noisypeak

THE APEX OF VIDEO OVER IP SOLUTIONS

FORMAT PROCESSING · DVR · PRODUCT BROCHURE

Noisypeak Packetizer

The UEN2 origin: any input repacked to HLS, DASH, MSS and multicast in parallel, with DVR.



Noisypeak Packetizer is the UEN2 origin: TS, SRT, RTMP, HLS or NDI in; HLS, HLS3, HLS7 fMP4, DASH, MSS and multicast out, in parallel, with time-shift, catch-up and start-over. Up to 2,500 streams and 20 Gb/s per node, SCTE-35 and captions carried through.

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STREAMING FORMATS IN PARALLEL · HLS · HLS3 · HLS7 · DASH

2,500
PARALLEL STREAMS PER NODE

20 Gb/s
SUSTAINED DELIVERY PER NODE

v7
HLS, WITH MULTI-LANGUAGE SUPPORT

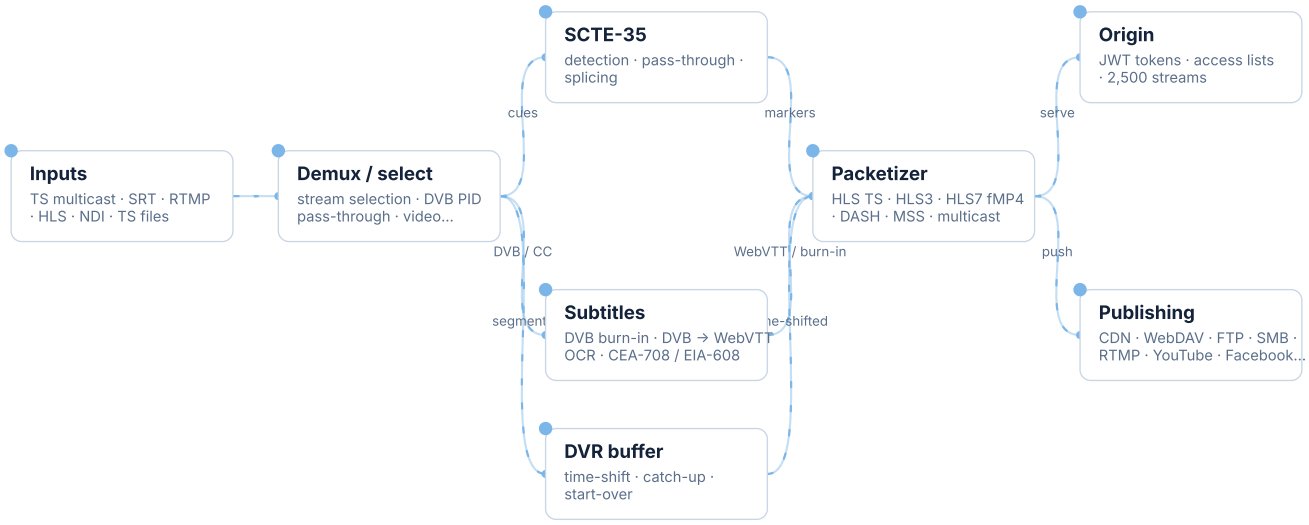
NOISYPEAK SÀRL · EPFL INNOVATION PARK · LAUSANNE · SWITZERLAND · 2026

NOISYPEAK PACKETIZER — FORMAT PROCESSING · DVR

Noisypeak Packetizer is the real-time repacketizer and origin of the Noisypeak UEN2 engine. It takes a compressed stream — TS over UDP/RTP multicast, SRT, RTMP, HLS, NDI or TS files — and re-packages it without re-encoding into HLS (TS and fMP4), MPEG-DASH, Microsoft Smooth Streaming and SPTS/MPTS multicast, all at the same time. It runs on Noisypeak Cell hardware, as a software licence or in the Noisypeak Cloud.

The origin serves the streams itself with time-shift, catch-up and start-over, JWT link tokenization and access lists, at up to 2,500 parallel streams and 20 Gb/s sustained per node. SCTE-35 cues are detected, passed through or spliced; DVB subtitles are burnt in or converted to WebVTT by OCR; CEA-708 and EIA-608 captions are carried. Output is published to CDNs, WebDAV, FTP, SMB, RTMP, YouTube Live and Facebook Live.

How Noisypeak Packetizer repacks a channel



One input is demuxed once and written to every output format in parallel; the origin serves them with DVR and tokens.

ONE INPUT, EVERY OUTPUT — IN PARALLEL

Packetizer is the origin mode of the UEN2 engine. From a single input it produces four streaming types at once: HLS with audio and video renditions as separate TS tracks, HLS3 with audio and video muxed in TS, HLS7 with separate fMP4 renditions, and MPEG-DASH with separate fMP4 renditions and a timelined manifest. It also emits Microsoft Smooth Streaming, SPTS/MPTS over UDP unicast or multicast, RTMP (Akamai support) and TS or MP4 files. HLS goes up to version 7 with multi-language support and a secondary destination point.

- HLS (TS, separate renditions) · HLS3 (muxed TS) · HLS7 (fMP4)
- MPEG-DASH Live and VOD, timelined manifest
- Microsoft Smooth Streaming
- UDP unicast/multicast SPTS and MPTS
- RTMP with Akamai support · TS and MP4 files
- Video passthrough

DVR: TIME-SHIFT, CATCH-UP, START-OVER

The origin keeps a recording buffer per channel, so the same node that packages the live stream also serves it time-shifted, as catch-up, or from the start of the current programme (start-over). Start-over, content protection and access lists are advanced configurations held in memory on the origin. When Packetizer is used behind Media2Flow, the DVR depth is set per live channel when the channel is created.

- Time-shift and catch-up from the origin buffer
- Start-over on live channels
- Thumbnail generator (NP-RPK-EMB)

SCTE-35 AND CAPTIONS

SCTE-35 CUE-IN/CUE-OUT messages are detected in the input and either passed through to the HLS/DASH manifests — where Prism X picks them up for ad insertion — or used to splice the stream. DVB subtitles are either burnt into the picture or converted by OCR into WebVTT tracks; closed captions are carried as CEA-708, EIA-608 or WebVTT. DVB PIDs can be passed through unchanged, and individual streams of an HLS or SPTS source can be skipped.

- SCTE-35 detection, pass-through and splicing
- DVB subtitles burn-in · DVB → WebVTT OCR
- Closed captions CEA-708 · EIA-608 · WebVTT
- DVB PID pass-through · HLS/SPTS stream selection

ORIGIN PERFORMANCE AND PROTECTION

In origin mode a node delivers up to 2,500 parallel streams over a 25 Gb/s interface and up to 20 Gb/s sustained traffic over 25 Gb/s or 2×10 Gb/s LACP interfaces. Links are tokenised with JWT (RFC 7519); access lists and content protection are applied in memory. The NP-RPK-EMB licence adds Google DRM and FairPlay encryption to the repacked HLS/DASH output; the full DRM set is covered by Noisypeak DRM.

- Up to 2,500 parallel streams over 25 Gb/s
- Up to 20 Gb/s sustained over 25 Gb/s or 2×10 Gb/s LACP
- JWT RFC 7519 link tokenization · access lists
- Google DRM and FairPlay with NP-RPK-EMB

PUBLISHING AND INTEGRATION

Multiple formats are published simultaneously: direct to CDNs, to WebDAV (with authorization) or Windows shares (Samba), FTP, HTTP, RTMP, YouTube Live and Facebook Live. In Media2Flow, Packetizer channels appear as live channels — input UDP, RTMP, SRT, HTTP/HTTPS or HLS pull, bound to an encoder template, availability zone and DVR depth — and are exposed to audiences through Distributions: one point of presence, one set of origin and live channels, one network whitelist. Externally encoded HLS feeds can be registered as third-party channels and served from the same edge.

- CDNs · WebDAV · Samba · FTP · HTTP · RTMP
- YouTube Live · Facebook Live
- Media2Flow Distributions: PoP, channel bundle, whitelist
- Third-party HLS feeds forwarded unchanged

FEATURES

Four formats at once

HLS TS, HLS3, HLS7 fMP4 and MPEG-DASH written in parallel from one input, plus MSS and multicast.

No re-encode

Repacketizing with video passthrough; TS and MP4 based media in and out.

DVR built in

Time-shift, catch-up and start-over served from the origin buffer, configured in memory.

