DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Parts 734, 736, 740, 742, 744, 762, 772, and 774

[Docket No. 220930–0204]

RIN 0694–AI94

Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification

AGENCY: Bureau of Industry and Security, Department of Commerce.

ACTION: Interim final rule; request for comments.

SUMMARY: In this rule, the Bureau of Industry and Security (BIS) is amending the Export Administration Regulations (EAR) to implement necessary controls on advanced computing integrated circuits (ICs), computer commodities that contain such ICs, and certain semiconductor manufacturing items. In addition, BIS is expanding controls on transactions involving items for supercomputer and semiconductor manufacturing end uses, for example, this rule expands the scope of foreign-produced items subject to license requirements for twenty-eight existing entities on the Entity List that are located in China. BIS is also informing the public that specific activities of ''U.S. persons'' that 'support' the ''development'' or ''production'' of certain ICs in the PRC require a license. Lastly, to minimize short term impact on the semiconductor supply chain from this rule, BIS is establishing a Temporary General License to permit specific, limited manufacturing activities in China related to items destined for use outside China and is identifying a model certificate that may be used in compliance programs to assist, along with other measures, in conducting due diligence. '

DATES:

a. Effective on October 7, 2022, are the following instructions: 7 (§ 740.2), 9 (§ 740.10), 11 (§ 742.6), 17 (§ 744.23), and 25 (supplement no. 1 to part 774).

b. Effective on October 12, 2022, is the following instruction: 15 (§ 744.6).

c. Effective on October 21, 2022, are the following instructions: 2 (§ 734.9), 3 (supplement no. 1 to part 734), 5 (supplement no. 1 to part 736), 8 (§ 740.2), 12 (§ 742.6), 14 (§ 744.1), 16 (§ 744.11), 18 (§ 744.23), 19 (supplement no. 4 to part 744), 21 (§ 762.2), 23 (§ 772.1), and 26 (supplement no. 1 to part 774).

d. Comments must be received by BIS no later than December 12, 2022.

ADDRESSES: Comments on this rule may be submitted to the Federal rulemaking portal (*www.regulations.gov*). The regulations.gov ID for this rule is: BIS–2022–0025. Please refer to RIN 0694–AI94 in all comments.

All filers using the portal should use the name of the person or entity submitting the comments as the name of their files, in accordance with the instructions below. Anyone submitting business confidential information should clearly identify the business confidential portion at the time of submission, file a statement justifying nondisclosure and referring to the specific legal authority claimed, and provide a non-confidential version of the submission.

For comments submitted electronically containing business confidential information, the file name of the business confidential version should begin with the characters ''BC.'' Any page containing business confidential information must be clearly marked ''BUSINESS CONFIDENTIAL'' on the top of that page. The corresponding non-confidential version of those comments must be clearly marked ''PUBLIC.'' The file name of the non-confidential version should begin with the character ''P.'' Any submissions with file names that do not begin with either a ''BC'' or a ''P'' will be assumed to be public and will be made publicly available through *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: For questions on the license requirements in this interim final rule, contact Eileen Albanese, Director, Office of National Security and Technology Transfer Controls, Bureau of Industry and Security, Department of Commerce, Phone: (202) 482–0092, Fax: (202) 482–482–3355, Email: *rpd2@bis.doc.gov.* For emails, include ''Advanced computing controls'' or ''Semiconductor manufacturing items control'' as applicable in the subject line.

For questions on the Entity List revisions, contact: Chair, End-User Review Committee, Office of the Assistant Secretary for Export Administration, Bureau of Industry and Security, Department of Commerce, Phone: (202) 482–5991, Email: *ERC@bis.doc.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

With this interim final rule, the Commerce Department's Bureau of Industry and Security (BIS) makes critical changes to the Export Administration Regulations (EAR) in two areas to address U.S. national security and foreign policy concerns. First, BIS imposes additional export controls on certain advanced computing semiconductor chips (chips, advanced computing chips, integrated circuits, or ICs), transactions for supercomputer end-uses, and transactions involving certain entities on the Entity List. Second, BIS adopts additional controls on certain semiconductor manufacturing items and on transactions for certain IC end use. Additional information about both areas of change is provided in the Overview of New Controls section. Some changes made in this interim final rule to address these two areas involve the same EAR provisions; in those cases, the preamble provides cross references to other areas in the rule that provide relevant additional information. This rule also solicits public comments on the changes included in this rule.

The restrictions implemented in this rule follow extensive United States government consideration of the impact of advanced computing ICs, ''supercomputers,'' and semiconductor manufacturing equipment on enabling military modernization, including the development of weapons of mass destruction (WMD), and human rights abuses. The Government of the People's Republic of China (PRC or China) has mobilized vast resources to support its defense modernization, including the implementation of its military-civil fusion development strategy, in ways that are contrary to U.S. national security and foreign policy interests.

A. Additional Export Controls: Certain Advanced Computing Integrated Circuits (ICs); Supercomputer End-Uses; Entity List Modifications

With this rule, BIS imposes new export controls on certain advanced computing semiconductor chips and computer commodities that contain such chips. Further, this rule implements an end-use control for certain items intended for a ''supercomputer'' located in or destined to the PRC.

Advanced computing items and ''supercomputers'' can be used to enhance data processing and analysis capabilities, including through artificial intelligence (AI) applications. The PRC is rapidly developing exascale supercomputing capabilities and has announced its intent to become the world leader in AI by 2030. These advanced systems are capable of sophisticated data processing and analysis that has multiple uses, and are enabled by advanced ICs. These systems

are being used by the PRC for its military modernization efforts to improve the speed and accuracy of its military decision making, planning, and logistics, as well as of its autonomous military systems, such as those used for cognitive electronic warfare, radar, signals intelligence, and jamming. Furthermore, these advanced computing items and ''supercomputers'' are being used by the PRC to improve calculations in weapons design and testing including for WMD, such as nuclear weapons, hypersonics and other advanced missile systems, and to analyze battlefield effects. In addition, advanced AI surveillance tools, enabled by efficient processing of huge amounts of data, are being used by the PRC without regard for basic human rights to monitor, track, and surveil citizens, among other purposes. With this rule, BIS seeks to protect U.S. national security and foreign policy interests by restricting the PRC's access to advanced computing for its military modernization, including nuclear weapons development, facilitation of advanced intelligence collection and analysis, and for surveillance. BIS intends to impose controls on items subject to the EAR and U.S. person activities to limit the PRC's ability to obtain advanced computing chips or further develop AI and ''supercomputer'' capabilities for uses that are contrary to U.S. national security and foreign policy interests.

These controls are being imposed through this interim final rule to address immediate concerns with the PRC's demonstrated intent and ability to use these items for activities of national security and foreign policy concern to the United States. As such, the advanced computing ICs and computer commodities that contain such ICs identified by this rule have been controlled for Regional Stability (RS) purposes. This rule also expands the scope of licensing requirements for 28 existing entities on the Entity List in supplement no. 4 to part 744 of the EAR that are located in China and were added to the Entity List between 2015 and 2021 to further address the national security and foreign policy concerns described above. BIS is interested in receiving comments regarding whether a broader or different scope of control is warranted for these ICs.

B. Additional Export Controls: Certain Semiconductor Manufacturing Items; Integrated Circuits End Use

Also with this rule, BIS imposes new export controls on certain semiconductor manufacturing items and activities involving the ''development'' or ''production'' of advanced integrated circuits (packaged or unpackaged) in the PRC that meet specified criteria.

Semiconductor manufacturing equipment can be used to produce ICs (packaged or unpackaged) for commercial applications, which has helped to transform the world and holds great commercial promise across a wide variety of industries and applications, including communications, health care, and transportation. However, semiconductor manufacturing equipment can also be used to produce various ICs (packaged or unpackaged) for WMD or other military applications, as well as applications that enable human rights violations or abuses, including but not limited to the advanced systems and ''supercomputers'' described above. Similar to their use in commercial products, the use of semiconductors has become vital in the ''production'' of military systems, particularly for advanced military systems, and may be used for purposes that are contrary to U.S. national security and foreign policy interests. The PRC government expends extensive resources to eliminate barriers between China's civilian research and commercial sectors, and its military and defense industrial sectors. It also is developing and producing advanced integrated circuits (packaged or unpackaged) for use in weapons systems.

Under the Export Control Reform Act of 2018 (ECRA), the United States shall control U.S. person activity related to nuclear explosive devices, missiles chemical or biological weapons, whole plants for chemical weapons precursors, foreign maritime nuclear projects, and foreign military intelligence services; BIS has already imposed some of these controls in § 744.6 of the EAR. But these controls generally only apply when the ''U.S. person'' has knowledge that their activities are contributing to prohibited end uses or end users. China's military-civil fusion effort makes it more difficult to tell which items are made for restricted end uses, thereby diminishing the effect of these existing controls. Accordingly, with this rule the United States is taking additional steps to inform the public that 'support' by ''U.S. persons'' related to the provision of items used to produce the most advanced semiconductors necessary for military programs of concern, such as missile programs or programs related to nuclear explosive devices, requires a license, even when the precise end use of such items cannot be determined by the ''U.S. person.''

BIS has already identified on the Entity List 28 entities in the PRC that are of concern for the national security and foreign policy reasons identified in this rule. For example, four of these entities were determined to be involved with supercomputers in the PRC that are believed to be used in nuclear explosive activities. See 80 FR 8527, Feb. 18, 2015. Five of the other entities were added to the Entity List due to their involvement in exascale high performance computing and ties to military end uses and end users. See 84 FR 29373, June 24, 2019. Finally, seven of the remaining entities were added to the Entity List due to their involvement in activities that support China's military actors, its destabilizing military modernization efforts, and/or its WMD programs. See 86 FR 18438, April 9, 2021.

In addition, BIS notes that according to the April 9, 2021, Annual Threat Assessment of the U.S. Intelligence Community, China ''will continue the most rapid expansion and platform diversification of its nuclear arsenal in its history, intending to at least double the size of its nuclear stockpile during the next decade and to field a nuclear triad'' and ''is building a larger and increasingly capable nuclear missile force that is more survivable, more diverse, and on higher alert than in the past, including nuclear missile systems designed to manage regional escalation and ensure an intercontinental second-strike capability.'' The types of semiconductor manufacturing items controlled in this rule under new item-based and end-use-based controls produce advanced integrated circuits that can be used in the ''development,'' ''production,'' or ''use'' of such military items with WMD application. In particular, the ability to produce indigenously within China these types of advanced ICs (packaged or unpackaged) would be contrary to U.S. national security and foreign policy interests.

As more fully discussed in Section IV.C below, this rule will more comprehensively control ''U.S. persons'' 'support' for the ''development'' or ''production'' of ICs (packaged or unpackaged) that could contribute to WMD applications. Advanced logic, certain NOT AND (NAND), and dynamic random-access memory (DRAM) chips have more significant military, intelligence, and security applications, including missile, nuclear, and conventional weapons applications. Advanced ICs (packaged or unpackaged) with smaller physical dimensions (*e.g.,* produced at more advanced technology nodes) are of national security concern because of the faster and more efficient microelectronic operation, greater data storage capability, and greater

computational efficiencies that these ICs (packaged or unpackaged) possess.

For example, a BIS rule from August 15, 2022 (87 FR 49981), stated that reasons why Gate-All-Around transistor technology are the key to next generation integrated circuits. This architecture allows for higher current capability and lower parasitic capacitances that enable 50 percent faster chip operation compared to bulk technologies. It is also inherently radiation hardened. Chips with these characteristics would advance many commercial as well as military applications, including defense and communication satellites. Because faster and more efficient chip operation enables superior processing and aggregation critical for WMD applications (*e.g.,* data volumes and computational loads necessary to model nuclear explosions, and missile simulations), it is necessary and consistent with the Export Control Reform Act of 2018 (ECRA) to impose this ''U.S. persons'' activity control under the EAR for 'support,' including the provision of services and foreign-produced items not subject to the EAR, but capable of producing such integrated circuits (*e.g.,* advanced logic, NAND, and DRAM integrated circuits).

With this rule, BIS intends to limit the PRC's ability to obtain semiconductor manufacturing capabilities to produce ICs (packaged or unpackaged) for uses that are contrary to U.S. national security and foreign policy interests.

II. Item-Based Controls on Semiconductor Manufacturing Equipment

As of the effective date of this rule on October 7, 2022, the specified semiconductor manufacturing equipment is controlled for RS reasons under the EAR, in order to immediately address concerns with the PRC's demonstrated intent and ability to use the specified items for activities of U.S. national security and foreign policy concern. Due to the urgent need for this rule to counter China's actions, it will not be published as a Section 1758 technology rule, which would include a notice and comment period (50 U.S.C. 4817(a)(2)(C)). However, BIS is interested in hearing from the public about the items in this rule and the scope of the new control.

III. Overview of New Controls for Certain Advanced Computing Integrated Circuits (ICs); Supercomputer End-Uses; Entity List Modifications

This rule addresses U.S. national security and foreign policy concerns by: (1) adding to the Commerce Control List (CCL) (supplement no. 1 to part 774 of the EAR) certain advanced computing chips and the computers, ''electronic assemblies,'' and ''components'' that contain them; (2) establishing a new end-use control for certain CCL items destined for ''supercomputers''; and (3) creating two new Foreign Direct Product (FDP) rules related to advanced computing and ''supercomputers'' and expanding an existing FDP rule for certain entities listed on the Entity List.

A. Addition of Advanced Computing Chips, Computer Commodities That Contain Them, and Associated ''Software'' and ''Technology'' to the Commerce Control List (Supplement no. 1 to Part 774 of the EAR)

In the CCL, this rule adds new Export Control Classification Numbers (ECCNs) 3A090 for specified high-performance ICs and 4A090 (computers, ''electronic assemblies,'' and ''components,'' not elsewhere specified (n.e.s.), containing ICs in ECCN 3A090). Both new ECCNs are controlled for RS reasons for exports or reexports to the PRC, through the addition of a new RS control in § 742.6(a)(6) of the EAR. The two ECCNs are also controlled for anti-terrorism (AT) reasons when destined to a country that has an AT:1 license requirement (Iran § 742.8, Syria § 742.9, or N. Korea § 742.19); see also parts 744 and 746 of the EAR for additional controls on items controlled for AT reasons. Associated ''software'' and ''technology'' controls on the CCL for the items controlled in ECCNs 3A090 and 4A090 are found in ECCNs 3D001, 3E001, 4D090, and 4E001, respectively, this rule controls the ''software'' and ''technology'' for RS reasons when destined to the PRC, in addition to the other reasons described in those ECCN entries.

This rule revises Category 3, Product Group A, Note 3 because controls for wafers (finished or unfinished) are now in multiple ECCNs in Category 3.

As discussed above, to align the new RS license requirements for ECCNs 3A090 and 4A090 in the associated ''technology'' and ''software'' ECCNs, the new RS license requirement has been added to the License Requirement tables within ECCNs 3D001, 3E001, and 4E001 for these items. Additionally, BIS is adding RS license requirements to the License Requirement tables within ECCNs 5A992 and 5D992 to address circumstances when these ECCNs meet or exceed the performance parameters of ECCN 3A090 or 4A090.

New ECCN 4D090 is also created to accommodate the software associated with the items controlled in ECCN 4A090, as such controls could not be readily added to ECCN 4D001.

B. License Requirements for New Advanced Computing Items

This rule establishes a new unilateral RS control and brings the newly identified advanced computing integrated circuits and related computers under the control. If a relevant multilateral export control regime adopts controls for the identified technology, BIS will adopt multilateral controls in place of the unilateral control. This rule also adds a new basis for RS controls to § 742.6 of the EAR. This newly added RS control imposes a license requirement for exports, reexports, and transfers (in-country) of identified items to or within the PRC. The license requirements under this new RS control for advanced computing chips and computer commodities that contain them found in new § 742.6(a)(6). The license requirements in § 742.6(a)(6) do not apply to deemed exports or reexports.

In addition, this RS control imposes a license requirement for the export from the PRC to any destination worldwide of technology for the design, development, or production of advanced computing chips (*i.e.,* 3E001 for 3A090), which has been developed by an entity headquartered in the PRC, is the ''direct product'' of certain software subject to the EAR, and is for the ''production'' of certain advanced computing integrated circuits and computers or assemblies containing them, consistent with § 734.9(h)(1)(i)(B)(*1*) and (h)(2)(ii). BIS is implementing this license requirement given the historical precedent of chips designed by PRC entities being diverted for use in the PRC to support PRC military modernization, and the inherent risk of this occurring with these advanced computing chips. Parties to such transactions should consider obtaining proof of the ultimate end use, such as the Model Certificate described in supplement no. 1 to part 734. Entities outside of the PRC that receive 3E001 for 3A090 technology from China should consider confirming that a license was obtained to export such technology from China. If no such license was obtained, General Prohibition 10 (§ 736.2(b)(10) of the EAR) prohibits any person from taking any further action with respect to such technology that has been exported without a required BIS license.

The license review policy for this new RS control is added to a new § 742.6(b)(10) of the EAR. Most license applications for items controlled under this RS control will be reviewed under a presumption of denial based on the

risk of these items being used contrary to the national security or foreign policy interests of the United States, including the foreign policy interest of promoting the observance of human rights throughout the world. The exception to the presumption of denial is for license applications for semiconductor manufacturing items destined to end users located in China that are headquartered in the United States or in a country in Country Group A:5 or A:6; license applications involving such end users will be considered on a case-by-case basis, taking into account factors including technology level, customers and compliance plans.

C. Anti-Terrorism Controls for Lower-Level Computing ICs and Computer Commodities That Contain Them

In the CCL, this rule also revises ECCN 3A991 by adding a new paragraph 3A991.p (specified high-performance ICs) and revises ECCN 4A994 by adding new paragraph 4A994.l (computers, ''electronic assemblies,'' and ''components,'' not elsewhere specified (n.e.s.), containing ICs in 3A991.p). These ECCNs, including these new paragraphs, are controlled for anti-terrorism (AT Column 1) reasons. Associated ''software'' and ''technology'' controls for ECCNs 3A991.p and 4A994.l are found in ECCNs 3D991, 3E991, 4D994, and 4E992, respectively. The Related Control Notes of ECCNs 3A991 and 4A994 are amended to alert the reader about associated technology and software ECCNs. As noted above, license requirements for AT Column 1 items are identified in parts 742, 744, and 746 of the EAR.

Deemed exports and reexports of technology and software that previously did not require a license, but now require a license because of the controls implemented by this rule, will only require licenses if the technology or software release exceeds the scope of the technology or software that the foreign national already had lawful access to prior to the controls implemented in this rule, *e.g.,* a foreign national who lawfully accessed technology or software specified in new ECCN paragraphs 3A991.p or 4A994.l items prior to the effective date would not need a new license to continue receiving the same technology or software for ECCN paragraphs 3A991.p or 4A994.l items, but would require a license for the release of controlled technology or software different from that previously release, even if the technology or software is classified under the same ECCNs.

This rule makes an editorial revision to the heading of ECCNs 3D001 and 4D994 by replacing the word ''equipment'' with ''commodities.'' This is to ensure that these ECCNs control software for not only equipment, but also parts, components, and assemblies.

