



THE ASIC **ADVANTAGE**

ALEX LIU, CO-FOUNDER & COO

NETINT TECHNOLOGIES



200 Billion Minutes
Encoded in 2021.

The ASIC Advantage

20x

Higher efficiency
compared with SW
on CPU.

80x

Reduced CO2
compared with
SW on CPU.

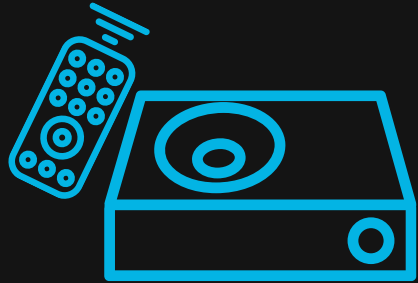
\$100

Cost per channel for
1080p60 live
streaming.

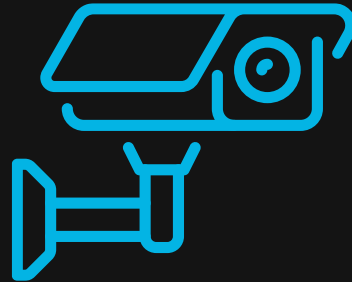
CPU vs. GPU vs. ASIC

	Video Quality	Bitrate Efficiency	Operational Complexity	Integration Flexibility
CPU	HIGH	HIGH	HIGH	MEDIUM
GPU	MEDIUM	MEDIUM	MEDIUM	LOW
ASIC	Low Medium HIGH	Low Medium HIGH	LOW	HIGH

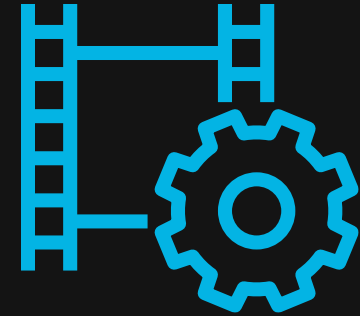
Common ASIC Approaches



CE chips used in commercial products.