SCTE-35 aware

Detection, pass-through and splicing of CUE-IN/CUE-OUT messages for downstream ad insertion.

Subtitles and captions

DVB burn-in, DVB-to-WebVTT OCR, CEA-708, EIA-608 and WebVTT.

Origin throughput

Up to 2,500 parallel streams and 20 Gb/s sustained per node over 25 Gb/s or 2×10 Gb/s LACP.

Tokenised, protected

JWT RFC 7519 links, access lists; Google DRM and FairPlay with the NP-RPK-EMB licence.

Publish anywhere

CDNs, WebDAV, Samba, FTP, HTTP, RTMP, YouTube Live and Facebook Live, simultaneously.

Thumbnails

Thumbnail generator for the repacked streams, included in NP-RPK-EMB.

SPECIFICATIONS

INPUTS

Transport	RTP/UDP SPTS and MPTS multicast · SRT · RTMP · RTSP · HLS · HTTP progressive · HTTP TS
Baseband / IP video	NDI · SDI · HDMI (via Noisypeak Cell capture)
Files	TS files — file2live, file2vod
Audio	AAC / AAC LATM · MP2 / MP3 · AC3 · EAC3 · Opus

OUTPUTS

HLS	Up to v7, multi-language · HLS (TS, separate renditions) · HLS3 (muxed TS) · HLS7 (fMP4) · secondary destination point
MPEG-DASH	Live and VOD · fMP4 · timelined manifest
CMAF	fMP4 — HLS7 and MPEG-DASH
Smooth Streaming	Microsoft Smooth Streaming
Transport streams	UDP unicast/multicast SPTS · MPTS · DVB PID pass-through
Other	RTMP (Akamai support) · TS and MP4 files · SDI · NDI · video passthrough
Parallel	Multi-format simultaneous publishing · HLS/SPTS stream selection

DVR

Functions	Time-shift · catch-up · start-over
Configuration	Advanced in-memory configuration: start-over, content protection, access lists
Media2Flow	DVR depth set per live channel

CAPTIONS AND SUBTITLES

DVB	Burn-in subtitles · DVB to WebVTT OCR
Closed captions	CEA-708 · EIA-608 · WebVTT

SCTE-35

Handling	Detection · pass-through of CUE-IN/CUE-OUT · splicing

ORIGIN PERFORMANCE

Streams	Up to 2,500 parallel streams over a 25 Gb/s interface
Throughput	Up to 20 Gb/s sustained over 25 Gb/s or 2×10 Gb/s LACP interfaces
Tokens	JWT RFC 7519 link tokenization
Protection	Access lists · content protection · Google DRM and FairPlay (NP-RPK-EMB)

PUBLISHING

Targets	CDNs · WebDAV (with authorization) · Windows share (Samba) · FTP · HTTP · RTMP · YouTube · Facebook

LICENCES

NP-RPK-EMB	Noisypeak Repack — MCAST/HLS in, HLS/DASH out, TS and MP4 media, DVB to WebVTT OCR, Google DRM and FairPlay, thumbnail generator, start-over
NPXS-SW	Noisypeak Cell software licence incl. HLS/DASH packetizing, WebDAV, DRM, SCTE-35

MODELS AND LICENCES

NP-RPK-EMB

Noisypeak Repack · multi-protocol repacketizer for integrated solutions · MCAST/HLS in, HLS/DASH out · DVB→WebVTT OCR · Google DRM, FairPlay · thumbnails · start-over

NPXS-SW

Noisypeak Cell software licence · MPEG2 / H.264 / HEVC / AV1 · HLS/DASH packetizing · WebDAV · DRM · SCTE-35 · one Intel integrated GPU

WHERE IT IS USED

Broadcast multicast to OTT

A DVB/IPTV multicast TS repacked to HLS and DASH for web, mobile and smart TV, SCTE-35 cues preserved.

Catch-up and start-over TV

Live channels served time-shifted or from programme start from the same origin node.

Multi-CDN and social simulcast

One channel pushed at once to CDNs, WebDAV/FTP targets, YouTube Live and Facebook Live.

Accessibility on OTT

DVB subtitles converted to WebVTT by OCR, CEA-708/EIA-608 captions carried into HLS and DASH.

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