

 noisypeak  
the **apex** of video over ip solutions

# noisypeak cell ex

Professional Xeon-based H.264/HEVC encoder with dual PSU

## multibitrate performance up to:

**SD** 60 channels, 1 bitrate  
32 channels in 5 bitrates  
**HD** 16 channels, 3 bitrates  
**HD HEVC** 9 channels, 2 bitrates

## technology

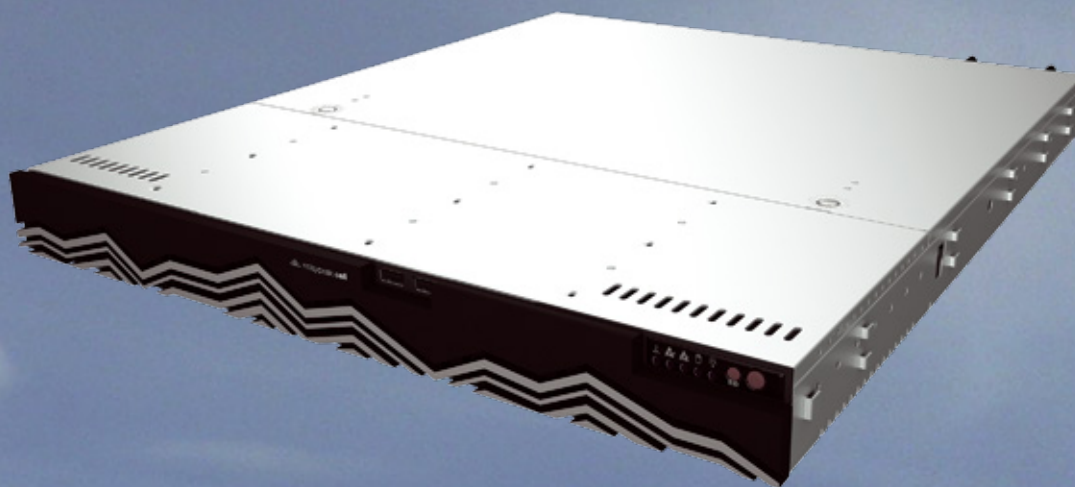
Intel® Xeon™ E3-1275v5 processor  
with HEVC hardware decode/encode  
up to 4K  
Onboard or optional depending on the  
model Artesyn SharpStreamer PCI-  
7207 (4 CPU/GPU) video accelerator

## advanced video encoding for IPTV/OTT

ABR: HLS, DASH, MSS, RTMP, SPTS/  
MPTS/MBTS  
DRM: Google® DRM, Microsoft®  
Playready®, Verimatrix®, Nagra® PRM  
Audio: HE-AAC, AAC-LC, Multichannel  
pass-through  
Redundancy: 1+1, 1+n, 1+m



based on  
noisypeak uniform encoding engine



# noisypeak cell ex is presented by two options

<b>Model</b>	Noisypeak Cell EX (Base) Single CPU/GPU (P/N: NPCELLEXB4)	Nosiypeak Cell EX (Advanced) 5 CPU/GPU (P/N: NPCELLEX4)
<b>Target use</b>	Low-density encoder/transcoder for MPEG2/H.264/HEVC	Middle-denisty transcoder for MPEG2/H.264
<b>Primary CPU/GPU</b>	Intel® E3-1275v5/P530	Intel® E3-1275v5/P530
<b>PCI slot</b>	Quad port Gigabit network card or Blackmagic DekLink Quad 2 or Artesyn Sharpstreamer PCI-7207 (P/N: NPCELL4A)	Artesyn® SharpStreamer™ PCI-7207, 4 CPU/GPU: Intel® i7-5650U/HD Graphics 6000
<b>Performance*</b> Multibitrate output channels		
<b>SD</b>	12 channels, 4 bitrates	32 channels, 5 bitrates or 60 channels, 1 bitrate
<b>HD</b>	6 channels, 3 bitrates	16 channels, 3 bitrates
<b>HEVC HD</b>	5 channels, 2 bitrates	9 channels, 2 bitrates

