



SMALL-MULTIFUNCTION RADIO FREQUENCY (SURF) SENSOR/ EFFECTOR PAYLOAD

ADAPTABLE, AFFORDABLE ELECTRONIC WARFARE

Demonstrated, threat-ready tactical sensors and effectors for a range of platforms

As a world leader in military communication technologies, Collins Aerospace is known for providing our defense customers with the advanced technology needed to carry out complex operations in rapidly changing threat environments. We're applying this expertise, combined with our knowledge of software-defined radio technologies, to create electronic warfare sensors and effectors that are demonstrated, cost-effective, easy-to-integrate – and ready now.

Affordable electronic warfare

The Collins Aerospace Small-Multifunction Radio Frequency (SURF) sensor/effector payload delivers electronic warfare

capabilities in one low Size, Weight, and Power (SWaP) package. Offering superior detection, identification, location, and reporting (DILR) technology, the SURF payload can equip the most challenging missions, even those conducted in Anti-Access and Area Denial (A2/AD) environments.

Our ability to leverage commercial off-the-shelf (COTS) parts sets us apart and helps us deliver the SURF solution at a fraction of the price. And an open, modular design brings maximum integration flexibility with other Collins products or third-party solutions.

KEY FEATURES & BENEFITS

- Modular design works seamlessly with a variety of data exchange interfaces, platform power sources and other unique customer requirements
- Flexible interface abstraction layer for payload control and data handling reduces platform and command/control integration efforts
- Demonstrated on a variety of platforms (ground, UAS, 3rd party platforms)
- Simultaneous Electronic Attack, Electronic Support and Networked Communication operations
- Networked geolocation at the tactical edge
- Configurable in flight, can adapt easily to new missions, threats or targets
- Affordability in unit price and integration cost

Seamless data flow and a selection of software modes

The SURF payload utilizes the Common Hardware Integrated Library (CHIL) developmental framework, which allows model-based programming tools, such as MATLAB and Simulink, to synthesize directly into a range of programming languages for rapid deployment into a DevSecOps pipeline. And independently tuned Software Defined Radios (SDRs) enable up to three dynamically selectable software modes (see back for details).

When it comes to equipping your mission with electronic warfare capabilities that position you for success, turn to Collins Aerospace as a trusted partner. We'll help you prepare for tomorrow's battlespace, today.

The Collins Aerospace Small-Multifunction Radio Frequency (SURF) sensor/effector payload is configured with dynamically selectable firmware/software modes, using three independently tuned Software Defined Radios (SDRs) across a spectrum of DC-6GHz. Current supported modes enable:

- Geolocation and tracking of pulsed emitters
- Cognitive spectral harvesting for signal collection, analysis, and identification of emitters
- Situational awareness disruption, asset obscuration jamming with Digital RF Memory (DRFM), cover noise, false target and other "smart noise" techniques
- Encrypted Low Probability of Intercept / Detection (LPI/LPD) networked communications

PROVEN PERFORMANCE

Demonstrated in tactically relevant, large-scale government exercises under multiple use case configurations, including air, ground, manned, unmanned, autonomous and cooperative. With capabilities to improve situational awareness and enable successful maneuvering in highly contested environments, the SURF payload offers asymmetric cost engagements in low SWAP-C form factors.

Specifications subject to change without notice.



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