

in 4A003 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. Designed or modified for “fault tolerance”;

Note: For the purposes of 4A003.a., “digital computers” and related equipment are not considered to be designed or modified for “fault tolerance” if they utilize any of the following:

1. Error detection or correction algorithms in “main storage”;

2. The interconnection of two “digital computers” so that, if the active central processing unit fails, an idling but mirroring central processing unit can continue the system’s functioning;

3. The interconnection of two central processing units by data channels or by use of shared storage to permit one central processing unit to perform other work until the second central processing unit fails, at which time the first central processing unit takes over in order to continue the system’s functioning; or

4. The synchronization of two central processing units by “software” so that one central processing unit recognizes when the other central processing unit fails and recovers tasks from the failing unit.

b. “Digital computers” having a “composite theoretical performance” (“CTP”) exceeding 28,000 million theoretical operations per second (MTOPS);

c. “Electronic assemblies” specially designed or modified to be capable of enhancing performance by aggregation of “computing elements” (“CEs”) so that the “CTP” of the aggregation exceeds the limit in 4A003.b.;

Note 1: 4A003.c applies only to “electronic assemblies” and programmable interconnections not exceeding the limit in 4A003.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 4A003.d, or 4A003.e

Note 2: 4A003.c does not control “electronic assemblies” specially designed for a product or family of products whose maximum configuration does not exceed the limit of 4A003.b.

d. [Reserved]

e. Equipment performing analog-to-digital conversions exceeding the limits in 3A001.a.5;

f. [Reserved]

g. Equipment specially designed to provide external interconnection of “digital computers” or associated equipment that allows communications at data rates exceeding 1.25 Gbyte/s.

Note: 4A003.g does not control internal interconnection equipment (e.g., backplanes, buses) passive interconnection equipment, “network access controllers” or “communication channel controllers”.

4D003 Specific “software”, as follows (see List of Items Controlled).

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List of Items Controlled

Unit: * * *

Related Controls: * * *

Related Definitions: * * *

Items:

a. Operating system “software”, “software” development tools and compilers specially designed for “multi-data-stream processing” equipment, in “source code”;

b. [Reserved]

c. “Software” having characteristics or performing functions exceeding the limits in Category 5, Part 2 (“Information Security”).

4D993 “Program” proof and validation “software”, “software” allowing the automatic generation of “source codes”, and operating system “software” specially designed for real time processing equipment.

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List of Items Controlled

Unit: * * *

Related Controls: * * *

Related Definitions: “Global interrupt latency time” is the time taken by the computer system to recognize an interrupt due to the event, service the interrupt and perform a context switch to an alternate memory-resident task waiting on the interrupt.

Items:

a. “Program” proof and validation “software” using mathematical and analytical techniques and designed or modified for “programs” having more than 500,000 “source code” instructions;

b. “Software” allowing the automatic generation of “source codes” from data acquired on line from external sensors described in the Commerce Control List;

c. Operating system “software” specially designed for “real time processing” equipment that guarantees a “global interrupt latency time” of less than 20 microseconds.

12. In Supplement No. 1 to part 774 (the Commerce Control List), Category 5—Telecommunications and “Information Security”, Part I—Telecommunications, Export Control Classification Numbers (ECCNs) are amended by:

(a) Revising the License Exceptions section, and the *Unit* and *Items*

paragraphs in the List of Items Controlled section of ECCN 5A001;

(b) Revising the *Related Definitions* paragraph in the List of Items Controlled section of ECCN 5A991;

(c) Revising the *Items* paragraph in the List of Items Controlled section of ECCN 5B001;

(d) Revising the *TSR* paragraph in the License Exception section and the *Items* paragraph in the List of Items Controlled section of ECCN 5E001; and

(e) Revising the *Related Definitions* paragraph and the *Items* paragraph in the List of Items Controlled section of ECCN 5E991, to read as follows:

5A001 Telecommunications systems, equipment, and components.

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License Exceptions

LVS: N/A for 5A001.a and b.5 \$5000 for 5A001b.1, b.2, b.3, b.6, and .d \$3000 for 5A001.c

GBS: Yes, except 5A001.a and b.5

CIV: Yes, except 5A001.a, b.3 and b.5

List of Items Controlled

Unit: Equipment in number; cable and fiber in meters/feet, components and accessories in \$ value

Related Controls: * * *

Related Definitions: * * *

Items:

a. Any type of telecommunications equipment having any of the following characteristics, functions or features:

a.1. Specially designed to withstand transitory electronic effects or electromagnetic pulse effects, both arising from a nuclear explosion;

a.2. Specially hardened to withstand gamma, neutron or ion radiation; or

a.3. Specially designed to operate outside the temperature range from 218 K (–55° C) to 397 K (124° C).

Note: 5A001.a.3 applies only to electronic equipment.

Note: 5A001.a.2 and 5A001.a.3 do not apply to equipment on board satellites.

b. Telecommunication transmission equipment and systems, and specially designed components and accessories therefor, having any of the following characteristics, functions or features:

b.1 Being underwater communications systems having any of the following characteristics:

b.1.a. An acoustic carrier frequency outside the range from 20 kHz to 60 kHz;

b.1.b. Using an electromagnetic carrier frequency below 30 kHz; or

b.1.c. Using electronic beam steering techniques;

b.2. Being radio equipment operating in the 1.5 MHz to 87.5 MHz band and having any of the following characteristics:

b.2.a. Incorporating adaptive techniques providing more than 15 dB suppression of an interfering signal; or

b.2.b. Having all of the following:

b.2.b.1. Automatically predicting and selecting frequencies and “total digital