## noisypeak cell ex at a glance

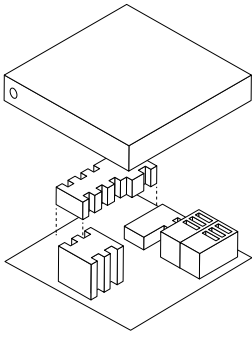
- High performance multi-GPU hardware acceleration for MPEG2, H.264 and HEVC
- Up to 5 CPU/GPU's
- Input: multicast/TS, SDI/HD-SDI, HDMI, IP, UVC 1.5
- Output: multicast SPTS/MPTS, HLS, MPEG-DASH, Smooth Streaming, RTMP
- HLS on input for bridging
- Multi-device management up to 50 encoders (additional software)
- Direct publishing to CDNs, build in WebDAV server and client
- DRM content protection: Google® DRM/CENC, PlayReady, Verimatrix®, Nagra®
- More than 40 JSON API methods for integration
- Clustering services for high-availability systems: n+1, 1+1, n+m (additional software)

## intuitive GUI

for Web-management (channels, templates, adaptive bitrate configuration, DRMs, publishing, etc.)

*\* Performance benchmarks are indicative. Presented results are verified and detailed benchmarks can be provided upon request. Factual results may vary depending on source streams parameters, encoding settings for audio and video, packetizing formats, etc. Performance indicators are subject to change without notice.*





## extend encoding power

with Artesyn® SharpStreamer™ PCI card 4 X Intel® Core™ i7-5650U w. HD 6000)  
**SharpStreamer™ PCIE-7207 is unique video acceleration technology offered as a standard or add-on card for Noisypeak Cell EX**

## artesyn

Artesyn® is a leading global provider of embedded computing solutions based on open standards such as ATCA®, VMEbus™, OpenVPX™, PCI Express and computer-on-module. Artesyn expertise enables OEMs in a wide range of industries to develop better products quickly, cost effectively and with less risk.

Artesyn® SharpStreamer™ PCIE-7207 high-density video accelerator enables service provider networks to offer video transcoding services quickly and dynamically. As an add-on card, the SharpStreamer™ PCIE-7207 offers quick and scalable integration with existing and standard server architectures to meet the demands of ISPs and MSOs who want to use existing servers and cloud infrastructure to support new video transcoding services. With a focus on the high-density and low power demands of video streaming applications such as OTT streaming servers, mobile network optimization, video conferencing and broadcast equipment, Artesyn® employs multiple Intel® Core™ i7 and GPU accelerated devices in a small and scalable PCI Express card footprint that is easily deployable in off the shelf platforms.



**ARTESYN**  
 EMBEDDED TECHNOLOGIES  
 SharpStreamer™  
 PCIE-7207

noisypeak / Channels

Real time monitoring

Encoding statistics

11/11

11/8

39/24

2:06:10

Input channels

Output channels

Output streams

Uptime (d:h:m)

Channels

+ Add New Channel

ID	Channel	Source	S-ID	V-PID	A-PID		State
63	Viasat Sport	file2live://E:\ViasatSportSD L...	256	128	130	21%	started
62	First HD	udp://239.77.0.117:1234	256	32	33		started
61	Armedia Premium	udp://239.255.3.42:1234	256	144	145		started
60	SuperTennis HD	udp://239.77.0.87:1234	auto	auto	auto		started
59	Nickelodeon	udp://239.77.0.60:1234	auto	auto	auto		stopped

# noisypeak cell ex encoder feature set

## input

RTP/UDP SPTS/MPTS  
TS files- file2live, file2vod  
HLS, HTTP progressive  
SDI/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

## output

UDP unicast/multicast SPTS, MBTS/SPTS, MPTS MPEG-DASH Live and VOD  
HLS – v2 and v5 with multi-language support  
Microsoft® Smooth Streaming  
RTMP  
TS and MP4 files  
WebDAV or Windows® share (Samba)  
Multi format simultaneous publishing  
DVB PID pass-through  
Closed captions - CEA-708, EIA-608, WebVTT

## DRM

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

## management

Management of up to 50 encoders in uniform Web interface  
Touch-screen local management for noisypeak one

## high-availability

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

## video encoding

Up to 4K video processing  
MPEG2, H.264, HEVC  
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

## front-panel

Power On/Off button, System Reset button, LEDs: Power LED, Hard drive activity LED, 2x Network activity LEDs, System Overheat LED

## chassis size

Form Factor: 1U / (H x W x D):  
437x503x43mm

## networking

4xGigabit UTP Ethernet (Intel based),  
1xIPMI  
PCI slot for Base model (e.g. HD-SDI capture card)

## power requirements

100-240V AC, 50-60Hz, 150W  
Dual PSU

## typical encoding profiles

4K/UHD (HEVC)		
#	Bitrate	Resolution
1	6000	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

\* For performance  
HD benchmarks we  
use these bitrates  
(1), (2) and (3)



## Contacts

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