D. License Exception Eligibility for New Advanced Computing Items

The only license exceptions available for exports or reexports of items controlled under the new ECCNs (3A090, 4A090, and the associated software and technology in 3D001, 3E001, 4D090, and 4E001) are listed in new § 740.2(a)(9) of the EAR. Similar to existing paragraph (a)(8), this new paragraph contains a list of appropriate license exceptions for the license requirements implemented in this rule. This restriction on the availability of license exceptions also applies to any integrated circuit, computer, or assembly meeting the performance parameters of new ECCNs 3A090 and 4A090 but classified elsewhere on the CCL (*e.g.,* under ECCN 5A002 due to encryption functionality). The only license exceptions available for the foregoing items are: Servicing and replacement of parts and equipment (RPL) under § 740.10; Governments, international organizations, International Inspections Under the Chemical Weapons Convention, and the International Space Station (GOV), restricted to eligibility under the provisions of § 740.11(b)(2)(ii) (exports, reexports, and transfers (in-country) made by or consigned to a department or agency of the United States Government); and Technology and Software Unrestricted (TSU), under the provisions of § 740.13(a) and (c). License Exceptions RPL and TSU require that the equipment or software must have been shipped to their current location in accordance with U.S. law and continue to be legally used, therefore these license exceptions will authorize support, *i.e.,* repairs and software updates, for items that were lawfully exported. These license exceptions will not overcome the new license requirement imposed in this interim final rule under new § 744.23 ''Supercomputer'' and semiconductor manufacturing end use''),'' implemented in this interim final rule, because no license exceptions are available to overcome the license requirement in that provision of the EAR. As discussed further below, new § 744.23 applies restrictions on the use of license exceptions to or within China.

BIS estimates these new license requirements will result in an additional 1,600 license applications being submitted to BIS annually.

E. Revising the Entity List Foreign Direct Product Rule Under § 734.9(e) and Establishing Two New Foreign Direct Product Rules for Advanced Computing and ''Supercomputers'' Under § 734.9(h) and (i)

In § 734.9 (Foreign-Direct Product (FDP) Rules), this rule revises § 734.9(e) (Entity List FDP rule) to add a new product scope and end-user scope for entities on the Entity List identified with a new footnote 4 and adds new paragraphs (h) (Advanced computing FDP rule) and (i) (''Supercomputer'' end-use FDP rule) to the EAR. As with the other FDP rules, these new FDP rules define when certain foreign made items are subject to the EAR. License requirements associated with these foreign direct products are found in § 742.6(a)(6) of the EAR, as well as in new § 744.23, described below. The license requirement for the Entity List entities designated with footnote 4, is found in a new § 744.11(a)(2)(ii) of the EAR and in such entities' entries in supplement no. 4 to part 744, as described below.

1. Revised Entity List FDP Rule

The revised Entity List FDP rule, set forth in § 734.9(e), now identifies two footnotes on the Entity List that indicate application of an Entity List FDP rule. The revision made in this interim final rule does not alter the scope or requirements of the existing Entity List FDP rule that applies to entities designated with footnote 1 on the Entity List, but this revision required BIS to renumber the paragraphs of the existing Entity List FDP rule. This rule also revises the heading of paragraph (e)(1)(i)(B) to reflect alignment with the unchanged scope of the paragraph, as the plant or 'major component' of the plant that must be a ''direct product'' of U.S.-origin ''technology'' or ''software.'' This new Entity List FDP rule states that any foreign-produced item is subject to the EAR if: (1) it meets the product scope in § 734.9(e)(2)(i)—either paragraph (e)(2)(i)(A) or (B); and (2) there is ''knowledge'' that an entity designated with footnote 4 on the Entity List is either involved in any of the activities in paragraph (e)(2)(ii)(A) or is a party to the transaction as described in paragraph (e)(2)(ii)(B).

2. Advanced Computing FDP Rule

The new ''Advanced computing FDP rule'' under paragraph (h) indicates that any foreign-produced item is subject to the EAR if it meets the product scope in § 734.9(h)(1)—either paragraph (h)(1)(i)

or (ii)—and destination scope in paragraph (h)(2). Paragraph (h)(1)(i) (''Direct product'' of ''technology'' or ''software'') specifies that a foreign-produced item meets the product scope of this new advanced computing FDP rule if it meets the conditions identified in (both) paragraphs (h)(1)(i)(A) (*i.e.,* the foreign-produced item is the ''direct product'' of certain specified ''software'' or ''technology'' subject to the EAR) and (B) (the foreign-produced item is specified in new ECCN 3A090 or 4A090 or is an integrated circuit, computer, ''electronic assembly,'' or ''component'' specified elsewhere on the CCL which meets or exceeds the limit in the performance parameters of ECCN 3A090 or 4A090, or is an item used in the ''development,'' ''production,'' ''use,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of any item in the PRC used in the ''development'' or ''production,'' of certain integrated circuits).

The product scope in § 734.9(h) also includes foreign-produced items specified in ECCN 3A090 or 4A090 or other specified items that are products of a complete plant or 'major component' of a plant, whether made in the United States or a foreign country, that itself is a ''direct product'' of certain specified U.S.-origin ''technology'' or ''software.''

Paragraph (h)(2) (Destination scope) specifies that a foreign-produced item meets the destination scope of this paragraph if there is ''knowledge'' that the foreign-produced item is being exported, reexported, or transferred (in-country) to or within the PRC, or being incorporated into any ''part,'' ''component,'' ''computer,'' or ''equipment'' destined to the PRC.

3. Supercomputer End-Use FDP Rule

The new ''Supercomputer end-use FDP rule'' under § 734.9(i) of the EAR makes any foreign-produced item subject to the EAR if it meets the product scope in paragraph (i)(1)—either paragraph (i)(1)(i) or (ii)—and the end-use and country scope in paragraph (i)(2) of § 734.9. Paragraph (i)(1)(i) (''Direct product'' of ''technology'' or ''software'') of this new Supercomputer end-use FDP rule specifies that a foreign-produced item meets the product scope if it meets the conditions identified in paragraph (i)(1)(i), *i.e.,* meaning the foreign-produced item is the ''direct product'' of certain specified ''technology'' or ''software'' subject to the EAR. The product scope also includes foreign-produced items that are the products of a complete plant or 'major component' of a plant, whether made in the United States or a foreign country, that itself is a ''direct product'' of certain specified U.S.-origin ''technology'' or ''software.'' The product scope for this FDP rule generally matches the product scope for the new ''supercomputer'' end use rule in § 744.23 of the EAR.

Paragraph (i)(2) (Country and end-use scope) of § 734.9(i) specifies that a foreign-produced item meets the country and end-use scope if there is ''knowledge'' that the foreign produced items will be 1) used in the design, ''development,'' ''production,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of a ''supercomputer'' located in or destined to the PRC; or 2) incorporated into, or used in the ''development,'' or ''production,'' of any ''part,'' ''component,'' or ''equipment'' that will be used in a ''supercomputer'' located in or destined to the PRC.

The end-use scope for this FDP rule generally matches the end-use requirement for the new ''supercomputer'' end-use control in § 744.23 of the EAR. Because the product scope, end-use scope, and country scope of this FDP rule generally match the license requirements in § 744.23 of the EAR, items that meet the terms of this foreign direct product rule should also require a license under § 744.23 of the EAR.

Relatedly, § 772.1 of the EAR is amended by adding a definition for ''supercomputer,'' as follows: ''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 ft^3 or smaller envelope.''

F. Instituting a New End-Use and End-User Control for ''Supercomputers'' Under § 744.23 of the EAR

In part 744 (End-Use and End-User Controls), this rule adds a new § 744.23 (''Supercomputer'' and semiconductor end use). New § 744.23 imposes an end-use control that is supplemental to CCL-based license requirements and adds two prohibitions under paragraphs (a) and (b). Paragraph (a) specifies that you may not export, reexport, or transfer (in-country) an item meeting the product scope in paragraph (a)(1) when you have ''knowledge'' at the time of export, reexport, or transfer (in-country) that the item will be used, directly or indirectly, in an applicable end use in paragraph (a)(2). In addition, new paragraph (a)(1)(iii) imposes a license requirement on any item subject to the EAR when you have ''knowledge'' at the time of the export, reexport, or transfer (in-country) that the item is destined for a specified end use, *i.e.,* the ''development'' or ''production'' of integrated circuits at a semiconductor fabrication ''facility'' located in China that fabricates certain integrated circuits.

Paragraph (a)(1) sets forth the product scope, which generally aligns with the new Supercomputer FDP rule in § 734.9(i), but this license requirement also applies to U.S.-origin items and other items subject to the EAR—not just the foreign-produced items subject to the EAR under the Supercomputer FDP rule.

Paragraph (a)(2) specifies the end-use scope, which includes the design, ''development,'' ''production,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of a ''supercomputer'' located in or destined to the PRC; incorporation of an item meeting the product scope of paragraph (a)(1) into any ''component'' or ''equipment'' that will be used in a ''supercomputer'' located in or destined to the PRC; the ''development'' or ''production,'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits with specified parameters or if you do not know whether such semiconductor fabrication ''facility'' can produce such integrated circuits; or the ''development,'' ''production,'' ''use,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of any item in the PRC used in the ''development'' or ''production,'' of integrated circuits.

This rule adds paragraph (b) (Additional prohibition on persons informed by BIS) to new § 744.23 to include an ''is informed'' process similar to other part 744 end-use controls. New paragraph (b) specifies that BIS may inform persons, either individually by specific notice or through amendment to the EAR, that a license is required for certain exports, reexports, or transfers (in-country) of any item subject to the EAR to a certain end user because there is an unacceptable risk of use in, or diversion to, the activities specified in paragraph (a)(1) of § 744.23. Consistent with other ''is informed'' provisions of the EAR, this rule specifies in paragraph (b) that a specific notice may be given only by, or at the direction of, the Deputy Assistant Secretary for Export Administration. In addition, paragraph (b) specifies that when such notice is provided orally, it will be followed by a written notice within two working

days. This rule also clarifies that the absence of any such notification under paragraph (b) does not excuse persons from compliance with the license requirements of paragraph (a)(1) or (2) of § 744.23 of the EAR.

This rule also adds paragraph (c) to new § 744.23 to specify that no license exceptions are available to overcome the license requirements in § 744.23. As with other end-use controls in part 744 of the EAR, this limitation on license exceptions applies even if the items also require a license under another provision of the EAR that is not so limited. For example, even if an item categorized under ECCN 3A001 is ordinarily eligible for export to China under License Exception RPL (for replacement parts), it would not be eligible for License Exception RPL if it is for a ''supercomputer'' that is located in or destined to the PRC.

Finally, this rule adds paragraph (d) (License Review Standards) to specify that there is a presumption of denial for applications to export, reexport, or transfer (in-country) of items that meet the product scope in paragraph (a)(1) of § 744.23 and the end use scope of paragraph (a)(2) of that section, except for certain end users in China that are headquartered in the United States or in a Country Group A:5 or A:6 country. This license review standard applies even though the items subject to this end-use control may require licenses to the PRC or other destinations for multiple reasons, including for reasons that have a more favorable licensing policy (*e.g.,* 3A001 items require a license for China and would normally be reviewed under the license review policy described in § 742.4(b)(7), but for an end-use described in new § 744.23, BIS will review the license application under the presumption of denial policy described above). The new paragraph also specifies that when an entity listed under supplement no. 4 to part 744 of the EAR (*i.e.,* the Entity List) and designated with a reference to footnote 4 are a party to the transaction, the license review policy for foreign-produced items subject to a license requirement is set forth in such entity's entry in supplement no. 4 to part 744 of the EAR.

BIS estimates new license requirements under § 744.23 will result in an additional five (5) license applications being submitted to BIS annually.

In § 744.1 (General provisions), as a conforming change to addition of § 744.23, this rule adds one sentence to specify that the end use and end-user controls in part 744 also extend to those in new § 744.23.

Provisions of this paragraph regarding the ''development'' or ''production,'' of integrated circuits at certain semiconductor manufacturing ''facilities'' located in China are described below in Section IV.B of this preamble.

G. Revisions to the Entity List Under Supplement No. 4 to Part 744 of the EAR

1. Overview of Entity List

The Entity List (supplement no. 4 to part 744 of the EAR) identifies entities for which there is reasonable cause to believe, based on specific and articulable facts, that the entities have been involved, are involved, or pose a significant risk of being or becoming involved in activities contrary to the national security or foreign policy interests of the United States. The EAR imposes additional license requirements on and limits the availability of most license exceptions for exports, reexports, and transfers (in-country) to listed entities.

The license review policy for each listed entity is identified in the ''License Review Policy'' column on the Entity List, and the impact on the availability of license exceptions is described in the relevant **Federal Register** document that added the entity to the Entity List. Any license application for an export, reexport, or transfer (in-country) involving an entity on the Entity List that is subject to an additional EAR license requirement will also be reviewed in accordance with the license review policies in the sections of the EAR applicable to those license requirements. For example, for Russian entities on the Entity List, if the export, reexport, or transfer (in-country) is subject to a license requirement in § 746.6, § 746.8, or § 746.10, the license application will be reviewed in accordance with the license review policies in those sections in addition to the specified license review policy under the Entity List entry.

BIS places entities on the Entity List pursuant to parts 744 (Control Policy: End-User and End-Use Based) and 746 (Embargoes and Other Special Controls) of the EAR. Paragraphs (b)(1) through (5) of § 744.11 include an illustrative list of activities contrary to the national security or foreign policy interests of the United States.

The End-User Review Committee (ERC), composed of representatives of the Departments of Commerce (Chair), State, Defense, Energy and, where appropriate, the Treasury, makes all decisions regarding additions to, removals from, or other modifications to the Entity List. The ERC makes all decisions to add an entry to the Entity List by majority vote and makes all decisions to remove or modify an entry by unanimous vote.

2. Entity List Decisions: Revisions to the Entity List

This rule expands the scope of licensing requirements for 28 existing entities on the Entity List that are located in the PRC and were added to the Entity List between 2015 and 2021. Certain of the entities are developing supercomputers believed to be used in nuclear explosive activities; these entities have been placed on the Entity List triggering license requirements for items destined to those specific entities. For example, see 80 FR 8527, Feb. 18, 2015 (''National University of Defense Technology (NUDT) has used U.S.-origin multicores, boards, and (co)processors to produce the TianHe-1A and TianHe-2 supercomputers located at the National Supercomputing Centers in Changsha, Guangzhou, and Tianjin. The TianHe-1A and TianHe-2 supercomputers are believed to be used in nuclear explosive activities as described in § 744.2(a) of the EAR.'') Similarly, BIS has added multiple other Chinese entities involved in the ''development'' and ''production'' of integrated circuits to the Entity List based on their involvement with WMD as well as military end uses and end users. For example, on April 9, 2021 (86 FR 18437), BIS added seven Chinese entities to the Entity List ''on the basis of their procurement of U.S.-origin items for activities contrary to the national security and foreign policy interests of the United States. Specifically, these entities are involved in activities that support China's military actors, its destabilizing military modernization efforts, and/or its [WMD] programs.'' The types of computing facilities located at these entities are used for designing stealth technologies, space planes, hypersonic missiles, and other military applications including nuclear weapons design. Most specifically, with the April 9 rule, BIS added chip developer Tianjin Phytium Information Technology (also known as Phytium) to the Entity List.

Even though the license requirement for these entities remains all items subject to the EAR, this rule changes the scope of items subject to the EAR for transactions involving these entities through the revised Entity List FDP rule in § 734.9(e)(2) of the EAR and adds a new license requirement in § 744.11 of the EAR that is specific to foreign produced items for these entities, both discussed elsewhere in this interim final

rule. This rule adds a footnote 4 to the entities, and a reference to the Entity List FDP rule in the license requirements column of the Entity List. With these changes, additional foreign-produced items will now be subject to the EAR and require a license when destined to or for these 28 entities. The agencies represented on the ERC have approved the changes.

The 28 revised entities are:

- Beijing Institute of Technology;
- Beijing Sensetime Technology Development Co., Ltd.;
- Changsha Jingjia Microelectronics Co., Ltd.;
- Chengdu Haiguang Integrated Circuit;
- Chengdu Haiguang Microelectronics Technology;
- China Aerospace Science and Technology Corporation (CASC) 9th Academy 772 Research Institute
- Dahua Technology;
- Harbin institute of technology;
- Higon;
- IFLYTEK;
- Intellifusion;
- Megvii Technology;
- National Supercomputer Center Zhengzhou;
- National Supercomputing Center Changsha (NSCC–CS);
- National Supercomputing Center Guangzhou (NSCC–GZ);
- National Supercomputing Center Jinan;
- National Supercomputing Center Shenzhen;
- National Supercomputing Center Tianjin (NSCC–TJ);
- National Supercomputing Center Wuxi (NSCC–WX);
- National University of Defense Technology;
- New H3C Semiconductor Technologies Co., Ltd.;
- Northwestern Polytechnical University;
- Shanghai High-Performance Integrated Circuit Design Center;
- Sugon;
- Sunway Microelectronics;
- Tianjin Phytium Information Technology;
- Wuxi Jiangnan Institute of Computing Technology; and
- Yitu Technologies.

To assist with clarity, this rule revises § 744.11 by making editorial changes to the paragraph that imposes a license requirement on foreign-produced items for footnote 1 entities. This rule adds double quotes around the term ''direct product'' in the paragraph heading for footnote 1 entities, because that term is defined in part 772, and updates the citation and description of the prohibition for footnote 1 entities in paragraph (e)(1)(i). This rule also adds paragraph (a)(2) to impose a license requirement on foreign-produced items for footnote 4 entities. The new paragraph prohibits, without a license, the reexport, export from abroad, or transfer (in-country) of any foreign-produced item subject to the EAR pursuant to § 734.9(e)(2)(i) of the EAR when an entity designated with footnote 4 on the Entity List in supp. no. 4 to part 744 of the EAR is a party to the transaction. This prohibition on foreign-produced items for these identified Chinese entities is necessary because many supercomputer parts and components based on U.S. technology and software are not produced in the United States, and more conventional export control measures would not effectively limit the U.S. contribution to Chinese advanced computing efforts by these entities.

IV. Overview of New Controls: Certain Semiconductor Manufacturing Items; and Integrated Circuits End Use

This rule further addresses U.S. national security and foreign policy concerns by making three changes related to semiconductor manufacturing equipment. First, BIS adds to the CCL certain advanced semiconductor manufacturing equipment under a new ECCN 3B090, controlled for RS and AT reasons of control with limited license exception availability. It also adds references to the new ECCN 3B090 under the related ''software'' and ''technology'' controls under ECCNs 3D001 and 3E001. Second, this rule establishes a new end-use control for any item subject to the EAR when the exporter, reexporter, or transferor knows the item is for ''development'' or ''production'' of ICs (packaged or unpackaged) at a semiconductor fabrication ''facility'' located in the PRC that fabricates ICs (packaged or unpackaged) that meet certain specified criteria under § 744.23. Finally, this rule informs the public that certain specific ''U.S. persons'' activity to 'support' the ''development'' or ''production'' of ICs (packaged or unpackaged) that meet certain criteria under § 744.6 of the EAR requires a license.

A. Addition of Semiconductor Manufacturing Equipment, and Associated ''Software'' and ''Technology'' to the Commerce Control List (Supplement No. 1 to Part 774 of the EAR)

This rule adds new ECCN 3B090 to the CCL for specified semiconductor manufacturing equipment. The new ECCN is controlled for RS reasons and a license is required when the items it controls are destined to the PRC. This rule imposes this license requirement by adding ECCN 3B090 to an RS control in § 742.6(a)(6) of the EAR. ECCN 3B090 will also be controlled for AT reasons when destined to a country that has AT:1 license requirement (Iran § 742.8, Syria § 742.9, or North Korea § 742.19); see also parts 744 and 746 of the EAR for additional controls on items controlled for AT reasons.

Associated ''software'' and ''technology'' controls in the CCL for items in ECCN 3B090 are found in ECCNs 3D001 and 3E001, respectively; the ''software'' and ''technology'' is also controlled for RS reasons (which this rule adds as a new reason for control) when destined to the PRC, and for other reasons described in the ECCN entries. Specifically, this rule adds the new RS license requirement to the License Requirement tables within ECCNs 3D001 and 3E001.

As described in new § 742.6(b)(10), license applications for semiconductor manufacturing items, such as semiconductor equipment, destined to end users in China that are headquartered in the United States or in a country in Country Group A:5 or A:6 will be considered on a case-by-case basis, taking into account factors including technology level, customers and compliance plans.

