NYTRO™ ENTERPRISE

SEAGATE GOVERNMENT SOLUTIONS

Lightspeed. Solid. Impressive.

Nytro 1200.2 SAS SSD

TAA or FIPS Certified or TAA + FIPS Combined

The Federal Information Processing Standard (FIPS) Publication 140-2 is a U.S. government computer security standard used to approve cryptographic modules. Trade Agreement Act:19 U.S.C. § 2501–2581 (TAA) fosters fair and open international trade between nations, requiring that products are produced or undergo "substantial transformation" within the United States or designated country.

3.84TB
1200.2 SSD
ST3840FM0043
SAS 12Gb/s

Built in Security

- Self-Encrypting Drive (SED) features mitigate data breaches, comply with data protection regulations and preserve brand recognition.[1]
- Self-Encrypting Drives with FIPS 140-2 certification and are TAA compliant, approved for U.S. and Canadian governments.[1,2]

Key Features and Benefits

- Dual-port 12Gb/s SAS interface
- Industry-leading storage density range up to 4TB-class capacity
- Ultra-fast performance of up to 1900MB/s
- Endurance options for a wide range of enterprise workloads
- Redundant, failover I/O communication
- Power loss data protection circuit
- Superior data security
- Advanced error correction

Best-Fit Applications

- Server virtualization
- OLTP databases
- Software-defined storage
- All flash arrays
- Cashing and tiering

[1] Refer to specifications table for further information and feature options.
[2] See FIPS 140-2 Level 2 Certificate at http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401vend.htm

SEAGATE SECURE™

The Seagate® 1200.2 SAS SSD family includes high-capacity, high-performance SAS SSDs designed with multiple endurance offerings optimized for demanding enterprise applications and improved TCO.
Performance You Need With the Affordability You Demand

Industry-Leading Performance up to 1900MB/s

The 1200.2 SAS SSD family delivers ultra-fast, consistent and easily scalable performance that exceeds 12Gb/s SAS single-port bandwidth. By removing the storage bottleneck, it closes the gap between processor and data storage performance and significantly improves overall system and application responsiveness. The 1200.2 SAS SSD family also provides consistent low-latency data access, reliably accelerating enterprise and cloud storage systems.

High-Capacity Solution With Multiple Endurance Offerings

Enterprise applications have different storage workload requirements for performance, endurance and cost. The optimal storage solution for databases or virtualization with a typically mixed read/write workload, for example, requires the highest random read/write IOPS, ultra-low latency and high endurance. Content streaming applications with highly intensive read workloads, however, demand high sequential read throughput and high storage density at the lowest cost per gigabyte. The 1200.2 SAS SSD family offers an industry-leading range of capacities, including 4TB-class in a 2.5-inch form factor, to increase enterprise storage density in data centers. It also enables lower TCO by offering four endurance categories to match cost and performance requirements of all enterprise workloads.

Enhanced Enterprise Reliability, Data Protection and Security

The 1200.2 SAS SSD family leverages Seagate's decades of enterprise SAS expertise and proven feature set to deliver the highest levels of reliability, data integrity and data security for mission-critical enterprise applications. The 1200.2 SAS SSD family helps deliver exceptional data protection and reliability by integrating full internal and external data path protection (T10 DIF), Seagate's advanced ECC algorithms, media life-cycle management and other techniques for extending flash memory life. With advanced power-loss data protection, the 1200.2 SSD maintains high data integrity to help prevent loss of user data in the event of unexpected power interruptions. The 1200.2 family implements security features to prevent unauthorized access to a drive and safeguards stored data with three levels of security, including Secure Downloads & Diagnostics, TCG-compliant Self-Encrypting Drive and FIPS drive.[1]

