SECTOR UPDATE

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Tech (OVERWEIGHT)

Jensen Huang highlights memory bottlenecks

- Vera Rubin is in mass-production, Nvidia has confirmed, while concurrently highlighting the importance of memory storage management via BlueField-4.
- Inference processes for agentic AI and physical AI should cause a surge in the number of memory bottlenecks, indicating co-growth not only for HBM but also for DRAM and NAND.

WHAT'S THE STORY?

Nvidia CES keynote speech—AI investment cycle to persist in 2026: The AI infrastructure investment cycle will remain strong throughout 2026, Nvidia's CEO Jensen Huang said during his CES 2026 keynote speech on Jan 6. He described the current phase not simply as the creation of new demand, but as a broad modernization of computing infrastructure. Huang explained that the massive investments are being driven by the structural limitations of existing data centers, which are ill-equipped for handling workloads from LLMs, agentic AI, and physical AI. This structural mismatch calls for a redesign and incremental investments across servers and storage systems. The advent of numerous open models, along with Alpamayo (a physical inference model designed for autonomous driving), underscores the ecosystem's ongoing expansion. Meanwhile, mass-production of Nvidia's next-generation GPU platform Vera Rubin has begun, and new server designs and memory architectures should be launched down the road.

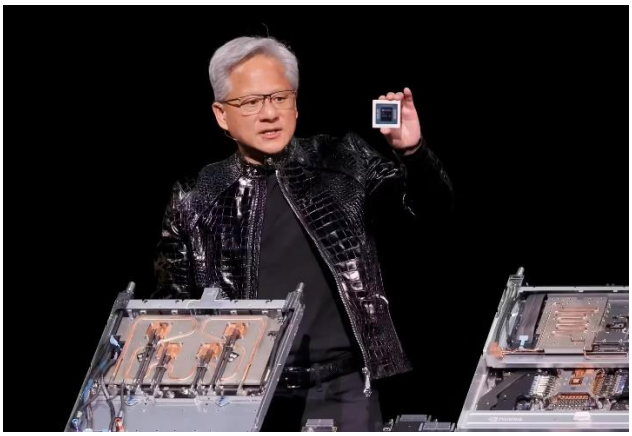
Trench architecture central to AI memory in 2026: The most significant implication of the keynote speech is that Nvidia has officially adopted GPU-centric trench architecture in its AI servers. Alongside Vera Rubin, Nvidia has introduced an AI memory storage system powered by the BlueField-4 DPU, marking an important turning point—DRAM and NAND have been fully integrated into the cache hierarchy, moving away from the traditional HBM-centric structure. With the rise of agentic AI, the number of compute calls and sequence lengths during inference has increased dramatically. Jensen Huang noted that the bandwidth and capacity of memory for handling KV cache have become a technical bottleneck. To address this, Nvidia is integrating a continuous memory hierarchy of HBM - LPDDR (DRAM) - NVMe (NAND), and using BlueField chips to directly connect and control the GPU. This enables the processing of large-scale KV cache. In this way, the software-hardware integrated architecture—including DOCA (Data-center On-a-Chip Architecture) for programming DPUs, GDS (GPU Direct Storage) for connecting storage to the GPU, and the BlueField chip (DPU + Ethernet)—is likely to function as another structural moat, much like CUDA.

Memory to remain key focus of data centers for now: The growth of memory content per AI server should outpace the growth of GPU computing in the near future. Nvidia's message suggests that maximizing capacity to accommodate KV cache when adopting the Vera Rubin system is a top priority. Agentic AI and physical AI workloads should be inference heavy, with a higher proportion of memory-resident data compared to training processes—a development that should lead to an increase in the amount of memory and storage connected per GPU. This should not only drive demand for HBM but also for general DRAM and high-capacity NVMe NAND. 2026 should mark the starting point for a sharp increase in bit demand for data center memory.

Nvidia: BlueField-4 powers inference context memory storage platform

Source: Nvidia, Samsung Securities

Jensen Huang's keynote speech at CES 2026



Source: Press release, Samsung Securities

Nvidia investor meeting Q&A summary

Q) What does the mass-production of Vera Rubin signify?

