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BUREAU OF INDUSTRY AND SECURITY

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Commerce Strengthens Export Controls to Restrict China’s Capability to Produce Advanced Semiconductors for Military Applications

Washington, D.C. – Today, the U.S. Department of Commerce’s Bureau of Industry and Security (BIS) announced a package of rules designed to further impair the People’s Republic of China’s (PRC) capability to produce advanced-node semiconductors that can be used in the next generation of advanced weapon systems and in artificial intelligence (AI) and advanced computing, which have significant military applications. This action is a proactive measure enhancing the Department of Commerce’s work to impede the PRC’s ability to procure and produce the technologies necessary for its military modernization.

The rules include new controls on 24 types of semiconductor manufacturing equipment and 3 types of software tools for developing or producing semiconductors; new controls on high-bandwidth memory (HBM); new red flag guidance to address compliance and diversion concerns; 140 Entity List additions and 14 modifications spanning PRC tool manufacturers, semiconductor fabs, and investment companies involved in advancing the PRC government’s military modernization; and several critical regulatory changes to enhance the effectiveness of our previous controls.

“This action is the culmination of the Biden-Harris Administration’s targeted approach, in concert with our allies and partners, to impair the PRC’s ability to indigenize the production of advanced technologies that pose a risk to our national security,” said **U.S. Secretary of Commerce Gina Raimondo**. “Further strengthening our export controls underscores the central role of the Department of Commerce in executing the United States’ broader national security strategy. No Administration has been tougher in strategically addressing China’s military modernization through export controls than the Biden-Harris Administration.”

“The United States has taken significant steps to protect our technology from being used by our adversaries in ways that threaten our national security. As technology evolves, and our adversaries seek new ways to evade restrictions, we will continue to work with our allies and partners to proactively and aggressively safeguard our world-leading technologies and know-how so they aren’t used to undermine our national security,” said **National Security Advisor Jake Sullivan**.

“This action builds on BIS’s laser-focused work, undertaken over the past few years, to impose strategic controls that have hindered the PRC’s ability to produce advanced semiconductors and AI capabilities directly impacting U.S. national security. We are constantly talking to our allies

and partners as well as reassessing and updating our controls. Today’s announcement represents the next step in that ongoing work,” said **Under Secretary of Commerce for Industry and Security Alan Estevez**. “This package is proactive and innovative in how we are responding to increasingly sophisticated actors and complex supply chains. We must ensure that we stay ahead of the PRC by protecting our advanced technology.”

“The PRC’s Military-Civil Fusion strategy presents a significant risk that advanced node semiconductors will be used in military applications that threaten the security of the United States, as well as the security of our allies and partners,” said **Assistant Secretary of Commerce for Export Administration Thea D. Rozman Kendler**. “These rules build on previous actions taken in service of our longstanding goal: protecting our collective security by constraining the PRC’s ability to indigenize the most advanced technologies, without unduly interfering with the continuing trade of technology.”

“The purpose of these Entity List actions is to stop PRC companies from leveraging U.S. technology to indigenously produce advanced semiconductors,” said **Matthew S. Axelrod, Assistant Secretary for Export Enforcement**. “By adding key semiconductor fabrication facilities, equipment manufacturers, and investment companies to the Entity List, we are directly impeding the PRC’s military modernization, WMD programs, and ability to repress human rights.”

Taking Novel Approaches to Impair and Impede the PRC’s Military Modernization

Throughout the Biden-Harris Administration, in coordination with U.S. allies and partners, BIS has taken novel approaches to address an ever-changing geopolitical and technological landscape and respond to increasingly sophisticated threat actors.

All of the policy changes announced today are designed to limit the PRC’s ability to indigenize the production of advanced technologies – such as advanced-node integrated circuits and the equipment used to produce them – that pose a substantial risk to U.S. national security. The semiconductor manufacturing equipment controlled by today’s rules is needed to produce advanced-node integrated circuits, which are necessary for advanced weapon systems and advanced AI used in military applications.

Advancements in large-scale AI models have shown striking performance improvements across many human abilities and may be used in advanced military and intelligence applications. These models have the ability to rapidly review and synthesize large amounts of information into actionable points. Advanced AI models could be used for rapid response scenarios on the battlefield; lowering the barrier to develop cyberweapons or chemical, biological, radiological, or nuclear weapons; and utilizing facial and voice recognition to repress and surveil minorities and political dissidents.

Today’s announcement underscores the United States’ “small yard, high fence” strategy and will restrict the PRC’s ability to produce technologies key to its military modernization or repression of human rights.

