



Expanded unofficial version of Annex 13

to the decision of the State Commission on Radio Frequencies under the Security Council of the Republic of Belarus No. 12K/12 dated 28.08.2012

Version 2022

MEDICAL DATA ACQUISITION

Scope of application

This annex covers frequency bands and regulatory as well as informative parameters recommended for medical data acquisition applications. They cover transmission of nonvoice data to and from non-implantable medical devices for the purpose of monitoring, diagnosing and treating patients in healthcare facilities or patient's home, as prescribed by duly authorised healthcare professionals, including:

- Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP-WMCE) application designed for use in medical doctor-patient scenarios with the aim of acquiring images of human digestive tract;
- Medical Body Area Network System (MBANS) for low-power wireless networking of a plurality of body-worn sensors and/or actuators as well as of a hub device placed on/around the human body.

Active Medical Implants and their associated peripherals are included in [Annex 12](#) of this Recommendation.



Table 13: Regulatory parameters

Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / maximum occupied bandwidth	Harmonised Standards/ Confirmation of compliance	Notes
430-440 MHz	-50 dBm/100kHz max e.r.p. density but not exceeding a total power of -40 dBm/10MHz (both limits are intended for measurement outside of the patient's body)	No requirement	<10 MHz	EN 300 220 EN 303 520 IEC 62311 / Regulation of Belarus TR 024 By	ULP-WMCE CCam transmitters and associated DR receivers for UHF wideband Ultra Low Power Wireless Medical Capsule Endoscopy
2483.5-2500 MHz	1 mW e.i.r.p.	Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and <10% duty cycle	<3 MHz	EN 300 440 EN 303 203 IEC 62311 / Regulation of Belarus TR 024 By	Application for MBANS networks, only inside medical institutions. The types of devices that can belong to MBANSs are on-body and off-body medical sensors, patient monitoring devices and medical actuators covered by the Medical Device Directive (Directive 93/42/EEC).



Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / maximum occupied bandwidth	Harmonised Standards/ Confirmation of compliance	Notes
2483.5-2500 MHz	10 mW e.i.r.p.	Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and < 2% duty cycle	<3 MHz	EN 300 440 EN 303 203 IEC 62311 / Regulation of Belarus TR 024 By	MBANS, indoor only within the patient's home. The types of devices that can belong to MBANSs are on-body and off-body medical sensors, patient monitoring devices and medical actuators covered by the Medical Device Directive (Directive 93/42/EEC).

Additional information

MBANS equipment must implement a spectrum access mechanism as described in the European standard EN 303 203 or an equivalent spectrum access mechanism. The modulation bandwidth for MBANS should not exceed 3 MHz.

DECISION OF THE STATE COMMISSION ON RADIO FREQUENCIES UNDER THE SECURITY COUNCIL OF THE REPUBLIC OF BELARUS

No. [12K/12](#):

«The allocation of radio frequency spectrum for short range radio electronics» (SRD) is based on the European Radiocommunications Committee/Recommendation 70-03 ([ERC/REC 70-03](#)).

All notes indicated in the tables (appendices 1-13 to decision [12K/12](#)) are a mandatory requirement. Appendices 1-13 to Decision [12K/12](#) also partially take into account [COMMISSION IMPLEMENTING DECISION 2013/752/EU](#) on harmonization of the radio spectrum for use by short-range devices.



The current version of the technical regulations

Republic of Belarus "Means of telecommunication. Safety" ([TR 2018/024/BY](#)) **confirmation of compliance is required** for short-range radio communication devices, including radio modules that are part of other equipment operating in the radio frequency band from 25 MHz to 30 GHz (Annex 2, paragraph 10 of the technical regulations)

