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STN	**Zariadenia s krátkym dosahom (SRD) používajúce technológiu ultraširokého pásma (UWB) Harmonizovaná norma vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice 2014/53/EÚ Časť 4: Materiálovo citlivé zariadenia používajúce technológiu UWB pod 10,6 GHz**	**STN EN 302 065-4 V1.1.1** 87 2065

Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 4: Material Sensing devices using UWB technology below 10,6 GHz

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/17

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Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 4: Material Sensing devices using UWB technology below 10,6 GHz

Reference
DEN/ERM-TGUWB-132

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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.11] 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.4].

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 4 of a multi-part deliverable. Full details of the entire series can be found in part 1 [i.10].

National transposition dates	
Date of adoption of this EN:	18 July 2016
Date of latest announcement of this EN (doa):	31 October 2016
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2017
Date of withdrawal of any conflicting National Standard (dow):	30 April 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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Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the Directive 2014/53/EU [i.4].

1 Scope

The present document specifies the requirements for **material sensing** applications using UWB technology operating in all or part of the frequency band from 2,2 GHz to 8,5 GHz. Additionally, it specifies reduced emissions in the ranges from 0,96 GHz to 2,2 GHz and 8,5 GHz to 10,6 GHz.

The present document applies to:

1) Material Sensing devices: a device enabling radio determination application designed to detect the location of objects within a structure or to determine the physical properties of a material.

2) Equipment fitted with a non-user changeable antenna.

3) The main categories are:

   a) Non fixed material sensors;

   b) Non fixed building material sensors;

   c) Fixed material sensors.

The present document does not apply to:

- UWB communication devices;
- Ground and wall probing radar devices;
- Through-wall radar imaging devices; and
- (Tank) Level Probing devices.

Equipment covered by the present document operates in accordance with ECC/DEC(07)01 [i.7] and Commission Decision 2014/702/EU [i.12].

These radio equipment types are capable of operating in all or part of the frequency bands given in table 1.

Table 1: Permitted range of operation [i.12]

Intended frequency bands	
Transmit	2,2 GHz to 8,5 GHz
Receive	2,2 GHz to 8,5 GHz
Permitted range of operation	
Transmit	30 MHz to 10,6 GHz
Receive	30 MHz to 10,6 GHz
NOTE: The UWB radio device can also operate outside of the intended range of operation and inside the permitted range of operation provided that the limits in clause 4.3.2 and 4.3.4.2, table 2 or table 3 are met.	

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 303 883 (V1.1.1) (09-2016): "Short Range Devices (SRD) using Ultra Wide Band (UWB); Measurement Techniques".

[2] ETSI TS 103 361 (V1.1.1) (03-2016): "Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Receiver technical requirements, parameters and measurement procedures to fulfil the requirements of the Directive 2014/53/EU".

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] CEPT ECC/DEC/(06)04 of 24 March 2006 amended 9 December 2011: "The harmonised conditions for devices using Ultra-Wideband (UWB) technology in bands below 10.6 GHz".

[i.2] ECC Report 120 (March 2008): "ECC Report on Technical requirements for UWB DAA (Detect and avoid) devices to ensure the protection of radiolocation in the bands 3.1-3.4 GHz and 8.5-9 GHz and BWA terminals in the band 3.4-4.2 GHz".

[i.3] CEPT/ERC Recommendation 74-01: "Unwanted emissions in the spurious domain".

[i.4] 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.5] CEPT report 45: "Report from CEPT to the European Commission in response to the Fifth Mandate to CEPT on ultra-wideband technology to clarify the technical parameters in view of a potential update of Commission Decision 2007/131/EC"; Report approved on 21 June 2013 by the ECC.

[i.6] Commission Decision 2009/343/EC of 21 April 2009 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonized manner in the Community (notified under document number C(2009) 2787) (Text with EEA relevance).

[i.7] ECC/DEC/(07)01: "ECC Decision of 30 March 2007 on specific Material Sensing devices using Ultra-Wideband (UWB) technology (amended 26 June 2009)".

[i.8] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).

[i.9] Commission Decision 2007/131/EC of 21 February 2007 on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community (notified under document number C(2007) 522).

[i.10] ETSI EN 302 065-1 (V2.1.0) "Short Range Devices (SRD) using Ultra Wide Band technology (UWB); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Requirements for Generic UWB applications".

[i.11] 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.12] Commission Implementation decision 2014/702/EU of 7 October 2014 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community (notified under document number C(2014) 7083).