Supermicro Content Delivery & Virtualization

Content Delivery Networks (CDNs), Transcoding, Compression, Cloud Gaming/Streaming

Video delivery workloads continue to make up a significant portion of current Internet traffic today. As streaming service providers increasingly offer content in 4K and even 8K, or cloud gaming in a higher refresh rate, GPU acceleration with media engines is a must to enable multi-fold throughput performance for streaming pipelines while reducing the amount of data required with better visual fidelity, thanks to the latest technologies such as AV1 encoding and decoding.

Supermicro's multi-node and multi-GPU systems, such as 2U 4-Node BigTwin system meet the stringent requirements of modern video delivery, each node supporting NVIDIA L4 GPU with the ability to feature plenty of PCIe Gen5 storage and networking speed to drive the demanding data pipeline for content delivery networks.

Systems

BigTwin®

Award Winning Multi-Node System with Resource Saving Architecture

Large Workload:
BigTwin® 2U 4-Node

- 1 NVIDIA L4 PCIe per node
- 6 2.5" NVMe drives per node
- 16 DIMMs DDR5-4800 per node

SYS-221BT-HNTR / SYS-621BT-HNTR

CloudDC

All-in-one Platform for Cloud Data Centers

Medium Workload:
2U CloudDC

- 2 NVIDIA L40 PCIe or 4 NVIDIA L4 PCIe
- 12 3.5" SATA drives
- 16 DIMMs DDR5-4800

SYS-521C-NR / AS -2015CS-TNR

Hyper-E

High Performance and Flexibility at the Edge

Medium Workload:
2U Hyper-E

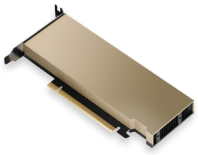
- 3 NVIDIA L40 PCIe
- 6 NVMe drives
- 32 DIMMs DDR5-4800

SYS-221HE-FTNR / SYS-221HE-FTNRD

Recommended NVIDIA GPUs

L40

- FHFL DW
- PCIe 4.0 x16
- 300W
- 48GB GDDR6



L4

- HHHL SW
- PCIe 4.0 x16
- 72W
- 24GB GDDR6

Accelerate Content Delivery & Virtualization Workloads

Content Delivery Networks (CDNs), Transcoding, Compression, Cloud Gaming/Streaming

Opportunities and Challenges:

- Contents in 4K and 8K, 120Hz+ refresh rate for cloud gaming
- Save data bandwidth and reduce delivery delays
- Faster, more efficient transcoding and compression
- Reduce power consumption and infrastructure cost
- Balancing hot, warm, cold data storage for data throughput and capacity

Key Technologies:

- GPU media engines with transcoding acceleration including AV1 encoding and decoding
- NVIDIA RTX GPUs handling both real-time 3D graphic rendering and media streaming for cloud gaming and VDI
- NVIDIA BlueField 2, 3 (DPU) for low latency, secure and fast data management
- Dense, resource-saving multi-node, multi-GPU systems for space and power efficiency
- High-capacity, high-throughput hot-swap storage

Solution Stack:

- Red Hat, VMWare
- Container orchestration and management
- SDKs to accelerate and optimize decoding, encoding and transcoding workloads

Use Cases:

- Content delivery networks
- 8K, 4K streaming, livebroadcast
- High resolution, high framerate cloud gaming and streaming

GPU Acceleration for Complete Range of Workloads

Go to www.supermicro.com/ai or scan the QR code to download the AI Workload Solution Brochure: