LYVEDRIVE™

Rack

DATA SHEET

Exabyte-Scale Hardware
Lyve Drive Rack Release One

SEAGATE

Lyve Drive™ Rack is the object storage component for the Lyve Drive data platform.

Product Highlights

- Lyve Drive Rack R1
- CORTX Object Storage software
- Low-cost S3-compatible private cloud
- Application-level load balanced
- Seagate 5U84 storage enclosure with 84 HDDs (1.5PB with 18TB drives)
- Ready for highest-capacity HDDs
- Active-Active HA

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Key Advantages

CORTX™ Object Storage System is an open source, software-defined object storage with vibrant community support.

Designed for maximum scalability, resiliency, and hardware efficiency. CORTX was designed by high-performance computing architects.

CORTX has **no global locks.**

CORTX **distributes metadata management across all servers** for maximum scalability and concurrency.

Hierarchical erasure coding provides the multi-tiered data protection across various data center failure scenarios for a scale-out solution.

Vertical integration benefits. Low-level hardware innovations like HAMR and multi-actuator can be co-developed with the software. Any new capabilities introduced in hardware can be addressed in the software, thereby ensuring that new hardware can be quickly produced.

CORTX functionality is available for enterprise customers as part of the Lyve Drive Rack offering running Lyve CORTX, a certified and supported version of CORTX open source code. It is compatible with a broad range of servers that meet the appropriate requirements in terms of minimum number of processors, memory, and networking.

Easy to set up, maintain, and deploy. All system components—power supply units, system cooling fans, the controller, the firmware, and the drives—are developed and optimized to work together seamlessly. This reduces support calls and eliminates technical learning curves.

CORTX Object Storage Solution with **high capacity and high performance.**

Build in security with ADAPT technology. Protect the most valuable business assets with Seagate Secure™ cybersecurity features and intelligent firmware. Rebuild drives faster and reduce downtime with Seagate ADAPT data protection technology.

Specifications	
Capacity	
Configuration Capacity (raw)	up to 1.5PB (with 18TB drives)
Max Number of Objects	2^{120}
Max Object Size	5TB
Software	
Operating System	RHEL 7.7
Object Store	CORTX™ v1.0
Management Interface	Cloud Storage Manager with WebUI, CLI, and RESTful API
Data Protection	Seagate ADAPT Erasure Coding
Reliability	
Data Integrity	Synchronous Data Writes
Connectivity	
Protocols	S3-compatible
Client Connectivity	2×50Gb/s
Physical Dimensions	
Rack Space (rack units)	7U
Rack Depth	1M
Physical (servers, ×2)	Height (1U): 43mm / 1.7 in | Width: 437mm / 17.2 in | Depth: 754mm / 29.7 in | Weight: 18.6kg / 41lb
Physical (5U84 storage enclosure)	Height (5U): 222.3mm / 8.75 in | Width: 444.5mm / 17.5 in | Width (w/ear): 483mm / 19.01 in | Depth: 981mm / 38.63 in | Weight (empty): 64kg / 141 lb | Weight (loaded): 135kg / 298 lb
Power	
Power Characteristics	100-240vAC (compute), 208-240vAC (storage)
Environmental	
Temperature, operating	5°C to 35°C (41°F to 95°F)
Temperature, nonoperating	−40°C to +70°C (−40°F to +158°F)
Airflow	System must be operated with low pressure rear exhaust installation. Back pressure created not to exceed 5Pa (~0.5mm H^2O).
Altitude, operating	−100m to 3000m (−330 ft to 10,000 ft) Maximum operating temperature is de-rated by 1ºC above 900m (3000 ft)
Altitude, nonoperating	−100m to 12,192m (−330 ft to 40,000 ft)
Shock, operating	5.0 Gs, 10ms, ½ sine pulses, Y-axis
Shock, nonoperating	30.0 Gs, 10ms, ½ sine pulses (Z-axis); 20.0 Gs, 10ms, ½ sine pulses (X- and Y-axes)
Vibration, operating	0.21 Grms, 5Hz to 500Hz random
Vibration, nonoperating	1.04 Grms, 2Hz to 200Hz random
Acoustics	Operating Sound Power ≤ LWAd 8.0 Bels (re 1 pW) @ 23°C

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