitoring for Space Missions

HOW IT WORKS



APPLICATION POTENTIAL

On orbit detection, classification and localisation of:

- GNSS jamming and spoofing from Earth
- Communication transmitters: min. 10W EIRP, e.g. drones with a range > 10km and their operators
- Illegal radio transmitters (ITU)
- Active radars