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

Product	Capacity[1]	RPM	Form Factor	Interface	Format	FIPS 140-2[3] Limited Warranty[2]	TAA + FIPS[3] Limited Warranty[2]	Standard TAA
BarraCuda *	500 GB	5400	2.5"	SATA	4KN	ST500LM033	ST500LM033-TAA	ST500LM030-TAA
BarraCuda *	1 TB	5400	2.5"	SATA	4KN	ST10000LM038	ST10000LM038-TAA	ST10000LM048-TAA
BarraCuda *	2 TB	5400	2.5"	SATA	4KN	ST2000LM010	ST2000LM010-TAA	ST2000LM015-TAA
BarraCuda	1 TB	7200	2.5"	SATA	4KN	ST1000LM050	ST1000LM050-TAA	ST1000LM049-TAA
EXOS E 10E2400 *	1.8 TB	10K	2.5"	SAS	4KN/512e	ST1800MM0149		
EXOS E 10E2400 *	2.4 TB	10K	2.5"	SAS	4KN/512e	ST2400MM0149		
EXOS E 15E900 *	900 TB	15K	2.5"	SAS	512N	ST900MP0126		
EXOS E 15E900 *	600 TB	15K	2.5"	SAS	512N	ST600MP0026		
EXOS E 15E900 *	900 TB	15K	2.5"	SAS	FF	ST900MP0166		
EXOS E 15E900 *	600 TB	15K	2.5"	SAS	FF	ST600MP0156		
EXOS E 7E2000	2 TB	7200	2.5"	SAS	512e	ST2000NX0353	ST20000NX0353-TAA	ST2000NX0273-TAA
EXOS E 7E2000	2 TB	7200	2.5"	SAS	4KN	ST2000NX0333		
EXOS E 7E2000	2 TB	7200	2.5"	SATA	512E			ST2000NX0253-TAA
EXOS E 7E8	2 TB	7200	3.5"	SATA	512N			ST2000NM0055-TAA
EXOS E 7E8	2 TB	7200	3.5"	SAS	512N			ST2000NM0045-TAA
EXOS E 7E8	3 TB	7200	3.5"	SAS	512N	ST3000NM0045		
EXOS E 7E8	3 TB	7200	3.5"	SATA	512N	ST3000NM0055		
EXOS E 7E8	4 TB	7200	3.5"	SAS	512E	ST4000NM0235		
EXOS E 7E8	4 TB	7200	3.5"	SATA	512E	ST4000NM0225		
EXOS E 7E8	4 TB	7200	3.5"	SATA	512N	ST4000NM0105	ST4000NM0105-TAA	ST4000NM0035-TAA
EXOS E 7E8	4 TB	7200	3.5"	SAS	512N	ST4000NM0135	ST4000NM0135-TAA	ST4000NM0025-TAA
EXOS E 7E8	6 TB	7200	3.5"	SATA	512e	ST6000NM0275		
EXOS E 7E8	6 TB	7200	3.5"	SAS	512E	ST6000NM0285	ST6000NM0285-TAA	ST6000NM0095-TAA
EXOS E 7E8	6 TB	7200	3.5"	SATA	4KN	ST6000NM0265		
EXOS 7E8	8 TB	7200	3.5"	SAS	4KN	ST8000NM0125	ST8000NM0125-TAA	ST8000NM0065-TAA
EXOS 7E8	8 TB	7200	3.5"	SATA	4KN	ST8000NM0145		
EXOS 7E8	8 TB	7200	3.5"	SATA	512e	ST8000NM0155	ST8000NM0155-TAA	ST8000NM0055-TAA
EXOS 7E8	8 TB	7200	3.5"	SAS	512e	ST8000NM0135	ST8000NM0135-TAA	ST8000NM0075-TAA
EXOS X10 *	10 TB	7200	3.5"	SAS	512e	ST10000NM0236	ST10000NM0236-TAA	ST10000NM0096-TAA
EXOS X10 *	10 TB	7200	3.5"	SAS	4KN	ST10000NM0246	ST10000NM0246-TAA	ST10000NM0206-TAA
EXOS X10 *	10 TB	7200	3.5"	SATA	4KN	ST10000NM0186		
EXOS X10 *	10 TB	7200	3.5"	SATA	512e	ST10000NM0176	ST10000NM0176-TAA	ST10000NM0016-TAA
Nytro	1.6 TB	ME	2.5"	SAS	512e/4KN	ST1600FM0023	ST1600FM0023-TAA	ST1600FM0003-TAA
Nytro	3.2 TB	ME	2.5"	SAS	512e/4KN	ST3200FM0043	ST3200FM0043-TAA	ST3200FM0023-TAA
Nytro	800 GB	ME	2.5"	SAS	512e/4KN	ST800FM0213	ST800FM0213-TAA	ST800FM0173-TAA
Nytro	400 GB	ME	2.5"	SAS	512e/4KN	ST400FM0293	ST400FM0293-TAA	ST400FM0233-TAA

