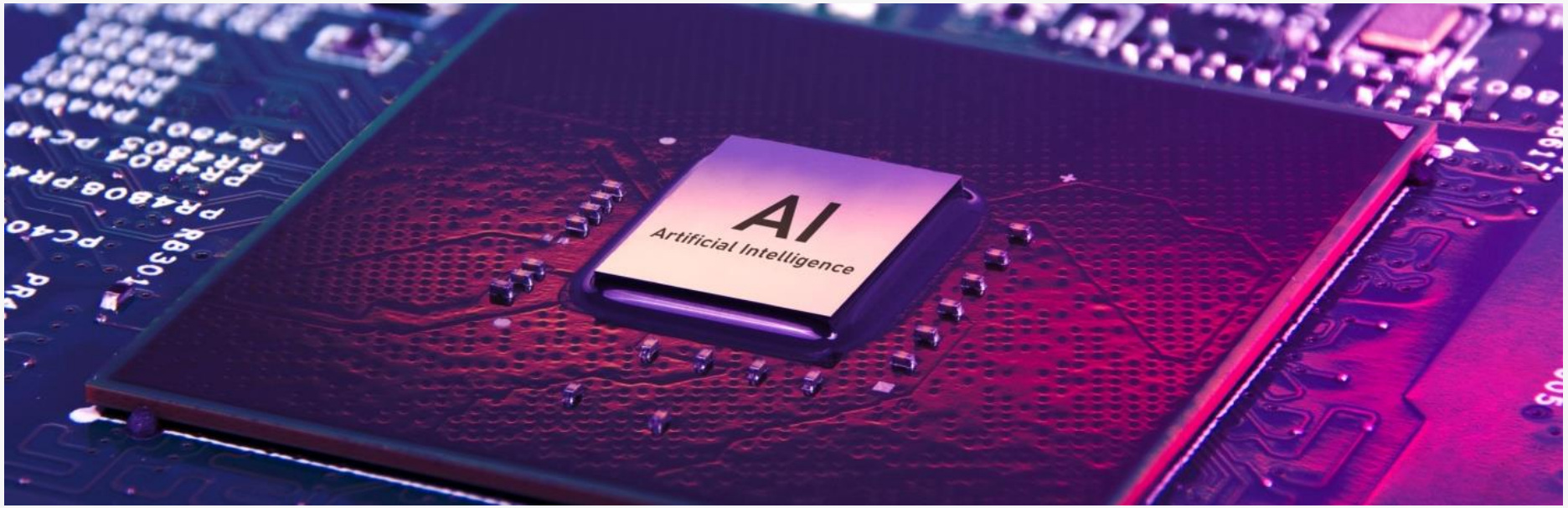
Special Report

Beyond Gaming: Nvidia’s Ascension as the AI Chip Titan



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September 2024

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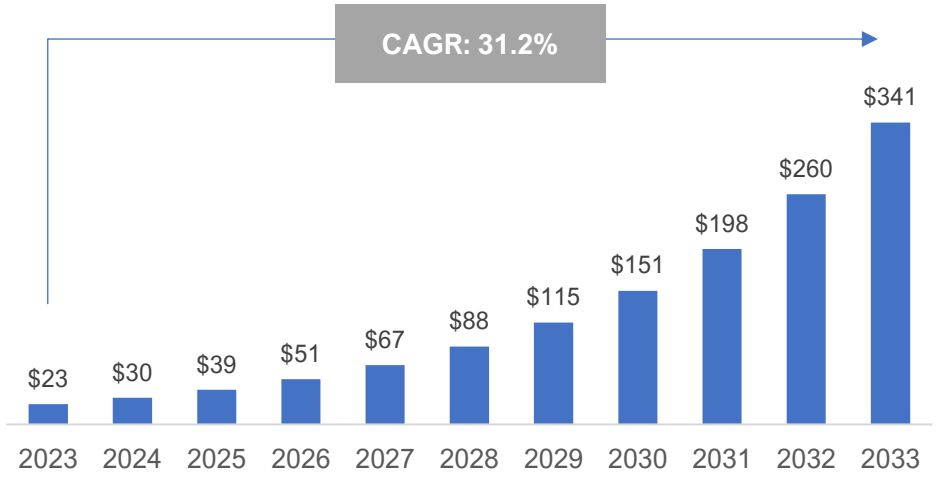
AI Chips Industry Overview – (1/2)

Global AI Chip market expected to register 31.2% CAGR and reach US$341 billion by 2033

