

# Raytheon's SPY-6 Radar Family Attracts Foreign Interest as U.S. Navy Readies for Deliveries

ARLINGTON,

Va. – Three foreign navies have expressed interest in the U.S. Navy's Raytheon-built SPY-6 scalable family of shipboard radars as the Navy prepares to take delivery this year of its first shipsets for installation.

Mike Mills,

Raytheon's SPY-6 program director, told *Seapower* in a Jan. 14 interview

at the Surface Navy Association convention here that Norway, Singapore and

Japan have expressed interest in the radars. He said Raytheon hopes to land its

first foreign military sale of the radars in 2020 or 2021.

The SPY-6(V)1

Air and Missile Defense Radar is designed for the Navy's Flight III Arleigh

Burke-class guided-missile destroyers (DDGs) and features 37 radar modular

assemblies (RMAs) in fixed arrays. The SPY(V)2 Enterprise Air Search Radar

(EASR) is designed for amphibious warfare ships and features nine RMAs in a rotating antenna.

The SPY-6(V)3

EASR, also with nine RMAs but in fixed arrays, is designed for

aircraft

carriers. Another version, the SPY-6(V)4, with 24 RMAs will be back-fit on

Flight IIA Arleigh Burke-class destroyers. The Navy's FFG(X) next-generation

guided-missile frigate also will receive a version of the SPY-6 EASR as government-furnished equipment.

Mills said that three shipsets – numbers 5, 6 and 7 – were placed on contract by the Navy in March and that a contract for shipsets 8 and 9 was awarded in December. The Navy ordered long-lead-time materials for the EASR radars to be installed on Bougainville (LHA 8) and USS John F. Kennedy (CVN 79). Mills expects the Navy to order the shipsets for those two ships in May or June.

For the backfits to Flight IIA DDGs, Raytheon delivered the technical data package for the 24-RMA assembly to the Navy in October. The Navy plans on installation of the radars on many Flight IIA DDGs.

Raytheon has five AMDR arrays at the company's facility in Andover, Massachusetts, with the first two in ranges for their scans. The company expects to deliver the next four between April and June, with the last one bound for installation of Jack H. Lucas (DDG 125), the first Flight III DDG.

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## **Navy Looks at Expanded Missions for Textron's CUSV**



An early variant of the CUSV autonomously conducts maneuvers

on a Potomac River test range near Dahlgren, Virginia, during a demonstration before government, defense contractors and military personnel. U.S. Navy/John Joyce  
ARLINGTON.

Va. – As Textron's Common Unmanned Surface Vehicle (CUSV) goes through the paces of testing, it is attracting the U.S. Navy's attention for missions beyond minesweeping.

The CUSV, an unmanned boat capable of towing or carrying payloads, is under development for the Navy's Mine Countermeasures USV (MCM USV) program. Designed to tow a mission package for the Unmanned Influence Sweep System, the MCM USV has been tested with Raytheon's AQS-20 and Northrop Grumman's AQS-24 mine-hunting sonars.

The MCM USV has completed developmental test and operational evaluation, Wayne Prender, vice president of Textron Systems, said in an Jan. 14 interview with *Seapower* at the Surface Navy Association convention here. He said the company is expecting a Milestone C decision from the Navy "any day now" that would authorize low-rate initial production.

Textron has built four CUSVs and has expanded its testing in southern Florida to include Panama City as well. The company is working with the Naval Surface Warfare Center at Dahlgren, Virginia, to develop expeditionary and

surface warfare  
packages for the CUSV.

In July, a  
CUSV was modified with a remote-controlled .50-caliber M2  
machine gun and a  
Hellfire missile vertical launcher. In this configuration the  
craft was demonstrated  
at Camp Lejeune, North Carolina, in an Advanced Naval  
Technology Exercise  
(ANTX).

The MCM USV  
has been tested in operations from an Independence-class  
littoral combat ship  
and from two vessels of opportunity, including an  
expeditionary base ship and a  
foreign-equivalent ship.

Prender said that Textron is continuing to work on the  
autonomy and mission behaviors of the CUSV.

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## **Navy Awards Lockheed \$43 Million for E-2D Electronic Support Measures Upgrade**

OWEGO, N.Y. – Lockheed Martin has received  
a \$43 million contract modification from the U.S. Navy to  
upgrade to the  
AN/ALQ-217 Electronic Support Measures (ESM) system for the  
E-2D Advanced  
Hawkeye, the company said in a release.

This modification increases the scope of the existing E-2D AN/ALQ-217D electronic support measures and provides upgrades to the receiver/processor, active front end and receiver antenna weapons replaceable assemblies.

These upgrades will give the warfighter additional performance in dense littoral and open-ocean environments. The system's enhanced situational awareness and full autonomy will also reduce operator workload, enable faster reaction time and improve survivability.

"We are pleased to provide an upgraded AN/ALQ-217 ESM system for our U.S. Navy customer," said Hamid Salim, vice president, Advanced Product Solutions, Lockheed Martin Rotary and Mission Systems. "The additional modifications are critical upgrades for the E-2D Advanced Hawkeye to improve overall performance in a contested battlespace and provide the capability required by today's warfighter."

The Lockheed team will deliver several AN/ALQ-217D ESM upgrade kits to support development and test through 2023. This is a 12-month period of performance adjustment from the initial contract award.

The base AN/ALQ-217D contract upgrades include improved combat identification networked-electronic warfare for multiship

geolocation with other carrier air wing aircraft and detection of advanced threat radar systems. In addition, the upgrades further improve the platform's antennas and active front ends.

Lockheed Martin has been the AN/ALQ-217 ESM supplier on the E-2D Advanced Hawkeye program since 1999. Most of the work will be performed in Owego, New York, and is expected to be completed by September 2023.

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## **Raytheon, Major Tool and Machine Team Up on SPY-6 Radars**

WASHINGTON, D.C. –

Raytheon has signed an exclusive teaming agreement with Major Tool & Machine Inc. to develop array structures for the U.S. Navy's SPY-6 radar program when it transitions from low-rate initial production to hardware production and sustainment, Raytheon said in a Jan. 14 release.

SPY-6 is a family of next-generation, integrated air and missile defense radars that is being installed on more than 50 ships across seven Navy ship classes.

"Major Tool's array structures will literally serve as the foundation upon which we build the U.S. Navy's most advanced radars," said Paul Ferraro, vice president of Raytheon's Seapower Capability Systems

business. “Our team of industry-leading partners is ready to deliver SPY-6’s unmatched, multimission capability to the surface fleet.”

Since its inception in January 2014, the Raytheon-led SPY-6 program has met all 20 milestones, ahead of or on schedule. The radar has a track record of performance, demonstrating its multimission capabilities against an array of single and multiple, simultaneous targets throughout the Navy’s extensive testing program.

AN/SPY-6(V) remains on schedule for delivery to the first DDG 51 Flight III, the future USS Jack H. Lucas (DDG 125). The first delivery of AN/SPY-6(V)2 to LHA 8, the USS Bougainville, an America-class amphibious assault ship, is on plan for 2021.

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## **L3Harris to Provide Expeditionary UUVs to Navy**

FALL RIVER, Mass. – L3Harris Technologies has been selected to provide an unmanned undersea vehicle for expeditionary undersea missions for U.S. military forces by the U.S. Navy and the Defense Innovation Unit (DIU), the company said in a Jan. 14 release.

DIU, which accelerates commercial technology to solve national security solutions, awarded the agreement to L3Harris for the Navy’s Next Generation Small-Class Maritime Expeditionary Mine Countermeasures Unmanned Undersea Vehicle (MEMUUV) program.

<https://www.youtube.com/watch?v=5DcWpCJaxVA>

This award includes the delivery and testing of an Iver4-900 PW UUV and two field swappable modular payload sections, including real aperture and synthetic aperture sonars. Additional sensors, swappable battery chemistries and data solutions are included with the prototype system to provide U.S. military forces with a highly capable UUV that can detect, classify, localize and identify targets on the ocean floor and in the water column in support of Expeditionary Mine Countermeasures (ExMCM), Explosive Ordnance Disposal (EOD) and undersea search operations.

“The Iver4 is the culmination of many years of UUV development, customer feedback and application knowledge for military applications,” said Daryl Slocum, vice president and general manager of unmanned maritime systems for L3Harris. “This platform has been custom-built to address the needs of the ExMCM and EOD communities. With its flexible payload, transportable package, extended endurance and high-performance accuracy, the Iver4 is leading the next generation of small class UUVs.”

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## **Lockheed to Deliver 50 C-130Js Via Multiyear III Award**



Two KC-130J Super Hercules conduct a ceremonial formation flight for the VMGR-352 75th anniversary above Marine Corps Air Station Miramar, California. U.S. Marine Corps/Lance Cpl. Clare J. McIntire

MARIETTA, Ga. – Lockheed Martin will deliver 50 C-130J Super

Hercules to the U.S. government through a C-130J Multiyear III award, which was finalized by the government on Dec. 27, Lockheed announced Jan. 13.

The Department of Defense awarded more than \$1.5 billion in funding for the first 21 C-130J aircraft on the multiyear award. The overall award, worth more than \$3 billion, provides Super Hercules aircraft to the U.S. Air Force (24 HC/MC-130Js), Marine Corps (20 KC-130Js) and Coast Guard (options for six HC-130Js). Aircraft purchased through the C-130J Multiyear III award will deliver between 2021 and 2025 and will be built at Lockheed's Marietta, Georgia, facility.

