ExpressBox 4400

FEATURES

- PCIe Gen 4 architecture
- Small, rugged frame design
- Dynamic fan speed control
- Configurable slot and host uplinks to optimize throughput
- Integrated IPMI based system monitoring
- AC and DC power inlet options

The EB4400 provides PCIe Gen 4 configurable expansion for ruggedized, transportable AI applications at twice the performance of the previous generation PCIe Gen 3. The appliance supports up to 4 NVIDIA A100 PCIe GPUs which deliver 2.5x FP64 performance compared to the NVIDIA V100, with two PCIe Gen 4 x16 HBA/NIC slots for up to 128GB/s of sustained data throughput. Alternatively, the EB4400 can be configured to provide 8 single-width PCIe Gen 4 x8 slots for FPGA data ingest or the latest
storage add-in cards. Additional features including dynamic fan speed control, IPMI based system monitoring, replaceable fan filters, and optional SmartNIC host configuration elevate the EB4400 to the ideal expansion platform for the entire AI workflow.

The EB4400 combines a small, rugged form factor with the latest PCIe Gen 4 add-in cards and features to meet the needs of any airborne, naval, or ground based transportable AI application.

APPLICATION EXAMPLES

EB4400 as a GPU Compute Accelerator
- OSS-538, 5-slot PCIe Gen4 x16, supporting 4 dual-width GPU
- 2x PCIe4 x16 Host-to-Target uplinks (128 GB/s)

EB4400 as a Flash Storage Array
- OSS-521, 8-slot PCIe Gen4
- 8x OSS-PCIe4-ADPT-x8-M.2-2 for 16x hot-swappable PCIe Gen4 M.2/E1.S drives
- PCIe4 x16 Host-to-Target uplinks (32 GB/s)

EB4400 as an FPGA Sensor Array
- OSS-521, 8-slot PCIe Gen4, supporting 7 PCIe Gen4 x8 FPGA sensor add-in cards
- 2x PCIe4 x16 Host-to-Target uplinks (64 GB/s)

SPECIFICATIONS

System	4U Custom Form Factor (10.7" x 7.0" x 18.5")
Host Options	1x PCIe4 x16 Host-to-Target uplink (32 GB/s) 2x PCIe4 x16 Host-to-Target uplinks (64 GB/s) SmartNIC Host
Backplane Options	**OSS-538:** • 1x single-width PCIe 4.0 x16 FHFL upstream slot • 4x dual-width PCIe 4.0 x16 FHFL downstream slots **OSS-521:** • 1x single-width PCIe 4.0 x16 FHFL upstream slot • 6x single-width PCIe 4.0 x16 FHFL downstream slots • 1x dual-width PCIe 4.0 x16 FHFL downstream slot

SPECIFICATIONS CONTINUED

Additional Slot Options	**Standard** • Modifies one dual-width PCIe 4.0 x16 FHFL downstream slot to two single-width PCIe 4.0 x16 FHFL downstream slots per backplane **Riser** • Adds an additional single-width PCIe 4.0 FHFL downstream slot per backplane

Environmental Specifications	**Temperature:**
	  Operating temp -10 ° to 50 °C* ambient.
	  Short-term (30 mins) operating temp –5°C to 40°C ambient.
	  Storage temp –40°C to 85°C.
	
	Operational Humidity:
	  Operating humidity 5-95% (non-condensing)
	  Storage humidity 0-95% (non-condensing)
	
	Operational altitude:
	  Operating altitude 6000 ft. at operating temp, 15,000ft. at derated temp.
	  Storage altitude 40,000 ft.
	
	Fans:
	  2x 180CFM 92mm fans
	  Default PWM controlled based on built-in temperature sensors
	  Optional IPMI system monitoring and control

Power Options	Single/Dual AC 2600W Single/Dual AC 1600W
System Monitoring	**Default** – automatic dynamic temperature-based fan speed control **Optional** – IPMI system monitoring with power, temperature, and fan speed control and monitoring
Fan Filters	Optional Quadrafoam 45 PPI Replaceable Fan Filters
PCIe 4.0 Cable Lengths	1m 2m 3m
Power Cords	6' US 110V C19 6' US 240V C19 6' US 240V C14 6' UK 2' IEC
Agency Compliance	Agency Certifications: TUV-GS (EN60950-1 /IEC60950-1,EK1-ITB2000) Agency Certifications (testing pending): FCC Class A CE Safety & Emissions UL, cUL RoHS3

*These temperature ranges may require GPU/CPU throttling.