

THE SCHEDULE OF THE STRATEGIC GOODS (CONTROL) ORDER 2009

PART II

DUAL-USE GOODS THE EXPORT, TRANSHIPMENT OR BRINGING IN
TRANSIT OF WHICH, AND TECHNOLOGY THE EXPORT OR
TRANSMISSION OF WHICH, REQUIRE A PERMIT

Division 2 – List of Dual-Use Goods

<i>Product Code</i>	<i>Item Description</i>
CATEGORY 5 – TELECOMMUNICATIONS AND “INFORMATION SECURITY”	
	<p>Part 1 — TELECOMMUNICATIONS</p> <p><u>Note 1</u></p> <p><i>Category 5, Part 1 concerns components, “lasers”, test and “production” equipment and “software” therefor which are specially designed for telecommunications equipment or systems.</i></p> <p><u>Note 2</u></p> <p><i>“Digital computer”, related equipment or “software”, when essential for operation and support of telecommunications equipment described in this Category, are regarded as specially designed components for the purposes of this Category, provided they are the standard models customarily supplied by the manufacturer. This includes operation, administration, maintenance, engineering or billing computer systems.</i></p>
5A1	Systems, Equipment and Components
DL5A001	<p>Telecommunications systems, equipment, components and accessories as follows:</p> <p>a. Any type of telecommunications equipment having any of the following characteristics, functions or features:</p> <ol style="list-style-type: none"> 1. Specially designed to withstand transitory electronic effects or electromagnetic pulse effects, both arising from a nuclear explosion; 2. Specially hardened to withstand gamma, neutron or ion radiation; <u>or</u> 3. Specially designed to operate outside the temperature range from 218 K (–55°C) to 397 K (124°C); <p><u>Note</u></p> <p><i>Category Code 5A001.a.3. applies only to electronic equipment.</i></p> <p><u>Note</u></p> <p><i>Category Codes 5A001.a.2. and 5A001.a.3. do not include equipment</i></p>

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	<p data-bbox="411 304 1038 338"><i>designed or modified for use on board satellites.</i></p> <p data-bbox="373 374 1385 479">b. Telecommunication systems and equipment, and specially designed components and accessories therefor, having any of the following characteristics, functions or features:</p> <ol data-bbox="411 501 1385 1608" style="list-style-type: none"> <li data-bbox="411 501 1385 568">1. Being underwater untethered communications systems having any of the following: <ol data-bbox="450 591 1385 891" style="list-style-type: none"> <li data-bbox="450 591 1385 658">a. An acoustic carrier frequency outside the range from 20 kHz to 60 kHz; <li data-bbox="450 680 1385 714">b. Using an electromagnetic carrier frequency below 30 kHz; <li data-bbox="450 736 1385 770">c. Using electronic beam steering techniques; <u>or</u> <li data-bbox="450 792 1385 891">d. Using “lasers” or light-emitting diodes (LEDs) with an output wavelength greater than 400 nm and less than 700 nm, in a “local area network”; <li data-bbox="411 913 1385 981">2. Being radio equipment operating in the 1.5 MHz to 87.5 MHz band and having all of the following: <ol data-bbox="450 1003 1385 1344" style="list-style-type: none"> <li data-bbox="450 1003 1385 1070">a. Automatically predicting and selecting frequencies and “total digital transfer rates” per channel to optimise the transmission; <u>and</u> <li data-bbox="450 1093 1385 1344">b. Incorporating a linear power amplifier configuration having a capability to support multiple signals simultaneously at an output power of 1 kW or more in the frequency range of 1.5 MHz or more but less than 30 MHz, or 250 W or more in the frequency range of 30 MHz or more but not exceeding 87.5 MHz, over an “instantaneous bandwidth” of one octave or more and with an output harmonic and distortion content of better than –80 dB; <li data-bbox="411 1366 1385 1469">3. Being radio equipment employing “spread spectrum” techniques, including “frequency hopping” techniques, other than those specified in Category Code 5A001.b.4. and having any of the following: <ol data-bbox="450 1491 1385 1608" style="list-style-type: none"> <li data-bbox="450 1491 1385 1525">a. User programmable spreading codes; <u>or</u> <li data-bbox="450 1547 1385 1608">b. A total transmitted bandwidth which is 100 or more times the bandwidth of any one information channel and in excess of 50 kHz; <p data-bbox="491 1630 555 1664"><u>Note</u></p> <p data-bbox="491 1686 1385 1789"><i>Category Code 5A001.b.3.b. does not include radio equipment specially designed for use with civil cellular radio-communications systems.</i></p> <p data-bbox="450 1812 513 1845"><u>Note</u></p> <p data-bbox="450 1868 1385 1935"><i>Category Code 5A001.b.3 does not include equipment designed to operate at an output power of 1 Watt or less.</i></p> <ol data-bbox="411 1957 1385 2016" style="list-style-type: none"> <li data-bbox="411 1957 1385 2016">4. Being radio equipment employing ultra-wideband modulation techniques, having user programmable channelising codes, scrambling

