

# Lumen 1000

## Powerful SVC Encoding Solution



The Lumen 1000 is an advanced H.264 Scalable Video Coding (SVC) turnkey appliance for creating content for multi-platform distribution and advanced adaptive streaming. Lumen enables content producers to publish content to a wider range of devices in a more cost effective manner.

### Encode Once, Serve Many

Existing adaptive streaming solutions require encoding content multiple times for distribution across a variety of platforms resulting in thousands of files for single piece of content.

In addition to encoding, transfer, storage, and other associated costs continue to rise.

SeaWell's Lumen 1000 solves this problem by providing content owners with a revolutionary single encode process.

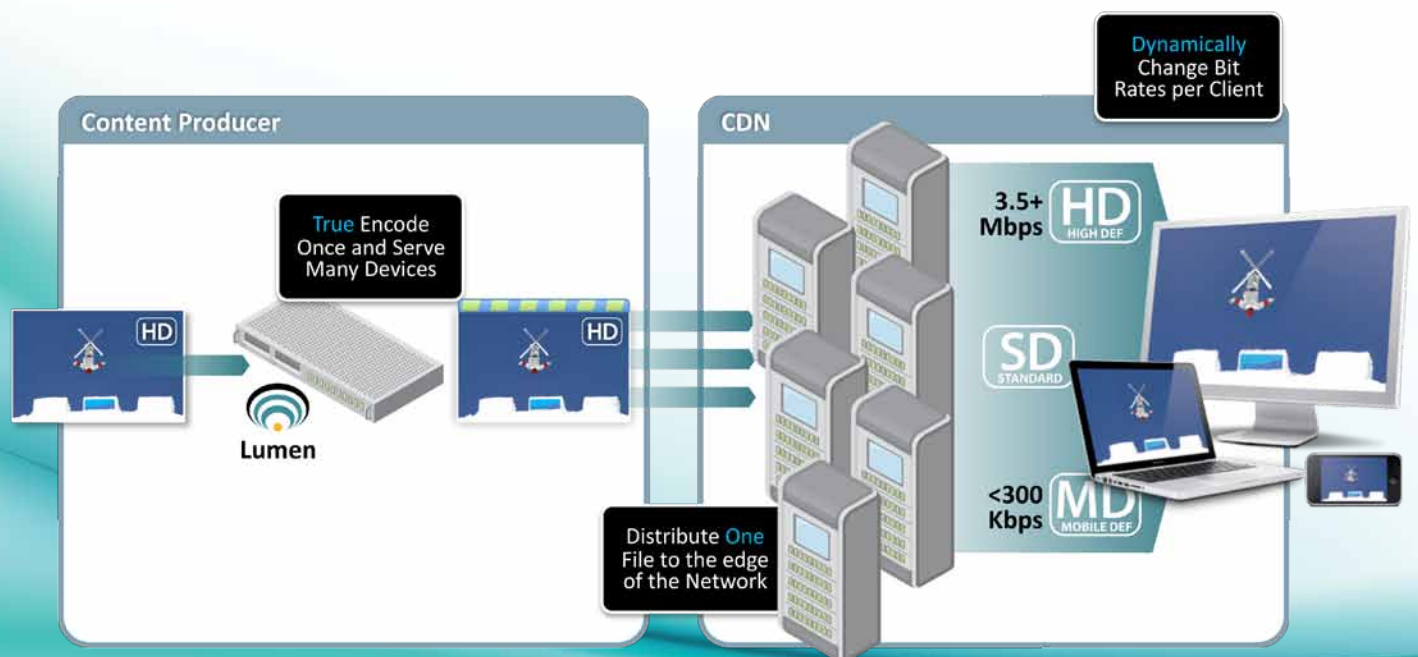
The Lumen 1000 creates H.264 SVC files that contain multiple resolutions and deliver only the bits required for play back on a given device, at a given network speed. The Lumen 1000 can generate SVC files that contain 27+ resolution layers, giving content owners more control over their media than ever before.

### H.264 Scalable Video Coding (SVC)

SVC was ratified as an extension to H.264 in November 2007 by the ITU-T and ISO/IEC JTC. Designed to efficiently deliver the optimal video stream to a range of target platforms and connections types.

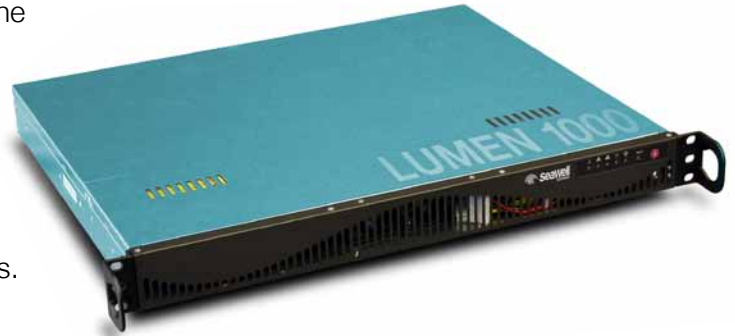
### The Layered Effect

SVC files can take adaptive cues from 3 dimensions - clarity, spatial, and temporal. The secret is in the layering. The Lumen 1000 converts the source video into layers, starting with a base layer that contains the lowest level of quality, and is backwards compatible with existing H.264 players. In addition to the base layer, the encoder also creates enhancement layers that contain video quality, size/resolution, and frame-rate information.



## Smaller Storage & Bandwidth Footprint

Lumen 1000 encoded files reduce a great deal of the redundant data normally required in discrete encodes. Each SVC layer adds information to the lower layers, rather than just duplicating information into multiple bit rates. This allows multiple bit rates to be derived from a single file that is typically only 10 to 20% larger than the highest bit rate. Content owners encoding with the Lumen 1000 will see a 50-70% reduction in storage needs over current multi-bitrate encoding solutions.



## Specifications

### Video Transcoding

- Input - MPEG2 or H.264 AVC (main, baseline, or high) in variety of containers, .flv, .mov, .mp4, avi, etc.
- Output – H.264 SVC Scalability Baseline/High

### Audio Transcoding

- Input – MPEG2, AAC or PCM audio
- Output – AAC audio

### SVC Scalability Baseline/High Support

- MGS – steps in Bit Rate (as a percentage)
- Spatial – 1:1, 1.2:1, 1.5:1, 1.8:1 or 2:1 spatial ratios
- Also supports Manual definition of resolution and bit rate per layer
- 1 to 3 Temporal Layers

### User Interface

- Web based Management UI including Statistics on a per job and per platform basis
- Automated Flow Management based on User Created or Pre-Canned Profiles

### Interface Specifications

- Streaming - 2x 10/100/1000 BT
- Control – RS-232 9-pin D-Sub - 4x USBs

### Dimensions

- 1RU/17.2" (437 mm)
- Height: 1.7" (43 mm)
- Width: 14.5" (369 mm)
- Depth: 17.2" (437 mm)
- Weight: 17 lbs (7.7 kg)

### Power

- 100 - 240V, 50 - 60Hz, 7 - 3Amp

### Environmental

- Operating Temperature: 10-35°C
- Humidity: 5-90% non-condensing

### Regulatory

- USA - UL listed, FCC
- Canada - CUL listed
- Germany - TUV Certified
- Europe/CE Mark
- EN 60950/IEC 60950-Compliant



| Control   | Name                              | Input                 | Transcode                   | Packaging        | Output           |
|---|-----------------------------------|-----------------------|-----------------------------|------------------|------------------|
| <input type="checkbox"/> stop<br><input type="checkbox"/> delete  | 4.3 TV to Web Content "Activated" | Dailies Primary       | 2screens-4by3               | Smooth Streaming | CDN Dailies 1    |
| <input type="checkbox"/> start<br><input type="checkbox"/> delete | 16.9 Feature to 3 screens web     | Feature Trailers AVC3 | 3screens-16by9              | Smooth Streaming | CDN Trailers     |
| <input type="checkbox"/> start<br><input type="checkbox"/> delete | Corp Announcements / Town Halls   | Internal Media 3      | Custom - variety of devices | SeaWell Chunking | Internal Media 1 |

Transcoding: - Flow: - Scheduled: 0

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