

U.S. Air Force F-16s fitted with IVEWS set to take to the skies in 2024

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IVEWS has been designed to provide the F-16 with a next-generation EW system.
(Photo: Northrop Grumman)

Flight testing with the Integrated Viper Electronic Warfare Suite should start before the end of the first quarter of 2024.

The US Air Force (USAF) has progressed with its efforts to modernise the EW capabilities of its F-16 fighter fleet and will start conducting flight trials with the AN/ALQ-257 Integrated Viper Electronic Warfare Suite (IVEWS) in the coming months.

Speaking to Shephard, James Conroy, VP of navigation, targeting and survivability at Northrop Grumman, stressed that the system has already accomplished integration lab activity with the US government, which was a 'critical' milestone.

“The US government has a couple of [F-16] jets that they are currently in process of modification and we look forward to starting flight tests by the end of Q1 [2024],” Conroy noted.

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Programme of record for the USAF, IVEWS has been designed to provide the F-16 with a next-generation EW system able to improve survivability and lethality against current and emerging threats for operations in contested and congested electromagnetic spectrum environments.

The solution features an open architecture in order to allow for long-term growth capability to support future upgrades, shorter modernisation cycles and improve logistical efficiencies. Its design enables the AN/ALQ-257 to be applied to other platforms apart from the F-16.

“IVEWS system is really slated to not only address the most modern threats but also to stay lockstep with them as they continue to progress,” Conroy pointed out.

The **AN/ALQ-257** has been equipped with an ultra-wideband suite engineered to detect, identify, locate and counter RF threats. The solution should prove effective against systems operating in the millimetre wave spectrum, Conroy noted.

Its design is also intended to provide extended frequency coverage, full spatial coverage and a more rapid response than previous generation EW suites.

Other IVEWS capabilities comprise a next-generation digital radar warning receiver, a processor designed specifically for EW applications and high-powered transmitters with antennas optimised for the size, weight and power requirements of the F-16.



The USAF has been operating F-16s since 1980. (Photo: US Air Force)

Internal to the aircraft, the AN/ALQ-257 is interoperable with the on-board **APG-83 Active Electronically Scanned Array (AESA)** radar.

The solution's ability to digitally work alongside with AESA radar was demonstrated at the Northern Lightning joint exercise in 2021. The systems were tested operating against a range of airborne and ground-based threats.

Conroy pointed out that IVEWS/AESA interoperability enables the aircraft to "remain both lethal and survivable simultaneously".

In June 2021, the USAF awarded Northrop Grumman a \$40 million Other Transaction Agreement (OTA) to develop an IVEWS environmentally and safety of flight certified prototype. An Unpriced Change Order (UCO) modification was announced in March 2022.

Conroy claimed that IVEWS has now been made available for export and has been receiving "a lot of interest internationally." Although the solution was already selected by two countries, the manufacturer could not disclose details on their customers as their FMS processes are still ongoing.

While Conroy remarked that the first state “has been focused on a majority of new aircraft that they are buying as well as a couple of upgrades,” the second nation will be “going to be predominantly just doing upgrades to their existing aircraft.”

“We have a large number of additional international partners that are currently in conversation with us,” he added.

A U T H O R

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