

Quantum®

StorNext AEL Archives



> DATASHEET

Cost-Effective Tiering for Long-Term Digital Archives

STORNEXT SOLUTIONS FOR DEMANDING WORKFLOWS

From DNA sequencing to high-definition video editing to seismic exploration, customers across industries are experiencing tremendous growth in unstructured digital assets. This digital content is very high in volume, is growing at high rates, and has great value to the business or institution. Like all Quantum StorNext® appliances, StorNext AEL Archives are designed for extreme data environments, offering high-performance, highly scalable data management solutions that are also cost effective and easy to manage. When added to a StorNext File System deployment, StorNext AEL Archives provide nearline archiving with built-in data protection and self-healing capabilities to ensure that valuable digital assets are protected and accessible over time.

COST-EFFECTIVE, HIGH-CAPACITY TIERED STORAGE

StorNext AEL Archives use automated, policy-based tiering and cost-effective tape storage to deliver petabytes of data accessible to users through a simple file system interface. By extending the StorNext File System with StorNext AEL Archive, you can move seldom-accessed data to inexpensive tape media that requires very little power, cooling, or floor space. Both data migration and tiering are transparent to users—when a user saves a file to the StorNext File System, it remains accessible, regardless of its location.

StorNext AEL6 starts at 125 TB (50 slots of LTO-6) and can grow to 9.6 PB (800 slots of LTO-8). StorNext AEL6000 scales up to 144 PB with 12,006 slots of nearline storage using LTO-8. StorNext vaulting with the Active Vault license for StorNext AEL6 and AEL6000 stores vaulted tapes in an inactive partition of the library for faster access and greater security than vaulting outside the library.

SELF-HEALING ARCHIVE

StorNext AEL Archives ensure data integrity through policy-based Extended Data Life Management (EDLM). EDLM tests and verifies the media in the archive and provides health reports for all cartridges. If EDLM identifies a suspect tape cartridge, it interacts with StorNext, and the data on the original cartridge is automatically copied to a new cartridge, creating a self-healing archive solution.

INVESTMENT PROTECTION WITH SLOT-BASED PRICING

StorNext AEL Archives use slot-based pricing to guarantee investment protection over the lifetime of the archive. As tape media capacities increase from one generation to another, the capacity of a purchased StorNext AEL Archive can increase—with no additional software license fees—making the initial investment affordable and its long-term TCO unbeatable.

FEATURES & BENEFITS

Automated Tiering

Based on user-defined policies, infrequently accessed files are automatically migrated to economical tape media, reducing costs so more content can be retained and protected.

Capacity-on-Demand Growth

Simplifies storage growth by scaling quickly, easily, and without disruption.

Slot-Based Pricing Model

Customers significantly increase archive capacities when they migrate already purchased StorNext AEL Archives to a new LTO tape technology (i.e., LTO-6 to LTO-7).

Self-Healing Archive

Extended Data Life Management (EDLM) capability automatically copies data on suspect tapes to new tape media.

Active Vault

Secure in-library vaulting saves cost, increases security, and simplifies access to vaulted content.

Reduced Management Costs

Automated data tiering, tape data integrity checking plus self-healing mean less management time and optimal utilization.

World-Class Support From One Vendor

All software, hardware, and support is provided by the experts at Quantum.

> **LEARN MORE:**
www.quantum.com/stornext

TECHNICAL SPECIFICATIONS

STORNEXT AEL ARCHIVES INCLUDE

StorNext AEL6	StorNext AEL6000
StorNext Storage Manager slot-based licenses	
EDLM software with license	
Quantum Scalar® i6 tape library configured for the following slot count <ul style="list-style-type: none"> • 50 activated slots • Expandable to 800 slots • High-efficiency power supplies, 80 PLUS® certified 	Quantum Scalar i6000 tape library configured for the appropriate slot count <ul style="list-style-type: none"> • 400, 700, 1,500, 3,000, or 5,000 activated slots • Expandable to 12,006¹ slots • High-efficiency power supplies, 80 PLUS Gold certified

CAPACITY CONFIGURATIONS

	StorNext AEL6	StorNext AEL6000
Base Module Sizes	6U	1-17 frames
Drive Technology	LTO-6, LTO-7, LTO-8	LTO-6, LTO-7, LTO-8
Drive Quantity	Up to 24	Up to 192
Cartridge Slots	50 to 800	400 to 12,006 ¹
Base Unit Active Slots	50	400, 700, 1,500, 3,000, 5,000
	Drive	Media
Approximate Capacity Range (TB)¹	LTO-8	LTO-8 (L8)
	LTO-8	LTO-7 (M8) ²
	LTO-7	LTO-7 (L7)
	LTO-6	LTO-6 (L6)
	600-9,600	4,800-143,760
	450-7,200	3,600-107,820
	300-4,800	2,400-71,880
	125-2,000	1,000-29,950

¹Maximum for AEL6000 requires optional High-Density Expansion Modules (HDEMs). Addition of optional drives, optional import/export stations, or optional Dual Robot will reduce maximum size.

²New, unused LTO generation 7 cartridges can be initialized as LTO-8 Type M media (M8).

