

Strengthening America's AI Chip Export Controls

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Executive Summary

- The United States currently dominates global AI. America and its partners control the design and manufacture of advanced AI chips, as well as the production of advanced semiconductor manufacturing equipment. Export controls on chips and equipment have played an important role in maintaining this lead.
- This lead is not inevitable. The Chinese Communist Party in particular is aggressively seeking to catch up, and is exploiting serious vulnerabilities in the current American export control regime.
- Congress should close these gaps by mandating the use of location verification technology to combat illegal smuggling, ensuring partners' export controls are aligned with American controls, codifying existing restrictions into law, and guaranteeing that no chip sales to adversaries harm American national security or constrain supply for American industry.

The Policy Question

The United States and its partners hold a commanding lead over China in the design and manufacture of advanced AI semiconductors and semiconductor manufacturing equipment (SME). The U.S. has placed restrictions on the sale and export of such chips and equipment to China and other adversaries, which has helped maintain that lead. But that export control regime has been subject to vacillating approaches by the executive branch and suffers from structural weaknesses that the Chinese Communist Party (CCP) is aggressively exploiting.

How should federal law remedy the weaknesses in America's export control regime for advanced AI chips?



Why It Matters

Global AI leadership is an economic and national security imperative for the United States and its allies. The U.S. is currently the global leader in AI, due in large part to American and allied control of the most advanced AI chip design and manufacture. But this dominance is not guaranteed—with sufficient compute, China would be able to catch up and even overtake the U.S.

The CCP is committed to catching up and is ruthlessly exploiting structural deficits in American export controls to gain the chips and SME it needs to do so. This represents a serious vulnerability to American economic and national security.

State of Play

The United States and its partners dominate the supply chain for advanced AI semiconductors. American companies control the design stage,¹ and America's partners control chip manufacturing.² Likewise with SME: the United States, the Netherlands, and Japan together “account for 90% of semiconductor manufacturing equipment market share.”³ The Dutch company ASML is the sole global producer of the extreme ultraviolet (EUV) lithography machines required in the manufacture of the most advanced chips. This control over the AI chip stack, from tools to design to manufacture, is the foundation of American AI leadership. As of the end of 2025, just five American companies held over 70% of global AI compute.⁴

This dominance is a major frustration for America's adversaries, who are highly dependent on this supply chain. This is especially true of the CCP, which openly aspires to acquire equivalent or superior capabilities across the complex chip manufacturing process. The U.S. Intelligence Community's 2025 Annual Threat Assessment report expresses high confidence that China “has a multifaceted, national-level strategy designed to displace the United States as the world's most influential AI power by 2030.”⁵

The CCP explicitly makes AI capability the centerpiece of its military strategy, identifying AI progress as its best chance to mitigate and perhaps exceed American military superiority.⁶ AI's potential to become a new general-purpose technology also represents an opportunity for compounding economic benefit. The State Council of China's stated goal is to “promote the broad and deep integration of

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- 1 Lauryn Williams, “[The United States' Accelerating Memory Chip Crunch: Implications for Tech and AI Leadership](#),” *Center for Strategic and International Studies*, July 31, 2026.
 - 2 TrendForce, “[TSMC's Advanced Processes Remain Resilient Amid Challenges](#),” April 8, 2024; U.S. House Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party, [Selling the Forges of the Future](#), October 7, 2025; Jeongku Choi and MS Hwang, “[Samsung's Q2 2025 Memory Performance Disappoints but Signals H2 Recovery](#),” *Counterpoint Research*, July 31, 2025.
 - 3 U.S. Department of Commerce, Bureau of Industry and Security, [Assessment of the Status of the Microelectronics Industrial Base in the United States](#), December 21, 2023.
 - 4 Luke Emberson, Josh You, and Venkat Somala, “[Five Hyperscalers Now Own Over Two-Thirds of Global AI Compute](#),” *Epoch AI*, April 14, 2026.
 - 5 Office of the Director of National Intelligence, [2025 Annual Threat Assessment of the U.S. Intelligence Community](#), March 18, 2025.
 - 6 Sam Bresnick, [China's Military AI Roadblocks: PRC Perspectives on Technological Challenges to Intelligentized Warfare](#), Center for Security and Emerging Technologies, June 2024.



artificial intelligence with all sectors and domains of the economy and society” for this reason.⁷ The CCP is particularly focused on using AI to supercharge its advanced manufacturing capabilities.

