Navy Awards Next-Gen Radar Contract

By Kris Osborn Tuesday, October 15th, 2013 1:13 pm
Posted in Naval

The Navy awarded Raytheon a possible $1.6 billion deal to develop, manufacture and integrate a new air-and-missile defense radar on Navy destroyers that is substantially more powerful and sensitive than existing radar systems used on ships today, service officials said.

The new radar, called Air and Missile Defense Radar, or AMDR, is slated for integration on the next-increment or Flight III Arleigh Burke-class destroyers in 2019, according to Navy spokesman Lt. Kurt Larson.

The contract was awarded Oct. 10. Initial funds for this deal are available despite the ongoing government shutdown because the money was budgeted for fiscal year 2013. During the shutdown, no new contracts can be awarded with fiscal year 2014 dollars unless they are for “excepted” activities because there are no approved funds.

The AMDR radar system is more powerful in its ability to detect and locate potential threats than the current Aegis AN/SPY-1D radar on ships today, service experts said.

“AMDR will see and differentiate between objects half the size and twice the distance of a SPY-1(D) radar,” Larson said.

“Unlike the legacy SPY-1 (D) radar which is a passive phased array, AMDR will be an active array radar that will use gallium nitride semiconductor technology. This allows AMDR to achieve much greater power efficiency with far less transmitter noise,” he added.

AMDR consists of S-band and X-band radars and a Radar Suite Controller, or RSC; together, these technologies are able to scan, track and search the horizon and surrounding area for potential threats by sending an electromagnetic signal into the atmosphere — then analyzing the return signal of what it bounces off or hits; this information, generally speaking, can in many cases provide dimensions of an incoming threat, such as a missile, by identifying its size, shape, location and trajectory.
Similar to its predecessor, the Aegis AN/SPY-1D radar, the AMDR includes a phased-array radar, Navy officials indicated; the S-band radar is engineered for long-range detection and the engagement of advanced threats, whereas the X-band radar performs the over-the-horizon search capability.

“AMDR S-band is a new development radar providing sensitivity for long-range detection and advanced threats. The X-band radar is a horizon-search radar based on existing technology,” Larson said.

“Under the contract, Raytheon will build, integrate and test the AMDR S-band and Radar Suite Controller engineering development models. For the ship sets covered under this contract, the AMDR suite will integrate with the existing AN/SPQ-9B X-band radar,” Larson said.

The base contract begins with design work leading to preliminary design review and culminates with system acceptance of the AMDR-S and RSC engineering development models at the end of testing at the Advanced Radar Detection Laboratory, Pacific Missile Range Facility, Kekaha, Hawaii, he said.

The contract includes options for procurement up to nine radars which may be exercised following a Milestone C procurement decision which is planned for fiscal year 2017. The options, if exercised, would bring the cumulative value of this contract to $1.6 billion, Larson explained.

The AMDR radar is performing very well in its current technology development phase, however the Navy is currently immersed in a series of technological adjustments or engineering change proposals needed so that that DDG 51’s can accommodate the new radar, Navy officials said.

In particular, the DDG 51s will need more on-board power and more cooling capability integrated into the ship platform, Navy officials said. As a result, Navy officials are working on installing larger megawatt generators and cooling plants than are currently on the ship in order to accommodate the AMDR system.

Among other things, this involves changing the existing DDG 51’s 200-ton Air Conditioning plant to a 300-ton plant, Navy officials said.

http://www.dodbuzz.com/2013/10/15/navy-awards-next-gen-radar-contract/
Lost your password?
Cancel Login
Dashboard | Edit profile | Logout

• Logged in as

Sort by: Date Rating Last Activity

+3 Vote up Vote down

Big-Dean · 5 weeks ago

Twice as powerful eh. Perhaps now we can simply "fry" incoming missiles and aircraft with radiated energy ;-)  

Any experts want to chime in here?

Report
Reply
1 reply · active 4 weeks ago
0 Vote up Vote down

LtKitty · 4 weeks ago

Maybe if we point them at North Korea we can fry Honorable Leader's junk off.

"Ooops... sorry, we were just polling for missiles. Sooo soorry."

Report
Reply
0 Vote up Vote down

extreme_one -60p · 5 weeks ago

As soon as I saw the words "gallium nitride semi-conductor technology" my thoughts went to Shane Todd. https://en.wikipedia.org/wiki/Death_of_Shane_Todd

Report
Reply
+3 Vote up Vote down

blight_ 115p · 4 weeks ago

I assume they'll also be intended to have miniaturized electronics with reduced power draw? Are we ambitiously hoping to be able to back-fit them to older Burkes too? The allusion to a larger air conditioning cooling plant seems to suggest that increased heat is inevitable; thus RCS return orIRST will be used to detect these ships.

