



U.S. DEPARTMENT OF COMMERCE  
BUREAU OF INDUSTRY AND SECURITY

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# Export Control Reform Spacecraft/Satellites

*Note: This presentation is merely a summary of official statements and final rules published by the Departments of Commerce and State. Final rules, as well as the Export Administration Regulations and International Traffic in Arms Regulations, must be reviewed to determine the full scope of any applicable requirements.*

**Date of Last Revision: Nov 14, 2014**

# Space Export Controls Update



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- **After delivery of the 1248 Report to Congress (Apr 2012), Congress added language into the FY13 National Defense Authorization Act that:**
  - Gave the President the authority to transfer certain satellites and related items to the Commerce Control List (CCL)
  - Prohibits export of CCL satellites and related items to China, North Korea, or any state sponsor of terrorism
- **May 24, 2013: Published proposed rules for satellite sections in USML (Cat XV) and CCL (ECCN 9x515) – Public comment period closed July 8, 2013.**
- **May 13, 2014: Final rules published.**
  - Effective date for radiation-hardened integrated circuits (and related software and technology): June 27, 2014
  - Effective date for all other items: November 10, 2014

# Summary of Spacecraft Controls



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## Cat XV Before ECR

## CCL Before ECR

### Revised USML

### Revised CCL

#### Cat XV

#### Other

#### New ECCN 9x515

#### Existing ECCNs

Military Satellites

Military Ground equip

Parts critical for military functions

Services for USML and CCL satellites (IV and XV)

GPS Rcvrs (XV now; future XII)

Worldwide license, except Canada.

25% *de minimis*, except 0% for China and other D:5 countries.

STA eligible for A:5, except for certain software and technology

Review microelectronic circuit ECCNs, 7A004, 7A104, and ECCNs using "space qualified" prior to using the catch-all control in 9A515.x.

Sats and Ground equip not in USML

Rad Hard ICs

Parts not on USML or other CCL

New sat related item or tech

Spec electronics

Spec optical sensors

Spec radar systems

# Items Remaining on USML



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- Satellites and spacecraft
  - Unique military and intelligence functions, including nuclear detection, intelligence collection, missile tracking, anti-satellite or space-based weapons, classified operation or equipment, and navigation
  - Certain remote sensing with military applications
  - Man-rated habitats
- Ground control equipment
  - Performs a uniquely military function for one of satellites above
- Parts & components
  - Sixteen specific technologies critical to military functions
  - Any payload that performs one of military functions listed above
  - DoD funded payloads

# 16 Critical Technologies Remaining on USML



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- 1) **Certain specified antennas having particular capabilities**
- 2) **Certain space-qualified optics with particular properties**
- 3) **Space-qualified FPAs having particular peak response wavelength**
- 4) **Space-qualified mechanical cryocooler**
- 5) **Space-qualified active vibration suppression**
- 6) **Certain optical bench assemblies**
- 7) **Certain non-communication space-qualified directed energy systems**
- 8) **Space-based kinetic or charged particle energy systems**
- 9) **Certain space-qualified atomics clocks**
- 10) **High performance attitude determination and control systems**
- 11) **Certain space-based thermoionic converters or generators**
- 12) **Certain thrusters for orbit adjustment**
- 13) **Control moment gyroscopes**
- 14) **Certain space-qualified MIMICs**
- 15) **Certain space-qualified oscillators**
- 16) **Certain high performing star trackers**

# Services Remaining on USML



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- Satellite integration and launch services
  - Provided by a U.S. person
  - To a foreign launch integrator or launch vehicle provider
- Launch support considered a defense service, includes furnishing assistance or information for:
  - Integration of satellite to vehicle
  - Launch failure analysis

# Items Transferred to CCL



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- **Satellites**
  - Commercial Communication Satellites
  - Lower-Performance Remote Sensing Satellites
  - Planetary Rovers
  - Planetary and Interplanetary Probes
- **Related systems for the above:**
  - Ground control systems
  - Training simulators
  - Test, inspection, and production equipment
  - Non-critical software for production, operation or maintenance
  - Non-critical technology for development, production, installation, operation or maintenance
  - Radiation hardened microelectronics
- **Parts and components of satellite bus and payloads not listed on USML**
  - Thousands of *types* of parts and subsystems
  - Hundreds of thousands of specific parts

# Notes on Jurisdiction



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- Spacecraft in 9A004 or 9A515.a remain subject to the EAR even when incorporating a hosted payload performing a function described in USML Category XV(a). All spacecraft incorporating primary or secondary payloads that perform a function described in XV(a) are controlled in XV(a).
- ITAR “see-through” rule does not apply to parts, components, accessories, attachments, equipment, or systems in XV(e) that are integrated into and included as an integral part of an EAR item prior to export, reexport, or transfer

# Non-Controlled Space-Related Technology



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- Technology required for spaceflight passenger or participant experience, as described in Note 2 to 9E515, is not subject to the ITAR or EAR.
- Technical data is not subject to the ITAR or EAR when transmitted to or from a satellite or spacecraft, when limited to information about the health, operational status, or measurements or function of, or raw sensor output from, the spacecraft, spacecraft payload, or its associated subsystems or components (see Note 3 to 9E515).

