Northrop Grumman Demonstrates Scaled Shipborne Electronic Attack

By Richard Scott

Northrop Grumman (Baltimore, MD) has revealed initial testing of a prototype shipborne Ultra-Lite Electronic Attack (EA) system based on technology scaled down from the US Navy's Surface Electronic Warfare Improvement Program (SEWIP) Block 3 system.

According to the company, key components were demonstrated in collaboration with the Naval Research Laboratory (NRL) on board an unidentified DDG-51 *Arleigh Burke*-class guided-missile destroyer as part of last year's Rim of the Pacific (RIMPAC) 2022 exercise.

SEWIP Block 3 will deliver a next-generation EA capability for US Navy destroyers, aircraft carriers and large amphibious ships, integrating with the existing AN/SLQ-32(V)6 electronic support system architecture to create the AN/SLQ-32(V)7 variant. Northrop Grumman was contracted by the US Navy in February 2015 for SEWIP Block 3 design and development: the company's technical solution adopts an active electronically scanned array based on Gallium Nitride transmit/receive modules, and leverages technology previously matured and de-risked under the Office of Naval Research's Integrated Topside program.

Northrop Grumman completed SEWIP Block 3 system integration and qualification testing at its Baltimore site in mid-2021 as part of its engineering and manufacturing development contract. An Engineering Development Model is undergoing land-based testing at the Surface Combat Systems Center at Wallops Island, VA, and the first ship installation is currently in

progress on board the DDG 51 Flight IIA destroyer USS *Pinckney* in San Diego.

Development of the derivative Ultra-Lite system has been self-funded by Northrop Grumman to meet anticipated Navy requirements for a more compact EA installation to support anti-ship missile defense for smaller surface combatants, which typically are not fitted with radar jamming systems. The company told *JED* that it has sought to maximize hardware commonality with the core SEWIP Block 3 system while re-architecting to enable installation on size, weight and power-constrained platforms.

For the RIMPAC 2022 demonstration, Northrop Grumman integrated Ultra-Lite EA transmit/receive technology with NRL's expeditionary EA antenna subsystem. The company said a press release that the combined system was "successfully demonstrated over many RIMPAC exercise events" and proved that the scaled EA solution "can effectively support US Navy missions."

Additional concept demonstrations are planned to run during 2023 to further demonstrate the reliability and scalability of the system to the US Navy. This will include lab trials, land-based tests and further at-sea demonstrations.