License requirements for AT Column 1 items are identified in part 742 of the EAR; the items subject to these requirements are also subject to the end-use and end-user controls in part 744 of the EAR as well as many of the country and sector controls imposed in part 746 of the EAR, including controls that apply to Russia and Belarus under § 746.8(a)(1) of the EAR. If, in the future, a multilateral export control regime adopts controls for the specified items controlled in this interim final rule, BIS will amend the controls implemented in this rule as needed to implement multilateral controls in place of the unilateral control.

The only license exception available for exports or reexports of items controlled under new ECCN 3B090 (and the associated software and technology in ECCNs 3D001 and 3E001) is listed under § 740.2(a)(9) of the EAR, which is an existing paragraph that contains a list of license exceptions that are appropriate for the license requirements implemented in this rule. The only available license exception is License Exception Governments, International organizations, international inspections under the Chemical Weapons Convention, and the International Space Station (GOV), restricted to eligibility under the provision of § 740.11(b)(2)(ii)

(exports, reexports, and transfers (in-country) made by or consigned to a department or agency of the United States Government).

BIS estimates these new license requirements and the restrictions on license exceptions described below will result in an additional fifty (50) license applications being submitted to BIS annually.

B. Instituting a New End-Use Control for Any Item Subject to the EAR for the ''Development'' or ''Production,'' of Integrated Circuits at Certain Semiconductor Manufacturing ''Facilities'' Located in the PRC

In part 744 (End-Use and End-User Controls), this rule adds § 744.23 (''Supercomputers'' and semiconductor manufacturing end use), to impose an end-use control that is supplemental to CCL-based license requirements. BIS imposes the new end-use control by adding prohibitions under paragraphs (a)(1)(iii) through (v). Paragraph (a) specifies that you may not export, reexport, or transfer (in-country) an item meeting the product scope in paragraph (a)(1) when you have ''knowledge'' at the time of export, reexport, or transfer (in-country) that the item will be used, directly or indirectly, in an applicable end use in paragraph (a)(2).

As with all end-use controls under the EAR, exporters, reexporters, and transferors are responsible for reviewing their transactions in accordance with the ''Know Your Customer'' Guidance in supplement no. 3 to part 732 of the EAR. If your customer is a semiconductor manufacturing ''facility'' involved in the end uses set forth in paragraph (a)(2) of § 744.23, in addition to the best practice of obtaining and end-use statement from your customer, you should also evaluate all other available information to determine whether a license is required pursuant to § 744.23. If your customer is a reseller, distributor, or other intermediary transaction party, it is a good compliance practice to attempt to obtain confirmation of the actual end use and end user of your products. If the intermediary party (*e.g.,* reseller, distributor) cannot furnish these details at the time of the proposed export or reexport because it is a prospective order and no specific customer has yet been identified, as a good compliance practice you may attempt to obtain a written statement that the intermediary party understands the license requirements in § 744.23 and will either: (a) inform you of the actual end use and end user, once known, so you may evaluate whether a license is required for any proposed in-country transfer, or (b) evaluate the end use and end user and apply for any required license for any proposed in-country transfer. The new prohibition this rule adds to § 744.23(a)(1)(iii) through (v) and (a)(2)(iii) through (v) is subject to BIS's ''is informed'' process under paragraph (b) (Additional prohibition on persons informed by BIS).

As specified under paragraph (c) to newly added § 744.23, no license exceptions are available to overcome the license requirements in § 744.23.

Paragraph (d) (License Review Standards) specifies that there is a presumption of denial for applications to export, reexport, or transfer (in-country) items subject to the license requirements of § 744.23, which will also apply for the ''development'' or ''production,'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates certain integrated circuits and the ''development'' or ''production'' in the PRC of any ''parts,'' ''components'' or ''equipment'' specified under certain ECCNs. This license review standard applies even though the items subject to this end-use control may require licenses to the PRC or other destinations for multiple reasons, including for reasons that have a more favorable licensing policy.

BIS estimates new license requirements under § 744.23(a)(1)(iii) through (v) and (a)(2)(iii) through (vi) will result in an additional twenty-five (25) license applications being submitted to BIS annually.

Provisions of this paragraph regarding ''supercomputers'' are described above in Section III.F of this preamble.

C. Providing Public Notice That ''U.S. Person'' 'Support' for ''Development'' or ''Production,'' of Integrated Circuits That Meet Certain Specified Criteria Implicates the General Prohibitions in § 744.6(b) of the EAR

In part 744, this rule revises § 744.6 (Restrictions on specific activities of ''U.S. persons'') to inform ''U.S. persons'' that 'support' for the ''development'' or ''production,'' of integrated circuits that meet certain specified criteria in the PRC implicates the general prohibitions set forth in § 744.6(b) of the EAR and is therefore subject to a BIS license requirement. As authorized in ECRA (50 U.S.C. 4812(a)(2)), § 744.6 specifies that no ''U.S. person'' may without a license from BIS 'support' the WMD- and military-intelligence-related end uses and end users set forth in paragraphs (b)(1) through (5). 'Support' is defined in paragraph (b)(6) to encompass a number of activities, including, but not limited to, shipping, transmitting, or transferring (in-country) items not subject to the EAR; facilitating such shipment, transmission, or transfer (in-country); or servicing items not subject to the EAR.

As described above, semiconductor manufacturing items enable the ''development'' or ''production'' of advanced ICs that may contribute to the WMD-related end uses set forth in § 744.6(b). Section 744.6(c) of the EAR provides that BIS may inform ''U.S. persons'' through amendment to the EAR published in the **Federal Register** that a license is required because an activity could involve the type of 'support' defined in paragraph (b)(6) to the end uses and end users set forth in paragraphs (b)(1) through (5). Accordingly, BIS is amending the EAR in this rule to set forth the current text of § 744.6(c) in new § 744.6(c)(1) and to add a new § 744.6(c)(2) to inform ''U.S. persons'' of activities related to the ''development'' or ''production'' of ICs that could involve 'support' to WMD and missile end uses set forth in paragraph (b) and are therefore subject to a BIS license requirement.

Specifically, new paragraph (c)(2) informs ''U.S. persons'' that the shipment, transmission, or transfer (in-country) to or within the PRC of any item not subject to the EAR; facilitation of such shipment, transmission, or transfer (in-country); or servicing of any item not subject to the EAR to or within the PRC when such activity would assist the ''development'' or ''production'' of ICs meeting certain parameters is subject to a license requirement. Likewise, BIS is informing ''U.S. persons'' that the shipment, transmission, or transfer (in-country) of certain items not subject to the EAR that meet specific technical parameters set forth on the CCL; facilitation of such shipment, transmission, or transfer (in-country); or servicing of such items to or within the PRC when such activity would assist the ''development'' or ''production'' of ICs, but you cannot determine the technical parameters of those ICs requires a license. A license is also required for ''U.S. persons'' activities involving shipping, transmitting, or transferring (in-country) or facilitating the shipment, transmission, or transfer (in-country) to or within the PRC any item not subject to the EAR and meeting the parameters of ECCN 3B090, 3D001 (for 3B090), or 3E001 (for 3B090) regardless of end use or end user; or servicing any item not subject to the EAR located in the PRC and meeting the parameters of ECCN 3B090, 3D001 (for 3B090), or 3E001 (for

3B090), regardless of end use or end user.

This is consistent with the scope of the end-use restriction for items subject to the EAR in new § 744.23(a)(2)(iii).

As specified under paragraph (d)(1) (Exceptions), no license exceptions are available to overcome the license requirements in § 744.6(b)(1) through (4) or (c)(2).

Under paragraph (e)(3) (License Review Standards), there is a presumption of denial for applications to export, reexport, or transfer (in-country) items subject to the license requirements of § 744.6(c)(2) except for license applications for end users in China headquartered in the United States or in a country in Country Group A:5 or A:6, which will be considered on a case-by-case basis taking into account factors including technology level, customers and compliance plans.

BIS estimates new license requirements under § 744.6(c)(2)(i) will result in an additional five (5) license applications being submitted to BIS annually.

V. Measures To Minimize Short Term Impacts on Supply Chains

BIS is imposing the controls described in this rule to protect critical U.S. national security and foreign policy interests. BIS is aware that the new controls being imposed in this rule may result in the disruption of certain companies' activities involving China, in particular in relation to their supply chains. In order to give companies time to become familiar with the new controls being implemented, this rule implements two changes to minimize the short term impact on supply chains in transactions that do not appear to implicate national security or foreign policy concerns.

A. Certification of Compliance With New FDP Rule

In § 734.9(h), this rule adds a new paragraph (h)(3) (*Certification*) to assist exporters, reexporters, and transferors in determining whether the items being exported, reexported, or transferred (in-country) are subject to the EAR based on the advanced computing FDP rule under § 734.9(h). The model certificate provided by BIS in new supplement no. 3 to part 734, is not required under the EAR, but is provided to assist exporters, reexporters, and transferors with the process of resolving potential red flags regarding whether an item is subject to the EAR based on § 734.9(h). The model certificate contemplates inclusion of information described in paragraph (b) of supplement no. 1 to part 734 and the signature by an official or designated employee of the certifying company. If a person in the supply chain is unable to obtain the certification due diligence is suggested and a BIS authorization may be required for the next set of recipients in the supply chain. While BIS expects that this certificate will be useful in facilitating understanding the application of the EAR to an item, BIS does not view use of this certificate alone to be a comprehensive due diligence process.

BIS has determined that use of the certificate will protect U.S. national security and foreign policy interests. BIS expects it will also limit the burden on entities participating in supply chains by allowing them to proceed with transactions within their supply chains.

In § 762.2 this rule revises paragraph (b) to add a reference to the FDP supply chain certification that this rule added under new § 734.9(h). This interim final rule makes this change by redesignating paragraphs (b)(3) through (31) as paragraphs (b)(4) through (32) and adding new paragraph (b)(3). In § 740.10 (Servicing and replacement of parts and equipment (RPL)), this interim final rule makes a conforming change to paragraph (c)(2) in § 762.2 to remove the references to § 762.2(b)(4), (47), and (48) and instead include a reference to § 762.2(b).

B. Temporary General License—Supply Chain

This rule establishes a temporary general license (TGL) in new paragraph (d) of supplement no. 1 to part 736 that allows, from October 21, 2022, through April 7, 2023, exports, reexports, in-country transfers, and exports from abroad destined to or within China by companies not headquartered in Country Groups D:1 or D:5 or E to continue or to engage in integration, assembly (mounting), inspection, testing, quality assurance, and distribution of items covered by ECCN 3A090, 4A090, and associated software and technology in ECCN 3D001, 3E001, 4D090, or 4E001; or any item that is a computer, integrated circuit, ''electronic assembly'' or ''component'' and associated software and technology, specified elsewhere on Commerce Control List (supplement no. 1 to part 774), which meets or exceeds the performance parameters of ECCN 3A090 or 4A090. The purpose of this TGL is to avoid disruption of supply chains for items covered by ECCNs that are ultimately destined to customers outside of China. This TGL does not authorize the export, reexport, in-country transfer, or export from abroad to ''end-users'' or ''ultimate consignees'' in China. This TGL is only for companies that engage in the specific activities authorized under this TGL. The TGL does not overcome any license requirements set forth in the EAR involving an entity on the Entity List or other prohibited end use and end user restrictions (*e.g.,* those applicable to military end uses and end users). Prior to any export, reexport, or transfer (in-country) to China pursuant to this TGL, the exporter, reexporter, or transferor, must retain the name of the entity receiving the item and the complete physical address of where the item is destined in China and the location of that company's headquarters.

In response to this interim final rule, BIS welcomes comments on the temporary general license, including comments on how important the temporary general license is for supply chains to continue functioning, comments on dependency of certain aspects of the supply chain on companies in China, overview of steps taken by companies to reduce dependency on China for those aspects of their supply chains, and if a request to extend the temporary license is made to provide a rationale for why an extension may be warranted. BIS, in consultation with the other agencies, will solely determine whether any extension or modification of the TGL is warranted, but comments from the public are welcome and may help inform any subsequent decisions on the TGL. Upon expiration of the TGL, exporters will need to apply for an individually-validated export license to export such advanced computing chips, assemblies containing them, and related software and technology to the PRC for supply chain-related activities, such as assembly, inspection, quality assurance, and distribution. Such license applications will be reviewed consistent with the licensing policy set forth in new § 742.6(b)(10), as described above in Section III.B.

Savings Clause

Shipments of items removed from license exception eligibility or eligibility for export, reexport or transfer (in-country) without a license as a result of this regulatory action that were on dock for loading, on lighter, laden aboard an exporting carrier, or en route aboard a carrier to a port of export, on October 7, 2022, may continue to the destination under the previous license exception eligibility or without a license so long as they have been exported, reexported or transferred (in-country) before November 7, 2022. Any such items not actually exported, reexported or transferred (in-country) before midnight, on November 7, 2022, require a license

in accordance with this interim final rule.

Deemed exports and reexports of technology and software related to ECCNs 3A991.p and 4A994.l that previously did not require a license, but now require a license because of the controls implemented by this rule, will only require licenses if the technology or software release exceeds the scope of the technology or software that the foreign national already had access to prior to the implementation of controls in this rule.

Export Control Reform Act of 2018

On August 13, 2018, the President signed into law the John S. McCain National Defense Authorization Act for Fiscal Year 2019, which included the Export Control Reform Act of 2018 (ECRA) (codified, as amended, at 50 U.S.C. Sections 4801–4852). ECRA provides the legal basis for BIS's principal authorities and serves as the authority under which BIS issues this rule. To the extent it applies to certain activities that are the subject of this rule, the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA) (codified, as amended, at 22 U.S.C. Sections 7201–7211) also serves as authority for this rule.

Rulemaking Requirements

1. This interim final rule is not a ''significant regulatory action'' because it ''pertain[s]'' to a ''military or foreign affairs function of the United States'' under sec. 3(d)(2) of Executive Order 12866.

2. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid Office of Management and Budget (OMB) Control Number.

This rule involves the following OMB-approved collections of information subject to the PRA:

- 0694–0088, ''Multi-Purpose Application,'' which carries a burden hour estimate of 29.4 minutes for a manual or electronic submission;
- 0694–0096 ''Five Year Records Retention Period,'' which carries a burden hour estimate of less than 1 minute; and
- 0607–0152 ''Automated Export System (AES) Program,'' which carries a burden hour estimate of 3 minutes per electronic submission.

BIS estimates that these new controls under the EAR imposed by this rule will result in an increase of 1,700 license applications submitted annually to BIS. However, the additional burden falls within the existing estimates currently associated with these control numbers. Additional information regarding these collections of information—including all background materials—can be found at *https://www.reginfo.gov/public/do/PRAMain* by using the search function to enter either the title of the collection or the OMB Control Number.

3. This rule does not contain policies with federalism implications as that term is defined in Executive Order 13132.

4. Pursuant to section 1762 of the Export Control Reform Act of 2018 (50 U.S.C. 4821) (ECRA), this action is exempt from the Administrative Procedure Act (APA) (5 U.S.C. 553) requirements for notice of proposed rulemaking, opportunity for public participation, and delay in effective date. While section 1762 of ECRA provides sufficient authority for such an exemption, this action is also independently exempt from these APA requirements because it involves a military or foreign affairs function of the United States (5 U.S.C. 553(a)(1)).

5. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule by 5 U.S.C. 553, or by any other law, the analytical requirements of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.,* are not applicable. Accordingly, no regulatory flexibility analysis is required, and none has been prepared.

List of Subjects

15 CFR Part 734

Administrative practice and procedure, Exports, Inventions and patents, Research, Science and technology.

15 CFR Parts 736 and 772

Exports.

15 CFR Part 740

Administrative practice and procedure, Exports, Reporting and recordkeeping requirements.

15 CFR Part 742

Exports, Terrorism.

15 CFR Part 744

Exports, Reporting and recordkeeping requirements, Terrorism.

15 CFR Part 762

Administrative practice and procedure, Business and industry, Confidential business information, Exports, Reporting and recordkeeping requirements.

15 CFR Part 774

Exports, Reporting and recordkeeping requirements.

For the reasons stated in the preamble, parts 734, 736, 740, 742, 744, 762, 772, and 774 of the Export Administration Regulations (15 CFR parts 730 through 774) are amended as follows:

PART 734—SCOPE OF THE EXPORT ADMINISTRATION REGULATIONS

■ 1. The authority citation for part 734 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13020, 61 FR 54079, 3 CFR, 1996 Comp., p. 219; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13637, 78 FR 16129, 3 CFR, 2014 Comp., p. 223; Notice of November 10, 2021, 86 FR 62891 (November 12, 2021).

■ 2. Effective on October 21, 2022, § 734.9 is amended by revising paragraph (e) and adding paragraphs (h) and (i) to read as follows:

§ 734.9 Foreign-Direct Product (FDP) Rules.

* * * * *

(e) *Entity List FDP rule.* A foreign-produced item is subject to the EAR if it meets the product scope and end-user scope in either Entity List FDP rule footnote 1 provision in paragraph (e)(1) of this section or the Entity List FDP rule Footnote 4 provision in paragraph (e)(2) of this section.

(1) *Entity List FDP rule: Footnote 1.* A foreign-produced item is subject to the EAR if it meets both the product scope in paragraph (e)(1)(i) of this section and the end-user scope in paragraph (e)(1)(ii) of this section. See § 744.11(a)(2)(i) of the EAR for license requirements, license review policy, and license exceptions applicable to foreign-produced items that are subject to the EAR pursuant to this paragraph (e)(1).

(i) *Product Scope Entity List FDP rule: Footnote 1.* The product scope applies if a foreign-produced item meets the conditions of either paragraph (e)(1)(i)(A) or (B) of this section.

(A) ''*Direct product*'' *of* ''*technology*'' *or* ''*software.*'' A foreign-produced item meets the product scope of this paragraph (e)(1)(i)(A) if the foreign-produced item is a ''direct product'' of ''technology'' or ''software'' subject to the EAR and specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992,

4E993, 5D001, 5D991, 5E001, or 5E991 of the Commerce Control List (CCL) in supplement no. 1 to part 774 of the EAR; or

(B) *Product of a complete plant or 'major component' of a plant that is a* ''*direct product.*'' A foreign-produced item meets the product scope of this paragraph (e)(1)(i)(B) if the foreign-produced item is produced by any plant or 'major component' of a plant that is located outside the United States, when the plant or 'major component' of a plant, whether made in the U.S. or a foreign country, itself is a ''direct product'' of U.S.-origin ''technology'' or ''software'' that is specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D991, 5E001, or 5E991 of the CCL.

Note 2 to paragraph (e)(1)(i): A foreign-produced item includes any foreign-produced wafer whether finished or unfinished.

(ii) *End-user scope of the Entity List FDP rule: Footnote 1.* A foreign-produced item meets the end-user scope of this paragraph (e)(1)(ii) if there is ''knowledge'' that:

(A) *Activities involving Footnote 1 designated entities.* The foreign-produced item will be incorporated into, or will be used in the ''production'' or ''development'' of any ''part,'' ''component,'' or ''equipment'' produced, purchased, or ordered by any entity with a footnote 1 designation in the license requirement column of the Entity List in supplement no. 4 to part 744 of the EAR; or

(B) *Footnote 1 designated entities as transaction parties.* Any entity with a footnote 1 designation in the license requirement column of the Entity List in supplement no. 4 to part 744 of the EAR is a party to any transaction involving the foreign-produced item, *e.g.,* as a ''purchaser,'' ''intermediate consignee,'' ''ultimate consignee,'' or ''end-user.''

(2) *Entity List FDP rule: Footnote 4.* A foreign-produced item is subject to the EAR if it meets both the product scope in paragraph (e)(2)(i) of this section and the end-user scope in paragraph (e)(2)(ii) of this section. See § 744.11(a)(2)(ii) of the EAR for license requirements, license review policy, and license exceptions applicable to foreign-produced items that are subject to the EAR pursuant to this paragraph (e)(2).

