



DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Parts 740, 744, and 774

[Docket No. 240130-0027]

RIN 0694-AI45

Revision of License Requirements of Certain Cameras, Systems, or Related Components

AGENCY: Bureau of Industry and Security, Commerce.

ACTION: Final rule.

SUMMARY: With this final rule, the Bureau of Industry and Security (BIS) amends the Export Administration Regulations (EAR), which it maintains, by revising license requirements for certain cameras, systems, and related components. These revisions will better align controls with technological and commercial developments, such as the items' global commercial availability, while recognizing the cooperative strategic relationship the United States has with our closest allies. In addition to these changes, BIS is adding controls on certain cameras that are not already controlled by either export control classification number (ECCN) 6A003 or 6A203. These new controls are detailed under new ECCN 6A293, which is a classification for temporary controls for which BIS is seeking multilateral agreement.

DATES: This rule is effective March 8, 2024.

FOR FURTHER INFORMATION CONTACT: For questions on the part 744 changes, contact John Varesi at (202) 482-1114 or John.Varesi@bis.doc.gov. For questions on the part 774 changes, contact Steve Clagett at (202) 482-1641 or steven.clagett@bis.doc.gov.

SUPPLEMENTARY INFORMATION:

Background

BIS is amending the EAR (15 CFR parts 730-774) by revising the license requirements for cameras in part 744 and by adding an ECCN that controls additional cameras to part 774. Background regarding these changes is detailed below.

Part 744

Modification to Existing Camera License Requirements

This rule revises paragraph (a)(1) to § 744.9 of the EAR. Prior to the effective date of this rule, paragraph (a)(1) was divided into (a)(1)(i) and (a)(1)(ii). To help ensure the restrictions in this paragraph are easily understood, this rule restructures the paragraph by adding (a)(1)(iii). The introductory text of (a)(1) will retain the same background information regarding applicable reasons for control, but the specific items discussed will be divided among (a)(1)(i) through (iii).

Paragraph (a)(1)(i) will pertain to commodities controlled by ECCN 6A003.a.3, 6A003.a.4, or 6A003.a.6 that will be or are intended to be used by a ‘military end-user,’ as defined in paragraph (d) of § 744.9, in all destinations except Canada. This is a structural change to the paragraph only; the policy regarding these items remains the same. Similarly, this rule does not remove the license requirement forth in new paragraph § 744.9(a)(1)(iii) for cameras, systems and related components being exported for incorporation into foreign “military commodities” specified in ECCN 0A919.

Paragraph (a)(1)(ii) will revise the policy pertaining to the original items (other than those controlled in 6A003.a.3, 6A003.a.4, and 6A003.a.6) by adding the phrase “in all destinations except countries specified in Country Group A:1.” This change will thereby more specifically focus the license requirement for the export, reexport, and transfer (in-country) on certain cameras, systems, and related components when destined for some of our closest allies. With this revision, BIS no longer requires a license for the cameras, systems, and related components described in ECCNs 0A504 (incorporating

commodities controlled by ECCNs 6A002 or 6A003, or commodities controlled by 6A993.a that meet the criterion of Note 3.a to 6A003.b.4), 6A002, 6A003 (other than 6A003.a.3, 6A003.a.4, and 6A003.a.6), or 6A993.a (having a maximum frame rate equal to or less than 9 Hz and thus meeting the criteria of Note 3.a to 6A003.b.4), or 8A002.d when the items are intended to be used by a military end user in Country Group A:1 countries. Prior to publication of this rule, a license was required for such transactions to all destinations except Canada.

With the effective date of this rule, focal plane arrays will continue to require a license to countries specified in Country Groups A:1 under other provisions of the EAR; these items are controlled for Regional Stability (RS) reasons to countries specified in RS Column 1 on the Commerce Country Chart in supplement no. 1 to part 738 of the EAR, as well as other parts of the EAR (*e.g.*, other sections in part 744 or sanctions provisions in part 746). BIS does not allow the use of License Exception Strategic Trade Authorization (STA) (§ 740.20 of the EAR) for these items. Regional Stability controls are detailed under § 742.6(a)(2) of the EAR. As a conforming change, this rule updates the related controls in ECCNs 6A003 such that they more accurately reflect changes to § 744.9(a)(1).

