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Standard elektromagnetne združljivosti (EMC) za radijsko opremo in storitve - 17. del: Posebni pogoji za širokopasovne sisteme za prenos podatkov - Harmonizirani standard za elektromagnetno združljivost

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for Broadband and Wideband Data Transmission Systems - Harmonised Standard for ElectroMagnetic Compatibility

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**ElectroMagnetic Compatibility (EMC)
standard for radio equipment and services;
Part 17: Specific conditions for
Broadband and Wideband Data Transmission Systems;
Harmonised Standard for ElectroMagnetic Compatibility**

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Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.12] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.1].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

The present document is part 17 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

National transposition dates	
Date of adoption of this EN:	23 September 2024
Date of latest announcement of this EN (doa):	31 December 2024
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2025
Date of withdrawal of any conflicting National Standard (dow):	30 June 2026

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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1 Scope

The present document specifies technical characteristics and methods of measurements for broadband and wideband data transmission system equipment including the associated ancillary equipment in respect of electromagnetic compatibility, as detailed in table 1.

Technical specifications related to the antenna port and emissions from the enclosure port of the radio equipment are not included in the present document. Such technical specifications are found in the relevant product standards for the effective use of the radio spectrum.

The present document specifies the applicable test conditions, performance assessment and performance criteria for broadband and wideband data transmission systems as detailed in table 1.

NOTE 1: In the context of the present document, broadband and wideband are interchangeable.

Table 1: Radio Technologies in scope of the present document

Technology	ETSI Standard
Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band	ETSI EN 300 328 [i.8]
5 GHz RLAN	ETSI EN 301 893 [i.3]
6 GHz WAS/RLAN	ETSI EN 303 687 [i.2]
Wireless Access Systems (WAS); 5,8 GHz fixed broadband data transmitting systems	ETSI EN 302 502 [i.4]
Multi-Gigabit Wireless Systems (MGWS) in the 60 GHz band	ETSI EN 302 567 [i.6]
Wideband Data Transmission Systems (WDTS) for Fixed Network Radio Equipment operating in the 57 GHz to 71 GHz band	ETSI EN 303 722 [i.5]

Technical specifications related to conducted emission EMC requirements below 9 kHz on the AC mains port of radio equipment are not included in the present document.

NOTE 2: Such technical specifications are normally found in the relevant product family standards for AC mains powered equipment (e.g. EN IEC 61000-3-2 [i.13] and EN 61000-3-3 [i.14]).

The environmental classification and the emission and immunity requirements used in the present document are as stated in ETSI EN 301 489-1 [1], except for any special conditions included in the present document.

NOTE 3: The relationship between the present document and essential requirements of article 3.1(b) of Directive 2014/53/EU [i.1] is given in annex A.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

- [1] [ETSI EN 301 489-1 \(V2.2.3\) \(11-2019\)](#): "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility".

[2] Void.

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] [Directive 2014/53/EU](#) of the European Parliament and of the council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.2] ETSI EN 303 687: "6 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum".
- [i.3] ETSI EN 301 893: "5 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum".
- [i.4] ETSI EN 302 502 (V2.1.3): "Wireless Access Systems (WAS); 5,8 GHz fixed broadband data transmitting systems; Harmonised Standard for access to radio spectrum".
- [i.5] ETSI EN 303 722: "Wideband Data Transmission Systems (WDTS) for Fixed Network Radio Equipment operating in the 57 GHz to 71 GHz band; Harmonised Standard for access to radio spectrum".
- [i.6] ETSI EN 302 567: " Multiple-Gigabit/s radio equipment operating in the 60 GHz band; Harmonised Standard for access to radio spectrum".
- [i.7] Void.
- [i.8] ETSI EN 300 328: "Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum".
- [i.9] Void.
- [i.10] Void.
- [i.11] Void.
- [i.12] [Commission Implementing Decision C\(2015\) 5376 final of 4.8.2015](#) on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.13] EN IEC 61000-3-2 (2019) + A1(2021): "Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)".
- [i.14] EN 61000-3-3 (2013) + A2(2021): "Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in ETSI EN 301 489-1 [1] and the following apply:

ancillary equipment: electrical or electronic equipment, that is intended to be used with a receiver or transmitter

NOTE 1: It is considered as an ancillary equipment if:

- the equipment is intended for use with a receiver or transmitter to provide additional operational and/or control features to the radio equipment, (e.g. to extend control to another position or location); and
- the ancillary equipment cannot be used without being connected to radio equipment to provide user functions independently of a receiver or transmitter; and
- the receiver or transmitter, to which it is connected, is capable of providing some intended operation such as transmitting and/or receiving without the ancillary equipment (i.e. it is not a sub-unit of the main equipment essential to the main equipment basic functions).

NOTE 2: An example of ancillary equipment would be a docking station for radio equipment whose interface is dedicated to a particular product or range of products.

Equipment Under Test (EUT): equipment subject to the performance requirements of the present document

fixed equipment: equipment intended for use in a fixed location and fitted with one or more antennas

NOTE: The equipment may be fitted with either antenna socket(s) or integral antenna(s) or both.

host: any equipment which has complete user functionality when not connected to the radio equipment part and to which the radio equipment part provides additional functionality and to which connection is necessary for the radio equipment part to offer functionality

plug-in radio device: equipment, including slide-in radio cards, intended to be used with or within a variety of host systems, using their control functions and power supply

portable equipment: radio equipment intended for portable use and powered by integral batteries or battery

NOTE: Devices will typically be handheld.

stand-alone radio equipment: equipment that is intended primarily as communications equipment and that is normally used on a stand-alone basis

vehicular equipment: radio equipment intended for installation and use in a vehicle, and powered by the main battery of the vehicle

3.2 Symbols

For the purposes of the present document, the following symbols apply:

P_{\min} minimum power required to establish a communication link

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AC	Alternating Current
ACK	ACKnowledgement
ARQ	Automatic Retransmission reQuest
DC	Direct Current