(i) *Product Scope Entity List FDP rule: Footnote 4.* The product scope applies if a foreign-produced item meets the conditions of either paragraph (e)(2)(i)(A) or (B) of this section.

(A) ''*Direct product*'' *of* ''*technology*'' *or* ''*software.*'' The foreign-produced item is a ''direct product'' of ''technology'' or ''software'' subject to the EAR and specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D002, 5D991, 5E001, 5E002, or 5E991 of the CCL; or

(B) *Product of plant or 'major component' that is a* ''*direct product.*'' The foreign-produced item is produced by any plant or 'major component' of a plant when the plant or 'major component' of a plant, whether made in the U.S. or a foreign country, itself is a ''direct product'' of U.S.-origin ''technology'' or ''software'' that is specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D991, 5E001, 5E991, 5D002, or 5E002 of the CCL.

(ii) *End user scope of the Entity List FDP rule: Footnote 4.* A foreign-produced item meets the end-user scope of this paragraph (e)(2)(ii) if there is ''knowledge'' that:

(A) *Activities involving Footnote 4 designated entities.* The foreign-produced item will be incorporated into, or will be used in the ''production'' or ''development'' of any ''part,'' ''component,'' or ''equipment'' produced, purchased, or ordered by any entity with a footnote 4 designation in the license requirement column of the Entity List in supplement no. 4 to part 744 of the EAR; or

(B) *Footnote 4 designated entities as transaction parties.* Any entity with a footnote 4 designation in the license requirement column of the Entity List in supplement no. 4 to part 744 of the EAR is a party to any transaction involving the foreign-produced item, *e.g.,* as a ''purchaser,'' ''intermediate consignee,'' ''ultimate consignee,'' or ''end-user.''

* * * * *

(h) *Advanced computing FDP rule.* A foreign-produced item is subject to the EAR if it meets both the product scope in paragraph (h)(1) of this section and the destination scope in paragraph (h)(2) of this section. See § 742.6(a)(6) of the EAR for license requirements and license exceptions and § 742.6(b)(10) for license review policy applicable to foreign-produced items that are subject to the EAR under this paragraph (h).

(1) *Product scope of advanced computing FDP rule.* The product scope applies if a foreign-produced item meets the conditions of either paragraph (h)(1)(i) or (ii) of this section.

(i) ''*Direct product*'' *of* ''*technology*'' *or* ''*software.*'' A foreign-produced item meets the product scope of this paragraph (h) if it meets both the following conditions:

(A) The foreign-produced item is the ''direct product'' of ''technology'' or ''software'' subject to the EAR and specified in 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D090, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D002, 5D991, 5E001, 5E991, or 5E002 of the CCL; and

(B) The foreign-produced item is:

(*1*) Specified in ECCN 3A090, 3E001 (for 3A090), 4A090, or 4E001 (for 4A090) of the CCL; or

(*2*) An integrated circuit, computer, ''electronic assembly,'' or ''component'' specified elsewhere on the CCL and meets the performance parameters of ECCN 3A090 or 4A090.

(ii) *Product of a complete plant or 'major component' of a plant that is a* ''*direct product.*'' A foreign-produced item meets the product scope of this paragraph (h) if it meets both of the following conditions:

(A) The foreign-produced item is produced by any complete plant or 'major component' of a plant that is located outside the United States, when the plant or 'major component' of a plant, whether made in the United States or a foreign country, itself is a ''direct product'' of U.S.-origin ''technology'' or ''software'' that is specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D090, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D991, 5E001, 5E991, 5D002, or 5E002 of the CCL; and

(B) The foreign-produced item is:

(*1*) Specified in ECCN 3A090, 3E001 (for 3A090), 4A090, or 4E001 (for 4A090) of the CCL; or

(*2*) An integrated circuit, computer, ''electronic assembly,'' or ''component'' specified elsewhere on the CCL and meets the performance parameters of ECCN 3A090 or 4A090.

(2) *Destination or end use scope of the advanced computing FDP rule.* A foreign-produced item meets the destination scope of this paragraph (h)(2) if there is ''knowledge'' that the foreign-produced item is:

(i) Destined to the PRC or will be incorporated into any ''part,'' ''component,'' ''computer,'' or ''equipment'' not designated EAR99 that is destined to the PRC; or

(ii) Technology developed by an entity headquartered in the PRC for the ''production'' of a mask or an integrated circuit wafer or die.

(3) *Certification.* Exporters, reexporters, and transferors may obtain a written certification from a supplier that asserts an item being provided would be subject to the EAR if future transaction meet the destination scope in paragraph (h)(2)(i) or (ii) of this section. The model certificate provided

by BIS in supplement no. 1 to this part is not required under the EAR, but through its provision, the certificate may assist exporters, reexporters, and transferors with the process of resolving potential red flags regarding whether an item is subject to the EAR based on this paragraph (h). The model certificate provided by BIS contemplates signature by an official or designated employee of the certifying company and inclusion of all the information described in paragraph (b) of supplement no. 1 to this part. If the exporter, reexporter, or transferors has not obtained such a certification, due diligence needs to be conducted to determine if the items meets the scope in this paragraph (h). While this certificate is expected to be useful for a company to understand the application of the EAR to an item, BIS does not view this as the only step to be completed during a company's due diligence process. *See* supplement no. 1 to this part and supplement no. 3 to part 732 of the EAR.

(i) ''*Supercomputer*'' *FDP rule.* A foreign-produced item is subject to the EAR if it meets both the product scope in paragraph (i)(1) of this section and the country and end-use scope in paragraph (i)(2) of this section. See § 744.23 of the EAR for license requirement, license review policy, and license exceptions applicable to foreign-produced items that are subject to the EAR pursuant to this paragraph (i).

(1) *Product scope.* The product scope applies if a foreign-produced item meets the conditions of either paragraph (i)(1)(i) or (ii) of this section.

(i) ''*Direct product*'' *of* ''*technology*'' *or* ''*software.*'' The foreign-produced item meets the product scope of this paragraph (i)(1)(i) if the foreign-produced item is a ''direct product'' of ''technology'' or ''software'' subject to the EAR and specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D991, 5E001, 5E991, 5D002, or 5E002 of the CCL; or

(ii) *Product of a complete plant or 'major component' of a plant that is a* ''*direct product.*'' A foreign-produced item meets the product scope of this paragraph (i)(1)(ii) if the foreign-produced item is produced by any plant or 'major component' of a plant that is located outside the United States, when the plant or 'major component' of a plant, whether made in the United States or a foreign country, itself is a ''direct product'' of U.S.-origin ''technology'' or ''software'' that is specified in ECCN 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D994, 4E001, 4E992, 4E993, 5D001, 5D991, 5E001, 5E991, 5D002, or 5E002 of the CCL.

(2) *Country and end-use scope.* A foreign-produced item meets the country and end-use scope of this paragraph (i)(2) if there is ''knowledge'' that the foreign produced item will be:

(i) Used in the design, ''development,'' ''production,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of, a ''supercomputer'' located in or destined to the PRC; or

(ii) Incorporated into, or used in the ''development,'' or ''production,'' of any ''part,'' ''component,'' or ''equipment'' that will be used in a ''supercomputer'' located in or destined to the PRC.

■ 3. Effective on October 21, 2022, add supplement no. 1 to part 734 to read as follows:

Supplement No. 1 to Part 734—Model Certification for Purposes of Advanced Computing FDP Rule

(a) *General.* This supplement is included in the EAR to assist exporters, reexporters, and transferors in determining whether the items being exported, reexported, or transferred (in-country) are subject to the EAR based on the advanced computing FDP rule under § 734.9(h). The model certificate provided by BIS in this supplement is not required under the EAR, but through its provision, the certificate may assist exporters, reexporters, and transferors with the process of resolving potential red flags regarding whether an item is subject to the EAR based on § 734.9(h). The model certificate provided in this supplement by BIS contemplates signature by an official or designated employee of the certifying company and inclusion of all the information described in paragraph (b) of this supplement. Any certification relied on for this part must be retained pursuant to part 762 of the EAR.

Obtaining the certification set forth in this supplement does not relieve exporters, reexporters, and transferors of their obligation to exercise due diligence in determining whether items are subject to the EAR, including by following the ''Know Your Customer'' guidance in supplement no. 3 to part 732 of the EAR.

(b) *Model Criteria.* A certification meets the criteria described in this supplement if it contains at least the following information:

(1) The certification must be signed by an organization official specifically authorized to certify the document as being accurate and complete. The undersigned certifies that the information herein supplied in response to this paragraph is complete and correct to the best of his/her knowledge. By signing the certification below, I attest that:

(2) My organization is aware that the items, [INSERT A DESCRIPTION OF THE ITEMS], provided to this exporter, reexporter, or transferor, [INSERT NAME OF EXPORTER, REEXPORTER, OR TRANSFEROR], could be subject to the U.S. Export Administration Regulations (EAR) (15 CFR 730–774) if future transactions are within the destination scope of § 734.9(h)(2)(i) or (ii) and exported or reexported to or transferred within the People's Republic of China (China);

(3) My organization has reviewed the criteria for the advanced computing Foreign Direct Product (FDP) rule under § 734.9(h) and attests that from my organization's ''knowledge'' of the item, it would be subject to the EAR if the destination criteria are met in § 734.9(h)(2)(i) or (ii); and

(4) My organization affirms its commitment to apply with all applicable requirements under the EAR.

[INSERT NAME(S) OF CONSIGNEE(S)]

[INSERT DATE(S) SIGNED]

Note 1 to paragraph (b): *When multiple consignees who form a network engaged in a production process (or other type of collaborative activity, such as joint development) will be receiving items under the EAR, a single model certification statement for multiple consignees may be used for any export, reexport, or transfer (in-country) under the EAR.*

(c) *Additional Information.* Because this is only a model certification, exporters, reexporters, or transferors may add additional elements to the certification and/or use it for multiple purposes as part of their compliance program. For example, if a company has ten affiliated companies in a multi-step supply chain, instead of obtaining a model certification for each export, reexport, or transfer (in-country), the initial exporter, reexporter, or transferor may get all ten parties to sign the certification, which may further reduce the burden on parties participating in the supply chain.

PART 736—GENERAL PROHIBITIONS

■ 4. The authority citation for part 736 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13020, 61 FR 54079, 3 CFR, 1996 Comp., p. 219; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13338, 69 FR 26751, 3 CFR, 2004 Comp., p. 168; Notice of November 10, 2021, 86 FR

62891 (November 12, 2021); Notice of May 9, 2022, 87 FR 28749 (May 10, 2022).

■ 5. Effective on October 21, 2022, supplement no. 1 to part 736 is amended by adding paragraph (d) to read as follows:

Supplement No. 1 to Part 736—General Orders

* * * * *

(d) General Order No. 4: The purpose of this General Order is to avoid disruption of supply chains for items specified in paragraph (d)(1) of this supplement that are ultimately destined to customers outside of People's Republic of China (China).

(1) *Temporary General License (TGL).* BIS authorizes, from October 21, 2022, through April 7, 2023, exports, reexports, in-country transfers, and exports from abroad destined to or within China by companies not headquartered in Country Groups D:1 or D:5 or E (see supplement no. 1 to part 740 of the EAR) to continue or engage in integration, assembly (mounting), inspection, testing, quality assurance, and distribution of items covered by ECCN 3A090, 4A090, and associated software and technology in ECCN 3D001, 3E001, 4D090, or 4E001; or any item that is a computer, integrated circuit, ''electronic assembly'' or ''component'' and associated software and technology, specified elsewhere on Commerce Control List (supplement no. 1 to part 774 of the EAR), which meets or exceeds the performance parameters of ECCN 3A090 or 4A090. This does not authorize the export, reexport, in-country transfer, or export from abroad to ''end-users'' or ''ultimate consignees'' in China. This TGL does not overcome the license requirements of § 744.11 or § 744.21 of the EAR when an entity listed in supplements no. 4 or 7 to part 744 is a party to the transaction as described in § 748.5(c) through (f) of the EAR, or when there is knowledge of any other prohibited end use or end user. This TGL is only for companies that engage in the specific activities authorized under this TGL.

(2) *Recordkeeping requirement.* Prior to any export, reexport, or transfer (in-country) to China pursuant to this TGL, the exporter, reexporter, or transferor, must retain the name of the entity receiving the item and the complete physical address of where the item is destined in China and the location of that company's headquarters.

* * * * *

PART 740—LICENSE EXCEPTIONS

■ 6. The authority citation for part 740 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 7201 *et seq.;* E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

■ 7. Effective on October 7, 2022, § 740.2 is amended by adding paragraph (a)(9) to read as follows:

§ 740.2 Restrictions on all License Exceptions.

* * * * *

(a) * * *

(9) The item is identified in paragraph (a)(9)(i) of this section, being exported, reexported, or transferred (in-country) to or within the People's Republic of China (PRC), and the license exception is other than: RPL (excluding 3B090, 3D001 (for 3B090), and 3E001 (for 3B090)), under the provisions of § 740.10, including § 740.10(a)(3)(v), which prohibits exports and reexports of replacement parts to countries in Country Group E:1 (see supplement no. 1 to this part)); GOV, restricted to eligibility under the provisions of § 740.11(b)(2)(ii); or TSU (excluding 3B090, 3D001 (for 3B090), and 3E001 (for 3B090)), under the provisions of § 740.13(a) and (c). Items restricted to eligibility only for the foregoing license exceptions are:

(i) Controlled under ECCNs 3B090, or associated software and technology in 3D001, or 3E001; or

(ii) [Reserved]

* * * * *

■ 8. Effective on October 21, 2022, § 740.2 is further amended by revising paragraph (a)(9) to read as follows:

§ 740.2 Restrictions on all License Exceptions.

* * * * *

(a) * * *

(9) The item is identified in paragraphs (a)(9)(i) and (ii) of this section, being exported, reexported, or transferred (in-country) to or within the People's Republic of China (PRC), and the license exception is other than: RPL (excluding 3B090, 3D001 (for 3B090), and 3E001 (for 3B090)), under the provisions of § 740.10, including § 740.10(a)(3)(v), which prohibits exports and reexports of replacement parts to countries in Country Group E:1 (see supplement no. 1 to this part)); GOV, restricted to eligibility under the provisions of § 740.11(b)(2)(ii); or TSU (excluding 3B090, 3D001 (for 3B090), and 3E001 (for 3B090)), under the provisions of § 740.13(a) and (c). Items restricted to eligibility only for the foregoing license exceptions are:

(i) Controlled under ECCNs 3A090, 3B090, 4A090, or associated software and technology in 3D001, 3E001, 4D090, and 4E001; or

(ii) A computer, integrated circuit, ''electronic assembly'' or ''component'' specified elsewhere on the CCL which meets or exceeds the performance parameters of ECCN 3A090 or 4A090.

* * * * *

■ 9. Effective on October 7, 2022, § 740.10 is amended by revising paragraph (c)(2) to read as follows:

§ 740.10 License Exception Servicing and replacement of parts and equipment (RPL).

* * * * *

(c) * * *

(2) Records maintained pursuant to this section may be requested at any time by an appropriate BIS official as set forth in § 762.7 of the EAR. Records that must be included in the annual or semi-annual reports of exports and reexports of ''600 Series'' items under the authority of License Exception RPL are described in §§ 743.4 and 762.2(b) of the EAR.

PART 742—CONTROL POLICY—CCL BASED CONTROLS

■ 10. The authority citation for part 742 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 3201 *et seq.;* 42 U.S.C. 2139a; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; Sec. 1503, Pub. L. 108–11, 117 Stat. 559; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Presidential Determination 2003–23, 68 FR 26459, 3 CFR, 2004 Comp., p. 320; Notice of November 10, 2021, 86 FR 62891 (November 12, 2021).

■ 11. Effective on October 7, 2022, § 742.6 is amended by adding paragraphs (a)(6) and (b)(10) to read as follows:

§ 742.6 Regional stability.

(a) * * *

(6) *RS requirement that applies to the People's Republic of China (China) for semiconductor manufacturing items*—(i) *Exports, reexports, transfers (in-country).* A license is required for items specified in ECCN 3B090 and associated software and technology in 3D001 (for 3B090), 3E001 (for 3B090)) being exported, reexported, or transferred (in-country) to or within the China.

(ii) *Deemed exports.* The license requirements in this paragraph (a)(6) do not apply to deemed exports or deemed reexports.

* * * * *

(b) * * *

(10) *Semiconductor manufacturing items when destined to China.* There is

a presumption of denial for applications for items specified in paragraph (a)(6) of this section being exported, reexported, or transferred (in-country) to or within the China. See § 744.11(a)(2)(ii) of the EAR for license requirements, license review policy, and license exceptions applicable to specific entities. License applications for semiconductor manufacturing items, such as semiconductor equipment, destined to end users in China that are headquartered in the United States or in a country in Country Group A:5 or A:6 will be considered on a case-by-case basis, taking into account factors including technology level, customers and compliance plans.

* * * * *

■ 12. Effective on October 21, 2022, § 742.6 is further amended by revising paragraphs (a)(6) and (b)(10) to read as follows:

§ 742.6 Regional stability.

(a) * * *

(6) *RS requirement that applies to the People's Republic of China (China) for advanced computing and semiconductor manufacturing items*—(i) *Exports, reexports, transfers (in-country).* A license is required for items specified in ECCNs 3A090, 3B090, 4A090, 5A992 (that meet or exceed the performance parameters of ECCNs 3A090 or 4A090) and associated software and technology in 3D001 (for 3A090 or 3B090), 3E001 (for 3A090 or 3B090), 3B090, or 3D001 (for 3A090 or 3B090), 4D090, 4E001 (for 4A090 and 4D090), and 5D992 (that meet or exceed the performance parameters of ECCNs 3A090 or 4A090) being exported, reexported, or transferred (in-country) to or within the China. A license is also required for the export from the China to any destination worldwide of 3E001 (for 3A090) technology developed by an entity headquartered in the China that is the direct product of software subject to the EAR and is for the ''production'' of commodities identified in ECCNs 3A090, 4A090, or identified elsewhere on the CCL that meet or exceed the performance parameters of ECCNs 3A090 or 4A090, consistent with § 734.9(h)(1)(i)(B)(*1*) and (h)(2)(ii) of the EAR.

(ii) *Deemed exports.* The license requirements in this paragraph (a)(6) do not apply to deemed exports or deemed reexports.

* * * * *

(b) * * *

(10) *Advanced computing and semiconductor manufacturing items when destined to China.* There is a presumption of denial for applications for items specified in paragraph (a)(6) of this section being exported, reexported, or transferred (in-country) to or within the China. See § 744.11(a)(2)(ii) of the EAR for license requirements, license review policy, and license exceptions applicable to specific entities. License applications for semiconductor manufacturing items, such as semiconductor equipment, destined to end users in China that are headquartered in the United States or in a country in Country Group A:5 or A:6 will be considered on a case-by-case basis, taking into account factors including technology level, customers and compliance plans.

* * * * *

PART 744—END–USE AND END–USER CONTROLS

■ 13. The authority citation for part 744 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 3201 *et seq.;* 42 U.S.C. 2139a; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13099, 63 FR 45167, 3 CFR, 1998 Comp., p. 208; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13224, 66 FR 49079, 3 CFR, 2001 Comp., p. 786; Notice of November 10, 2021, 86 FR 62891 (November 12, 2021); Notice of September 19, 2022, 87 FR 57569 (September 19, 2022).

■ 14. Effective on October 21, 2022, § 744.1 is amended by adding a sentence at the end of paragraph (a)(1) to read as follows:

§ 744.1 General provisions.

(a)(1) * * * Section 744.23 sets forth restrictions on exports, reexports, and transfers (in-country) for certain ''supercomputer'' and semiconductor manufacturing end use.

* * * * *

■ 15. Effective on October 12, 2022, § 744.6 is amended by revising paragraphs (c) and (d) and adding paragraph (e)(3) to read as follows:

§ 744.6 Restrictions on specific activities of ''U.S. persons.''