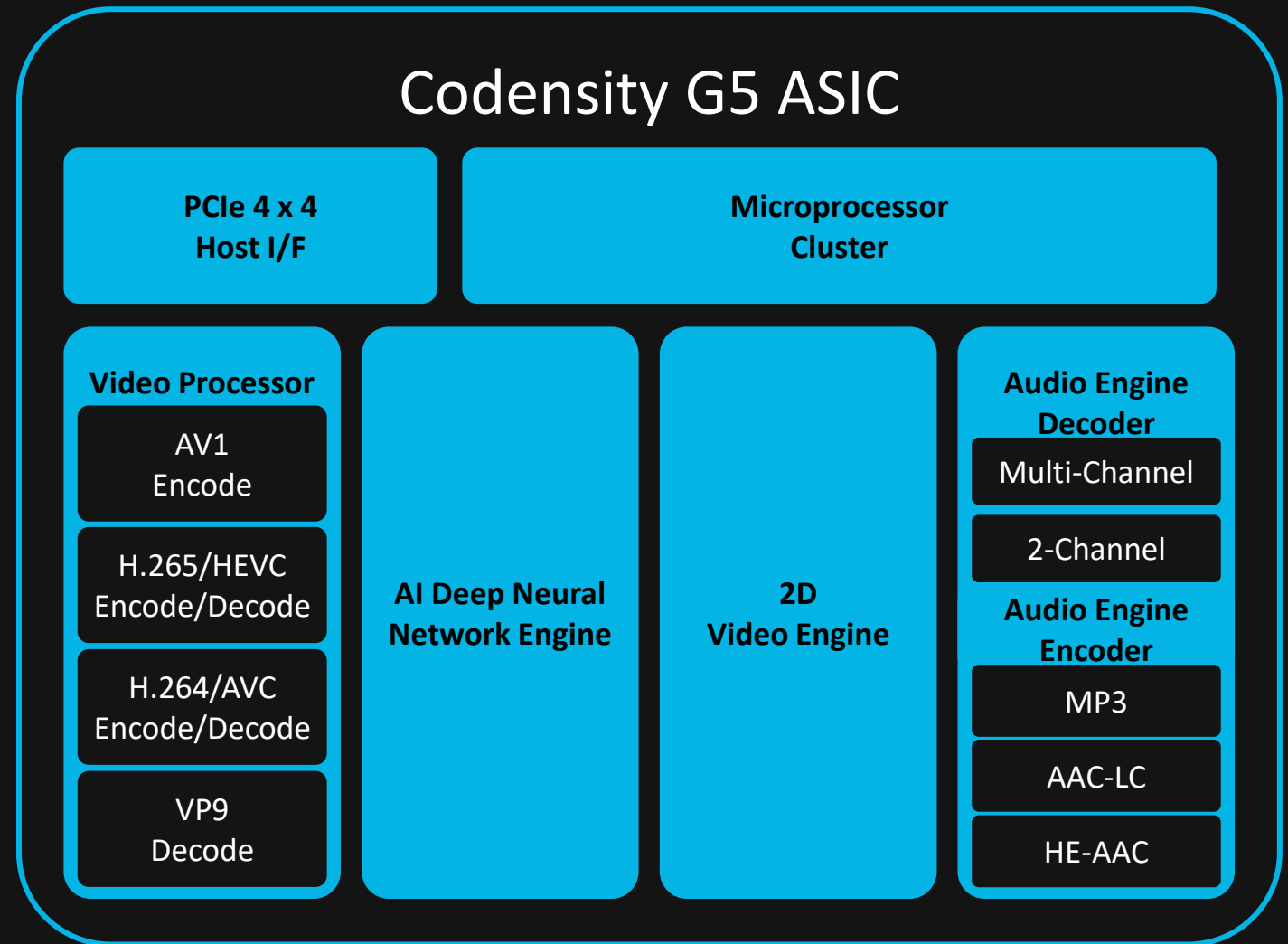
Specialized solutions.



Custom developed video solutions.

Inside Codensity

- Worlds first ASIC video engine for x86 and Arm servers in the datacenter via standard U.2 or PCIe or Ruler .
- Supports the widest used video codecs for encoding: AV1, HEVC, H.264.
- Designed to offer the performance of silicon without losing the quality and bitrate efficiency and flexibility of software.

