

MediaScale™ Transcode

ATA-GLANCE

- Any input, any output, file and live
- Support for a wide range of formats/codecs
- 100% software-defined transcoding for appliance, software only, and virtual machine solutions
- Configuration and management via GUI, API and SNMP
- Optimized integration with the MediaScale™ Origin / Packager
- Supports file and live workflows
- VOX enables flexible video quality setting to manage CPU resources and bandwidth
- 4K, HD, SD inputs and outputs
- MPEG-2, H.264, and HEVC video
- AAC and AC3 Audio
- Advanced video pre/post processing
- High-density-chassis expands easily with additional blades
- CALM Act and EBU R128 compliant

SOLUTION OVERVIEW

MediaScale™ Transcode is a 100% software-based solution that takes advantage of the latest advancements in encoding technology to provide unsurpassed video quality on COTS hardware. Simple to configure and scale, MediaScale™ Transcode enables service providers, broadcasters, and content owners to deliver video over any network and to any device at resolutions from QCIF to 4K. Coupled with the CDN solution, MediaScale™ Transcode provides an end to end video distribution solution including video processing, storage, and delivery.

SOFTWARE DEFINED TRANSCODING

The MediaScale™ Transcode software-based transcoding solution is hardware agnostic, can run on a virtual machine or in a container, and enables the flexibility of on premise, cloud (public or private), or hybrid-cloud deployments.

FILE AND LIVE WORKFLOWS

Both file and live video formats allow converged deployment for QAM, IP, and OTT applications. Deploying with the MediaScale™ Transcode enables highly scalable packaging, seamlessly supporting multiple output formats (HLS, DASH, fragmented MP4, etc.).

MULTIPLE SIMULTANEOUS OUTPUTS

Simultaneously output a mix of streams at multiple resolutions and frame rates. Efficiently address multiple target devices, simplify workflows, and maximize processing throughput.

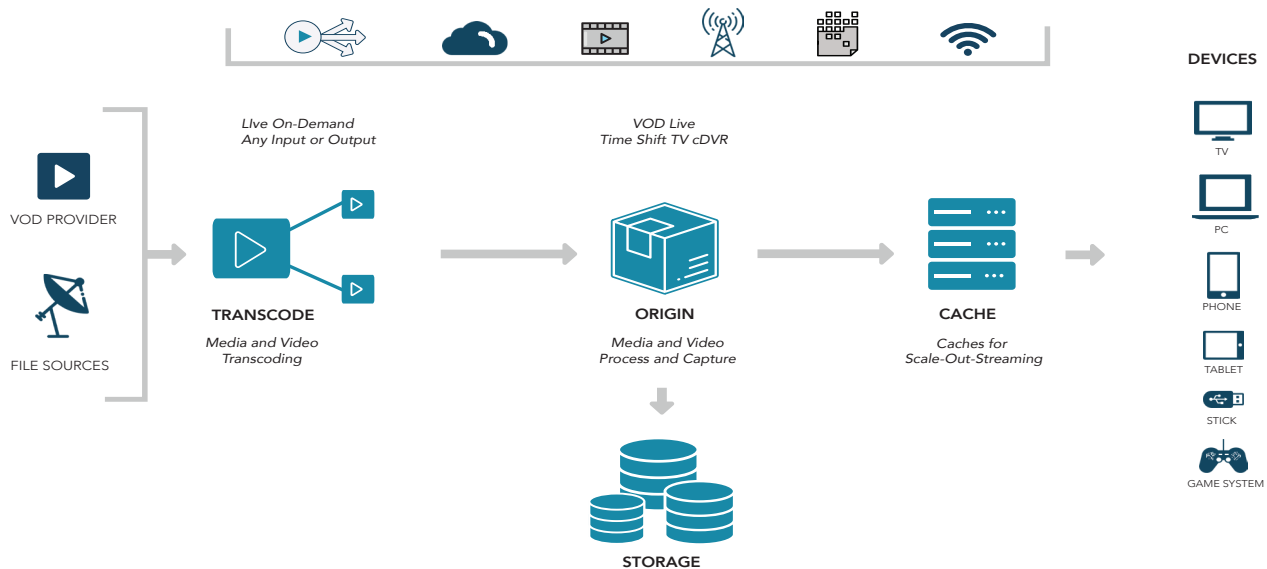
ADVANCED VIDEO PROCESSING

VQX (Video Quality Experience) allows operators to select and adjust the level of video processing on a per channel basis, enabling maximum video quality as a function of CPU utilization and network bandwidth.

HIGH DENSITY AND SCALABILITY

A pre-integrated blade server appliance provides scalable capacity to match user needs and growth. Expected transcode throughput using an HD ABR profile of 3-4 bitrates:

- 1000 Hours of HD ABR VOD content per month per blade (best quality)
- 4 HD ABR live channels per blade (very good quality)
- 6 HD ABR live channels per blade (good quality)
- 8 HD ABR live channels per blade (normal quality)
- Between 104 and 208 HD ABR live channels per 6U chassis with recommended levels of redundancy



TECHNICAL SPECIFICATIONS

FILE INPUT / OUTPUTS

File Formats

- .ts, .mpg, .avi, .mp4, .mov, .mxf, fragmented MP4

Video Formats

- MPEG-1, MPEG-2, H.264, HEVC, XDCAM50, ProRes

Video Resolutions

- QCIF (176x144) up to 4K (3840x2160)

Frame Rates

- Progressive 59.94, 50, 29.97, 25, 23.97
- Interlaced 29.97, 25, 23.97)

Video Bit Rates

- Up to 50 Mb/s in VBR, CBR, or capped VBR

Video Processing

- Configurable GOP, 3:2 pulldown/inverse telecine, frame rate conversion, logo insertion, watermarking, file concatenation

Audio Formats and Processing

- MPEG-1 Layer II, AAC, AC3

Subtitle and Teletex

- EIA 608 and 708 closed captioning pass-through and embedding from file, convert to DMXF, burn-in from TTML

Digital Program Insertion

- SCTE 35 pass-through, SCTE 35 insertion via SCTE 104 triggers

Management

- GUI, API, SNMP

LIVE PROCESSING

IP Input Formats

- UDP/RTP (multicast and unicast), MPEG-2 TS

Video Codecs

- MPEG-2, H.264 4:2:0 (8-bit), H.264 4:2:2 (10/12-bit), HEVC HD 4:2:0 (8-bit), HEVC 4K

Video Resolutions

- QCIF (176x144) up to 4K (3840x2160)

Frame Rates

- Progressive 59.94, 50, 29.97, 25, 23.97
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Video Bit Rates

- Up to 50 Mb/s in VBR, CBR, or capped VBR

Video Processing

- Configurable GOP, 3:2 pulldown/inverse telecine, frame rate conversion, logo insertion, watermarking

Audio Formats and Processing

- MPEG-1 Layer II, AAC, AC3, CALM (ATSC A/85), EBU R128

Subtitle and Teletex

- SCTE 27, closed caption

Digital Program Insertion

- SCTE 35 pass-through, SCTE 35 insertion via SCTE 104 triggers

Management

- GUI, SNMP