

WRAITH SHIELD™ COUNTER-UAS SOFTWARE UPGRADE

Transform every L3Harris Falcon® IV Radio into a sensor and effector

Modern battlefields face threats from attritable (expendable, low-cost) drones and aggressive electronic attacks. The Wraith Shield™ software transforms L3Harris radios into a protective network, delivering resilient voice and data while defending ground forces from commercial unmanned aerial systems (UAS) threats.

The Wraith Shield™ software is a converged communications and counter-UAS capability that upgrades Wraith™-enabled L3Harris radios, turning them into distributed radio frequency (RF) sensing and response nodes. Through software-only enhancement, radios already carried by operators can maintain resilient voice and data while sensing, identifying and enabling protective actions against UAS command-and-control links.

EVERY RADIO A PROTECTIVE NODE

The Wraith Shield technology builds on the proven Wraith fast-frequency-hopping waveform and extends resilient communications into a new operational role — turning every radio network into a distributed protection layer. While operators continue passing voice, GPS and data, Wraith Shield-enabled radios monitor for signals of interest associated with UAS C2 (unmanned aerial system command and control) links and, when activated, mitigates hostile UAS C2 links to counter the threat.

LAYERED PROTECTION AT THE TACTICAL EDGE

Designed for the tactical edge, the Wraith Shield solution provides a distributed layer of protection that prioritizes operator survivability. By transforming each radio into an AI-enabled protection node, the system extends safeguarding capabilities to every operator.

The Wraith Shield solution expands coverage, shortens detection timelines and disrupts hostile drone threats before they reach effective range. This proactive, layered approach helps safeguard dismounted and mounted forces at the front line, reducing risk to personnel while allowing higher-end counter-UAS and air defense systems to stay focused on more complex threats.

UPGRADE CAPABILITY, NOT EQUIPMENT

The Wraith Shield upgrade is delivered as a software update. It becomes operational immediately across 150k+ fielded Falcon® IV radios worldwide. No need to carry new hardware, antennas or batteries. Deployed radios become sensors at the front line — expanding situational awareness, feeding sensed data to visualization and AI tools and integrating seamlessly with broader counter-UAS, air defense and mission command systems.

ONE RADIO. MULTIPLE ROLES. IMMEDIATE ADVANTAGE.

The result: resilient communications, distributed sensing and rapid protection — delivered through a single radio platform and ready for today's contested environments.



KEY BENEFITS

- > Delivers assured voice and data in contested spectrum while detecting and enabling countering UAS protection
- > Turns deployed radios into distributed RF sensors providing counter-UAS protection at the tactical edge
- > Detects and mitigates hostile UAS control links to strengthen layered counter-UAS and air defense systems
- > Requires no added hardware or SWaP; delivered as a software upgrade to existing radios
- > Integrates and scales across the battlespace, feeding sensor data to C-UAS systems like Drone Guardian® and VAMPIRE™

FROM RESILIENT COMMUNICATIONS TO INTEGRATED PROTECTION

The Wraith Shield solution builds on the proven Wraith waveform by adding distributed sensing and protection capabilities at the radio level.

Wraith

- > Fast frequency hopping MANET
- > Voice and data in contested spectrum, degraded GNSS environments and severe RF conditions
- > Supports high data throughput applications including streaming video, ISR and C2 applications
- > Proven resilience for today's contested environments via partnerships and demonstrations at multiple lab and field exercises
- > Available on the AN/PRC-163, AN/PRC-167, AN/PRC-158C, RF-9820S, RF-9820S-ER and AN/PRC-171

Wraith Shield

- > Sense-and-protect capabilities for distributed C-UAS protection
- > AI integrated radio-as-a-sensor-and-effector solution
- > Scalable to thousands of distributed sensors with c-UAS protection capabilities
- > Supported on the RF-9820S-ER providing long-range threat sensing on a UAV platform
- > Will be available on the AN/PRC-163, AN/PRC-167, AN/PRC-158C, RF-9820S, RF-9820S-ER and AN/PRC-171

AI-ENABLED SPECTRUM AWARENESS AT THE TACTICAL EDGE

The Wraith Shield solution integrates advanced AI-driven signal intelligence from DataShapes AI to deliver realtime visibility into the electromagnetic environment at the tactical edge. With the DataShapes AI GlobalEdge™ platform, Wraith Shield-enabled radios detect, classify and visualize RF (radio frequency) signals of interest — including commercial drone links and other threat emitters — providing operators with enhanced situational awareness and faster decision making.

By combining resilient communications, distributed sensing and protection and AI-powered analytics, the Wraith Shield system transforms tactical radios into a scalable network for sensing, identifying and countering emerging RF threats.

REDEFINING THE ROLE OF THE TACTICAL RADIO

Built on proven resilient communications and designed to evolve through software, the Wraith Shield platform enables distributed sensing and protection where it matters most — at the edge. The result is a scalable, integrated capability that strengthens layered defense architectures and keeps warfighters connected and protected in increasingly complex battlespaces.

Wraith Shield™

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