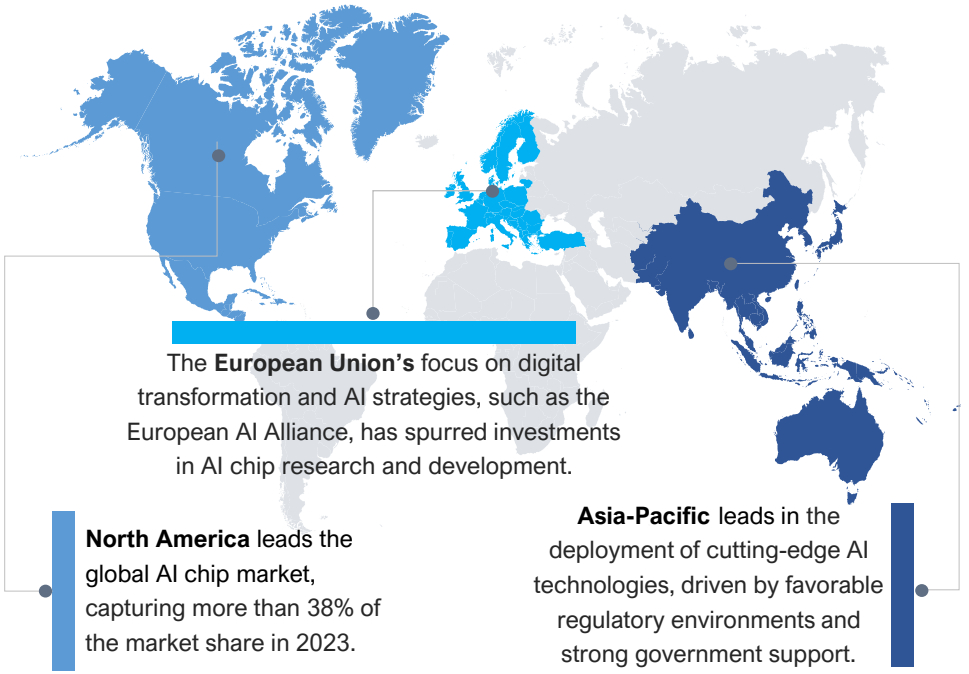
Global AI Chip Market Size

US$ Bn



- AI chips are purpose-built to allow businesses to extract valuable insights quickly and efficiently. These specialized chips outperform traditional processors, driving their widespread adoption across multiple industries.
- The expanding use of AI across industries has driven chip manufacturers to innovate, creating advanced, fast and cost-effective AI chips.
- The increased implementation of AI chips in robotics, coupled with quantum computing, is anticipated to drive significant market expansion. Intensified efforts toward autonomous robot development further escalate the demand for AI chips.

Regional Insights



- European industries, particularly automotive, are integrating AI chips extensively to enhance vehicle capabilities.
- North America leads AI technology innovation, with continuous advancements in AI chip architectures, such as GPUs (Graphics Processing Units) and SoCs (System on Chips).
- Several governments in the APAC region, notably China, are actively investing in AI technologies.

Source: *Aranca Research*

AI Chips Industry Overview – (2/2)

The AI chips industry is experiencing rapid growth, driven by soaring demand for AI applications across cloud computing, autonomous vehicles, and edge devices

Recent Deals and Developments

Jun 24 – Nvidia announced a new AI chip architecture, "Rubin," which is in production and expected to ship to customers late in 2024.

May 24 – Apple introduced its new chip M4, which will outclass PCs designed for AI.

Apr 24 – Google announced its first custom ARM-based CPU chip for AI applications at its annual conference.

Apr 24 – Intel revealed the Gaudi 3 AI chip to expand its AI and high-performance computing footprint.

Mar 24 – Nvidia announced its latest AI chip B200 to enhance AI model performance and efficiency.

Mar 24 – Microsoft and OpenAI to establish a $100 billion US-based data center, housing an AI supercomputer named Stargate.

Feb 24 – Sam Altman (CEO, OpenAI), aims to raise between $5 to $7 trillion to increase the production of AI chips.

Key Market Trends

Advanced Node Development
Companies are pushing for smaller nanometer nodes (2nm) to enhance performance and efficiency

Specialized AI Chips
There is a growing demand for specialized chips like GPUs and TPUs designed specifically for AI applications

Integration of AI in Data Centers
AI chips are increasingly being integrated into data centers to boost AI processing capabilities

Rising Investment
Significant investments are being made in AI chip R&D and manufacturing to stay competitive

Competition Insights

Consolidated
(Market dominated by 1–5 major players)

Fragmented
(Highly competitive market with no dominant player)

Global AI Chipsets Market

- The AI chipset industry is experiencing a surge in competition, driven by the rapidly growing demand for large-scale, low-power data processing solutions. These advancements are crucial for future applications in big data analysis, smart factories, and other critical sectors of the industry.
- Companies significantly investing in research and development to design powerful and efficient AI processors.
- Nvidia leads in raw performance for AI workloads, particularly with its Tensor Core GPUs. Intel and AMD are catching up with specialized AI chips and accelerators. Nvidia will likely continue to dominate the high-performance segment, while Intel and AMD will leverage their diverse hardware portfolios to capture different market segments.

NVIDIA, intel, IBM, XILINX, Qualcomm, Google, AMD, Micron

Source: *Aranca Research*

Application of AI chips (1/2)

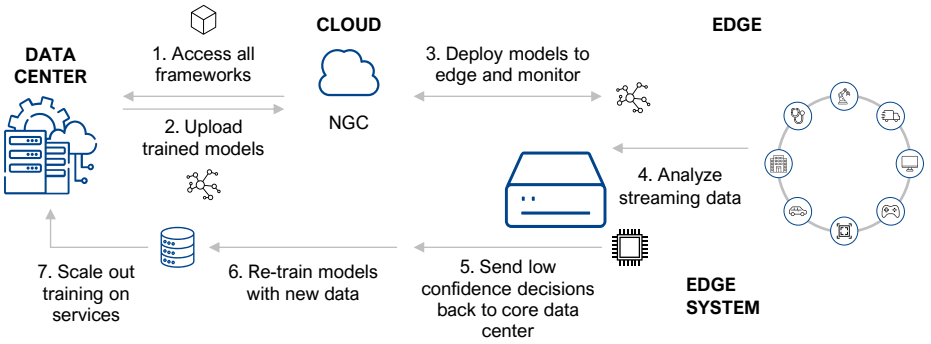
AI chips are optimized for training deep learning models, which require immense computational power to process large datasets and perform matrix multiplications

Generative AI

ChatGPT Gemini perplexity Copilot

- Generative AI includes algorithms crafted to create original content, ranging from audio, code, and images to text, simulations, and videos. Recent advancements in this technology promise to revolutionize the content creation landscape.
- Generative AI leverages machine learning models to analyze patterns and relationships within human-created datasets. It uses this acquired knowledge to produce new content.
- AI chips accelerate the training and refinement of AI, machine learning, and deep learning algorithms, crucial for developing large language models (LLMs).
- By leveraging parallel processing for sequential data and optimizing neural network operations, these chips enhance the performance of LLMs and generative AI tools such as chatbots, AI assistants, and text generators.