Portions of the original national security rationale for § 744.9(a)(1) are no longer relevant. In 2009, when the license requirement for ECCN 6A003.b.4.b items was first imposed, BIS sought visibility into their use by military end users. A 2016 revision to § 744.9 expanded the license requirements to all items listed under ECCNs 6A002 and 6A003, and items listed under ECCN 6A993.a further reflected the interest in reviewing these transactions to military end users. However, the number of approved applications for these items going to Country Group A:1 countries by BIS and the global commercial availability of these items warrants the removal of this license requirement.

Specifically, license data since 2009 demonstrates that these items, when destined for Country Group A:1 countries, do not pose a national security risk to the United States. As a practical matter, BIS, through the interagency license review process, has approved thousands of license applications for these items to Country Group A:1 countries over the past decade. Therefore, BIS has determined that U.S. Government and industry resources could be more effectively deployed reviewing transactions posing potentially higher risks.

As stated above, the items controlled by § 744.9 have become mainstream commercial products. In the aftermath of the COVID-19 global pandemic, one of the most popular uses of these cameras is to determine if a person has a fever before entering a building. However, prior to the publication of this rule, the export of these items under § 744.9 for a similar purpose by a military end user in any country would require a license. BIS determined this type of transaction no longer warrants review when destined to close allies. Given the high number of approvals and the absence of denials, the growing burden the regulations have placed on industry, and the licensing burden placed on BIS itself, BIS is removing the license requirements for these items when going to military end users in Country Group A:1 countries.

BIS also notes the increased commercial availability of the items listed in § 744.9. At the time § 744.9 was first published, the commercial market for the items listed in the section was relatively new and U.S. exports of these items were not heavily impacted by the regulatory requirement. Since the 2016 revision, the global commercial market for these items has continued to expand. These items are now manufactured and widely available outside the United States, including in China. The combined impact of the expanded controls and growing global manufacturing of the items has resulted in restricted exports of U.S.-origin products and increased competition from non-U.S.-origin products. In many cases, the manufacturers who made these sales are located in countries

outside of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, such as China. This rule ensures that U.S. companies are operating on a level playing field with foreign competitors when selling to end users in County Group A:1 countries.

Part 774

Addition of New Controls for Cameras under ECCN 6A293

As stated above, this final rule adds certain cameras under ECCN 6A293 on the Commerce Control List (CCL), supplement no. 1 to part 774. While ECCNs 6A003 and 6A203 control specified cameras, this new control will capture cameras that are not controlled by either ECCNs 6A003 or 6A203 and have the following characteristics: (1) minimum exposure time of 1 microsecond or faster; and (2) a throughput of 13.43 Giga Pixels per second or greater when taken at 205,000 frames per second. The control also includes a technical note with a formula for throughput and a note that describes some of the ways these cameras may be referenced by the public in non-technical terms. ECCN 6A293 has NP Column 1 and Anti-Terrorism (AT) Column 1 reasons for control; these reasons for control are detailed in part 742 of the EAR. ECCN 6A293 is not eligible for License Exception STA. As conforming changes, this rule updates the related controls in ECCNs 6A003 and 6A203 to include ECCN 6A293; this rule also revises § 740.20(b)(2)(x) to include the limitation on STA for ECCN 6A293.

ECCNs 6A003 and 6A203 control certain high-speed cameras that are on the Nuclear Suppliers Group (NSG) Dual Use Annex. The NSG is a multilateral regime of nuclear supplier countries seeking to address the non-proliferation of nuclear weapons through export controls. Following a technical analysis of high-speed camera systems, the U.S. Government determined that additional cameras, with specifications differing from those in ECCNs 6A003 and 6A203, have similar applications of proliferation concern. Accordingly, the new controls of these cameras under ECCN 6A293 are

warranted. Cameras controlled in this new ECCN may be exported to NSG participating countries without a license, except to Russia, Belarus, and China. New ECCN 6A293 will allow implementation of these warranted temporary controls while BIS seeks multilateral agreement.