Despite its military and economic ambitions, China currently lags meaningfully on chip design and production. Export controls on chips and SME have helped constrain China’s ability to close this gap.⁸ The Trump administration’s 2025 AI Action Plan endorses this approach: “Advanced AI compute is essential to the AI era, enabling both economic dynamism and novel military capabilities. Denying our foreign adversaries access to this resource, then, is a matter of both geostrategic competition and national security.”⁹

Yet in practice, American controls are limited. A House Select Committee on China report highlights the problem:

There is a common misperception that U.S. export controls on chipmaking equipment, AI chips, and AI itself are broad in scope. They are not. Many known chokepoint tools are only restricted for a subset of Chinese chipmakers, and can otherwise be shipped to anywhere else in China. Controls on AI chips capture only the most advanced data center chips, excluding even the leading-edge AI chips currently powering China’s rapid progress in robotics. And restrictions on accessing such chips through the cloud are non-existent. The United States and its allies must urgently close these gaps.¹⁰

Analysis

American companies like Nvidia have argued that it is constructive for China to be “addicted” to the American AI tech stack, which they say will delay the development of domestic capacity controlled by the CCP. This argument is precisely backwards. By providing Chinese customers with chips and SME, the U.S. and its allies are effectively providing a “bridge loan”: the ability to continue aggressively developing their AI industry while working to build their domestic chip capacity. China, including the Chinese military, actively seeks to acquire U.S. chip technology.¹¹ In 2025, the CCP reportedly disassembled an ASML deep ultraviolet (DUV) lithography machine for the purpose of reverse engineering it.¹² A year later, a Chinese company reportedly started producing DUV tools.¹³

The ongoing gaps in the United States’ export control regime for advanced AI chips threaten to undermine its effectiveness and undercut American AI leadership. This is especially urgent in the face of concerted efforts by the CCP to exploit those gaps.

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- 7 State Council of the People’s Republic of China, “[Opinions of the State Council on Deepening the Implementation of the ‘Artificial Intelligence Plus’ Initiative](#),” August 26, 2025.
 - 8 Export controls have contributed to a fivefold advantage over China in total AI computational capacity; see Oren Cass, “[Winning the AI Arms Race against the Chinese Communist Party](#),” testimony before the House Foreign Affairs Committee, January 14, 2026.
 - 9 The White House, [America’s AI Action Plan](#), July 2025.
 - 10 U.S. House Select Committee on China, “[Buy What It Can, Steal What It Must: China’s Campaign to Acquire Frontier AI Capabilities](#),” April 16, 2026.
 - 11 Ana Swanson and Tripp Mickle, “[Chinese Military Sought Nvidia Chips for Years, Report Says](#),” *The New York Times*, June 1, 2026.
 - 12 Brandon Weichert, “[Did China Break an ASML Lithography Machine While Trying to Reverse-Engineer It?](#),” *National Interest*, October 20, 2025.
 - 13 Arjun Kharpal, “[China’s Reported Chip Breakthrough Comes with Some Big Caveats](#),” *CNBC*, July 28, 2026.



First, the CCP straightforwardly evades export controls via both remote access and illegal smuggling. China's Kimi K3 model was reportedly trained on Nvidia Blackwell chips that China is restricted from purchasing, but to which it gained remote access via servers elsewhere.¹⁴ Likewise, “sophisticated smuggling networks” allow the CCP to acquire chips it cannot purchase legally.¹⁵ The scale of CCP chip smuggling is massive. The profit smugglers made from just three reported cases is more than twice the U.S. Department of Commerce's Bureau of Industry and Security (BIS)'s entire export control enforcement budget.¹⁶ Both American and allied authorities have taken action against numerous individuals and front companies for smuggling; in July 2026, an Nvidia employee was detained by Taiwan in a smuggling case.¹⁷ Reports indicate that DeepSeek has trained models using “several thousand” restricted Blackwell chips, likely located at its data center in Mongolia.¹⁸

Second, the insufficient scope of American and allied SME export control regimes, and the misalignment between them, present another vulnerability. A 2025 American Compass report explains these deficits:

The U.S. and its allies apply some countrywide export controls on SME to China, but only on the most cutting-edge technology. This has succeeded in denying China access to ASML's EUV lithography (capable of producing chips 5nm and under, though also used for 7nm chips), for example—but not to all of ASML's less advanced but still highly capable deep ultraviolet (DUV) lithography, which is used to produce chips between 40nm and 7nm. ... China is attempting “to use DUV to produce even smaller nodes, including 5nm,” and while such SME produces advanced chips at reduced efficiency and with reduced yield, China is attempting to make up the difference through sheer volume by actively acquiring as many of ASML's DUV machines as possible. Seventy percent of ASML's DUV sales in 2024 were to China. Nor do American countrywide export controls apply to node-agnostic SME, the equipment that is needed to produce chips of any kind, advanced or otherwise.

The U.S. also imposes entity-specific SME export controls, which can reduce acquisition by entities of concern, but ultimately represent merely a hurdle to overcome, not an outright denial. Chinese companies are adept at “entity obfuscation,” and BIS itself has approved a majority of license applications for exports of SME even to listed entities. Nor are U.S. and allied export control regimes well aligned. U.S. SME producers face greater constraints relative to allied producers, which continue to sell to China in large volumes.¹⁹

14 Leo Schwartz, “[Important reporting from @theinformation today on how Moonshot trained Kimi K3 using Nvidia chips and its plans for K4](#),” X, July 28, 2026; Maggie Eastland, “[US Official Says Moonshot Accessed Banned Nvidia Chips](#),” *Bloomberg*, July 22, 2026.

15 U.S. House Select Committee on China, “[Select Committee Investigation Reveals China's History of AI Chip Smuggling and Model Distillation](#),” April 16, 2026; see also Mackenzie Hawkins, “[Nvidia Staff Detained by Taiwan in China Chip Smuggling Case](#),” *Bloomberg*, July 28, 2026.

16 Erich Grunewald and Tim Fist, “[Countering AI Chip Smuggling Has Become a National Security Priority: An Updated Playbook for Preventing AI Chip Smuggling to the PRC](#),” *Center for a New American Security*, June 2025.

17 Mackenzie Hawkins, “[Nvidia Staff Detained by Taiwan in China Chip Smuggling Case](#),” *Bloomberg*, July 28, 2026.

18 Steve Holland and Alexandra Alper, “[China's DeepSeek Trained AI Model on Nvidia's Best Chip Despite US Ban, Official Says](#),” *Reuters*, February 23, 2026.

19 American Compass, [Stop Selling the Rope](#), October 27, 2025.



As a result of these flaws, “China is still buying vast quantities of highly sophisticated SME from the United States, Japan, and the Netherlands,” according to a House Select Committee on China report.²⁰

Third, even legal sales of advanced AI chips to China occur on a hydraulic, zero-sum basis. American and allied AI supply chains face real supply constraints; every sale to China increases the CCP’s AI capacity while further limiting U.S. and allied capacity.²¹ Leaving the contours of the export control regime up to the executive branch has also resulted in serious regulatory whiplash, as “the United States has vacillated from prohibition to permissiveness.”²² And while the sale of the most advanced chips (like Nvidia’s Blackwell) remains restricted, current rules permit the sale of near-threshold chips like the H200, which BIS has licensed for sale to buyers in China. Nvidia disclosed its initial H200 sales to Chinese customers in August 2026.²³

Recommendations

The United States must close the gaps in its export control regime for advanced AI chips and SME. This should be done legislatively to ensure durability across administrations.

- Congress has recognized the urgency. In the 119th Congress, the chairs of the House Committee on Foreign Affairs²⁴, the House Permanent Select Committee on Intelligence²⁵, and the House Select Committee on China²⁶, as well as key leaders in the Senate²⁷, have supported legislation to address the three broad areas of vulnerability identified above. Congress should incorporate these proposals into the FY2027 National Defense Authorization Act (NDAA).
- The Chip Security Act (H.R. 3447 / S. 1705), introduced by Reps. Bill Huizenga (R-MI) and Bill Foster (D-IL) in the House and Senator Tom Cotton (R-AR) in the Senate, would require location verification technology in advanced chips.²⁸ This aligns with a recommendation from the President’s AI Action Plan to implement “new and existing location verification features on advanced AI compute to ensure that the chips are not in countries of concern.”²⁹ The House Select Committee on China has called for the bill’s

20 U.S. House Select Committee on China, *Selling the Forges of the Future*, October 7, 2025.

21 James Sanders, Janet Egan, and Rory Madigan, “[American AI Companies Can’t Get Enough Chips: Implications for U.S. Policy](#),” *Center for a New American Security*, May 7, 2026.

