

noisypeak **connected**

all-in-one **professional** video **streaming** solution
software and **cloud** service



encoding

Capture up to 12G-SDI, 4K HDMI from many types of PCIe cards and dongles. Connect your professional cameras, webcams or playout servers.



transcoding

Transcode AV1, HEVC/H.265, AVC/H.264, MPEG2 and generate SPTS/MPTS, HLS, DASH, SRT, MSS, RTMP.



advanced features

Closed captions, DRM protection, CDNs, Youtube® Live, Facebook® Live, Twitch®, add overlays and many more!



based on
noisypeak uniform encoding engine

noisypeak® solutions



Noisypeak provides a comprehensive solution, serving as your ultimate destination for all video content streaming needs, supporting resolutions up to 4K AV1 and 16K HEVC. This versatile solution can be accessed either as a software package or through a convenient cloud service.

Linear scalability: from 1 to hundreds of distributed video processing nodes

Codecs: AV1, HEVC, H.264, MPEG2, VP8/VP9

Inputs: HDMI, HD-SDI, 6/12G-SDI, UDP, RTP, HLS, UVC 1.5, HTTP TS, RTMP, NDI, SHOUTcast, RTSP, SRT

Outputs: RTMP, HLS, DASH, SPTS/MPTS MCast, MSS, SHOUTcast, SDI payout, NDI payout, SRT

GPU acceleration: Intel oneAPI, Nvidia NVENC

Publishing: Direct to CDNs, WebDAV, HTTP, FTP, SMB, RTMP, Youtube, Facebook

DRMs: Google® DRM/CENC, Verimatrix®, Nagra®, Apple® Fairplay

APIs: More than 55 JSON API methods for integration

High availability: Clustering services for high-availability systems: n+1, 1+1, n+m



For all our solutions we provide deep learning based video quality monitoring, analysis and optimization tool Noisypeak DigitalEye.

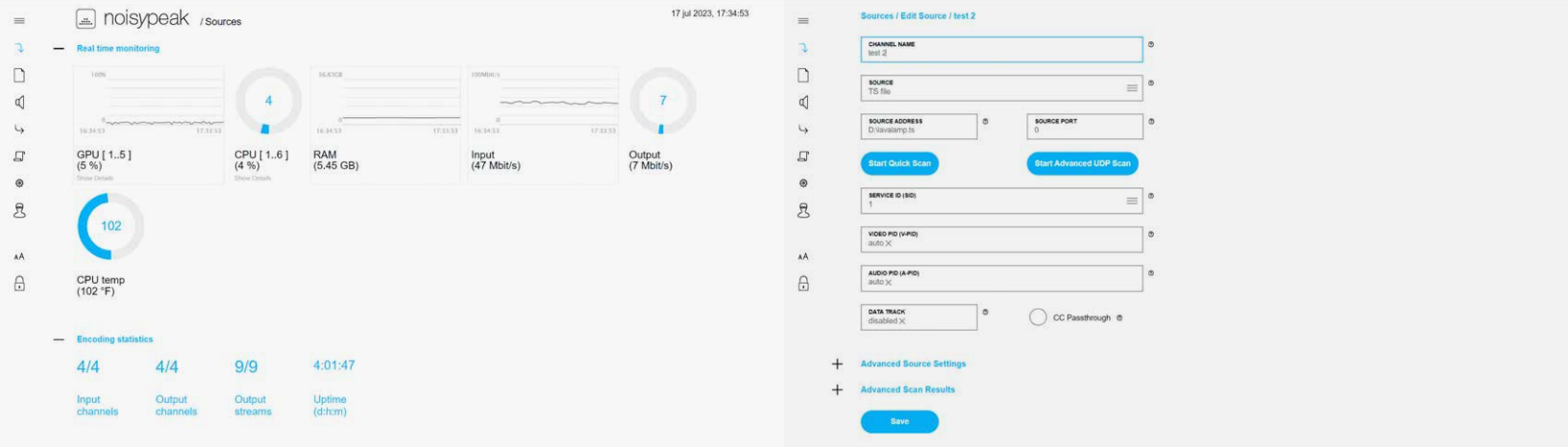
the widest **range** of off-the-shelf **hardware** for video encoding, transcoding and streaming

Selected supported platforms:



