
**Information technology — Unique
identifiers —**

**Part 4:
Individual items**

*Technologies de l'information — Identificateurs uniques —
Partie 4: Articles individuels*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national 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 and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15459-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 15459-4:2006), of which it constitutes a minor revision. Because the scope of ISO/IEC 15459 has been expanded beyond transport units, the term “license plate” in the first edition of ISO/IEC 15459 has been replaced by “unique identifier” in the second edition.

ISO/IEC 15459 consists of the following parts, under the general title *Information technology — Unique identifiers*:

- *Part 1: Unique identifiers for transport units*
- *Part 2: Registration procedures*
- *Part 3: Common rules for unique identifiers*
- *Part 4: Individual items*
- *Part 5: Unique identifier for returnable transport items (RTIs)*
- *Part 6: Unique identifier for product groupings*

Introduction

Unique identification can occur at many different levels in the supply chain, at the transport unit, at the item level, and elsewhere. Such distinct entities are often handled by several parties: the sender, the receiver, one or more carriers, customs authorities, etc. Each of these parties must be able to identify and trace the item so that reference can be made to associated information such as configuration, maintenance history, address, order number, contents of the item, weight, sender, batch or lot number, etc.

The information is often held on computer systems, and may be exchanged between parties involved via EDI (Electronic Data Interchange) and XML (eXtensible Markup Language) messages.

There are considerable benefits if the identity of the item is represented in bar code format, or other AIDC (Automatic Identification and Data Capture) media and attached to or made a constituent part of that which is being uniquely identified so that

- it can be read electronically, thus minimising errors;
- one identity can be used by all parties;
- each party can use the identity to look up its computer files to find the data associated with the item;
- the identifier is unique within the class and cannot appear on any other item of the class during the lifetime of the item.

The unique identifier for individual items defined in this part of ISO/IEC 15459 and represented in a bar code label, two-dimensional symbol, radio-frequency identification tag, or other AIDC media attached to the item meets these needs.

All AIDC technologies have the potential to encode a unique identifier. It is expected that application standards for items, using various automatic identification technologies, will be developed based upon the unique identifier as a prime key. These application standards may be made available from the Issuing Agency.

Information technology — Unique identifiers —

Part 4: Individual items

1 Scope

This part of ISO/IEC 15459 specifies a unique, non-significant, string of characters for the unique identifier for individual items. The character string is intended to be represented in a bar code label or other AIDC media attached to the item to meet supply chain needs. To address management needs, different classes of items are recognized in the various parts of ISO/IEC 15459, which allows different requirements to be met by the unique identifiers associated with each class. The rules are defined for the individual items to identify the unique occurrence of an item, understood to mean the layers zero and one as will be defined in two future International Standards (ISO 17367 and ISO 17366, respectively).

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/IEC 646, *Information technology — ISO 7-bit coded character set for information interchange*

ISO/IEC 15418, *Information technology — EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance* ¹⁾

ISO/IEC 15459-2, *Information technology — Unique identifiers — Part 2: Registration procedures*

ISO/IEC 15459-3, *Information technology — Unique identifiers — Part 3: Common rules for unique identifiers*

ISO/IEC 9834-1, *Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities: General procedures and top arcs of the ASN.1 Object Identifier tree*

ISO/IEC 19762 (all parts), *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

GS1 *General Specifications*, GS1

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 (all parts) and ISO/IEC 15459-2 apply.

1) GS1 was formed in 2005 from the joining together of EAN International and the Uniform Code Council (UCC). Since 2005, "EAN/UCC Application Identifiers" have been re-branded "GS1 Application Identifiers".