

“Light Shield”

Brief

“Light Shield” is an advanced Electronic Support/ ELINT small form factor system designed for installation on UAS group 3. The operational model includes multi-system cooperation (between several 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.

“Light Shield” 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

“Light Shield” is a combined system supporting ES/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. “Light Shield” provides versatile sensing and analysis capabilities to stay ahead of the threat and to win on the battlefield.

Aerial Operational mode

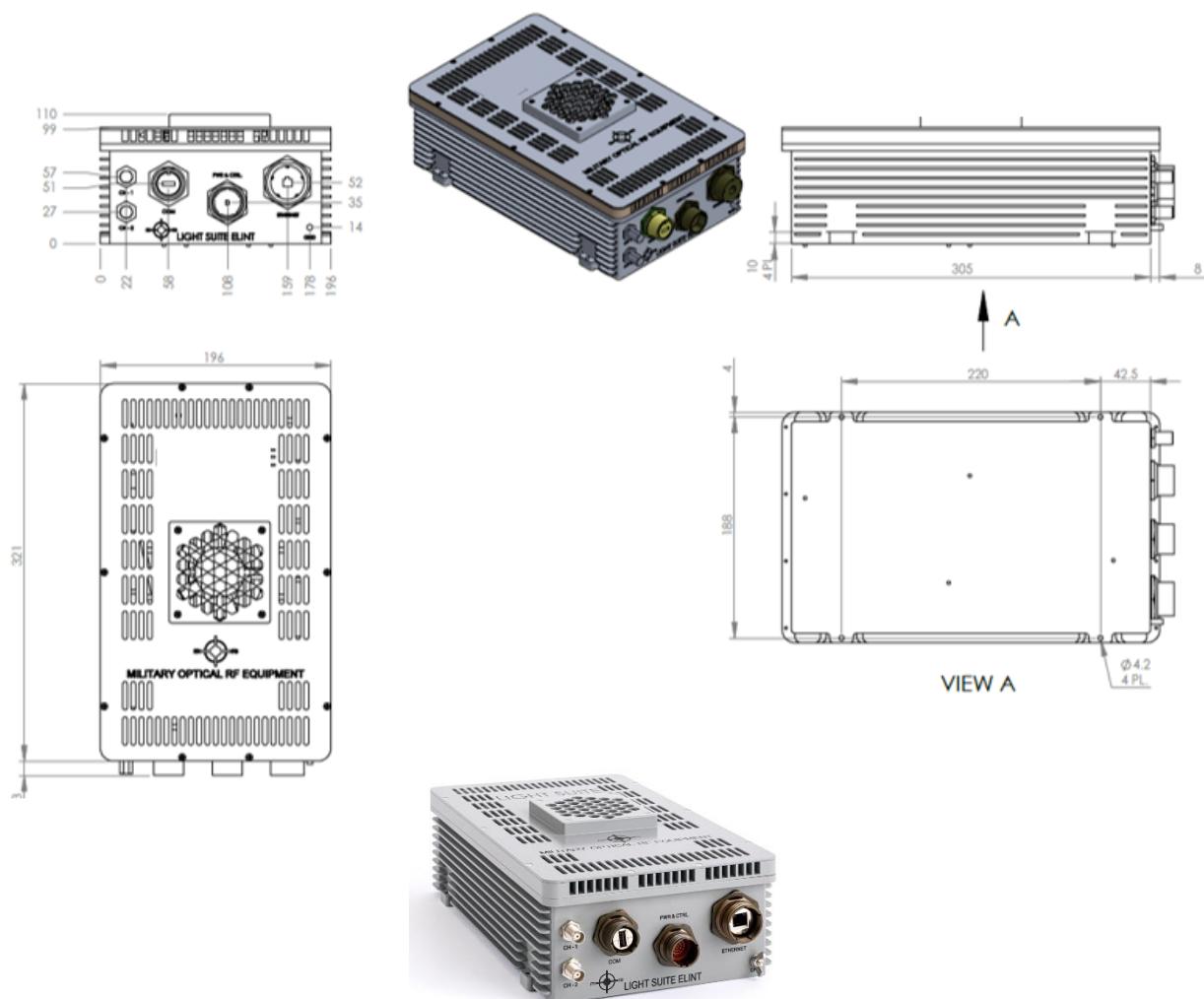
“Light Shield” payloads supporting multi-payload aerial operational mode. This mode enables real-time data fusion from a few payloads installed on several UASs.

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: High
- Sensitivity: High
- Real-time PDW and Raw Data recording for advanced processing capabilities
- DF accuracy: High
- Geolocation accuracy: High
- De Interleaving capabilities:
- Payload Weight: 5.7kg

Mechanical Dimensions



MORE_LS_06_24_un