



SOLUTION BRIEF

ARE YOU READY?

4K HEVC/H.265 is coming

Prepare for the new standard in broadcasting now

Features

- Dense CPU-only 4K HEVC encoding available now!
- Start your migration now on CPUs and scale up to x86 GPU-accelerated encoding when ready
- Benchmark results show the 8-core Intel® Xeon® D to perform as well or better than a dual-socket Intel Xeon E5 2640v2 for 4K HEVC video encoding
- Artesyn's MaxCore™ platform offers 28 Intel Xeon D processors that far surpass typical dual socket servers

Whether you are a telecommunications company, OTT service provider, network operator, or broadcaster, there is a tidal wave coming. You cannot avoid 4K and HEVC, so prepare for it.

Market research, industry conferences and real-life experience show that the world is preparing for a new standard in video: HEVC, also known as H.265. This new video compression standard is the prerequisite for transferring 4K video across today's networks. Some broadcasters such as Netflix and Amazon are already beginning to offer 4K, which requires encoding in the network today. There is more coming, and by the end of next year, a large proportion of video traffic is likely to be in 4K resolution, encoded in H.265.

So the industry needs to start commissioning equipment now that will support this standard.

At the same time, operators and service providers increasingly demand standard x86 technology that can take advantage of virtualization and cloud technologies. With the next technology insertion point being delayed, equipment builders and integrators are hesitating to support the new technology at a time when it is crucial to build momentum instead.

In order to enable solutions today, Artesyn, together with Vanguard Video, has run a set of benchmarks and created products that will enable you to introduce encoding capabilities for HEVC in high density seamlessly into your network.



The Benchmark

In order to create a real life scenario, we ran a set of different benchmarks that model current deployment scenarios and allow operators to compare different systems in this environment.*

The first benchmark scenario is based on measuring pure encoding speed, so the test pre-loads the frames to be encoded into local memory and then encodes them. Then, the same task is executed including loading a file from a local hard drive.

All benchmarks are centered around encoding raw 10b422 YUV and 8b420 YUV content to HEVC with different target formats, comparing Artesyn's microserver card based on Intel® Xeon® D family processors to a standard rackmount server system based on Intel Xeon E family processors.

Original videos from which the YUV content was derived can be found at the links below:

Tears of Steel: <https://mango.blender.org/download/>
Coastguard – 4K: <http://www.elementaltechnologies.com/resources/4k-test-sequences>

*This is a benchmark. Your results may vary. Please talk to an Artesyn expert who can provide benchmark data for your specific application.

What Does this Mean to You?

The results show that a system based on the 8-core Intel Xeon D processor performs as well or better than a system based on a dual-socket Intel Xeon E5 2640 v2, which is the processor deployed in many cloud datacenters today. Combining this with Artesyn's MaxCore™ platform, which can hold up to 14 dual-socket Intel Xeon D1540 cards, plus a 100G network interface card that supports load balancing across these processors, the MaxCore platform offers an unrivaled density for encoding with up to 28 encoding units in a 3U server, compared to a typical 2U standard rackmount server with either a single or dual encoding unit.

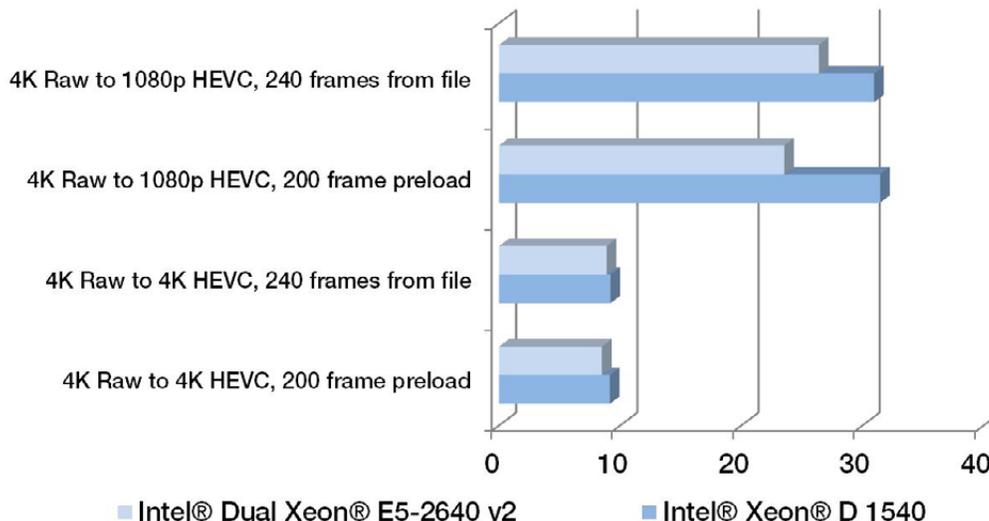
What's Next?

Why wait for next generation processors? Get moving today and build systems that deliver meaningful functionality and performance advantages now using the MaxCore platform with Vanguard Video software.

Learn more about Artesyn's MaxCore platform and related boards such as the Intel Xeon D based SharpServer™ card and SharpSwitch™ combined network interface, switch and processor card, as well as our SharpStreamer™ product line.

Contact us, and we'll be happy to arrange a demo for you so you are ready to ride the wave.

The Results - Frames per Second Measured



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