* * * * *

(c) *Additional prohibitions on ''U.S. persons'' informed by BIS.* (1) BIS may inform ''U.S. persons,'' either individually by specific notice, through amendment to the EAR published in the **Federal Register**, or through a separate notice published in the **Federal Register**, that a license is required because an activity could involve the types of 'support' (as defined in paragraph (b)(6) of this section) to the end uses or end users described in paragraphs (b)(1) through (5) of this section. Specific notice is to be given only by, or at the direction of, the Deputy Assistant Secretary for Export Administration. When such notice is provided orally, it will be followed by a written notice within two working days signed by the Deputy Assistant Secretary for Export Administration. However, the absence of any such notification does not excuse the ''U.S. person'' from compliance with the license requirements of paragraph (b) of this section.

(2) Consistent with paragraph (c)(1) of this section, BIS is hereby informing ''U.S. persons'' that a license is required for the following activities, which could involve 'support' for the weapons of mass destruction-related end uses set forth in paragraph (b) of this section.

(i) Shipping, transmitting, or transferring (in-country) to or within the PRC any item not subject to the EAR that you know will be used in the ''development'' or ''production'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits meeting any of the following criteria:

(A) Logic integrated circuits using a non-planar architecture or with a ''production'' technology node of 16/14 nanometers or less;

(B) NOT–AND (NAND) memory integrated circuits with 128 layers or more; or

(C) Dynamic random-access memory (DRAM) integrated circuits using a ''production'' technology node of 18 nanometer half-pitch or less; or

(ii) Facilitating the shipment, transmission, or transfer (in-country) of any item not subject to the EAR that you know will be used in the ''development'' or ''production'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits that meet any of the criteria in paragraphs (c)(2)(i)(A) through (C) of this section;

(iii) Servicing any item not subject to the EAR that you know will be used in the ''development'' or ''production'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits that meet any of the criteria in paragraphs (c)(2)(i)(A) through (C) of this section;

(iv) Shipping, transmitting, or transferring (in-country) to or within the PRC any item not subject to the EAR and meeting the parameters of any ECCN in Product Groups B, C, D, or E in Category 3 of the CCL that you know will be used in the ''development'' or ''production'' of integrated circuits at

any semiconductor fabrication ''facility'' located in the PRC, but you do not know whether such semiconductor fabrication ''facility'' fabricates integrated circuits that meet any of the criteria in paragraphs (c)(2)(i)(A) through (C) of this section;

(v) Facilitating the shipment, transmission, or transfer (in-country) to or within the PRC of any item not subject to the EAR and meeting the parameters of any ECCN in Product Groups B, C, D, or E in Category 3 of the CCL that you know will be used in the ''development'' or ''production,'' of integrated circuits at any semiconductor fabrication ''facility'' located in the PRC, but you do not know whether such semiconductor fabrication ''facility'' fabricates integrated circuits that meet any of the criteria in paragraphs (c)(2)(i)(A) through (C) of this section;

(vi) Servicing any item not subject to the EAR and meeting the parameters of any ECCN in Product Groups B, C, D, or E in Category 3 of the CCL that you know will be used in the ''development'' or ''production'' of integrated circuits at any semiconductor fabrication ''facility'' located in the PRC, but you do not know whether such semiconductor fabrication ''facility'' fabricates integrated circuits that meet any of the criteria in paragraphs (c)(2)(i)(A) through (C) of this section;

(vii) Shipping, transmitting, or transferring (in-country) to or within the PRC any item not subject to the EAR and meeting the parameters of ECCN 3B090, 3D001 (for 3B090), or 3E001 (for 3B090) regardless of end use or end user;

(viii) Facilitating the shipment, transmission, or transfer (in-country) to or within the PRC of any item not subject to the EAR and meeting the parameters of ECCN 3B090, 3D001 (for 3B090), or 3E001 (for 3B090), regardless of end use or end user; or

(ix) Servicing any item not subject to the EAR located in the PRC and meeting the parameters of ECCN 3B090, 3D001 (for 3B090), or 3E001 (for 3B090), regardless of end use or end user.

(d) *Exceptions.* (1) No License Exceptions apply to the prohibitions described in paragraphs (b)(1) through (4) and (c)(2)(i) through (vi) of this section.

(2) Notwithstanding the prohibitions in paragraphs (b)(5) and (c)(2)(vii) through (ix) of this section, ''U.S. persons'' who are employees of a department or agency of the U.S. Government may 'support' a 'military-intelligence end use' or a 'military-intelligence end user,' as described in paragraph (b)(5) of this section, or engage in the activities described in paragraphs (c)(2)(vii) through (ix) of this section, if the 'support' is provided in the performance of official duties in furtherance of a U.S. Government program that is authorized by law and subject to control by the President by other means. This paragraph (d)(2) does not authorize a department or agency of the U.S. Government to provide 'support' that is otherwise prohibited by other administrative provisions or by statute. 'Contractor support personnel' of a department or agency of the U.S. Government are eligible for this authorization when in the performance of their duties pursuant to the applicable contract or other official duties. 'Contractor support personnel' for the purposes of this paragraph (d)(2) has the same meaning given to that term in § 740.11(b)(2)(ii) of the EAR. This authorization is not available when a department or agency of the U.S. Government acts as an agent on behalf of a non-U.S. Government person.

(e) * * *

(3) Applications for licenses submitted pursuant to the notice of a license requirement set forth in paragraph (c)(2) of this section will be reviewed with a presumption of denial, except for end users in the PRC headquartered in the United States or a country in Country Group A:5 or A:6, which will be considered on a case-by-case basis taking into account factors including technology level, customers, and compliance plans.

■ 16. Effective on October 21, 2022, § 744.11 is amended by revising paragraph (a)(2) to read as follows:

§ 744.11 License requirements that apply to entities acting or at significant risk of acting contrary to the national security or foreign policy interests of the United States.

* * * * *

(a) * * *

(2) *Entity List foreign-''direct product'' (FDP) license requirements, review policy, and license exceptions*—(i) *Footnote 1 entities.* You may not, without a license or license exception, reexport, export from abroad, or transfer (in-country) any foreign-produced item subject to the EAR pursuant to § 734.9(e)(1)(i) of the EAR when an entity designated with footnote 1 on the Entity List in supplement. no. 4 to this part is a party to the transaction. All license exceptions described in part 740 of the EAR are available for foreign-produced items that are subject to this license requirement if all terms and conditions of the applicable license exception are met and the restrictions in § 740.2 of this EAR do not apply. The sophistication and capabilities of technology in items is a factor in license application review; license applications for foreign-produced items subject to a license requirement by this paragraph (a)(2) that are capable of supporting the ''development'' or ''production'' of telecom systems, equipment, and devices below the 5G level (*e.g.,* 4G, 3G) will be reviewed on a case-by-case basis.

(ii) *Footnote 4 entities.* You may not, without a license, reexport, export from abroad, or transfer (in-country) any foreign-produced item subject to the EAR pursuant to § 734.9(e)(2) of the EAR when an entity designated with footnote 4 on the Entity List in supp. no. 4 to this part is a party to the transaction, or that will be used in the ''development'' or ''production'' of any ''part,'' ''component,'' or ''equipment'' produced, purchased, or ordered by any such entity. See § 744.23 for additional license requirements that may apply to these entities. The license review policy for foreign-produced items subject to this license requirement is set forth in the entry in supplement no. 4 to this part for each entity with a footnote 4 designation.

* * * * *

■ 17. Effective on October 7, 2022, add § 744.23 to read as follows:

§ 744.23 Semiconductor manufacturing end use.

(a) *General prohibition.* In addition to the license requirements for items specified on the CCL, you may not export, reexport, or transfer (in-country) without a license any item subject to the EAR meeting the product scope in paragraph (a)(1) of this section when you have ''knowledge'' at the time of export, reexport, or transfer (in-country) that the item is destined for the end-use described in paragraph (a)(2) of this section.

(1) *Product scope.* Any of the following items meet the product scope of the prohibition in this section:

(i)–(ii) [Reserved]

(iii) Any item subject to the EAR when you know the items will be used in an end use described in paragraphs (a)(2)(iii)(A) through (C) of this section;

(iv) Any item subject to the EAR and classified in an ECCN in Product Groups B, C, D, or E in Category 3 of the CCL when you know the items will be used in an end use described in paragraph (a)(2)(iv) of this section; or

(v) Any item subject to the EAR when you know the item will be used in an end use described in paragraph (a)(2)(v) of this section.

(2) *End-use scope.* The following activities meet the end-use scope of the prohibition in this section:

(i)–(ii) [Reserved]

(iii) The ''development'' or ''production'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits meeting any of the following criteria:

(A) Logic integrated circuits using a non-planar transistor architecture or with a ''production'' technology node of 16/14 nanometers or less;

(B) NOT AND (NAND) memory integrated circuits with 128 layers or more; or

(C) Dynamic random-access memory (DRAM) integrated circuits using a ''production'' technology node of 18 nanometer half-pitch or less; or

(iv) The ''development'' or ''production'' of integrated circuits at any semiconductor fabrication ''facility'' located in the PRC, but you do not know whether such semiconductor fabrication ''facility'' fabricates integrated circuits that meet any of the criteria in paragraphs (a)(2)(iii)(A) through (C) of this section.

(v) The ''development'' or ''production'' in the PRC of any ''parts,'' ''components'' or ''equipment'' specified under ECCN 3B001, 3B002, 3B090, 3B611, 3B991, or 3B992.

(b) *Additional prohibition on persons informed by BIS.* BIS may inform persons, either individually by specific notice or through amendment to the EAR published in the **Federal Register**, that a license is required for a specific export, reexport, or transfer (in-country) of any item subject to the EAR to a certain end-user, because there is an unacceptable risk of use in, or diversion to, the activities specified in paragraph (a)(1) of this section. Specific notice is to be given only by, or at the direction of, the Deputy Assistant Secretary for Export Administration. When such notice is provided orally, it will be followed by a written notice within two working days signed by the Deputy Assistant Secretary for Export Administration or the Deputy Assistant Secretary's designee. However, the absence of any such notification does not excuse persons from compliance with the license requirements of paragraph (a) of this section.

(c) *License exceptions.* No license exceptions may overcome the prohibition described in paragraph (a) of this section.

(d) *License review standards.* There is a presumption of denial for applications to export, reexport, or transfer (in-country) items described in paragraph (a)(1) of this section that are for end uses described in paragraph (a)(2) of this section, except for items controlled under paragraph (a)(2)(iii) of this section for end users in China that are headquartered in the United States or in a Country Group A:5 or A:6 country, which will be considered on a case-by-case basis taking into account factors including technology level, customers, and compliance plans.

■ 18. Effective on October 21, 2022, revise § 744.23 to read as follows:

§ 744.23 ''Supercomputer'' and semiconductor manufacturing end use.

(a) *General prohibition.* In addition to the license requirements for items specified on the CCL, you may not export, reexport, or transfer (in-country) without a license any item subject to the EAR meeting the product scope in paragraph (a)(1) of this section when you have ''knowledge'' at the time of export, reexport, or transfer (in-country) that the item is destined for the end-use described in paragraph (a)(2) of this section.

(1) *Product scope.* Any of the following items meet the product scope of the prohibition in this section:

(i) An integrated circuit (IC) subject to the EAR and specified in ECCN 3A001, 3A991, 4A994, 5A002, 5A004, or 5A992 when you know the item will be used in an end use described under paragraph (a)(2)(i) or (ii) of this section;

(ii) A computer, ''electronic assembly,'' or ''component'' subject to the EAR and specified in ECCN 4A003, 4A004, 4A994, 5A002, 5A004, or 5A992 when you know the item will be used in an end use described under paragraph (a)(2)(i) or (ii) of this section;

(iii) Any items subject to the EAR when you know the items will be used in an end use described in paragraphs (a)(2)(iii)(A) through (C) of this section;

(iv) Any items subject to the EAR and classified in an ECCN in Product Groups B, C, D, or E in Category 3 of the CCL when you know the items will be used in an end use described in paragraph (a)(2)(iv) of this section; or

(v) Any item subject to the EAR when you know the item will be used in an end use described in paragraph (a)(2)(v) of this section.

(2) *End-use scope.* The following activities meet the end-use scope of the prohibition in this section:

(i) The ''development,'' ''production,'' ''use,'' operation, installation (including on-site installation), maintenance (checking), repair, overhaul, or refurbishing of a ''supercomputer'' located in or destined to the PRC;

(ii) The incorporation into, or the ''development'' or ''production'' of any ''component'' or ''equipment'' that will be used in a ''supercomputer'' located in or destined to the PRC; or

(iii) The ''development'' or ''production,'' of integrated circuits at a semiconductor fabrication ''facility'' located in the PRC that fabricates integrated circuits meeting any of the following criteria:

(A) Logic integrated circuits using a non-planar transistor architecture or with a ''production'' technology node of 16/14 nanometers or less;

(B) NOT AND (NAND) memory integrated circuits with 128 layers or more; or

(C) Dynamic random-access memory (DRAM) integrated circuits using a ''production'' technology node of 18 nanometer half-pitch or less; or

(iv) The ''development'' or ''production'' of integrated circuits at any semiconductor fabrication ''facility'' located in the PRC, but you do not know whether such semiconductor fabrication ''facility'' fabricates integrated circuits that meet any of the criteria in paragraphs (a)(2)(iii)(A) through (C) of this section; or

(v) The ''development'' or ''production'' in the PRC of any ''parts,'' ''components,'' or ''equipment'' specified under ECCN 3B001, 3B002, 3B090, 3B611, 3B991, or 3B992.

(b) *Additional prohibition on persons informed by BIS.* BIS may inform persons, either individually by specific notice or through amendment to the EAR published in the **Federal Register**, that a license is required for a specific export, reexport, or transfer (in-country) of any item subject to the EAR to a certain end-user, because there is an unacceptable risk of use in, or diversion to, the activities specified in paragraph (a)(2) of this section. Specific notice is to be given only by, or at the direction of, the Deputy Assistant Secretary for Export Administration. When such notice is provided orally, it will be followed by a written notice within two working days signed by the Deputy Assistant Secretary for Export Administration or the Deputy Assistant Secretary's designee. However, the absence of any such notification does not excuse persons from compliance with the license requirements of paragraph (a) of this section.

(c) *License exceptions.* No license exceptions may overcome the prohibition described in paragraph (a) of this section.

(d) *License review standards.* There is a presumption of denial for applications to export, reexport, or transfer (in-country) items described in paragraph (a)(1) of this section that are for end uses described in paragraph (a)(2) of this section, except for items controlled under paragraph (a)(2)(iii) of this section for end users in China that are headquartered in the United States or in a Country Group A:5 or A:6 country,

which will be considered on a case-by-case basis taking into account factors including technology level, customers and compliance plans.

■ 19. Effective on October 21, 2022, supplement no. 4 is amended by:

■ a. Revising Under CHINA the entries for ''Beijing Institute of Technology,'' ''Beijing Sensetime Technology Development Co., Ltd.,'' ''Changsha Jingjia Microelectronics Co., Ltd.,'' ''Chengdu Haiguang Integrated Circuit,'' ''Chengdu Haiguang Microelectronics Technology,'' ''China Aerospace Science and Technology Corporation (CASC) 9th Academy 772 Research Institute,'' ''Dahua Technology,'' ''Harbin institute of Technology,'' ''Higon,'' ''IFLYTEK,'' ''Intellifusion,'' ''Megvii Technology,'' ''National Supercomputing Center Changsha (NSCC–CS),'' ''National Supercomputing Center Guangzhou (NSCC–GZ),'' ''National Supercomputing Center Jinan,'' ''National Supercomputing Center Shenzhen,'' ''National Supercomputing Center Tianjin (NSCC–TJ),'' ''National Supercomputing Center Wuxi,'' ''National Supercomputer Center Zhengzhou,'' ''National University of Defense Technology (NUDT),'' ''New H3C Semiconductor Technologies Co., Ltd.,'' ''Northwestern Polytechnical University,'' ''Shanghai High-Performance Integrated Circuit Design Center,'' ''Sugon,'' ''Sunway Microelectronics,'' ''Tianjin Phytium Information Technology,'' ''Wuxi Jiangnan Institute of Computing Technology,'' and ''Yitu Technologies''; and

■ b. Revising footnote 1 and adding footnote 4.

The revisions and addition read as follows:

Supplement No. 4 to Part 744—Entity List

* * * * *

Country	Entity	License requirement	License review policy	**Federal Register** citation
*	* * *	*	* *	*
CHINA, PEOPLE'S REPUBLIC OF.	* * *	*	* *	*
	Beijing Institute of Technology, No. 5 South Zhongguancun Street, Haidian District, Beijing, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	85 FR 83420, 12/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* * *	*	* *	*
	Beijing Sensetime Technology Development Co., Ltd., a.k.a., the following two aliases: —Beijing Shangtang Technology Development Co., Ltd.; *and* —Sense Time. 5F Block B, Science and Technology Building, Tsing-hua Science Park, Haidian District, Beijing, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Case-by-case review for ECCNs 1A004.c, 1A004.d, 1A995, 1A999.a, 1D003, 2A983, 2D983, and 2E983, and for EAR99 items described in the Note to ECCN 1A995; case-by-case review for items necessary to detect, identify and treat infectious disease; and presumption of denial for all other items subject to the EAR.	84 FR 54004, 10/9/19. 85 FR 34505, 6/5/20. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* * *	*	* *	*
	Changsha Jingjia Microelectronics Co., Ltd.,902, Building B1, Lugu Science and Technology Innovation Pioneer Park, 1698 Yuelu West Ave., Changsha High-tech Development Zone; *and* Building 3, Changsha Productivity Promotion Center, No. 2, Lujing Rd., Yuelu District, Changsha City, Hunan Province; *and* No. 1, Meixihu Road, Yuelu District, Changsha City, Hunan Province, 410221; *and* Room 1501, Aipu Building, 395 Xinshi North Road, Shijiazhuang City, Hebei Province, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 71560, 12/17/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* * *	*	* *	*
	Chengdu Haiguang Integrated Circuit, a.k.a., the following two aliases: —Hygon; *and* —Chengdu Haiguang Jincheng Dianlu Sheji. China (Sichuan) Free Trade Zone, No. 22–31, 11th Floor, E5, Tianfu Software Park, No. 1366, Middle Section of Tianfu Avenue, Chengdu High-tech Zone, Chengdu, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 29373, 6/24/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.

