

Unmatched SIGINT Detection Performance in Extremely Dense, High Interference Signal Environments

PRODUCT DESCRIPTION

Over the last 25 years, L-3 has developed unique SIGINT technology named SkyHawk™, that provides high probability of detection with an extremely low false alarm rate against any emission that has temporal or spectral structure. This patented technology has proven highly effective against extremely low-powered LPI push-to-talk tactical COMINT emitters in urban high signal density environments at long standoff ranges. This technology has also demonstrated detection and characterization of previously unknown signals within these complex signal environments, as well as signals that until now were undetectable.



These capabilities have been demonstrated with National Assets, manned and unmanned airborne platforms, and ground based deployments (mobile and stationary). SkyHawk™ capability against COMINT/ELINT emitters is unmatched within the industry and is readily adaptable to emerging threats. SkyHawk™ software may be hosted on a wide range of hardware platforms from COTS servers to custom designed single board computers to meet a wide range of mission requirements.

SkyHawk provides game changing performance in the detection of weak emitters amidst high levels of noise and interference in crowded RF environments.

APPLICATIONS

- SIGINT search from air, naval, and ground; manned and unmanned platforms; unattended deployments; interfaces to National Assets processes
- Locate and characterize hostile, low power, agile emitters in extremely dense, high interference signal environments
- Discover and characterize new and unknown emitter types
- Locate and characterize high value, difficult to detect targets
- Cue recorders, jammers, or EO/IR/SAR Sensors to fuse Intelligence data
- Signal exploitation of simultaneous multiple LPI emitters
- Multiple platform operation for cross platform localization

KEY FEATURES AND BENEFITS

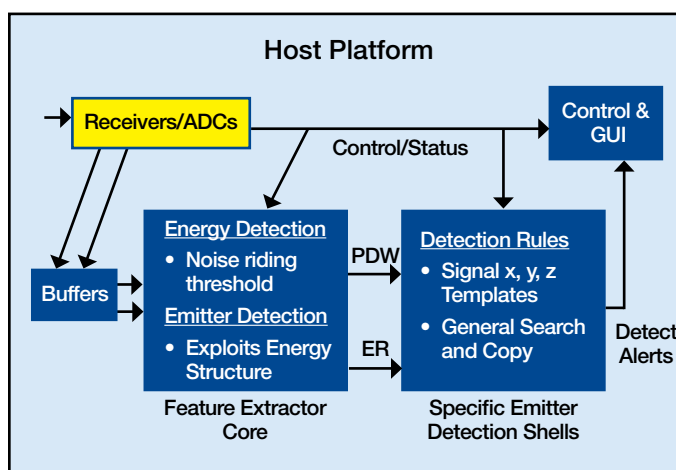
- Patented high-capacity processing architecture maintains performance in high density, high interference, complex signal environments
 - Unique interference rejection algorithms prevent processing overload
 - Signal enhancement and noise thresholding algorithms provide high detection sensitivity with low-false alarm rate
 - Detects extremely low-power agile or continuous frequency emitters, even at extreme ranges
 - Distinguishes individual emitters in multiple, overlapping network environment
- Detects and geolocates any emission with temporal or spectral structure
 - No a priori signal knowledge required
 - Supports specific signal and general search modes
 - Discovers previously unknown signals
 - Intelligently adapts to new threats
- Unmatched SIGINT capability and performance in a small SWaP package
- Outstanding mission flexibility – one payload handles all signal types
- Modular, Open, Scalable Architecture
 - Configurable for RF or digital data inputs
 - Add receiver channels for higher Instantaneous Bandwidth
 - Multi-core processor scales for higher throughput
- Command and Control
 - Socket Based GUI enables local & remote control of processing element
 - Collection receiver Control & Status Interface

PHYSICAL CHARACTERISTICS

Size: 3RU, 19"W x 24"D
Weight: 50 lbs.

PERFORMANCE CHARACTERISTICS

- Receiver instantaneous bandwidth: 30 Mhz per channel
- A/D conversion: 140 Msps @ 14 bits per channel
- Processing: Dual Intel Xeon 5600 Hex-Core processors
- Memory: 12 GB DRAM expandable to 192 GB
- Power: 500W (max)
- Shock: MIL-STD-810F, Method 516.5, Procedure 1 (10 G, 11ms) and Procedure 2
- Temperature: 0° to 40° C Operating



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