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	<p>codes or network identification codes and having any of the following:</p> <ul style="list-style-type: none"> a. A bandwidth exceeding 500 MHz; <u>or</u> b. A “fractional bandwidth” of 20% or more; <p>5. Being digitally controlled radio receivers having all of the following:</p> <ul style="list-style-type: none"> a. More than 1,000 channels; b. A “frequency switching time” of less than 1 ms; c. Automatic searching or scanning of a part of the electromagnetic spectrum; <u>and</u> d. Identification of the received signals or the type of transmitter; <u>or</u> <p><u>Note</u></p> <p><i>Category Code 5A001.b.5. does not include radio equipment specially designed for use with civil cellular radio-communications systems.</i></p> <p>6. Employing functions of digital “signal processing” to provide ‘voice coding’ output at rates of less than 2,400 bit/s.</p> <p><u>Technical Notes</u></p> <ul style="list-style-type: none"> 1. <i>For variable rate ‘voice coding’, Category Code 5A001.b.6. applies to the ‘voice coding’ output of continuous speech.</i> 2. <i>For the purpose of Category Code 5A001.b.6., ‘voice coding’ is defined as the technique to take samples of human voice and then convert these samples into a digital signal, taking into account specific characteristics of human speech.</i>
	<p>c. Optical fibre communication cables, optical fibres and accessories, as follows:</p>
	<p>1. Optical fibres of more than 500 m in length, and specified by the manufacturer as being capable of withstanding a ‘proof test’ tensile stress of 2×10^9 N/m² or more;</p> <p><u>Technical Note</u></p> <p><i>‘Proof Test’: on-line or off-line production screen testing that dynamically applies a prescribed tensile stress over a 0.5 m to 3 m length of fibre at a running rate of 2 m/s to 5 m/s while passing between capstans approximately 150 mm in diameter. The ambient temperature is a nominal 293 K (20°C) and relative humidity 40%. Equivalent national standards may be used for executing the proof test.</i></p>
	<p>2. Optical fibre cables and accessories designed for underwater use;</p> <p><u>Note</u></p> <p><i>Category Code 5A001.c.2. does not include standard civil</i></p>

