

Supermicro 4K VIDEO TRANSCODING SERVER

LOW LATENCY, HIGH DENSITY, REAL-TIME VIDEO TRANSCODER



Introduction

With the birth of the metaverse and interactive streaming video applications such as cloud gaming and video conferencing, streaming video platforms are facing operational pressure to improve both encoding performance and power efficiency while minimizing their environmental footprint.

The Supermicro 4K Video Transcoding Server future proofs hyper-scale real-time streaming video platforms with higher levels of performance compared to CPU based software-encoding systems, while simultaneously reducing TCO by as much as 10x and carbon emissions 20x.

40 Broadcast Quality 1080p60 Live Streams in 1RU



**10 NETINT T408 U.2 Video
Processing Units**



Supermicro 1114S-WN10RT Server

- High throughput, low latency, multi-stream transcoding server.
- Simple setup using industry standard hardware and open source software tools.
- Typical workloads include live streaming, real-time interactive video applications, cloud gaming, and more.

The Supermicro 4K Video Transcoding Server is built on the Supermicro A+ Server 1114S-WN10RT platform and features advanced encoding capability enabled by ten NETINT T408 Video Processing Units. The T408 VPU is powered by the Codensity G4 ASIC video transcoder and supports HEVC and H.264 video encoding at up to 4K resolution and with 10-bit HDR.

The high throughput of the Supermicro 4K VideoTranscoding Server enables ultra low latency encoding of 40 broadcast quality 1080p60 streams in a compact 1RU form factor.



Cloud Gaming



AR / VR



Security



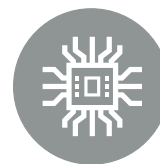
OTT / IPTV



Conferencing



Home Monitoring



AI Acceleration



Live Streaming



Social Mobile Video



Virtual Desktop



Benefits

Ultra High Density

Ten times increase in video encoding density as compared to software.

HEVC, H.264

Multi-format Transcoding, Encoding, and Decoding.

4K/UHDTV/HDTV

Supports a wide variety of streaming applications.

Real-Time Encoding

Optimized for live streaming and interactive video applications.

Low Latency

Enables Interactive video applications including Cloud Mobile Gaming, AR and VR.

Scalable

High capacity encoding throughput for rapid deployment of additional channels.

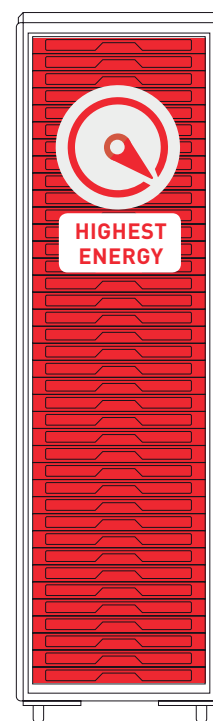
Total Cost of Ownership

The Supermicro 4K Video Transcoding Server enables a reduction in TCO for hyperscale cloud platforms and video service providers.

Using Codensity ASIC-powered video processing units, video services and platforms can reduce their TCO and server footprint by 10x while reducing carbon emissions 20x as compared to CPU-powered software video transcoders. This increase in encoding density expands the number of channels that can be encoded without increasing the rack footprint. Reduced power and HVAC cost means a lower TCO and higher density can be achieved without sacrificing video quality or latency.

Video Encoding with Lowest TCO and Highest Density

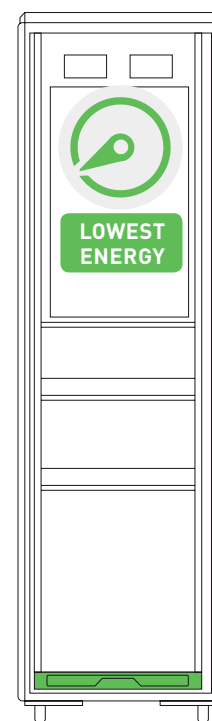
58W Total Server Power Per Stream



\$580,535

Software on CPU*

3W Total Server Power Per Stream



\$52,403

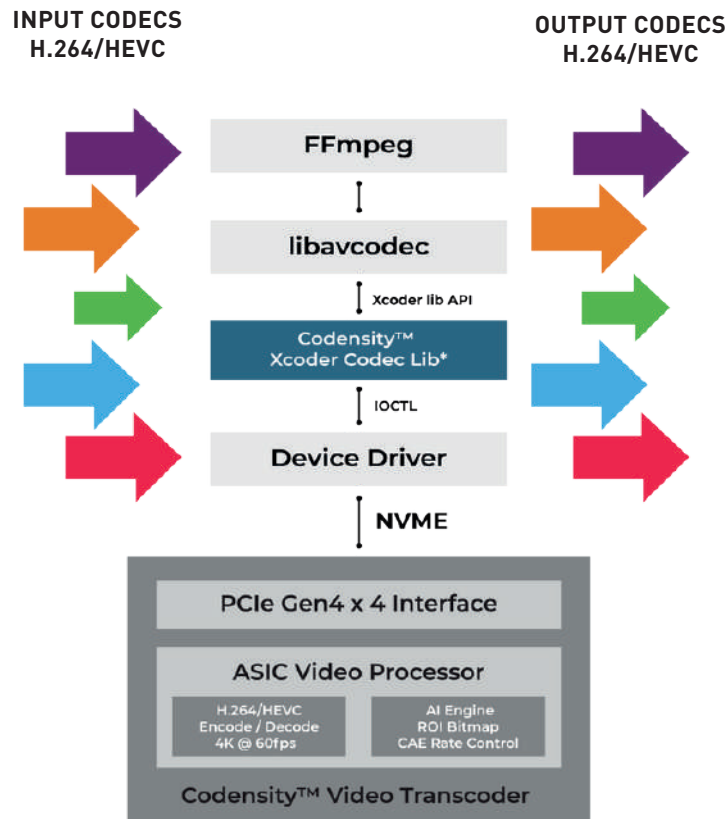
Supermicro 4K Video Transcoding Server

\$525,000 operational cost savings per year based on 1,000 live streams. The Supermicro Video Transcoding Server utilizes one-tenth the rack space for the same number of streams as compared with CPU-based video encoders. NETINT Codensity video transcoders use 20X less energy than CPU powered video transcoding systems.

*Total Annual Operating Cost Per 1,000 Streams

Simple Integration

Leveraging FFmpeg, the Supermicro 4K Video Transcoding Server provides an open-source suite of video processing tools. Video operators can easily and quickly integrate the Supermicro 4K Video Transcoding Server into their existing encoding infrastructure.



Supermicro 4K Video Transcoding Server Specifications

Compute	AMD EPYC™ 7003/7002 Series Processor
Memory	Up to 4TB (16 DIMMs)
NVMe support	10x
PCIe Expansion	Up to 3x PCIe slots
Network Options	Dual 10GBase-T LAN
Maximum Power	700W: 100 - 140Vac 750W: 200 - 240Vac 750W: 200 - 240Vdc (for CCC only)
Transcoders	10x NETINT T408
Transcoding Capacity	4K@60FPS 1080p@240FPS x10 T408 VPUs
Codec Support	H.264 - Encode & Decode H.265 - Encode & Decode

For more information about the Supermicro 4K Video Transcoding Server, contact us at:

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For more information on NETINT VPU solutions, contact us at:

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