“Tactical Sense”

Brief

"Tactical Sense" is an advanced SIGINT small-form-factor system designed for installation on UAS (Unmanned Aerial Systems) group 3. The operational model includes cooperation between multiple systems (across 10 aerial platforms) for increasing situational awareness and providing Electronic Order of Battle.

The payload incorporates wideband, high-sensitivity SDR, advanced real-time processing procedures, and sophisticated algorithms.
“Tactical Sense” identifies electromagnetic sources and the characteristics of the emitted waveform.

The sources include RADARs and communication links. The system provides de-interleaving of the emitted sources and an Angle of Arrival for each source.

Operational approach

"Tactical Sense" is a combined system supporting ELINT and COMINT applications.
The system enables electromagnetic activity surveillance for intelligence purposes. It also provides the ability to build battlefield situational awareness by detecting hostile sensors that may threaten the platform or friendly forces. Additionally, it assists tactical assault forces in gaining rapid insertion, access, and egress to and from objectives.
The electromagnetic scenario becomes a dense and dynamic mixture of signals distributed over a wide frequency range and multiple geolocations. It is characterized by complex waveforms (FMCW, Barker, hoppers, low power, etc.). As a result, the proliferation of modern emitters in the EW/ELINT arena compromises the effectiveness of state-of-the-art Electronic Support systems and complicates stealth mode operations.
"Tactical Sense" provides versatile sensing and analysis capabilities to stay ahead of threats and dominate the battlefield.

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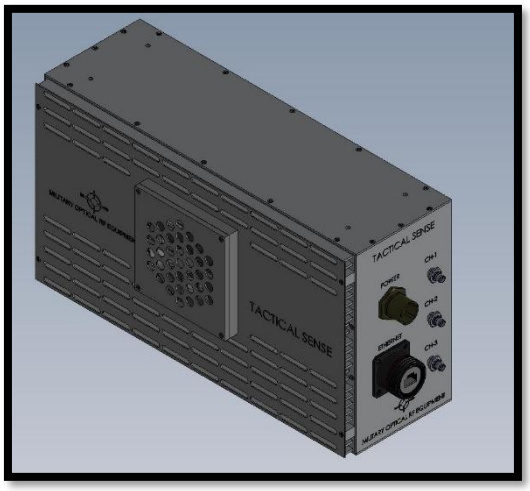
Aerial Operational mode

"Tactical Sense" payloads support a multi-payload aerial operational mode. This mode enables real-time data fusion from 10 payloads installed on several UAS platforms.
Up to four aerial platforms and a single ground control unit can support the Aerial Operational mode.
The payloads process the received data in the air and transmit the information to the ground station for data fusion and analysis. The received emitters' directions and locations are presented on a digital map. The De-interleaving results and the Emitters parameters are displayed in real-time.

Technical Specifications

- Frequency Coverage: 50MHz – 18GHz
- Instantaneous Bandwidth: 1.25GHz (per payload)
- Sensitivity: -85dbm
- Real-time PDW and Raw Data recording for advanced processing capabilities
- DF accuracy (interferometric based): 1.5°
- Geolocation accuracy: 25m (EEP = 90%)
- De Interleaving capabilities: up to 50 emitters
- Payload Weight: 4.5kg



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