



DATA SHEET

Integrated. Efficient. Intelligent.

# NyTRO X 2U24



Seagate® NyTRO® X 2U24 is the datasphere's affordable all-flash array (AFA) system for critical workloads that demand the highest performance.



## Product Highlights

- Deliver unfettered data access with extremely low 250 microsecond latency.<sup>2</sup>
- Ensure data is consistently available with next-gen Seagate ADAPT data protection for up to 95% faster rebuilds than traditional RAID configurations
- Easily upgrade capacity and speed with hot-swappable Seagate SSDs
- Save time with quick 5-step setup and low maintenance support design
- Rely on factory-tested components that are qualified before delivery

## Key Advantages

**Consistent High Performance.** Get high performance, low latency, and intelligent features at a fraction of the cost of other AFA solutions, with up to 24 super-fast solid state drives (SSD) that can deliver up to 7GB/s sequential read, 5.5GB/s sequential write throughput performance. New firmware ensures performance in every model is fast and access to data is virtually immediate. This NyTRO product's dual-redundant controllers enable consistent speed at 320K to 600K IOPS.<sup>1</sup>

**Cost-Optimized Architecture.** This flexible solution's unique design leverages an ASIC-based architecture to deliver ultra-fast data access and predictable AFA performance at consistent low latencies. Now data centers can eliminate the overhead of expensive processors and dynamic random-access memory (DRAM) for high speed and upgrade to uncompromised flash performance.

**Easy to Set Up, Maintain, and Expand.** All system components—the enclosure, the controller, the firmware, and the drives—are developed and optimized by our engineers to work together seamlessly. This reduces support calls and eliminates technical learning curves. Modular architecture makes components interchangeable between systems, and upgrades are simple due to common FRUs, PCMs, controllers, and software.

**Get Data to Applications Fast and Protect Valuable Assets.** This system is full of features that enable extreme cost efficiency, performance, and up to 99.999% data availability. Parallel architecture, multi-core processing, data replication, and fast streaming capabilities make access to data unfettered, while exclusive Seagate ADAPT data protection technology enables fast and efficient drive rebuilds that virtually eliminate system downtime.

**Build In Security at the Foundation of the Data Life Cycle.** Protect the most valuable business assets with Seagate Secure™ cybersecurity features and intelligent firmware—such as SFTP, SED support, and administrator access controls—that provide built-in security measures for reliable and safe file access, transfer, and management.

<sup>1</sup> IOPS based on controller choice: capable of 320K IOPS with 4005 model and 600K IOPS with 5005 model.

<sup>2</sup> When configuration supports 500K IOPS



Specifications	
4005 Controller Performance	320,000 IOPS @ 1ms latency   7GB/s read throughput   5.5GB/s write throughput
5005 Controller Performance	600,000 IOPS @ 1ms latency   500,000 IOPS @ 250 µs latency   7GB/s read throughput   5.5GB/s write throughput
Expansion BODs	J1224 (2U24)   Maximum of 4 BODs
Advanced Software Features	Snapshots, Asynchronous replication
Base Array Software Features	Virtual pools, Thin provisioning, ADAPT, SSD read cache, Encryption
High-Availability Features	Redundant hot-swap controllers   Redundant hot-swap devices, fans, power   Dual power cords   Hot standby spare   Automatic failover   Multi-path support
Device Support	SAS SSD
Data Protection	Seagate ADAPT   RAID levels supported: 0, 1, 3, 5, 6, 10, and 50
System Configuration (24, 2.5-in devices)	360TB max   With 3 BODs: 1.44PB (based on 15TB SSDs)
Physical	Height: 87.9mm / 3.46 in   Width: 443mm / 17.44 in   Depth: 630mm / 24.8 in   Width w/ear mounts: 483mm / 19.01 in   Weight: 17kg / 38 lb   Weight (with drives): 30kg / 66 lb
Hosts	
External Ports	8 per system
Fibre Channel Models	Host speed: 16Gb/s, 8Gb/s Fibre Channel   Interface type: SFP+
iSCSI Models	Host speed: 10Gb/s, 1Gb/s iSCSI   Interface type: SFP+
SAS Models	Host speed: 12Gb/s, 6Gb/s SAS   Interface type: HD Mini-SAS
System Configuration	
System Memory	16GB per system (4005), 32GB per system (5005)
Volumes per System	1024
Cache	Mirrored cache: Yes   Supercapacitor cache backup: Yes   Cache backup to flash: Yes – nonvolatile
Management	
Interface Types	10/100/1000 Ethernet, Mini USB
Protocols Supported	SNMP, SSL, SSH, SMTP, HTTP(S)
Management Consoles	Web GUI, CLI
Management Software	Seagate Systems storage management console   Remote diagnostics   Nondisruptive updates   Volume expansion
Power Requirements—AC Input	
Input Power Requirements	100V-240V AC 60Hz/50Hz
Max Power Output per PSU	580W
Environmental/Temperature Ranges	
Operating/Nonoperating Temperature	ASHRAE A2, 5°C to 35°C (41°F to 95°F), derate 1°C/300m above 900m, 20°C/hr max rate of change / -40°C to 70°C (-40°F to 158°F)
Operating/Nonoperating Humidity	-12°C DP and 10% RH to 21°C DP and 80% RH, max DP 21°C / 5% to 100% noncondensing
Operating/Nonoperating Shock	5 Gs, 10ms, half sine pulses / 15 Gs, 10ms, half sine pulses
Operating/Nonoperating Vibration	0.21 Gs rms 5Hz to 500Hz random / 1.04 Gs rms 2Hz to 200Hz random
Standards/Approvals	
Safety Certifications	UL 60950-1 (United States)   CAN/CSA-C22.2 No.60950-1-07 (Canada)   EN 60950-1 (European Union)   IEC 60950-1 (International)   CCC (China PRC – CCC Power Supplies)   BIS (India – BIS Power Supplies)
Ecodesign	Commission Regulation (EU) 2019/424 (Directive 2009/125/EC)
Emissions (EMC)	FCC CFR 47 Part 15 Subpart B Class A (United States)   ICES/NMB-003 Class A (Canada)   EN 55032 Class A, EN 55024, EN 61000-3-2, EN 61000-3-3 (Europe)   AS/NZS CISPR 32 Class A (Australia/New Zealand)   VCCI Class A (Japan)   KN 32 Class A/KN 35 (S. Korea)   CNS 13438 Class A (Taiwan)
Harmonics	EN 61000-3-2 (EU)
Flicker	EN 61000-3-3 (EU)
Immunity	EN 55024 (EU)   KN 24/KN 35 (S. Korea)
Environmental Standards	The RoHS Directive (2011/65/EU)   The WEEE Directive (2012/19/EU)   The REACH Directive (EC/1907/2006)   The Batteries Directive (2006/66/EC)
Standard Marks/Approvals	Australia/New Zealand (RCM), Canada (cUL/ICES/NMB-003 Class A), China (CCC – PSU only), European Union (CE), Japan (VCCI), South Korea (KC), Taiwan (BSMI), United States (FCC/UL)

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