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), 50 U.S.C. sections 4801–4852. ECRA, as amended, provides the legal basis for BIS’s principal authorities and serves as the authority under which BIS issues this rule.

Rulemaking Requirements

1. Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distribute impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This final rule has been designated a “significant regulatory action,” under Executive Order 12866.
2. Notwithstanding any other provision of law, no person may be required to respond to or 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 regulation involves a collection currently approved by OMB under control number 0694-0088, Simplified Network Application Processing System. This collection includes, among other things, license applications and commodity classification, and carries a burden estimate of 29.6 minutes

for a manual or electronic submission for a total burden estimate of 31,835 hours. BIS does not expect the burden hours associated with this collection to change.

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

4. Pursuant to Section 1762 of ECRA (50 U.S.C. 4821), 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.

5. Because neither the Administrative Procedure Act nor any other law requires that notice of proposed rulemaking and an opportunity for public comment be given for this rule, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) are not applicable. Accordingly, no Final Regulatory Flexibility Analysis is required and none has been prepared.

List of Subjects

15 CFR Part 740

Administrative practice and procedure, Exports, Reporting and recordkeeping requirements

15 CFR Part 744

Exports, Reporting and recordkeeping requirements, Terrorism

15 CFR Part 774

Exports, Reporting and recordkeeping requirements

Accordingly, parts 740, 744, and 774 of the Export Administration Regulations (15 CFR parts 730-774) are amended as follows:

PART 740 – LICENSE EXCEPTIONS

1. The authority citation for 15 CFR 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.

2. Section 740.20 is amended by revising paragraph (b)(2)(x) to read as follows:

§ 740.20 License Exception Strategic Trade Authorization (STA).

* * * *

(b) * * *

(2) * * *

(x) License Exception STA may not be used for items controlled by ECCN 6A002; 6A293; 6D002 (software “specially designed” for the “use” of commodities controlled under 6A002.b); 6D003.c; 6D991 (software “specially designed” for the “development,” “production,” or “use” of commodities controlled under 6A002 or 6A003); 6E001 (“technology” for the “development” of commodities controlled under ECCN 6A002 or 6A003); or 6E002 “technology” (for the “production” of commodities controlled under ECCN 6A002 or 6A003).

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PART 744 – CONTROL POLICY: END-USER AND END-USE BASED

3. The authority citation for 15 CFR 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 September 19, 2022, 87 FR 57569 (September 21, 2022); Notice of November 8, 2022, 87 FR 68015 (November 10, 2022).

4. Amend § 744.9 by revising paragraph (a)(1) to read as follows:

§ 744.9 Restrictions on exports, reexports, and transfers (in-country) of certain cameras, systems, or related components.

(a) ***

(1) In addition to the applicable license requirements for nuclear nonproliferation, national security, regional stability, anti-terrorism, and United Nations embargo reasons in §§ 742.3, 742.4, 742.6, 742.8, 746.1(b), and 746.3 of the EAR, a license is required pursuant to this section for specific exports, reexports, or transfers (in-country) if at the time of export, reexport, or transfer, the exporter, reexporter, or transferor knows or is informed that:

(i) Commodities controlled by ECCN 6A003.a.3, 6A003.a.4, or 6A003.a.6 will be or are intended to be used by a ‘military end-user,’ as defined in paragraph (d) of this section in all destinations except Canada.

(ii) Commodities described in ECCNs 0A504 (incorporating commodities controlled by ECCNs 6A002 or 6A003, or commodities controlled by 6A993.a that meet the criterion of Note 3.a to 6A003.b.4), 6A002, 6A003 (other than 6A003.a.3, 6A003.a.4, and 6A003.a.6), or 6A993.a (having a maximum frame rate equal to or less than 9 Hz and thus meeting the criteria of Note 3.a to 6A003.b.4), or 8A002.d will be or are intended to be used by a ‘military end-user,’ as defined in paragraph (d) of this section in all destinations except those specified in Country Group A:1.

