

## The disruptive **lossless quality video compression, powerful in software**

### A TECHNOLOGY SERVING THE GLOBAL AV INDUSTRY

This revolutionary technology is fast and powerful in software (CPU, GPU) and extremely tiny in hardware (FPGA, ASIC), robust for real-time operation with no latency.

Up to now, image and video are sent or stored uncompressed into many displays and systems such as cameras, videos servers, or recorders. TICO is a smart upgrade path to manage higher resolutions (4K, 8K, ...) and frame rates while assuring visual quality, keeping power and bandwidth at a reasonable budget, and significantly reducing the complexity and cost of the system.

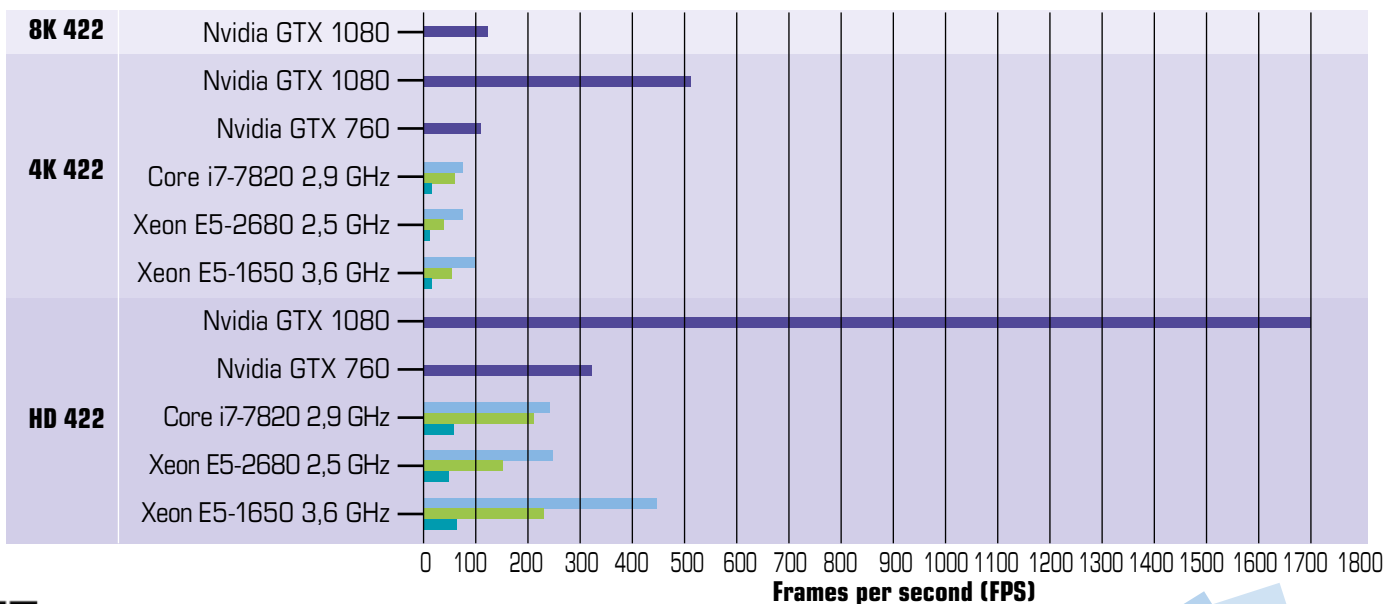


### Technology benefits

- > Visually lossless quality:
  - 2:1 to 8:1
  - Robust over multiple encoding generations
  - Math. lossless at lower compression ratio
- > Fixed latency: maximum one frame in pure CPU and GPU
- > Powerful, real-time or faster than real-time
- > Scalable for low power devices and multicore & multi-GPU installations
- > Easy-to-use API
- > SMPTE RDD35 compliant:
  - TICO over IP (SMPTE 2022 5/6 & RTP for SMPTE 2110-22)
  - and over SDI infrastructures (4K over 3G-SDI)

