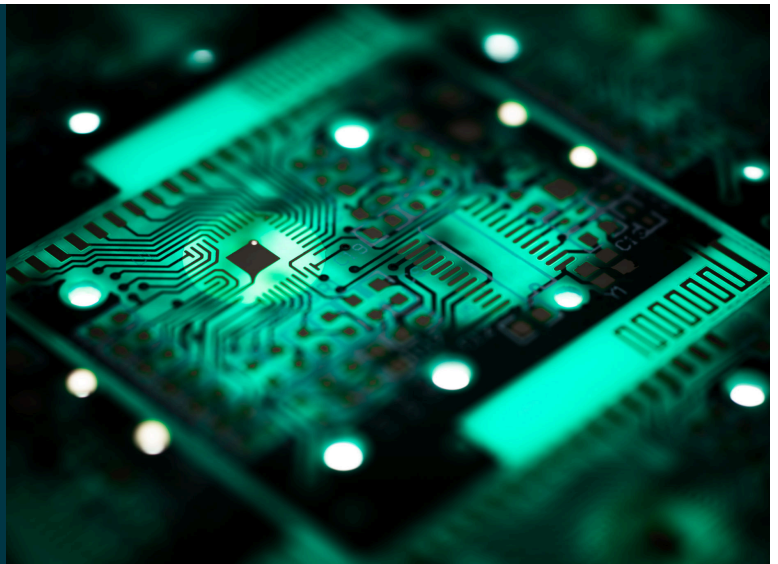


BIS Implements New Semiconductor- and Supercomputer-related Export Controls and End-Use Controls



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ALERTS

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On October 7, 2022, the Bureau of Industry and Security (BIS) issued a long-awaited [interim final rule](#) implementing new export controls on advanced computing chips, computers, and components including new Export Control Classification Numbers (ECCNs); creating new end-use controls on semiconductor manufacturing and supercomputer components; and implementing new and expanded Foreign Direct Product rules for such items and in relation to certain Entity List-designated entities. The new rules apply only to items exported to China and to other highly controlled countries.¹ This new rule follows notices provided to Nvidia and AMD in late August limiting the export of items to China and indicating that new license requirements would apply to shipments to China involving certain semiconductor chips. Since then, a broader package of export controls has been anticipated—and now, finally released.

According to BIS, these new controls are being imposed to address its concern with China's "intent and ability to use these items for activities of national security and foreign policy concern to the United States." Specifically, BIS identified China's military modernization efforts, including nuclear weapons development, facilitation of advanced intelligence collection and analysis, and surveillance of Chinese citizens without regard for human rights.

These actions represent the latest in a long series of escalations of technology controls imposed by the U.S. government targeted specifically at China. The restrictions, some of which come into effect immediately, are expected to dramatically alter supply chains and the operations of major companies in the coming months. In order to minimize the impact of these regulations in the short term on the semiconductor supply chain, BIS also established a Temporary General License (TGL) authorizing specific manufacturing activities in China for items that are intended to be used outside of China.

The rule will be published on October 13, although parts are already in effect, and interested parties will have 60 days to submit comments.

New Controls on Certain Semiconductor Manufacturing Equipment and End Uses

New ECCNs Covering Semiconductor Manufacturing Equipment and Related Items

Effective as of the date of prepublication, October 7, BIS implemented new controls on certain advanced semiconductor manufacturing equipment, parts, components, and accessories by creating new ECCN 3B090 which is controlled for Anti-Terrorism controls (AT) and Regional Stability (RS) purposes when exported to China. The same controls are also imposed on software and technology related to the new ECCN 3B090 items classified under ECCNs 3D001 and 3E001, respectively.

