GigaIO AIC Resource Box - Disaggregated Compute Accelerator for Deep Learning and HPC

The GigaIO™ Add-in-Card (AIC) Resource Box is a rack-mount, disaggregated compute accelerator with space for up to 10 PCIe Gen 3 x16 accelerator cards. This flexible expansion platform enables you to add numerous PCIe Gen 3 application accelerators, including GPUs, FPGAs, IPUs, thin-NVMe-servers and specialty AI chips. Configure the AICs for different workloads to quickly scale your applications. Two PCIe x16 lanes provide connections to the FabreX™ switch for maximum flexibility with disaggregation and dynamic composability of AIC devices.

The Resource Box includes three fans for cooling of high-capacity GPU systems.

FEATURES

- 4U rack-mount design
- Configurable AIC slots
- PCIe Gen 3 host links – x16 link delivers 128 Gbit/sec half-duplex or 256 Gbit/sec full-duplex throughput
- Thermostatic fan controls
- Single or redundant power options

Specifications

Enclosure	19" W x 18.5" D x 7" H (4U) Supports up to 10 total full-height, full-length PCIe slots, or 8 double wide GPUs Supports extended height cards and top GPU power cables Power and fan status bi-color LED panel
Cables	Connect to the FabreX Adapter Card with Copper or Active Optical Cable
Cooling	Three 120mm x 38mm fans mounted to the front bezel of the chassis Two standard fan options, perfect for GPU or FPGA accelerator High-capacity, variable speed (PWM) Fans: • Three 180CFM fixed-speed fans with tachometer monitoring via front panel LED

Power	Several options for the 10-slots available for expansion. The supplies are mounted inside the back panel of the chassis:
	Redundant Power:
	   • Dual redundant 1000-2000W 80Plus Platinum supply shared among all backplanes in the enclosure
	Split Power:
	   • Dual 1620W 80Plus Platinum supply for use with 2 separate backplanes zones
	Aux Power:
	   • Up to 8 EPS12V 8-pin 12V aux power cables

Operating Environment	0 to 35°C, 10 to 90% relative humidity, 0 to 10,000 feet above sea level Storage Environment -40 to 85°C, 5 to 96% relative humidity, 0 to 50,000 feet above sea level

GigaIO U.2 Flash Array - Disaggregated NVMe SSD Storage

The GigaIO Flash Array is a 2U rack-mounted NVMe storage enclosure. It can include 1+1 redundant canisters, up to 24 2.5" NVMe SSD drives, and 1+1 redundant 900W 80 Plus Platinum PSUs, to provide high throughput, low latency, resource sharing and high availability.

This U.2 JBOF (Just a Bunch of Flash) array delivers the next level of storage capacity, performance, and flexibility through disaggregation with the GigaIO FabreX Switch. PCIe Gen 3 x16 connectors operating at 128 Gbit/sec bandwidth can connect the array to one or more host computers. This JBOF is a perfect addition to any high-workload applications such as AI, data analytics and HPC.

FEATURES

- Up to 24 U2 dual-ported SSD drives

- One or two rear panel PCIe Gen 3 host (upstream) links – x16 link delivers 128 Gbit/sec half-duplex or 256 Gbit/sec full-duplex throughput

- One or two rear panel PCIe Gen 3 target (downstream) links – for additional JBOF connectivity

- Intelligent enclosure management

- Self-discovery and self-configuration

- Hot swap design for easy maintenance

- Single or redundant power options

Specifications

Enclosure	2U rack-mounted NVMe storage enclosure which supports 24 NVMe SSDs. 17.5" W x 21" D (446 x 536mm)
NVMe Drive	Front access NVMe drive Support 24 2.5" dual-ported NVMe SSDs Individual power control
Canister	1+1 redundant Support 8 mini SAS HD 4X ports for external connectivity PCIe Gen 3 NVMe SSDs and 8 mini SAS HD 4x ports
Cables	Connect JBOF to FabreX Switches and Adapter Cards with copper or Active Optical Cable
Cooling	Four 132CFM fans (removable)
Power	900W, 1+1 redundant Hot-pluggable from rear of chassis System input: 89 to 264Vac High efficiency (80Plus Platinum Level) Integrated fans for PSU and Canister cooling controlled by internal microcontroller Support N+1 fan failure
Operating Environment	1 to 35°C 10 to 90% relative humidity 0 to10,000 feet above sea level Storage Environment -40 to 85°C, 5 to 96% relative humidity 0 to 50,000 feet above sea level Ambient Temperature 5 to 40ºC Max Temperature Gradient 20ºC per hour Ambient Non-Operating -40 to 60 ºC
Humidity	Ambient Operating (Non-condensing) 8 to 85% R.H Ambient Non-Operating (Non-condensing) 8 to 95% R.H