

INTERNATIONAL STANDARD

ISO/IEC 15963

First edition
2004-09-01

Information technology — Radio frequency identification for item management — Unique identification for RF tags

*Technologies de l'information — Identification par radiofréquence pour
la gestion des objets — Identification unique des tags RF*

Withhold

Reference number
ISO/IEC 15963:2004(E)



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

Withdrawn

© ISO/IEC 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions.....	2
4 Symbols and abbreviated terms.....	2
5 The use of unique identifiers	3
6 Possible ways to uniquely identify an RF tag.....	3
6.1 Virtual ID.....	3
6.1.1 Data as a unique ID.....	3
6.1.2 Time as a unique ID	3
6.1.3 Position as a unique ID.....	4
6.2 Permanent unique ID	4
6.2.1 Benefits of permanent unique ID versus virtual ID.....	4
6.2.2 Selection of the size of a permanent unique ID.....	4
Annex A (normative) Numbering system of a permanent unique identifier (UID).....	5
A.1 General.....	5
A.2 UID issuer identifier	5
A.3 Allocation class (AC).....	5
A.4 UID issuer registration number	6
A.5 Serial number	6
A.6 Allocation classes.....	6
A.6.1 In support of ISO/IEC 7816-6.....	6
A.6.2 In support of ISO/TS 14816	6
A.6.3 In support of EAN.UCC standardized numbering.....	7
A.6.4 In support of ANS INCITS 256.....	7
A.6.5 Reserved for future use.....	8
Annex B (normative) ISO/TS 14816 – Numbering systems for supply chain applications of RFID.....	9

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 15963 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

Withhold

Introduction

ISO/IEC 15963 is one of a series of International Standards and Technical Reports developed by ISO/IEC JTC 1/SC 31 for the identification of items (Item Management) using radio frequency identification (RFID) technology.

ISO/IEC 15963 describes numbering systems for the unique identification of RF tags.

It is intended to be used in conjunction with other International Standards developed by SC 31 for "RFID for item management" such as ISO/IEC 18000 and ISO/IEC 15962.

Withdrawn

Information technology — Radio frequency identification for item management — Unique identification for RF tags

1 Scope

ISO/IEC 15963 describes numbering systems that are available for the identification of RF tags.

A unique ID is required as part of the write operation to RFID tags. The unique ID guarantees that the information written to a tag is unambiguously written to the correct data carrier (tag). A unique ID is also required in many read situations where the contents of the tag are tied to a specific item and that item needs to be unambiguously identified. Further discussion and explanation are given in Clause 5.

The unique ID may also be used

- for the traceability of the integrated circuit itself for quality control in their manufacturing process,
- for the traceability of the RF tag during its manufacturing process and along its lifetime,
- for the completion of the reading in a multi-antenna configuration,
- by the anti-collision mechanism to inventory multiple tags in the reader's field of view,
- for the traceability of the item to which the RF tag is attached.

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 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 6346, *Freight containers — Coding, identification and marking*

ISO/IEC 7816-6, *Identification cards — Integrated circuit cards — Part 6: Interindustry data elements for interchange*

ISO/TS 14816, *Road transport and traffic telematics — Automatic vehicle and equipment identification — Numbering and data structure*

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC¹⁾*

ISO/IEC 19762-3, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 3: Radio frequency identification (RFID)¹⁾*

1) To be published.

ANS INCITS 256, *Radio Frequency Identification (RFID)*

General EAN.UCC Specifications (EAN International, Brussels)

Withdrawn