HighPoint Technologies, Inc.

RocketStor 8531AW

External PCIe Gen4 x16 eGPU Chassis

Revolutionizes eGPU Expansion for x86 & ARM Platforms

HighPoint's RocketStor 8000 series represent revolutionary leap forward in eGPU (external GPU) connectivity. Designed for performance hungry AI/ML workloads, professional media editing, 3D-design and content creation, RocketStor 8000 series eGPU expansion chassis leverage industry-proven PCIe Switching technology and robust CDFP-CopprLink connectivity to provide a guaranteed x16 lanes of host-to-device bandwidth, delivering a level of performance and responsiveness that conventional solutions can simply not match.

Complete Turn-Key eGPU Expansion Solution

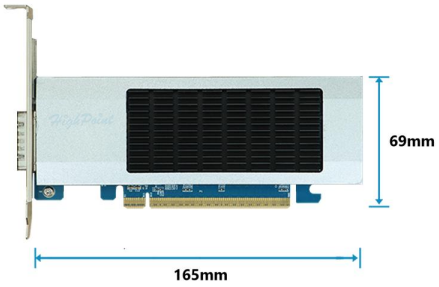
RocketStor 8000 series eGPU Expansion chassis are complete, turnkey hardware solutions, and include a low-profile external PCIe x16 switch adapter, 1-meter CDFP cable, 850W PSU and power cabling, and external aluminum GPU chassis. The hardware is natively supported by all modern Windows OS and Linux distributions and does not require device drivers or a dedicated software application to operate and perform optimally. Installation could not be simpler: insert your desired GPU into the chassis, install the adapter card into the target platform, then connect the CDFP cable from the chassis to the host system and power-on the unit!

Feature Highlights

- **Unrestricted Performance:** Industry Leading PCIe Switching technology guarantees x16 lanes of dedicated Gen5 bandwidth
- **Universal GPU Compatibility:** Support industry standard full-height, 2-slot, and 3-slot GPUs from all leading manufacturers.
- Up to **850W of power** for high-end GPUs
- Enterprise Grade External **PCIe x16 CDFP Gen4** connectivity
- **Low-profile host interface** adapter is Ideal for compact systems
- **Advanced Dual-Fan Cooling System** with Programmable Smart Fan Control prevents thermal throttling
- **Seamless, Plug-and-Play Software-less Installation** for Linux & Windows

Key Features

Uncompromised GPU Expansion Solution for SFF (small form-factor) Computing Platforms



The RocketStor 8531AW's low-profile PCIe Gen4 x16 External Switch Adapter is ideal for small form-factor workstations and compact servers, which often lack the interior space and PCIe resources to directly host today's most powerful 2-slot and 3-slot GPUs.

The adapter utilizes HighPoint's proven switching architecture to provide x16 lanes of dedicated bandwidth for the external GPU and can be easily integrated into any x86 (Inte/AMD) or ARM platform capable of hosting a low-profile PCIe device, including 1 and 2U rackmount platforms via riser cards.

Built for Today's Fastest, Power-Hungry GPUs:

The RocketStor 8531AW is engineered to support the most advanced, power-hungry GPUs available, including full-height, 2-slot, and 3-slot models from NVIDIA, AMD, Intel, and more. It can accommodate cards up to 370mm in length and provides a massive 850W of direct power, ensuring that today's most demanding GPUs can operate at peak performance.

Robust External CDFP-CopprLink Connectivity Delivers x16 Lanes of Dedicated Gen5 Host Bandwidth:

HighPoint's innovative external CDFP based connectivity delivers a dedicated x16 lane connection, offering up to 64GB/s of bi-directional bandwidth! This ensures that your GPU receives the full bandwidth it needs to handle the most intensive workloads with ease.

***RocketStor 8531AW**: CDFP to CDFP cabling solution (end to end PCIe 4.0 x16 connectivity)*

Cross-Platform Compatibility

- Universal support for **x86 (Intel/AMD)** & **ARM-based** platforms
- **Driverless deployment using** native NVMe drivers **across all major OS platforms**

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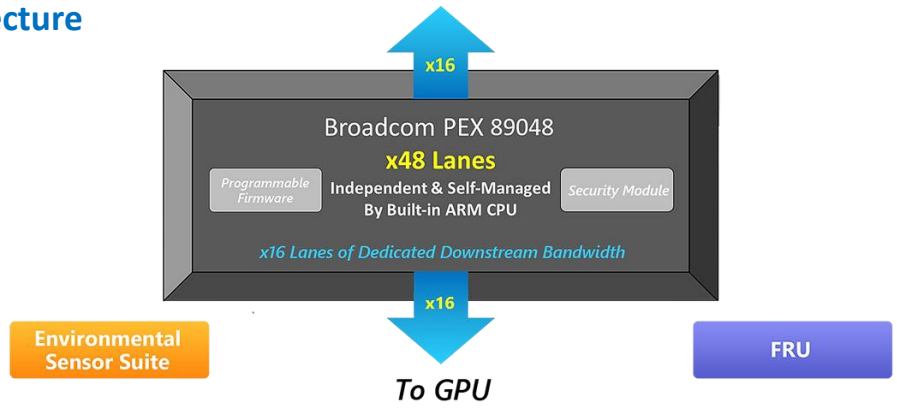
Industry Leading PCIe Switching Architecture

