
**Intelligent transport systems —
Localized communications — ITS-M5**

Systèmes intelligents de transport — Communications localisées — M5

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This second edition cancels and replaces the first edition (ISO 21215:2010) which has been technically revised.

The following main changes have been made since the last edition:

- document restructured in support of different regulatory regions;
- requirements applicable for usage in the European Union added;
- LDP/SNAP replaced by EPD;
- ASN.1 aligned with latest developments in ISO/TC 204;
- provisioning for path and flow management added;
- normative annex related to conformance testing, that contains the PICS proforma, added;
- editorial improvements.

Introduction

Localized communications is an essential component of hybrid communications in Intelligent Transport Systems (ITS). Various access technologies are suited for localized communications. A major focus of ITS stakeholders for "Cooperative ITS" and "Urban ITS" is on the access technology originally specified by IEEE in the standard IEEE Std 802.11™-2016. For usage in ITS, IEEE specified the operational mode "Outside the Context of a BSS" (OCB), also known under the acronym of 802.11p.

This document primarily provides complements to IEEE Std 802.11™-2016 OCB needed to operate as an ITS access technology in the various regions of the world, and optionally also supports ordinary WiFi operation, i.e. not applying OCB. An implementation of this document is referred to as an ITS-M5 communication interface (CI).

ITS-M5 CIs are capable of

- interoperating with IEEE WAVE devices, and
- receiving messages from ETSI ITS-G5 devices.

This document supports usage of ITS-M5 in various station contexts. Precise specifications are provided for the context specified in ISO 21217 and ISO 21218. Optional support for "Path and Flow Management" specified in ISO 24102-6[8] is also provided.

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