OPTIONAL ADD-ONS

StorNext AEL6	StorNext AEL6000
<ul style="list-style-type: none"> • Capacity-on-Demand for quick and easy scalability: <ul style="list-style-type: none"> ▫ 25-slot licenses ▫ 100-slot licenses ▫ 750-slot license • Physical Expansion Modules sold separately • Additional tape drives • EDLM drives • Active Vault • StorNext Distributed Data Movers (DDMs) • StorNext vaulting • Advanced Reporting license • Redundant power supply • Advanced Path Failover 	<ul style="list-style-type: none"> • Dual Robot feature with active/active operation • Capacity-on-Demand for quick and easy scalability: <ul style="list-style-type: none"> ▫ 100 slot licenses ▫ Physical Expansion Modules sold separately • Choice of Expansion Modules <ul style="list-style-type: none"> ▫ Storage/Drive Expansion Module ▫ High-Density Expansion Module • EDLM drives • StorNext Distributed Data Movers (DDM) • StorNext vaulting • Active Vault • Advanced Reporting license • Redundant power supply • Advanced Path Failover

ADVANCED FEATURES

Dual Robot:	Adds a redundant robot for high availability and active/active operation for faster robot performance. Allows the library to continue to operate despite robotic failure. (StorNext AEL6000 only)
Active Vault:	In-library vaulting of cartridges in a separate Active Vault partition. Reduces software and hardware costs, reduces management time, and improves data security.
HDEMs:	High-Density Expansion Modules replace Standard-Density Expansion Modules to achieve 70% higher physical capacity in the same floor space. (StorNext AEL6000 only)
Advanced Reporting:	Media Integrity Analysis report, Media Usage report, Drive Utilization report, Security report and media removal notifications; report scheduling with automated report creation and delivery to distribution lists.
Firmware Auto-leveling:	Maintains consistent firmware levels across all tape drives in the library.
Extended Data Life Management (EDLM):	Media health reports of cartridges stored for long-term archive; information is collected outside of normal operation. Policy-based data migration to new cartridges.
Path Failover:	Control Path Failover and Data Path Failover, including support for path failure within the SAN fabric.
Library Partitioning:	Supports up to 16 partitions for tape consolidation in StorNext AEL6000 and up to 15 partitions in StorNext AEL6.

OPERATION

	StorNext AEL6	StorNext AEL6000
Library Control/Data Interface:	8 Gb Fibre Channel	8 Gb Fibre Channel
Management Interface:	1 GbE	1 GbE
Inventory Speed:	Ranges from approx. 1 minute to 6 minutes, depending on configuration	100 slots in 20 seconds
Import/Export:	Configurable, 0 to 50 slots in 5-slot increments for every module, up to 240 I/E slots	Up to 1,104 (LTO) physical I/E slots; Extended I/E provides virtual I/E slots; Auto-import; non-disruptive bulk loading

RELIABILITY

	StorNext AEL6	StorNext AEL6000
Library MSBF:	Greater than 2 million	Greater than 3 million
Library MTTR:	30 minutes	20 minutes
Power:		2N power
Diagnostics:	Embedded monitoring of major subsystems, self-diagnostic procedures, and policy-based email and pager alerts to system administrators and Quantum Global Services	
Module Upgrades:	Any storage module may be added in less than 30 minutes; all components are customer installable.	Standard-Density Expansion Modules are included by default with purchase of Capacity-on-Demand license keys. Optional HDEMs replace Standard-Density Expansion Modules, if purchased.

COMPLIANCE AND CERTIFICATION

	StorNext AEL6	StorNext AEL6000
Safety Standards:	IEC-60950 with worldwide country deviations	TUV IEC-60950-1:2006 CB Scheme, EN 60950-1 2nd Edition
Emissions Standards:	CNS 13438 Class A, EN 55022:2010 Class A, FCC Part 15, Class A, KN 32, VCCI	Class A: FCC CFR-47 Part 15, CISPR 22, EN 55022, VCCI, KCC
Immunity Standards:	EN 55024, KN 35	EN 55024, KN 55024
International Certifications:	CE (Europe), VCCI (Japan), TUV/GS (Germany), FCC (USA), ICES (Canada), cTUVus (USA and Canada), EAC (EurAsian Conformity Mark), KCC (Korea), BSMI (Taiwan)	CE, cTUVus, KCC (MIC), GOST, VCCI

ENVIRONMENTAL

	StorNext AEL6	StorNext AEL6000
Electrical:	100-240 VAC, 50-60 Hz	100-240 VAC, 2-24 kVA
Temperature:	16 °C to 35 °C operating temperature	15 °C to 35 °C operating temperature
Humidity:	20 to 80% non-condensing operating humidity	10 to 90% non-condensing operating humidity

INTEROPERABILITY

StorNext AEL Archives are available for purchase with StorNext appliances or StorNext software. They can also be added to an existing StorNext deployment. The StorNext AEL family is designed for use with:

- StorNext Pro Solutions
- StorNext metadata appliances
- StorNext storage
- StorNext software
- Scalar Key Manager
- Select third-party encryption key managers

SUPPORTED ENVIRONMENTS

Host Operating Systems and Client Types:	Oracle Solaris, HP-UX, IBM AIX, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows, Mac OS X*, CentOS, Scientific Linux, Oracle Linux
Metadata Controller:	Requires StorNext M440/M660 metadata appliance or equivalent Linux StorNext metadata controller

*Mac OS X support provided by Apple's Xsan product. For more information, visit www.apple.com/xsan. Note: For a complete list of supported operating systems, consult the StorNext-Supported Environments List at www.quantum.com.

ABOUT QUANTUM

Quantum is a leading expert in scale-out tiered storage, archive, and data protection, providing solutions for capturing, sharing, and preserving digital assets over the entire data lifecycle. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to address their most demanding data workflow challenges. Quantum's end-to-end, tiered storage foundation enables customers to maximize the value of their data by making it accessible whenever and wherever needed, retaining it indefinitely and reducing total cost and complexity. See how at www.quantum.com/customerstories.