(iii) Commodities described in ECCNs 0A504 (incorporating commodities controlled by ECCNs 6A002 or 6A003, or commodities controlled by 6A993.a that meet the criterion of Note 3.a to 6A003.b.4), 6A002, 6A003, or 6A993.a (having a maximum frame rate equal to or less than 9 Hz and thus meeting the criteria of Note 3.a to 6A003.b.4), or 8A002.d will be or are intended to be incorporated into a “military commodity” controlled by ECCN 0A919 in all destinations except Canada.

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PART 774 – Commerce Control List

5. The authority citation for 15 CFR 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.

6. Amend supplement no. 1 to part 774 by:

- a. Revising ECCNs 6A003 and 6A203; and
- b. Adding ECCN 6A293.

The revisions and addition read as follows:

* * * * *

6A003 Cameras, systems or equipment, and “components” therefor, as follows (see List of Items Controlled).

License Requirements

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

<i>Control(s)</i>	<i>Country Chart (See Supp. No. 1 to part 738)</i>
NS applies to entire entry	NS Column 2
NP applies to cameras controlled by 6A003.a.3 or a.4 and to plug-ins in 6A003.a.6 for cameras controlled by 6A003.a.3 or	NP Column 1

a.4	
RS applies to 6A003.b.3, 6A003.b.4.a, 6A003.b.4.c and to items controlled in 6A003.b.4.b that have a frame rate greater than 60 Hz or that incorporate a focal plane array with more than 111,000 elements, or to items in 6A003.b.4.b when being exported or reexported to be embedded in a civil product. (But see § 742.6(a)(2)(iii) and (v) for certain exemptions)	RS Column 1
RS applies to items controlled in 6A003.b.4.b that have a frame rate of 60 Hz or less and that incorporate a focal plane array with not more than 111,000 elements if not being exported or reexported to be embedded in a civil product	RS Column 2

AT applies to entire entry	AT Column 1
UN applies to 6A003.b.3 and b.4	See § 746.1(b) for UN controls

License Requirement Note: Commodities that are not subject to the ITAR but are of the type described in USML Category XII(c) are controlled as cameras in ECCN 6A003 when they incorporate a camera controlled in this ECCN.

Reporting Requirements

See §743.3 of the EAR for thermal camera reporting for exports that are not authorized by an individually validated license of thermal imaging cameras controlled by ECCN 6A003.b.4.b to destinations in Country Group A:1 (see Supplement No. 1 to part 740 of the EAR), must be reported to BIS.

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

LVS: \$1500, except N/A for 6A003.a.3 through a.6, b.1, b.3 and b.4.

GBS: N/A

Special Conditions for STA

STA: License Exception STA may not be used to ship any commodity in 6A003.b.3 or b.4 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: (1) See ECCNs 6E001 (“development”), 6E002 (“production”), and 6E201 (“use”) for technology for items controlled under this entry. (2) Also see ECCN 6A203. (3) See ECCN 0A919 for foreign made military commodities that incorporate cameras described in 6A003. (4) Section 744.9 imposes a license requirement on cameras described in 6A003 if being exported, reexported, or transferred (in-country)

for use by certain military end-users or for incorporation into a commodity controlled by ECCN 0A919. (5) See USML Category XII(c) and (e) for cameras subject to the ITAR. (6) Also see ECCN 6A293.

Related Definitions: N/A

Items:

a. Instrumentation cameras and “specially designed” “components” therefor, as follows:

***Note:** Instrumentation cameras, controlled by 6A003.a.3 to 6A003.a.5, with modular structures should be evaluated by their maximum capability, using plug-ins available according to the camera manufacturer's specifications.*

a.1. [Reserved]

a.2. [Reserved]

a.3. Electronic streak cameras having temporal resolution better than 50 ns;

a.4. Electronic framing cameras having a speed exceeding 1,000,000 frames/s;

a.5. Electronic cameras having all of the following:

a.5.a. An electronic shutter speed (gating capability) of less than 1μs per full frame;

and

a.5.b. A read out time allowing a framing rate of more than 125 full frames per second;

a.6. Plug-ins having all of the following characteristics:

a.6.a. “Specially designed” for instrumentation cameras which have modular structures and that are controlled by 6A003.a; *and*

a.6.b. Enabling these cameras to meet the characteristics specified by 6A003.a.3, 6A003.a.4 or 6A003.a.5, according to the manufacturer's specifications;

b. Imaging cameras as follows:

***Note:** 6A003.b does not control television or video cameras “specially designed” for television broadcasting.*

b.1. Video cameras incorporating solid state sensors, having a peak response in the wavelength range exceeding 10 nm, but not exceeding 30,000 nm and having all of the following:

b.1.a. Having any of the following:

b.1.a.1. More than 4×10^6 “active pixels” per solid state array for monochrome (black and white) cameras;

b.1.a.2. More than 4×10^6 “active pixels” per solid state array for color cameras incorporating three solid state arrays; *or*

b.1.a.3. More than 12×10^6 “active pixels” for solid state array color cameras incorporating one solid state array; *and*

b.1.b. Having any of the following:

b.1.b.1. Optical mirrors controlled by 6A004.a.;

b.1.b.2. Optical control equipment controlled by 6A004.d.; *or*

b.1.b.3. The capability for annotating internally generated ‘camera tracking data’;

Technical Notes:

1. For the purposes of 6A003.b.1, digital video cameras should be evaluated by the maximum number of “active pixels” used for capturing moving images.

2. For the purposes of 6A003.b.1.b.3, ‘camera tracking data’ is the information necessary to define camera line of sight orientation with respect to the earth. This includes: 1) the horizontal angle the camera line of sight makes with respect to the earth's magnetic field direction and; 2) the vertical angle between the camera line of sight and the earth's horizon.

b.2. Scanning cameras and scanning camera systems, having all of the following:

b.2.a. A peak response in the wavelength range exceeding 10 nm, but not exceeding 30,000 nm;

b.2.b. Linear detector arrays with more than 8,192 elements per array; *and*

b.2.c. Mechanical scanning in one direction;

***Note:** 6A003.b.2 does not apply to scanning cameras and scanning camera systems, “specially designed” for any of the following:*

a. Industrial or civilian photocopiers;

b. Image scanners “specially designed” for civil, stationary, close proximity scanning applications (e.g., reproduction of images or print contained in documents, artwork, or photographs); or

c. Medical equipment.

b.3. Imaging cameras incorporating image intensifier tubes having the characteristics listed in 6A002.a.2.a or 6A002.a.2.b;

b.4. Imaging cameras incorporating “focal plane arrays” having any of the following:

b.4.a. Incorporating “focal plane arrays” controlled by 6A002.a.3.a to 6A002.a.3.e;

b.4.b. Incorporating “focal plane arrays” controlled by 6A002.a.3.f; *or*

b.4.c. Incorporating “focal plane arrays” controlled by 6A002.a.3.g;

***Note 1:** Imaging cameras described in 6A003.b.4 include “focal plane arrays” combined with sufficient “signal processing” electronics, beyond the read out integrated circuit, to enable as a minimum the output of an analog or digital signal once power is supplied.*

***Note 2:** 6A003.b.4.a does not control imaging cameras incorporating linear “focal plane arrays” with 12 elements or fewer, not employing time-delay-and-integration within the element and designed for any of the following:*

a. Industrial or civilian intrusion alarm, traffic or industrial movement control or counting systems;

b. Industrial equipment used for inspection or monitoring of heat flows in buildings, equipment, or industrial processes;

c. Industrial equipment used for inspection, sorting or analysis of the properties of materials;

d. Equipment “specially designed” for laboratory use; or

e. Medical equipment.

