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# SAGE ELECTRONIC SUPPORT MEASURES

### SINGLE PLATFORM GEO-LOCATION

SAGE analyses the electromagnetic spectrum across the Land, Sea and Air domains in order to map the source of active emissions. Using highly accurate Direction Finding (DF) antennas, SAGE builds target locations and provides situational awareness, advance warning of threats and the ability to cue other sensors.

This state-of-the-art Electronic Support Measures (ESM) can be fitted to all platforms and configured to support a variety of requirements. Its favourable SWaP (Size, Weight and Power) characteristics allow it to be integrated with other sensors and missions systems, providing packaging opportunities on many platforms including small UAVs.

SAGE eliminates the need for specialist ESM platforms, reducing cost and enhancing through its innovative SWaP with its dual role ESM/ Radar Warning receiver.

# **OPERATIONAL BENEFITS**

- > Pinpoint the location of the adversary
- Identify weapons systems
- Deduce operational tactics
- Cue other sensors, jamming and Electronic Attack systems

### ELECTRONIC WARFARE OPERATIONAL SUPPORT (EWOS)

Give your platform the best possible protection with EWOS. Our world class provision includes:

- Threat Vulnerability Analysis and Countermeasure Development (TVACD)
- Comprehensive training packages
- Simple programming

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- > Data and configuration management tools
- Sovereign capability development

## **KEY FEATURES**

- Single platform geo-location enabling accurate sensor cueing at tactically significant range
- Rapid decision making by shortening the 'Find Fix' element of the F2T2EA (Find, Fix, Track, Target, Engage, Assess) Timeline
- > Identification and categorisation of complex emitters
- Enhanced platform survivability through advanced Radar Warning capability
- Data recording for further analysis and sovereign EW database creation
- Compact, modular and simple to fit
- Light-weight: Approximately 20kg (45lbs)
- Scalable and upgradeable
- Easily networked and Data-Link ready



**OPTIMISED FOR** 



### **TECHNICAL SPECIFICATION**

- > RF band: 0.5 40GHZ
- > RF measurement agility: 1Mhz RMS typical, including RF characteristics
- > Sensitivity: -60dBmi wideband DRx sensitivity dependent on FFT better than -80dBmi achievable
- > High accuracy DF: Typically 1° RMS
- > PRF types: Fixed, jittered, slide, stagger, random stagger, drift batch, irregular, nets
- > Geo-location: Typically better than 5%
- > Pulse width: 50ns to CW (Stable and all PW agile types)
- > Pulse width agility: Fixed, agile, agile discrete
- > Fine frequency measurement: <50KHz RMS for pulse widths >1µs, < 100Hz for coherent signals (using external 10MHz ref.)
- > Intra-pulse measurements: Frequency Modulation: FMICW, FMCW, FM Chirp
- > Phase modulation: Phase Shift Keyring (PSK) Barker Codes
- > Emitter library size: 16000 mode lines
- > Communication ESM: VHF D Band operation

For more information: infomarketing@leonardocompany.com

### Electronics Division 300 Capability Green

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