S C H E D U L E S

[F1SCHEDULE 2C

Critical-industry goods and critical-industry technology

Textual Amendments

F1 Sch. 2C inserted (5.7.2022) by The Republic of Belarus (Sanctions) (EU Exit) (Amendment) Regulations 2022 (S.I. 2022/748), reg. 1(2), **Sch.**

PART 4

Telecommunications and information security

CHAPTER 1

Telecommunication equipment

5A991 Telecommunication equipment.

Note:

1. 'Asynchronous transfer mode' ('ATM') is a transfer mode in which the information is organised into cells; it is asynchronous in the sense that the recurrence of cells depends on the required or instantaneous bit rate.

2. 'Bandwidth of one voice channel' is data communication equipment designed to operate in one voice channel of 3,100 Hz, as defined in CCITT Recommendation G.151.

3. 'Communications channel controller' is the physical interface that controls the flow of synchronous or asynchronous digital information. It is an assembly that can be integrated into computer or telecommunications equipment to provide communications access.

4. 'Datagram' is a self-contained, independent entity of data carrying sufficient information to be routed from the source to the destination data terminal equipment without reliance on earlier exchanges between this source and destination data terminal equipment and the transporting network.

5. 'Gateway' is the function, realised by any combination of equipment and "software", to carry out the conversion of conventions for representing, processing or communicating information used on one system into the corresponding, but different conventions used in another system.

6. 'Packet' is a group of binary digits including data and call control signals that is switched as a composite whole. The data, call control signals, and possible error control information are arranged in a specified format.

a. Any type of telecommunications equipment, not controlled by 5A001.a, specially designed to operate outside the temperature range from 219 K (-54°C) to 397 K (124°C).

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

a. Categorised as follows, or combinations thereof:

1. Radio equipment (e.g., transmitters, receivers and transceivers);

2. Line terminating equipment;

3. Intermediate amplifier equipment;

4. Repeater equipment;

5. Regenerator equipment;

6. Translation encoders (transcoders);

7. Multiplex equipment (statistical mutiplex included);

8. Modulators/demodulators (modems);

9. Transmultiplex equipment (see CCITT Rec. G701);

10. "Stored program controlled" digital cross-connection equipment;

11. 'Gateways' and bridges;

12. "Media access units"; and

b. Designed for use in single or multi-channel communication via any of the following:

1. Wire (line);

2. Coaxial cable;

3. Optical fibre cable;

4. Electromagnetic radiation; or

5. Underwater acoustic wave propagation.

b.1. Employing digital techniques, including digital processing of analogue signals, and designed to operate at a "digital transfer rate" at the highest multiplex level exceeding 45 Mbit/s or a "total digital transfer rate" exceeding 90 Mbit/s;

Note: 5A991.b.1 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

b.2. Modems using the 'bandwidth of one voice channel' with a "data signalling rate" exceeding 9,600 bits per second;

b.3. Being "stored program controlled" digital cross-connect equipment with "digital transfer rate" exceeding 8.5 Mbit/s per port.

b.4. Being equipment containing any of the following:

b.4.a. 'Network access controllers' and their related common medium having a "digital transfer rate" exceeding 33 Mbit/s; *or*

b.4.b. "Communication channel controllers" with a digital output having a "data signalling rate" exceeding 64,000 bit/s per channel;

Note: If any uncontrolled equipment contains a "network access controller", it cannot have any type of telecommunications interface, except those described in, but not controlled by 5A991.b.4.

b.5. Employing a "laser" and having any of the following:

b.5.a. A transmission wavelength exceeding 1,000 nm; *or*

b.5.b. Employing analogue techniques and having a bandwidth exceeding 45 MHz;

***Note:** 5A991.b.5.b does not control commercial TV systems.*

b.5.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques);

b.5.d. Employing wavelength division multiplexing techniques; or

b.5.e. Performing optical amplification;

b.6. Radio equipment operating at input or output frequencies exceeding:

b.6.a. 31 GHz for satellite-earth station applications; or

b.6.b. 26.5 GHz for other applications;

***Note:** 5A991.b.6. does not control equipment for civil use when conforming with an International Telecommunications Union (ITU) allocated band between 26.5 GHz and 31 GHz.*

b.7. Being radio equipment employing any of the following:

b.7.a. Quadrature-amplitude-modulation (QAM) techniques above level 4 if the "total digital transfer rate" exceeds 8.5 Mbit/s;

b.7.b. QAM techniques above level 16 if the "total digital transfer rate" is equal to or less than 8.5 Mbit/s;

b.7.c. Other digital modulation techniques and having a "spectral efficiency" exceeding 3 bit/s/Hz; or

b.7.d. 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.