Country	Entity	License requirement	License review policy	Federal Register citation
	Chengdu Haiguang Microelectronics Technology, a.k.a., the following two aliases: —HMC; *and* —Chengdu Haiguang Wei Dianzi Jishu. China (Sichuan) Free Trade Zone, No. 23–32, 12th Floor, E5, Tianfu Software Park, No. 1366, Middle Section of Tianfu Avenue, Chengdu High-tech Zone, Chengdu, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 29373, 6/24/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	China Aerospace Science and Technology Corporation (CASC) 9th Academy 772 Research Institute, a.k.a., the following four aliases: —772 Research Institute; —Beijing Institute of Microelectronics Technology; —Beijing Microelectronics Technology Institute; *and* —BMTI. No. 2, Siyingmen North Road, Donggaodi, Fengtai District, Beijing, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	87 FR 51877, 8/24/22. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	Dahua Technology, 807, Block A, Meike Building No. 506, Beijing South Road, New City, Urumqi, Xinjiang, China; 1199 Bin'an Road, Binjiang High-tech Zone, Hangzhou, China; *and* 6/F, Block A, Dacheng Erya, Huizhan Avenue, Urumqi, China; *and* No. 1187, Bin'an Road, Binjiang District, Hangzhou City, Zhejiang Province, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 54004, 10/9/19. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	Harbin Institute of Technology, No. 92 Xidazhi Street, Nangang District, Harbin, Heilongjiang, China; *and* No. 92 West Dazhi Street, Nangang District, Harbin, Heilongjiang, China; *and* No. 2 West Wenhua Road, Weihai, Shandong, China; *and* Pingshan 1st Road, Shenzhen, Guangdong, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	85 FR 34497, 6/5/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	Higon, a.k.a., the following five aliases: —Higon Information Technology; —Haiguang Xinxi Jishu Youxian Gongsi; —THATIC; —Tianjing Haiguang Advanced Technology Investment; *and* —Tianjing Haiguang Xianjin Jishu Touzi Youxian Gongsi. Industrial Incubation-3–8, North 2–204, 18 Haitai West Road, Huayuan Industrial Zone, Tianjin, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 29373, 6/24/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*

Country	Entity	License requirement	License review policy	**Federal Register** citation
	IFLYTEK, National Intelligent Speech High-tech Industrialization Base, No. 666, Wangjiang Road West, Hefei City, Anhui Province, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Case-by-case review for ECCNs 1A004.c, 1A004.d, 1A995, 1A999.a, 1D003, 2A983, 2D983, and 2E983, and for EAR99 items described in the Note to ECCN 1A995; case-by-case review for items necessary to detect, identify and treat infectious disease; and presumption of denial for all other items subject to the EAR.	84 FR 54004, 10/9/19. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	Intellifusion, a.k.a., the following two aliases: —Shenzhen Yuntian Lifei Technology Co., Ltd.; —Yuntian Lifei. 1st Floor, Building 17, Shenzhen Dayun Software Town, 8288 Longgang Avenue, Yuanshan District, Longgang District, Shenzhen, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Case-by-case review for ECCNs 1A004.c, 1A004.d, 1A995, 1A999.a, 1D003, 2A983, 2D983, and 2E983, and for EAR99 items described in the Note to ECCN 1A995; case-by-case review for items necessary to detect, identify and treat infectious disease; and presumption of denial for all other items subject to the EAR.	85 FR 34505, 6/5/20. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	Megvii Technology, 3rd Floor, Block A, Rongke Information Center, No. 2 South Road, Haidian District, Beijing, China; *and* Floor 3rd Unit A Raycom Infotech Park, No 2 Kexueyuan, Beijing, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Case-by-case review for ECCNs 1A004.c, 1A004.d, 1A995, 1A999.a, 1D003, 2A983, 2D983, and 2E983, and for EAR99 items described in the Note to ECCN 1A995; case-by-case review for items necessary to detect, identify and treat infectious disease; and presumption of denial for all other items subject to the EAR.	84 FR 54004, 10/9/19. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	* *	*	* *	*
	National Supercomputing Center Changsha (NSCC–CS), Changsha City, Hunan Province, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	80 FR 8527, 2/18/15. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National Supercomputing Center Guangzhou (NSCC–GZ), Sun Yat-Sen University, University City, Guangzhou, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	80 FR 8527, 2/18/15. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National Supercomputing Center Jinan, a.k.a., the following two aliases: —Shandong Computing Center; *and* —NSCC–JN. No. 1768, Xinluo Street, High-tech Development Zone, Jinan City, Shandong Province, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.

Country	Entity	License requirement	License review policy	Federal Register citation
	National Supercomputing Center Shenzhen, a.k.a., the following three aliases: —The National Supercomputing Shenzhen Center; —Shenzhen Cloud Computing Center; *and* —NSCC–SZ. No. 9 Duxue Road, University Town Community, Taoyuan Street, Nanshan District, Shenzhen, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National Supercomputing Center Tianjin (NSCC–TJ), 7th Street, Binhai New Area, Tianjin, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	80 FR 8527, 2/18/15. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National Supercomputing Center Wuxi, a.k.a., the following one alias: —NSCC–WX. No. 1, Yinbai Road, Binhu District, Wuxi City, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National Supercomputer Center Zhengzhou, a.k.a., the following one alias: —NSCC–ZZ. Southeast of the intersection of Fengyang Street and Changchun Road, Zhongyuan District, Zhengzhou City, China; *and* 1st Floor, Building 18, Zhengzhou University (South Campus), Zhengzhou City, China; *and* Room 213, Institute of Drug Research, Zhengzhou University, Changchun Road, High-tech Zone, Zhengzhou City, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
	National University of Defense Technology (NUDT), a.k.a., the following three aliases: —Central South CAD Center; —CSCC; *and* —Hunan Guofang Keji University. Garden Road (Metro West), Changsha City, Kaifu District, Hunan Province, China; *and* 109 Deya Road, Kaifu District, Changsha City, Hunan Province, China; *and* 47 Deya Road, Kaifu District, Changsha City, Hunan Province, China; *and* 147 Deya Road, Kaifu District, Changsha City, Hunan Province, China; *and* 47 Yanwachi, Kaifu District, Changsha, Hunan, China; *and* Wonderful Plaza, Sanyi Avenue, Kaifu District, Changsha, China; *and* No. 54 Beiya Road, Changsha, China; *and* No. 54 Deya Road, Changsha, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	80 FR 8527, 2/18/15. 84 FR 29373, 6/24/19, 87 FR 38925, 6/30/22. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	New H3C Semiconductor Technologies Co., Ltd., No. 1, Floor 1, Unit 1, Building 4, No. 219, Tianhua 2nd Rd., Chengdu High-Tech Zone, China (Sichuan) Pilot Free Trade Zone, China; *and* Beijing Branch—Room 401, 4th Floor, Building 1, No. 8 Yard, Yongjia North Road, Haidian District, Beijing, China; *and* Shanghai Branch—No. 666 Shengxia Rd., 122 Yindong Rd., China (Shanghai) Pilot Free Trade Zone, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 67319. 11/26/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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Country	Entity	License requirement	License review policy	**Federal Register** citation
	Northwestern Polytechnical University, a.k.a., the following three aliases: —Northwestern Polytechnic University; —Northwest Polytechnic University; *and* —Northwest Polytechnical University. 127 Yonyi Xilu, Xi'an 71002 Shaanxi, China; *and* Youyi Xi Lu, Xi'an, Shaanxi, China; *and* No. 1 Bianjia Cun, Xi'an; *and* West Friendship Rd. 59, Xi'an; *and* 3 10 W Apt 3, Xi'an.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	66 FR 24266, 5/14/01. 75 FR 78883, 12/17/10. 77 FR 58006, 9/19/12. 81 FR 64696, 9/20/16. 84 FR 40241, 8/14/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	Shanghai High-Performance Integrated Circuit Design Center, a.k.a., the following two aliases: —Shenwei Micro; *and* —Shanghai High-Performance IC Design Center. No. 399, Bi sheng Road, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai, China; *and* 428 Zhanghen Rd, Zhangjiang High Tech Park, Pudong District, Shanghai, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	Sugon, a.k.a., the following nine aliases: —Dawning; —Dawning Information Industry; —Sugon Information Industry; —Shuguang; —Shuguang Information Industry; —Zhongke Dawn; —Zhongke Shuguang; —Dawning Company; *and* —Tianjin Shuguang Computer Industry. Sugon Building, No. 36 Zhongguancun Software Park, No. 8 Dongbeiwang West Road, Haidian District, Beijing; *and* No. 15, Haitai Huake Street, Huayuan Industrial Zone, Tianjin; *and* Sugon Science and Technology Park, No. 64 Shuimo West Street, Haidian District, Beijing, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 29373, 6/24/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	Sunway Microelectronics, a.k.a., the following two aliases: —Chengdu Shenwei Technology; *and* —Chengdu Sunway Technology. Building D22, Electronic Science and Technology Park, Section 4, Huafu Avenue, Chengdu, China; *and* Shuangxing Avenue, Gongxing Street, Southwest Airport Economic Development Zone, Shuangliu District, Chengdu, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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Country	Entity	License requirement	License review policy	Federal Register citation
	Tianjin Phytium Information Technology, a.k.a., the following three aliases: —Phytium; —Phytium Technology; *and* —Tianjin Feiteng Information Technology. Bldg 5 Xin'an Venture Plaza 1 Haiyuan M Rd Binhai New Area Tianjin, 300450 China; *and* Building 5, Xin'an Chuangye Plaza, No. 1, Haiyuan Middle Road, Binhai New District, Tianjin, China; *and* 8th Floor, Quantum Core Tower, No.27 Zhichun Road, Haidian District, Beijing, China; *and* 10th Floor, Office Building, Wangdefu Kaiyue International Building, No.526 Sanyi Avenue, Kaifu District, Changsha City, Hunan Province; China; *and* Room 101, No. 1012, Hulin Road, Huangpu District, Guangzhou, China; *and* 100 Waihuanxi Rd, 3F–326 Science Pavilion, Panyu District, Guangdong, Guangzhou, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	86 FR 18438, 4/9/21. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	Wuxi Jiangnan Institute of Computing Technology, a.k.a., the following two aliases: —Jiangnan Institute of Computing Technology; *and* —JICT. No. 699, Shanshui East Road, Binhu District, Wuxi City, China, *and* No. 188, Shanshui East Road, Binhu District, Wuxi City, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Presumption of denial	84 FR 29373, 6/24/19. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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	Yitu Technologies, 23F, Shanghai Arch Tower I, 523 Loushanguan Rd, Changning District, Shanghai, China.	For all items subject to the EAR. (See §§ 734.9(e) and 744.11 of the EAR) [4].	Case-by-case review for ECCNs 1A004.c, 1A004.d, 1A995, 1A999.a, 1D003, 2A983, 2D983, and 2E983, and for EAR99 items described in the Note to ECCN 1A995; case-by-case review for items necessary to detect, identify and treat infectious disease; and presumption of denial for all other items subject to the EAR.	84 FR 54004, 10/9/19. 85 FR 44159, 7/22/20. 87 FR [INSERT FR PAGE NUMBER, 10/13/22.
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[1] For this entity, "items subject to the EAR" includes foreign-produced items that are subject to the EAR under § 734.9(e)(1) of the EAR. See § 744.11(a)(2)(i) for related license requirements and license review policy for these items.

* * * * * * *

[4] For this entity, "items subject to the EAR" includes foreign-produced items that are subject to the EAR under § 734.9(e)(2) of the EAR. See § 744.11(a)(2)(ii) for related license requirements and license review policy.

PART 762—RECORDKEEPING

■ 20. The authority citation for part 762 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

■ 21. Effective on October 21, 2022, § 762.2 is amended by redesignating paragraphs (b)(3) through (31) as paragraphs (b)(4) through (32) and adding new paragraph (b)(3) to read as follows:

§ 762.2 Records to be retained.

* * * * *

(b) * * *

(3) Section 734.9(h), Foreign Direct Product (FDP) supply chain certification;

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PART 772—DEFINITIONS OF TERMS

■ 22. The authority citation for part 772 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

■ 23. Effective on October 21, 2022, § 772.1 is amended by adding a definition for ''Supercomputer'' in alphabetical order to read as follows:

§ 772.1 Definitions of terms as used in the Export Administration Regulations (EAR).

* * * * *

Supercomputer. (734, 744) 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 ft^3 or smaller envelope.

Note 1 to ''Supercomputer'': The 41,600 ft^3 envelope corresponds, for example, to a 4x4x6.5 ft rack size and therefore 6,400 ft^2 of floor space. The envelope may include empty floor space between racks as well as adjacent floors for multi-floor systems.

Note 2 to ''Supercomputer'': Typically, a 'supercomputer' is a high-performance multi-rack system having thousands of closely coupled compute cores connected in parallel with networking technology and having a high peak power capacity requiring cooling elements. They are used for computationally intensive tasks including scientific and engineering work. Supercomputers may include shared memory, distributed memory, or a combination of both.

* * * * *

PART 774—THE COMMERCE CONTROL LIST

■ 24. The authority citation for part 774 continues to read as follows:

Authority: 50 U.S.C. 4801–4852; 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* 10 U.S.C. 8720; 10 U.S.C. 8730(e); 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.;* 22 U.S.C. 6004; 42 U.S.C. 2139a; 15 U.S.C. 1824; 50 U.S.C. 4305; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

■ 25. Effective on October 7, 2022, supplement no. 1 to part 774 is amended by adding ECCN 3B090 after ECCN 3B002 and revising ECCNs 3B991, 3D001, and 3E001 to read as follows:

Supplement No. 1 to Part 774—The Commerce Control List

* * * * *

3B090 Semiconductor manufacturing equipment, not Controlled by 3B001, as follows (see List of Items Controlled) and ''specially designed'' ''parts,'' ''components,'' and ''accessories'' therefor.

License Requirements

Reason for Control: RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
RS applies to entire entry.	China (see § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A *Items:*

a. Semiconductor manufacturing deposition equipment, as follows:

a.1. Equipment for depositing cobalt through electroplating processes.

a.2. Chemical vapor deposition equipment capable of deposition of cobalt or tungsten fill metal having a void/seam having a largest dimension less than or equal to 3 nm in the fill metal using a bottom-up fill process.

a.3 Equipment capable of fabricating a metal contact within one processing chamber by:

a.3.a. Depositing a layer using an organometallic tungsten compound while maintaining the wafer substrate temperature between 100 °C and 500 °C; and

a.3.b. Conducting a plasma process where the chemistries include hydrogen, including H_2+N_2 and NH_3.

a.4. Equipment capable of fabricating a metal contact in a vacuum environment by:

a.4.a. Using a surface treatment during a plasma process where the chemistries include hydrogen, including H_2, H_2+N_2, and NH_3, while maintaining the wafer substrate temperature between 100 °C and 500 °C;

a.4.b. Using a surface treatment consisting of a plasma process where the chemistries include oxygen (including O_2 and O_3) while maintaining the wafer substrate temperature between 40 °C and 500 °C; and

a.4.c. Depositing a tungsten layer while maintaining the wafer substrate temperature between 100 °C and 500 °C.

a.5. Equipment capable of depositing a cobalt metal layer selectively in a vacuum environment where the first step uses a remote plasma generator and an ion filter, and the second step is the deposition of the cobalt layer using an organometallic compound.

Note: *This control does not apply to equipment that is non-selective.*

a.6. Physical vapor deposition equipment capable of depositing a cobalt layer with a thickness of 10 nm or less on a top surface of a copper or cobalt metal interconnect.

a.7. Atomic layer deposition equipment capable of depositing a 'work function metal' for the purpose of adjusting transistor electrical parameters by delivering an organometallic aluminum compound and a titanium halide compound onto a wafer substrate.

Technical note: *'Work function metal' is a material that controls the threshold voltage of a transistor.*

a.8. Equipment capable of fabricating a metal contact in a vacuum environment by depositing all of the following:

a.8.a. A titanium nitride (TiN) or tungsten carbide (WC) layer using an organometallic compound while maintaining the wafer substrate temperature between 20 °C and 500 °C;

a.8.b. A cobalt layer using a physical sputter deposition technique where the process pressure is 1–100 mTorr while maintaining the wafer substrate temperature below 500 °C; and

a.8.c. A cobalt layer using an organometallic compound, where the process pressure is 1–100 Torr, and the wafer substrate temperature is maintained between 20 °C and 500 °C.

a.9. Equipment capable of fabricating copper metal interconnects in a vacuum environment that deposits all of the following:

a.9.a. A cobalt or ruthenium layer using organometallic compound where the process pressure is 1–100 Torr, and the wafer substrate temperature is maintained between 20 °C and 500 °C; and

a.9.b. A copper layer using a physical vapor deposition technique where the process pressure is 1–100m Torr and the wafer substrate temperature is maintained below 500 °C.

a.10. Equipment capable of area selective deposition of a barrier or liner using an organometallic compound.

Note: *3B090.a.10 includes equipment capable of area selective deposition of a barrier layer to enable fill metal contact to an underlying electrical conductor without a barrier layer at the fill metal via interface to an underlying electrical conductor.*

a.11. Atomic layer deposition equipment capable of producing a void/seam free fill of tungsten or cobalt in a structure having an aspect ratio greater than 5:1, with openings smaller than 40 nm, and at temperatures less than 500 °C.

* * * * *

3B991 Equipment, not controlled by 3B001 or 3B090, for the manufacture of electronic ''parts,'' ''components'' and materials, and ''specially designed'' ''parts,'' ''components'' and ''accessories'' therefor.

License Requirements

Reason for Control: AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: N/A

Related Definitions: 'Sputtering' is an overlay coating process wherein positively charged ions are accelerated by an electric field towards the surface of a target (coating material). The kinetic energy of the impacting ions is sufficient to cause target surface atoms to be released and deposited on the substrate. (Note: Triode, magnetron or radio frequency sputtering to increase adhesion of coating and rate of deposition are ordinary modifications of the process.)

Items:

a. Equipment ''specially designed'' for the manufacture of electron tubes, optical elements and ''specially designed'' ''parts'' and ''components'' therefor controlled by 3A001 or 3A991;

b. Equipment ''specially designed'' for the manufacture of semiconductor devices, integrated circuits and ''electronic assemblies'', as follows, and systems incorporating or having the characteristics of such equipment:

Note: *3B991.b also controls equipment used or modified for use in the manufacture of other devices, such as imaging devices, electro-optical devices, acoustic-wave devices.*

b.1. Equipment for the processing of materials for the manufacture of devices, ''parts'' and ''components'' as specified in the heading of 3B991.b, as follows:

Note: *3B991 does not control quartz furnace tubes, furnace liners, paddles, boats (except ''specially designed'' caged boats), bubblers, cassettes or crucibles ''specially designed'' for the processing equipment controlled by 3B991.b.1.*

b.1.a. Equipment for producing polycrystalline silicon and materials controlled by 3C001;

b.1.b. Equipment ''specially designed'' for purifying or processing III/V and II/VI semiconductor materials controlled by 3C001, 3C002, 3C003, 3C004, or 3C005 except crystal pullers, for which see 3B991.b.1.c below;

b.1.c. Crystal pullers and furnaces, as follows:

Note: *3B991.b.1.c does not control diffusion and oxidation furnaces.*

b.1.c.1. Annealing or recrystallizing equipment other than constant temperature furnaces employing high rates of energy transfer capable of processing wafers at a rate exceeding 0.005 m^2 per minute;

b.1.c.2. ''Stored program controlled'' crystal pullers having any of the following characteristics:

b.1.c.2.a. Rechargeable without replacing the crucible container;

b.1.c.2.b. Capable of operation at pressures above 2.5×10^5 Pa; *or*

b.1.c.2.c. Capable of pulling crystals of a diameter exceeding 100 mm;

b.1.d. ''Stored program controlled'' equipment for epitaxial growth having any of the following characteristics:

b.1.d.1. Capable of producing silicon layer with a thickness uniform to less than ±2.5% across a distance of 200 mm or more;

b.1.d.2. Capable of producing a layer of any material other than silicon with a thickness uniformity across the wafer of equal to or better than ± 3.5%; *or*

b.1.d.3. Rotation of individual wafers during processing;

b.1.e. Molecular beam epitaxial growth equipment;

b.1.f. Magnetically enhanced 'sputtering' equipment with ''specially designed'' integral load locks capable of transferring wafers in an isolated vacuum environment;

b.1.g. Equipment ''specially designed'' for ion implantation, ion-enhanced or photo-enhanced diffusion, having any of the following characteristics:

b.1.g.1. Patterning capability;

b.1.g.2. Beam energy (accelerating voltage) exceeding 200 keV;

b.1.g.3 Optimized to operate at a beam energy (accelerating voltage) of less than 10 keV; *or*

b.1.g.4. Capable of high energy oxygen implant into a heated ''substrate'';

b.1.h. ''Stored program controlled'' equipment for the selective removal (etching) by means of anisotropic dry methods (*e.g.,* plasma), as follows:

b.1.h.1. Batch types having either of the following:

b.1.h.1.a. End-point detection, other than optical emission spectroscopy types; *or*

b.1.h.1.b. Reactor operational (etching) pressure of 26.66 Pa or less;

b.1.h.2. Single wafer types having any of the following:

b.1.h.2.a. End-point detection, other than optical emission spectroscopy types;

b.1.h.2.b. Reactor operational (etching) pressure of 26.66 Pa or less; *or*

b.1.h.2.c. Cassette-to-cassette and load locks wafer handling;