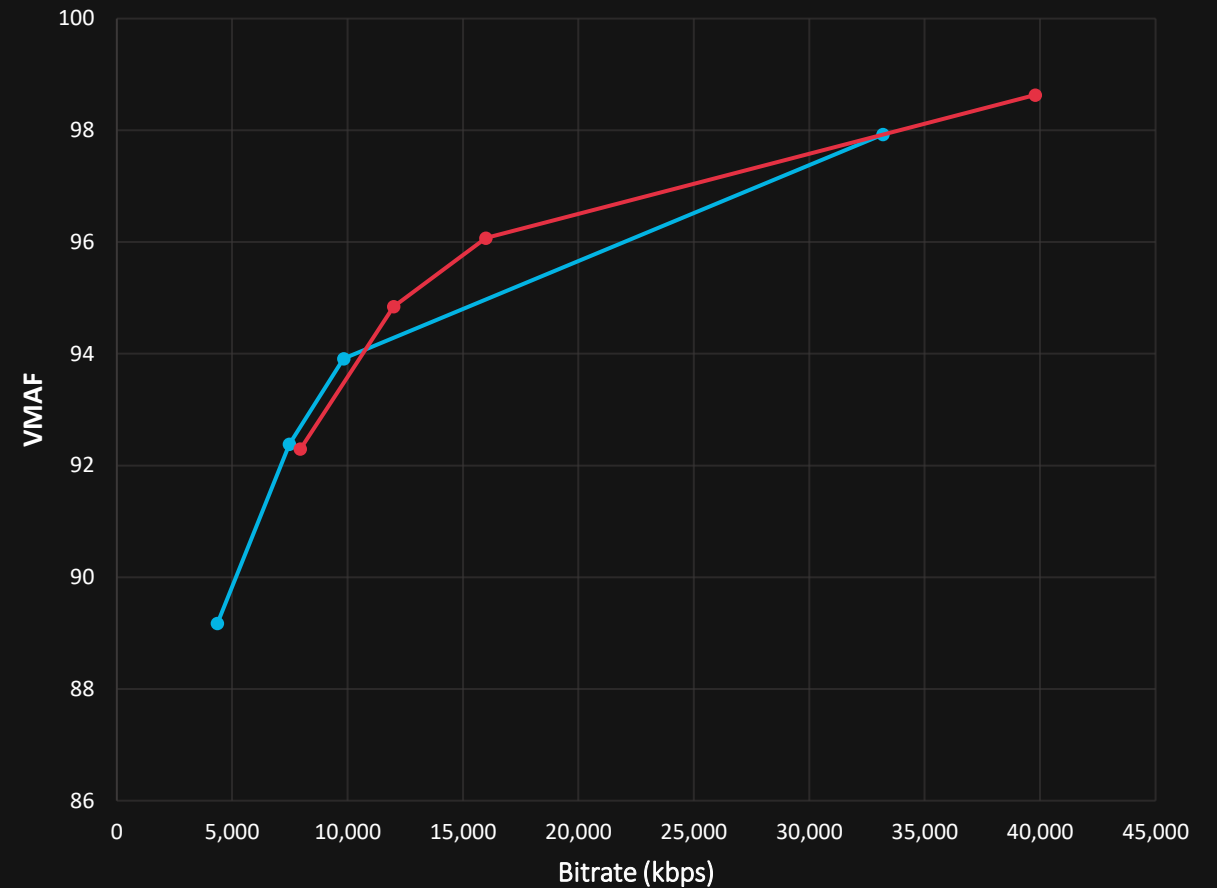


BD Rate – VMAF – 4Kp60

Quadra AV1 vs. SVT-AV1






Bosphorus 4Kp60



AV1 Demo

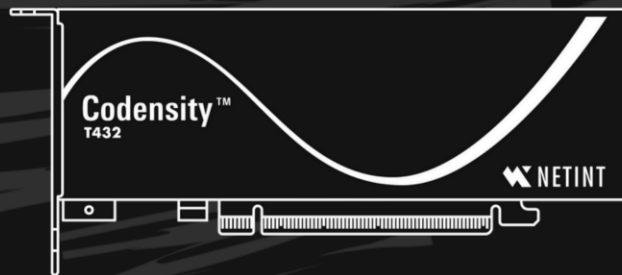
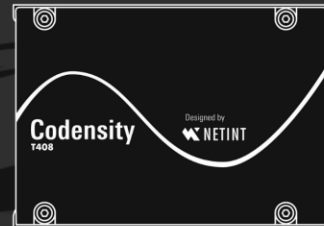
- <https://netint.brime.tv/av1.mp4>
- <https://netint.brime.tv/original.mp4>

ASIC vs. GPU vs. SW - 10k Streams

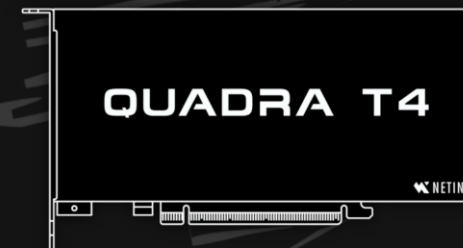
	Annual TCO 	Environment Impact 	Server Density 
ASIC NETINT QUADRA VPU	\$131,000	29.3 CO ²	32 NETINT QUADRA SERVERS
GPU NVIDIA T4	\$1,100,000	410 CO ²	250 NVIDIA T4 SERVERS
SOFTWARE INTEL SVT	\$5,800,000	2,170 CO ²	1,250 INTEL XEON SERVERS