I'm wondering if the next Burkes will incorporate revisions to the superstructure to lower RCS?

Report
Reply
2 replies · active 4 weeks ago
+1 Vote up Vote down

Greg · 4 weeks ago

I personally think we should start mature the 1000. Isn't this also the same radar to be used on the 1000?

Report
Reply
+1 Vote up Vote down
Zumwalt is intended to have a SPY-3 and an AMDR. Not sure of the specifics though.

Shape!! Every missile I've ever seen had a nose cone, was round and had fins

Shoot the ducks, not the decoys.

You haven't seen much of what goes on in the exo-atmosphere - not many have. You may get a good look in the near future when those contrails appear high overhead and the entire sky lights up.

The power consumption is a result of the phased array antenna elements, the more elements in the array; the more power needed to supply the array. This will lead to 4KVDC power generation on US Navy ships in the future. There will be advantages to larger generators for future upgrades, but there are disadvantages for battle damage and personnel safety as well. The US Navy desire for rail guns and lasers may push the power requirements to beyond 4KVDC power generation. The Electrician's Mate rating may become more in common with an industrial lineman for maintaining ships power.

Soon we'll need contract electricians to sail with the ships from the factory. Or on the plus side, it'll mean job security once they leave the service.

Don't forget what's happening to the electric plant on the next generation aircraft carrier. The Everyready bunny doesn't power the electromagnetic catapults.
Commenting Policy

We welcome your comments on our blogs. We ask that you keep your comments on topic, socially acceptable and free from slander, personal attacks, threats, and discrimination. We will moderate and delete comments we find to be beyond acceptable, as well as comments containing phone numbers and email addresses. We will block commenting from users who abuse our policies. You can read the official Military.com User Agreement for more information.

Comments by IntenseDebate

NOTE: Comments are limited to 2500 characters and spaces.

By commenting on this topic you agree to the terms and conditions of our User Agreement

Handgun Accuracy Secrets:
www.InstantAccuracy.org
Avoid the 7 Deadly Sins of Handgun Accuracy:

Government RFPs & Bids
www.BidSync.com
Daily List of New Govt Contracts Register w/ BidSync for Free Today

Windows 7 Driver Download
Windows 7 Drivers Latest Download. Microsoft Certified. (Recommended)

• Military.com Daily News
  • Air Force Honors Pilot Who Flew With One Wing
  • Navy Ships Quench Philippines’ Thirst
  • Aviation Museum Honors Hornet’s First Flight
  • Acting SECAF Says Air Force at Budget Risk
  • Cav Soldiers Prepare for Life After Inactivation
  • B-52 Crews Help Save Disoriented Pilot
  • Coast Guard Rescues 2 from Fishing Vessel Dreamer

• Most Read
  • Air Force Begins Massive B-52 Overhaul
  • Air Force Mourns Likely Passing of A-10 Warthog
  • Astronaut’s Nomination Yanked Over Sex Assault Case
  • C-27J Reemerges Despite AF’s Boneyard Plans
  • Navy Leaders Try to Rescue LCS From Its Own Report

http://www.dodbuzz.com/2013/10/15/navy-awards-next-gen-radar-contract/
• Got a Hot Tip? | Philip Ewing’s Bio
• Get the DoD Buzz Newsletter
• RSS | Subscribe by email
• Twitter | Facebook

Recent Comments

• COIN Doctrine Under Fire
  Anyways. You can’t win a COIN campaign unless certain conditions are met, 1) Be willing to send in the masses of Infantry that such a campaign MUST HAVE. (We...
  Belesari
• COIN Doctrine Under Fire
  Smoking whatever it is you are isn’t really helpin’ ya Taxes. I swear to god I have yet to hear a logical rant on Iraq. And even when you show them...
  Belesari
• COIN Doctrine Under Fire
  Petraeus should have read Martin Van Crevald, who said back in about 2006 that in 300 years of modern military history, NO counter-insurgent has ever won. NONE. He...
  Taxpayer
• Lockheed Martin Slashes 4,000 Jobs
  So you’re saying reform the tax code to dis-incentivize short-term behavior?
  blight_
• Lockheed Martin Slashes 4,000 Jobs
  “that have been educated through the public money” What public money? There's student loan debt, so it's more like indentured servitude.
  blight_

• Channels:
  • Military Benefits
  • Military News
  • Off Duty
  • Join the Military
  • Military Education
  • Veteran Jobs
  • Military Money
  • Military Deals
  • Spouse
  • Military Community
  • Video

• Military.com Network:
  • Military.com
  • CinCHouse
  • MilBlogging
  • Defense Tech
  • DoD Buzz
  • SpouseBuzz

• Services: