



Specification Brief

January 2010

MagnaStor™ 1.0 For Microsoft Windows

General Specifications

Target Environment:

Long-term, high-performance archival storage

Overview:

Transparent Windows file system, perpetual, journalized meta-data, embedded, user-defined file system policy

Maximum File System (Volume) Size:

3785 TB

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3785 TB

Maximum Mounted Volumes:

No fixed limit, subject to available memory; each mounted file system consumes about 25-50MB of virtual memory

Maximum Path Length:

1024 characters

Maximum Name Length:

254 characters

Unicode Support:

UTF-8

Pathname Case:

Pathnames are case sensitive by default, case is preserved

File System Portability:

Binary compatible across operating systems and hardware platforms

Data Integrity Checking Options:

CRC32, SHA-1, SHA-256, SHA-512
(calculated and applied on all file system meta-data structures and user data)

Policy Controls:

MagnaStor™ file system policy allows the user to define time frames and events that are associated with the chain of custody and lifecycle stages of a file. At each stage, rules may be defined to control which types of file system operations are permissible. Policy controls only how the file system interacts with users and applications, but has no impact at the media level, where all actions are sequentially journalized and strict WORM semantics are imposed and cannot be circumvented.



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MagnaStor™ 1.0

File System Implementation

Driver:	Windows IFS kernel driver
Supported Processors:	Intel/AMD 32/64 bit processors
Supported Operating Systems:	Windows Server 2008/2003 (32/64 bit) Windows 7, Windows XP Pro (32/64 bit)
Security:	Share-level Security (File-level Security will be available in an upcoming version)

Storage Subsystem/ Device Specifications

Storage Device Support:	Any block addressable storage class device supported by Microsoft Windows
Minimum Device Capacity:	16GB

File System Details

Files

Maximum Files per Volume:	No fixed limit
Maximum Files per Directory:	No fixed limit (recommended maximum: 100,000 files)
Attribute Support:	Read Only, Archive, Offline, System, Hidden
Alternate Data Streams Support:	Yes
Extended Attribute Support:	Yes
Security Level:	Share-level Security

Directories

Maximum Name Length:	254 characters
Maximum Number:	No fixed limit
Maximum Depth:	No fixed limit, other than maximum total path length of 1024 characters

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