RIM-116 Rolling Airframe Missile (RAM)

Description
The RIM-116 Rolling Airframe Missile (RAM) is a lightweight, quick-reaction, fire-and-forget missile designed to destroy anti-ship cruise missiles and asymmetric air and surface threats. The RIM-116 RAM was developed as a cooperative program between the U.S. and German governments, and continues to be cooperatively produced and supported. Currently there are two RIM-116 configurations: Block 0 (RIM-116A) and Block 1 (RIM-116B). Block 1 is in full rate production. A RAM Block 2 configuration is currently in the Engineering and Manufacturing Development (EMD) phase.

Features
The RIM-116 RAM is designed as an all-weather, high-firepower, low-cost, self-defense system against anti-ship cruise missiles and other asymmetric threats. The original Block 0 design was based upon the infra-red seeker of the Stinger missile, and the warhead, rocket motor and fuse from the Sidewinder missile. The Block 0 configuration uses Radio Frequency (RF) for midcourse guidance and transitions to Infrared (IR) guidance for terminal engagement. There is no shipboard support required (i.e., no illuminators) after missile launch. The Block 1 incorporates the added capability of autonomous IR-all-the-way guidance, thus countering advanced anti-ship cruise missiles that do not employ onboard radar seekers. The Block 2 will provide kinematic and guidance improvements to the missile for countering maneuvering threats and regaining battlespace, featuring a Control Section upgrade (4 canards vs. current 2), a Propulsion Section upgrade (a larger, composite case rocket motor) and an Evolved Radio Frequency (ERF) receiver. RAM Block 2 Initial Operating Capability (IOC) will occur in Fiscal Year 2013.

Background
The RIM-116 RAM is a cooperative venture between the U.S. and German governments. The RIM-116 RAM is fully operational in the U.S. and German Navies with more than 3,400 missiles and 180 launchers deployed on more than 100 ships ranging from fast patrol boats to aircraft carriers. It is also being installed on a majority of new USN ship classes (LHA 6, CVN 78 and LCS).

Point Of Contact
Office of Corporate Communication (SEA 00D)
Naval Sea Systems Command
Washington, D.C. 20376

General Characteristics
Primary Function: Ship Self Defense. RAM Launcher Specifications
Above-Deck Weight: 11,432 lbs. (5,196 kg)
( Including Rounds)
Below-Deck Weight: 2,069 lbs (940 kg)
Working Circle: 129 in. / 3.28 m
Train: +380°
Elevation: –25° to +80°
Missile Capacity: 21
Contractor: Raytheon.
Date Deployed: Mid-1993.
Propulsion: Solid-propellant rocket.
Length: 9.3 ft 2.82 m
Diameter: 5 inches (12.70 centimeters)
Wingspan: 17.5 in / 44.5 cm
Weight: 962 lbs. (73.5 kilograms)
Speed: Supersonic
Platforms:
Amphibious Assault Ships (LHA/LHD)
Landing Platform Dock Ships (LPD)
Carriers (CVN)
Dock Landing Ships (LSD)
Littoral Combat Ship (LCS)
Warhead: 7.9 lbs. (explosive weight).

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