Export of these items and associated software and technology will now require a license for export to China and sanctioned countries, and the license requests will be subject to a presumption of denial. The presumption of denial will *not*, however, apply for shipments to facilities owned by entities headquartered in the United States or Country Group A:5, or Country Group A:6—the same group identified in the previously established controls on exports to Russia and including a large contingent of semiconductor firms in countries like Taiwan and South Korea. These exports will still require licensing by BIS, but the license applications will be evaluated on a case-by-case basis. Finally, licenses will *not* be required for deemed exports and deemed reexports under the new rules, meaning that Chinese nationals in the United States or countries other than China or sanctioned countries will not require BIS licenses to access technology or source code related to these items. Please see Table 1 below for additional information.

Semiconductor Manufacturing End-Use Controls

In addition, also effective October 7, U.S. companies are prohibited from exporting to China:

- **any items subject to the Export Administration Regulations (EAR)** that will be used in the development or production of parts, components, or equipment in China classified under ECCNs 3B001, 3B002, 3B090, 3B611, 3B991, or 3B992.
- **any items subject to the EAR** that will be used in the development or production of integrated circuits at semiconductor fabrication facilities in China that fabricate integrated circuits that meet any of the following criteria (“744.23(a)(2)(iii) Criteria”):
 - Logic integrated circuits using a non-planar transistor architecture or with a ‘production’ technology node of 16/14 nanometers or less;
 - NOT AND (NAND) memory integrated circuits with 128 layers or more; or
 - Dynamic random-access memory (DRAM) integrated circuits using a ‘production’ technology node of 18 nanometer half-pitch or less.
- **any items classified in Product Groups 3Bxxx, 3Cxxx, 3Dxxx, or 3Exxx that are subject to the EAR** when the items will be used in a Chinese semiconductor fabrication facility and the exporter is unable to confirm whether any of the 744.23(a)(2)(iii) Criteria are met.

License exceptions are not available if the end-use criteria are met. There is a presumption of denial for license applications except for those end users in China that are headquartered in the United States, Country Group A:5, or Country Group A:6, for whom evaluation will be on a case-by-case basis.

Even though these changes have already become effective, BIS is soliciting comments related to these controls through December 12.

New ECCNs for Computing Chips and Commodities Containing Them

New ECCNs on Advanced Computing Chips and Commodities Containing Such Chips

Through this rule (and effective on October 21), BIS created two new hardware ECCNs—ECCN 3A090, covering specified high-performance ICs, and ECCN 4A090, covering commodities containing these ICs—which are both controlled for RS purposes when being exported to China and for AT purposes. BIS also added controls on associated software and technology (classified under 3D001, 3E001, 4D090, and 4E001) which also are subject to RS controls when being exported to China. Please see Table 1 below for additional information.

New ECCNs on Lower-Level Computing Chips and Commodities Containing Such Chips

Additionally, BIS added AT-level controls to certain lower-level chips and commodities containing them. Please see Table 1 below for additional information.

ECCN	Effective Date	New Control Parameters	License Requirements and Review Policy	License Exceptions
3A090	10-21-2022	Integrated Circuits (ICs): aggregate bidirectional transfer rate over all inputs and outputs of 600 Gbyte/s or more to or from ICs	Reasons for control: 1. Regional Stability (RS) (for China) except for	RPL, GOV, TSU

		other than volatile memories; covers graphical processing units (GPUs), tensor processing units (TPUs), neural processors, in-memory processors, vision processors, text processors, co-processors/accelerators, adaptive processors, field-programmable logic devices (FPLDs), and application-specific integrated circuits (ASICs)	deemed export/reexports 2. Anti-Terrorism (AT) Presumption of denial except for companies headquartered in the United States, A:5, or A:6 countries, which will be subject to a case-by-case review	
3A991.p	10-21-2022	Integrated circuits n.e.s. and possessing: 1. a processing performance of 8 TOPS or more; or 2. an aggregate bidirectional transfer rate over all inputs and outputs of 150 Gbyte/s or more to or from integrated circuits other than volatile memories	AT-controlled only	
3B090	10-7-2022	Semiconductor manufacturing equipment not covered by 3B001 and specially designed parts, components, and accessories	Reasons for control: 1. RS (for China), except for deemed export/reexports 2. AT Presumption of denial except for companies headquartered in the United States, A:5, or A:6 countries which will be subject to a case-by-case review	GOV only
3D001/ 3E001	10-7-2022 (as related to 3B090) 10-21-2022 (for 3A090)	“Software” and “technology” associated with 3A090 or 3B090	Adds RS controls for China except for deemed export/reexports in addition to existing	Related to 3B090: GOV only Related to 3A090: RPL, GOV, TSU
3D991/ 3E991	10-21-2022	Adds “technology” associated with new 3A991.p	Deemed export rules apply only on new transfers of source and	

