



From World's Factory to a Tech Powerhouse

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China's technology sector is undergoing a profound structural transformation, driven by policy support, supply chain advantages, and rapid commercialization across multiple frontier domains. This shift reflects a strategic pivot from cost-driven manufacturing to innovation-led growth, with implications for global technology competition.

By Cathay SITE

On Aug 27–28, 2025, Cambricon Technologies briefly overtook Kweichow Moutai as China's priciest onshore A share by per share price, highlighting capital rotation from staples into AI semiconductors under domestic compute tailwinds. The rise of companies like Cambricon is part of a larger, government-driven structural transformation of China's technology and industrial landscape. This is not a random market fluctuation but a strategic, long-term pivot away from being the "world's factory" to becoming a global leader in high-tech innovation.

The structural shift is underpinned by three core drivers: policy, supply chain, and commercialization. The Chinese government has prioritized sectors like AI, robotics, semiconductors, and green energy, reinforcing its commitment through initiatives such as the "AI+ Plan." This top-down agenda, combined with a growing pool of STEM talent, provides a strong foundation for sustained innovation.

A push for self-reliance

Geopolitical tensions and concerns over supply chain vulnerabilities have accelerated China's drive for technological independence. This is seen not just as a business opportunity but as a national priority. The market is betting on

domestic companies to provide a homegrown alternative to foreign technology, particularly as export restrictions impact access to advanced chips from companies like NVIDIA.

A Bernstein Research report projects that 2025 will be a breakout year for Chinese AI semiconductors. Domestic players are projected to capture 42% of the market, a significant jump from 29% in 2024. By 2026, domestic companies are expected to surpass NVIDIA and AMD in market share for the first time, reaching 53%.

Commercialization-driven

While a technological gap remains with the United States, China holds distinct advantages. In the field of AI, its primary strengths include its vast consumer base and diverse application scenarios. This is complemented by strong government support, subsidies, and a complete, vertically integrated ecosystem that spans from software applications (WeChat, TikTok) to platforms (Baidu Cloud, Alibaba Cloud) and hardware (mobile devices, IoT).

The adoption of AI for the consumer sector (2C) in China is expected to be much faster than in other global markets, especially in daily life applications. User growth is faster in areas like e-commerce, food, transportation, and tourism.



WeChat has 1.2 billion monthly active users and Alibaba has 1 billion, comparable to WhatsApp and Google's global monthly active users. The commercial application market is anticipated to grow substantially, demonstrating immense potential.

Energy and cost advantages

Unlike the U.S., which focus on computing power, China leverages low-cost electricity and diversified energy sources to scale data centers and AI infrastructure. This energy advantage is projected to strengthen, with IDC power costs expected to decline by 20% by 2027.

Furthermore, China's absolute advantage in rare earth reserves and mining capabilities, which are crucial raw materials for new energy, defense, and consumer electronics, positions it to compete with the U.S. on a strategic level.

China possesses an absolute advantage in the robotics and humanoid robot manufacturing supply chain. Non-Chinese supply chains are almost three times more expensive. This structural advantage, combined with a rapidly adopting consumer market, is poised to make China the world's largest single market for technologies like humanoid robots. According to Morgan Stanley, China is likely to have the highest number of humanoid robots in use by 2050, over 300 million units.

While challenges remain, particularly in overcoming chip constraints, the nation's focus

on domestic innovation and technological self-reliance positions it as a major contender in the global tech landscape.

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