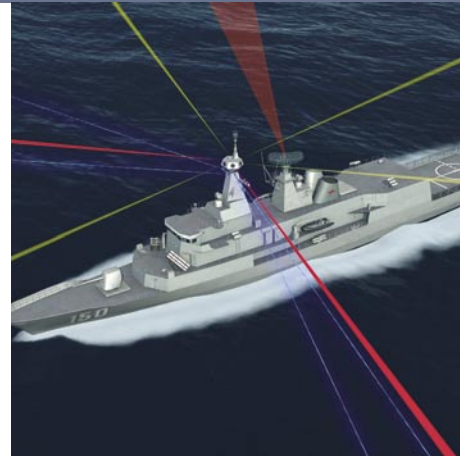


ADVANCED AIR WARFARE SYSTEM

Naval combat capability to defeat multiple modern missile attacks



The ability of a modern warship to defend itself against threats of the 21st century is critical. It must sustain National and Coalition operations in multi-threat environments in both the littoral and open ocean.



CEA active phased array radars, integrated with the updated Saab 9LV Mk3E CMS have been selected for the RAN ANZAC Ship ASMD Upgrade Program.

The high end of future conventional threats includes faster and more sophisticated sea-skimming missiles employed in a coordinated manner. Asymmetric threats include swarming surface craft, airborne threats such as helicopters, or light aircraft and land based small and medium arms, often shoulder launched.

Two Australian companies are combining their technologies to provide a unique, low-cost, high performance air warfare system for small to medium sized warships. The CEA-Saab Advanced Air Warfare System includes the advanced threat analysis and flexible combat systems coordination of a proven Combat Management System with highly efficient search and track capabilities of phased array radar technology.

The Saab 9LV Mk3E Combat Management System (CMS) integrates the ship's sensor, weapon, data link and intelligence systems to provide the functionality for automatic reactions and rapid response to threats.

The CEA active phased array surveillance radar CEAFAR provides 3D above-water volume coverage including rapid horizon search. CEAMOUNT provides active phased array target illumination and control for the anti-ship missile defence systems.

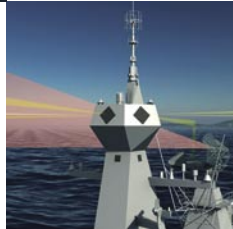
The CMS and phased array radars are augmented by surface-to-air missiles and air defence guns as well as electronic attack systems and decoys. This complete system has the defensive capability to handle at least ten attacking missiles simultaneously, as well as providing a level of force protection against air threats.

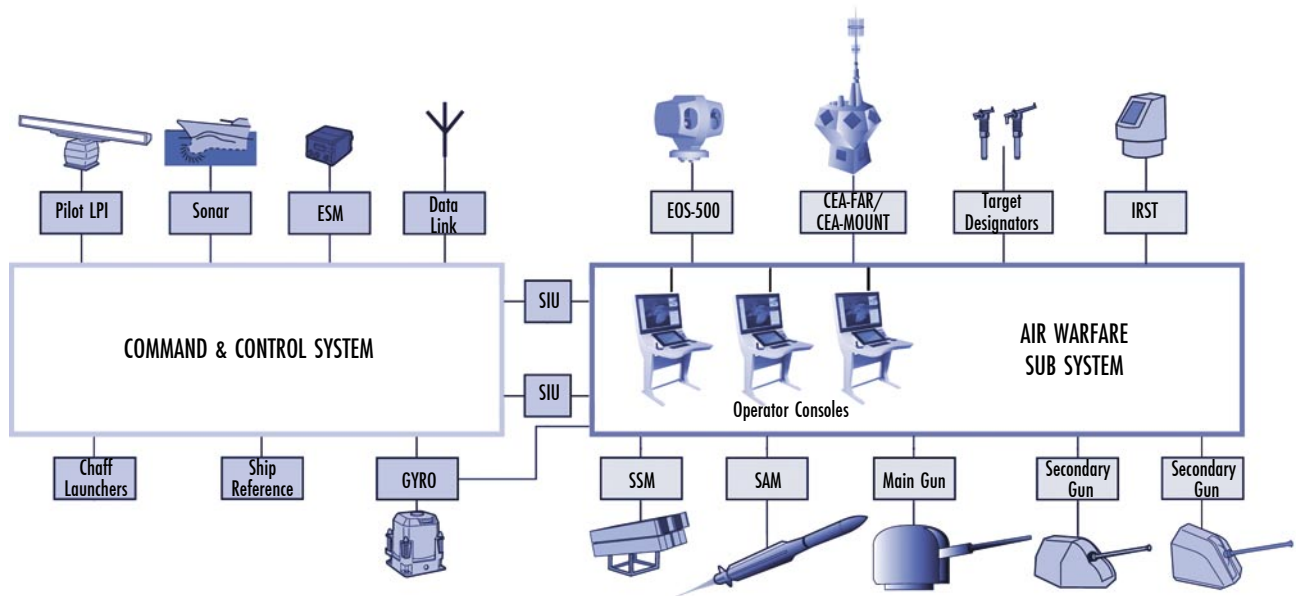
Scalability is a key feature of the CEA-Saab system, providing advanced combat system capabilities suitable for platforms ranging from small fast-attack craft and corvettes to large frigates, destroyers and cruisers. Many system components are also suited to amphibious support ships and aircraft carriers.

The Combat Management System

The Saab 9LV Mk3E CMS provides the functional heart of an integrated combat system managing sensor and weapon systems to fit the missions and tasks of any ship.

Air, surface and subsurface defence of the ship are supported by sophisticated automatic and semi-automatic functions optimised for rapid reaction and





the optimum use of the weapon systems capabilities. The CMS enables flexible control of the fully integrated combat system from any of the CeCots multifunction consoles.

The high flexibility and functionality of the CMS enable the crew to perform force level command simultaneously with own ship command and control.

Air Warfare Sub System

The open architecture of the Saab combat management system facilitates a modern cost-effective approach to air warfare. Coupled with the active phased array radars, new or extant effectors and weapons can be interfaced with legacy or national command and control systems. This innovative approach uses the sophisticated threat evaluation and weapons assignment features of the Saab 9LV Mk3E CMS, without the need to replace or modify other combat system components. Capability enhancement in detection, tracking and missile guidance is provided by the CEA active phased array radars, particularly in the littoral environment.

CEA Active Phased Array Radar Systems

CEA's active phased array radar systems provide fully programmable, scalable radar systems that can be configured to meet customer-specific operational

performance and budget constraints. The combination of S-band, X-band radars and IFF active phased array antennas in fixed and agile directors provides full surveillance and missile control capability.

CEAFAR Surveillance Radar

The CEAFAR surveillance radar system has a low radar cross-section, reduced infra-red signature, and electronic beam and power management for ECCM. The algorithms and processing include automatic target detection, tracking and classification capability.

The ship installation impact of CEAFAR is low. Power, weight and size allow for simple platform physical and electronic interface, as well as flexible siting options.

CEAMOUNT Active Phased Array Illuminator

The X-Band CEAMOUNT is an active phased array illuminator offering capability to engage multiple simultaneous targets and provide uplink with flexible beam management over a broad azimuth and elevation sector from each face.

Each illuminator face provides multiple missile channels of fire and far higher availability and redundancy than current missile fire control systems. CEAMOUNT also provides significantly reduced radar cross-section.

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