



International
Standard

ISO 23150-12

**Road vehicles — Logical interface
between sensors and data fusion
unit for automated driving
functions —**

**Part 12:
Lidar specific interfaces**

*Véhicules routiers — Interface logique entre capteurs et unité de
fusion de données pour les fonctions de conduite automatisée —*

Partie 12: Interfaces spécifiques de Lidar

**First edition
2026-06**

Sample Document

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Published in Switzerland

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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 <http://www.iso.org/directives>).

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

This first edition of ISO 23150-12, together with ISO 23150-1 [\[1\]](#), ISO 23150-2 [\[2\]](#), ISO 23150-11 [\[3\]](#), ISO 23150-13 [\[4\]](#), ISO 23150-14 [\[5\]](#), ISO 23150-15 [\[6\]](#) and ISO 23150-20 [\[7\]](#), cancels and replaces ISO 23150:2023, which has been technically revised.

The main changes are as follows:

- reorganization of the document structure; use of generic interfaces, generic signals, generic profiles and terms and definitions defined in ISO 23150-1 [\[1\]](#), as a basis for this document;
- specific collection of interfaces in separate documents; in this document, specific collection of all technology-specific interfaces for lidar;
- revision of the logical interfaces.

A list of all parts in the ISO 23150 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

Vehicle environmental perception sensors (single sensor or sensor cluster) provide logical interfaces, according to the ISO 23150 series, to the fusion unit or automated driving functions. The fusion unit generates a surround model and interprets the scene around the vehicle based on the sensor data. Interfaces are defined at different levels and described in a modular and semantic representation. The interfaces on feature level, advanced detection level and detection level are technology-specific and differ for each technology.

Figure 1 shows the schematic and contextual relationships between the documents relating to logical interfaces of the ISO 23150 series.

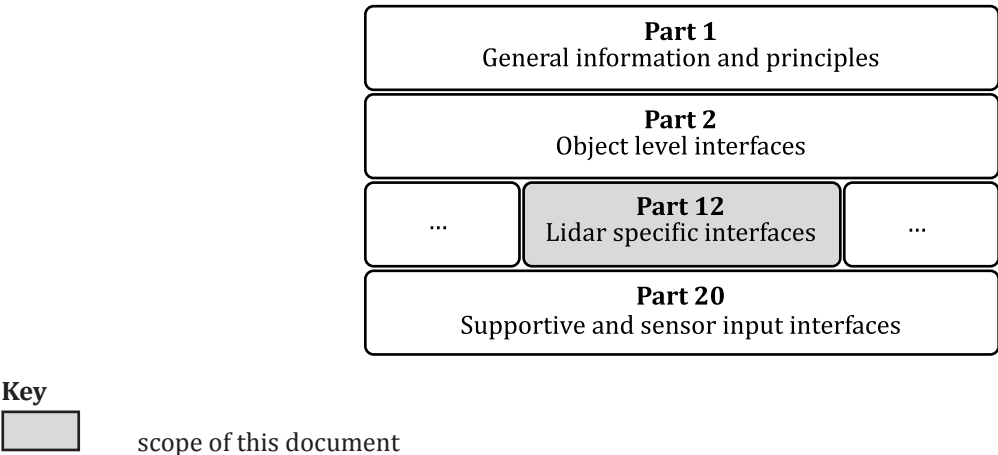


Figure 1 — Relationship of the ISO 23150 series

This document is based on the generic specifications in ISO 23150-1 [1], as shown in Figure 2:

- generic sensor cluster feature interface;
- generic sensor advanced detection interface;generic sensor detection interface;
- general level-independent profiles.