Model	NUC 13 Pro	Supermicro® X12	Supermicro® Microblade
Target use	Portable encoder/transcoder	1U Mainstream encoder/transcoder	6U ultra high-density modular transcoder
CPU	Intel® Core™ i7-1370P	Intel® Core™ i7-13700T	Intel® Xeon® E-2286G (up to 56 per chassis)
GPU	Intel® Iris® Xe	Intel® UHD Graphics 770 GPU PCIe: Matrox Luma A310F or equivalent single slot Intel ARC	Intel® UHD Graphics P630
PSU	Single PSU	Single or Dual PSU	up to 4 PSUs
Multibitrate output channels			
SD	16	25	620
HD	10	16	312
UHD	4	8	104
Encoding			
HD	4 with Magewell HD-SDI dongles	4 with Blackmagic Quad2	
UHD	2 with Innogeni 4K HDMI	1 with Blackmagic 12G SDI@60FPS	

NOTE: Channels' density is provided with ABR 3-bitrates AVC/H.264 HLS outputs with interlacing enabled out of SPTS/MPTS H.264 source.



Noisypeak UI
Real-time monitoring and statistics

Noisypeak UI
Input analysis



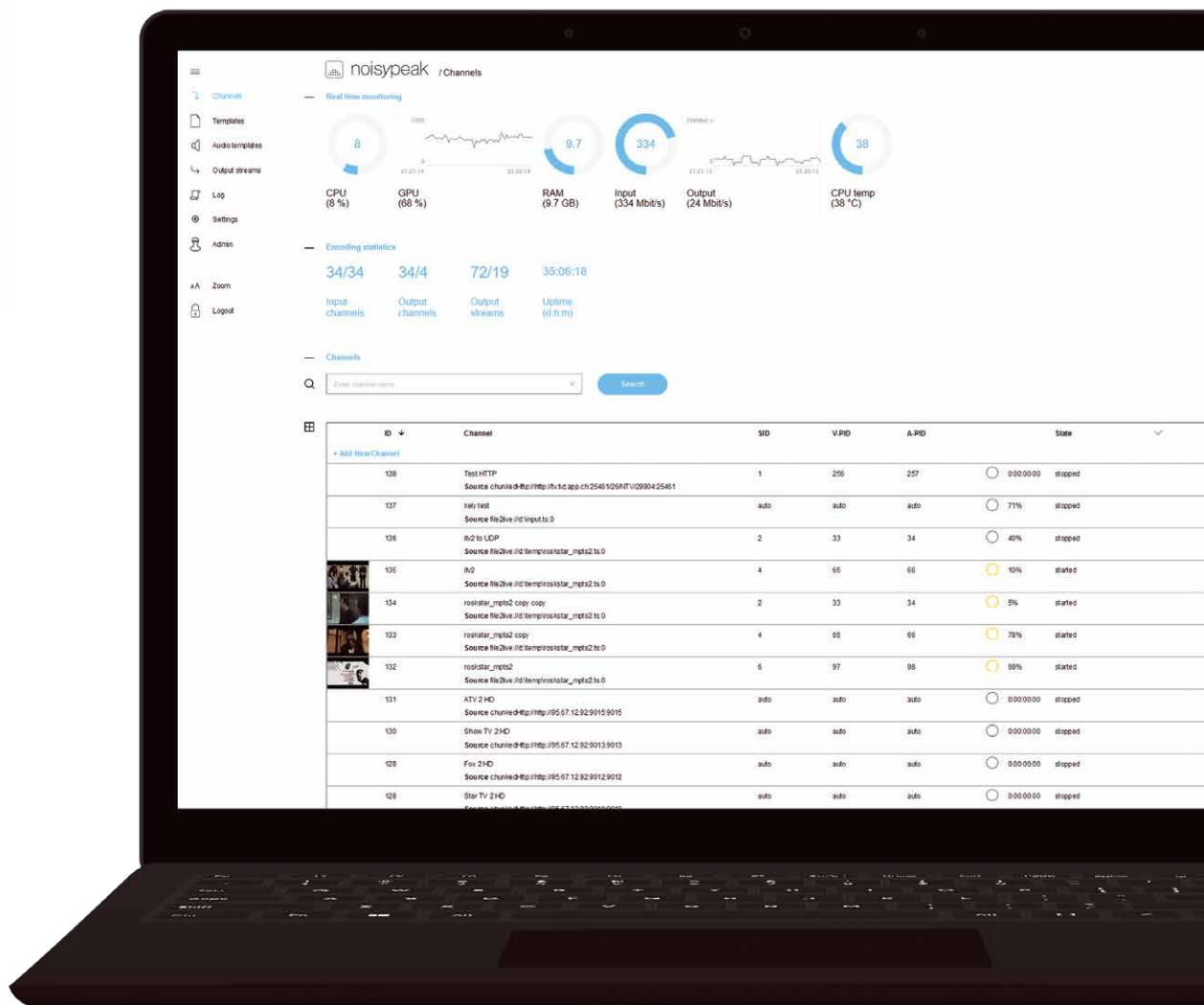
wide range of
capture devices

Blackmagicdesign

MAGEWELL

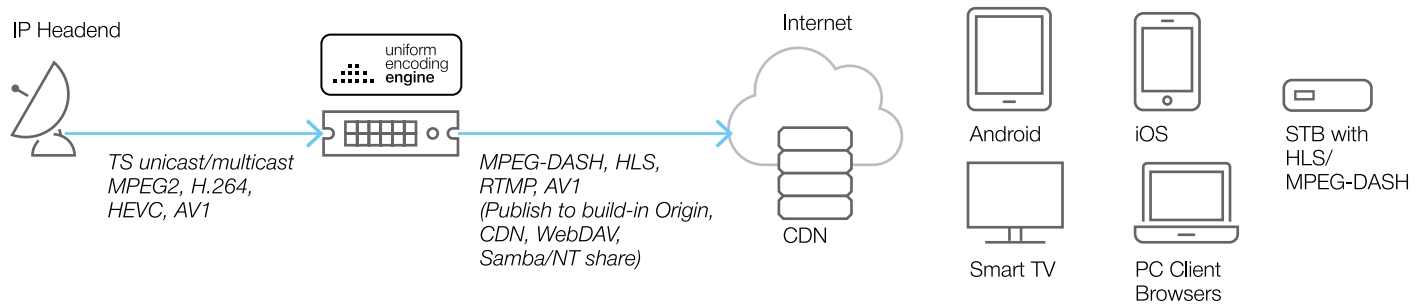
INOGENI

UVC web-cams

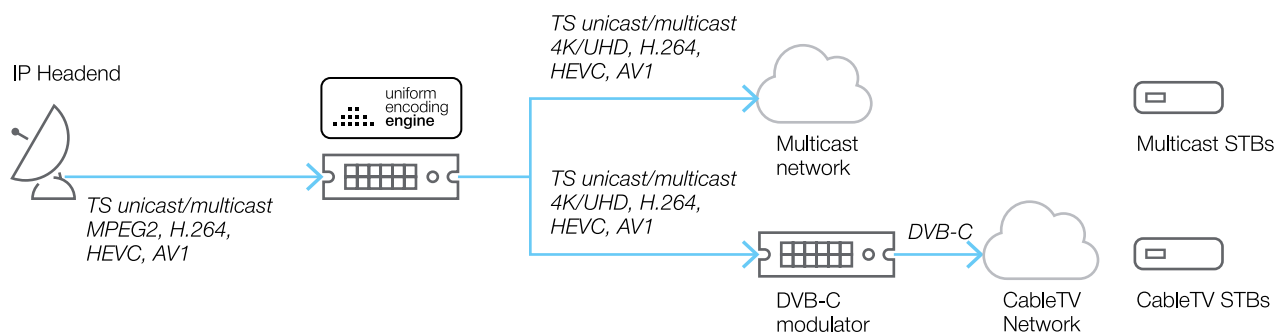


noisypeak typical **usage** scenarios

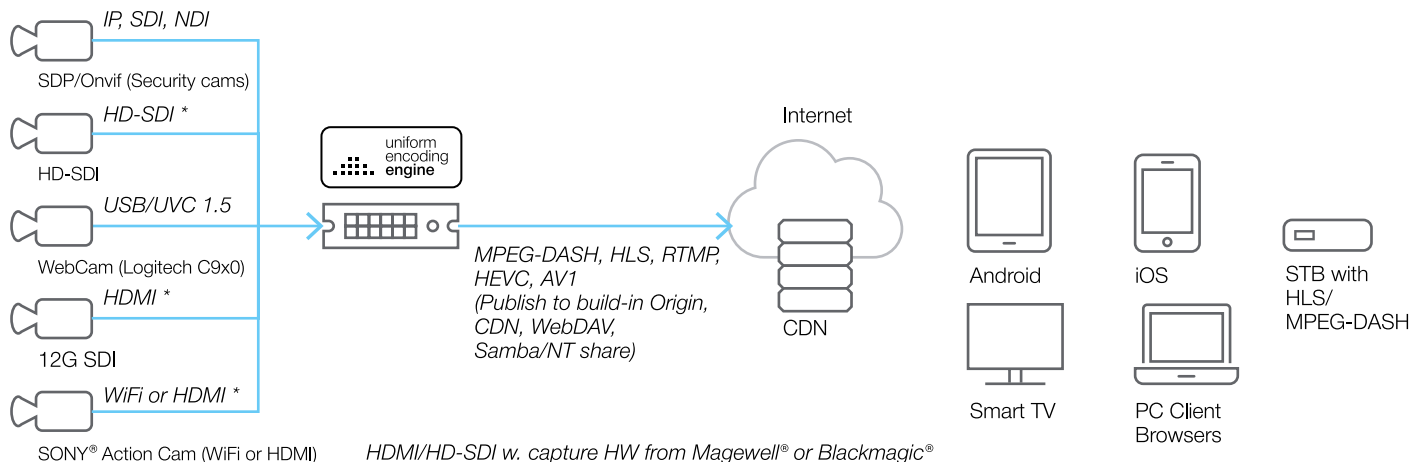
livetv to multiscreen OTT



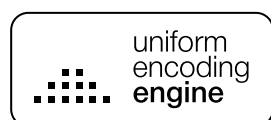
livetv to multicast IPTV and CableTV



external **camera** broadcasting



uen², uniform encoding **engine**



All Noisypeak solutions including Encoding As a Service are built on a uniform set of advanced video encoding technologies. It doesn't matter which Noisypeak device you choose, it will have the same set of core features and user interface. The user experience is fully transparent across all models.

noisypeak cross-industry **coverage**

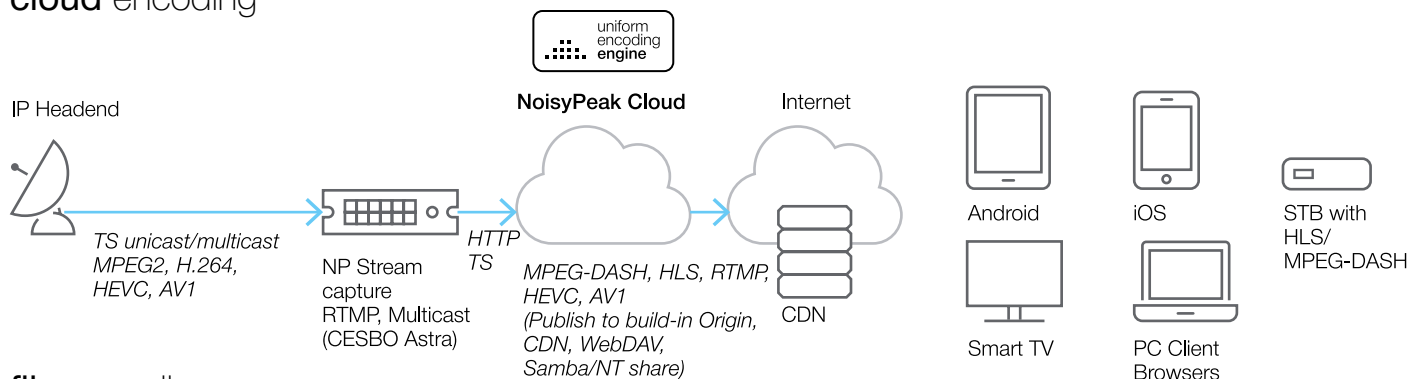


Content distribution / Field recording / Video conversion / Archive / Automation

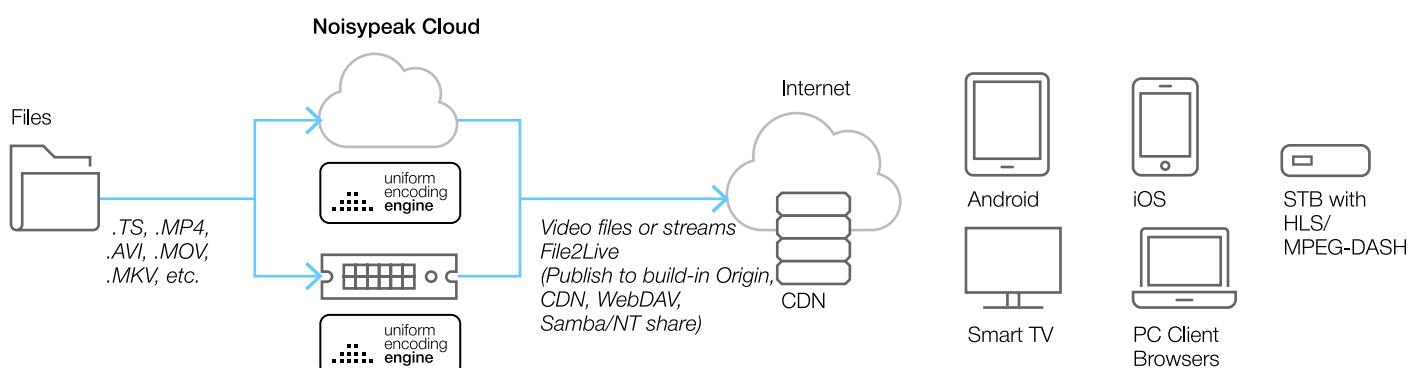


Procedure documentation / Live surgery / Streaming / Patient monitoring / Training

cloud encoding



file encoding



Network recording / Multi-channel monitoring / IPTV/VOD / Head-end solutions / Cluster management



Classroom recording / Curriculum archive / College TV channels / Sports productions / Entertainment content



Real time monitoring / Surveillance / Digital video archives / On-line training and procedures / Videoconferencing



Arenas / IPTV/VOD / Hospitality / Digital Signage / Video Walls

noisypeak feature set

input

4K HDMI
RTP/UDP SPTS/MPTS
TS files- file2live, file2vod
HLS, HTTP progressive
12GSDI/HD-SDI, HDMI through Magewell®, Blackmagic® add on modules
SDP/Onvif for IP security cams
Dynamic input adjustment for codec and protocols Audio AAC/AAC LATM, MP2/3, AC3, EAC3
RTMP
SDI
NDI
SRT

output

UDP unicast/multicast SPTS, MBTS/SPTS, MPTS MPEG-DASH Live and VOD
HLS up to v7 with multi-language support
SCTE35 detection and pass-through (CUE-In/CUE-Out messages)
Microsoft® Smooth Streaming
RTMP (w. Akamai® support)
TS and MP4 files
WebDAV or Windows® share (Samba), FTP
Multi format simultaneous publishing
DVB PID pass-through
DVB Burn-in subtitles
Closed captions - CEA-708, EIA-608, WebVTT
HLS secondary destination point
WebDAV authorization
SCTE35 detection and splicing
HLS/SPTS streams selection (user can skip some streams)
Video passthrough
MPEG DASH timed manifest
SDI
NDI

DRM

Apple® Fairplay
Nagra® PRM
Microsoft® Playready
Verimatrix®
Google® DRM for MPEG-DASH/CENC
AES128 static key

