

Nytró[®] XF1440 and XM1440 NVMe SSDs

Data Sheet

Key Features and Benefits

- PCIe Gen3 x4 interface with NVMe protocol for improved latency, consistent response time and high throughput
- Best-in-class performance per Watt of up to 25,000 IOPS/W enables more computing with less energy consumption
- Host selectable performance optimization to balance performance and power
- Industry-leading storage density of up to 1.8TB in a 2.5-inch x 7mm form factor and up to 960GB in a M.2 form factor
- Optimized for read-intensive and mixed workloads
- Hot-swappable 2.5-inch SSD with SFF-8639 connector for easy serviceability
- Power loss data protection circuit to prevent loss of data in the event of unexpected power interruptions
- Superior data security with Seagate Secure™ Self-Encrypting Drive (SED) models¹
- End-to-end data protection and LDPC error correction for high level of data integrity and reliability

The Seagate Nytró XF1440 2.5-inch solid state drive (SSD) and Seagate Nytró XM1440 M.2 SSD are the new industry-leading class of low-power enterprise NVMe SSDs with optimized power and performance designed to increase storage density in data centers.

Increase Storage Density in Data Centers

The Nytró XF1440 and XM1440 are low power, high performance enterprise NVMe SSDs in compact form factors engineered to increase storage density as well as reduce storage footprints and power use in data centers. The SSDs enable more computing with less space, energy and cost by delivering the highest performance in the smallest power envelope.

Improve Data Center Efficiency and Lower TCO

The Nytró XF1440 and XM1440 are cost-effective, energy efficient storage solutions that combine high level of serviceability, improved power and cooling efficiency, scalability and space optimization to reduce total cost of ownership (TCO) in data centers.

The Nytró XF1440 with SFF-8639 connector enables effortless serviceability and maintenance without any downtime requirements featuring hot-swap capability for easy addition, removal or replacement of SSDs.

Enhanced Enterprise Reliability, Data Protection and Security

By leveraging Seagate's existing enterprise expertise, mature reliability, manufacturing excellence and system compatibility testing and infrastructure the Nytró XF1440 and XM1440 SSDs deliver the highest levels of data integrity, data security, and endurance for critical business applications.

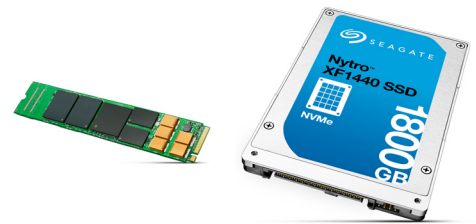
The Nytró XF1440 & XM1440 feature end-to-end data protection and LDPC error correction for solid reliability and endurance. With power-loss data protection, the XF1440 and XM1440 maintain data integrity to prevent loss of data in the event of unexpected power interruptions.

Seagate Secure Self-Encrypting Drive (SED) models¹ support TCG Enterprise protocol and enable companies to keep valuable data secure.

¹ Self-Encrypting Drives (SED) are not available in all models or countries. May require TCG-compliant host or controller support.



