

9`Y_fca U[bYfbUnXfi y`fj cgh]b`nUXYj Yj`nj Yn]`nfUX]`g_`ja `gdY_fca `fØFAŁ!
BUdfUj Y`fUh_Y[UXcgY[UfGF8łž_]i dcfUV`Uc`i`hfUý]fc_cdUgcj bc`fl K6Ł
hM bc`c[]`c`!`CdfYa UnUg`YXYb`YZ_]XYi`Yj`ZY_j Yb bYa`cVa c`f`cX`*`; <n`Xc
, ž`; <n`!`&`XY.`<Ufa cb]n]fUb]9Bž_]`nUYa UV]ghj YbY`nU h]j Y`YbU`"&X]fY_hj Y
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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 8,5 GHz - Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
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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 8,5 GHz;
Part 2: Harmonized EN covering essential requirements
of article 3.2 of the R&TTE Directive**

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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 8,5 GHz, as identified below:

Part 1: "Technical characteristics and test methods";

Part 2: "Harmonized EN covering 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 [3] (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 [1] 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").

National transposition dates

Date of adoption of this EN:	26 January 2007
Date of latest announcement of this EN (doa):	30 April 2007
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 October 2007
Date of withdrawal of any conflicting National Standard (dow):	31 October 2008

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 8,5 GHz.

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

The present document applies for indoor applications only.

The present document is intended to cover the provisions of Article 3.2 of Directive 1999/5/EC [1] (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".

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version 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.

- [1] 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).
- [2] ETSI EN 302 500-1 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD) using Ultra-WideBand technology, Location Tracking equipment operating in the frequency range from 6 GHz to 8,5 GHz; Part 1: Technical characteristics and test methods".
- [3] 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.

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 [1] and EN 302 500-1 [2] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 302 500-1 [2] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 302 500-1 [2] 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 8.2.3 of EN 302 500-1 [2].

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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 [2], clause 8.3.3.

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4.2.1.3 Maximum peak equivalent isotropically radiated power spectral density

The maximum peak equivalent isotropically radiated power (e.i.r.p.) spectral density shall not exceed the limits specified in clause 8.4.3 of EN 302 500-1 [2].

4.2.1.4 Minimum Pulse Repetition Frequency (PRF)

The minimum Pulse Repetition Frequency (PRF) shall comply with the limit specified in clause 8.5.3 of EN 302 500-1 [2].

This requirement applies to transmitters using impulsive UWB signals.

4.2.2 Receiver requirements

4.2.2.1 Maximum receiver spurious radiations

The receiver spurious radiations as defined in EN 302 500-1 [2], clause 9.1.1, shall not exceed the limit specified in EN 302 500-1 [2], clause 9.1.3.

4.3 Design requirements

The equipment shall comply with the additional design requirements as defined in annex C of EN 302 500-1 [2].

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 8.2.2 of EN 302 500-1 [2] shall be carried out.

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

The test defined in clause 8.3.2 of EN 302 500-1 [2] shall be carried out.

5.2.1.3 Maximum peak e.i.r.p. spectral density

The test defined in clause 8.4.2 of EN 302 500-1 [2] shall be carried out.

5.2.2 Receiver test suites

5.2.2.1 Receiver spurious radiations

The test defined in clause 9.1.2 of EN 302 500-1 [2], shall be carried out.

5.3 Interpretation of measurement results

Clause 7 of EN 302 500-1 [2] shall apply.

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