
**Road vehicles — Vehicle interface
for electronic Periodic Technical
Inspection (ePTI) —**

**Part 1:
Application and communication
requirements**

*Véhicules routiers — Interface de véhicule pour contrôle technique
périodique électronique (ePTI) —
Partie 1: Exigences d'application et de communication*

ISO 20730-1:2021

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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 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*.

A list of all parts in the ISO 20730 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.

Introduction

Roadworthiness testing is a part of a wider regime designed to ensure that road vehicles are kept in a safe and environmentally acceptable condition during their use. This regime covers periodic roadworthiness testing of vehicles and technical roadside inspections of vehicles used for commercial road transport activities and provides a vehicle registration procedure allowing for the suspension of a vehicle's authorisation to be used in road traffic where the vehicle constitutes an immediate risk to road safety. Periodic testing is the main tool to ensure roadworthiness. Technical roadside inspections of commercial vehicles are merely complementary to periodic testing.

An ePTI system list, which is defined in ISO 20730-3, summarises ePTI-relevant systems and specifies a defined name (system), a unique identifier (ePTI system identifier) and a description for each ePTI system. All the definitions in this document refer to this ePTI system list.

The ISO 20730 series 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 data link framework requirements specified/referenced in the ISO 20730 series are structured according to [Figure 1](#).

[Figure 1](#) illustrates a standard-based documentation concept, which consists of the following main clusters:

- vehicle diagnostic communication framework: covers all relevant basic vehicle diagnostic communication specifications of OSI layers 7, 6 and 5;
- vehicle diagnostic communication use case framework: covers the master specification, which specifies the use cases and requirements of the subject matter of OSI layer 7;
- presentation layer framework: covers all data relevant specifications of OSI layer 6;
- conformance test plan: covers the conformance test plan requirements of the use cases and communication requirements of OSI layers 7, 6 and 5;
- lower OSI layer framework: covers all vehicle diagnostic protocol standards of OSI layers 4, 3, 2 and 1, which are relevant and referenced by the use case specific standard.