

STN	Telematika dopravy a premávky (TTT) Vysielacie zariadenia účelových komunikácií na krátku vzdialenosť (DSRC) (500 kbit/s/250 kbit/s) pracujúce vo frekvenčnom pásme od 5 795 MHz do 5 815 MHz Časť 2: Harmonizovaná norma vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice 2014/53/EÚ Oddiel 2: Palubné jednotky (OBU)	STN EN 300 674-2-2 V2.1.1 87 0674
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Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Sub-part 2: On-Board Units (OBU)

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

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**Transport and Traffic Telematics (TTT);
Dedicated Short Range Communication (DSRC)
transmission equipment (500 kbit/s / 250 kbit/s)
operating in the 5 795 MHz to 5 815 MHz frequency band;
Part 2: Harmonised Standard covering the essential
requirements of article 3.2 of Directive 2014/53/EU;
Sub-part 2: On-Board Units (OBU)**

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regulation, RTTT, testing**ETSI**650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
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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.6] 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.5].

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, sub-part 2 of a multi-part deliverable covering Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band, as identified below:

Part 1: "General characteristics and test methods for Road Side Units (RSU) and On-Board Units (OBU)";

Part 2: "**Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU**";

Sub-part 1: "Road Side Units (RSU)";

Sub-part 2: "On-Board Units (OBU)".

National transposition dates	
Date of adoption of this EN:	14 November 2016
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Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2017
Date of withdrawal of any conflicting National Standard (dow):	31 August 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).

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

1 Scope

The present document applies to Transport and Traffic Telematics (TTT) systems:

- with a Radio Frequency (RF) output connection and specified antenna or with an integral antenna;
- for data transmission only;
- operating on radio frequencies in the 5 725 MHz to 5 875 MHz Short Range Devices frequency band.

The applicability of the present document covers only the On Board Units (OBU).

The present document does not necessarily include all the characteristics which may be required by a user, nor does it necessarily represent the optimum performance achievable.

The present document complies with the Commission Implementing Decision 2013/752/EU [1] and CEPT/ERC Recommendation 70-03 [2]. It is a specific standard covering various TTT applications.

The present document applies to the following radio equipment types operating in all or in part of the following service frequency bands given in table 1.

Table 1: Frequency bands and centre frequencies f_{TX} allocated for DSRC

	Pan European Service Frequencies	National Service Frequencies
Channel 1	5,795 GHz to 5,800 GHz, $f_{TX} = 5,7975$ GHz	
Channel 2	5,800 GHz to 5,805 GHz, $f_{TX} = 5,8025$ GHz	
Channel 3		5,805 GHz to 5,810 GHz, $f_{TX} = 5,8075$ GHz
Channel 4		5,810 GHz to 5,815 GHz, $f_{TX} = 5,8125$ GHz

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

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 necessary for the application of the present document.

- [1] Commission Decision 2013/752/EU: "Commission Implementing Decision of 11 December 2013 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices and repealing Decision 2005/928/EC".
- [2] CEPT/ERC Recommendation 70-03 (2015): "Relating to the use of Short Range Devices (SRD)".
- [3] CEN EN 12253 (2004): "Road transport and traffic telematics - Dedicated short-range communication - Physical layer using microwave at 5,8 GHz".

- [4] ETSI TR 100 028 (V1.4.1) (12-2001) - (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [5] IEC 60721-3-4 (1995) including Amendment 1 (1996): "Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 4: Stationary use at non-weatherprotected locations".
- [6] IEC 60721-3-5 (1997): "Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 5: Ground vehicle installations".
- [7] CEN EN 12795 (2003): "Road transport and traffic telematics - Dedicated Short Range Communication (DSRC) - DSRC data link layer: medium access and logical link control".
- [8] CEN EN 12834 (2003): "Road transport and traffic telematics - Dedicated Short Range Communication (DSRC) - DSRC application layer".
- [9] ISO 14906 (2011): "Electronic fee collection - Application interface definition for dedicated short-range communication".
- [10] CEPT/ERC Recommendation 74-01E (2011): "Unwanted emissions in the spurious domain".
- [11] ETSI TR 102 273-2 (V1.2.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties; Part 2: Anechoic chamber".
- [12] ETSI TR 102 273-6 (V1.2.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties; Part 6: Test fixtures".
- [13] CEN EN 13372 (2004): "Road Transport and Traffic Telematics (RTTT) - Dedicated short-range communication - Profiles for RTTT applications".
- [14] CISPR 16-1 (2015): "Specification for radio disturbance and immunity measuring apparatus and methods - Part 1: Radio disturbance and immunity measuring apparatus".

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] ETSI EN 300 674-1: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band; Part 1: General characteristics and test methods for Road Side Units (RSU) and On-Board Units (OBU)".
- [i.2] ETSI EN 300 674-2-1: "Transport and Traffic Telematics (TTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5 795 MHz to 5 815 MHz frequency band; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Sub-part 1: Road Side Units (RSU)".
- [i.3] ETSI TR 102 273-4 (V1.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties; Part 4: Open area test site".

- [i.4] Commission Directive 95/54/EC of 31 October 1995 adapting to technical progress Council Directive 72/245/EEC on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers.
- [i.5] 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.6] 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.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN