

CUTLASS SERVER

SMALL FORM FACTOR RUGGED
DEFENSE MIL-STD-810G PLATFORM



The **Cutlass Series** of extreme rugged defense servers distinguish themselves in that we design with heavy-duty machined aluminum alloy, using overlapped extrusions for superior torsional strength with EMC/EMI compliance to MIL-STD-461.

Compatible with ATX and sub-ATX small factor system boards, **Cutlass** provides I/O signal interfaces to a suite of front panel D38999 military connectors, supported by an in-line military-grade EMI/EMC filter & honeycomb shielded air intakes.

The thermally managed enclosure supports a variety of COTS storage devices & contained PCIe expansion options to increase system performance & flexibility, ensuring electromagnetic compatibility and significantly increased mechanical durability.

FEATURES:

- ✓ Intel® Xeon® Broadwell-DE processor D-1587 16-Core, 32 Threads
- ✓ Up to 128GB ECC RDIMM DDR4 2133MHz
- ✓ Mini PCI-E (mSATA support), M.2 PCI-E 3.0, M-Keyed and Disk-on-Module (DOM) Storage Options
- ✓ Dual 10G SFP+ and 6 x GbE LAN
- ✓ Four (4) USB 2.0 Ports on external connectors
- ✓ 2-slots of PCIe 3.0 expansion and robust card retention
- ✓ Machined aeronautical aluminum alloy for EMC/EMI compliance to MIL-STD-461F/G and weight, 6.5kg
- ✓ Fully qualified MIL-STD-810G and 55,000 ft. altitude
- ✓ +18-36VDC Operation with programmable Temperature Supervisory Unit (TSU) for operation from -24°C to +55°C
- ✓ In-line EMI/EMC filter + VICOR filter front-end module
- ✓ Front-to-Back air cooled enclosure with high-reliability fans
- ✓ 8 front panel LED indicators driven by the TSU & system board
- ✓ Depth: 286 Width: 310 Height: 141 mm (11.25" x 12.2" x 5.55")



A new generation of forced-air military enclosures designed to support COTS Flex ATX for low cost rapid deployment



CUTLASS D-1587



SPECIFICATIONS:

OPERATING SYSTEM	Windows 10 Pro, Windows 10 Enterprise (LTSB, LTSC 2019) Windows Server 2016 or Linux	OPTIONAL 3RD PARTY PCIE CARDS	High Performance 3rd Party Graphics Reflective Memory Fiber / Copper Media 1GbE & 10GbE Ports MIL-STD-1553, ARINC 429 Ports
PROCESSOR	Intel® Xeon® Processor D-1587, 24M Cache, 1.70 GHz, 65-Watts TDP, Embedded FCBGA1667	BIOS AND SOFTWARE	AMI UEFI 2.4, Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
CHIPSET	Intel® Xeon D SoC	PERIPHERAL DEVICES	5 USB 2.0 ports (4 headers, 1 Type A) 2 USB 3.0 ports (2 rear) 1 VGA port, 1 COM Port 5 x MIL-C-38999 connectors provide: general purpose I/O signals, Ethernet, USBs, Fiber optical, etc. and, 2 power pins for 28VDC
MEMORY	128 GB dual-channel DDR4 ECC memory up to 2133/2400 MT/s. (128 GB @ RDIMM 32 GB/DIMM, 64 GB @ UDIMM/SOD- IMM 16 GB/DIMM)	TRUSTED PLATFORM MODULE	TPM 2.0 also supports Intel® vPro™ Technology and Intel® Trusted Execution Technology (Intel® TXT)
STORAGE	SoC controller for 4 SATA3 (6 Gb/s) ports; RAID 0,1,5,10 RSTe Broadcom® 2116 SW controller for 16 SATA3 (6 Gb/s) ports; SAS2 and SATA3 Optional 24-port, 12Gb/s SAS HBA or 24-Port 12Gb/s SAS/SATA H/W RAID Controller port expansion card	POWER	MIL-STD-461 compliant, military grade input power EMI Filter and 50mS Hold up @ 300W 28VDC (+18-36VDC) Operation with Temperature Supervisory Unit (TSU) -40 to +90 °C 450W ATX output compatible with the military voltages and frequencies specified in MIL-STD-704 and MIL-STD-1275.
IPMI/BASE BOARD MANAGEMENT CONTROLLER	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC with VGA Graphics	MECHANICAL	Machined aeronautical aluminum alloy AW #6082 T651 overlapping panel extrusions, with aeronautical stainless steel captive screws, helicoils and assembly accessories Corrosion resistant, MIL-STD-1547B chromate conversion coating on internal & external surfaces Multilayer, military grade painting on external surface with primer Dimensions: Depth: 286 Width: 310 Height: 141 mm (11.25" x 12.2" x 5.55") Weight: 6.5 kg
ETHERNET LAN	Quad LAN with 1GbE with Intel® I350-AM4 Dual LAN with 10G SFP+ from D-1500 SoC Dual LAN with 1GbE with Intel® I210	ENVIRONMENTAL	Operating Temp: -24°C to +55°C Storage Temp: -40°C to +70°C NOTE: Successful boot up within 30 minutes after application of power at cold Humidity: Tested to 95% Non-Condensing Vibration: Operating under random vibration per MIL-STD-810G Shock: Operating while exposed to 6g shocks per MIL-STD-810G Crash: Tested to 30g per MIL-STD-810G EMI/EMC: Tested per MIL-STD-461F and G
SSD DEVICES	MIL-STD-810-G qualified SATA-DOM SATADOM-ML 3MG2-P features: <ul style="list-style-type: none">• Built-in Pin 8 power supply• Best boot drive solution for server and embedded system• SATA 6Gb/s interface• High IOPS to reduce boot up timing• Innovative Firmware Algorithm• Anti-vibration mechanical design• Built in iData Guard• Hardware write protection supported• P/N DGSML-B56D81BWBQCA-B401		
EXPANSION SLOTS	2 PCI-E 3.0 x8 1 M.2 SATA/PCI-E 3.0 x4, 2242/2280/22110		

TEST STANDARDS:

MIL-STD-810	ASTM B117
MIL-S-901	ASTM G53
MIL-STD-167	ASTM D4169
RTCA DO-160	UN TDG



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