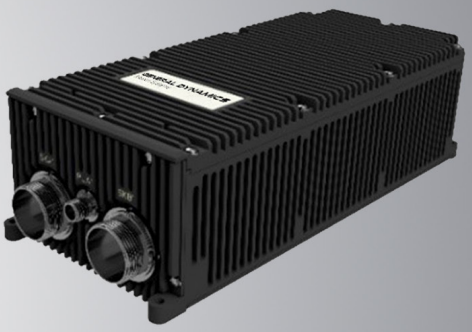
GENERAL DYNAMICS
Mission Systems

Viper Low SWaP 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
- SeaVenom

Anti-Submarine
- MK 46/54
- Stingray
- Depth Charge
- MU90
- A244s

Operational Features

- A key component of any armament 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 (Miniature Munitions) [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 and provide maximum flexibility.

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 2 x SAE AS 5725B Class II/A MMSI1	
Suspension and Release Equipment Interfaces	2 x Electro-Magnetic or hot/cold gas Ejector Release Unit interfaces (L3Haris 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) 28VDC Armament Power (MASS Live) In accordance with MIL-STD-704E	
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	**V1** NXP MPC8308 PowerQuicc II Pro 400MHz 512 Mbytes DRAM 128 Mbytes NOR FLASH 32 Mbytes SPIFLASH 32 Kbytes NVRAM 66 MHz PCI bus speed	**V2** NXP T1014 CPU Power Architecture 1.4GHz 4GB DDR4 RAM 1600MHz 1GB NAND Flash Storage Secondary 32MB NOR SPI Flash Storage 66MHz PCI Bus Speed
	Optional upgrade for second PMC form factor processor	
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, compatible with Thales' FF-LMM – AS5652 10Mbit/s MIL-STD-1553 protocol currently not supported
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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CANADA
gdmissionsystems.ca
info@gd-ms.ca

UNITED KINGDOM
gd-ms.uk
enquiries@gd-ms.uk