Edge AI



- Edge AI deploys AI applications on devices in the physical world, performing computations near the user at the network's edge, close to the data source, rather than relying on a central cloud or data center.
- Edge AI chips facilitate local AI processing, minimizing latency and reducing reliance on the cloud, while optimizing power consumption.. This ensures real-time decision-making for battery-powered devices such as smartphones and IoT sensors.
- Since the Internet is global, the network's edge can be anywhere: retail stores, factories, hospitals, or everyday devices like traffic lights, autonomous machines, and phones.

alexa WATCH Google Home

Source: *Aranca Research*

Application of AI chips (2/2)

AI chips provides the computational power needed to process data from various sensors, make real-time decisions, and control movements.

Autonomous Vehicles

- AI chips enhance the intelligence and safety of driverless cars by processing vast data from cameras, LiDAR, and other sensors. They support advanced tasks like image recognition and, with their parallel processing power, enable real-time decision-making. This allows autonomous vehicles to navigate complex environments, detect obstacles, and acclimatize to dynamic traffic conditions.
- The automotive AI chip market is rapidly growing, driven by rising demand for advanced compute architectures. This surge is fueled by the growing use of Advanced Driver-Assistance Systems (ADAS) and a switch to autonomous vehicles, which require sophisticated computing solutions.
- Manufacturers are investing in AI and compute architectures to meet market demand and shape the future of automotive design. AI chips are driving the development of smart, autonomous, and personalized vehicles, ushering in a new era of innovation.
- Intel is acquiring Silicon Mobility to enhance AI integration in automotive systems, boosting vehicle performance and efficiency.

Robotics

- AI chips enhance machine learning and computer vision tasks, enabling robots to better perceive and respond to their environment. This benefits all areas of robotics, from robots harvesting crops to humanoid robots providing companionship.
- AI chips play a crucial role in advancing robotics, empowering robots to execute an array of tasks with enhanced efficiency, precision, and intelligence. These applications transform industries and improve the quality of services and products across the board.
- AI chips help drones perform tasks such as obstacle avoidance, path planning, and target tracking. AI-powered robots enhance surgical procedures by offering improved visualization and precision. Robots equipped with AI chips can manage inventory by recognizing and tracking products.
- Samsung secured a landmark deal to supply 2nm AI chips to Preferred Networks Inc. (PFN), a leading Japanese AI startup known for its work in deep learning and robotics.

Source: *Aranca Research*

The Nvidia Advantage: A Look at their Chip Offerings

Nvidia is a leader in developing AI-specific chips, known as GPUs (Graphics Processing Units) that are optimized for complex calculations needed in AI applications

***Nvidia Corporation**, founded in 1993, transformed computer graphics with its 1999 GPU invention, fueling the PC gaming boom. It now leads in AI and high-performance computing with innovations like the Blackwell architecture and Grace Hopper Superchip. Their GPUs, including the GeForce, Quadro, and Tesla series, are integral to gaming, professional visualization, and AI workloads.*

Nvidia's Portfolio

GB200 NVL2
Its design facilitates a variety of system designs and networking options to seamlessly integrate accelerated computing into existing data center infrastructure. Data processing for this GPU is 18x vs. CPU.

GB200 NVL72
Designed for most compute-intensive AI and high-performance computing workloads, it delivers up to 30x performance improvements for LLM inference and reduces cost and energy consumption by up to 25x.

H100 Tensor Core GPU
The GPU includes dedicated a Transformer Engine to solve trillion-parameter language models. These technological innovations can speed up LLMs and up to 256 H100 GPUs can be connected to accelerate workloads.

L4 Tensor Core GPU
It delivers universal, energy-efficient acceleration for video, AI, visual computing, graphics, virtualization and more. It is a cost-effective, energy-efficient solution for high throughput and low latency in every server.

L40S
Delivers exceptional performance for AI, graphics, and data center workloads, excels in multi-workload acceleration, offering up to 5x higher inference performance than its predecessor, the A40.

L40 GPU
It is equipped with 48 GB of VRAM, enabling it to handle inference tasks and train models with up to 24 billion parameters; the GPU supports advanced AI-enhanced graphics capabilities.

A100 Tensor Core GPU
Provides up to 20x higher performance over the previous generation and can be segregated into seven GPU instances to dynamically adjust to shifting demands; it has world's fastest memory bandwidth at over 2 TB/s*

A2 Tensor Core GPU
It is a beginner-level solution designed for efficient AI inference and edge computing applications. It is suited for environments requiring high performance within a small footprint, such as edge AI servers and small data centers.

A10 Tensor Core GPU
The GPU combines with Nvidia RTX Virtual Workstation software to combine mainstream graphics and video with AI services to mainstream enterprise servers, delivering solutions and meeting challenges.