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	<p><i>telecommunication cables and accessories.</i></p> <p><u>N.B.1</u> <i>For underwater umbilical cables, and connectors therefor, see Category Code 8A002.a.3.</i></p> <p><u>N.B.2</u> <i>For fibre-optic hull penetrators or connectors, see Category Code 8A002.c.</i></p>
	<p>d. “Electronically steerable phased array antennae” operating above 31.8 GHz;</p> <p><i>Note</i> <i>Category Code 5A001.d. does not include “electronically steerable phased array antennae” for landing systems with instruments meeting ICAO standards covering Microwave Landing Systems (MLS).</i></p>
	<p>e. Radio direction finding equipment operating at frequencies above 30 MHz and having all of the following characteristics, and specially designed components therefor:</p> <ol style="list-style-type: none"> 1. “Instantaneous bandwidth” of 10 MHz or more; <u>and</u> 2. Capable of finding a Line Of Bearing (LOB) to non-cooperating radio transmitters with a signal duration of less than 1 ms;
	<p>f. Jamming equipment specially designed or modified to intentionally and selectively interfere with, deny, inhibit, degrade or seduce mobile telecommunication services and having any of the following characteristics, and specially designed components therefor:</p> <ol style="list-style-type: none"> 1. Simulating the functions of Radio Access Network (RAN) equipment; <u>or</u> 2. Detecting and exploiting specific characteristics of the mobile telecommunications protocol employed (e.g., GSM); <p><u>N.B.</u> <i>For GNSS jamming equipment see Division 2 of Part I of this Schedule.</i></p>
	<p>g. Passive Coherent Location (PCL) systems or equipment, specially designed for detecting and tracking moving objects by measuring reflections of ambient radio frequency emissions, supplied by non-radar transmitters.</p> <p><i>Technical Note</i> <i>Non-radar transmitters may include commercial radio, television or cellular telecommunications base stations.</i></p> <p><i>Note</i></p>

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	<p><i>Category Code 5A001.g. does not include any of the following:</i></p> <ol style="list-style-type: none"> <i>1. Radio-astronomical equipment; <u>or</u></i> <i>2. Systems or equipment, that require any radio transmission from the target.</i>
DL5A101	<p>Telemetry and telecontrol equipment, including ground equipment, designed or modified for ‘missiles’.</p> <p><u>Technical Note</u></p> <p><i>In Category Code 5A101 ‘missile’ means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.</i></p> <p><u>Note</u></p> <p><i>Category Code 5A101 does not include:</i></p> <ol style="list-style-type: none"> <i>a. Equipment designed or modified for manned aircraft or satellites;</i> <i>b. Ground based equipment designed or modified for terrestrial or marine applications;</i> <i>c. Equipment designed for commercial, civil or ‘Safety of Life’ (e.g., data integrity, flight safety) GNSS services.</i>
5B1	Test, Inspection and Production Equipment
DL5B001	<p>Telecommunications test, inspection and production equipment, components and accessories, as follows:</p> <ol style="list-style-type: none"> a. Equipment and specially designed components or accessories therefor, specially designed for the “development”, “production” or “use” of equipment, functions or features specified in Category Code 5A001, 5B001, 5D001 or 5E001; <p><u>Note</u></p> <p><i>Category Code 5B001.a. does not include optical fibre characterisation equipment.</i></p> <ol style="list-style-type: none"> b. Equipment and specially designed components or accessories therefor, specially designed for the “development” of any of the following telecommunication transmission or switching equipment: <ol style="list-style-type: none"> 1. Equipment employing digital techniques designed to operate at a “total digital transfer rate” exceeding 15 Gbit/s; <p><u>Technical Note</u></p> <p><i>For switching equipment the “total digital transfer rate” is measured at the highest speed port or line.</i></p>

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	<p>2. Equipment employing a “laser” and having any of the following characteristics:</p> <ul style="list-style-type: none"> a. A transmission wavelength exceeding 1,750 nm; b. Performing “optical amplification”; c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques); <u>or</u> d. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz; <p><i>Note</i></p> <p><i>Category Code 5B001.b.2.d. does not include equipment specially designed for the “development” of commercial TV systems.</i></p>
	3. Equipment employing “optical switching”;
	4. Radio equipment employing Quadrature-Amplitude-Modulation (QAM) techniques above level 256; <u>or</u>
	5. Equipment employing “common channel signalling” operating in non-associated mode of operation.
5C1	Materials
	None.
5D1	Software
DL5D001	<p>“Software”, as follows:</p> <ul style="list-style-type: none"> a. “Software” specially designed or modified for the “development”, “production” or “use” of equipment, functions or features, specified in Category Code 5A001 or 5B001; b. “Software” specially designed or modified to support “technology” specified in Category Code 5E001; c. Specific “software” specially designed or modified to provide characteristics, functions or features of equipment, specified in Category Code 5A001 or 5B001; d. “Software” specially designed or modified for the “development” of any of the following telecommunication transmission or switching equipment: <ul style="list-style-type: none"> 1. Equipment employing digital techniques designed to operate at a “total digital transfer rate” exceeding 15 Gbit/s;