Notes:

1. 5A991.b.7 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

2. 5A991.b.7 does not control radio relay equipment for operation in an ITU allocated band:

a. Having any of the following:

a.1. Not exceeding 960 MHz; or

a.2. With a "total digital transfer rate" not exceeding 8.5 Mbit/s; and

b. Having a "spectral efficiency" not exceeding 4 bit/s/Hz.

c. "Stored program controlled" switching equipment and related signalling systems, having any of the following characteristics, functions or features, and specially designed components therefor:

Note: Statistical multiplexers with digital input and digital output which provide switching are treated as "stored program controlled" switches.

c.1. Data (message) switching equipment or systems designed for "packet-mode operation" and electronic assemblies and components therefor,

c.2. Not used;

c.3. Routing or switching of 'datagram' packets;

Note: The restrictions in 5A991.c.3 do not apply to networks restricted to using only 'network access controllers' or to 'network access controllers' themselves.

c.4. Not used.

c.5. Multi-level priority and pre-emption for circuit switching;

Note: 5A991.c.5 does not control single-level call pre-emption.

c.6. Designed for automatic hand-off of cellular radio calls to other cellular switches or automatic connection to a centralised subscriber data base common to more than one switch;

c.7. Containing "stored program controlled" digital cross connect equipment with "digital transfer rate" exceeding 8.5 Mbit/s per port.

c.8. "Common channel signalling" operating in either non-associated or quasi-associated mode of operation;

c.9. "Dynamic adaptive routing";

c.10. Being packet switches, circuit switches and routers with ports or lines exceeding any of the following:

c.10.a. A "data signalling rate" of 64,000 bit/s per channel for a 'communications channel controller'; or

Note: 5A991.c.10.a does not control multiplex composite links composed only of communication channels not individually controlled by 5A991.b.1.

c.10.b. A "digital transfer rate" of 33 Mbit/s for a "network access controller" and related common media;

Note: 5A991.c.10 does not control packet switches or routers with ports or lines not exceeding the limits in 5A991.c.10.

c.11. "Optical switching";

c.12. Employing 'Asynchronous Transfer Mode' ('ATM') techniques;

d. Optical fibres and optical fibre cables of more than 50 m in length designed for single mode operation;

e. Centralised network control having all of the following:

e.1. Receives data from the nodes; and

e.2. Process these data in order to provide control of traffic not requiring operator decisions, and thereby performing "dynamic adaptive routing";

Note: 5A991.e does not preclude control of traffic as a function of predictable statistical traffic conditions.

f. Phased array antennas, operating above 10.5 GHz, containing active elements and distributed components, and designed to permit electronic control of beam shaping and pointing, except for landing systems with instruments meeting International Civil Aviation Organisation (ICAO) standards (microwave landing systems (MLS));

g. Mobile communications equipment and electronic assemblies and components therefor;

h. Radio relay communications equipment designed for use at frequencies equal to or exceeding 19.7 GHz and components therefor.

5B991 Telecommunications test equipment.

5C991 Preforms of glass or of any other material optimised for the manufacture of optical fibres controlled by 5A991.

5D991 "Software" specially designed or modified for the "development," "production" or "use" of equipment controlled by 5A991 and 5B991, and dynamic adaptive routing software, as follows:

a. "Software", other than in machine-executable form, specially designed for "dynamic adaptive routing";

b. Not used.

5E991 "Technology" for the "development", "production" or "use" of equipment controlled by 5A991 or 5B991, or "software" controlled by 5D991, and other "technologies" as follows:

Note:

1. 'Synchronous digital hierarchy' (SDH) is a digital hierarchy providing a means to manage, multiplex, and access various forms of digital traffic using a synchronous transmission format on different types of media. The format is based on the Synchronous Transport Module (STM) that is defined by CCITT Recommendation G.703, G.707, G.708, G.709 and others yet to be published. The first level rate of 'SDH' is 155.52 Mbits/s.

2. 'Synchronous optical network' (SONET) is a network providing a means to manage, multiplex and access various forms of digital traffic using a synchronous transmission format on fiber optics. The format is the North America version of 'SDH' and also uses the Synchronous Transport Module (STM). However, it uses the Synchronous Transport Signal (STS) as the basic transport module with a first level rate of 51.81 Mbits/s. The SONET standards are being integrated into those of 'SDH'.

a. Specific "technologies" as follows:

a.1. "Technology" for the processing and application of coatings to optical fibre specially designed to make it suitable for underwater use;

a.2. "Technology" for the "development" of equipment employing 'Synchronous Digital Hierarchy' ('SDH') or 'Synchronous Optical Network' ('SONET') techniques.

CHAPTER 2

Information security

5A992 "Information security" systems, equipment and components, described by entry 5A002 of Annex I of the Dual-Use Regulation and classified under Note 3 to Category 5, Part 2 of Annex I of the Dual-Use Regulation (Cryptography Note).

5D992 "Information Security" "software" described by entry 5D002 to Category 5, Part 2 in Annex I of the Dual-Use Regulation and classified under Note 3 to Category 5, Part 2 of Annex I of the Dual-Use Regulation (Cryptography Note).

Note: This entry does not control "software" designed or modified to protect against malicious computer damage, e.g., viruses, where the use of "cryptography" is limited to authentication, digital signature and/or the decryption of data or files.

5E992 "Information Security" "technology" as follows:

a. "Technology" for the "use" of items controlled by 5A992 or "software" controlled by 5D992.**]**

Changes to legislation:
There are currently no known outstanding effects for the The Republic of Belarus (Sanctions) (EU Exit) Regulations 2019, PART 4.