

# SeaChange® MediaServer FMS 2500

QuickSpec

## 100% Non-Volatile Flash Memory Solution for Diskless Edge Streaming in CDN and NGOD Environments

SeaChange® International continues to deliver industry-leading flash memory-based streamers designed to drastically reduce the operational costs for on-demand service providers deploying CDN environments. With large capacity flash memory and higher density streaming and ingest, the SeaChange MediaServer FMS 2500 is designed to eliminate spinning hard disk drives from the edge of an operator's CDN infrastructure. The FMS family of products is the first in the industry that completely decouples streaming from disk storage, enabling a new level of configuration flexibility, reliability and scalability for operators moving to a centralized CDN architecture.

### BENEFITS

**Reduced operational costs** – For operators, SeaChange reduces the OPEX and CAPEX costs associated with traditional disk failures. Disk replacement and rebuilds, together with the high power consumption, thermal dissipation, space requirement, and noise of traditional disks, make flash technology an easy choice. Compared to spinning hard disk drives, flash memory:

- has no moving parts
- is 100 times more reliable
- requires 1/10th the power to operate

In the 1990's SeaChange revolutionized the industry with MediaCluster® technology. Since then, SeaChange has adapted this technology to on-demand and solid-state drive applications — striping data across all the disks in a server and across all the servers (nodes) in a cluster. By striping data across all the flash modules and all the servers, MediaCluster guarantees fault resilience in the case of flash module failure, or complete server failure or service downtime. It also eliminates the expensive option of mirrored or backup servers. Combining flash memory with SeaChange's patented and widely deployed MediaCluster technology and NGOD, the FMS 2500 is the most reliable and interoperable video server in the market today.

**Independent streaming and storage** – Because of its high cost, limited capacity, and volatility, DRAM (Dynamic Random Access Memory) does not eliminate hard disks from video servers. With 100 times the capacity and persistent flash memory, the FMS 2500 completely decouples streaming from disk storage. Operators have the freedom to co-locate flash streaming servers and disk storage or distribute them at geographically dispersed locations.

**High density and scalability** – The FMS 2500 comes in a compact 2RU package, capable of streaming at 9.375Gbps (2,500 SD MPEG-2 streams) and storing up to 660 hours of SD MPEG-2 content. A 6-node FMS2500 cluster is capable of streaming 15,000 SD streams and storing up to 3,300 hours of SD MPEG-2 content.

**Integrated solution** – The FMS 2500 is fully compatible with SeaChange's widely-deployed video servers as well as SeaChange Axiom® On Demand software.

**Long life cycle flash** – The FMS 2500 uses SLC (single level cell) flash technology which delivers operators piece of mind for non-stop operation. SLC flash guarantees operators higher performance and endurance while requiring less power all while delivering 10 times the life-span over MLC-based (multi-level cell) solutions.

**NGOD compliant** – The FMS 2500 supports NGOD, offering open interfaces to any NGOD compliant CDN or back office solution.

### USE CASES

**CDN Diskless edge streaming** – The FMS 2500 enables an operator to deploy diskless streamers at the edge locations of their CDN networks and thereby centralize storage and storage management at the head-end. SeaChange cache management software automatically keeps popular content at the edge locations. With up to 3300 hours of persistent flash memory per MediaCluster, the FMS 2500 eliminates spinning disks from the edge locations and minimizes the network bandwidth consumption.

**Time-shifted TV** – With up to 3300 hours of flash memory per MediaCluster, the FMS 2500 is the ideal solution for time-shifted TV. In contrast to DRAM-based solutions, the FMS 2500 retains real-time ingested content in spite of server failures, a key requirement for every time-shifted TV application.

**Stream Expansion** – In situations where the current deployment provides a sufficient amount of storage, the FMS 2500 allows the operator to boost streaming capacity without adding disk storage. SeaChange Axiom software automatically distributes popular content to the FMS 2500 to provide the additional streaming capacity.



# Product Specifications

## STREAMER SPECIFICATION

- 2U rack-mountable chassis
- PCI Express server
- 2,500 SD MPEG-2 streams
- 24 x 64GB flash memory
- 660 hours of SD MPEG-2 content with trick speeds
- Power:
  - Redundant 720W supplies
  - 110 or 220 VAC or -48v DC
  - Startup power draw 520W
  - Operating power draw 525W
- Operating temperature: 10°C to 35°C (50°F to 95°F)
- Dimensions: 3.5"H x 17"W x 26.5"D
- Regulatory certifications: FCC class A, CE, CB, Safety 60950-1



Non-Volatile Flash Memory Module

## CLUSTER SPECIFICATION

- RAID 5 Clusters of 3 to 6 nodes\*
- Up to 15,000 SD MPEG-2 streams
- Up to 3,300 hours of SD MPEG-2 content with trick speeds
- N+1 fault resiliency (node level RAID 5)
- Automatic load balancing, and online expansion
- Dual redundant InfiniBand cluster interconnect

## SOFTWARE

- Supports SeaChange Axiom v3.5.3, v5.x (or later)
- Requires SeaChange OSTR servers for NGOD support
- MPEG-2 SD and HD; H.264 SD and HD
- Support for SeaChange's patented smooth splicing technology for dynamic ad insertion
- Clear and pre-encrypted content
- Cluster Management GUI and command line interface
- System snapshot for upgrades, server replacements, and cluster expansions
- SNMP and alarms package

MEDIASERVER FMS 2500 FLASH SERVER "CDN READY"	
FMS 2500 (2RU-9.375Gbps – 24x64GB flash drives) – AC	FMS2500-24x64-AC
FMS 2500 (2RU-9.375Gbps – 24x64GB flash drives) – DC	FMS2500-24x64-DC

\*Contact Product Management if proposing more than a 4-node cluster



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