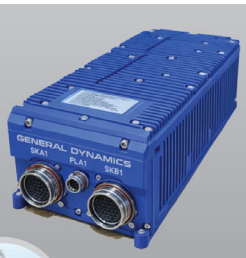
GENERAL DYNAMICS
Mission Systems

Viper

Low SWaP Dual-Use Stores Management Computer

The Viper design is the result of more than 40 years' pedigree in the design, development, certification, and support of safety critical Stores Management Systems.



Air-to-Air
- AIM-9
- AMRAAM
- ASRAAM
- Meteor
- Gun/canon

Air-to-Ground
- SP bombs
- Rockets
- Brimstone
- Free Fall LMM
- Maverick
- Popeye
- StormShadow
- Paveway III/IV

Air-to-Surface
- Harpoon
- Martlet
- Sea Venom

Anti-submarine
- MK 46/54
- Stingray
- Depth charge
- MU90
- A244

Non-kinetic Stores
- Search and rescue pods
- Sonobuoys
- Logistics pods
- EO/IR pods
- ECM/ESM pods

Operational Features

- Designed to control and release all store types, both kinetic (military) and non-kinetic (civil) for operations ranging from Search & Rescue (SAR) and environmental monitoring to military strike.
- A key component of any stores management system, Viper offers huge flexibility to platform integrators.
- Design ensures it is appropriate for all platform sizes, whether rotary or fixed wing, manned or unmanned.
- Underpinned by the latest approaches in high integrity software development.
- Offers unprecedented flexibility for the introduction of new or modified store types to enabling lower cost and faster integration onto your platform.
- Can be used stand alone, or combined with other DSMS components to provide cost effective, tailored stores management capabilities.
- A low size, weight and power, ITAR-free store station control solution.
- 2 x Suspension & Release Equipment interfaces.
- 2 x MIL-STD-1760E or AS5725[1,2] weapon interfaces.
- Single or dual processor modular design.
- High integrity (RTCA/DO-254 DAL A) safety interlocks.
- RTCA/DO-178C DAL C Rapid Store Integration Capability (RSIC) compliant software architecture.
- Other DSMS family components provide flexible emergency jettison, power switching, legacy weapon interfacing and high/low bandwidth routing capabilities.

Viper is the core component of our range of low SWaP solutions, designed to simplify integration.

Technical Information

Technical Characteristics

Mission System Interfaces	MIL-STD-1553B and 10/100 Base T Ethernet RS485 for dedicated high integrity Weapon Control Panel
Weapon System Interfaces	2 x MIL-STD-1760E Class II ASI (no high or low bandwidth) 2 x SAE AS 5725B Class II/A MMSI
Suspension and Release Equipment Interfaces	2 x electro-magnetic or hot/cold gas Ejector Release Unit interfaces (L3Harris Hornet-compatible) In-flight operable lock Normally open and normally closed store on station returns
Mass (kg)	<2.2Kg
Power consumption (W)	<22W
Dimensions LxWxH (mm)	246 x 104 x 71
Connectors	2 x 85-pin Glen Air "Mighty Mouse" sockets (input/output) 1 x 7-pin Glen Air "Mighty Mouse" plug (power)
Power Supplies	28VDC Logic Power (MASS Standby/Live), in accordance with MIL-STD-704E 28VDC Armament Power (MASS Live)
Safety Interlocks (dual MIL-STD-1760/AS5725 and S&RE interface variant)	Late Arm Weapon Release Button Selective Jettison Guard Selective Jettison Button Weight on Wheels Selected station MIL-STD-1760 and AS5725 station interlocks
Discrete Outputs	High Integrity Station Selected indicators Store hazard/SMS fail indicator
Processor	NXP T1024 CPU Power Architecture 1.2GHz 4GB DDR4 RAM 1600MHz 1GB NAND Flash Storage Secondary 32MB NOR SPI Flash Storage 66MHz PCI Bus Speed
Qualification is available against DO160 and MIL-STD-810 (the following specifications are provided to indicate levels):	
Temperature/cooling	-40 degrees C to +50 degrees C (convection-only cooled) +70 degrees C (baseplate cooled) MIL-STD-810H method 520.5 (combined environments)
Storage	-55 degrees C to +85 degrees C
Vibration limits	MIL-STD-810H test 514.8 Procedure I Annex D-I (STANAG 4370 vibration levels)
Shock limits	MIL-STD-810H method 516.8 Procedures I and VI
Salt fog	MIL-STD-810H method 509.7
Fungus/Mould Growth	MIL-STD-810H method 508.8
Sand and dust	MIL-STD-810H method 510.7
Altitude	-1,500ft – 48,000 ft (-458 – 14,630 m) MIL-STD-1810H method 511.7
Drip	MIL-STD-810H 506.6 Procedure 3
EMC	MIL-STD-461G CE102, CS101, CS114, CS115, CS116, RE102 and RS103

Note 1: RS422 physical layer/UART data interface only.
Note 2: MIL-STD-1760E high and low bandwidth routing capability not provided. This can be provided separately – details on request.

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