video encoding

Up to 16K video processing
AV1, HEVC/H.265, AVC/H.264, MPEG2, VP9
Static Images preview generation
Logotype, texts string overlays
Baseline, Main and High profiles
CABAC/CABVLC
Picture in Picture up to 4 streams
Framerates: fixed to source framerate
Linear time-code generation
Single input to multi-stream output
Look ahead buffer
NAL HRD conformance parameters:
a. HRD buffer length
b. HRD initial delay
GOP structure adjustment:
a. frame-accurate closed GOP length
b. B-frames count
c. re-frames count
d. IDR interval
e. Slice count
h.264 AVCC/Annex B at the input
h.264 Annex B for multicast/hls output
h.264 AVCC for RTMP output
Video post-processing:
a. Scaling
b. Cropping
c. Deinterlacing
d. Letterboxing

audio encoding

Support of multi-audio channels MP2/MP3
AAC-LC up to 512kb/s
HE-AAC up to 128kb/s
Gain control
Advanced sample rate transform
Audio leveling
Shoutcast output
Audio-only transcoding (radio)
Different audio templates for each output of single channel
Audio passthrough

management

Management of up to 50 encoders in uniform Web interface
Zabbix® integration
Prometheus/Grafana integration
SNMP management
API management

high-availability

Redundancy management system that support:
n+1, n+m, 1+1
Input source redundancy in standard image
Publishing server redundancy

typical encoding profiles

4K/UHD (HEVC)		
#	Bitrate	Resolution
1	8000	3840x2160
2	4500	1920x1080
3	2500	1280x720
4	1600	1024x576
5	1100	720x404
6	700	640x360

HD		
#	Bitrate	Resolution
1	6000	1920x1080
2	4500	1280x720
3	2500	1024x576
4	1600	720x404
5	1100	640x360
6	700	480x270

SD		
#	Bitrate	Resolution
1	1600	720x404
2	1100	640x360
3	700	480x270
4	400	312x176



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