
**Intelligent transport systems —
Adaptive cruise control systems —
Performance requirements and test
procedures**

*Systèmes intelligents de transports — Systèmes stabilisateurs de
vitesse adaptés — Exigences de performance et modes opératoires*

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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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This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*.

This third edition of ISO 15622 cancels and replaces ISO 15622:2010 and ISO 22179:2009, which have been technically revised.

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

- the third edition of ISO 15622 is extended with the performance requirements and test procedures for full speed range adaptive cruise control systems formerly described in ISO 22179:2009 (with minor changes);
- in-vehicle devices are allowed as a possible source for the acquisition of driver commands (set-speed-advice);
- curve classification and related dependencies have been removed;
- automatic start from hold is no longer prohibited.

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

The main system function of Adaptive Cruise Control (ACC) is to control vehicle speed adaptively to a forward vehicle by using information about: (1) distance to forward vehicles, (2) the motion of the subject (ACC equipped) vehicle and (3) driver commands (see [Figure 1](#)). Based upon the information acquired, the controller (identified as “ACC control strategy” in [Figure 1](#)) sends commands to actuators for carrying out its longitudinal control strategy and it also sends status information to the driver. Optionally, the driver may choose to have the ACC use set speed advice from in-vehicle devices.

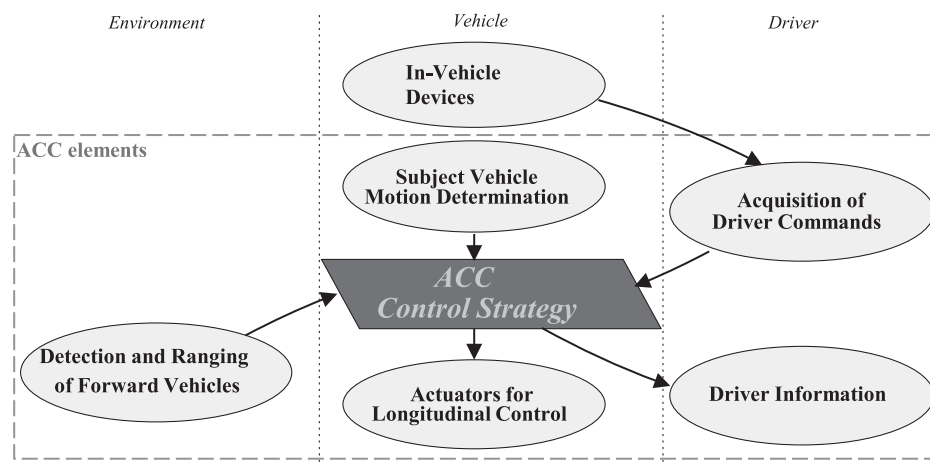


Figure 1 — Functional ACC elements

The goal of ACC is a partial automation of the longitudinal vehicle control and the reduction of the workload of the driver with the aim of supporting and relieving the driver in a convenient manner. The generic ACC system comprehends two classes: Full Speed Range ACC (FSRA) and Limited Speed Range ACC (LSRA).

This document can be used as a system level standard by other standards, which extend the ACC to a more detailed standard, e.g. for specific detection and ranging sensor concepts or higher level of functionality. Therefore, issues like specific requirements for the detection and ranging sensor function and performance or communication links for co-operative solutions will not be considered here.