Notes: *1. ''Batch types'' refers to machines not ''specially designed'' for production processing of single wafers. Such machines can process two or more wafers simultaneously with common process parameters, e.g., RF power, temperature, etch gas species, flow rates.*

2. ''Single wafer types'' refers to machines ''specially designed'' for production processing of single wafers. These machines may use automatic wafer handling techniques to load a single wafer into the equipment for processing. The definition includes equipment that can load and process several wafers but where the etching parameters, e.g., RF power or end point, can be independently determined for each individual wafer.

b.1.i. ''Chemical vapor deposition'' (CVD) equipment, *e.g.,* plasma-enhanced CVD (PECVD) or photo-enhanced CVD, for semiconductor device manufacturing, having either of the following capabilities, for deposition of oxides, nitrides, metals or polysilicon:

b.1.i.1. ''Chemical vapor deposition'' equipment operating below 10^5 Pa; *or*

b.1.i.2. PECVD equipment operating either below 60 Pa (450 millitorr) or having automatic cassette-to-cassette and load lock wafer handling;

Note: *3B991.b.1.i does not control low pressure ''chemical vapor deposition'' (LPCVD) systems or reactive ''sputtering'' equipment.*

b.1.j. Electron beam systems ''specially designed'' or modified for mask making or semiconductor device processing having any of the following characteristics:

b.1.j.1. Electrostatic beam deflection;

b.1.j.2. Shaped, non-Gaussian beam profile;

b.1.j.3. Digital-to-analog conversion rate exceeding 3 MHz;

b.1.j.4. Digital-to-analog conversion accuracy exceeding 12 bit; *or*

b.1.j.5. Target-to-beam position feedback control precision of 1 micrometer or finer;

Note: *3B991.b.1.j does not control electron beam deposition systems or general purpose scanning electron microscopes.*

b.1.k. Surface finishing equipment for the processing of semiconductor wafers as follows:

b.1.k.1. ''Specially designed'' equipment for backside processing of wafers thinner than 100 micrometer and the subsequent separation thereof; *or*

b.1.k.2. ''Specially designed'' equipment for achieving a surface roughness of the active surface of a processed wafer with a two-sigma value of 2 micrometer or less, total indicator reading (TIR);

Note: *3B991.b.1.k does not control single-side lapping and polishing equipment for wafer surface finishing.*

b.1.l. Interconnection equipment which includes common single or multiple vacuum chambers ''specially designed'' to permit the integration of any equipment controlled by 3B991 into a complete system;

b.1.m. ''Stored program controlled'' equipment using ''lasers'' for the repair or trimming of ''monolithic integrated circuits'' with either of the following characteristics:

b.1.m.1. Positioning accuracy less than ± 1 micrometer; *or*

b.1.m.2. Spot size (kerf width) less than 3 micrometer.

b.2. Masks, mask ''substrates,'' mask-making equipment and image transfer equipment for the manufacture of devices, ''parts'' and ''components'' as specified in the heading of 3B991, as follows:

Note: *The term ''masks'' refers to those used in electron beam lithography, X-ray lithography, and ultraviolet lithography, as well as the usual ultraviolet and visible photo-lithography.*

b.2.a. Finished masks, reticles and designs therefor, except:

b.2.a.1. Finished masks or reticles for the production of unembargoed integrated circuits; *or*

b.2.a.2. Masks or reticles, having both of the following characteristics:

b.2.a.2.a. Their design is based on geometries of 2.5 micrometer or more; *and*

b.2.a.2.b. The design does not include special features to alter the intended use by means of production equipment or ''software'';

b.2.b. Mask ''substrates'' as follows:

b.2.b.1. Hard surface (*e.g.,* chromium, silicon, molybdenum) coated ''substrates'' (*e.g.,* glass, quartz, sapphire) for the preparation of masks having dimensions exceeding 125 mm x 125 mm; *or*

b.2.b.2. ''Substrates'' ''specially designed'' for X-ray masks;

b.2.c. Equipment, other than general purpose computers, ''specially designed'' for computer aided design (CAD) of semiconductor devices or integrated circuits;

b.2.d. Equipment or machines, as follows, for mask or reticle fabrication:

b.2.d.1. Photo-optical step and repeat cameras capable of producing arrays larger than 100 mm x 100 mm, or capable of producing a single exposure larger than 6 mm x 6 mm in the image (*i.e.,* focal) plane, or capable of producing line widths of less than 2.5 micrometer in the photoresist on the ''substrate'';

b.2.d.2. Mask or reticle fabrication equipment using ion or ''laser'' beam lithography capable of producing line widths of less than 2.5 micrometer; *or*

b.2.d.3. Equipment or holders for altering masks or reticles or adding pellicles to remove defects;

Note: *3B991.b.2.d.1 and b.2.d.2 do not control mask fabrication equipment using photo-optical methods which was either commercially available before the 1st January, 1980, or has a performance no better than such equipment.*

b.2.e. ''Stored program controlled'' equipment for the inspection of masks, reticles or pellicles with:

b.2.e.1. A resolution of 0.25 micrometer or finer; *and*

b.2.e.2. A precision of 0.75 micrometer or finer over a distance in one or two coordinates of 63.5 mm or more;

Note: *3B991.b.2.e does not control general purpose scanning electron microscopes except when ''specially designed'' and instrumented for automatic pattern inspection.*

b.2.f. Align and expose equipment for wafer production using photo-optical or X-ray methods, *e.g.,* lithography equipment, including both projection image transfer equipment and step and repeat (direct step on wafer) or step and scan (scanner) equipment, capable of performing any of the following functions:

Note: *3B991.b.2.f does not control photo-optical contact and proximity mask align and expose equipment or contact image transfer equipment.*

b.2.f.1. Production of a pattern size of less than 2.5 micrometer;

b.2.f.2. Alignment with a precision finer than ± 0.25 micrometer (3 sigma);

b.2.f.3. Machine-to-machine overlay no better than ± 0.3 micrometer; *or*

b.2.f.4. A light source wavelength shorter than 400 nm;

b.2.g. Electron beam, ion beam or X-ray equipment for projection image transfer capable of producing patterns less than 2.5 micrometer;

Note: *For focused, deflected-beam systems(direct write systems), see 3B991.b.1.j or b.10.*

b.2.h. Equipment using ''lasers'' for direct write on wafers capable of producing patterns less than 2.5 micrometer.

b.3. Equipment for the assembly of integrated circuits, as follows:

b.3.a. ''Stored program controlled'' die bonders having all of the following characteristics:

b.3.a.1. ''Specially designed'' for ''hybrid integrated circuits'';

b.3.a.2. X–Y stage positioning travel exceeding 37.5 x 37.5 mm; *and*

b.3.a.3. Placement accuracy in the X–Y plane of finer than ± 10 micrometer;

b.3.b. ''Stored program controlled'' equipment for producing multiple bonds in a single operation (*e.g.,* beam lead bonders, chip carrier bonders, tape bonders);

b.3.c. Semi-automatic or automatic hot cap sealers, in which the cap is heated locally to a higher temperature than the body of the package, ''specially designed'' for ceramic microcircuit packages controlled by 3A001 and that have a throughput equal to or more than one package per minute.

Note: *3B991.b.3 does not control general purpose resistance type spot welders.*

b.4. Filters for clean rooms capable of providing an air environment of 10 or less particles of 0.3 micrometer or smaller per 0.02832 m^3 and filter materials therefor.

* * * * *

3D001 ''Software'' ''specially designed'' for the ''development'' or ''production'' of commodities controlled by 3A001.b to 3A002.h, or 3B (except 3B991 and 3B992).

License Requirements

Reason for Control: NS, RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
NS applies to "software" for commodities controlled by 3A001.b to 3A001.h, 3A002, and 3B.	NS Column 1
RS applies to "software" for commodities controlled by 3B090.	China (see § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

Reporting Requirements

See § 743.1 of the EAR for reporting requirements for exports under License Exceptions, Special Comprehensive Licenses, and Validated End-User authorizations.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: Yes, except for ''software'' ''specially designed'' for the ''development'' or ''production'' of Traveling Wave Tube Amplifiers described in 3A001.b.8 having operating frequencies exceeding 18 GHz.

Special Conditions for STA

STA: License Exception STA may not be used to ship or transmit ''software'' ''specially designed'' for the ''development'' or ''production'' of equipment specified by 3A002.g.1 or 3B001.a.2 to any of the destinations listed in Country Group A:6 (See Supplement No.1 to part 740 of the EAR).

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

The list of items controlled is contained in the ECCN heading.

* * * * *

3E001 ''Technology'' according to the General Technology Note for the ''development'' or ''production'' of commodities controlled by 3A (except 3A980, 3A981, 3A991, 3A992, or 3A999), 3B (except 3B991 or 3B992) or 3C (except 3C992).

License Requirements

Reason for Control: NS, MT, NP, RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
NS applies to "technology" for commodities controlled by 3A001, 3A002, 3A003, 3B001, 3B002, or 3C001 to 3C006..	NS Column 1
MT applies to "technology" for commodities controlled by. 3A001 or 3A101 for MT reasons.	MT Column 1
NP applies to "technology" for commodities controlled by. 3A001, 3A201, or 3A225 to 3A234 for NP reasons.	NP Column 1
RS applies to "technology" for commodities controlled by 3B090 or "software" specified by 3D001 (for 3B090 commodities)..	China (See § 742.6(a)(6)).
AT applies to entire entry.	AT Column 1

License Requirements Note: *See § 744.17 of the EAR for additional license requirements for microprocessors having a processing speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more, including those incorporating ''information security'' functionality, and associated ''software'' and ''technology'' for the ''production'' or ''development'' of such microprocessors.*

Reporting Requirements

See § 743.1 of the EAR for reporting requirements for exports under License Exceptions, Special Comprehensive Licenses, and Validated End-User authorizations.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: Yes, except N/A for MT, and ''technology'' for the ''development'' or ''production'' of: (a) vacuum electronic device amplifiers described in 3A001.b.8, having operating frequencies exceeding 19 GHz; (b) solar cells, coverglass-interconnect-cells or covered-interconnect-cells (CIC) ''assemblies'', solar arrays and/or solar panels described in 3A001.e.4; (c) ''Monolithic Microwave Integrated Circuit'' (''MMIC'') amplifiers in 3A001.b.2; and (d) discrete microwave transistors in 3A001.b.3.

Special Conditions for STA

STA: License Exception STA may not be used to ship or transmit ''technology''

according to the General Technology Note for the ''development'' or ''production'' of equipment specified by ECCNs 3A002.g.1 or 3B001.a.2 to any of the destinations listed in Country Group A:6 (See Supplement No.1 to part 740 of the EAR). License Exception STA may not be used to ship or transmit ''technology'' according to the General Technology Note for the ''development'' or ''production'' of components specified by ECCN 3A001.b.2 or b.3 to any of the destinations listed in Country Group A:5 or A:6 (See Supplement No.1 to part 740 of the EAR).

List of Items Controlled

Related Controls: (1)''Technology'' according to the General Technology Note for the ''development'' or ''production'' of certain ''space-qualified'' atomic frequency standards described in Category XV(e)(9), MMICs described in Category XV(e)(14), and oscillators described in Category XV(e)(15) of the USML are ''subject to the ITAR'' (see 22 CFR parts 120 through 130). See also 3E101, 3E201 and 9E515. (2) ''Technology'' for ''development'' or ''production'' of ''Microwave Monolithic Integrated Circuits'' (''MMIC'') amplifiers in 3A001.b.2 is controlled in this ECCN 3E001; 5E001.d refers only to that additional ''technology'' ''required'' for telecommunications.

Related Definition: N/A

Items:

The list of items controlled is contained in the ECCN heading.

Note 1: 3E001 does not control ''technology'' for equipment or ''components'' controlled by 3A003.

Note 2: 3E001 does not control ''technology'' for integrated circuits controlled by 3A001.a.3 to a.14, having all of the following:

(a) Using ''technology'' at or above 0.130 μm; and

(b) Incorporating multi-layer structures with three or fewer metal layers.

Note 3: 3E001 does not apply to 'Process Design Kits' ('PDKs') unless they include libraries implementing functions or technologies for items specified by 3A001.

Technical Note: A 'Process Design Kit' ('PDK') is a software tool provided by a semiconductor manufacturer to ensure that the required design practices and rules are taken into account in order to successfully produce a specific integrated circuit design in a specific semiconductor process, in accordance with technological and manufacturing constraints (each semiconductor manufacturing process has its particular 'PDK').

■ 26. Effective on October 21, 2022, supplement no. 1 to part 774 is further amended by:

■ a. Under Category 3, Product Group A, revising Note 3;

■ b. Adding ECCN 3A090 after ECCN 3A003;

■ c. Revising ECCNs 3A991, 3D001, and 3E001;

■ d. Adding ECCN 4A090 after ECCN 4A005;

■ e. Revising ECCN 4A994;

■ f. Adding ECCN 4D090 after ECCN 4D004; and

■ g. Revising ECCNs 4D994, 4E001, 5A992, and 5D992.

The additions and revisions read as follows:

Supplement No. 1 to Part 774—The Commerce Control List

* * * * *

Category 3—Electronics A. ''**End Items,**'' ''**Equipment,**'' ''**Accessories,**'' ''**Attachments,**'' ''**Parts,**'' ''**Components,**'' **and** ''**Systems**''

* * * * *

Note 3: *The status of wafers (finished or unfinished), in which the function has been determined, is to be evaluated against the parameters of items in 3A.*

* * * * *

3A090 Integrated circuits as follows (see List of Items Controlled).

License Requirements

Reason for Control: RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
RS applies to entire entry.	China (See § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A

GBS N/A

List of Items Controlled

Related Controls: See ECCNs 3D001 and 3E001 for associated technology and software controls.

Related Definitions: N/A

Items:

a. Integrated circuits that have or are programmable to have an aggregate bidirectional transfer rate over all inputs and outputs of 600 Gbyte/s or more to or from integrated circuits other than volatile memories, and any of the following:

a.1. One or more digital processor units executing machine instructions having a bit length per operation multiplied by processing performance measured in TOPS, aggregated over all processor units, of 4800 or more;

a.2. One or more digital 'primitive computational units,' excluding those units contributing to the execution of machine instructions relevant to the calculation of TOPS for 3A090.a.1, having a bit length per operation multiplied by processing performance measured in TOPS, aggregated over all computational units, of 4800 or more;

a.3. One or more analog, multi-value, or multi-level 'primitive computational units' having a processing performance measured in TOPS multiplied by 8, aggregated over all computational units, of 4800 or more; or

a.4. Any combination of digital processor units and 'primitive computational units' whose calculations according to 3A090.a.1, 3A090.a.2, and 3A090.a.3 sum to 4800 or more.

Note: *Integrated circuits specified by 3A090.a include 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). Examples of integrated circuits are in the Note to 3A001.a.*

Technical Notes:

1. A 'primitive computational unit' is defined as containing zero or more modifiable weights, receiving one or more inputs, and producing one or more outputs. A computational unit is said to perform 2N–1 operations whenever an output is updated based on N inputs, where each modifiable weight contained in the processing element counts as an input. Each input, weight, and output might be an analog signal level or a scalar digital value represented using one or more bits. Such units include:

—*Artificial neurons*
— *Multiply accumulate (MAC) units*
—*Floating-point units (FPUs)*
—*Analog multiplier units*
—*Processing units using memristors, spintronics, or magnonics*
—*Processing units using photonics or non-linear optics*
—*Processing units using analog or multi-level nonvolatile weights*
—*Processing units using multi-level memory or analog memory*
— *Multi-value units*
—*Spiking units*

2. Operations relevant to the calculation of TOPS for 3A090.a include both scalar operations and the scalar constituents of composite operations such as vector operations, matrix operations, and tensor operations. Scalar operations include integer operations, floating-point operations (often measured by FLOPS), fixed-point operations, bit-manipulation operations, and/or bitwise operations.

3. TOPS is Tera Operations Per Second or 10^{12} Operations per Second.

4. The rate of TOPS is to be calculated at its maximum value theoretically possible when all processing elements are operating simultaneously. The rate of TOPS and aggregate bidirectional transfer rate is assumed to be the highest value the manufacturer claims in a manual or brochure for the integrated circuit. For example, the threshold of 4800 bits x TOPS can be met with 600 tera integer operations at 8 bits or 300 tera FLOPS at 16 bits. The bit length of an operation is equal to the highest bit length of any input or output of that operation. Additionally, if an item specified by this entry is designed for operations that achieve different bits x TOPS value, the highest bits x TOPS value should be used for the purposes of 3A090.a.

5. For integrated circuits specified by 3A090.a that provide processing of both sparse and dense matrices, the TOPS values are the values for processing of dense matrices (*e.g.,* without sparsity).

b. [Reserved]

* * * * *

3A991 Electronic devices and ''components,'' not controlled by 3A001.

License Requirements

Reason for Control: AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
AT applies to entire entry.	AT Column 1

License Requirements Note: *See § 744.17 of the EAR for additional license requirements for microprocessors having a processing speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more, including those incorporating ''information security'' functionality, and associated ''software'' and ''technology'' for the ''production'' or ''development'' of such microprocessors.*

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: For associated ''software'' for commodities in this ECCN, see 3D991 and for associated ''technology for commodities in this ECCN, see 3E991.
Related Definitions: N/A
Items:

a. ''Microprocessor microcircuits'', ''microcomputer microcircuits'', and microcontroller microcircuits having any of the following:

a.1. A performance speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more;

a.2. A clock frequency rate exceeding 25 MHz; *or*

a.3. More than one data or instruction bus or serial communication port that provides a direct external interconnection between parallel ''microprocessor microcircuits'' with a transfer rate of 2.5 Mbyte/s;

b. Storage integrated circuits, as follows:

b.1. Electrical erasable programmable read-only memories (EEPROMs) with a storage capacity;

b.1.a. Exceeding 16 Mbits per package for flash memory types; *or*

b.1.b. Exceeding either of the following limits for all other EEPROM types:

b.1.b.1. Exceeding 1 Mbit per package; *or*

b.1.b.2. Exceeding 256 kbit per package and a maximum access time of less than 80 ns;

b.2. Static random access memories (SRAMs) with a storage capacity:

b.2.a. Exceeding 1 Mbit per package; *or*

b.2.b. Exceeding 256 kbit per package and a maximum access time of less than 25 ns;

c. Analog-to-digital converters having any of the following:

c.1. A resolution of 8 bit or more, but less than 12 bit, with an output rate greater than 200 million words per second;

c.2. A resolution of 12 bit with an output rate greater than 105 million words per second;

c.3. A resolution of more than 12 bit but equal to or less than 14 bit with an output rate greater than 10 million words per second; *or*

c.4. A resolution of more than 14 bit with an output rate greater than 2.5 million words per second;

d. Field programmable logic devices having a maximum number of single-ended digital input/outputs between 200 and 700;

e. Fast Fourier Transform (FFT) processors having a rated execution time for a 1,024 point complex FFT of less than 1 ms;

f. Custom integrated circuits for which either the function is unknown, or the control status of the equipment in which the integrated circuits will be used is unknown to the manufacturer, having any of the following:

f.1. More than 144 terminals; *or*

f.2. A typical ''basic propagation delay time'' of less than 0.4 ns;

g. Traveling-wave ''vacuum electronic devices,'' pulsed or continuous wave, as follows:

g.1. Coupled cavity devices, or derivatives thereof;

g.2. Helix devices based on helix, folded waveguide, or serpentine waveguide circuits, *or* derivatives thereof, with any of the following:

g.2.a. An ''instantaneous bandwidth'' of half an octave or more; *and*

g.2.b. The product of the rated average output power (expressed in kW) and the maximum operating frequency (expressed in GHz) of more than 0.2;

g.2.c. An ''instantaneous bandwidth'' of less than half an octave; *and*

g.2.d. The product of the rated average output power (expressed in kW) and the maximum operating frequency (expressed in GHz) of more than 0.4;

h. Flexible waveguides designed for use at frequencies exceeding 40 GHz;

i. Surface acoustic wave and surface skimming (shallow bulk) acoustic wave devices (*i.e.,* ''signal processing'' devices employing elastic waves in materials), having either of the following:

i.1. A carrier frequency exceeding 1 GHz; *or*

i.2. A carrier frequency of 1 GHz or less; *and*

i.2.a. A frequency side-lobe rejection exceeding 55 Db;

i.2.b. A product of the maximum delay time and bandwidth (time in microseconds and bandwidth in MHz) of more than 100; *or*

i.2.c. A dispersive delay of more than 10 microseconds;

j. Cells as follows:

j.1. Primary cells having an energy density of 550 Wh/kg or less at 293 K (20°C);

j.2. Secondary cells having an energy density of 350 Wh/kg or less at 293 K (20°C);

Note: 3A991.j does not control batteries, including single cell batteries.

