

VIPER SHIELD™

AN/ALQ-254(V)1 and (V)2 **All-digital electronic warfare suite**

The next-generation F-16 fighter will face future threats previously unimagined. To meet the challenge, the Viper Shield all-digital electronic warfare (EW) suite is custom designed to be baseline on advanced F-16 Block 70/72 aircraft and maximize their survivability and mission success. It is also compatible with various F-16 configurations.

NEXT-GENERATION EW SYSTEM

In partnership with Lockheed Martin and the U.S. Air Force, L3Harris is developing the new AN/ALQ-254(V)1 and (V)2 Viper Shield to provide U.S. allies with cutting-edge countermeasures against sophisticated, ever-changing threats. This advanced EW system will provide a virtual electronic shield around the aircraft, enabling warfighters to complete missions safely in increasingly complex battlespace scenarios. Its modern, all-digital architecture using commercial-off-the-shelf (COTS) technology enables enhanced system performance, a smaller form factor, reduced weight and easier future upgrades.

SOPHISTICATED AND INTEGRATED

Viper Shield's software-defined technology components enable unprecedented digital radar threat warning and robust digital

countermeasure capabilities in a fully integrated, internally mounted system. Its advanced digital radar warning receiver (DRWR) technology integrates seamlessly with the aircraft's new APG-83 active electronically scanned array (AESA) radar to deliver greater situational awareness. The digital radio frequency memory (DRFM)-based jamming system provides enhanced capability against advanced threats.

The open-system design accommodates seamless addition of combat-proven EW applications, providing state-of-the-art capability to address emerging and future threats. Enhanced system performance provides improved probability of intercept against agile threats. A new pilot and vehicle interface provides the pilot with full situational awareness and easier interaction with the system. New sophisticated technology prevents any EW interference to and from a wingman.



CREDIT: Lockheed Martin

BENEFITS

- > Self-protection against emerging and future threats
- > Maximum survivability and mission success
- > Greater situational awareness
- > Lower lifecycle costs
- > Easier future upgrades
- > Compatible across F-16 configurations



CREDIT: Lockheed Martin

LOWER LIFECYCLE COSTS, EASIER TO UPGRADE

Viper Shield is designed with fewer critical components than previous generation EW systems. This not only results in a smaller form factor and reduced weight, but also a higher mean time between failure and lower lifecycle costs. The modular design supports swapping line replaceable units (LRUs) in the field. The design is also forward-looking by provisioning for future growth and enhancements. Its 3U COTS technology and software-defined architecture will simplify future upgrades, enabling the warfighter to affordably modernize with new capabilities and technologies, minimizing obsolescence.

SEAMLESS INTEGRATION WITH F-16 VARIANTS

One of Viper Shield's most impressive features is its compatibility with various F-16 configurations. It seamlessly fits into the Block 70/72 new aircraft, as well as the Block 40 and Block 50 F-16 fleets, including D-models, without requiring any redesign. It can also be integrated into previous F-16 blocks through a podded system, which attaches to an aircraft without requiring extensive internal modifications. That means fighter pilots will get the same level of protection regardless of internal or external configuration. This adaptability puts Viper Shield three to five years ahead of its competitors, guaranteeing that L3Harris' international partners receive the most advanced capabilities.

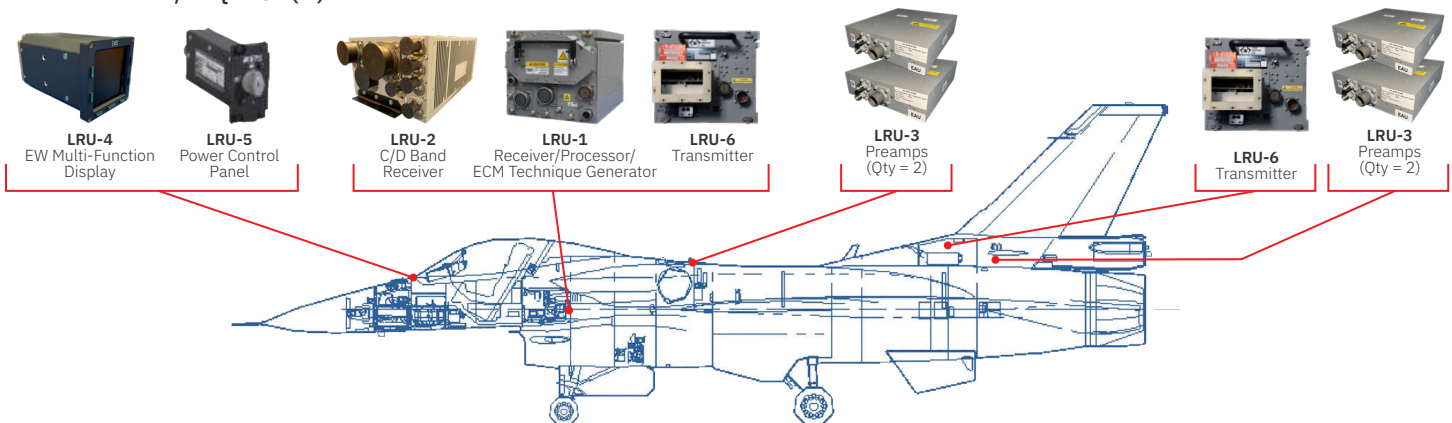
L3HARRIS EW LEGACY

L3Harris has provided EW systems on F-16s for more than 30 years. As the only successful and funded international EW program, L3Harris' EW systems have protected the fleets of our partners around the world for over 20 years. Several international air forces have already committed to Viper Shield based on its operational capability, advanced technology and affordability. This continues our 60-plus-year legacy of developing advanced EW technology to ensure superiority across the spectrum. Our EW solutions are deployed across all domains – land, sea, air, space – to defeat threats at every level of engagement.

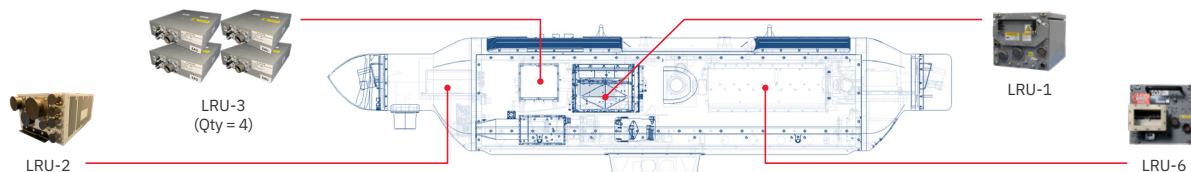
LOCKHEED MARTIN F-16 BLOCK 70/72

- > Newest and most advanced production F-16 aircraft
- > Viper Shield AN/ALQ-254(V)1 all-digital electronic warfare suite
- > Advanced APG-83 AESA radar
- > Radar mode improvements
- > Upgraded modular mission computer (MMC) and avionics architecture
- > Infrared search and track (IRST)
- > Advanced datalink, targeting pod and weapons
- > New cockpit displays and safety improvements
- > New digital flight control computer with enhanced autopilot/auto throttle
- > Automatic ground collision avoidance system (Auto GCAS)
- > Digital intercommunications system (ICS) with 3D audio
- > Precision GPS navigation

INTERNAL AN/ALQ-254(V)1



POD AN/ALQ-254(V)2



Viper Shield™

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