

“Tactical Sense”

Brief

“Tactical Sense” is an advanced SIGINT small form factor system designed for installation on UAS groups 2 and 3. The operational model includes multi-system cooperation (between 10 aerial platforms) for increasing situational awareness and providing Electronic Order of Battle. The payload incorporates wide band 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 the Angle of Arrival for each source.

Operational approach

“Tactical Sense” is a combined system supporting ELINT and COMINT applications.

The system provides the capability of electromagnetic activity surveillance for intelligence purposes in addition to the capabilities of building the battlefield situational awareness of the hostile sensors that can threaten the platform or friendly forces and further assist 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 geo-location. 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 challenges stealth mode operations. “Tactical Sense” provides versatile sensing and analysis capabilities to stay ahead of the threat and to win on the battlefield.

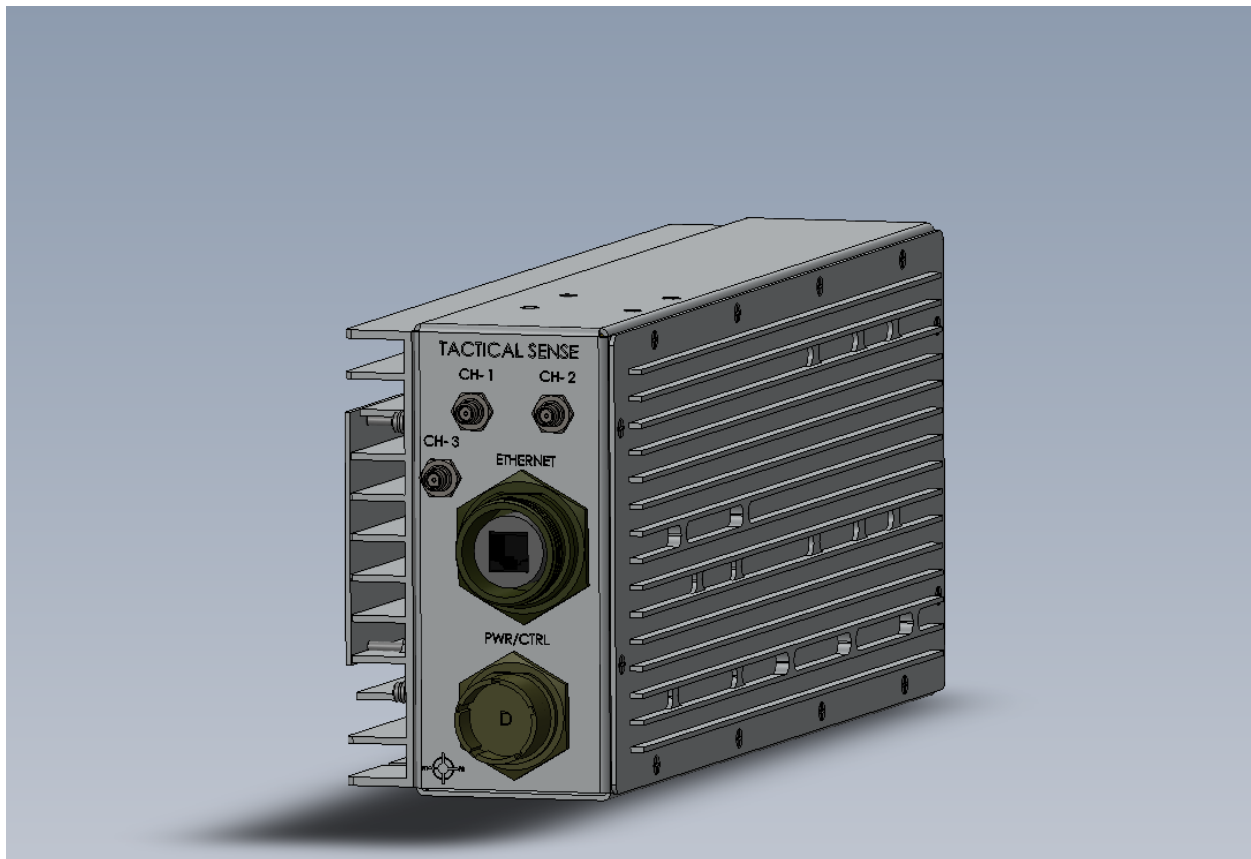
Aerial Operational mode

“Tactical Sense” payloads supporting multi-payload aerial operational mode. This mode enables real-time data fusion from 10 payloads installed on several UASs.

Up to four aerial platforms and a single ground control unit support the Aerial Operational mode. The payloads process the received data in the air and send 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: 2.7kg



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