



**Intelligent Transport Systems (ITS);
Mitigation techniques to avoid interference between European
CEN Dedicated Short Range Communication (CEN DSRC)
equipment and Intelligent Transport Systems (ITS)
operating in the 5 GHz frequency range**

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Intelligent Transport System (ITS).

Introduction

Without the use of special mitigation techniques, European CEN Dedicated Short Range Communication (DSRC) equipment operating in the frequency range from 5 795 MHz to 5 815 MHz might suffer from harmful interference caused by Intelligent Transport Systems (ITS) using adjacent frequency bands. The present document specifies methods to ensure coexistence of both systems.

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1 Scope

As shown in TR 102 654 [i.10] and TR 102 960 [i.16] previously, interference from ITS-G5 A/B to CEN DSRC might occur in close proximity to ETC zones if no mitigation techniques are applied. The present document deals in detail with different techniques to ensure coexistence of ITS-G5A/B and CEN DSRC.

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.

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2.1 Normative references

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

- [1] CEN EN 12253: "Road transport and traffic telematics - Dedicated short-range communication - Physical layer using microwave at 5,8 GHz".
- [2] ETSI EN 300 674 (parts 1, 2-1 and 2-2): "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".
- [3] ISO 21218: "Intelligent transport systems - Communications access for land mobiles (CALM) - Medium service access points".
- [4] ISO 24102: "Intelligent transport systems - Communications access for land mobiles (CALM) - Management".
- [5] IEEE 802.11: "IEEE Standard for Information Technology - Telecommunications and information exchange between systems Local and metropolitan area networks - Specific requirements; Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications".
- [6] ETSI EN 302 571: "Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".
- [7] ETSI ES 202 663: "Intelligent Transport Systems (ITS); Access layer specification for Intelligent Transport Systems operating in the 5 GHz frequency band".
- [8] ETSI TS 102 724: "Intelligent Transport Systems (ITS); Harmonized Channel Specifications for Intelligent Transport Systems operating in the 5 GHz frequency band".

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] CVIS project: "CVIS COMM Interference measurements test report", February 2010.