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Fourth edition
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Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) —

Part 4: Requirements for emissions-related systems

Véhicules routiers — Diagnostic sur gestionnaire de réseau de communication (DoCAN) —

Partie 4: Exigences applicables aux systèmes associés aux émissions



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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

This fourth edition cancels and replaces the third edition (ISO 15765-4:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

- changed all time-related parameters to $t_{\text{Parameter_Name}}$;
- corrected all occurrences of $\neg P2_{\text{CAN_max}}$ and changed to $\Delta t_{\text{P2_CAN_Client_Max}}$;
- [Clause 6](#) title has been changed to application;
- [subclause 6.1](#) title has been changed to vehicle communication initialisation sequence;
- [subclause 6.2](#) title has been changed to external test equipment communication initialisation sequence;
- changed N_{As} to $t_{\text{N_As}}$ and changed timeout value to 33 ms;
- changed N_{Ar} to $t_{\text{N_Ar}}$ and changed timeout value to 33 ms;
- added clarification in [10.3.3](#) regarding the acceptance of physically addressed request messages.

A list of all parts in the ISO 15765 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document has been established in order to define common requirements for vehicle diagnostic systems implemented on a controller area network (CAN) communication link, as specified in ISO 11898-1 and ISO 11898-2. Although primarily intended for diagnostic systems, it also meets requirements from other CAN-based systems needing a network layer protocol.

To achieve this, it is based on the Open Systems Interconnection (OSI) basic reference model specified in ISO/IEC 7498-1 and ISO/IEC 10731, which structures communication systems into seven layers.

When mapped on this model, the application protocol and lower OSI layers framework requirements specified/referenced in the ISO 15765 series are structured according to [Figure 1](#).

[Figure 1](#) illustrates a standards-based documentation concept, which consists of the lower OSI layers framework, which specifies requirements related to the transport layer, network layer, data link layer and physical layer standards of the OSI layers 4, 3, 2, and 1.

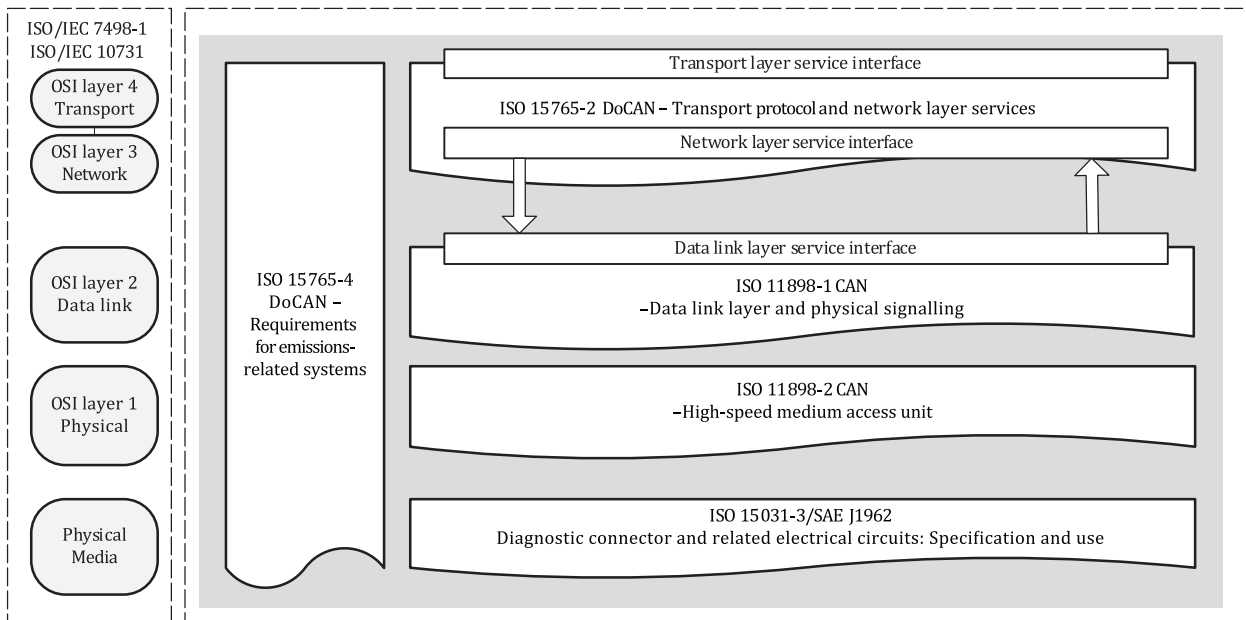


Figure 1 — DoCAN related OSI layers framework