

RO-IR SRD-03

TECHNICAL REGULATION

for the radio interface

on broadband data transmission devices

(previous coding RO-IR 03 - specifications RO-IR 03-01, RO-IR 03-04a, RO-IR 03-04b, RO-IR 03-04c, RO-IR 03-05 and RO-IR 03-06)

1. Basic Considerations

Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC was implemented in national legislation by Government Decision No 740/2016 on making available on the market of radio equipment, with subsequent amendments and completions.

This technical regulation contains the requirements for license-exempt use of radio spectrum by short-range devices intended for broadband data transmission devices in the specified frequency bands and considers compliance, especially, with the provisions of Article 3 Paragraph 2 and Articles 6-8 of Directive 2014/53/EU.

Nothing in this technical regulation shall preclude the obligation for radio equipment placed on the market or made available on the market in Romania to comply with Directive 2014/53/EU.

The obligations arising from Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services are met in this regulation (OJ L 241, 17.9.2015, p. 1-15).

All the Romanian technical regulations for the radio interfaces notified under Directive (EU) 2015/1535 shall be published and made available on National Authority for Management and Regulation in Communications (ANCOM) website at: https://www.ancom.ro/en/romanian-regulation_2719.

2. Radio Interface Specifications

Broadband Data Transmission Devices

Frequency band	Annex
863 – 868 MHz	RO-IR SRD-03-01
917.4 – 919.4 MHz	RO-IR SRD-03-02
2 400 – 2 483.5 MHz	RO-IR SRD-03-03
57 – 71 GHz	RO-IR SRD-03-04a, RO-IR SRD-03-04b, RO-IR SRD-03-04c

For the purpose of this technical regulation, *a proximity radio device (short-range device - SRD)* means a radio device which provides either unidirectional or bidirectional communication and which receives and/or transmits signals over a short distance and at a low power.

For the purpose of this technical regulation, *category of short-range devices* means a group of short-range devices or short-range devices operating in the network, which use the radio spectrum by the aid of similar technical mechanisms of access to spectrum or based on common usage scenarios.

The category of *broadband data transmission devices* includes radio devices that use broadband modulation techniques to access radio spectrum. Typical uses include wireless access devices such as radio local area networks (*WAS/RLANs*) or broadband SRDs in data networks.

For the purpose of this technical regulation, *a network access point on a data network* is a fixed terrestrial short-range device that operates as a point of connection for other short-range devices in the data network for service platforms outside that data network. The term *data network* refers to several short-range devices, including the network access point, of which the network is composed, and the radio connections between them.

For the purpose of this technical regulation, *mean equivalent isotropically radiated power (e.i.r.p.)* means e.i.r.p. averaged for the duration of one transmission burst corresponding for the power setting to the highest level, if the power regulation was implemented to the transmitter.

For the purpose of this technical regulation, the *cycle of use* is defined as the ratio, expressed as a percentage, between $\Sigma(Ton)$ and $(Tobs)$, where Ton is the operating time of a single radio transmitter device and $Tobs$ is the observation period. Ton is measured in a frequency observation band ($Fobs$). Unless otherwise specified in this technical regulation, $Tobs$ represents a one-hour uninterrupted period and $Fobs$ is the applicable frequency band of this technical regulation.

For the purpose of this technical regulation, *non-interference and non-protected basis* means that no harmful interference may be caused to any radio communications services and that no claim may be made for protection of these devices against harmful interferences originating from radio communications services.

The use of radio spectrum by proximity radio devices (short-range devices) is allowed on a non-interference and non-protected basis provided that such devices meet the conditions set out in the Annexes below.

3. Document History:

Edition	Changes
Edition 1/2014	Notification number according to Directive 98/34/EC: 2014/599/RO.
Edition 2/2018 (06.08.2018)	<p>Update according to Commission Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on harmonizing the radio spectrum for the use of short-range devices and repealing Decision 2006/804/EC: RO-IR 03-01, RO-IR 03-04, to which RO-IR 03-05 (863 – 868 MHz frequency band) was added;</p> <p>Update of the legal framework according to Point 1 – „Basic considerations” and reference documents (line 13);</p> <p>Formal changes according to TCAM-RSC model of November 2017.</p>
Edition 3/2020 (23.12.2020)	<p>Update of the legal framework according to Point 1 – „Basic considerations” and definitions to Point 2 - “Specifications for radio interface”;</p> <p>Update according to Commission Implementing Decision (EU) 2019/1345 amending Decision 2006/771/EC in order to update the harmonised technical conditions for the use of radio spectrum for short-range devices:</p> <ul style="list-style-type: none"> • RO-IR 03-01 ÷ RO-IR 03-03 and RO-IR 03-05; • RO-IR 03-04 (57-66 GHz frequency band) was eliminated; • New technical specifications were added: RO-IR 03-04a, RO-IR 03-04b and RO-IR 03-04c (57-71 GHz frequency band); <p>Update according to Commission Implementing Decision (EU) 2018/1538 of 11 October 2018 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands:</p> <ul style="list-style-type: none"> • A new technical specification was added: RO-IR 03-06; <p>Update according to the list of Class 1 radio equipment subclasses (version of January 2020) published according to Article 1 Paragraph (3) of Commission Decision 2000/299/EC (https://ec.europa.eu/docsroom/documents/40361).</p>

