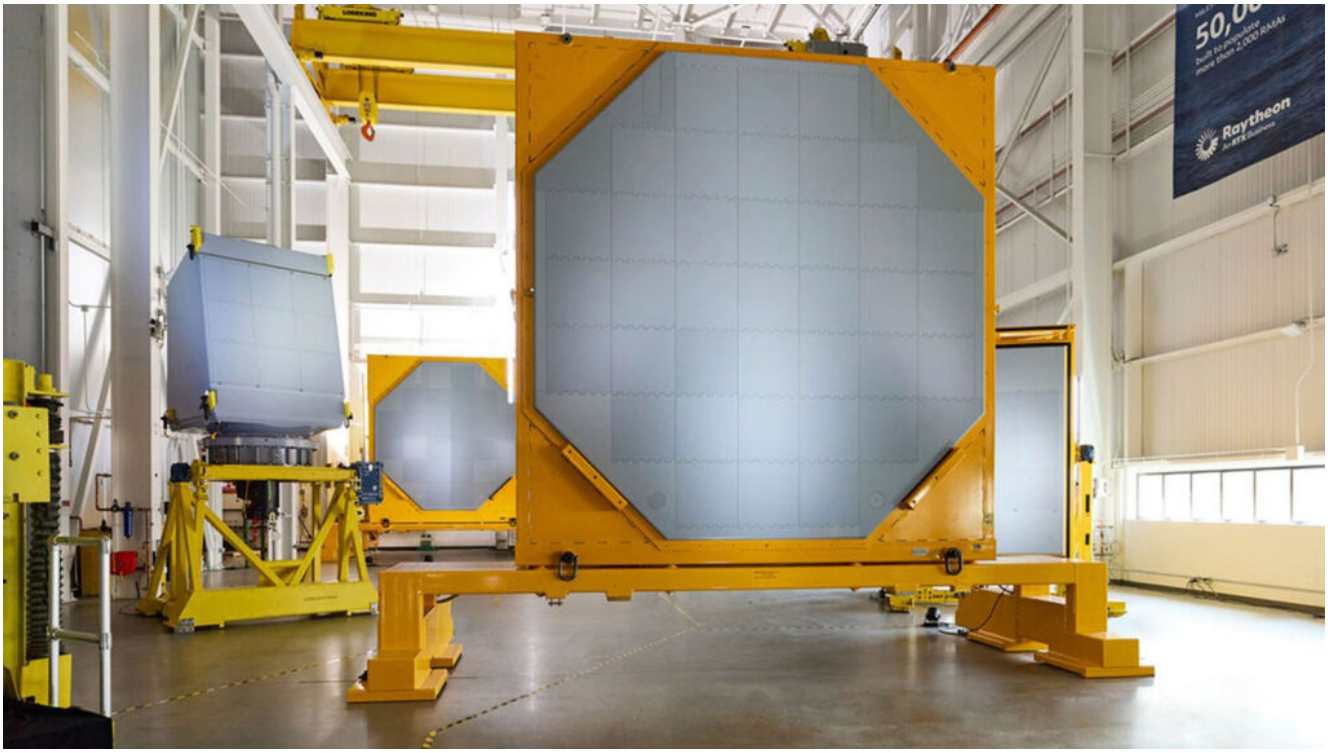
Raytheon to Further Develop Next-Generation Software-Defined Radar Capability



Raytheon has been awarded a contract from the Office of Naval Research to further develop advanced radar software for next-generation naval radars. Photo from RTX.

New software gives naval radars multi-mission flexibility and improved spectrum sharing with 5G

From RTX

ARLINGTON, Va. (May 18, 2026) – Raytheon, an RTX (NYSE: RTX) business, has been awarded a contract from the Office of Naval Research to further develop advanced radar software for next-generation naval radars.

Under the contract, Raytheon's Advanced Technology team will develop software that enables each building block within a radar to operate independently, allowing a single radar to perform multiple missions simultaneously. By treating each

building block as its own software-defined aperture, the radar can rapidly adapt to changing operational needs and better share crowded frequency bands with commercial networks such as 5G.

“The electromagnetic spectrum is more crowded than ever, and our systems have to be smarter about how they operate in it,” said Colin Whelan, president of Advanced Technology at Raytheon. “With precise, software-driven control over where and how we radiate, we’re taking an important step forward in how we use software-defined apertures to keep pace with evolving mission demands.”

Building on Raytheon’s long-standing work in software-defined apertures, this flexible, modular architecture delivers capability enhancements through software rather than hardware redesign. This approach allows radar performance to be adapted and expanded over time with greater speed, lower cost, and reduced risk.

Once the software development is complete, Raytheon will conduct a series of demonstrations to validate independent control of radar modules and associated capabilities such as multi-mission operation and spectrum sharing. Upon successful validation, the technology is expected to be transitioned into operational naval radar systems.