Technical Notes:

1. For the purpose of 3A991.j energy density (Wh/kg) is calculated from the nominal voltage multiplied by the nominal capacity in ampere-hours divided by the mass in kilograms. If the nominal capacity is not stated, energy density is calculated from the nominal voltage squared then multiplied by the discharge duration in hours divided by the discharge load in Ohms and the mass in kilograms.

2. For the purpose of 3A991.j, a 'cell' is defined as an electrochemical device, which has positive and negative electrodes, and electrolyte, and is a source of electrical energy. It is the basic building block of a battery.

3. For the purpose of 3A991.j.1, a 'primary cell' is a 'cell' that is not designed to be charged by any other source.

4. For the purpose of 3A991.j.2, a 'secondary cell' is a 'cell' that is designed to be charged by an external electrical source.

k. ''Superconductive'' electromagnets or solenoids ''specially designed'' to be fully charged or discharged in less than one minute, having all of the following:

Note: 3A991.k does not control ''superconductive'' electromagnets or solenoids designed for Magnetic Resonance Imaging (MRI) medical equipment.

k.1. Maximum energy delivered during the discharge divided by the duration of the discharge of more than 500 kJ per minute;

k.2. Inner diameter of the current carrying windings of more than 250 mm; *and*

k.3. Rated for a magnetic induction of more than 8T or ''overall current density'' in the winding of more than 300 A/mm^2;

l. Circuits or systems for electromagnetic energy storage, containing ''components'' manufactured from ''superconductive'' materials ''specially designed'' for operation at temperatures below the ''critical temperature'' of at least one of their ''superconductive'' constituents, having all of the following:

l.1. Resonant operating frequencies exceeding 1 MHz;

l.2. A stored energy density of 1 MJ/M^3 or more; *and*

l.3. A discharge time of less than 1 ms;

m. Hydrogen/hydrogen-isotope thyratrons of ceramic-metal construction and rate for a peak current of 500 A or more;

n. Digital integrated circuits based on any compound semiconductor having an equivalent gate count of more than 300 (2 input gates);

o. Solar cells, cell-interconnect-coverglass (CIC) assemblies, solar panels, and solar arrays, which are ''space qualified'' and not controlled by 3A001.e.4.

p. Integrated circuits, n.e.s., having any of the following:

p.1. A processing performance of 8 TOPS or more; or

p.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.

Technical Notes: *For the purposes of 3A991.p:*

1. This ECCN includes but is not limited to central processing units (CPU), graphics processing units (GPU), tensor processing units (TPU), neural processors, in-memory processors, vision processors, text processors, co-processors/accelerators, adaptive processors, and field-programmable logic devices (FPLDs).

2. TOPS is Tera Operations Per Second or 10^{12} Operations per Second.

3. The rate of TOPS is to be calculated at its maximum value theoretically possible

when all processing elements are operating simultaneously. The rate of TOPS and aggregate bidirectional transfer rate is assumed to be the highest value the manufacturer claims in a manual or brochure for the integrated circuit. Operations include both scalar operations and the scalar constituents of composite operations such as vector operations, matrix operations, and tensor operations. Scalar operations include integer operations, floating-point operations (often measured by FLOPS), fixed-point operations, bit-manipulation operations, and/or bitwise operations.

* * * * *

3D001 ''Software''''specially designed'' for the ''development'' or ''production'' of commodities controlled by 3A001.b to 3A002.h, 3A090, or 3B (except 3B991 and 3B992).

License Requirements

Reason for Control: NS, RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
NS applies to ''software'' for commodities controlled by 3A001.b to 3A001.h, 3A002, and 3B.	NS Column 1
RS applies to ''software'' for commodities controlled by 3A090 or 3B090..	China (see § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

Reporting Requirements

See § 743.1 of the EAR for reporting requirements for exports under License Exceptions, Special Comprehensive Licenses, and Validated End-User authorizations.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: Yes, except for ''software'' ''specially designed'' for the ''development'' or ''production'' of Traveling Wave Tube Amplifiers described in 3A001.b.8 having operating frequencies exceeding 18 GHz.

Special Conditions for STA

STA: License Exception STA may not be used to ship or transmit ''software'' ''specially designed'' for the ''development'' or ''production'' of equipment specified by 3A002.g.1 or 3B001.a.2 to any of the destinations listed in Country Group A:6 (See Supplement No.1 to part 740 of the EAR).

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

The list of items controlled is contained in the ECCN heading.

* * * * *

3E001 ''Technology'' according to the General Technology Note for the ''development'' or ''production'' of commodities controlled by 3A (except 3A980, 3A981, 3A991, 3A992, or 3A999), 3B (except 3B991 or 3B992) or 3C (except 3C992).

License Requirements

Reason for Control: NS, MT, NP, RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
NS applies to ''technology'' for commodities controlled by 3A001, 3A002, 3A003, 3B001, 3B002, or 3C001 to 3C006.	NS Column 1.
MT applies to ''technology'' for commodities controlled by 3A001 or 3A101 for MT reasons.	MT Column 1.
NP applies to ''technology'' for commodities controlled by 3A001, 3A201, or 3A225 to 3A234 for NP reasons.	NP Column 1.
RS applies to ''technology'' for commodities controlled by 3A090 or 3B090 or ''software'' specified by 3D001 (for 3A090 or 3B090 commodities).	China (See § 742.6(a)(6)).
RS applies to ''technology'' for commodities controlled in 3A090, when exported from China.	Worldwide (See § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

License Requirements Note: *See § 744.17 of the EAR for additional license requirements for microprocessors having a processing speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more, including those incorporating ''information security'' functionality, and associated ''software'' and ''technology'' for the ''production'' or ''development'' of such microprocessors.*

Reporting Requirements

See § 743.1 of the EAR for reporting requirements for exports under License Exceptions, Special Comprehensive Licenses, and Validated End-User authorizations.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: Yes, except N/A for MT, and ''technology'' for the ''development'' or ''production'' of: (a) vacuum electronic device amplifiers described in 3A001.b.8, having operating frequencies exceeding 19 GHz; (b) solar cells, coverglass-interconnect-cells or covered-interconnect-cells (CIC) ''assemblies'', solar arrays and/or solar panels described in 3A001.e.4; (c) ''Monolithic Microwave Integrated Circuit'' (''MMIC'') amplifiers in 3A001.b.2; and (d) discrete microwave transistors in 3A001.b.3.

Special Conditions for STA

STA: License Exception STA may not be used to ship or transmit ''technology'' according to the General Technology Note for the ''development'' or ''production'' of equipment specified by ECCNs 3A002.g.1 or 3B001.a.2 to any of the destinations listed in Country Group A:6 (See Supplement No.1 to part 740 of the EAR). License Exception STA may not be used to ship or transmit ''technology'' according to the General Technology Note for the ''development'' or ''production'' of components specified by ECCN 3A001.b.2 or b.3 to any of the destinations listed in Country Group A:5 or A:6 (See Supplement No.1 to part 740 of the EAR).

List of Items Controlled

Related Controls: (1) ''Technology'' according to the General Technology Note for the ''development'' or ''production'' of certain ''space-qualified'' atomic frequency standards described in Category XV(e)(9), MMICs described in Category XV(e)(14), and oscillators described in Category XV(e)(15) of the USML are ''subject to the ITAR'' (see 22 CFR parts 120 through 130). See also 3E101, 3E201 and 9E515. (2) ''Technology'' for ''development'' or ''production'' of ''Microwave Monolithic Integrated Circuits'' (''MMIC'') amplifiers in 3A001.b.2 is controlled in this ECCN 3E001; 5E001.d refers only to that additional ''technology'' ''required'' for telecommunications.
Related Definition: N/A
Items:

The list of items controlled is contained in the ECCN heading.

Note 1: *3E001 does not control ''technology'' for equipment or ''components'' controlled by 3A003.*

Note 2: *3E001 does not control ''technology'' for integrated circuits controlled by 3A001.a.3 to a.14, having all of the following:*

(a) Using ''technology'' at or above 0.130 μm; and

(b) Incorporating multi-layer structures with three or fewer metal layers.

Note 3: *3E001 does not apply to 'Process Design Kits' ('PDKs') unless they include libraries implementing functions or technologies for items specified by 3A001.*

Technical Note: *A 'Process Design Kit' ('PDK') is a software tool provided by a semiconductor manufacturer to ensure that the required design practices and rules are taken into account in order to successfully produce a specific integrated circuit design in a specific semiconductor process, in accordance with technological and manufacturing constraints (each semiconductor manufacturing process has its particular 'PDK').*

* * * * *

4A090 Computers as follows (see List of Items Controlled) and related equipment, ''electronic assemblies,'' and ''components'' therefor.

License Requirements

Reason for Control: RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
RS applies to entire entry.	China (see § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: For associated ''software'' for commodities in this ECCN, see 4D090 and for associated ''technology'' for commodities in this ECCN, see 4E001.
Related Definitions: N/A
Items:

a. Computers, ''electronic assemblies,'' and ''components'' containing integrated circuits, any of which exceeds the limit in 3A090.a.

Technical Note: *Computers include ''digital computers,'' ''hybrid computers,'' and analog computers.*

b. Reserved

* * * * *

4A994 Computers, ''electronic assemblies'' and related equipment, not controlled by 4A001 or 4A003, and ''specially designed'' ''parts'' and ''components'' therefor (see List of Items Controlled).

License Requirements

Reason for Control: AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: For associated ''software'' for commodities in this ECCN, see 4D994 and for associated ''technology'' for commodities in this ECCN, see 4E992.
Related Definitions: N/A
Items:

Note 1: *The control status of the ''digital computers'' and related equipment described in 4A994 is determined by the control status of other equipment or systems provided:*

a. The ''digital computers'' or related equipment are essential for the operation of the other equipment or systems;

b. The ''digital computers'' or related equipment are not a ''principal element'' of the other equipment or systems; and

N.B. 1: *The control status of ''signal processing'' or ''image enhancement'' equipment ''specially designed'' for other equipment with functions limited to those required for the other equipment is determined by the control status of the other equipment even if it exceeds the ''principal element'' criterion.*

N.B. 2: *For the control status of ''digital computers'' or related equipment for telecommunications equipment, see Category 5, Part 1 (Telecommunications).*

c. The ''technology'' for the ''digital computers'' and related equipment is determined by 4E.

a. Electronic computers and related equipment, and ''electronic assemblies'' and ''specially designed'' ''parts'' and ''components'' therefor, rated for operation at an ambient temperature above 343 K (70 °C);

b. ''Digital computers'', including equipment of ''signal processing'' or image enhancement'', having an ''Adjusted Peak Performance'' (''APP'') equal to or greater than 0.0128 Weighted TeraFLOPS (WT);

c. ''Electronic assemblies'' that are ''specially designed'' or modified to enhance performance by aggregation of processors, as follows:

c.1. Designed to be capable of aggregation in configurations of 16 or more processors;

c.2. [Reserved];

Note 1: *4A994.c applies only to ''electronic assemblies'' and programmable interconnections with a ''APP'' not exceeding the limits in 4A994.b, when shipped as unintegrated ''electronic assemblies''. It does not apply to ''electronic assemblies'' inherently limited by nature of their design for use as related equipment controlled by 4A994.k.*

Note 2: *4A994.c does not control any ''electronic assembly'' ''specially designed'' for a product or family of products whose maximum configuration does not exceed the limits of 4A994.b.*

d. [Reserved];

e. [Reserved];

f. Equipment for ''signal processing'' or ''image enhancement'' having an ''Adjusted Peak Performance'' (''APP'') equal to or greater than 0.0128 Weighted TeraFLOPS WT;

g. [Reserved];

h. [Reserved];

i. Equipment containing ''terminal interface equipment'' exceeding the limits in 5A991;

j. Equipment ''specially designed'' to provide external interconnection of ''digital computers'' or associated equipment that allows communications at data rates exceeding 80 Mbyte/s.

Note: *4A994.j does not control internal interconnection equipment (e.g., backplanes, buses) passive interconnection equipment, ''network access controllers'' or ''communication channel controllers''.*

k. ''Hybrid computers'' and ''electronic assemblies'' and ''specially designed'' ''parts'' and ''components'' therefor containing analog-to-digital converters having all of the following characteristics:

k.1. 32 channels or more; and

k.2. A resolution of 14 bit (plus sign bit) or more with a conversion rate of 200,000 conversions/s or more.

l. Computers, ''electronic assemblies,'' and ''components,'' n.e.s., containing integrated circuits, any of which exceeds the limit of ECCN 3A991.p.

Technical Note: *For the purposes of 4A994.l, computers include ''digital computers,'' ''hybrid computers,'' and analog computers.*

* * * * *

4D090 ''Software'' ''specially designed'' or modified for the ''development'' or ''production,'' of computers and related equipment, ''electronic assemblies,'' and ''components'' therefor specified in ECCN 4A090.

License Requirements

Reason for Control: RS, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
RS applies to entire entry.	China (See § 742.6(a)(6)).
AT applies to entire entry.	AT Column 1.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: N/A

List of Items Controlled

Related Controls: For associated ''technology'' for software in this ECCN, see 4E001.
Related Definitions: N/A
Items:

The list of items controlled is contained in the ECCN heading.

* * * * *

4D994 ''Software'' other than that controlled in 4D001 ''specially designed'' or modified for the ''development,'' ''production,'' or ''use'' of commodities controlled by 4A101 or 4A994.

License Requirements

Reason for Control: AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
AT applies to entire entry.	AT Column 1

List Based License Exceptions (See Part 740 for a description of all license Exceptions)

TSR: N/A

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

The list of items controlled is contained in the ECCN heading.

* * * * *

4E001 ''Technology'' as follows (see List of Items Controlled).

License Requirements

Reason for Control: NS, MT, RS, CC, AT

Control(s)	*Country chart (See Supp. No. 1 to part 738)*
NS applies to entire entry.	NS Column 1.

Control(s)	Country chart (See Supp. No. 1 to part 738)
MT applies to ''technology'' for items controlled by 4A001.a and 4A101 for MT reasons.	MT Column 1.
RS applies to ''technology'' for commodities controlled by 4A090 or ''software'' specified by 4D090.	China (See § 742.6(a)(6)).
CC applies to ''software'' for computerized finger-print equipment controlled by 4A003 for CC reasons.	CC Column 1.
AT applies to entire entry.	AT Column 1.

Reporting Requirements

See § 743.1 of the EAR for reporting requirements for exports under License Exceptions, and Validated End-User authorizations.

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: Yes, except for the following:

(1) ''Technology'' for the ''development'' or ''production'' of commodities with an ''Adjusted Peak Performance'' (''APP'') exceeding 29 WT or for the ''development'' or ''production'' of commodities controlled by 4A005 or ''software'' controlled by 4D004; or

(2) ''Technology'' for the ''development'' of ''intrusion software''.

APP: Yes to specific countries (see § 740.7 of the EAR for eligibility criteria).

ACE: Yes for 4E001.a (for the ''development'', ''production'' or ''use'' of equipment or ''software'' specified in ECCN 4A005 or 4D004) and for 4E001.c, except to Country Group E:1 or E:2. See § 740.22 of the EAR for eligibility criteria.

Special Conditions for STA

STA: License Exception STA may not be used to ship or transmit ''technology'' according to the General Technology Note for the ''development'' or ''production'' of any of the following equipment or ''software'': a. Equipment specified by ECCN 4A001.a.2; b. ''Digital computers'' having an 'Adjusted Peak Performance' ('APP') exceeding 29 Weighted TeraFLOPS (WT); or c. ''software'' specified in the License Exception STA paragraph found in the License Exception section of ECCN 4D001 to any of the destinations listed in Country Group A:6 (See Supplement No. 1 to part 740 of the EAR); and may not be used to ship or transmit ''software'' specified in 4E001.a (for the ''development'', ''production'' or ''use'' of equipment or ''software'' specified in ECCN 4A005 or 4D004) and 4E001.c to any of the destinations listed in Country Group A:5 or A:6.

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

a. ''Technology'' according to the General Technology Note, for the ''development'', ''production'', or ''use'' of equipment or ''software'' controlled by 4A (except 4A980 or 4A994) or 4D (except 4D980, 4D993, 4D994).

b. ''Technology'' according to the General Technology Note, other than that controlled by 4E001.a, for the ''development'' or ''production'' of equipment as follows:

b.1. ''Digital computers'' having an ''Adjusted Peak Performance'' (''APP'') exceeding 15 Weighted TeraFLOPS (WT);

b.2. ''Electronic assemblies'' ''specially designed'' or modified for enhancing performance by aggregation of processors so that the ''APP'' of the aggregation exceeds the limit in 4E001.b.1.

c. ''Technology'' for the ''development'' of ''intrusion software.''

Note 1: *4E001.a and 4E001.c do not apply to ''vulnerability disclosure'' or ''cyber incident response''.*

Note 2: *Note 1 does not diminish national authorities' rights to ascertain compliance with 4E001.a and 4E001.c.*

* * * * *

5A992 Equipment not controlled by 5A002 (see List of Items Controlled)

License Requirements

Reason for Control: RS, AT

Control(s)	Country chart (See Supp. No. 1 to part 738)
RS applies to items controlled by 5A992.c that meet or exceed the performance parameters of ECCN 3A090 or 4A090.	RS (see § 742.6(a)(6))
AT applies to entire entry.	AT Column 1

License Requirements Note: *See § 744.17 of the EAR for additional license requirements for microprocessors having a processing speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more, including those incorporating ''information security'' functionality, and associated ''software'' and ''technology'' for the ''production'' or ''development'' of such microprocessors.*

List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

a. [Reserved]

b. [Reserved]

c. Commodities classified as mass market encryption commodities in accordance with § 740.17(b) of the EAR.

* * * * *

5D992 ''Information Security'' ''software,'' not controlled by 5D002, as follows (see List of Items Controlled).

License Requirements

Reason for Control: RS, AT

Control(s)	Country chart (See Supp. No. 1 to part 738)
RS applies to items controlled by 5D992.c that meet or exceed the performance parameters of ECCN 3A090 or 4A090.	RS (see § 742.6(a)(6)).
AT applies to entire entry.	AT Column 1.

License Requirements Note: *See § 744.17 of the EAR for additional license requirements for microprocessors having a processing speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more, including those incorporating ''information security'' functionality, and associated ''software'' and ''technology'' for the ''production'' or ''development'' of such microprocessors.*

List Based License Exceptions (See Part 740 for a description of all license exceptions)

TSR: N/A

List of Items Controlled

Related Controls: This entry does not control ''software'' designed or modified to protect against malicious computer damage, *e.g.,* viruses, where the use of ''cryptography'' is limited to authentication, digital signature and/or the decryption of data or files.
Related Definitions: N/A
Items:

a. [Reserved]

b. [Reserved]

c. ''Software'' classified as mass market encryption software in accordance with § 740.17(b) of the EAR.

* * * * *

Thea D. Rozman Kendler,

Assistant Secretary for Export Administration.

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