# Order of Review - Spacecraft

(Supp. No. 4 to part 774)



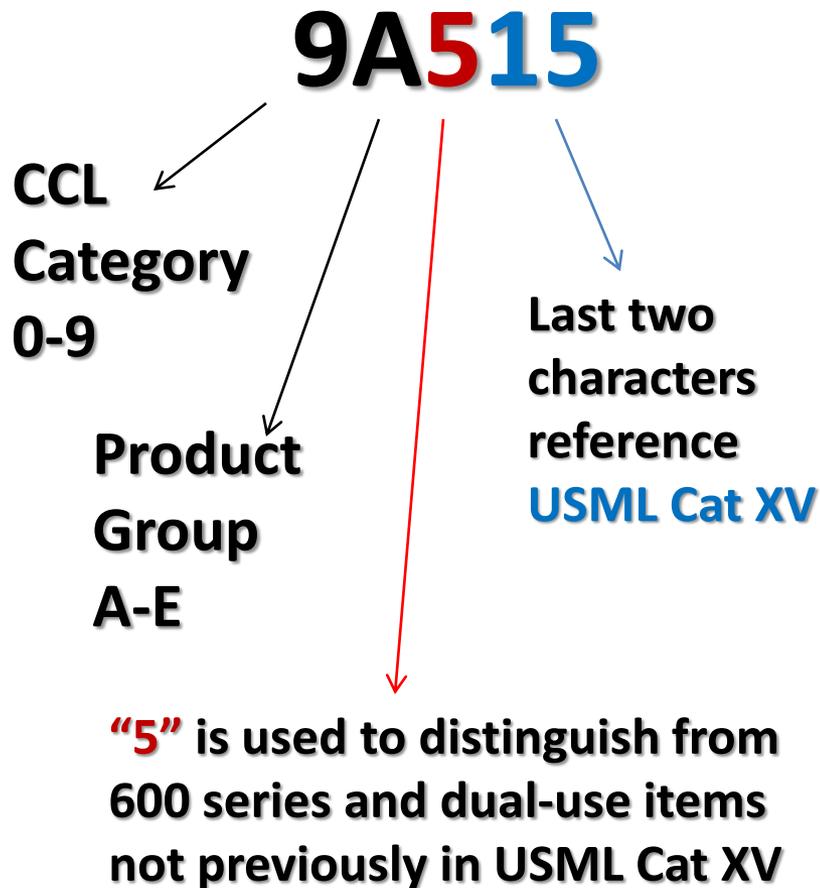
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- Review USML Category XV
  - Specifically enumerated items
  - “Catch-all” controls and ITAR definition of “specially designed”
- If not on the USML, review the CCL
  - Review applicable 9x515 ECCN
    - Specifically enumerated items
    - “Catch-all” controls and EAR definition of “specially designed”
    - Note: the following ECCNs supersede 9A515.x:
      - ECCNs for microelectronic circuits
      - 7A004, 7A104
      - ECCNs containing “space qualified” as a control criterion
  - Review other applicable non-9x515 ECCNs

# 9x515 Framework



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- .a - .w: specifically enumerated end items, materials, parts, components, accessories, and attachments
  - Some items may be “specially designed”
- .x: “specially designed” parts, components, accessories, and attachments that are not specifically enumerated
- .y: items that would otherwise be within scope of 9A515.x but that have been identified in interagency-cleared CCATS (§ 748.3(e))
  - No items currently listed in 9A515.y

# 9x515 ECCN Framework



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- Subject to same scope of controls as 600 series items
  - NS1, RS1, and AT1 generally
  - MT for some items
- License applications for Country Group D:5 reviewed consistent with ITAR § 126.1
  - Policy of denial for Country Group E:1 and China

# 9x515 and Restrictions in § 744.21



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- Section 744.21 imposes a license requirement for exports or reexports of certain items subject to the EAR when one knows such items are intended, entirely or in part, for a military end use in China or for a military end use or military end user in Russia or Venezuela
- A license is required for all items classified under a 9x515 ECCN, including any items that may be added to 9A515.y, for China, Russia, or Venezuela