NETINT VPU Products

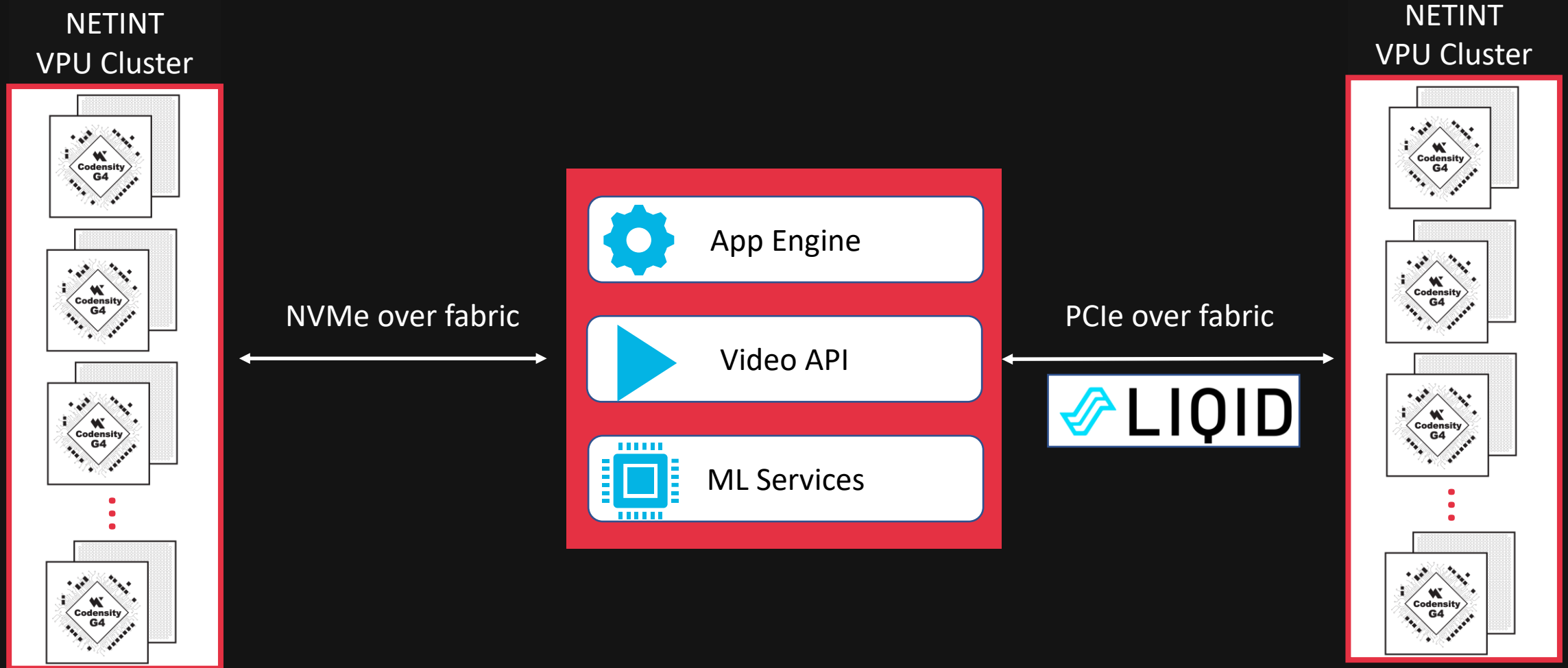
1st Gen – HEVC, H.264 - U.2
w/1 G4, PCIe w/4 G4's



2nd Gen – AV1, HEVC, H.264 -
U.2 w/1 G5, PCIe w/1,2, 4 G5's



Data Center Scale - Transcoder Farm





**IT'S TIME TO SWITCH
TO ASICS.**

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