

<b>STN</b>	<b>Intelligentné dopravné systémy (ITS) ITS-G5 Prístupová vrstva vo frekvenčnom pásme 5 GHz Vydanie 2</b>	<b>STN EN 303 797 V2.1.1</b>  87 3797
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Intelligent Transport Systems (ITS); ITS-G5 Access layer in the 5 GHz frequency band; Release 2

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/24

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**Intelligent Transport Systems (ITS);  
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# Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Intelligent Transport Systems (ITS).

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Date of adoption of this EN:	13 February 2024
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Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2024
Date of withdrawal of any conflicting National Standard (dow):	30 November 2024

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# Modal verbs terminology

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## Introduction

The present document outlines the two lowest OSI layers - physical layer and data link layer - for the Cooperative ITS (C-ITS) direct ITS-S to ITS-S wireless AdHoc Networking communication protocol stack used in the 5,9 GHz frequency band as allocated in Europe in compliance with Commission Decision 2008/671/EC [i.1], ECC/DEC/(08)01 [i.2] and ECC/REC/(08)01 [i.3] and specified in the COMMISSION IMPLEMENTING DECISION (EU) 2020/1426 of 7 October 2020 [i.1]. The two lowest layers together form the access layer. The technology specified in the present document is part of the so called ITS-G5 stack.

In the ITS-G5 access layer, the data link layer is divided into two sublayers: Medium Access Control (MAC) and Logical Link Control (LLC). The physical layer and the medium access control layer are specified in IEEE 802.11<sup>TM</sup>-2020 [1] and corresponding extension IEEE 802.11bd<sup>TM</sup>-2022 [2]. The logical link control is based on the IEEE/ISO/IEC 8802-2-1998 [3].

ITS-G5 realizes AdHoc peer-to-peer mode communication functionality as defined in IEEE 802.11<sup>TM</sup>-2020 [1] and corresponding extension IEEE 802.11bd<sup>TM</sup>-2022 [2]. Operating profiles requiring synchronization and authentication as specified in IEEE 802.11<sup>TM</sup>-2020 [1] or any other version of 802.11<sup>TM</sup> are not supported. To manage congestion, ITS-G5 provides Decentralized Congestion Control (DCC) mechanisms as specified in clause 4.6. How to ensure coexistence with other systems is handled in clause 4.7.

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# 1 Scope

The present document defines the access layer for ITS-G5 consisting of the physical layer and the data link layer, as part of the ITS station architecture.

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## 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.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

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

- [1] [IEEE 802.11<sup>TM</sup>-2020](#): "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".
- [2] [IEEE 802.11bd<sup>TM</sup>-2022](#): "IEEE Standard for Information technology- Tele- communications 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 Amendment 5: Enhancements for Next Generation V2X". . .
- [3] [IEEE/ISO/IEC 8802-2-1998](#): "Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- Specific requirements -- Part 2: Logical Link Control".
- [4] [IEEE 802<sup>TM</sup>-2014](#): "IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture".
- [5] [ETSI EN 302 571](#): "Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU".
- [6] [ETSI TS 102 792](#): "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".

### 2.2 Informative references

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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] [Commission Implementing Decision \(EU\) 2020/1426](#) of 7 October 2020 on the harmonised use of radio spectrum in the 5 875-5 935 MHz frequency band for safety-related applications of intelligent transport systems (ITS) and repealing Decision 2008/671/EC.
- [i.2] ECC/DEC/(08)01: "[ECC Decision \(08\)01 on the harmonised use of the band 5875-5925 MHz for Intelligent Transport Systems \(ITS\)](#)".
- [i.3] ECC/REC/(08)01: "[ECC Recommendation \(08\)01 on the use of the band 5855-5875 MHz for Intelligent Transport Systems \(ITS\)](#)".
- [i.4] ETSI TS 103 695: "Intelligent Transport Systems (ITS); Access layer specification in the 5 GHz frequency band; Multi-Channel Operation (MCO) for Cooperative ITS (C-ITS); Release 2".
- [i.5] ETSI TS 102 687: "Intelligent Transport Systems (ITS); Decentralized Congestion Control Mechanisms for Intelligent Transport Systems operating in the 5 GHz range; Access layer part".

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