# License Exceptions



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- 9x515 generally eligible for many license exceptions (e.g., LVS, TMP, RPL, GOV, TSU, STA)
  - Restrictions apply in § 740.2, including 9x515 items subject to MT control
  - However, 9A515 items controlled for MT reasons are eligible for certain provisions of TMP, RPL, TSU, or AVS if exported as part of a spacecraft in quantities appropriate for replacement parts (§ 740.2(a)(5)(i))
- Current restriction in § 740.2(a)(7) restricting use of license exceptions for certain space-qualified items will be removed

# License Exception STA



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- 9x515 generally eligible for STA for Country Group A:5
  - Unlike 600 series, ultimate government end use is not required
  - Prior Consignee Statement requirements generally the same as for non-600 series items, but statement must allow for USG end-use check
  - Certain spacecraft in 9A515.a require eligibility request
  - Software in 9D515.b, .d, or .e and technology in 9E515.b, .d, or .e are not eligible for STA

# License Exception STA



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	600 Series Items	9x515 Items	Other EAR Items
Ultimate government end use required?	Yes	No	No
Always limited to Country Group A:5?	Yes	Yes	No
Eligibility request required?	Yes, for end items in 0A606.a, 8A609.a, 8A620.a or .b, or 9A610.a	Yes, for certain spacecraft in 9A515.a	No
Must the foreign parties have been on a previously approved license?	Yes	No	No
Does Prior Consignee Statement require agreement to permit USG end-use check?	Yes, if the consignee is not the government of an A:5 country	Yes, if the consignee is not the government of an A:5 country	No

# Reexport Considerations – *De Minimis*



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- 9x515 subject to same *de minimis* rule as 600 series

Items identified in .a through .x paragraphs of 9x515 ECCN	
Item with U.S. content reexported to all countries, <u>except</u> D:5 (see also ITAR §126.1)	25% <i>de minimis</i> rule
D:5 (U.S. arms embargoed)	0% <i>de minimis</i> rule
<p><u>Note 1</u>: See Supplement No. 2 to Part 734 – Guidelines for De minimis Rules</p> <p><u>Note 2</u>: If exceeds de minimis, the foreign made item is subject to the EAR.</p>	

# Reexport Considerations – *De Minimis*



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- 9x515 subject to same *de minimis* rule as 600 series

For any future items identified in 9A515.y

Item with U.S. .y content only  
reexported to all countries,  
except E:1 plus China

Not subject to the EAR

E:1 plus China

0% *de minimis* rule

Note 1: See Supplement No. 2 to Part 734 – Guidelines for De minimis Rules

Note 2: If exceeds de minimis, the foreign made item is subject to the EAR.

# Reexport or Transfer of Direct Products of U.S. Technology or Software



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- Under § 124.8(5) of the ITAR, any defense article produced or manufactured from ITAR technical data or defense service requires DDTC approval prior to transfer to any non-U.S. person.
- Under the EAR, certain foreign-made items that are located outside the U.S. that are the direct product of certain U.S.-origin technology or software are subject to the EAR when exported from abroad or reexported to *certain* countries.
- 9x515 items are subject to a broader direct product rule (additional country and product scope) than other items subject to the EAR.
- Foreign-made items subject to the EAR because of this rule are subject to the same license requirements to the new country of destination as if they were of U.S. origin.

# Reexport or Transfer of Direct Products of U.S. Technology or Software



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## The 9x515 direct product rule

Is the foreign-produced direct product of:

(i) U.S.-origin 9x515 technology or software or

(ii) a plant or major component of a plant that is a direct product of U.S.-origin 9x515 technology or software?

Yes

Is the foreign-produced direct product a 9x515 item?

Yes

Is the foreign-produced direct product being reexported or exported from abroad to countries listed in Country Groups D:1, D:5, or E:1?

Yes

*Note: If “yes” to all three questions, then the foreign made item is subject to the EAR.*

# Contact Information



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## Technical and Licensing Questions on Satellites: Office of National Security and Technology Transfer Controls

- Mark Jaso, [mark.jaso@bis.doc.gov](mailto:mark.jaso@bis.doc.gov)
- Reynaldo Garcia, [reynaldo.garcia@bis.doc.gov](mailto:reynaldo.garcia@bis.doc.gov)
- Dennis Krepp, [dennis.krepp@bis.doc.gov](mailto:dennis.krepp@bis.doc.gov)

## Regulatory Interpretation and Transition Guidance

- Regulatory Policy Division: [rp2@bis.doc.gov](mailto:rp2@bis.doc.gov) , 202-482-2440

**Web:** [www.bis.doc.gov](http://www.bis.doc.gov)    [www.export.gov/ecr](http://www.export.gov/ecr)