



KONGSBERG

FDC-VSHORAD

A Key Element in an Active, Layered Air Defence Structure



The FDC-VSHORAD (FDC-V) system provides Air Defense Battle Management, Fire Control & Coordination and System Communications Management for the optimal utilisation of VSHORAD weapon platforms. The system is characterized by its advanced BMC4I and fire control, state-of-the-art tactical interfaces and modern man machine interface (MMI) - all of which provide a significant increase in the combat efficiency of localized and distributed VSHORAD weapons.

The FDC-V also increases situational awareness for the VSHORAD operators and provides early warning and accurate 3D target data for engagement. Efficiency increases up to 60% when cued by a high performance 3D radar. The FDC-V ensures friendly protection and coordinates the effects of VSHORAD in the battlefield. All of the Surveillance, Tracking, Identification, Threat Evaluation and Weapon Target allocation functionality is optimized for the specific weapon systems.

The FDC-V is a scalable system that provides a flexible solution for varying mobility, deploy-ability and mission requirements.

Features

- Proven and fielded BMC4I for air defense - Selected by 6 nations
- Net-Centric, modular and scalable
- Supports multiple sensors, sensor types, launchers and weapons
- Easy to Operate
- Low Manpower Requirement
- NATO Interoperable with Optional TADILs and interface message protocols (e.g. Link 11B, Link16, LLAPI etc)
- Open software and hardware architecture ensures technology insertion and support of national requirements sensors/weapon



FDC-V - Scalable Solutions

The FDC-V is a no risk, off-the-shelf solution with seamless integration of various VSHORAD weapon platforms (Dual Mounted Stinger, Vehicle Mounted Stinger Launch Platforms, Avenger, SL-AIM 9X, Protector RWS, MANPAD and gun systems). The FDC-V system can utilize a variety of its proven Tactical Data Links to interface to multiple sensors, adjacent C2 entities as well as higher echelon units to generate a common shared air picture. It interfaces the weapon systems through a two-way interface message protocol. The standard FDC-V Air Defense Console is employed with one operator work station (two is customer selectable) and is integrated in a variety of shelters and vehicles. A Mission Planning Tool (MPT) used for deployment planning, mission analysis, scenario generation and operator training is embedded in the system.

Sensors

The FDC-V can integrate to a variety of 3D search and acquisition radars/ sensors. Two options include the Sentinel and the HARD radars.

The Raytheon AN/MPQ-64 Sentinel Radar is a modern 3D pencil beam radar featuring a large surveillance and track volume, a phase-frequency electronic scanning antenna with X-band range gated pulse Doppler operation. It has a high scan rate (30 rpm), 75 km range, with high ECM resistance.

The SAAB HARD radar is a 3D search and acquisition radar specially designed to be a 'silent radar' in Air Defence Missile Systems. Small size and minimal weight make it easy to integrate onto all types of vehicles.

Launch Platforms

The Launch Platform is equipped with a weapon control terminal for reception of air picture and fire control data sent from the FDC-V. The FDC-V system will cue the weapon systems either by Automatic Direct Target Allocation (DTA), where the system recommends which weapon unit to use, or by broadcasting all tracks within the Area of Responsibility. The use of DTA will maximize engagement range and prevent overkill. Friend protection is ensured by the use of IFF/SIF and a friend protection logic for fratricide avoidance.

Interoperability with SHORAD/ MSAM

The FDC-V system contains all the necessary modules to interoperate with other air defense systems. Kongsberg/Raytheon can offer integrated solutions that provide the ability to operate with the Surface Launched AMRAAM (SL-AMRAAM), HAWK and PATRIOT systems. The SL-AMRAAM missile is a high firepower and fire-and-forget missile, capable of multiple target and cluster target engageability, non line-of-sight remote launch, and advanced ECCM. SL-AMRAAM is the number one Cruise Missile and UAV defense system.

The HAWK XXI and PATRIOT systems provide respectively longer ranges and higher altitude missiles than the SL-AMRAAM.

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