GPU Accelerator System — Rugged (GAS-R)

FEATURES

- 8U x 23" Depth enclosure, MIL-STD-810G tested
- 8x NVIDIA® A100 SXM4 GPUs with 4.8TB/s Aggregate NVIDIA® NVLink™ Bandwidth
- Up to 64 Core AMD Epyc™ 7002 or Dual Intel® Scalable Processors
- Over 200TB PCIe Gen4 NVMe™ Storage
- Supports four 200Gb/s NICs
- Up to 4TB System Memory
- IPMI BMC system management
- AC (50-400Hz) and DC Power Options
- Lightweight aluminum frame design
- Optimized cooling for noise and power efficiency

The cutting edge, mission-ready GAS-R (Ruggedized) GPU Accelerator System provides the highest level of compute and processing power for applications such as AI deep learning, real-time HPC, and big data. The compute system is used for all-in-one acceleration of mission-critical and bandwidth demanding AI workflows with massive datasets. The GAS-R can be deployed in harsh environments such as cargo trucks, ground stations and surveillance aircraft with a wide range of allowable ambient temperatures and vibration profiles. It provides the best datacenter level AI performance by integrating PCIe 4.0 NVMe flash on the same PCIe fabric as 8x A100 SXM4 GPUs connected with NVLINK along with four 200Gb/s NICs for maximum sustained data throughput. An optimized mechanical design minimizing size, weight, and power makes the GAS-R an unmatched powerhouse in rugged AI computing.
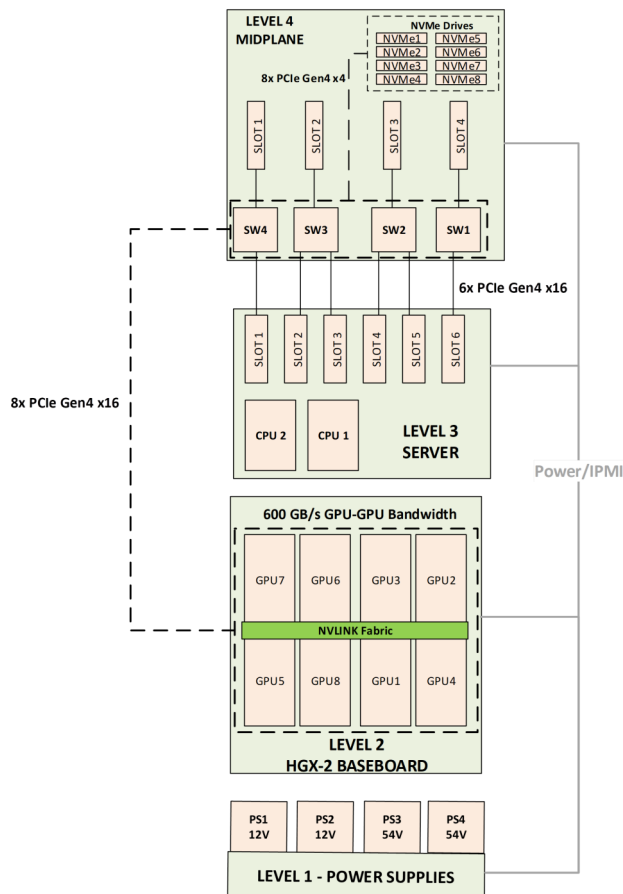
SPECIFICATIONS

System	
Dimensions	14.5"H x 17"W (19" rackmount) x 24.5"D
System Weight	133lbs
Form Factor	8U rack mount, front rack ears, rear dagger pins
System Storage Capacity:	200TB PCIe 4.0 NVMe flash
CPU:	Up to 64 Core AMD Epyc™ 7002 or Dual Intel® Scalable Processors
Compute GPUs:	8x NVIDIA A100 SXM4 GPUs with NVLINK 3.0
Memory:	4TB
Network Inputs	4x Ethernet & Infiniband up to 200Gb/s, 4x FibreChannel up to 32Gb Other sensor inputs available using FPGA input modules for sensors, radar, digital, analog I/O
Chassis	Anodized Aluminum
Power	Rear Power Supply Input: 100-250VAC (47-63 or 400Hz) or 200-370VDC 2+1, hot-swap power system up to 1600W
LEDs	Front Status LEDs displaying system power and IPMI Status
System Monitoring	IPMI BMC system monitoring through rear RJ45

SPECIFICATIONS CONTINUED

Environmental Temperature	Operating: 0°C to 35°C
	Storage (non-operating): -40°C to 71°C
	-500 to 10,000ft Altitude with rapid decompression
Environmental Humidity	Operating: 5% to 95% non-condensing
	Storage (non-operating): 5% to 100% condensing, after drying
Shock	Transport (non-operating): ±10g, 11msec, half-sine pulse, 3 shocks per axis each direction
Vibration	Operational: 5-2000 Hz, .00004-.015 g2/Hz
	Non-Operational: 5-2000 HZ, .00015-.06 g2/Hz
	Transportation in optional transport case: 15-2000 Hz, .01-.3 g2/Hz
Noise	80dBA 1m from unit
Standards	Tested to MIL-STD-810G, MIL-STD-461E, MIL-STD-464A, MIL-STD-704E, IEC 61000-4-2, conformal coated

BLOCK DIAGRAM

REAR