

ESSM Evolved SeaSparrow Missile



The **Evolved SeaSparrow Missile** offers best-in-world performance against high-speed, highly maneuverable anti-ship cruise missiles, surface threats and low-velocity air threats.

Benefits

- High firepower
- Longer range, higher speed and increased maneuverability
- Increased performance against smaller, sea skimming, maneuvering targets
- Improved efficacy against hardened anti-ship missile threats
- New post-launch interfaces include X-band and S-band midcourse uplinks and interrupted continuous wave terminal illumination
- Increased performance against surface and low-velocity air threats

ESSM Mission

The Evolved SeaSparrow Missile (ESSM) defends the local area battlespace, delivering lethal, quick reaction firepower against faster, lower, smaller and more maneuverable anti-ship threats, including cruise missiles, surface threats and low-velocity air threats.

ESSM Advances

Modern fleets require an agile counter to the evolving threats that endanger today's navies. ESSM meets the challenge with fast, maneuverable, long-range performance; a guidance section capable of targeting smaller threats; and a warhead that is lethal against hardened targets. ESSM is a tail-controlled missile with maneuverability throughout the flight envelope and thrust vector control for quick pitchover after vertical launch. ESSM's state-of-the-art fuze maximizes lethality against low-altitude, low cross section threats. ESSM requires no

prelaunch warm-up and is ready for engagement at all times.

Launcher Compatibility

ESSM is designed with the broadest degree of system compatibility in mind. It is integrated into a wide variety of combat systems including the Aegis, NATO SeaSparrow Surface Missile System U.S. and Dutch configurations, APAR (Active Phased Array Radar), Stanflex and Anzac. ESSM can be loaded in a quad-pack canister for the MK 41 and MK 57 vertical launch systems, or a dual-pack canister for the MK 56 vertical launch system. Both canister configurations offer a significant increase in load-out capacity and firepower for naval combatants. ESSM can also be loaded into a single pack for the MK 29 trainable and MK 48 vertical launchers.

Technology Exploitation

ESSM's design exploits modern missile control technology to

counter emerging ship defense threats. ESSM can employ inertial midcourse, command midcourse or home-all-the-way guidance. For terminal guidance, ESSM supports conventional continuous wave illumination or interrupted continuous wave illumination-sample data homing guidance used by multifunction radars. Both S-band and X-band data links communicate with capable combat systems.

Cooperative Development

Raytheon leads a capable international team of 16 world-class companies in developing and producing ESSM. The team concept — that a program requires mutual design and production efforts — develops the industrial bases of all participating countries, uses the expertise and technological skills of each participant and provides each country a return on investment.



Local Area Defense



ESSM kinematics provide the capability to defend ships in company against the full spectrum of threats



ESSM is a proven solution compatible with a wide array of naval platforms.



Navies with the resources to buy the best solution have bought ESSM



Threat Coverage

- High-speed, highly maneuverable anti-ship missiles (SS-N-22, Brahmos, etc.)
- Moderately fast and agile anti-ship missiles (Exocet, etc.)
- Aircraft
- Helicopters
- Surface targets

Testing

- Extremely challenging and realistic operational testing program successfully completed
- USN OPEVAL resulted in assessment of operationally suitable, operationally effective and recommended for fleet introduction
- On-going international navy testing program is underway with 6 first of class firings successfully completed

Production

- High production rates provide economies of scale
- Worldwide support network in place and operational

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