<p>Edition 4/2022 (11.10.2022)</p>	<p>Update according to Commission Implementing Decision (EU) 2022/172 amending Commission Implementing Decision (EU) 2018/1538 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands.</p> <p>Update according to Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices.</p> <ul style="list-style-type: none"> • Update of reference documents (line 13) and definitions Point 2 • Renumbering of technical specifications following the separation of RO-IR 03 into RO-IR SRD-03 and RO-IR RLAN <p>The history of the frequency bands 863-868 MHz, 917.4-919.4 MHz, 2400-2483.5 MHz and 57-71 GHz is available in the technical regulation RO-IR 03 for the radio interface concerning broadband data transmission systems, 3rd edition.</p>
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ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-01	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices	<i>This set of usage conditions only applies to broadband SRDs in data networks.</i>
	3	Frequency band	863 – 868 MHz	<i>Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices)</i>
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	Bandwidth: > 600 kHz and ≤ 1 MHz	
	6	Direction/Separation	-	
	7	Transmit power / Power density	25 mW effective radiated power (e.r.p.)	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply. Duty cycle: ≤ 10% for network access points; Duty cycle: ≤ 2.8% in the other cases.	<i>Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.</i>
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 304 220; Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-02	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices	<i>This set of usage conditions only applies to broadband SRDs in data networks. All nomadic and mobile devices in the data network are placed under the control of a pilot network access point.</i>
	3	Frequency band	917.4 – 919.4 MHz (harmonized minimum central band)	<i>Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/172 amending Commission Implementing Decision (EU) 2018/1538 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands)</i>
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	Bandwidth: > 600 kHz and ≤ 1 MHz	
	6	Direction/Separation	-	
	7	Transmit power / Power density	25 mW effective radiated power (e.r.p.)	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply. Duty cycle: ≤ 10 % for network access points. Duty cycle: ≤ 2.8 % in the other cases.	<i>Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.</i>
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 303 659; Commission Implementing Decision (EU) 2022/172 amending Commission Implementing Decision (EU) 2018/1538 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-03	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices	
	3	Frequency band	2 400 – 2 483.5 MHz	<i>Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices)</i>
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	100 mW equivalent isotropic radiated power (e.i.r.p.) and 100mW/100kHz e.i.r.p. density when using frequency hopping modulation; 10 mW/MHz e.i.r.p. density when using other types of modulation	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply.	<i>Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.</i>
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 328; Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-04a	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices Fixed outdoor installations are excluded.	
	3	Frequency band	57 – 71 GHz	Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices)
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	40 dBm equivalent isotropic radiated power (e.i.r.p.) and 23 dBm/MHz e.i.r.p. density	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply.	Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 567 (for the 57-66 MHz frequency band); Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-04b	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices	
	3	Frequency band	57 – 71 GHz	<i>Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices)</i>
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	40 dBm e.i.r.p., 23 dBm/MHz e.i.r.p. density and a maximum transmitting power at the antenna port or ports of 27 dBm	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply.	<i>Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.</i>
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

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ROMANIA	Radio Interface Specification	SRD / Broadband Data Transmission Devices	RO-IR SRD-03-04c	Edition 4/2022
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	No	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Proximity radio device (short-range) / Broadband data transmission devices This set of usage conditions only applies to fixed outdoor installations.	
	3	Frequency band	57 – 71 GHz	<i>Harmonised radio spectrum for use by short-range devices (Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices)</i>
	4	Channelling (channel distribution)	-	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	55 dBm e.i.r.p., 38 dBm/MHz e.i.r.p. density and a broadcast antenna gain of ≥ 30 dBi	
	8	Channel occupation and access rules	Requirements on techniques to access radio spectrum and mitigate interference apply.	<i>Techniques to access radio spectrum and mitigate interference are used, ensuring an adequate performance level to meet the essential requirements provided in Directive 2014/53/EU. If the relevant techniques are described in the harmonized standards (or parts thereof) the references of which have been published in the Official Journal of the European Union under Directive 2014/53/EU, a performance at least equivalent to the performance of these techniques shall be ensured.</i>
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	Commission Implementing Decision (EU) 2022/180 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices; ERC/REC 70-03	
	14	Notification number	-	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1