			technology and not on previously released source code and technology	
4A090	10-21-2022	Computers, electronic assemblies, and components containing ICs controlled by 3A090	Reasons for control: 1. RS (for China) except for deemed export/reexports 2. AT Presumption of denial except for companies headquartered in the United States, A:5, or A:6 countries, which will be subject to a case-by-case review	RPL, GOV, TSU
4A994.l	10-21-2022	Computers, electronic assemblies, and components, n.e.s., containing ICs, any of which exceeds the limit of ECCN 3A991.p	AT-controlled only	
4D090	10-21-2022	Software specially designed or modified for the development or production, of computers and related equipment, electronic assemblies, and components therefore specified in ECCN 4A090.	Reasons for control: 1. RS (for China) except for deemed export/reexports 2. AT Presumption of denial except for companies headquartered in the United States, A:5, or A:6 countries which will be subject to a case-by-case review	RPL, GOV, TSU
4E001	10-21-2022	“Technology” associated with 4A090 and/or 4D090	Reasons for control: 1. RS (for China) except for deemed export/reexports 2. AT Presumption of denial except for companies headquartered in the United States, A:5, or A:6 countries, which will be subject to a case-by-case review	Related to 4A090: RPL, GOV, TSU

4D994/ 4E992	10-21- 2022	Adds “technology” associated with new 4A994.1	Deemed export rules apply only on new transfers of source and technology and not on previously released source code and technology	
5A992/ 5D992	10-21- 2022	Items controlled under this category that exceed the performance parameters in 3A090	Adds RS controls for China except for deemed export/reexports in addition to existing	

New End-Use Controls on Supercomputers

Complementing the ECCN controls announced in the new interim final rule, BIS added new end-use restrictions on supercomputers² which will be effective on October 21. These rules prohibit the export, reexport, and transfer of the following items:

- Integrated Circuits subject to the EAR and classified in ECCN 3A001, 3A991, 4A994, 5A002, 5A004, or 5A992
- Computers, electronic assemblies, or components subject to the EAR and classified in ECCN 4A003, 4A004, 4A994, 5A002, 5A004, or 5A992;

with knowledge that the item will be:

- used in the development, production, use, operation, installation, maintenance, repair, overhaul, or refurbishing of a supercomputer located in or destined for China; or
- incorporated into or used in the development or production of any component or equipment that will be used in a supercomputer located in or destined for China.

These controls will include items subject to the EAR via the new foreign direct product rules (FDPRs) discussed below and license applications will be subject to a presumption of denial, except for those end users in China that are headquartered in the United States, Country Group A:5, or Country Group A:6, for whom evaluation will be on a case-by-case basis.

New and Expanded Foreign Direct Product Rules

Another major category of changes announced in the new rule expands the Foreign Direct Product rule provided in Part 739 of the EAR. Effective October 21, the Entity List Foreign Direct Product Rule (at §739.4(e)) will be revised to distinguish—in a new “Footnote 4”—a subset of entities currently on the Entity List deemed to warrant stricter controls. In addition, two new FDPRs will be added, creating an Advanced Computing Foreign Direct Product Rule (at §739.4(h)) and a Supercomputer Foreign Direct Product Rule (at §739.4(i)) to capture certain foreign-produced items matching the specifications announced in the new export controls discussed above.

Entity List Foreign Direct Product Rule—Footnote 4

BIS added 28 Chinese entities to a new Footnote 4 to the Entity List. The designated Footnote 4 entities were added to the Entity List between 2015 and 2021 and are believed to be involved in the development of supercomputers used in nuclear explosive activities and other activities related to military end uses, military modernization, and weapons of mass destruction. For transactions involving these parties, this rule brings an expanded set of direct products into the scope of the EAR—specifically,

- products derived from items classified under ECCNs 3D001, 3D991, 3E001, 3D002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D992, 5E001, 5E001, 5D002, or 5E002 or
- produced by a plant or major component of a plant that is covered by the specified entries—are brought within scope of the EAR.

These Footnote 4 controls are similar to the Footnote 1 controls to which Huawei and many Huawei affiliates are subject. The Footnote 4 controls include several additional ECCNs that can subject items

to control under the EAR. Any items, including EAR99 items can be subject to the Footnote 4 controls if the designated Chinese entities are involved in the transaction in any way, including as purchaser, producer, end user, or otherwise as a party to the transaction involving the item and the item is a direct product of technology or software in the specified ECCNs.

Advanced Computing Foreign Direct Product Rule

The new Advanced Computing Foreign Direct Product Rule, added to the EAR at §739.4(h), captures foreign-produced ECCN 3A090 and ECCN 4A090 items,³ ECCN 3E001 technology related to ECCN 3A090, and ECCN 4E001 technology related to ECCN 4A090 that:

- are the direct product of EAR-subject software and technology specified in ECCNs 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D090, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D002, 5D991, 5E001, 5E002, or 5E991; or
- originate from a plant or major plant component that is itself derived from such software or technology.

Such products that are destined for China; or incorporated into any part, component, computer, or equipment not designated EAR99 and destined for China; or technology developed by a China-headquartered entity for the “production” of a mask or an integrated circuit wafer or die are also brought within scope of the EAR and subject its licensing requirements. With this additional control, BIS stated that it hopes to prevent unauthorized product diversion that could support China’s military modernization efforts.

In order to assist companies in their efforts to comply with these new controls, BIS published a model certification in Supplement Number 1 to Part 734, which upstream suppliers can provide to help downstream parties determine whether a foreign-produced item is captured within the EAR and subject to new (or existing) licensing requirements. While use of this model certification is not required, BIS notes that where a supplier is unwilling or unable to provide such information, exporters should act cautiously and ensure due diligence is completed regarding the applicability of the EAR.

Supercomputer Foreign Direct Product Rule

The new Supercomputer Foreign Direct Product Rule, added to the EAR at §739.4(i), captures foreign-produced items that:

- are the direct product of EAR-subject software and technology specified in ECCNs 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D002, 5D991, 5E001, 5E002, or 5E991; or
- originate from a plant or major plant component that is itself derived from such software or technology.

Such items that are known by the exporter to be used in the design, development, production, operation, installation, maintenance, repair, overhaul, or refurbishing of a ‘supercomputer’ located in or destined for China—are, as with the other foreign direct product rules, brought within scope of the EAR and subject to its licensing requirements.

Note, too, that because the scope of the Supercomputer Foreign Direct Product rule generally matches the scope of products controlled under the new supercomputer end-use rule (at §744.23) described above, BIS anticipates that all such items meeting the terms of this foreign direct product rule will generally also require a license.

Controls on Activities of U.S. Persons

Effective October 12, the new regulations will also prohibit “U.S. persons”⁴ from providing support for certain related end uses and end users, including weapons of mass destruction-related end uses, without a license and even in cases in which the activity does not involve any items subject to the EAR.

New and Temporary Measures to Mitigate Supply Chain Impact

Recognizing that these new export controls, end-use restrictions, and foreign direct product rules—which are gradually coming into effect over the next two weeks—will have a substantial effect on

commercial supply chains, BIS introduced measures to try to mitigate the impact of the newly announced interim final rule.