22 American Compass, *Stop Selling the Rope*, October 27, 2025.

23 Maggie Eastland, “[Nvidia Steps Back Into China Market With First H200 Chip Sales](#),” *Bloomberg*, August 26, 2026.

24 U.S. House Committee on Foreign Affairs, *Winning the AI Arms Race Against the Chinese Communist Party*, 119th Cong., 2nd sess., January 14, 2026.

25 U.S. House Permanent Select Committee on Intelligence, “[Chairmen Crawford & Mast Statement on Joint Briefing on Tech Competition with China](#),” press release, April 21, 2026.

26 John Moolenaar, “[Chairman Moolenaar’s Opening Statement: China’s Chip Smuggling is a Threat to America](#),” press release, *Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party*, April 16, 2026.

27 Office of Senator Jim Banks, “[Banks Introduces AI OVERWATCH Act](#),” press release, May 4, 2026.

28 Samuel Hammond, “[The Chip Security Act: A Bipartisan Solution to Chip Smuggling](#),” *Foundation for American Innovation*, July 18, 2025.

29 The White House, *America’s AI Action Plan*, July 2025.



passage³⁰, and it passed the House Foreign Affairs Committee unanimously 42–0 on March 26, 2026.³¹

- The Multilateral Alignment of Technology Controls on Hardware (MATCH) Act (H.R. 8170 / S. 4281), introduced by Rep. Michael Baumgartner (R-WA) and Senators Pete Ricketts (R-NE) and Andy Kim (D-NJ), would address deficiencies in American and allied SME export controls. It would require SME-producing allies like Japan and the Netherlands to match U.S. export controls within 150 days, backed by unilateral U.S. controls on foreign-produced SME that uses American technology if that alignment is not achieved. It would impose “countrywide controls on covered SME, prohibiting sales to any destination within a country of concern,” which would address “the front-company evasion problem [because] it doesn’t matter what shell-corporation structure a Chinese fab uses if the sale to China itself is prohibited.”³² It would also tighten restrictions on Chinese national champion companies, including restricting post-sale servicing of equipment. The House Select Committee on China has recommended passage, and a House version of the legislation passed the House Foreign Affairs Committee by 36–8 on April 22, 2026.³³
- The Artificial Intelligence Oversight of Verified Exports and Restrictions on Weaponizable Advanced Technology to Covered High-Risk Actors (AI OVERWATCH) Act (H.R. 6875 / S. 4456), introduced by Rep. Brian Mast (R-FL) and Senators Jim Banks (R-IN) and Elizabeth Warren (D-MA), would address the direct sale of advanced AI chips to adversaries. It would codify existing restrictions on the sale of the most advanced AI chips, securing those restrictions against future administrative changes. It would also require Commerce Department licenses for the sale of other AI chips to countries of concern. Such licenses would have to certify that any sale “will not support or enable, directly or indirectly, the military, intelligence, surveillance, or cyber-enabled capabilities of a country of concern,” and will not adversely affect U.S. supply and computational power relative to the purchasing country. The House Select Committee on China has recommended its passage, and it passed the House Foreign Affairs Committee by 42–2 on January 21, 2026.³⁴

30 U.S. House Select Committee on China, “[Buy What It Can, Steal What It Must: China's Campaign to Acquire Frontier AI Capabilities](#),” April 16, 2026.

31 [Chip Security Act](#), H.R. 3447, 119th Cong., 1st sess., 2025.

32 Samuel Hammond and Daniel King, “[The MATCH Act Is the Missing Piece in America's AI Export Control Strategy](#),” *Foundation for American Innovation*, April 13, 2026.

33 [MATCH Act](#), H.R. 8170, 119th Cong., 2026.

34 [AIOVERWATCH Act](#), H.R. 6875, 119th Cong., 2025.