Note 3: *6A003.b.4.b does not control imaging cameras having any of the following:*

a. A maximum frame rate equal to or less than 9 Hz;

b. Having all of the following:

1. Having a minimum horizontal or vertical ‘Instantaneous-Field-of-View (IFOV)’ of at least 2 mrad (milliradians);

2. Incorporating a fixed focal-length lens that is not designed to be removed;

3. Not incorporating a ‘direct view’ display; and

Technical Note: *For the purposes of 6A003.b.4 Note 3.b.3, ‘direct view’ refers to an imaging camera operating in the infrared spectrum that presents a visual image to a human observer using a near-to-eye micro display incorporating any light-security mechanism.*

4. Having any of the following:

a. No facility to obtain a viewable image of the detected field-of-view; or

b. The camera is designed for a single kind of application and designed not to be user modified; or

Technical Note:

For the purposes of 6A003.b.4 Note 3.b.1, ‘Instantaneous-Field-of-View (IFOV)’ is the lesser figure of the ‘Horizontal IFOV’ or the ‘Vertical IFOV’.

‘Horizontal IFOV’ = horizontal Field-of-View (FOV)/number of horizontal detector elements

‘Vertical IFOV’= vertical Field-of-View (FOV)/number of vertical detector elements.

c. The camera is “specially designed” for installation into a civilian passenger land vehicle and having all of the following:

1. The placement and configuration of the camera within the vehicle are solely to assist the driver in the safe operation of the vehicle;

2. Is operable only when installed in any of the following:

a. The civilian passenger land vehicle for which it was intended and the vehicle weighs less than 4,500 kg (gross vehicle weight); or

b. A “specially designed”, authorized maintenance test facility; and

3. Incorporates an active mechanism that forces the camera not to function when it is removed from the vehicle for which it was intended.

Note: *When necessary, details of the items will be provided, upon request, to the Bureau of Industry and Security in order to ascertain compliance with the conditions described in Note 3.b.4 and Note 3.c in this Note to 6A003.b.4.b.*

Note 4: *6A003.b.4.c does not apply to 'imaging cameras' having any of the following characteristics:*

a. Having all of the following:

1. Where the camera is “specially designed” for installation as an integrated component into indoor and wall-plug-operated systems or equipment, limited by design for a single kind of application, as follows:

a. Industrial process monitoring, quality control, or analysis of the properties of materials;

b. Laboratory equipment “specially designed” for scientific research;

c. Medical equipment;

d. Financial fraud detection equipment; and

2. Is only operable when installed in any of the following:

a. The system(s) or equipment for which it was intended; or

b. A “specially designed,” authorized maintenance facility; and

3. Incorporates an active mechanism that forces the camera not to function when

it is removed from the system(s) or equipment for which it was intended;

b. Where the camera is “specially designed” for installation into a civilian passenger land vehicle or passenger and vehicle ferries and having all of the following:

1. The placement and configuration of the camera within the vehicle or ferry are solely to assist the driver or operator in the safe operation of the vehicle or ferry;

2. Is only operable when installed in any of the following:

a. The civilian passenger land vehicle for which it was intended and the vehicle weighs less than 4,500 kg (gross vehicle weight);

b. The passenger and vehicle ferry for which it was intended and having a length overall (LOA) 65 m or greater; or

c. A “specially designed”, authorized maintenance test facility; and

3. Incorporates an active mechanism that forces the camera not to function when it is removed from the vehicle for which it was intended;

c. Limited by design to have a maximum “radiant sensitivity” of 10 mA/W or less for wavelengths exceeding 760 nm, having all of the following:

1. Incorporating a response limiting mechanism designed not to be removed or modified; and

2. Incorporates an active mechanism that forces the camera not to function when the response limiting mechanism is removed; and

3. Not “specially designed” or modified for underwater use; or

d. Having all of the following:

1. Not incorporating a ‘direct view’ or electronic image display;

2. Has no facility to output a viewable image of the detected field of view;

3. The “focal plane array” is only operable when installed in the camera for which it was intended; and

4. The “focal plane array” incorporates an active mechanism that forces it to be

permanently inoperable when removed from the camera for which it was intended.

***Note:** When necessary, details of the item will be provided, upon request, to the Bureau of Industry and Security in order to ascertain compliance with the conditions described in Note 4 above.*

b.5. Imaging cameras incorporating solid-state detectors specified by 6A002.a.1.

* * * * *

6A203 High-speed cameras, imaging devices and “components” therefor, other than those controlled by 6A003 (see List of Items Controlled).

