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Information technology — Radio frequency identification for item management — RFID Emblem

*Technologies de l'information — Identification par radiofréquence (RFID) pour la gestion d'objets —
Emblème RFID*

ICS: 35.040.50

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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.

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 document 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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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by 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 29160:2012), which has been technically revised.

Introduction

Radio frequency identification (RFID) is a technology that touches all aspects of the supply chain, from manufacturing all the way to the end-use consumer.

It is important for industrial users, retailers and consumers to know when an RFID tag is present. To this end, the RFID Emblem specified in this International Standard provides the public with a readily identifiable method to inform users of the presence of RFID.

The RFID Emblem provides a visible identification of RFID transponders, interrogators, and tagged items. Visible signs inform consumers whether an item or product contains an RFID tag. Therefore, this meets one of the main requirements for consumer privacy protection.

The RFID Emblem is a public-domain object intended to augment rather than replace other emblems and logos such as recycling and CE (European Conformity) mark. The RFID Emblem requires no fee for use, nor does it have any membership or other use restriction or requirement, other than compliance with this International Standard.

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Information technology — Radio frequency identification for item management — RFID Emblem

1 Scope

This International Standard specifies the design and use of the RFID Emblem: an easily identified visual guide that indicates the presence of radio frequency identification (RFID). It does not address the location of the RFID Emblem on a label. Specific placement requirements are left to application standards developers.

It also specifies an RFID Index, which can be included in the RFID Emblem and which addresses the complication added by the wide range of RFID tags (frequency, protocol and data structure). The RFID Index is a two-character code that provides specific information about compliant tags and interrogators. Successful reading of RFID tags requires knowledge of the frequency, protocol and data structure information provided by the RFID Index.

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 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms, definitions, symbols and abbreviations given in ISO/IEC 19762 apply.

Bluetooth SIG	Bluetooth Special Interest Group
CAGE	Commercial And Government Entity
GIAI	Global Individual Asset Identifier
GID	General Identifier
GRAI	Global Returnable Asset Identifier
GSRN	Global Service Relation Number
GTIN	Global Trade Identification Number
ID	Identifier
NFC	Near Field Communication
RAIN	RAdio frequency IdentificatioN
SDO	Standard Development Organisation
SGLN	Serialized Global Location Number

SGTIN	Serialized Global Trade Item Number
SSCC	Serialized Shipping Container Code
UHF	Ultra High Frequency
US DoD	United States Department of Defense

4 The RFID Emblem

The RFID Emblem's genesis was the AIM RFID Emblem, developed by the AIM Global RFID Experts Group (REG). The RFID Emblem consists of a unique, public-domain emblem with a two-character code (RFID Index) to indicate the frequency range and, in certain cases, the data structure contained within the encoded RFID transponder. A generic emblem without the RFID Index is permitted. Due to the incompatibility of different types of RFID, the use of the generic emblem is discouraged.

The RFID Emblem may be used in conjunction with other logos or indicia that indicate specific applications of RFID.

4.1 RFID Index

Two-character codes are used to identify the frequency, the air interface protocol, the defining agency for the data, and the data on the tag. This is referred to as the RFID Index. The first character defines the frequency, air interface protocol and defining authority, the second character defines the data structure.

To help installation planners identify encoding or reading equipment suitable for a particular frequency and data structure, a "generic" code with an asterisk (*) as the second character is assigned for each grouping. This code shall only be used on interrogators and shall not be used on labels or tags. Currently assigned two-character codes are given in [Annex A](#). Codes not currently assigned are reserved for future use.

4.2 Representation

The two representations of the RFID Emblem are dark-on-light and light-on-dark, as illustrated below. Examples of the RFID Emblem for use on RFID-enabled printers/encoders and interrogators, and for use on labels are also illustrated.

[Figure 1](#) illustrates the RFID Emblem. Earlier forms and representations of the emblem are not compliant with this International Standard and should not be used.



Figure 1 — Examples of the RFID Emblem

Either form of the RFID Emblem may be used; the form which is most visually striking on the printed RFID-enabled label material or tag should be used.

The RFID Emblem may also be engraved or embossed in the covering of an RFID tag or item containing an RFID transponder.

As described in [section 4.5](#) and [Figure 2](#), a generic emblem with the characters “RFID” is also defined for transponders and interrogators with non-standardized communication protocols and/or non-standardized data structures.

4.3 Size

The RFID Emblem should be printed no smaller than 14 mm by 13 mm, in any colour. There shall be a minimum 3 mm clear, unprinted area around the RFID Emblem.

If Direct Marking on small components/products, a smaller emblem may be used but in no case shall the emblem be smaller than 5 mm square with a 1mm clear, unprinted area around the RFID Emblem. When represented in a low contrast form, it should be large enough to be easily recognizable under typical use conditions.

Design graphics for the RFID Emblem are shown in [Annex B](#) and [D](#).

4.4 Placement

Placement of the RFID Emblem shall be determined by an appropriate application standard. In the absence of an appropriate application standard, the RFID Emblem shall be placed such that it is easily visible to those trying to read the RFID tag or label. To improve readability, the RFID Emblem should be located near the actual transponder.

4.5 Using the RFID Emblem

The RFID Emblem is free to use by any RFID label, tag, encoder or interrogator manufacturer and companies printing or using RFID labels and tags who self-certify their compliance to the assignments of [Table A.1](#).

Manufacturers of RFID equipment who do not comply with the [Table A.1](#) assignments are free to use the following graphic to denote “RFID inside”.



Figure 2 — Graphic for generic RFID equipment

Large, high-quality graphics of the RFID Emblem for all current assignments are available at: https://www.aimglobal.org/page/RegAuthority_29160. These graphics may be resized to meet user needs.

Graphic files are available in bmp, jpg, eps and pcx formats. Additional formats will be made available upon request.

4.6 Restrictions on use

The RFID Emblem shall not be modified in any way.

Ad hoc and “internal use only” assignments of two-character codes in conjunction with the RFID Emblem are prohibited.

5 Maintenance

As more standards and user applications evolve, additional index assignments will be made. Corresponding graphics will be made available for download from the AIM Global website.

[Annex C](#) provides a list of index assignments at the time of publication.

For up-to-date information, please refer to the AIM Global website shown below, for the complete list of current assignments and downloadable graphics.

https://www.aimglobal.org/page/RegAuthority_29160

5.1 Requesting an index assignment

Additional assignments may be requested by completely filling out and submitting the application form shown in [Annex C](#). Send requests to standards@aimglobal.org

5.2 Criteria for additional index assignments

- Requests must come from an internationally recognized Standards Developing Organizations (SDOs)
- The technology standard(s) shall be stable.
- The SDO shall be a widely recognized coding authority.
- There is a demonstrated need for the assignment.