
**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.\(^2\)
- 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.\(^1\)

**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.

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1. IOPS based on controller choice: capable of 320K IOPS with 4005 model and 600K IOPS with 5005 model.
2. 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 EBODs

### 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)
- 91TB max | With 3 EBODs: 364TB (based on 3.8TB 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

### 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 | Non-disruptive updates | Volume expansion

### Power Requirements—AC Input
- Input Power Requirements: 100V-240V AC 60Hz/50Hz
- Max Power Output per PSU: 580W

### Environmental/Temp 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)
- Emissions (EMC): FCC CFR 47 Part 15 Subpart B Class A (United States) | ICES/NMB-003 Class A (Canada) | EN 55022 Class A, EN 55024, EN 61000-3-2, EN 61000-3-3 (Europe) | AS/NSZ 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)
- 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)