CATEGORY 5 - TELECOMMUNICATIONS AND "INFORMATION SECURITY"

II. "Information Security"

Note 1: *The control status of "information security" equipment, "software", systems, application specific "electronic assemblies", modules, integrated circuits, components, or functions is determined in Category 5, part 2 even if they are components or "electronic assemblies" of other equipment.*

N.B. to Note 1: *Commodities and software specially designed for medical end-use that incorporate an item in Category 5, part 2 are not classified in any ECCN in Category 5, part 2.*

Note 2: *Category 5, part 2, encryption products, when accompanying their user for the user's personal use or as tools of trade, are eligible for License Exceptions TMP or BAG, subject to the terms and conditions of these License Exceptions.*

Note 3: *Cryptography Note: ECCNs 5A002 and 5D002 do not control items that meet all of the following:*

a. *Generally available to the public by being sold, without restriction, from stock at retail selling points by means of any of the following:*

1. *Over-the-counter transactions;*
2. *Mail order transactions;*
3. *Electronic transactions; or*
4. *Telephone call transactions;*

b. *The cryptographic functionality cannot be easily changed by the user;*

c. *Designed for installation by the user without further substantial support by the supplier; and*

d. *When necessary, details of the items are accessible and will be provided, upon request, to the appropriate authority in the exporter's country in order to ascertain compliance with conditions described in paragraphs (a) through (c) of this note.*

N.B. to Cryptography Note: Mass market encryption commodities and software eligible for the Cryptography Note are subject to the notification or review requirements described in §742.15(b)(1) and (b)(2) of the EAR, unless specifically excluded from these requirements by §742.15(b)(3) of the EAR. Mass market commodities and software employing a key length greater than 64 bits for the symmetric algorithm must be reviewed in accordance with the requirements of §742.15(b)(2) of the EAR in order to be released from the "EI" and "NS" controls of ECCN 5A002 or 5D002. All other mass market commodities and software eligible for the Cryptography Note are controlled under ECCN 5A992 or 5D992 (without review) and may be exported or reexported to most destinations without a license, following notification, in accordance with the requirements of §742.15(b)(1) of the EAR.

A. SYSTEMS, EQUIPMENT AND COMPONENTS

5A002 Systems, equipment, application specific "electronic assemblies", modules and integrated circuits for "information security", as follows (see List of Items Controlled), and other specially designed components therefor.

License Requirements

Reason for Control: NS, AT, EI

Control(s)	*Country Chart*
NS applies to entire entry	NS Column 1
AT applies to entire entry	AT Column 1

EI applies to encryption items transferred from the

U.S. Munitions List to the Commerce Control List consistent with E.O. 13026 of November 15, 1996 (61 FR 58767) and pursuant to the Presidential Memorandum of that date. Refer to §742.15 of this subchapter.

License Exceptions

LVS: Yes: $500 for components and spare parts only. N/A for equipment.
GBS: N/A
CIV: N/A

List of Items Controlled

Unit: $ value
Related Controls: 5A002 does not control the items listed in paragraphs (a) through (f) in the Note in the items paragraph of this entry. These items are instead controlled under ECCN 5A992. 5A002 does not control commodities eligible for the Cryptography Note (Category 5 Part 2 Note 3).
Related Definitions: N/A
Items:

Note: *5A002 does not control the following. However, these items are instead controlled under 5A992:*

(a) *"Personalized smart cards":*
(1) *Where the cryptographic capability is restricted for use in equipment or systems excluded from control paragraphs (b) through (f) of this Note; or*
(2) *For general public-use applications where the cryptographic capability is not user-accessible and it is specially designed and limited to allow protection of personal data stored within.*

N.B.: *If a "personalized smart card" has multiple functions, the control status of each function is assessed individually.*

(b) *Receiving equipment for radio broadcast, pay television or similar restricted audience broadcast of the consumer type, without digital encryption except that exclusively used for sending the billing or program-related information back to the broadcast providers.*

(c) *Equipment where the cryptographic capability is not user-accessible and which is specially designed and limited to allow any of the following:*
(1) *Execution of copy-protected "software";*
(2) *Access to any of the following:*
(a) *Copy-protected contents stored on read-only media; or*
(b) *Information stored in encrypted form on media (e.g., in connection with the protection of intellectual property rights) where the media is offered for sale in identical sets to the public;*
(3) *Copying control of copyright protected audio/video data; or*
(4) *Encryption and/or decryption for protection of libraries, design attributes, or associated data for the design of semiconductor devices or integrated circuits;*

(d) *Cryptographic equipment specially designed and limited for banking use or money transactions;*

N.B.: *The term "money transactions" includes the collection and settlement of fares or credit functions.*

(e) *Portable or mobile radiotelephones for civil use (e.g., for use with commercial civil cellular radio*

communications systems) that are not capable of end-to-end encryption.