[1]One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.
[2]Extended warranty products available. Consult your distributor for details.
[3] Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support. Instant Secure Erase (ISE) functionality meets the ISO/IEC 27040 and NIST 800-88 guidelines for complete and authoritative drive sanitation

FIPS VALIDATED 140-2™

SEAGATE SECURE

ADVANCED AF FORMAT

FIPS 140-2 Inside

* Common Criteria Certified

Seagate Self-Encrypting Drives (SED) are validated as FIPS 140-2, Level 2 compliant. Organizations of all types are increasingly demanding that data-at-rest be encrypted to protect against loss or theft. FIPS 140-2, Level 2 validation is viewed as a mark of security and quality, and certifies to all buyers that Seagate FIPS SEDs meet the U.S. federal government requirements for security products.

Seagate is a trusted trailblazer in the world of data management for government entities and contractors, providing highly secure, top performing, affordable solutions. Armed with TAA-compliant hard drives and SSDs, customers are able to adhere to strict government mandates while adding essential protection to some of the world's most valuable data.

TAA and FIPS: Why They Matter When Buying Drives
Technology Point of View

Now more than ever, enhanced data security is a necessity for government agencies and contractors. As such, we need to go beyond safeguarding systems—security must start at the drive level. Seagate® TAA and FIPS-compliant hard drives and SSDs answer this need, addressing every step of the supply chain, reducing risks and meeting Federal security standards.

Understanding TAA
TAA (Trade Agreements Act: 19 U.S.C. § 2501–2581) fosters fair and open international trade between nations, requiring that products are produced or undergo "substantial transformation" within the United States or designated country. While TAA compliance is often thought of in relation to storage systems, it also applies to individual components, such as hard drives and SSDs.

Approved and Recorded in the Federal Register
Seagate's TAA-compliant solutions for enterprise, desktop and notebook hard drives are the only solutions approved and recorded in the Federal Register. This eliminates the requirement for waivers for TAA storage and meets the encryption requirements set by the US Government for both US Government entities and contractors.

Penalties for Non-Compliance
Any supplier having a GSA Schedule or other US Government contract, such as DOD and IDIQs, must ensure their products comply with TAA standards. Non-compliance could lead to bid award cancellation, significant fines and potential exclusion from Federal contracting. Additionally, TAA cannot be ignored if order values are below the dollar threshold, which is currently $203,000 for goods and services. GSA states, *Since the estimated dollar value of each Schedule exceeds the established TAA threshold, TAA is applicable to all Schedules. In accordance with TAA, only U.S.-made or designated country end products shall be offered and sold under Schedule contracts. Based on this ruling, that means all products offered under GSA Schedule contracts must be TAA compliant, regardless of cost.*[2]

Understanding FIPS 140-2
FIPS 140-2 (Federal Information Processing Standard, with 2 referring to the version) is part of a set of US Government computer security standards used to approve cryptographic modules and their use within IT systems. It applies to any product that might store or transmit sensitive data, including link encryptors, hard drives, SSDs or other removable storage media. It ensures that a product uses sound security practices, such as approved, strong encryption algorithms and methods. It also specifies how individuals or other processes must be authorized in order to utilize the product, and how modules or components must be designed to securely interact with other systems.

Common Criteria
Common Criteria (CC) is an internationally recognized standard (ISO/IEC 15408) for assessing security functionality of information assurance (IA) and IA-enabled products. CC is required to be sold into US national security agencies and for all IA-enabled devices. A CC certification assures buyers that the process of specification, implementation and evaluation of any certified security product was conducted and proven in a thorough and standard manner. CC is recognized by 17 certificate authorizing and 11 certificate consuming members, including many member nations from the EU, Asia, and North America.[5]

[1] Current list of designated countries
[2] GSA ordering guidelines
[3] Guidelines for media sanitization
[4] NIST Special Publication
[5] The Common Criteria

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