

**Fixed Radio Systems;  
Characteristics and requirements for  
point-to-point equipment and antennas;  
Part 2: Digital systems operating in frequency bands  
from 1 GHz to 86 GHz;  
Harmonised Standard for access to radio spectrum  
(ETSI EN 302 217-2 V3.3.1 (2021-10))**

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# Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Access, Terminals, Transmission and Multiplexing (ATTM).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.61] 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 2 of a multi-part deliverable covering Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas. Full details of the entire series can be found in ETSI EN 302 217-1 [5].

<b>National transposition dates</b>	
Date of adoption of this EN:	30 August 2021
Date of latest announcement of this EN (doa):	30 November 2021
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2022
Date of withdrawal of any conflicting National Standard (dow):	31 May 2023

Major changes with respect to previously published versions are summarized in annex U.

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## 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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

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## Introduction

The ETSI EN 302 217 series has been produced in order to rationalize a large number of previous ETSI ENs dealing with equipment and antennas for Point-to-Point (P-P) Fixed Service applications. For more details, see foreword in ETSI EN 302 217-1 [5].

In the present document the "*italic*" font is used for "terms" defined in clause 3.1 of ETSI EN 302 217-1 [5].

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# 1 Scope

The present document specifies technical characteristics and methods of measurements for Point-to-point (P-P) Digital Fixed Radio Systems (DFRS) operating in frequency bands allocated to Fixed Service (FS) from 1 GHz to 86 GHz, corresponding to the appropriate frequency bands from 1,4 GHz to 86 GHz as described in annex B to annex J.

Systems in the scope of the present document are generally intended to operate in full Frequency Division Duplex (FDD) and cover also unidirectional applications. Time Division Duplex (TDD) applications, when possibly applicable in a specific band, are explicitly mentioned as appropriate in annex B through annex J.

Systems may be composed by equipment without antennas (see informative annex Q for background) or equipment including *integral* or *dedicated antenna*, both cases are in the scope of the present document.

The present document covers requirements to demonstrate that radio equipment both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference

**NOTE:** The relationship between the present document and the essential requirements of article 3.2 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 301 126-1 (V1.1.2) (09-1999): "Fixed Radio Systems; Conformance testing; Part 1: Point-to-point equipment - Definitions, general requirements and test procedures".
- [2] ETSI EN 301 126-3-1 (V1.1.2) (12-2002): "Fixed Radio Systems; Conformance testing; Part 3-1: Point-to-Point antennas; Definitions, general requirements and test procedures".
- [3] CEPT/ERC/REC 74-01 (May 2019): "Unwanted emissions in the spurious domain".
- [4] ETSI EN 301 390 (V1.3.1) (08-2013): "Fixed Radio Systems; Point-to-point and Multipoint Systems; Unwanted emissions in the spurious domain and receiver immunity limits at equipment/antenna port of Digital Fixed Radio Systems".
- [5] ETSI EN 302 217-1 (V3.3.1): "Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 1: Overview, common characteristics and requirements not related to access to radio spectrum".
- [6] ETSI EN 302 217-4 (V2.1.1) (05-2017): "Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 4: Antennas".
- [7] Recommendation ITU-T O.151 (10-1992)/Corrigendum 1 (05-2002): "Error performance measuring equipment operating at the primary rate and above".
- [8] Recommendation ITU-T O.181 (05-2002): "Equipment to assess error performance on STM-N interfaces".