



COMMISSION IMPLEMENTING DECISION (EU) 2025/650

of 26 March 2025

amending Implementing Decision (EU) 2018/1538 as regards the update of harmonised technical conditions for short-range devices within the 874-876 and 915-921 MHz frequency bands

(notified under document C(2025) 1739)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community ⁽¹⁾, and in particular Article 4(3) thereof,

Whereas:

- (1) Commission Implementing Decision (EU) 2018/1538 ⁽²⁾ harmonises the technical conditions for the use of the 874-876 and 915-921 MHz frequency bands by technically advanced radio frequency identification ('RFID') solutions as well as 'Internet of Things' applications based on networked short-range devices in data networks. In those frequency bands, the sharing environment is different compared to that applicable under Commission Decision 2006/771/EC ⁽³⁾, therefore, a specific regulatory regime is required.
- (2) While the 873-874,4 MHz and 918-919,4 MHz bands are not harmonised for use by the global system for mobile communications for railway ('GSM-R'), by Union law or by a Decision of the European Communications Committee, those frequency bands may be used for this purpose on a national basis subject to a national decision in line with the Radio Regulations of the International Telecommunication Union. Therefore, where harmonised technical conditions would not be sufficient to protect the use of those bands for a national extension of GSM for Railways ('E-GSM-R'), concerned Member States are allowed to subject the use of short-range devices to additional requirements without impacting the harmonised technical conditions for access to spectrum for short-range devices within the bands. Such restrictions, where needed in a particular Member State, should ensure that coordination between spectrum users takes place, enabling geographic sharing between E-GSM-R on the one hand and RFID devices and networked short-range devices on the other.
- (3) The harmonised use for railway mobile radio of the paired frequency bands 874,4-880,0 MHz and 919,4-925,0 MHz, which are adjacent to the frequency bands 874-874,4 MHz and 916,1-919,4 MHz that are harmonised for short-range devices by Implementing Decision (EU) 2018/1538, is subject to Commission Implementing Decision (EU) 2021/1730 ⁽⁴⁾. The coexistence between the short-range devices operating in the 874-874,4 MHz and 917,4-919,4 MHz frequency bands and railway mobile radio operating in the adjacent frequency bands 874,4-880,0 MHz and 919,4-925,0 MHz was assessed in Report 74 of the European Conference of Postal and Telecommunications Administrations ('CEPT').

⁽¹⁾ OJ L 108, 24.4.2002, p. 1, ELI: [http://data.europa.eu/eli/dec/2002/676\(1\)/oj](http://data.europa.eu/eli/dec/2002/676(1)/oj).

⁽²⁾ 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 (OJ L 257, 15.10.2018, p. 57, ELI: http://data.europa.eu/eli/dec_impl/2018/1538/oj).

⁽³⁾ Commission Decision 2006/771/EC of 9 November 2006 on harmonisation of the radio spectrum for use by short-range devices (OJ L 312, 11.11.2006, p. 66, ELI: [http://data.europa.eu/eli/dec/2006/771\(2\)/oj](http://data.europa.eu/eli/dec/2006/771(2)/oj)).

⁽⁴⁾ Commission Implementing Decision (EU) 2021/1730 of 28 September 2021 on the harmonised use of the paired frequency bands 874,4-880,0 MHz and 919,4-925,0 MHz and of the unpaired frequency band 1900-1910 MHz for Railway Mobile Radio (OJ L 346, 30.9.2021, p. 1, ELI: http://data.europa.eu/eli/dec_impl/2021/1730/oj).

- (4) According to Article 1(4) of Decision No 676/2002/EC, Member States have the right to organise and use their radio spectrum for public order and public security purposes and defence. As a consequence, they remain free to protect the existing and future use of the 874-876 and 915-921 MHz frequency bands and of the adjacent bands for military and other public security and public order purposes when making available the harmonised frequency bands for networked short-range devices in accordance with Decision (EU) 2018/1538.
- (5) On 8 March 2024, CEPT Report 85 was submitted to the Commission in response to the permanent mandate issued to the CEPT in 2006 in accordance with Article 4(2) of Decision No 676/2002/EC and to a guidance letter of the Commission for the ninth cycle of updates to implementing decisions on short-range devices. In Report 85, the CEPT proposed the extension of the harmonised frequency ranges applicable to wideband data transmission devices from 916,4 MHz to 919,4 MHz (band No 2) and to non-specific short-range devices from 916,1 MHz to 919,4 MHz (band No 5).
- (6) On the basis of the work carried out by the CEPT and resulting in CEPT Report 85, it can be concluded that it is appropriate to extend the harmonised frequency ranges for wideband data transmission devices and to non-specific short-range devices in accordance with the proposals made by the CEPT.
- (7) Implementing Decision (EU) 2018/1538 should therefore be amended accordingly.
- (8) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee,

HAS ADOPTED THIS DECISION:

Article 1

The Annex to Implementing Decision (EU) 2018/1538 is amended as set out in the Annex to this Decision.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 26 March 2025.