A16 GPU
The GPU combines with Nvidia virtual GPU software to elevate the bar on user experience for graphics-rich virtual desktop infrastructure. It delivers up to 2x the user density, reducing the required hardware resources.

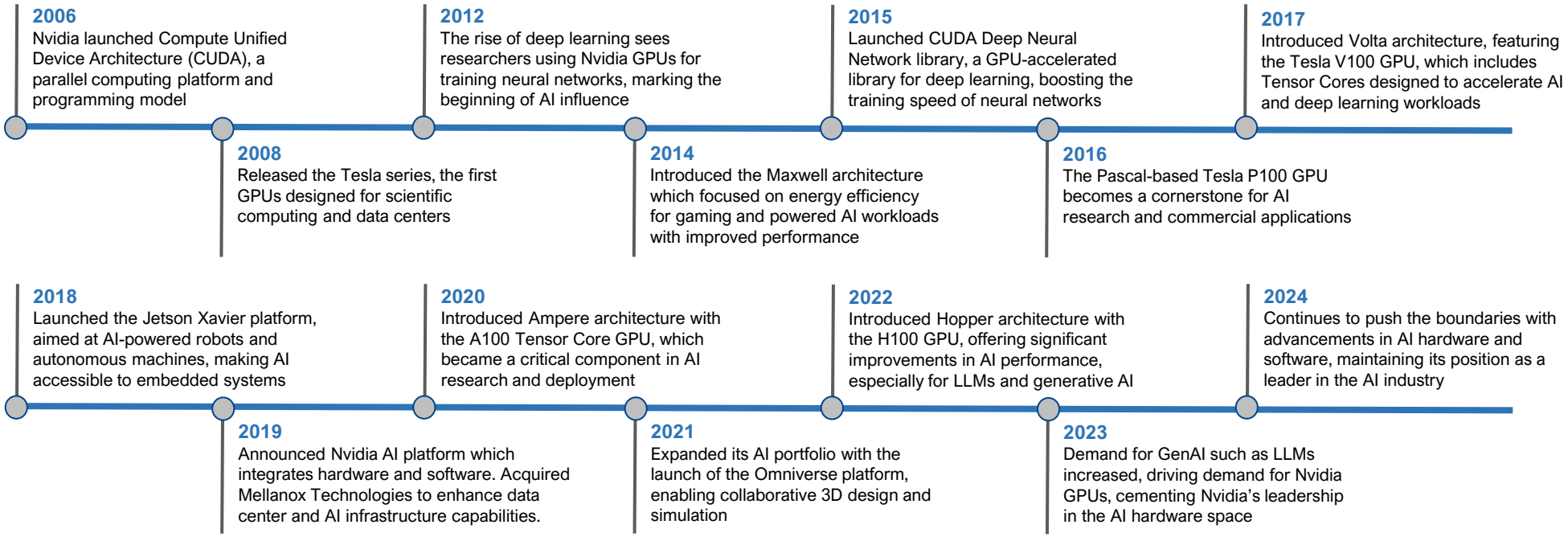
A30 Tensor Core GPU
By combining fast memory bandwidth and low-power consumption in a PCIe form factor - optimal for mainstream servers - A30 empowers an elastic data center and delivers maximum value for enterprises.

A40 GPU
Combines best-in-class professional graphics with powerful compute and AI acceleration to meet today's design, creative, and scientific challenges. Brings technology to data centers for advanced professional visualization workloads.

***Source:** Aranca Research, Nvidia Corp.'s Website | **Note:** *2 terabytes per second*

Nvidia's AI Journey: Key Milestones and Breakthroughs

From the launch of CUDA in 2006 to the groundbreaking H100 GPU in 2022, Nvidia's strategic focus on AI has propelled them to the forefront of the AI revolution



- AMD entered the AI chip market in 2017 with the Radeon Instinct series, specifically designed for machine learning and AI workloads, targeting data centers. These GPUs intended to compete with Nvidia's Tesla series. In 2020, AMD introduced the Radeon Instinct MI100 based on the CDNA architecture, marking a significant push into AI and high-performance computing (HPC).
- Intel got into the AI chip market in 2016 by acquiring Nervana Systems and later expanded its AI offerings with the Nervana processors in 2019 for deep learning training and inference. Intel broadened its AI presence by launching the Movidius Myriad X for edge AI in 2017 and HABANA Labs Gaudi processors in 2020, providing diverse AI solutions across data centers and edge computing.
- **By entering the AI chip market nearly a decade ahead of AMD and Intel**, Nvidia leveraged its early innovations like CUDA in 2006 and the subsequent launch of AI-specific GPUs such as the Tesla series. This foresight and early commitment to AI allowed Nvidia to establish a dominant position, securing a significant first-mover advantage.