## Performances

### GPU and CPU decoding performances



- GPU
- CPU 6 threads
- CPU 4 threads
- CPU 1 thread

## Use cases

- Video over IP systems (SMPTE 2022, SMPTE 2110-22, ...)
- Video recorders & players
- Video servers, routers and switchers
- Cameras (high-res, real-time or high speed)
- Video monitors and displays
- Frame grabbers and video capture devices
- Cable extenders
- UHD/4K over 3G-SDI, over 10GbE
- UHD/8K over 12G-SDI, over 25GbE/40GbE, ...
- VR/AR/360°, capture, transmission
- (...)



## TICO is a smart solution to

- Support higher data streams using existing systems & infrastructures (HD/4K/8K/HFR/HDR)
- Increase the stream configuration
- Reduce the internal video bandwidth (and power !)
- Cost effectively increase video buffer and storage capacity
- Reduce the number of lanes needed to transport a stream at a display interface or at an image sensor to save power, cost or both

## Fast TICO SDK packages

		ORDERING INFOS		
		CPU Enc	CPU Dec	GPU Dec
<b>Start</b>	<ul style="list-style-type: none"> <li>• Single user encoder or decoder SDK</li> <li>• Highest quality visually lossless codec for the optimization of SDI and IP infrastructures</li> <li>• Ideal for simple test applications, single recorder/player or anyone starting in the field of zero-latency, lossless video coding</li> </ul>	✓	✓	✓
<b>Pro</b>	<ul style="list-style-type: none"> <li>• Encoder and/or decoder OEM from HD to 4K60p on all operating systems</li> <li>• Perfect for all professionals wanting to deploy zero-latency, lossless encoding over parts of or their entire infrastructure</li> <li>• Enables access to premium support &amp; customization program</li> </ul>	✓	✓	✓
<b>Ultimate</b>	<ul style="list-style-type: none"> <li>• Single video stream up to 8K60p &amp; supporting specific image inputs with extreme parallel processing</li> <li>• Optimized for top productions and the future of broadcast</li> </ul>	✓	✓	✓

## Fast TICO SDK key features

<b>Quality &amp; latency</b>	<ul style="list-style-type: none"> <li>• Best-in-class visually lossless video codec (lossless at lower compression rate)</li> <li>• Ultra low latency (below a single frame)</li> </ul>
<b>CPU and GPU footprint, speed performances</b>	<ul style="list-style-type: none"> <li>• Optimized for real-time operations on 100% CPU or 100% GPU (Nvidia, AMD and Intel)</li> <li>• Extra small Intel CPU footprint (SSE 4.1 or newer)</li> <li>• Highly parallelized processing</li> </ul>
<b>Image formats &amp; frame rates</b>	<ul style="list-style-type: none"> <li>• 422 10 bit and 444 8/10/12 bit</li> <li>• HD to 4K &amp; 8K</li> <li>• Frame rate depends on CPU/GPU performance &amp; SDK packages</li> </ul>
<b>Compression</b>	<ul style="list-style-type: none"> <li>• Compliant &amp; support of TICO Profile 1 &amp; Profile 2 (SMPTE RDD35)</li> <li>• Proxi x2 decoding (HD decode from 4K codestream) – with Pro &amp; Ultimate package</li> </ul>
<b>Rate control</b>	<ul style="list-style-type: none"> <li>• Adjustable compression rate</li> <li>• CBR or optional Capped VBR mode</li> </ul>
<b>Supported platforms</b>	<ul style="list-style-type: none"> <li>• Windows (32 bit/64 bit), Linux (32 bit/64 bit) &amp; Mac OS (64 bit)</li> </ul>
<b>SDI add-ons</b>	<ul style="list-style-type: none"> <li>• Support of the SMPTE RDD35 SDI mapping to map a UHD4K stream over a single 3G-SDI</li> </ul>

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