For the Commission
Henna VIRKKUNEN
Executive Vice-President

In the Annex to Implementing Decision (EU) 2018/1538, the table and the table notes are replaced by the following:

Band No	Frequency band	Category of short-range devices	Transmit power limit/ field strength limit/power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
1	874-874,4 MHz	Non-specific short-range devices ⁽¹⁾	500 mW e.r.p. Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth \leq 200 kHz Duty cycle \leq 10 % for network access points ⁽⁴⁾ Duty cycle 2,5 % otherwise	This set of usage conditions is only available for data networks All nomadic and mobile devices within the data network shall be controlled by a master network access point ⁽⁴⁾ , ⁽⁵⁾ , ⁽⁶⁾ , ⁽⁷⁾	1 July 2022
2	916,4-919,4 MHz	Wideband data transmission devices ⁽²⁾	25 mW e.r.p	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth: $>$ 600 kHz and \leq 1 MHz Duty cycle \leq 10 % for network access points ⁽⁴⁾ Duty cycle \leq 2,8 % otherwise	This set of usage conditions is only available for wideband short-range devices in data networks All nomadic and mobile devices within the data network shall be controlled by a master network access point ⁽⁴⁾ , ⁽⁵⁾ , ⁽⁶⁾	1 October 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit/ field strength limit/power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
3	916,1-918,9 MHz ⁽⁸⁾	Radio Frequency Identification (RFID) devices ⁽²⁾	Interrogator transmissions at 4 W e.r.p. only permitted at the centre frequencies 916,3 MHz, 917,5 MHz, 918,7 MHz	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 400 kHz	⁽⁵⁾ , ⁽⁶⁾ , ⁽⁷⁾	1 July 2022
4	917,3-918,9 MHz	Non-specific short-range devices ⁽¹⁾	500 mW e.r.p. Transmissions only permitted within the frequency ranges 917,3-917,7 MHz, 918,5-918,9 MHz Adaptive Power Control (APC) required, alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility	Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured. Bandwidth ≤ 200 kHz Duty cycle ≤ 10 % for network access points ⁽⁴⁾ Duty cycle ≤ 2,5 % otherwise	This set of usage conditions is only available for data networks All nomadic and mobile devices within the data network shall be controlled by a master network access point ⁽⁴⁾ , ⁽⁵⁾ , ⁽⁶⁾ , ⁽⁷⁾	1 July 2022

Band No	Frequency band	Category of short-range devices	Transmit power limit/ field strength limit/power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
5	916,1-919,4 MHz	Non-specific short-range devices ⁽¹⁾	25 mW e.r.p.	<p>Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the <i>Official Journal of the European Union</i> under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured.</p> <p>Bandwidth ≤ 600 kHz</p> <p>Duty cycle ≤ 1 %</p>	<p>This set of usage conditions is only available for short-range device in data networks</p> <p>All nomadic and mobile devices within the data network shall be controlled by a master network access point ⁽⁴⁾, ⁽⁵⁾, ⁽⁶⁾</p>	1 October 2025

- ⁽¹⁾ The non-specific short-range device category covers all kinds of radio devices, regardless of the application or the purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.
- ⁽²⁾ The radio frequency identification (RFID) device category covers tag/interrogator based radio communications systems, consisting of radio devices (tags) attached to animate or inanimate items and of transmitter/receiver units (interrogators) which activate the tags and receive data back. Typical uses include the tracking and identification of items, such as for electronic article surveillance (EAS), and collecting and transmitting data relating to the items to which tags are attached, which may be either battery-less, battery assisted or battery powered. The responses from a tag are validated by its interrogator and passed to its host system.
- ⁽³⁾ The wideband data transmission device category covers radio devices that use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local area networks (WAS/RLANs) or wideband short-range devices in data networks.
- ⁽⁴⁾ A network access point in a data network is a fixed terrestrial short range device that acts as a connection point for the other short range devices in the data network to service platforms located outside of that data network. The term data network refers to several short range devices, including the network access point, as network components and to the wireless connections between them.
- ⁽⁵⁾ According to Article 3(1) the frequency bands shall be designated and made available on a non-exclusive and shared basis. The harmonised technical conditions shall make it possible for most short-range devices in most Member States to be operated subject to a general authorisation regime under national law. This is without prejudice to Articles 46 and 51 of Directive (EU) 2018/1972 and to Articles 3(2) and 7 of Directive 2014/53/EU. Member States may limit usage of this entry such that installation and operation are performed only by professional users and may consider individual authorisation, e.g. to administer geographical sharing and/or the application of mitigation techniques to ensure protection of radio services.
- ⁽⁶⁾ In Member States where parts or all of this frequency range are used for public order and public security purposes and defence and coordination is not possible, Member States may decide not to implement this entry partially or entirely, in accordance with Article 1(4) of Decision 676/2002/EC and Article 3(2) of this Decision.
- ⁽⁷⁾ National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands, for example due to intermodulation or blocking.
- ⁽⁸⁾ RFID tags respond at a very low power level (-10 dBm e.r.p.) in a frequency range around the RFID interrogator channels and must comply with the essential requirements of Directive 2014/53/EU.