Digital High Probability of Intercept (DHPOI)

Breakthrough Electronic Support Measures to Enable Spectrum Dominance

Novel Signal Processing to Enhance Precision of ISR and Self-Protection

OVERVIEW

A cutting-edge High Standoff Wideband Strategic Awareness system with Tactical ability to detect LPI signals for spectrum awareness at the speed of conflict. Designed to ensure dominance in the electromagnetic spectrum across air, ground, surface, and subsurface military operations. This next-generation system builds on Navy fielded TRL9 HPOI technology, offering revolutionary advances in sensitivity, dynamic range and resolution to detect, identify, and track obfuscated RF signals of modern electronic warfare (EW) transmitters in highly contested RF environments.

KEY FEATURES

Tactical Long Stand-Off Detection

- Improved sensitivity and bandwidth for operation outside the long range kill web.
- Detect and characterizes SOI in highly contested RF environments from modern EW transmitters that operate in agile and unpredictable manners.
- Integrated AI supports direct filtering of SOI for improved tactical situational awareness.
- Establishes early threat detection.
- Allows for strategic responses in complex operational theaters.

Fielded HPOI Technology

- Leverages the current POR Navy fielded TRL9 Furious Mace technology
- Wide Instantaneous Bandwidth - 16GHz
- Operates over the spectrum from 2Ghz to 18Ghz
- Direction Finding algorithm calculates bearing
- Outputs industry standard Pulse Descriptor Word (PDW) format and IQ samples in BDIF format

Ultra-Fast Latency Detection

- Operates in nanoseconds (<500ns)
- Provides near-instantaneous feedback in PDW format critical for time-sensitive missions

High RF Sensitivity

- Detects down to -85dBm
- High resolution combined with advanced deinterleaving classifies elusive RF signals that frequency hop or operate below the noise floor

Noise and Interference Reduction

- Patented noise reduction detects signals below the thermal noise floor.
- Frequency domain processing discerns signals in the presence of jamming and interferers.

Advanced Signal Processing

- Two-dimensional detection leverages advances in image recognition algorithms.

Seamless Platform Integration

- Available as a waveform for existing systems that support a wideband aperture.
- OpenVPX cards with software for drop-in upgrades.

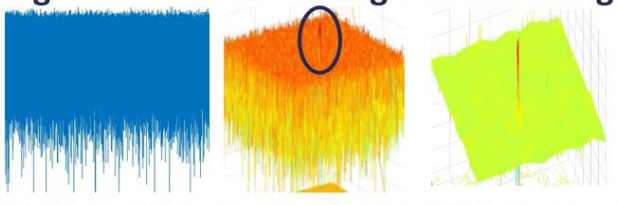
Multi-Domain Operation Application

- Optimized for use across the DOD for intelligence, surveillance, target acquisition, and reconnaissance (ISR) missions for air, ground, surface, and subsurface platforms.
- Used for essential operations requiring precise and reliable RF detection and analysis

"Plays a critical role in modern military operations and electronic warfare dominance"

EMSO

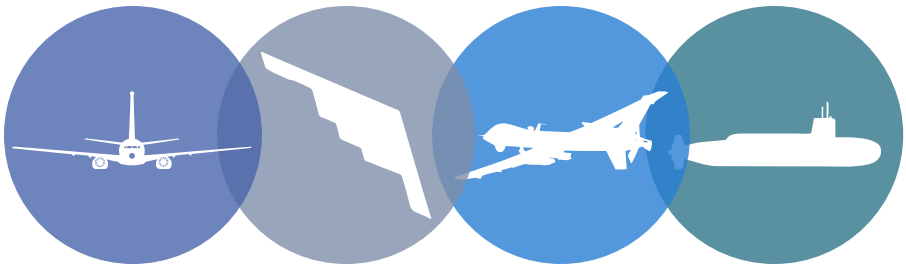
Digital HPOI Patented Signal Processing



Noise Reduction Algorithm Clarifies Threshold | Time Frequency Transform Exposes Potential SOI | Original Time Domain Source Dominated by Noise

DHPOI

Tactically Securing the Electromagnetic Spectrum with Unrivaled Precision



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