

# Digital Stores Management System (DSMS)

*Integrating and Controlling Modern, Advanced Precision Weapons*



Improves warfighting capability through control of advanced precision weapons

Enhances operator training through mission simulation modes

Enables rapid Integration of new capabilities

Lowers cost and risk throughout the product lifecycle

Improves safety by providing enriched operator feedback

Reduces system weight by 300lbs from legacy system

Modernizes stores management with digital interface

Increases system versatility with standards-based architecture

## Overview

DSMS is a standards-based MIL-STD-1760D/E weapons control system enabling the launch and control of modern precision guided weapons. The system provides an immediate improvement to the P-3 Orion and other maritime patrol aircraft by replacing the legacy analog stores management system with a modern digital solution.

General Dynamics has a tested and proven combat heritage as a leading provider of stores management systems (SMS) for military aircraft. As a leading systems integrator, we have designed DSMS with an eye toward future technology improvements that will continue to provide maritime patrol aircraft with the overall tactical advantage in the maritime environment.

DSMS improves safety by providing the operator with enhanced weapon status feedback. Additionally, the system's simulation mode provides the ability to simulate stores for enhanced operator training.

Built with an open systems architecture, DSMS is scalable to support unique mission requirements, from an individual weapon control system to up to 18 weapon stations. This approach also enables customers to rapidly integrate new capabilities to meet evolving mission needs.

# Digital Stores Management System (DSMS)

**Providing a digital interface to integrate and control modern advanced precision weapons**

## Lower Cost and Risk throughout the product lifecycle

A proven, tested solution, DSMS offers lower costs and reduced risk throughout the product lifecycle. The system has successfully completed the U.S. Navy's extensive and rigorous development process, including testing, and installation. Deployed on aircraft around the world, we leverage DSMS' existing international business base to help offset costs.

## Standards-based system

DSMS is a standards-based MIL-STD-1760 weapons control system that provides selection, arming, release and post launch control of modern precision guided weapons.

DSMS is expandable – After DSMS is installed, new MILSTD-1760 stores can be integrated with software modification only and no additional hardware.

DSMS is fully compatible with standard test sets. No new support equipment is required.

## System Components

- **Weapon Interface Controller (WIC):** The WIC is a line replaceable unit (LRU) that provides the selection, arming, and release functions in addition to data interfaces for aircraft weapons and stores.
- **High Bandwidth Sonobuoy Controller (HBSC):** The HBSC provides the primary processing and interface functions for sonobuoys and other search stores in the DSMS system.
- **TACCO Armament Panel (TAP):** Located at the Tactical Coordinator (TACCO) station, the TAP is a commercial-off-the-shelf (COTS) touch panel display that provides the operator interface for the DSMS system.
- **Ordnance Control Panel (OCP):** The OCP allows selection and release of sonobuoys from unpressurized and pressurized sono-launch tubes at the ordnance operator station. The OCP is interchangeable with the TAP.
- **Armament Control Panel (ACP):** The ACP provides positive control of weapon releases and is installed in the cockpit between the pilot and copilot.
- **TACCO Release Panel (TRP):** The TRP is installed at the TACCO Station and provides ancillary control, status, and cueing functions for the TACCO.
- **Stores Management Operational Program (SMOP):** The SMOP is the application software that resides and executes in the WIC and the HBSC. It provides the TACCO with operational control of weapons, stores, and sonobuoys as well as a simulation capability for training mode for enhanced operator training.
- **Simulation Mode:** DSMS provides the capability to simulate stores to enhance operator training.

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