
Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Naprave kratkega dosegga (SRD), ki uporabljajo ultra širokopasovno (UWB) tehnologijo - Oprema za sledenje, ki deluje v frekvenčnem območju od 6 GHz do 9 GHz - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.2 direktive R&TTE

Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) using Ultra WideBand (UWB) technology - Location Tracking equipment operating in the frequency range from 6 GHz to 9 GHz - Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

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Ta slovenski standard je istoveten z: EN 302 500-2 Version 2.1.1

ICS:

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

SIST EN 302 500-2 V2.1.1:2010 **en**

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ETSI EN 302 500-2 V2.1.1 (2010-10)

Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Short Range Devices (SRD) using
Ultra WideBand (UWB) technology;
Location Tracking equipment operating in
the frequency range from 6 GHz to 9 GHz;
Part 2: Harmonized EN covering the essential requirements
of article 3.2 of the R&TTE Directive**

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<https://standards.iteh.ai/catalog/standards/sist/fc507626-09e4-41cb-8df6-f5f5bafbfab/sist-en-302-500-2-v2-1-1-2010>



Reference

REN/ERM-TGUWB-009-2

Keywords

radio, regulation, SRD, testing, UWB

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Sous-Préfecture de Grasse (06) N° 7803/88

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SIST EN 302 500-2 V2.1.1:2010

<https://standards.iteh.ai/catalog/standards/sist/fc507626-09e4-41cb-8df6-f5f5bafbfad0/SIST-EN-302-500-2-V2-1-1-2010>

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Foreword

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

The present document is part 2 of a multi-part deliverable covering Short Range Devices (SRD) using Ultra WideBand (UWB) technology; Location Tracking equipment operating in the frequency range from 6 GHz to 9 GHz, as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [i.1] (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the 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 ("the R&TTE Directive") [i.2].

The requirements relevant to Directive 1999/5/EC [i.2] are summarised in annex A.

National transposition dates

Date of adoption of this EN:	5 October 2010
Date of latest announcement of this EN (doa):	31 January 2011
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 2011
Date of withdrawal of any conflicting National Standard (dow):	31 July 2012

1 Scope

The present document specifies the requirements for ultra-wideband Location Tracking equipment operating in all or part of the frequency range from 6 GHz to 9 GHz.

The present document applies for indoor as well as portable or mobile outdoor applications.

It covers ultra-wideband location tracking tags which are attached to people or objects and are tracked using a fixed receiver infrastructure to only receive the UWB emission by the tags. Equipment covered by the present document is fitted with an integral or dedicated antenna.

The present document is intended to cover the provisions of article 3.2 of Directive 1999/5/EC [i.2] R&TTE Directive, which states that "... radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive may apply to equipment within the scope of the present document.

NOTE: A list of such ENs is included on the web site <http://www.newapproach.org>.

2 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 reference document (including any amendments) applies.

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

2.1 Normative references

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

- [1] ETSI EN 302 500-1 (V2.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD) using Ultra WideBand (UWB) technology; Location Tracking equipment operating in the frequency range from 6 GHz to 9 GHz; Part 1: Technical characteristics and methods of measurement".

2.2 Informative references

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 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.
- [i.2] 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).

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [i.2] and EN 302 500-1 [1] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 302 500-1 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 302 500-1 [1] apply.

4 Technical requirements specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be declared by the provider. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the declared operational environmental profile.

4.2 Conformance requirements

4.2.1 Transmitter requirements

4.2.1.1 Maximum mean equivalent isotropically radiated power spectral density

The maximum mean equivalent isotropically radiated power (e.i.r.p.) spectral density shall not exceed the limits specified in clause 8.1.3 of EN 302 500-1 [1].

This requirement applies to all transmitters.

4.2.1.2 Frequency of highest maximum mean e.i.r.p. spectral density

The frequency of the highest maximum mean equivalent isotropically radiated power (e.i.r.p.) spectral density shall not lie outside the limits specified in EN 302 500-1 [1], clause 8.2.3.

This requirement applies to all transmitters.

4.2.1.3 Maximum peak equivalent isotropically radiated power

The maximum peak equivalent isotropically radiated power (e.i.r.p.) shall not exceed the limits specified in clause 8.3.3 of EN 302 500-1 [1].

This requirement applies to all transmitters.

4.2.1.4 Indirect Detect-And-Avoid (DAA)

The equipment shall meet the design requirements for Indirect Detect-And-Avoid (DAA) as specified in EN 302 500-1 [1], clause 8.4.2.

Furthermore, the maximum mean equivalent isotropically radiated power (e.i.r.p.) spectral density and maximum peak e.i.r.p., as measured in Non-Interference Mode and non-NIM operation mode, shall not exceed the limits specified in clause 8.4.4 of EN 302 500-1 [1].

This requirement applies to all transmitters operating in the range 8,5 GHz to 9 GHz.

4.2.2 Receiver requirements

4.2.2.1 Maximum receiver spurious radiations

The receiver spurious radiations as defined in EN 302 500-1 [1], clause 9.1.1, shall not exceed the limit specified in EN 302 500-1 [1], clause 9.1.3.

5 Testing for compliance with technical requirements

5.1 Environmental conditions for testing

Tests defined in the present document shall be carried out at representative points within the boundary limits of the declared operational environmental profile.

Where technical performance varies subject to environmental conditions, tests shall be carried out under a sufficient variety of environmental conditions (within the boundary limits of the declared operational environmental profile) to give confidence of compliance for the affected technical requirements.

5.2 Essential radio test suites

5.2.1 Transmitter test suites

5.2.1.1 Maximum mean e.i.r.p. spectral density

The test defined in clause 8.1.2 of EN 302 500-1 [1] shall be carried out.

This test suite applies to all transmitters.

5.2.1.2 Frequency of highest maximum mean e.i.r.p. spectral density

The test defined in clause 8.2.2 of EN 302 500-1 [1] shall be carried out.

This test suite applies to all transmitters.

5.2.1.3 Maximum peak e.i.r.p.

The test defined in clause 8.3.2 of EN 302 500-1 [1] shall be carried out.

This test suite applies to all transmitters.

5.2.1.4 Indirect Detect-And-Avoid (DAA)

The tests defined in clause 8.4.3 of EN 302 500-1 [1] shall be carried out.

This requirement applies to all transmitters operating in the range 8,5 GHz to 9 GHz.