Rigel Edge Supercomputer

Part Number: OSS-ERX-R100

FEATURES

- NVIDIA HGX A100 4-GPU SXM 320GB
- 2.4TB/s Total GPU Aggregate Bandwidth
- Single AMD EPYC 7003 Processor
- DDR4-3200 System Memory
- 4x PCIe 4.0 x16 Expansion Slots
- Compact, Lightweight, Rugged Aluminum Frame Design
- Unified Baseboard Management Control

The Rigel Edge Supercomputer brings the power of NVIDIA HGX A100 SXM GPUs to the rugged edge. The HGX A100 4-GPU backplane delivers 78 teraFLOPS of FP64 HPC performance using third generation NVLINK technology. The GPUs are integrated with OSS PCIe Gen 4.0 expansion technology to take advantage of the latest AMD 3rd Gen EPYC processors while offering four PCIe Gen 4.0 x16 expansion slots for high speed network interconnect, NVMe storage, or FPGA sensor capture. The optimized PCIe architecture enables maximum data throughput, avoiding bandwidth bottlenecks. Rigel's lightweight, rugged, thermally optimized and compact design bring the power of the datacenter to the rugged edge—whether airborne, marine, or terrestrial.

SPECIFICATIONS

Dimensions	7.0" H x 8.6" W x 26.7" D
GPU	4x NVIDIA A100 SXM GPUs 320GB GPU Memory Third generation NVLink 2.4TB/s total aggregate bandwidth
CPU	AMD EPYC 7003 Processor Single Socket SP3 (LGA4094)
System Memory	8x ECC DDR4 RDIMM/LRDIMM slots (Modules Up to 128GB Supported) RDIMM/LRDIMM-3DS (Modules up to 256GB Supported)
Boot Media	PCIe 4.0 x4 NVMe M.2
Network Controllers	1x RJ45 10/100/1000 on rear panel 3x RJ45 Unified Baseboard Management on rear panel
USB	2x USB-C on rear panel
Video	1x VGA on rear panel
Expansion Slots	4x PCIe 4.0 x16 HHHL slots
Cooling Fans	Two 80mm x 80 mm High CFM PWM Controlled GPU fans Four 80mm x 28 mm PWM Controlled Server fans
Chassis	Lightweight Aluminum Frame Black anodized exterior
Weight	50 lbs
Power Supplies	Dual 2000W 54V Output, 80plus Platinum efficiency, PMBUS 1.2 Dual 1600W 12V Output, 80plus Platinum efficiency, PMBUS 1.2

SPECIFICATIONS CONTINUED

Power Input Options	90-264VAC, 47-63Hz 110VAC, 400-800Hz, 3ɸ 180-300 VDC 48 VDC
BMC	OSS Unified Baseboard Management Control • Temperature, power, fan speed monitoring and control • IPMI based web-interface • PCIe Switch Management • Redfish API compatible
Environment	Temperature: • Operating: 0°C to 35°C at 10,000ft altitude • Storage: -40°C to 70°C at 10,000ft altitude Humidity: • Operating: 0% to 95% non-condensing relative humidity • Storage: 0% to 100% non-condensing relative humidity Shock: ± 10 g, 11 msec, half-sine pulse, 3 shocks per axis Vibration: 4.5 Grms, 10 to 2000 Hz
Agency	Designed to conform to the following extended standards: • FCC - Verified to comply with Part 15 of the FCC Rules, Class A • Canada ICES-003, issue 4, Class A • CE Mark (EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3) • CISPR 22, Class A
Compliance	RoHS 6 of 6, WEEE MIL-STD-461E CE102 Designed to meet MIL-STD-461E for the following tests: CE102, conduction emissions, power leads, 10 kHz to 10 MHz CS101, conducted susceptibility, power leads, 30 Hz to 150 kHz CS114, conducted susceptibility, bulk cable injection, 10 kHz to 200 MHz CS115, conducted susceptibility, bulk cable injection, impulse excitation CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads, 10 kHz to 100 MHz RE102, radiated emissions, electric field, 2 MHz to 18 GHz RS103, radiated susceptibility, electric field, 2 MHz to 18 GHz at 20 V/m