Source: *Aranca Research*

Nvidia’s Superior Product Portfolio (1/2)

Nvidia's A100 Tensor Core GPU outperforms its peers across a range of MLPerf benchmarks, offering better performance and power efficiency

MLPerf Training Benchmarks

Workload	Metric	Nvidia A100	AMD Instinct MI100	Intel Habana Gaudi
ResNet-50 (Image Classification)	Training Time (minutes)	35	45	40
	Throughput (images/sec)	1.3 million	1.0 million	1.15 million
BERT (Natural Language Processing)	Training Time (minutes)	17	22	20
	Throughput (images/sec)	480	370	420
SSD (Object Detection)	Training Time (minutes)	23	30	28
	Throughput (images/sec)	0.5 million	0.4 million	0.45 million

MLPerf Inference Benchmarks

Workload	Metric	Nvidia A100	AMD Instinct MI100	Intel Habana Gaudi
ResNet-50 (Image Classification)	Latency (ms)	0.9	1.2	1.0
	Throughput (images/sec)	100,000	80,000	90,000
BERT (Natural Language Processing)	Latency (ms)	1.1	1.5	1.3
	Throughput (images/sec)	20,000	15,000	18,000
SSD (Object Detection)	Latency (ms)	1.5	2.0	1.8
	Throughput (images/sec)	80,000	60,000	70,000

Source: *MLPerf Benchmarks*

Nvidia’s Superior Product Portfolio (2/2)

Nvidia's A100 GPU offers significant energy efficiency advantages compared to competing AI chips from AMD and Intel

Power Efficiency (Performance per Watt)

Workload	Metric	Nvidia A100	AMD Instinct MI100	Intel Habana Gaudi
Training Efficiency	ResNet-50 (images/sec/watt)	0.05	0.04	0.045
	BERT (sequences/sec/watt)	0.02	0.015	0.018
Inference Efficiency	ResNet-50 (images/sec/watt)	10	8	9
	BERT (sequences/sec/watt)	2	1.5	1.8

- The **Nvidia A100** demonstrates strong performance across all AI benchmarks, excelling in natural language processing tasks and image classification. It benefits significantly from the mature CUDA ecosystem, which enhances AI development by providing robust tools and libraries for developers. The Nvidia A100 is built on the Ampere architecture and features 40 GB of HBM2e memory. It uses NVLink interconnects and is optimized for AI workloads with its advanced Tensor Cores.
- The **AMD Instinct MI100** excels in FP64 performance, making it particularly suitable for scientific simulations and financial modeling. However, it exhibits slightly a lower performance in AI-specific benchmarks due to a less optimized software stack compared to Nvidia. The AMD Instinct MI100 utilizes the CDNA architecture, equipped with 32 GB of HBM2 memory. It features Infinity Fabric interconnects and Matrix Cores, making it suitable for both high-performance computing (HPC) tasks and AI.
- The **Intel Habana Gaudi** chip provides competitive performance with good latency and throughput, along with strong efficiency. It is well-suited for applications in data centers, cloud computing, and enterprise AI environments, offering a balanced combination of efficiency and performance. The Intel Habana Gaudi is a custom AI processor that comes with 32 GB of HBM2 memory and employs RDMA over Converged Ethernet (RoCE) for interconnects. It leverages Tensor Processing Cores, designed to efficiently handle AI workloads.

Source: *MLPerf Benchmarks*

Comparing Nvidia's Latest Chip Offerings

The NVIDIA H100 GPU dominates AI performance benchmarks with its high memory capacity and bandwidth. While the Intel Gaudi 3 offers superior cost-efficiency, the AMD Instinct MI300X has the highest memory capacity.

Benchmark Comparison

Specification	Nvidia H100	AMD Instinct MI300X	Intel Gaudi 3
FP32 Performance	19.5 teraflops	~20 teraflops	Comparable but not specified
FP64 Performance	9.7 teraflops	11.5 teraflops	Not specified
Memory Type	HBM2e	HBM2e	HBM2
Memory Capacity	80GB	192GB	32GB
Memory Bandwidth	2.0TB/s	Higher but not specified	1.2TB/s
Power Consumption (TDP)	300W	300W	250W
Process Technology	7nm	7nm	7nm
Price/Performance Ratio	$46,875 per petaflop	Not specified	$18,733 per petaflop

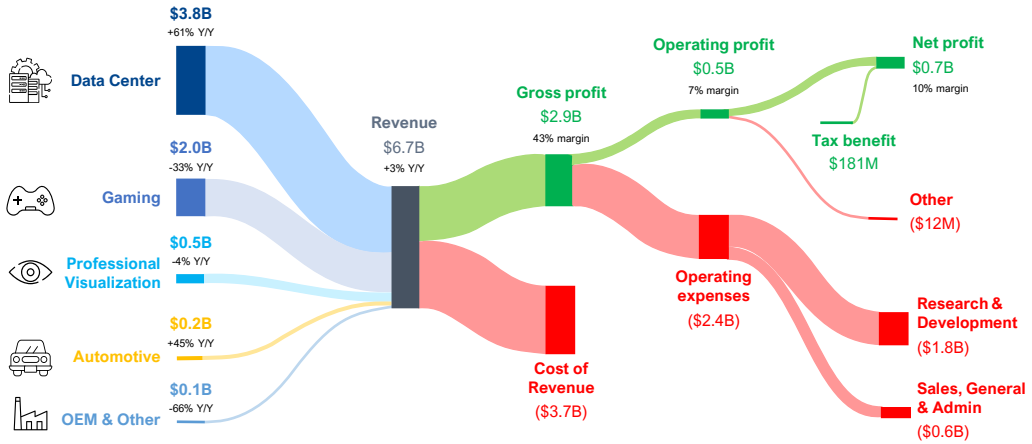
- The **NVIDIA H100 GPU** has established dominance in performance across a range of AI benchmarks, offering the highest memory capacity and bandwidth, making it suitable for very large AI models and datasets.
- In contrast, the **Intel Gaudi 3** provides substantial cost-efficiency advantages, being 2.5x better in price/performance compared to the NVIDIA H100, making it suitable for large-scale AI training with notable energy efficiency improvements.
- The **AMD Instinct MI300X** features the highest memory capacity among the three, which can be beneficial for memory-intensive applications, though detailed performance benchmarks are less frequently published.