"The C-130J Multiyear III award represents a joint commitment between Lockheed Martin and the U.S. government in delivering proven capability that meets our operators' mission and affordability requirements," said Rod McLean, vice president and general manager of air mobility and maritime missions at Lockheed.

The C-130J is the global standard in tactical airlift, providing a unique mix of versatility and performance to complete any mission. The Super Hercules worldwide fleet has more than 2 million flight hours and is the airlifter of choice for 20 nations.

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# Four Navy Ships Set for Delivery of Newest SSDS Configuration



A U.S. Marine Corps MV-22 lands aboard the amphibious assault ship USS Boxer (right) while the amphibious dock landing ship USS Harpers Ferry follows. Boxer will be among four ships to receive the newest SSDS configuration this summer. U.S. Navy/Mass Communication Specialist 2nd Class Kyle Carlstrom ARLINGTON,

Va. – Lockheed Martin is on tap to deliver the latest version of the Ship

Self-Defense System (SSDS) to four Navy ships this summer, a company official said.

Lockheed

Martin was confirmed as the Combat Systems Engineering Agent (CSEA) for the

SSDS program on Dec. 13 when a protest to the selection by the previous CSEA

was denied, Jim Sheridan, Lockheed's vice president for naval combat and missile

defense systems, said in a Jan. 14 briefing to reporters at the Surface Navy

Association convention here. The initial bid was made in August 2017.

Sheridan said

the major challenge since the resolution of the protest was the tight timeline

to make the deliveries by July.

The SSDS

Advanced Capability Build 20 (ACB 20) will be delivered to the aircraft USS

George Washington (CVN 73), the amphibious assault ship USS Boxer (LHD 4) and

the amphibious platform dock ships USS San Antonio (LPD 17) and USS Fort

Lauderdale (LPD 28).

SSDS ACB 20 is

a combat system that will integrate such systems as the Evolved SeaSparrow

Missile Block II system, the SLQ-32 Surface Electronic Warfare Program III

system and the Enterprise Air-Search Radar. The upgrade features cybersecurity

enhancements and fire-control loop modernization. It also will integrate the

Advanced Training Domain.

In addition,

the SSDS ACB 10 will be migrated from Hardware Technology Insertion (HTI) 12 to

HTI 16 infrastructure.

Sheridan said

the selection of the Lockheed Martin as CSEA for the SSDS makes the company the

CSEA for aircraft carriers and most surface combatants, the major exception

being the Zumwalt-class guided-missile destroyers. The company plans to bid to

become the CSEA for the new FFG(X) guided-missile frigate.

Lockheed Martin is adding

the SSDS ACB 20 software to its Common Source Library, also inhabited by its

Aegis Combat System software.

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# Leonardo to Build Navy's New Training Helicopter

ROME – Leonardo, through AgustaWestland Philadelphia Corp., has been awarded a contract valued at \$176.5 million for the production and delivery of 32 TH-73A helicopters, initial spares, support and dedicated equipment and specific pilot and maintenance training services, the company said in a release.

Work will be mostly performed at Leonardo's Philadelphia facility and is expected to be completed by October 2021.

"On the cusp of celebrating nearly 40 years of operating in Philadelphia, Leonardo is thrilled the U.S. Navy has selected our TH-119-based offer and us as a local and long-term partner," said Alessandro Profumo, Leonardo's CEO. "We are proud to be a core contributor to the future of U.S. defense."

"Today's brilliant news is a ringing endorsement for our solutions setting new industry standards for training," said Gian Piero Cutillo, managing director of Leonardo Helicopters. "We are committed to working with the U.S. Navy to ensure future pilots meet all evolving service requirements."

"Our plan since day one has been to offer the U.S. Navy the training capabilities they asked for, without compromise," said William Hunt, managing director of Leonardo Helicopters Philadelphia. "We are honored to deliver on that promise, build the new fleet in Philadelphia and maintain it from Milton, Florida."

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# Former CNO Adm. Vern Clark to Chair SNA Board of Directors



Retired Adm. Vern Clark, a former CNO and the new chairman of the Surface Navy Association board of directors. Defense Media Activity

Retired Adm. Vern Clark will assume the position of chairman of the board of directors of the Surface Navy Association (SNA) this week at the association's annual banquet on Jan. 16.

Clark was approved by the board on Jan. 13 at the association's annual board of directors meeting. He succeeds retired Adm. James Hogg, who has been chairman since 1994.

In addition to numerous ashore assignments, Clark served at sea aboard the destroyers USS John W. Weeks and USS Gearing. He commanded USS Grand Rapids, USS McCloy, USS Spruance, the Atlantic Fleet Anti-Submarine Warfare Training Center, Destroyer Squadron 17 and Destroyer Squadron 5.



Clark speaks to attendees at his retirement ceremony. As a flag officer, he commanded the USS Carl Vinson Battle Group/Cruiser-Destroyer Group 3, the U.S. 2nd Fleet and U.S. Atlantic Fleet. He became the 27th chief of naval operations in 2000 and retired in 2005. He serves on boards or as a trustee of corporations, organizations and universities.

Hogg is a 1956 graduate of the U.S. Naval Academy and was commissioned in 1956. His sea commands included a guided missile cruiser, two destroyer squadrons, a cruiser-destroyer

flotilla and the U.S. 7th Fleet. He served for 35 years and retired from active duty in 1991 as an admiral. He was the director of the NO's Strategic Studies Group at the Naval War College in Newport, Rhode Island, from 1995 to 2013. Hogg succeeded Adm. Arleigh Burke (then chairman emeritus) as chairman of SNA's board.

*“Vern Clark, with his experience and expertise as a surface warfare officer and as a leader, will ensure our association continues its steady course of growth, success and increasing value to the Navy and all those it serves.”*

*Retired Adm. James Hogg, outgoing chairman of the SNA board*

“It’s been an honor and privilege to lead SNA for the past 25 years, and it has been immensely gratifying – both professionally and personally – to see our association grow in support of the surface warfare professionals in the Navy and Coast Guard in so many meaningful ways,” Hogg said. “Vern Clark, with his experience and expertise as a surface warfare officer and as a leader, will ensure our association continues its steady course of growth, success and increasing value to the Navy and all those it serves.”

“We have been incredibly fortunate to have Adm. Jim Hogg at the helm of our association during a period of incredible growth and success in meeting its mission,” said retired Vice Adm. Rick Hunt, who is the president of SNA. “Surface warriors have benefited from his leadership and his dedication to his shipmates, past, present and to come. SNA’s success in maintaining a strong membership, growing participation in our symposiums and professional development events, active chapters and sound financial health is in no small part due to his contributions.”

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# Sikorsky, Rheinmetall Unveil Plans for German Heavy-Lift CH-53K



Sikorsky and Rheinmetall submitted a bid for production and operation of the Sikorsky CH-53K King Stallion heavy-lift helicopter. Photo by Sikorsky

Koblenz, Germany – Sikorsky and Germany's Rheinmetall submitted a bid for the production and operation of the Sikorsky CH-53K King Stallion as the Bundeswehr's new heavy-lift transport helicopter for its Schwerer Transporthubschrauber (STH) program, Lockheed Martin, which owns Sikorsky, said in a release.

"Our entire team is pleased to offer the CH-53K, the most efficient, capable and intelligent helicopter that will deliver the best long-term value to the Bundeswehr through the 21st century," said Beth Parcella, CH-53K's international business development director.

Sikorsky and Rheinmetall formed a STH project team of more than 10 German companies, which includes MTU Aero Engines, Autoflug GmbH and Hydro Systems.

Parcella stressed that it was important "to build a strong German industrial team early on and to capitalize on the know-how of the German teammates for the STH project." This will ensure the quality of the offer and subsequently the high availability of the CH-53K in the German air force, she said.

"German companies will play a significant role in the success

of the CH-53K program,” said Mike Schmidt, managing director of Rheinmetall Aviation Services. “For the industry, this means the creation of many new, long-term jobs for highly qualified employees and an important transfer of know-how. Sikorsky and Rheinmetall prepared the application together over a long period of time – this has strengthened the bonds within our team.”

The CH-53K’s avionics and digitized flight control systems are designed to accommodate future software upgrades, and its internal payload capability may be increased substantially with relatively simple modifications. An integrated sensor system enables the aircraft to predict and prevent problems at an early stage and thus drastically reduce the maintenance effort, which is key for high availability rates of the fleet.

Additionally, the CH-53K is equipped with air-to-air refueling fully interoperable with Lockheed Martin’s KC-130J tanker aircraft, which the Bundeswehr is planning to operate and which is already being used by France.

The CH-53K easily accommodates the same air transport pallets, enabling fast cargo handling between it and fixed-wing transport aircrafts such as the C130-J and the A400M. This means that the helicopter can be used particularly in areas where these aircraft cannot land.

The CH-53K can be used for the tactical transport of personnel and material as well as for disaster relief, humanitarian missions, medical evacuation or combat search-and-rescue operations. For example, no other heavy-lift helicopter can transport more water to fight fires and simultaneously carry material and personnel. The CH-53K features fly-by-wire flight controls, reducing the pilots’ workload and allowing pilots to anticipate limits while keeping their eyes outside.

If the bid is successful, Sikorsky and Rheinmetall intend to

set up a logistics hub and a STH fleet support center at Leipzig/Halle Airport. The two are in talks with representatives of state government, local companies and the airport operator.