These actions serve two primary objectives:

- Slowing the PRC's development of advanced AI that has the potential to change the future of warfare; and
- Impairing the PRC's development of an indigenous semiconductor ecosystem – an ecosystem built at the expense of U.S. and allied national security.

In line with these objectives, BIS is implementing several regulatory measures, including but not limited to:

- **New controls on semiconductor manufacturing equipment** needed to produce advanced-node integrated circuits, including certain etch, deposition, lithography, ion implantation, annealing, metrology and inspection, and cleaning tools.
- **New controls on software tools** for developing or producing advanced-node integrated circuits, including certain software that increases the productivity of advanced machines or allows less-advanced machines to produce advanced chips.
- **New controls on high-bandwidth memory (HBM).** HBM is critical to both AI training and inference at scale and is a key component of advanced computing integrated circuits (ICs). The new controls apply to U.S.-origin HBM as well as foreign-produced HBM subject to the EAR under the advanced computing Foreign Direct Product (FDP) rule. Certain HBM will be eligible for authorization under new License Exception HBM.
- **Addition of 140 entities to the Entity List, in addition to 14 modifications,** including semiconductor fabs, tool companies, and investment companies that are acting at the behest of Beijing to further the PRC's advanced chip goals which pose a risk to U.S. and allied national security.
- **Establishment of two new Foreign Direct Product (FDP) rules and corresponding *de minimis* provisions:**
 - **Semiconductor Manufacturing Equipment (SME) FDP:** Extends jurisdiction over specified foreign-produced SME and related items if there is “knowledge” that the foreign-produced commodity is destined to Macau or a destination in Country Group D:5, including the PRC.
 - **Footnote 5 (FN5) FDP:** Extends jurisdiction over specified foreign-produced SME and related items if there is “knowledge” of certain involvement by an entity on or added to the Entity List with a FN5 designation. Such entities are being designated on the Entity List for specific national security or foreign policy concerns described in the Entity List companion rule, such as these entities’ involvement in supporting the PRC’s military modernization through the PRC’s attempts to produce advanced-node semiconductors, including for military end-uses.
 - ***De minimis*:** Extends jurisdiction over specified foreign-produced SME and related items described in the above FDP rules that contain any amount of U.S.-origin integrated circuits.

- **New software and technology controls**, including restrictions on Electronic Computer Aided Design (ECAD) and Technology Computer Aided Design (TCAD) software and technology when there is “knowledge” that such items will be used for the design of advanced-node integrated circuits to be produced in Macau or a destination in Country Group D:5.
- **Clarification to the EAR regarding existing controls on software keys.** Export controls now apply to the export, reexport, or transfer (in-country) of software keys that allow access to the use of specific hardware or software or renewal of existing software and hardware use licenses.

In October 2022, BIS published an interim final rule (IFR) to restrict the PRC’s ability to both purchase and manufacture certain high-end semiconductors critical for military applications. As part of BIS’s commitment to continually evaluating the effectiveness of export controls, it released updated rules in October 2023 and April 2024. Today’s rules build on those efforts.

Additional Background

The PRC has both mandated and incentivized relevant domestic firms to dedicate significant resources to realizing a whole-of-society approach to indigenization that the PRC is taking to shape the global semiconductor ecosystem for its benefit and at the expense of the national security of the United States and its allies.

PRC leadership at the highest levels has stressed the importance of building an indigenous and self-sufficient semiconductor ecosystem, referring to ICs as critical to national security and military capabilities. The Chinese Communist Party’s semiconductor strategy intends to further the PRC’s military modernization, weapons of mass destruction (WMD) development, and control agenda to promote transnational regression and stifle human rights, threatens the security and undermines the values of the United States and our allies. Today’s rules hamper the PRC’s ability to realize these objectives.

BIS’s actions are taken under the authority of the Export Control Reform Act of 2018 and its implementing regulations, the Export Administration Regulations (EAR).

Under these authorities, BIS possesses a variety of tools to control the export of U.S.-origin and certain foreign-produced commodities, software, and technology, as well as specific activities of U.S. persons, for national security and foreign policy reasons. These tools include issuing federal regulations, as well as using the licensing and regulatory process to take party-specific actions.

Today’s rules are available on the Federal Register’s website [here](#) and [here](#). The rules are effective today with a delayed compliance date of December 31, 2024 for certain controls. Public comments can be submitted on the Interim Final Rule.

For more information, please visit BIS’s website at: <https://www.bis.gov>.

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