Northrop Grumman Lifts Veil on Low-SWaP-C Multifunction AESA

By Richard Scott

Northrop Grumman has unveiled a new 3D-printed multifunction active electronically scanned array (AESA) designed to host electromagnetic warfare, radar and communications functionality into a single wideband (2-18 GHz) radio frequency (RF) array.

Given the name Valen, the new company-funded AESA development is intended to provide both crewed and uncrewed platforms with a lighter, smaller, and cheaper RF array architecture. Advanced packaging techniques from Northrop Grumman's own Microelectronics Center have been employed to squeeze many different semiconductor parts into one micro-sized package so as to reduce size, weight, power and cooling.

Successful flight testing has already been completed using Northrop Grumman's own CRJ-700 testbed aircraft. The company adds that Valen's lightweight design allows it to integrate into new systems or modernize existing platforms.