
**Automatic vehicle and equipment
identification — Electronic registration
identification (ERI) for vehicles —**

**Part 2:
Operational requirements**

*Identification automatique des véhicules et des équipements —
Identification d'enregistrement électronique (ERI) pour les véhicules —
Partie 2: Exigences de fonctionnement*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 24534-2 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 278, *Road transport and traffic telematics*, in collaboration with Technical Committee ISO/TC 204, *Intelligent transport systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 24534-2 cancels and replaces ISO/TS 24534-2:2007, which has been technically revised.

ISO 24534 consists of the following parts, under the general title *Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles*:

- *Part 1: Architecture*
- *Part 2: Operational requirements*
- *Part 3: Vehicle data*
- *Part 4: Secure communications using asymmetrical techniques*
- *Part 5: Secure communications using symmetrical techniques*

Introduction

A quickly emerging need has been identified with administrations to improve the unique identification of vehicles for a variety of services. Situations are already occurring where manufacturers intend to fit lifetime tags to vehicles. Various governments are considering the needs and benefits of electronic registration identification (ERI) as a legal proof of vehicle identity with potential mandatory uses. There is commercial and economic justification in respect of both tags and infrastructure that a standard enables an interoperable solution.

ERI is a means of uniquely identifying road vehicles. The application of ERI will offer significant benefits over existing techniques for vehicle identification. It will be a suitable tool for the future management and administration of traffic and transport, including applications in free-flow, multi-lane traffic conditions with the capability to support mobile transactions. ERI addresses the need of authorities and other road users for a trusted electronic identification, including roaming vehicles.

The unique vehicle identifier is held in a secure environment within an electronic registration tag (ERT) fitted to a vehicle. The identifier used to identify a vehicle is called the vehicle identifier or vehicleId. The preferred vehicle identifier is the VIN, assigned to the vehicle by its manufacturer in accordance with ISO 3779, or a variant of this vehicle identifier.

The ERT may contain vehicle data in addition to the unique identifier, as required by authorities or their agents for ERI applications (e.g. vehicle registration details). An ERT is the core component for simple to complex applications of ERI, ranging from a simple read-only device, with more complex applications requiring one or more communications systems.

The ERT may be accessed by an electronic registration reader (ERR), either to read, or read/write data, from or to an ERT.

Optionally, the ERT may communicate with other onboard vehicle equipment. The potential range of ERI applications, simple to complex, will require interoperability to exist between an ERT and an ERR by application.

This part of ISO 24534 illustrates the ERI system concept and the fully featured ERI function enabling simple to complex applications of ERI.

Whilst it is desirable to determine a single set of requirements for operation in all environments and under all operating conditions, this could impose unacceptable costs for an ERI application. This part of ISO 24534 provides classification categories of operational parameters for different aspects of a system specification, enabling appropriate performance parameters to be selected for an ERI application. Annex A provides example ERI user requirements with operational scenarios.

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Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles —

Part 2: Operational requirements

1 Scope

This part of ISO 24534 provides requirements for electronic registration identification (ERI) that are based on an identifier assigned to a vehicle (e.g. for recognition by national authorities) suitable to be used for:

- electronic identification of local and foreign vehicles by national authorities;
- vehicle manufacturing, in-life maintenance and end-of-life identification (vehicle life cycle management);
- adaptation of vehicle data (e.g. for international resales);
- safety-related purposes;
- crime reduction;
- commercial services.

It adheres to privacy and data protection regulations.

This part of ISO 24534 defines the operational requirements for the remaining parts of ISO 24534 and the more limited but relevant provisions of ISO 24535.

Whilst the definition of the organizational framework required to implement, operate and maintain an ERI system is outside the scope of this part of ISO 24534, a list of potential stakeholders in the public and private sector has been included.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24534-3, *Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 3: Vehicle data*

IEC 60721-3-5:1988, *Classification of environmental conditions — Part 3: Classification of groups of environmental parameters and their severities — Section 5: Ground vehicle installations*

IEC 60215:1987, *Safety requirements for radio transmitting equipment*

EN 301 489-1, *Electromagnetic compatibility and radio spectrum matters (ERM) — Electromagnetic compatibility (EMC) standard for radio equipment and services — Part 1: Common technical requirements*