

Distributed Stores Management System



40 years in the design, development, certification and support of safety critical stores management systems (SMS) for aircrafts worldwide.

We developed the next generation distributed SMS capability based on our compact modular computer (CMC) technology.

Our distributed Stores Management System (dSMS) technology has been designed for air launched weapon integration and carriage system applications.

The dSMS includes the General Dynamics Rapid Store Integration Capability (RSIC), enabling rapid, highly cost effective weapon integration through data reconfiguration of the installed software using our supplied software tooling.

Features

- Scalability (# stations, UAS spectrum)
- Reduced Size, Weight and Power (SWaP)
- Improved system availability
- Increasing weapon complexity and mission system integration impact
- Next generation networked avionic architectures
- Applicable to: fixed and rotary wing aircrafts, uncrewed air systems in both GCS and air components, and weapon carriage system electronics

Technical Information

Technical Parameters	dSMS General Processing	dSMS Station Node	dSMS Carriage Electronics Unit
Mission Systems Interface	Ethernet, MIL-STD-1553B		N/A
Weapon System Interface	N/A	2 x MIL-STD-1760 class II ASI (no HB/LB), or 2 x SAE AS 5725 MMSI class II	1 x MIL-STD-1760 MSI 3 x SAE AS 5725 MMSI class II
Suspension and Release Equipment (bomb rack)	N/A	2 off EMRU/ERU or 2 off miniature bomb rack (Harris Hornet)	2 off miniature bomb rack (Harris Hornet)
Weight (Kg)	1Kg	1.3Kg	1.3Kg
Power Dissipation (W)	<15	<20	<20
Dimensions LxWxH (mm)	240 x 104 x 40-57 (variable height depending on configuration)		
Chassis	Custom		
Power Supplies	1 off 28v DC logic supply 1 off 28VDC Armament supply (MASS Live)		
Generic Interfaces	Ethernet, RS485, configurable Discretes		
Available Features	Weapon/store inventory discovery and conflict resolution Weapon/store mission planning, control and release Weapon/store selective jettison Weapon post launch control Rapid Store Integration Capability Comprehensive built-in test Fault and Event logging Ground Test Function to test aircraft armament system installation Extension of Ground Test Function to include MIL-STD-1760D ASI wiring with addition of separate General Dynamics Weapon Interface TestSet		Sub munition inventory management Sub munition power control management Sub munition mission planning, control and release Sub munition jettison Carriage system BIT Sub munition BIT Fault and event logging
Cooling Requirements	Conduction cooling through chassis fixings		
Operating Temperature	SMS function -40°C to + 50°C – Extended temperature variants available		
Storage Temperature	-55°C to +85°C		
Vibration Limits	RTCA DO-160F Section 8 categories S, R		
Shock Limits	RTCA DO-160F Section 7 category B-R20		
Salt Fog	RTCA DO-160F Section 14 Category S		
Sand and Dust	RTCA DO-160F Section 12 Category S		
Thermal Shock	DEF-STAN 00-35 part 3: Test CL14		
Altitude	DEF-STAN 00-35 part 3: Test CL21 – Operating up to 4,572M – Transport up to 15,220M		
Drip	DEF-STAN 00-35 part 3: Tests CL28		
EMC	DEF-STAN 59-41 for aircraft use		
System Safety	Def Stan 00-56		
Software Certification	Def Stan 00-55		