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	<p><u>Technical Note</u></p> <p><i>For switching equipment the “total digital transfer rate” is measured at the highest speed port or line.</i></p> <p>2. Equipment employing a “laser” and having any of the following:</p> <ul style="list-style-type: none"> a. A transmission wavelength exceeding 1,750 nm; <u>or</u> b. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz; <p><u>Note</u></p> <p><i>Category Code 5D001.d.2.b. does not include “software” specially designed or modified for the “development” of commercial TV systems.</i></p> <p>3. Equipment employing “optical switching”; <u>or</u></p> <p>4. Radio equipment employing quadrature-amplitude-modulation (QAM) techniques above level 256.</p>
DL5D101	“Software” specially designed or modified for the “use” of equipment specified in Category Code 5A101.
5E1	Technology
DL5E001	<p>“Technology”, as follows:</p> <ul style="list-style-type: none"> a. “Technology” (according to the General Technology Note) for the “development”, “production” or “use” (excluding operation) of equipment, functions or features or “software”, specified in Category Code 5A001, 5B001 or 5D001; b. Specific “technology”, as follows: <ul style="list-style-type: none"> 1. “Required” “technology” for the “development” or “production” of telecommunications equipment specially designed to be used on board satellites; 2. “Technology” for the “development” or “use” of “laser” communication techniques with the capability of automatically acquiring and tracking signals and maintaining communications through exoatmosphere or sub-surface (water) media; 3. “Technology” for the “development” of digital cellular radio base station receiving equipment whose reception capabilities that allow multi-band, multi-channel, multi-mode, multi-coding algorithm or multi-protocol operation can be modified by changes in “software”; 4. “Technology” for the “development” of “spread spectrum”

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	<p>techniques, including “frequency hopping” techniques;</p> <p>c. “Technology” (according to the General Technology Note) for the “development” or “production” of any of the following:</p> <ol style="list-style-type: none"> 1. Equipment employing digital techniques designed to operate at a “total digital transfer rate” exceeding 15 Gbit/s; <p><i>Technical Note</i></p> <p><i>For switching equipment the “total digital transfer rate” is measured at the highest speed port or line.</i></p> <ol style="list-style-type: none"> 2. Equipment employing a “laser” and having any of the following: <ol style="list-style-type: none"> a. A transmission wavelength exceeding 1,750 nm; b. Performing “optical amplification” using Praseodymium-Doped Fluoride Fibre Amplifiers (PDFFA); c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques); d. Employing wavelength division multiplexing techniques exceeding 8 optical carriers in a single optical window; <u>or</u> e. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz; <p><i>Note</i></p> <p><i>Category Code 5E001.c.2.e. does not include “technology” for the “development” or “production” of commercial TV systems.</i></p> 3. Equipment employing “optical switching”; 4. Radio equipment having any of the following: <ol style="list-style-type: none"> a. Quadrature-Amplitude-Modulation (QAM) techniques above level 256; b. Operating at input or output frequencies exceeding 31.8 GHz; <u>or</u> <p><i>Note</i></p> <p><i>Category Code 5E001.c.4.b. does not include “technology” for the “development” or “production” of equipment designed or modified for operation in any frequency band which is “allocated by the ITU” for radio-communications services, but not for radio-determination.</i></p> <ol style="list-style-type: none"> c. Operating in the 1.5 MHz to 87.5 MHz band and incorporating adaptive techniques providing more than 15 dB suppression of an interfering signal; <u>or</u> 5. Equipment employing “common channel signalling” operating in non-

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	associated mode of operation.
DL5E101	“Technology” (according to the General Technology Note) for the “development”, “production” or “use” of equipment specified in Category Code 5A101.