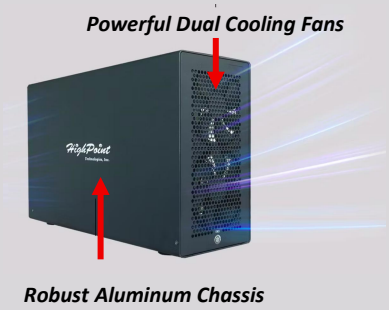
The RocketStor 8531AW is powered by HighPoint's revolutionary PCIe Gen4 Switching Architecture, which leverages Broadcom's industry-leading PEX89048 IC to optimize signal integrity, minimize latency, and maximize data transfer speed. This solution provides 48 lanes of internal PCIe Gen4 bandwidth; 16 lanes to the upstream connection for both the host platform and GPU; achieves a maximum data transfer rate of 32GB/s; and minimizes latency through optimized design and components.



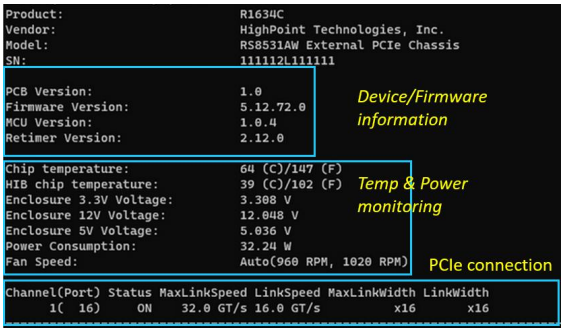
Advanced Cooling Solution

To maintain optimal performance, the chassis features a robust dual-fan cooling system with programmable smart fan control and monitoring interface.

This system effectively dissipates waste heat to prevent thermal throttling and ensure that your system runs at peak performance even under heavy loads.



MPT Firmware Interface Tool



Monitor Temp, Power & PCIe status in real time

Applications & Use Cases

The design and performance of the RocketStor 8531AW make it suitable for applications that require high performance scaling. Its high bandwidth, low latency, high scalability, and flexible storage configurations make it ideal for AI/ML Computing & Deep Learning, Scientific Research & Big Data Analytics, Enterprise Workloads & Cloud Solutions, High-Performance Content Creation & Rendering, and High-End Gaming/Media Platforms.

AI/ML Computing & Deep Learning

Accelerates data loading & model training times, supporting high-throughput data processing.

Scientific Research & Big Data Analytics

Rapid access to massive datasets, results in faster analytics and insights generation.

High-Performance Content Creation & Rendering

The ultimate solution for professionals in the content creation & rendering industries, offering the power, flexibility, & performance needed to turn creative visions into reality.

Adapter Hardware Features	
Bus Interface	PCI-Express 4.0 x16
Hardware Architecture	Broadcom PEX 89048 PCIe Switch Technology
CopprLink Compliant	Yes (CDFP Pin Definition)
Number of Channel / Devices	1 x CDFP (Dedicated PCIe 4.0 x16 per port)
Port Type	CDFP (Gen4)
Data Transfer Rate	32GB/s
LED Indicators	
Host Status LED	Indicates the Bandwidth of Rocket 1634C's PCIe connection (Connection with Motherboard)
CDFP Status LED	Indicates the CDFP Connection Status (to External Chassis)
Power Measurement	Yes
FRU Support	Yes (Stores VPD data)
CDFP Hotswap	No
Form Factor	Low Profile
Dimensions	68.9 mm X 165 mm
Enclosure Hardware Features	
Hardware Architecture	Asteralabs PCIe 4.0 Retimer Technology
Bus Interface	PCI-Express 4.0 x16
Number of Channel / Host	1
CopprLink Compliant	Yes
Host Port Type	CDFP (Gen4)
Data Transfer Rate	32GB/s
Number of GPU Supported	1
GPU Support	All GPU
	370mm x 170mm (to Gold Finger) x 88mm & below
Power Measurement	Real Time Power Measurement
Audible Alarm	High Temperature, Low-Fan Speed Warnings
Front Panel LEDs	
Power Switch	Powers On/Off the unit. Illuminates blue when powered On.
Back Panel	
CDFP Port	Upstream Port for PCIe 4.0 1x16
Mute Button	used to mute the audible alarm
Supported Systems	
OS Support	Any OS with native PCIe device support
Software Secure Boot	Yes
Hardware Secure Boot	Yes
Management Software	
Firmware Upgrade Tools (MPT Utility)	Used to upgrade both the MCU firmware and Retimer Firmware
Operating Environment	
Work Temp	+5°C ~ + 55°C
Storage Temp	-20°C ~ +80°C
Operating Voltage	100V ~ 240V AC In; 850W
Power	TBA
MTBF (Mean Time Before Failure)	TBA

Kit Contents	1x Rocket 1634C Adapter
	1x External PCIe Chassis (RocketStor 8531A)
	1x CDFP to CDFP Cable (Gen4, 1M)
	1x QIG
	4x 2x4 connectors to 2x4 connectors Cable
	6x cable ties
	1x UL Cable

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