Nytró[®] XF1440 and XM1440 NVMe SSDs



| Nytró XF1440 SSD Specifications | Endurance Optimized | | | Capacity Optimized | | |
|--|------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|
| | 1600GB ¹ | 800GB ¹ | 400GB ¹ | 1800GB ¹ | 960GB ¹ | 480GB ¹ |
| Target Application | Mixed Workloads | | | Read-intensive Workloads | | |
| Standard Model | ST1600HM0011 | ST800HM0021 | ST400HM0021 | ST1800HM0001 | ST960HM0001 | ST480HM0001 |
| Seagate Secure™ SED Model | TBD ² | TBD ² | TBD ² | TBD ² | TBD ² | TBD ² |
| Interface | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b |
| NAND Flash Type | eMLC | eMLC | eMLC | eMLC | eMLC | eMLC |
| Form Factor | 2.5 in x 7mm | 2.5 in x 7mm | 2.5 in x 7mm | 2.5 in x 7mm | 2.5 in x 7mm | 2.5 in x 7mm |
| Performance³ | | | | | | |
| Sequential Read (MB/s) Peak, 128KB ³ | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Sequential Write (MB/s) Peak, 128KB ³ | 1200 | 1200 | 600 | 1200 | 1200 | 600 |
| Random Read (IOPS) Peak, 4KB QD32 ³ | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 |
| Random Write (IOPS) Peak, 4KB QD32 ³ | 34,000 | 34,000 | 34,000 | 3,000 | 7,000 | 6,000 |
| Endurance/Reliability | | | | | | |
| Lifetime Endurance (Drive Writes per Day) | 3 | 3 | 3 | 0.3 | 0.3 | 0.3 |
| Nonrecoverable Read Errors per Bits Read | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 |
| Mean Time Between Failures (MTBF, hours) | 2M | 2M | 2M | 2M | 2M | 2M |
| Power Management | | | | | | |
| +12V Max Power (W) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Average Read/Write Power (W) | 9 | 9 | 9 | 9 | 9 | 9 |
| Average Idle Power (W) | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Environmental | | | | | | |
| Temperature, Operating (°C) | 0 to 70 | 0 to 70 | 0 to 70 | 0 to 70 | 0 to 70 | 0 to 70 |
| Temperature, Nonoperating (°C) | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 |
| Temperature Change Rate/Hr, Max (°C) | 20 | 20 | 20 | 20 | 20 | 20 |
| Shock, 0.5ms (Gs) | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Vibration, 7Hz to 800Hz (Grms) | 3.08 | 3.08 | 3.08 | 3.08 | 3.08 | 3.08 |
| Vibration, 20Hz to 2000Hz (Grms) | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 |
| Physical | | | | | | |
| Height (in/mm, max) ⁴ | 0.276/7.00 | 0.276/7.00 | 0.276/7.00 | 0.276/7.00 | 0.276/7.00 | 0.276/7.00 |
| Width (in/mm, max) ⁴ | 2.750/69.85 | 2.750/69.85 | 2.750/69.85 | 2.750/69.85 | 2.750/69.85 | 2.750/69.85 |
| Depth (in/mm, max) ⁴ | 3.951/100.35 | 3.951/100.35 | 3.951/100.35 | 3.951/100.35 | 3.951/100.35 | 3.951/100.35 |
| Weight (lb/g) | 0.198/90 | 0.198/90 | 0.198/90 | 0.198/90 | 0.198/90 | 0.198/90 |
| Carton Unit Quantity | 10 | 10 | 10 | 10 | 10 | 10 |
| Warranty | | | | | | |
| Limited Warranty (years) | 5 | 5 | 5 | 5 | 5 | 5 |

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 SED model not yet available, please contact your sales representative for info on availability. Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

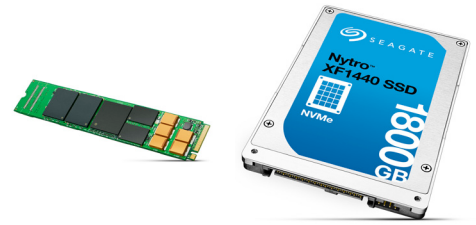
3 Performance data is based on estimates under certain workload conditions and is subject to change.

4 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8639.





Nytrio[®] XF1440 and XM1440 NVMe SSDs



| Nytrio XM1440 SSD Specifications ¹ | Endurance Optimized | | Capacity Optimized | |
|---|------------------------|------------------------|--------------------------|------------------------|
| | 800GB ² | 400GB ² | 960GB ² | 480GB ² |
| Target Application | Mixed Workloads | | Read-intensive Workloads | |
| Interface | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b | PCIe Gen3 x4 NVMe 1.1b |
| NAND Flash Type | eMLC | eMLC | eMLC | eMLC |
| Form Factor | M.2 22110 | M.2 22110 | M.2 22110 | M.2 22110 |
| Endurance/Reliability | | | | |
| Lifetime Endurance (Drive Writes per Day) | 3 | 3 | 0.3 | 0.3 |
| Nonrecoverable Read Errors per Bits Read | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 |
| Mean Time Between Failures (MTBF, hours) | 2M | 2M | 2M | 2M |
| Power Management | | | | |
| +12V Max Power (W) | 8.25 | 8.25 | 8.25 | 8.25 |
| Average Read/Write Power (W) | 7 | 7 | 7 | 7 |
| Environmental | | | | |
| Temperature, Operating (°C) | 0 to 70 | 0 to 70 | 0 to 70 | 0 to 70 |
| Temperature, Nonoperating (°C) | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 |
| Temperature Change Rate/Hr, Max (°C) | 30 | 30 | 30 | 30 |
| Shock, 0.5ms (Gs) | 1500 | 1500 | 1500 | 1500 |
| Vibration, 7Hz to 800Hz (Grms) | 3.08 | 3.08 | 3.08 | 3.08 |
| Vibration, 20Hz to 2000Hz (Grms) | 16.3 | 16.3 | 16.3 | 16.3 |
| Physical | | | | |
| Component Max Height - Top (mm) | 2.5 | 2.5 | 2.5 | 2.5 |
| Component Max Height - Bottom (mm) | 1.5 | 1.5 | 1.5 | 1.5 |
| Width (mm) | 22.0 | 22.0 | 22.0 | 22 |
| Length (mm) | 110.0 | 110.0 | 110.0 | 110 |
| Weight (g) | 12 | 12 | 12 | 12 |
| Carton Unit Quantity | 10 | 10 | 10 | 10 |
| Warranty | | | | |
| Limited Warranty (years) | 5 | 5 | 5 | 5 |

¹ Announced product not yet available, please contact your sales representative for info on availability. Specifications are preliminary and subject to change.

² One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.



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