Vera Rubin is currently in mass-production, and it is expected to be made available in 2H26. There is a lead time of approximately 9 months.

Q) What is the strategic significance of the Groq licensing announcement?

While Nvidia architecture remains mainstream, Groq's technology excels in areas requiring extremely low latency, such as smart glasses.

Q) What is the scope, timing, and revenue model for autonomous driving and robotics markets?

The autonomous driving-related data center market is already in the billions of dollars and is expected to grow further. Autonomous trucks and robotaxis are projected to become massive businesses within the next decade. It is important for the ecosystem to thrive, even if Nvidia chips are not used.

Q) Why did Anthropic choose Nvidia semiconductors?

Initially funded by Google and Amazon, Anthropic relied heavily on Google and Amazon. However, considering performance, it expanded to other vendors. Nvidia's platform is advantageous for generating high-quality tokens. Nvidia is used by nearly all AI models globally.

Q) What is the status of DRAM pricing, supply, and power supply issues?

Nvidia is the only global chip company that purchases DRAM in large quantities. It collaborates closely with its HBM partners. Additionally, Nvidia is involved in upstream supply-chain management, including partnerships with semiconductor equipment makers (*eg*, AMAT, ASML), securing land, and establishing electricity grids. Directly managing the supply chain ensures a more stable supply.

Q) What is Nvidia's China strategy?

Products for China are managed through a separate supply chain to avoid impacting other regions. It is currently waiting for its license applications to be processed by the US and Chinese governments.

Q) Is DGX Cloud a service that competes with customers?

Initially, CSPs were unfamiliar with AI architectures, so we built our own systems and attracted over 20,000 AI-native companies to CSPs. In a way, we acted as the sales force for CSPs through DGX Cloud. Now, the importance of DGX Cloud as a rental business is declining.

Q) What is the memory/storage controller business?

The inference volume at AI factories is so large that KV cache has become extremely heavy. To handle this, a new layer of storage directly connected within the computing fabric is needed. BlueField 4's DOCA software performs this role. It should grow like CUDA.

Q) How fast will Vera Rubin be mass-produced, and how profitable will it be?

Vera Rubin involves developing all component chips from scratch. It reduces server assembly time to just two hours and improves NVLink maintenance efficiency. The value of adopting Vera Rubin is high, and profitability should be maintained.

Q) Should AI models consolidate into a few winners or should they remain fragmented?

General-purpose AI is smart enough, but vertical agents are needed in specific domains. Many companies should use open-source models to build their own AI.

Q) When should the inflection point for agentic AI and physical AI arrive?

Agentic AI and physical AI are already here. Their use should become more ubiquitous.

Q) What should be the role of Neo Cloud?

In a fast-changing technological landscape where securing power is a challenge, specialized regional players have emerged. They are important partners for Nvidia.

Q) How sustainable is your profitability?

Profitability is directly tied to the value we provide. Our value is overwhelming in terms of reducing model training time, lowering inference costs, and increasing profitability at the data center level. When a client is building a gigawatt-scale data center valued at USD50b, the client would gladly pay a premium if Nvidia's products help generate more revenue (vs that generated by competitors' products).

Q) What is the next game-changer? Will token demand continue to grow?

The next challenges are expansion of context length and continuous learning. Thanks to agent systems, token generation has increased 50x.

Q) Tell us more about your R&D investments and M&A philosophy

We make investments across the board—including in chips, models, and applications. We do not distinguish between R&D activities and external investments. If there is a team that shares our vision and moves quickly in technology, we will consider acquiring them.

Q) What is the possibility of reducing your dependency on HBM via SRAM and proprietary technologies?

Products like CPX that reduce reliance on HBM may be more efficient for specific tasks. However, the challenge is that AI workloads continue to change. Since data center power is limited, a unified architecture that delivers top performance across all models should ultimately be more cost-effective in terms of total cost of ownership (TCO).

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