Source: *Aranca Research*

Revenue Shift: Nvidia's Transition from Gaming to AI Chips

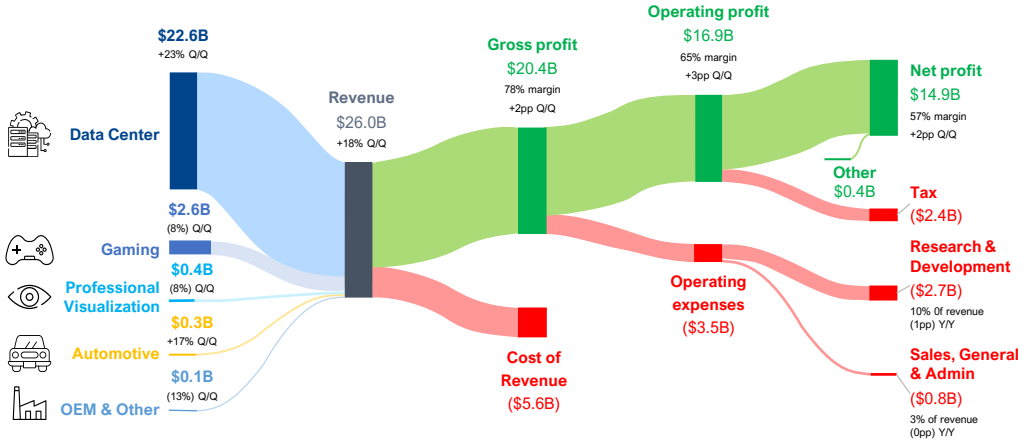
Nvidia's revenue is increasingly driven by its AI chip sector, marking a significant shift from its traditional gaming focus

Q2 2023 Income Statement



- In Q2 23, gaming contributed 30% of the total revenue, reflecting short-term stability but highlighting a notable decline from the 47% share it held in Q2 2022. Meanwhile, the data center segment surged to 57% of total revenue, driven by advancements in AI, up from 36% in Q2 22.
- This decline reflects a broad trend in the gaming sector, which has been impacted by various market dynamics, comprising a reduced demand for gaming GPUs and a slowdown in the PC and gaming market following a pandemic-driven boom.
- AMD launched the Radeon RX 7800 XT and RX 7700 XT, while Intel introduced the Arc A770 and Arc A750 gaming GPUs, intensifying market competition and providing consumers with more alternatives, which diluted Nvidia's market share in the gaming GPU segment.

Q1 2025 Income Statement



- Nvidia's gaming revenue dropped to 10% of total revenue in Q1 2025, down from 31% in Q1 2024, despite the introduction of new AI gaming technologies. On the other hand, data center revenue soared to 87% of total revenue, marking a staggering 427% annual increase (Q1 2024: 60%), driven by surging demand for generative AI training.
- The gaming segment's revenue has been overshadowed by Nvidia's rising focus and success in the data center market, which has seen substantial growth due to increased demand for AI and cloud computing technologies.
- Leading cloud providers have significantly fueled growth by scaling and extensively deploying Nvidia AI infrastructure, making this segment responsible for approximately 45% of data center revenue.

Source: *Company Filings*

Intel’s Position in a Competitive Landscape

Intel is catching up in the AI Market, driven by its Gaudi AI accelerators and Xeon processors, designed to compete with Nvidia and other players by offering competitive performance and cost advantage

Where did Intel Fall Behind?

- **Intel focuses on manufacturing CPUs, whereas Nvidia is known for specializing in GPUs.** AI was initially processed on CPUs because all tasks, including those eventually run on GPUs, were first tested on CPUs.
- **Intel developed specialized products known as Phi cards** that combined the strengths of both CPUs and GPUs. These cards featured 50-90 cores, making them capable of handling large-scale computations, particularly for AI inferencing tasks like image recognition at the data center level. However, despite their processing power, **Phi cards were not ideal for general LLM** use due to their high-power consumption.
- Intel's first significant entry into the GPU market, **the ARC series, launched in 2022**, after 15 years of development. Nvidia launches its first GPU in 1999.
- While impressive for its price, the ARC GPU competes primarily with Nvidia's mid-range RTX cards rather than high-end models like the 4090s and H100s. **Intel didn't drop behind in the GPU race; they simply weren't competing until now.**

Intel’s Current Strategy and Upcoming Offerings

- Intel is actively advancing its AI chip technology with the introduction of the **Gaudi 3 AI accelerator**, designed to compete with Nvidia's offerings by providing a cost-effective alternative for AI training and inference tasks.
- In addition to Gaudi, Intel is also focusing on its **Xeon 6 processors** and the Lunar Lake architecture, which are tailored for AI and high-performance computing needs.
- Intel continues to invest in its CPU lineup with developments such as the upcoming **Lunar Lake and Arrow Lake processors**, which are focused on enhancing power efficiency and performance for PCs and data centers. On the GPU front, Intel is working on its GPU series, with the upcoming releases of the **Battlemage and Celestial GPUs**.

intel foundry services

- Intel Foundry Services (IFS) is key to Intel's strategy to expand its semiconductor manufacturing capabilities beyond its own products and offer manufacturing services to external customers.
- Intel has received substantial financial backing under the CHIPS Act, including up to $8.5 billion in direct funding. This support is intended to help Intel expand its semiconductor manufacturing capabilities, with significant investments in new and existing fabs across the U.S., Europe, and Israel.
- Funding from the CHIPS Act is crucial for Intel's ambition to become the world's second-largest foundry by 2030, behind TSMC. The Act supports Intel's efforts to achieve process parity and leadership through advanced nodes, such as the 18A process technology.
- Intel has parted its Product and Foundry lines into two separate businesses. Intel intends its Foundry services to have strategic focus and operational flexibility. This separation allows the foundry business to operate with greater independence, helping it respond effectively to external customers and adapt to market demands.