Savings Clause

Shipments of items no longer eligible for license exceptions or for export, reexport, or transfer (in-country) without a license as a result of this rule that were on a dock for loading or laden aboard a carrier or en route aboard a carrier on October 7 may continue as long as they are exported, reexported, or transferred prior to November 7, 2022. Additionally, for deemed export purposes, source code and technology now controlled under ECCNs 3D991, 3E991, 4D994, and 4E992 related to items newly controlled under ECCNs 3A991.p and 4A994.l do not require a license to continue to be provided to foreign nationals who had access prior to this rule becoming effecting and only require licensing for newly granted access.

Temporary General License (TGL)

Second, BIS is also issuing a TGL effective October 21, 2022–April 7, 2023 for companies that are not headquartered in Country Groups D:1, D:5, or E to permit continued, limited engagement in China in “integration, assembly (mounting), inspection, testing, quality assurance, and distribution of items covered by ECCN 3A090, 4A090 and associated software and technology in 3D001, 3E001, 4D090, or 4E001; or any item that is a computer, integrated circuit, ‘electronic assembly’ or ‘component’ and associated software and technology ... which meets or exceeds the performance parameters of 3A090 or 4A090.” The TGL is intended to avoid the disruption of the supply chain for items ultimately destined for customers outside of China. All finished products produced under the TGL must have end users and ultimate consignees outside of China and the exporter must retain the name and entity receiving the item as well as the physical address where the item is destined in China and the location of the company’s headquarters.

Conclusion

Given the complexity of these new rules—especially with regard to the end-use and end-user restrictions—it might initially seem that feigned ignorance could be a viable approach, but in this notice, BIS also reminded exporters of its expectations and best practices related to its “knowledge” standard, including:

- maintaining compliance with the “Know Your Customer” Guidance in Supp. 3 to Part 732;
- adhering to the “best practice” of obtaining end-use statements from semiconductor manufacturing facilities; and
- recommending exporters attempt to obtain confirmation of the actual end use and end user for any customer that is a reseller, distributor, or intermediary.

Exporters will shoulder a significant burden becoming familiar with these changes and ensuring they adhere to these requirements. We have developed tools to assist companies in determining when these controls apply. Please feel free to reach out to discuss your particular products and supply chain, and we would be happy to assist with your analysis.

BIS also seems to recognize the magnitude of changes contained within this rule, which is so complex, and has been the subject of so much interest, that BIS will be holding a [public briefing call on October 13 at 9 a.m. ET](#). As an interim final rule, public comments are being accepted through December 12, and further changes are likely to come. We will provide updates as changes occur and more information is made available.

For more information or any questions on these changes or any related matter, please contact Josephine Aiello LeBeau (202-973-8813, jalebeau@wsgr.com), Anne Seymour (202-973-8874, aseymour@wsgr.com), or any member of the [export control and sanctions practice](#) at Wilson Sonsini Goodrich & Rosati.

[1] Cuba, Iran, North Korea, Syria, Russia, Belarus, and the Crimea, DNR, and LNR regions of Ukraine.

[2] Section 772.1 of the EAR will now define a supercomputer as: “[a] computing ‘system’ having a collective maximum theoretical compute capacity of 100 or more double-precision (64-bit) petaflops or 200 or more single-precision (32-bit) petaflops within a 41,600 ft³ or smaller envelope.”

[3] And integrated circuits, computers, electronic assemblies, or components specified elsewhere on the CCL and meeting the performance parameters of ECCNs 3A090 or 4A090.

[4] “U.S. persons” include 1) U.S. legal entities and their non-U.S. branches (but not subsidiaries); 2) individual U.S. citizens, lawful permanent residents (“green-card” holders), and protected individuals as defined by 8 U.S.C. 1324b(a)(3) (refugees and individuals granted asylum)—no matter where they are located or employed; and 3) persons present in the United States.