

STN	Priame širokopásmové komunikácie vzduch - zem. Zariadenia pracujúce vo frekvenčných pásmach od 1 900 MHz do 1 920 MHz a od 5 855 MHz do 5 875 MHz. Antény s pevným vyžarovacím diagramom. Harmonizovaná norma vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice 2014/53/EÚ.	STN EN 303 339 V1.1.1 87 3339
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Broadband Direct Air-to-Ground Communications; Equipment operating in the 1 900 MHz to 1 920 MHz and 5 855 MHz to 5 875 MHz frequency bands; Fixed pattern antennas; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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**Broadband Direct Air-to-Ground Communications;
Equipment operating in the 1 900 MHz to 1 920 MHz
and 5 855 MHz to 5 875 MHz frequency bands;
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of article 3.2 of Directive 2014/53/EU**

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Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Broadband Radio Access Networks (BRAN).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.7] 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.

National transposition dates	
Date of adoption of this EN:	21 June 2016
Date of latest announcement of this EN (doa):	30 September 2016
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 March 2017
Date of withdrawal of any conflicting National Standard (dow):	31 March 2018

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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Executive summary

The present document addresses the Broadband Direct Air-to-Ground Communications system based on the ETSI System Reference Document ETSI TR 103 108 [i.6]. This System Requirement document was used by the ECC, in conjunction with other contributions, to develop technology neutral ECC Decisions on the allocation of European spectrum in the frequency bands 1 900 MHz to 1 920 MHz and 5 855 MHz to 5 875 MHz.

The technical requirements in the present document reflect, in part, the results of studies undertaken within the CEPT on compatibility between broadband direct air-to-ground systems and other applications operating within, or adjacent to, the frequency bands that are designated for Broadband DA2GC operations.

Introduction

The technical requirements in the present document reflect, in part, the results of studies undertaken within the CEPT on compatibility between broadband direct air-to-ground systems and other applications operating within, or adjacent to, the frequency bands which are designated for BDA2GC operations. These studies are described in ECC Report 209 [i.2] (for the 1 900 MHz to 1 920 MHz band) and ECC Report 210 [i.3] (for the 5 855 MHz to 5 875 MHz band).

The resulting technical and operational requirements to be applied to BDA2GC systems in the 1 900 MHz to 1 920 MHz bands and the 5 855 MHz to 5 875 MHz bands are contained within ECC Decision(15)02 [i.4] and ECC Decision(15)03 [i.5] respectively.

1 Scope

The present document applies to the Ground Station, Aircraft Station and antenna equipment for DA2GC (TDD).

This radio equipment type is capable of operating in all or any part of the frequency bands given in table 1.

Table 1: DA2GC TDD service frequency bands

Direction of Transmission	Frequency Band
Transmit 1	1 900 MHz to 1 920 MHz
Receive 1	1 900 MHz to 1 920 MHz
Transmit 2	5 855 MHz to 5 875 MHz
Receive 2	5 855 MHz to 5 875 MHz

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

2 References

2.1 Normative references

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

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

- [1] ETSI EN 301 126-3-2 (V1.2.1) (12-2003): "Fixed Radio Systems; Conformance testing; Part 3-2: Point-to-Multipoint antennas - Definitions, general requirements and test procedures".
- [2] NIMA Technical Report TR8350.2 (1984, including amendment 1 of 03 January 2000 and amendment 2 of 23 June 2004): "Department of Defense World Geodetic System 1984. Its Definition and Relationships with Local Geodetic Systems".

NOTE: Available at <http://earth-info.nga.mil/GandG/publications/tr8350.2/wgs84fin.pdf>.

2.2 Informative references

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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] ECC Report 209: "Compatibility/sharing studies related to Broadband Direct-Air-to-Ground Communications (DA2GC) in the frequency bands 1900-1920 MHz / 2010-2025 MHz and services/applications in the adjacent bands".
- [i.3] ECC Report 210: "Compatibility/sharing studies related to Broadband Direct-Air-to-Ground Communications (DA2GC) in the frequency bands 5855-5875 MHz, 2400-2483.5 MHz and 3400-3600 MHz".
- [i.4] ECC Decision ECC/DEC(15)02: "The harmonised use of broadband Direct Air-to-Ground Communications (DA2GC) systems in the frequency band 1900-1920 MHz".
- [i.5] ECC Decision ECC/ DEC(15)03: "The harmonised use of broadband Direct Air-to-Ground Communications (DA2GC) systems in the frequency band 5855-5875 MHz".
- [i.6] ETSI TR 103 108 (V1.1.1) (07-2013): "Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference document (SRdoc); Broadband Direct-Air-to-Ground Communications System operating in the 5,855 GHz to 5,875 GHz band using 3G technology".
- [i.7] 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.

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