(f) *Cordless telephone equipment not capable of end-to-end encryption where the maximum effective range of unboosted cordless operation (e.g., a single, unrelayed hop between terminal and home basestation) is less than 400 meters according to the manufacturer's specifications.*

Technical Note*: Parity bits are not included in the key length.*

a. Systems, equipment, application specific "electronic assemblies", modules and integrated circuits for "information security", as follows, and other specially designed components therefor:

N.B.: *For the control of global navigation satellite systems receiving equipment containing or employing decryption (e.g., GPS or GLONASS) see 7A005.*

a.1. Designed or modified to use "cryptography" employing digital techniques performing any cryptographic function other than authentication or digital signature having any of the following:

Technical Notes*:*

1. Authentication and digital signature functions include their associated key management function.

2. Authentication includes all aspects of access control where there is no encryption of files or text except as directly related to the protection of passwords, Personal Identification Numbers (PINs) or similar data to prevent unauthorized access.

3. "Cryptography" does not include "fixed" data compression or coding techniques.

Note*: 5A002.a.1 includes equipment designed or modified to use "cryptography" employing analog principles when implemented with digital techniques.*

a.1.a. A "symmetric algorithm" employing a key length in excess of 56-bits; *or*

a.1.b. An "asymmetric algorithm" where the security of the algorithm is based on any of the following:

a.1.b.1. Factorization of integers in excess of 512 bits (*e.g.*, RSA);

a.1.b.2. Computation of discrete logarithms in a multiplicative group of a finite field of size greater than 512 bits (*e.g.*, Diffie-Hellman over Z/pZ); *or*

a.1.b.3. Discrete logarithms in a group other than mentioned in 5A002.a.1.b.2 in excess of 112 bits (*e.g.*, Diffie-Hellman over an elliptic curve);

a.2. Designed or modified to perform cryptanalytic functions;

a.3. [RESERVED]

a.4. Specially designed or modified to reduce the compromising emanations of information-bearing signals beyond what is necessary for health, safety or electromagnetic interference standards;

a.5. Designed or modified to use cryptographic techniques to generate the spreading code for "spread spectrum" systems, not controlled in 5A002.a.6., including the hopping code for "frequency hopping" systems;

a.6. Designed or modified to use cryptographic techniques to generate channelizing codes, scrambling codes or network identification codes, for systems using ultra-wideband

modulation techniques, having any of the following characteristics:

a.6.a. A bandwidth exceeding 500 MHz; *or*

a.6.b. A "fractional bandwidth" of 20% or more;

a.7. [RESERVED]

a.8. Communications cable systems designed or modified using mechanical, electrical or electronic means to detect surreptitious intrusion;

a.9. Designed or modified to use 'quantum cryptography.'

Technical Notes:

1. 'Quantum cryptography' A family of techniques for the establishment of a shared key for "cryptography" by measuring the quantum-mechanical properties of a physical system (including those physical properties explicitly governed by quantum optics, quantum field theory, or quantum electrodynamics).

2. 'Quantum cryptography' is also known as quantum key distribution (QKD).

5A992 Equipment not controlled by 5A002.

License Requirements

Reason for Control: AT

Control(s)	*Country Chart*
AT applies to 5A992.a	AT Column 1
AT applies to 5A992.b	AT Column 2

License Exceptions

LVS: N/A
GBS: N/A
CIV: N/A

List of Items Controlled

Unit: $ value
Related Controls: N/A
Related Definitions: N/A
Items:

a. Telecommunications and other information security equipment containing encryption.

b. "Information security" equipment, n.e.s., (*e.g.*, cryptographic, cryptanalytic, and cryptologic equipment, n.e.s.) and components therefor.

B. TEST, INSPECTION AND PRODUCTION EQUIPMENT

5B002 Information Security - test, inspection and "production" equipment.

License Requirements

Reason for Control: NS, AT

Control(s)	*Country Chart*
NS applies to entire entry	NS Column 1
AT applies to entire entry	AT Column 1

License Exceptions

LVS: N/A
GBS: N/A
CIV: N/A

List of Items Controlled

Unit: $ value
Related Controls: N/A
Related Definitions: N/A

Items:

a. Equipment specially designed for:

a.1. The "development" of equipment or functions controlled by 5A002, 5B002, 5D002 or 5E002, including measuring or test equipment;

a.2. The "production" of equipment or functions controlled by 5A002, 5B002, 5D002, or 5E002, including measuring, test, repair or production equipment;

b. Measuring equipment specially designed to evaluate and validate the "information security" functions controlled by 5A002 or 5D002.

C. MATERIALS - [RESERVED]

D. SOFTWARE

5D002 Information Security - "Software".

License Requirements

Reason for Control: NS, AT, EI

Control(s)	*Country Chart*
NS applies to entire entry	NS Column 1
AT applies to entire entry	AT Column 1

"EI" applies to encryption items transferred from the U.S. Munitions List to the Commerce Control List consistent with Executive Order 13026 of November 15, 1996 (3 CFR, 1996 Comp., p. 228) and pursuant to the Presidential Memorandum of that date. Refer to §742.15 of the EAR.

