Packager XOS

OTT LIVE PUSH PACKAGER

harmonic

Harmonic's Packager XOS™ is a carrier-grade system for preparing scalable, secure live video streams for delivery over OTT networks.

This powerful packaging technology allows multiple streams of H.264 and H.265 video and associated audio to be combined selectively into the most popular HTTP adaptive bitrate protocols, enabling the deployment of high-quality live SD, HD and Ultra HD services for all popular mobile and web devices.

Entirely software-based, Packager XOS is part of a complete family of Harmonic OTT video preparation and processing solutions, including real-time and file-based transcoding, time-shifting, packaging and origination. Packager XOS can be controlled and managed with the Harmonic NMX™ Digital Service Manager network management system or a web-based GUI, and can scale to support hundreds of simultaneous streams. Metadata information—such as language, captions, ad insertion and teletext—is extracted from input so that it can be automatically embedded on output. Encryption is made simple thanks to integration with multiple digital rights management (DRM) vendors.

Input
Packager XOS accepts transport streams over UDP containing H.264 and H.265 video, with key frame alignment and multiple videos and audio languages available for each service.

Output
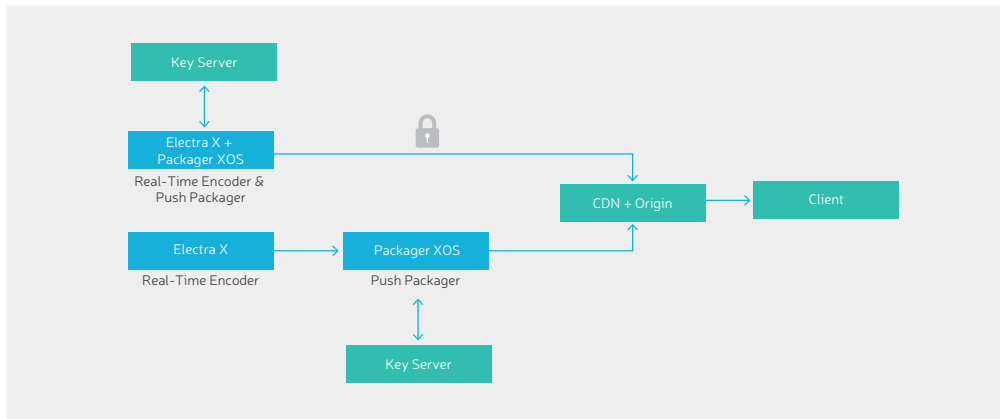Packager XOS supports the following output formats:

- Apple® HTTP Live Streaming (HLS)
- Microsoft® Smooth Streaming (HSS)
- RTMP
- MPEG-DASH

Deployment Options
Packager XOS is available as a stand-alone software application, or it can be pre-loaded onto a hardware application server. When purchased as software-only, the customer can install the Packager XOS software onto their hardware of choice, as long as the appliance fulfills Packager XOS's compute requirement. When purchased as an appliance, Packager XOS will arrive as an integrated platform that is ready to use with simple configuration.

HIGHLIGHTS

- Encode once and encapsulate to a variety of target ecosystems
- Supports Apple HLS, Microsoft Smooth Streaming, RTMP and MPEG-DASH adaptive bitrate streaming protocols

- Open Key Management Server (KMS) interface enables simplified integration with multiple DRM vendors
- Carrier-grade management system with NMX Digital Service Manager monitoring, control and N+M redundancy

- Integration with multiple CDNs
- Wide range of player integration
- Available on optimized hardware application server

Business and Technical Benefits

Flexibility
Packager XOS supports all major streaming protocol standards in use today and offers the flexibility to package to different formats from a single H.264 or H.265 multi-bitrate source.

Ecosystem Integration
Harmonic multiscreen solutions integrate with numerous DRM vendors and media asset management systems. An open Key Management System simplifies DRM integration, and deployment time is shortened through integration with leading content distribution networks (CDNs).

Scalability & Performance
In addition to supporting a broad variety of formats, multiple Packager XOS systems can be combined for high channel deployments to supports hundreds of simultaneous streams.

Centralized Management
NMX Digital Service Manager can centrally manage, provision and control various elements in a broadcast/OTT workflow, including Packager XOS, enhancing scalability while simplifying deployment and management of multiscreen services.

SPECIFICATIONS

VIDEO INPUTS

H.264 & H.265	Up to 15 profiles per channel, key frame alignment is required

AUDIO INPUTS

Formats	AAC-LC, HE-AAC v1/v2, and Dolby® (AC-3), up to eight languages per channel

IP CONNECTIVITY

Redundancy	N+M unit redundancy, NIC teaming, source redundancy, publishing point redundancy

PROCESSING FEATURES

Ad Insertion	Conversion of SCTE 35 into annotations
Video, Audio, Data Selection	Exclusion of video, audio and data services available per packaging technology
Subtitle and Closed Caption Support	CEA 608 and CEA 708 passthrough or conversion to WebVTT (HLS, DASH) or TTML (HSS) Teletext or Cavena P31 conversion to WebVTT (HLS, DASH) or TTML (HSS) DVB-Subtitle conversion to SMPTE-TT

OUTPUTS

Apple HLS	WebDAV Active:Active, Active:Standby
MPEG-DASH	WebDAV Active:Active, Active:Standby
Microsoft Smooth Streaming (HSS)	HTTP Post (IIS encoder publishing interface), WebDAV Active:Active, Active:Standby
RTMP	RTMP Active:Active, Active:Standby