



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
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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.

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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.

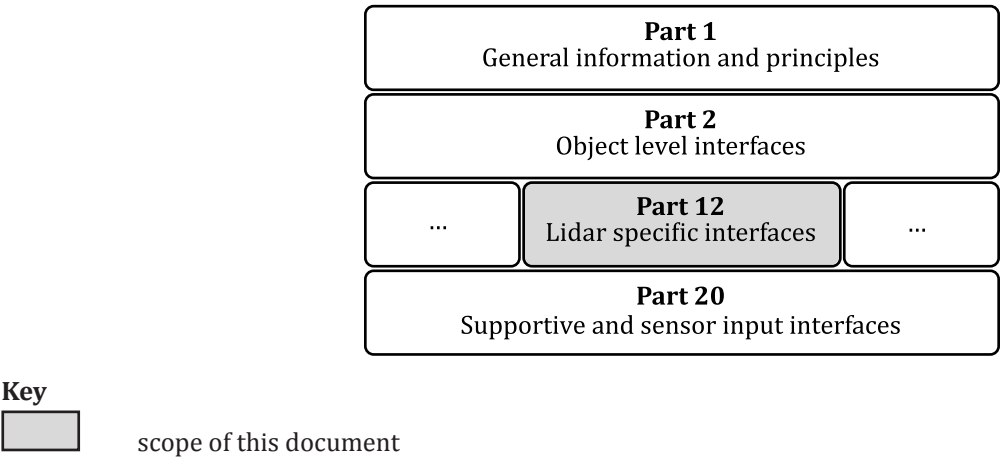
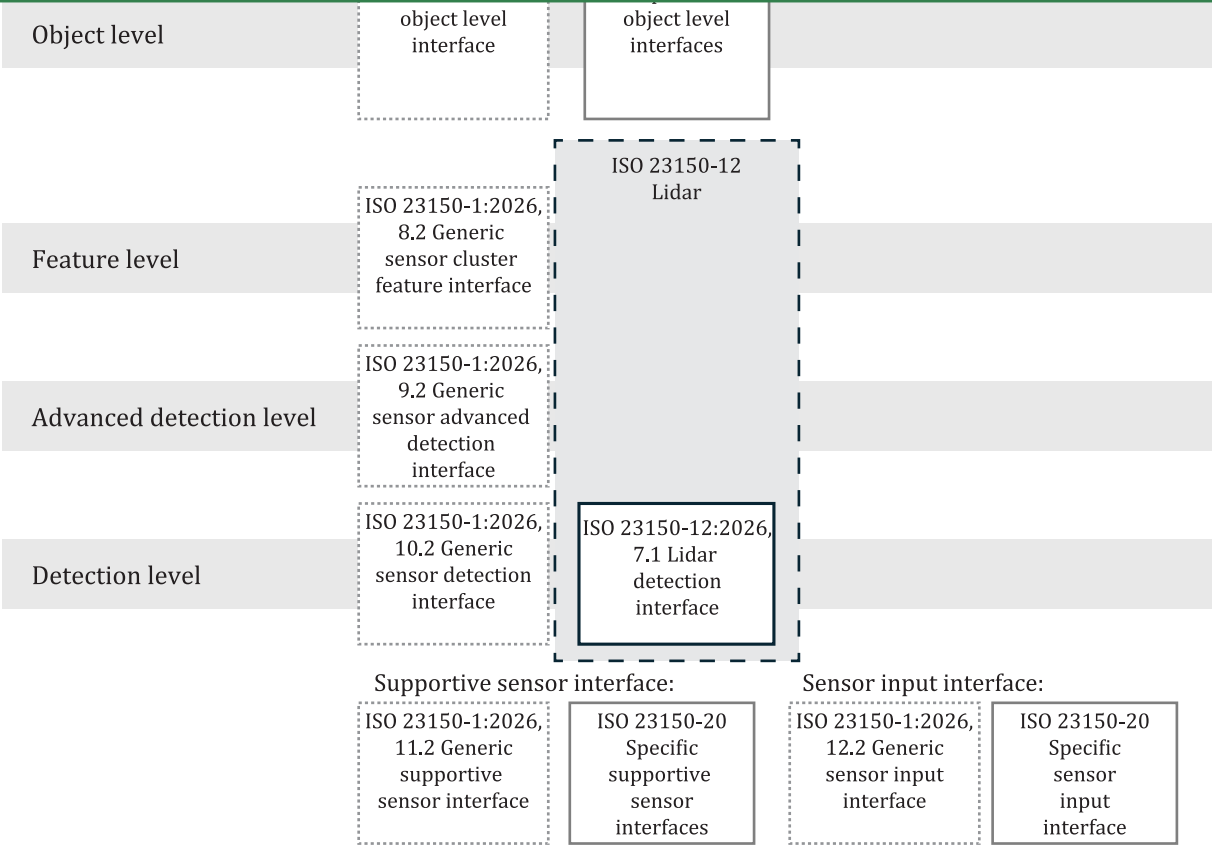


Figure 1 — Relationship of the ISO 23150 series

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.

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Key
[] scope of this document

Figure 2 — Interfaces in the scope of this document and the related interfaces of the ISO 23150 series

This document specifies technology-specific interfaces for lidar sensors as well as sensor clusters. The interfaces are based on the generic specifications of the interfaces in ISO 23150-1 [1]. This document references the generic specifications of signals for the interface header, the generic interface levels and the profiles.

A lidar sensor or sensor cluster may also implement (provide or receive) logical interfaces:

- on object level (see ISO 23150-2 [2]);
- for additional interfaces such as supportive sensor interfaces and sensor input information interfaces (see ISO 23150-20 [7]).

This document is not intended to replace the logical interface specifications of other documents in the ISO 23150 series.