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Computational Power is Core US Competitive Advantage

Across the numerous metrics for evaluating AI competitiveness, ***the United States enjoys the largest, order-of-magnitude advantage in AI computational power*** through its leadership in not only GPUs (i.e., NVIDIA), but the entire microchip supply chain and ecosystem including software, design and cluster performance. Against this backdrop, the US government's decision on Dec 8th to permit commercial sale to China of the most powerful chip in the older generation Hooper architecture (H200) has been viewed by many as a strategic misstep that has notably diluted US AI competitiveness and national security. The newest generation NVIDIA Blackwell chips (B300, B30) are still subject to US export restrictions.

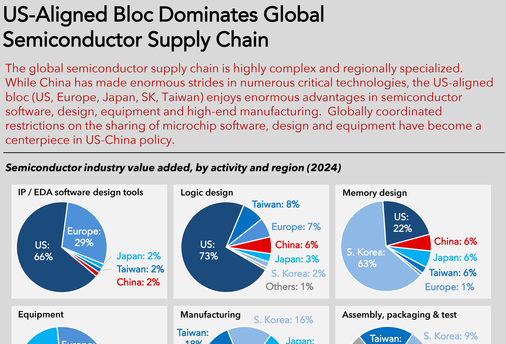
Metrics for evaluating US-China AI competitiveness

Competitive Advantage		
	Energy	• US leads on energy production, but China moving much more rapidly and efficiently in adding power and grid capacity aligned with AI data center expansion
	Computational Power	• Most dominant area of US competitive advantage led by new generation of Nvidia Blackwell GPUs (and related system and software architecture) • Significant US restrictions on export of Blackwell chips to China; older Hopper generation (H20, H200) permitted
	Infrastructure	• US leadership in data centers, software and hardware; China moving rapidly with central planning and local gov't tax credits and subsidies
	Engineering Talent / Innovation	• US institutions host largest share of world class AI talent, high quality research and labs; more depth and innovation in US private sector AI ecosystem (hyperscalers, start-ups) • China's growing pipeline of engineering talent and scale creating significant longer-term competitive advantage
	Language Models	• Significant US leadership in frontier models, innovation and foundational research; China narrowing the gap with several notable cost-efficient breakthroughs (DeepSeek)
	Data	• Significant Chinese structural advantages in data volume and ease of large-scale harvesting; more permissive legal environment; surveillance data; strong consumer apps • US strong on high quality, globally sourced enterprise data
	Business Applications	• US advantages in high-value enterprise AI, but China more entrepreneurial and rapid with integration across a plethora of business applications

Nvidia vs. Huawei AI Chip Capabilities

The US Government has explicit restrictions on the sale of both NVIDIA's most advanced ***Blackwell generation B300 AI GPU*** to China, as well as the less powerful ***NVIDIA B30A GPU*** (often dubbed "half a B300), which NVIDIA customized with China in mind. However, on Dec 8, 2025, the US Government did approve exports of ***NVIDIA's most advanced Hopper generation H200*** chip, the most advanced US AI GPU approved for commercial use in China to date. While not nearly as high performing as the B300, NVIDIA's H200 is generally more capable than Huawei's most advanced chip, the ***Ascend 910C***, and nearly on par with ***NVIDIA's B30A GPU***.

Nvidia & Huawei AI chip capabilities



Comparison of Nvidia's AI GPUs for China

NVIDIA

	Metric	H20	H200	B30A	B300
Background	Description	Nvidia GPU under prior US export compliance standard	Nvidia GPU approved by US gov't on Dec 8	Nvidia's customized AI GPU for China	Nvidia's most advanced AI GPU
	Generation	Hopper	Hopper	Blackwell	Blackwell
	Approved for export to China	Yes	Yes	No	No
Processing Power	AI processor die	1 die	**1 die**	1 die	2 dies
	Total processing performance (TPP)	2.4k	15.8k	30k	60k
	GPU thermal design power (TDP)	350W	**700W**	700W	1400W
Memory	Memory Bandwidth	4 TB/s	**4.8 TB/s**	4 TB/s	8 TB/s
	Memory Capacity	96 GB HBM3E	**141 GB HBM3E**	144 GB HBM3E	288 GB HBM3E
	High-bandwidth memory stacks	6 stacks	**6 stacks**	4 stacks	8 stacks
Other	Estimated retail cost	$10-13k	~$30k *(25% surcharge paid to US gov't)*	$20-25K	$50-55K

US-Aligned Bloc Dominates Global Semiconductor Supply Chain

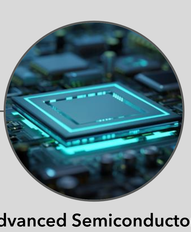
The global semiconductor supply chain is highly complex and regionally specialized. While China has made enormous strides in numerous critical technologies, the US-aligned bloc (US, Europe, Japan, SK, Taiwan) enjoys enormous advantages in semiconductor software, design, equipment and high-end manufacturing. Globally coordinated restrictions on the sharing of microchip software, design and equipment have become a centerpiece in US-China policy.

Semiconductor industry value added, by activity and region (2024)

China's Twin Technology Deficits

China has made extraordinary progress across a wide range of foundational technologies over the last decade, well establishing themselves as the world's second most formidable global technology power. However, more so than most other areas, China notably lags US and western innovation in two fundamental, core technology arenas: software and advanced microprocessors.

Software



Advanced Semiconductors

*Source: IFP, Tom's Hardware, Various News Sources, Bloomberg. "Nvidia's H200 Could Turbocharge China's AI Clout". *Some metrics are estimates based on reporting of the B30A having 50% of the performance power of the B300. Actual names and specifications may be different than those listed above. Bloomberg, "Nvidia's H200 Could Turbocharge China's AI Clout". IFP, Tom's Hardware. *B30A performance is speculated based on public reporting. Semiconductor Industry Association, "2025: State of the U.S. Semiconductor Industry". Data as of 2024.*

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"Macro stability isn't everything, but without it, you have nothing."