

AV_Halo™ DETECT

RF SPECTRUM SENSING & COMMUNICATIONS SOFTWARE
FOR THEATER LEVEL OPERATING PICTURE



DETECT is a breakthrough RF spectrum sensing and networking software suite designed to empower both new and legacy unmanned platforms with advanced communications and mission autonomy. It is engineered with the mission-critical demands of distributed Intelligence, Surveillance, and Reconnaissance (ISR), loitering, and precision strike operations in mind. DETECT seamlessly integrates with AV_Halo COMMAND (Command and Control Core), enabling rapid autonomous response informed by real-time threat perception, even in the most challenging and contested environments.

_Scalable Capabilities

DETECT's modular architecture supports dynamic integration with autopilots, radios, payloads, and sensors, delivering collaborative autonomy across massed unmanned formations. This enables persistent ISR, rapid networking and comms relay, secure loitering surveillance, and fast-strike missions, even in spectrum-contested or GPS-denied settings. DETECT enables platforms to network, sense, and adapt with unmatched resilience and security.

Deployment & Fielding

- › DETECT's Modular Open Systems Approach-compatible, architecture supports rapid tactical fielding and in-theater upgrades, ensuring forces stay ahead of emerging electronic warfare (EW) and communications threats.
- › U.S.-manufactured and compliant, DETECT platforms are built for secure, resilient use in even the most adversarial RF environments.

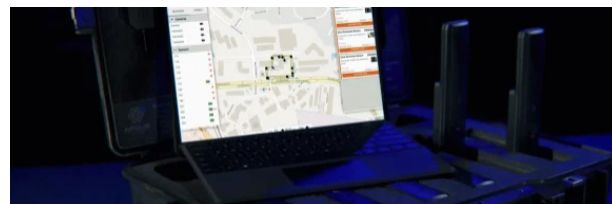


_GALLIUM™

- › Handheld tactical hardware radio and software platform
- › Superior radio coverage and networked positioning, navigation, and timing (PNT) capabilities, sub-nanosecond wireless synchronization, and ranging.
- › Enables warfighters and first responders to achieve tactical communication and emergency situation objectives.
- › Can be integrated into RF communications, weapons systems, manned or uncrewed vehicles.

_Benefits

- › AI-driven RF Detection – Real-time spectrum sensing enables automatic threat identification and location for mission survivability.
- › MANET Architecture – Resilient, self-forming Mobile Ad Hoc Network links platforms without fixed infrastructure.
- › LPI/LPD Waveforms – Low Probability Intercept/Detection ensures secure operations in contested environments.
- › FCC Compliance – Operates in 900/2400 MHz bands for worldwide deployment.
- › GPS-free Accurate Localization – Waveform-based methods enable reliable position when GPS is denied.
- › Beam-break RF Security – Innovative sensing safeguards infrastructure perimeters.
- › Advanced Phased Array & RF Steering – Optimized signal directionality and threat avoidance.



_ARGUS™

- › AI-enabled RF-powered perimeter detection system that ensures maximum security.
- › Self-healing mesh network of free-standing, low power sensors.
- › Provides scalable protection and monitoring in any environment.
- › Enables installation of a fully functioning intrusion detection system without the need for utilities or infrastructure.