Note: *Encryption software is controlled because of its functional capacity, and not because of any informational value of such software; such software is not accorded the same treatment under the EAR as other "software"; and for export licensing purposes, encryption software is treated under the EAR in the same manner as a commodity included in ECCN 5A002.*

Note: *Encryption software controlled for "EI" reasons under this entry remains subject to the EAR even when made publicly available in accordance with part 734 of the EAR. See §740.13(e) of the EAR for information on releasing certain source code (and corresponding object code) which would be considered publicly available from "EI" controls.*

Note: *After notification to BIS, 56-bit encryption items (including key management products not exceeding 512 bits) and up to (and including) 64-bit mass market encryption commodities and software are released from "EI" and "NS" controls. After a review by BIS, all other mass market encryption commodities and software eligible for the Cryptography Note also may be released from "EI" and "NS" controls. See §742.15(b)(1) and (b)(2) of the EAR.*

License Exceptions

CIV: N/A
TSR: N/A

List of Items Controlled

Unit: $ value
Related Controls: This entry does not control "software" "required" for the "use" of equipment excluded from control under the Related Controls paragraph or the Technical Notes in ECCN 5A002 or "software" providing any of the functions of equipment excluded from control under ECCN 5A002. These items are controlled under ECCN 5D992.
Related Definitions: 5D002.a controls "software" designed or modified to use "cryptography" employing digital or analog

techniques to ensure "information security".
Items:

a. "Software" specially designed or modified for the "development", "production" or "use" of equipment or "software" controlled by 5A002, 5B002 or 5D002.

b. "Software" specially designed or modified to support "technology" controlled by 5E002.

c. Specific "software" as follows:

c.1. "Software" having the characteristics, or performing or simulating the functions of the equipment controlled by 5A002 or 5B002;

c.2. "Software" to certify "software" controlled by 5D002.c.1.

5D992 "Information Security" "software" not controlled by 5D002.

License Requirements

Reason for Control: AT

Control(s)	*Country Chart*
AT applies to 5D992.a.1 and .b.1	AT Column 1
AT applies to 5D992.a.2, b.2 and c	AT Column 2

License Exceptions

CIV: N/A
TSR: N/A

List of Items Controlled

Unit: $ value
Related Controls: N/A
Related Definitions: N/A
Items:

a. "Software", as follows:

a.1 "Software" specially designed or modified for the "development", "production", or "use" of telecommunications and other information security equipment containing encryption (e.g., equipment controlled by 5A992.a);

a.2. "Software" specially designed or modified for the "development", "production:, or "use" of information security or cryptologic equipment (e.g., equipment controlled by 5A992.b).

b. "Software", as follows:

b.1. "Software" having the characteristics, or performing or simulating the functions of the equipment controlled by 5A992.a.

b.2. "Software having the characteristics, or performing or simulating the functions of the equipment controlled by 5A992.b.

c. "Software" designed or modified to protect against malicious computer damage, e.g., viruses.

E. TECHNOLOGY

5E002 "Technology" according to the General Technology Note for the "development", "production" or "use" of equipment controlled by 5A002 or 5B002 or "software" controlled by 5D002.

License Requirements

Reason for Control: NS, AT, EI

Control(s)	*Country Chart*

NS applies to entire entry NS Column 1

AT applies to entire entry AT Column 1

EI applies to encryption items transferred from the U.S. Munitions List to the Commerce Control List consistent with E.O. 13026 of November 15, 1996 (61 FR 58767) and pursuant to the Presidential Memorandum of that date. Refer to §742.15 of the EAR.

License Exceptions

CIV: N/A
TSR: N/A

List of Items Controlled

Unit: N/A
- *Related Controls*: See also 4E001 for 4A001.b, 4E001 for 4D001 for 4A001.b, and 5E992
Related Definitions: N/A
Items:

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

5E992 "Information Security" "technology", not controlled by 5E002.

License Requirements

Reason for Control: AT

Control(s)	*Country Chart*
AT applies to 5E992.a	AT Column 1
AT applies to 5E992.b	AT Column 2

License Exceptions

CIV: N/A
TSR: N/A

List of Items Controlled

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

a. "Technology" n.e.s., for the "development", "production" or "use" of telecommunications equipment and other information security and containing encryption (e.g., equipment controlled by 5A992.a) or "software" controlled by 5D992.a.1 or b.1.

b. "Technology", n.e.s., for the "development", "production" or "use" of "information security" or cryptologic equipment (e.g., equipment controlled by 5A992.b), or "software" controlled by 5D992.a.2, b.2, or c.

EAR99 Items subject to the EAR that are *not* elsewhere specified in this CCL Category *or* in any other category in the CCL are designated by the number EAR99.