License Requirements

Reason for Control: NP, AT

<i>Control(s)</i>	<i>Country Chart (See Supp. No. 1 to part 738)</i>
NP applies to entire entry	NP Column 1
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: (1) See ECCNs 6E001 (“development”), 6E002 (“production”), and 6E201 (“use”) for technology for items controlled under this entry. (2) See ECCN 6A003.a.3 and a.4. (3) Also see ECCN 6A293.

Related Definitions: N/A

Items:

a. Streak cameras and “specially designed” components therefor, as follows:

- a.1. Streak cameras with writing speeds greater than 0.5 mm/μs;
- a.2. Electronic streak cameras capable of 50 ns or less time resolution;
- a.3. Streak tubes for cameras described in 6A203.a.2;
- a.4. Plug-ins, “specially designed” for use with streak cameras having modular structures, that enable the performance characteristics described in 6A203.a.1 or .a.2;
- a.5. Synchronizing electronics units, and rotor assemblies consisting of turbines, mirrors and bearings, that are “specially designed” for cameras described in 6A203.a.1.

b. Framing cameras and “specially designed” components therefor, as follows:

- b.1. Framing cameras with recording rates greater than 225,000 frames per second;
- b.2. Framing cameras capable of 50 ns or less frame exposure time;
- b.3. Framing tubes, and solid-state imaging devices, that have a fast image gating (shutter) time of 50 ns or less and are “specially designed” for cameras described in 6A203.b.1 or .b.2;
- b.4. Plug-ins, “specially designed” for use with framing cameras having modular structures, that enable the performance characteristics described in 6A203.b.1 or .b.2;
- b.5. Synchronizing electronic units, and rotor assemblies consisting of turbines, mirrors, and bearings, that are “specially designed” for cameras described in 6A203.b.1 or .b.2.

c. Solid-state or electron tube cameras and “specially designed” components therefor, as follows:

- c.1. Solid-state cameras, or electron tube cameras, with a fast image gating (shutter) time of 50 ns or less;

c.2. Solid-state imaging devices, and image intensifiers tubes, that have a fast image gating (shutter) time of 50 ns or less and are “specially designed” for cameras described in 6A203.c.1;

c.3. Electro-optical shuttering devices (Kerr or Pockels cells) with a fast image gating (shutter) time of 50 ns or less;

c.4. Plug-ins, “specially designed” for use with cameras having modular structures, that enable the performance characteristics described in 6A203.c.1.

Technical Note: *High speed single frame cameras can be used alone to produce a single image of a dynamic event, or several such cameras can be combined in a sequentially-triggered system to produce multiple images of an event.*

d. Radiation-hardened TV cameras, or lenses therefor, “specially designed” or rated as radiation hardened to withstand a total radiation dose greater than 5×10^4 Gy (silicon) without operational degradation.

Technical Note: *The term Gy (silicon) refers to the energy in Joules per kilogram absorbed by an unshielded silicon sample when exposed to ionizing radiation.**

* * * *

6A293 Cameras not classified ECCNs 6A003 or 6A203 with all the following characteristics: (see List of Items Controlled).

License Requirements

Reason for Control: NP, AT

<i>Control(s)</i>	<i>Country Chart (See Supp. No. I to part 738)</i>
NP applies to entire entry	NP Column 1
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

Special Conditions for STA

STA: License Exception STA (§ 740.20 of the EAR) may not be used for ECCN 6A293.

List of Items Controlled

Related Controls: See ECCNs 6A003 and 6A203.

Related Definitions: N/A

Items:

- a. Minimum exposure time of 1 microsecond or faster, and
- b. a throughput of 13.43 Giga Pixels/s or greater when taken at 205,000 frames/s.

Technical Note: *Throughput = Width (pixels) x Height (pixels) x Frames Per Second.*

The width and Height in pixels are those that are achieved at 205,000 frames per second.

Note: *This entry includes cameras which may be referred to as high-speed digital imaging cameras, high-speed video cameras or slow-motion cameras or any other camera that meets these parameters.*

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Thea R. Kendler

Assistant Secretary for Export Administration