Source: *Aranca Research*

Key Players in AI Market

In the AI Value chain, AMD designs AI-capable hardware and software tools, ARM provides AI-focused processor architecture, and TSMC manufactures advanced AI chips

- **Advanced Micro Devices (AMD)** is a multinational semiconductor company that produces and designs a range of computing and graphics products.
- **AMD's Instinct MI300X and MI300A GPUs** are designed for data center AI applications, offering high-performance solutions for AI training and inference tasks.
- AMD has introduced the **Ryzen AI 300 Series processors**, which feature integrated Neural Processing Units (NPUs) to enhance AI capabilities on PCs.
- AMD is leveraging its **XDNA architecture** to support AI software development, allowing for effective execution of AI models on its hardware. This enhances the performance of AI applications across various platforms.

- **Arm Holdings** is a British semiconductor and software design company, which designs microprocessor architectures and licenses these designs to other companies.
- Unlike Intel or AMD, which manufacture their own chips, Arm's business model is based on **licensing its processor architecture to manufacturers** who then produce their own chips.
- Arm is actively **working on AI-specific chips**, aiming to release its first dedicated AI processors by **2025**. These chips are designed to offer cost-effective, energy-efficient alternatives to current AI processors, catering to a broad spectrum of applications, from mobile devices to large-scale data centers.
- AI applications extensively use Arm's processor designs, including the **Cortex series.**

- Taiwan Semiconductor Manufacturing Company (TSMC) is **the world's largest dedicated independent semiconductor foundry**, providing semiconductor manufacturing services to a range of technology companies.
- TSMC is renowned for its advanced process technologies, consistently **leading the way in developing and implementing new semiconductor manufacturing nodes**.
- TSMC collaborates closely with its customers to **develop tailored manufacturing solutions** that meet the specific needs of AI applications.
- TSMC manufactures a significant portion of the world's AI chips for leading companies like **Nvidia, AMD, and Apple**.

Source: *Aranca Research*

Value Chain Overview

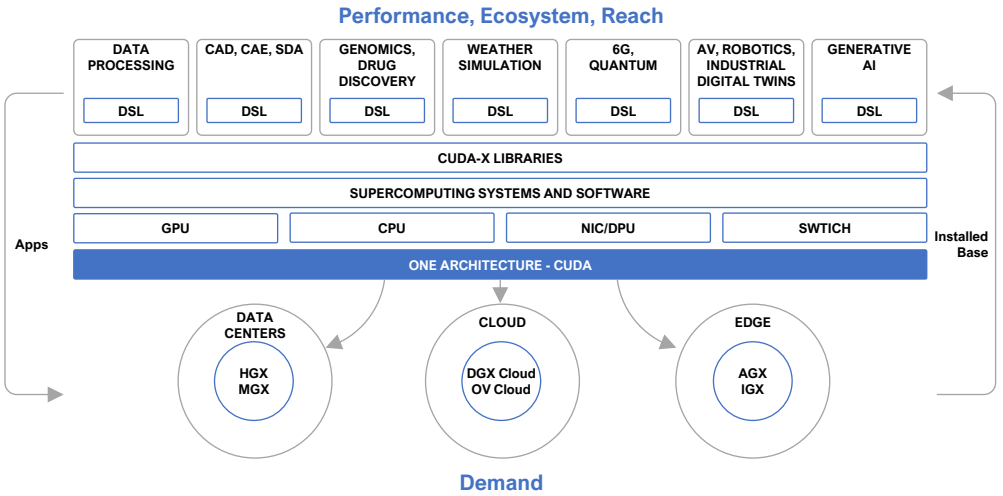
Nvidia leads in the AI chips value chain as a top designer of GPUs and AI accelerators, partnering with foundries for fabrication and focusing on software integration to drive AI applications

Source: *Aranca Research*

Nvidia’s MOAT: CUDA Architecture and Blackwell Innovation

Leveraging the CUDA platform's computational power and Blackwell's architectural advancements, Nvidia secures its position as a leader in AI, data processing, and next-gen computing technologies

CUDA



- Nvidia's CUDA platform transforms parallel computing by offering developers a robust and versatile framework that unlocks the full power of GPU acceleration, driving unprecedented performance gains in AI, machine learning, and computational science, and setting new standards in the industry.
- CUDA is deeply integrated into popular ML and DL frameworks like TensorFlow and PyTorch, providing accelerated computing capabilities essential for AI workloads.
- Nvidia has designed its GPUs to maximize the performance of CUDA applications, achieving seamless integration between software and hardware. This synergy allows Nvidia to set the standard for AI and high-performance computing (HPC).

