



## RocketStor 4243AS

24-Bay CDI Hardware NVMe Storage Rackmount

### REJECT COMPLEXITY. EMBRACE THE FUTURE.

#### RocketStor 4243AS: The Entry-Point to NVMe-over-Fabrics

##### Eliminating Cost Barriers for the Software-Defined Enterprise

The RocketStor 4243AS is HighPoint's premier Entry-Level NVMe-oF Storage Solution, designed to bring the power of Composable Disaggregated Infrastructure (CDI) to the wider industry. By removing the "Enterprise Tax" and high-budget hurdles associated with complex, over-engineered multi-controller arrays, the RS4243AS makes high-density, Fabric-Attached Block Storage accessible to mid-market enterprises, regional AI pods, and media production houses.

##### Disaggregated Server Storage - Redefined

###### Hardware-Accelerated Fabric Offload (WDC RapidFlex™ C2000)

At the heart of the RocketStor 4243AS is the Western Digital RapidFlex™ C2000, a dedicated NVMe-oF Fabric Bridge that transforms the storage enclosure into a high-performance network target.

**Near-Zero Target Overhead:** Unlike software-defined targets that consume massive CPU cycles to manage network traffic, the C2000 offloads the entire NVMe-oF protocol stack to dedicated silicon. This ensures the RS4243AS delivers consistent 100GbE line-rate performance without taxing the enclosure's management resources.

**120-Host Connectivity:** Consolidate your storage and serve up to 120 independent host initiators simultaneously. The C2000 manages these virtual controllers in hardware, providing seamless multi-tenant access without protocol bottlenecks.

**Transparent Hardware Bridge:** The RS4243AS functions as a pure hardware bridge, presenting remote NVMe storage to the network with the same simplicity and speed as locally attached drives.

### Feature Highlights

- **Next-Gen 2U 24-Bay CDI Platform:** Purpose-built for Composable Disaggregated Infrastructure.
- **Dual 100GbE Connectivity:** High-performance 200Gbps throughput with native support for **RoCE v2** and **TCP**.
- **Open BYOD Architecture:** Hardware-neutral platform; zero vendor lock-in for 2.5" U.2 NVMe SSDs.
- **WDC RapidFlex™ C2000 Integration:** Full hardware offload of the NVMe-oF protocol stack; zero CPU tax on host or management resources.
- **Optimized Power/Bandwidth Efficiency:** Precision 1-lane per-bay architecture perfectly synced to 100GbE line rates to minimize thermal output and power consumption.
- **Enterprise Management: Redfish API** support for seamless integration into modern automation and orchestration frameworks.

NVMe-oF Initiator Solutions  
*SDS Suite*

**RocketStor Ethernet Rackmount Enclosure**  
WDC RapidFlex C2000  
24x NVMe SSD Shared Storage Pool



**Host A**  
AI / ML Clusters  
20TB Namespace

**Host B**  
HPC / Analytics Workloads  
20TB Namespace

**Host C**  
Virtualization Platforms  
10TB Namespace

**Host D**  
Kubernetes Environments  
AI Training Namespace

### Unmatched Fabric Flexibility: RoCE v2 or TCP

The RocketStor 4243AS is designed to adapt to your existing infrastructure while providing a clear path for future performance upgrades.

200GbE

**NVMe/TCP (Standard Ethernet):** Deploy instantly over your current standard Ethernet network. Experience the benefits of disaggregated storage with zero specialized hardware and maximum compatibility across your existing switch fabric.

**NVMe/RoCE v2 (RDMA):** For workloads requiring sub-microsecond latency—such as AI/ML training and 8K video editing—leverage RoCE v2 to achieve "wire-speed" performance.

*Note: Maximum RDMA performance requires a RoCE-capable SmartNIC on the host initiator.*

### Green Power & Thermal Reliability: Optimized for Efficiency

The RS4243AS is engineered for the "Green" data center, where every watt of power and every degree of heat matters.



**"Lane-per-Drive" Architecture:** Utilizing the **HighPoint R1528D PCIe Switch**, the RS4243AS allocates a dedicated **Gen4 x1 lane** to each of the 24 NVMe bays. This provides ~45GB/s of internal bandwidth—perfectly saturating the Dual 100GbE network interface (~25GB/s)—without generating the massive heat of an over-provisioned 96-lane configuration.

**Reduced Thermal Load:** Running 24 lanes instead of 96 significantly lowers the internal temperature of the chassis, protecting your NVMe media from thermal throttling and extending hardware lifespan (MTBF).

**Operational Savings:** A cooler-running system requires less active cooling, directly reducing your monthly electricity and facility cooling costs.

### The "Zero-Constraint" Hardware Bridge

The RS4243AS offers a level of simplicity and open-standard compatibility that software-heavy arrays cannot match.



**No Drivers, No Constraints:** Natively supported by any OS with an NVMe-oF initiator (Linux, Windows Server 2025, VMware).

RedFish

**Open Management:** Utilize the integrated **ARM-based BMC** and native **Redfish® API** for seamless, out-of-band (OOB) integration into your existing orchestration and monitoring dashboards.

### True BYOD (Bring Your Own Drive) Freedom

Escape vendor lock-in and high-margin proprietary drives. The RS4243AS is a **True Open Platform:**



**Vendor Agnostic:** Mix and match U.2/U.3 SSDs from Samsung, Micron, Sandisk, or Solidigm based on your specific workload and budget requirements.

Enclosure Specifications	
Form Factor	2U Rackmount
Front Drive Bays	24 x 2.5-Inch NVMe SSD Trays
Fabric Adapter Slots	2x QSFP28 (100Gbps)
Fabric Adapter	Western Digital RapidFlex C2000 Fabric Bridge Adapter
Cabling	Passive (1 - 5m) and Active Optical (5m - 20m)
Power Supply	2 x 1300w 100-240VAC Platinum, CRPS, Hot-Plug capable PSUs
Platform Management Controller	ARM Based BMC (Aspeed 2620)
Remote Management	1Gb Ethernet Connector (RJ45), BMC remote management
Environmental	Working Temperature: 10°C ~ +35°C
	Storage Temperature: 5°C ~ +45°C
	Operating Voltage: 100V ~ 240V AC In; 1300W
Chassis Dimensions (Height x Width x Depth)	3.46" x 19.84" x 16.93"
Weight	TBA
Warranty	3-Year (Standard) / Optional 4-5 Year

Hardware Specifications	
Storage Adapter	HighPoint Rocket 1528D Switch Adapter
High-Performance SSDs	Up to 24x 2.5" U.2 NVMe
NVMe Spec Supported	NVMe Base Spec v1.4 Support
	NVMe Over Fabrics Spec v1.1 Supported
	NVMe-oF on RoCE v2 or TCP (only one can be active at a time)
NVMe SSD HotSwap	Yes
NVMe SSD Power Disable Support	Yes

Performance	RoCE	TCP
4KB Random Read at QD=32 (max in MIOPS)	4.89	5.1
4KB Random Write at QD=32 (max in MIOPS)	4.52	3.84
128KB Sequential Read at QD=16 (max in GB/s)	21.8	21.8
128KB Sequential Write at QD=16 (max in GB/s)	18.5	18.7