

SeaChange® Universal Media Streamer (UMS)

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 the highest density streaming, automatic load balancing and intelligent caching algorithm, the SeaChange Universal Media Streamer (UMS) is designed to eliminate spinning hard disk drives from the edge of an operator's CDN infrastructure. The UMS is the newest generation of the FMS family of products – 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.

Offered as a single rack unit, 20 Gigabit streaming server, the UMS supports CBR and VBR HD/SD VOD streaming as well as HTTP, Adobe Flash and many other media streaming methods, making it a future-proof platform based on the Linux operating system for operators to delivery multi-screen video to customers anywhere.

BENEFITS

Reduced OPEX and CAPEX – For operators, the UMS 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 2007, SeaChange revolutionized the industry with the first solid-state flash memory-based VOD streamer. With 100 times more reliable flash memory, this family of products 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. With the largest installed base of the solid-state VOD streamer in the industry, SeaChange is well positioned to deliver the next innovative UMS platform. Furthermore, UMS eliminates the need for trick files and generates dynamic trick speeds on the fly enabling operators to reduce CAPEX by reducing the edge cache storage requirement in addition to reducing OPEX.

High density and adaptive streaming – The UMS comes in a compact 1RU package, capable of streaming at 18.75Gbps (5,000 SD MPEG-2 streams) and caching up to 3,000 hours of SD MPEG-2 content. It supports VBR as well as CBR streams, enabling operators to deploy advanced adaptive streaming technology. It supports MPEG-2 and H.264 SD/HD videos in many transport protocols and

container formats such as UDP, HTTP, Adobe Flash, etc., enabling operators to unify the delivery of video to TV, PC and mobile phones.

Scalability – The UMS is an autonomous streaming node supporting a horizontal, N+1 streaming server scaling architecture.

Intelligent caching – The UMS deploys distributed block based caching that utilizes the CDN and other UMS streamers in a loosely coupled IP network. If a requested block is not present in cache, the UMS may obtain it from one of its neighbors or from the CDN.

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

Large storage – The the UMS supports up to twenty-four 128GB or 256GB flash drives providing up to 6TB (3,000 hours of SDE) of storage respectively.

Fault resilient and stream fail-over – At an edge site, multiple UMS can be connected by IP networking and streaming control managed by the Open Stream Service (OSTR) application to offer automatic load balancing, N+1 fault resiliency and stream fail-over.

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

USE CASES

CDN Diskless edge streaming – The UMS 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. The UMS eliminates spinning disks from the edge locations and minimizes the network bandwidth consumption.

Time-shifted TV – The UMS is the ideal solution for time-shifted TV. In contrast to DRAM-based solutions, the UMS 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 UMS allows the operator to boost streaming capacity without adding disk storage. SeaChange Axiom software automatically distributes popular content to the UMS to provide the additional streaming capacity.

Product Specifications

STREAMER SPECIFICATION

- 1RU rack-mountable chassis
- Linux server
- 5,000 SD MPEG-2 streams
- 24 x 128GB or 256GB flash memory (3TB or 6TB of storage)
- 1,500 hours or 3,000 hours of SD MPEG-2 content
- 18.75Gbps output streaming capacity
- Power:
 - Redundant power supplies
 - 110 or 220 VAC or -48v DC
- Operating temperature: 10°C to 35°C (50°F to 95°F)
- Dimensions: 1.75" H x 17" W x 26.5" D
- Regulatory certifications: FCC class A, CE, CB, Safety 60950-1
- N+1 fault resiliency
- Automatic load balancing, and online expansion



SOFTWARE

- Supports SeaChange Axiom
- Requires SeaChange OSTR for NGOD and eventIS support
- MPEG-2 SD and HD; H.264 SD and HD, CBR or VBR
- HTTP, Adobe Flash and other media containers
- Support for SeaChange's patented smooth splicing technology for dynamic ad insertion
- Clear and pre-encrypted content
- Management GUI and command line interface
- System snapshot for upgrades, server replacements, and expansions
- SNMP and alarms package



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