Blackwell

Specification	H100	H200	B100	B200	GB200 NVL72
Price	$24,000	$24,000	$30,000	-	-
Watts Per GPU	700	700	700	1,000	1,200
All-in System Watts Per GPU	1,275	1,275	1,275	1,788	1,667
NVLink Bandwidth (Unidirectional - GB/s)	450	450	900	900	900
Memory Capacity (GB)	80GB	141GB	Up to 192GB	Up to 192GB	192GB
Memory Bandwidth (GB/s)	3,352	4,800	Up to 8,000	Up to 8,000	8,000
TF32 TFLOPS	495	495	900	1,100	1,250
FP16/BF16 TFLOPS	989	989	1,750	2,250	2,500
FP8/FP6/Int8 TFLOPS	1,979	1,979	3,500	4,500	5,000
FP4TFLOPS	1,979	1,979	7,000	9,000	10,000

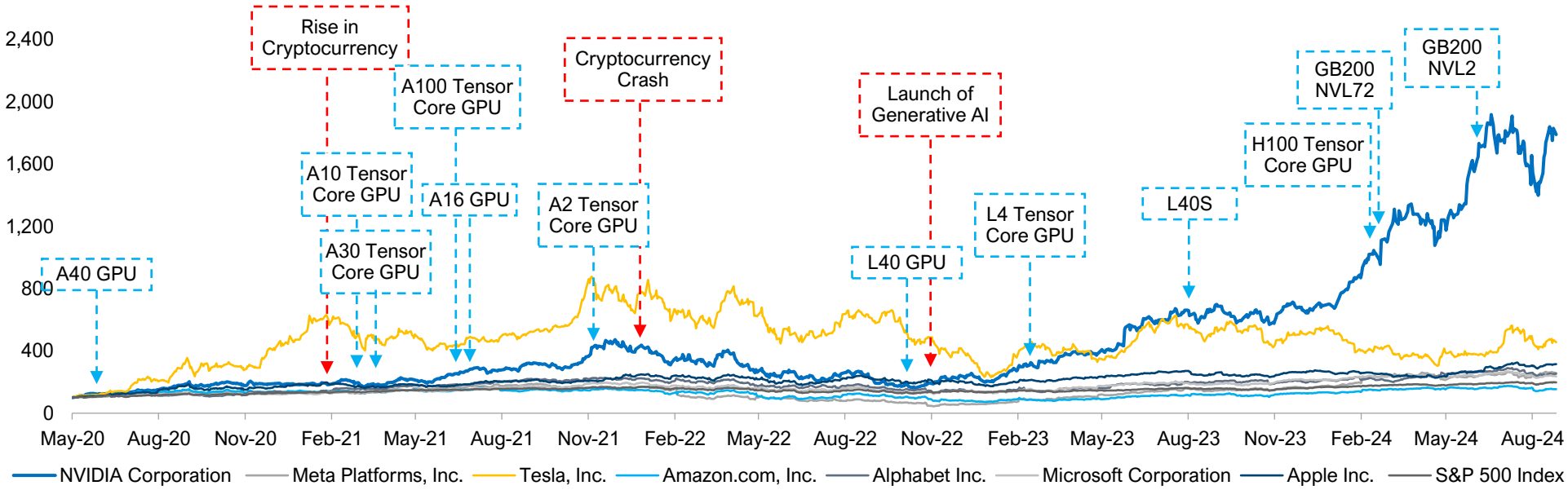
Source: *Aranca Research*

- Nvidia’s Blackwell platform is the anticipated successor to the Hopper GPU architecture, designed to advance Nvidia's capabilities in AI, machine learning, and high-performance computing (HPC). Blackwell GPUs deliver a 30% boost in FP64 and FP32 FMA performance, surpassing the capabilities of Hopper.
- The new platform empowers organizations to develop and run real-time generative AI on trillion-parameter LLMs, delivering up to 25 times the cost and energy efficiency of its predecessor.
- Nvidia's HGX B200 server board integrates eight B200 GPUs via NVLink, enabling robust support for x86-based generative AI platforms. It offers networking speeds of up to 400Gb/s, using Nvidia's Quantum-2 InfiniBand and Spectrum-X Ethernet networking solutions, making it ideal for high-performance AI workloads.

Comparing Nvidia's Stock with the Magnificent 7 and S&P 500 Index

Nvidia's stock has demonstrated impressive growth, often outperforming the Magnificent 7 companies and the S&P 500 index, driven by its strong position in AI and graphics processing technology

Stock Performance



- In 2023, Nvidia's stock performance significantly outpaced both the Magnificent 7 companies and the broader S&P 500 index. Throughout 2024, driven by robust demand for its industry-leading AI chips and strong market expectations for the impact of AI on the global economy, Nvidia's shares surged over 170%.
- Compared to other tech giants in the Magnificent 7, Nvidia's P/E ratio is markedly higher. This divergence underscores Nvidia's unique growth narrative tied to AI, whereas peers like Apple and Microsoft, although growing, are not as singularly focused on AI.
- Nvidia has been at the forefront of the AI and GPU markets, with significant growth potential driven by the increasing adoption of AI technologies, cloud computing, and data center expansions. Despite its impressive growth trajectory, Nvidia's lower PEG ratio suggests that the market might not have fully priced in its future earnings growth relative to its current stock price.

PEG Ratio (Blended Forward 12M)	NVDA	META	TSLA	AMZN	GOOGL	MSFT	AAPL
	0.71x	1.67x	3.77x	0.92x	1.30x	0.92x	3.10x

Source: *Aranca Research and Bloomberg | Note: PEG Ratio is as per Non-GAAP EPS reported by the company, except for AMZN. PEG for AMZN is as per Bloomberg.*

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