
**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*

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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 organisation to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organisations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 Organisation (WTO) principles in the Technical Barriers to Trade (TBT) see 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.

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

- Minimum size of RFID Emblem has been modified in order to match industry needs and constraints
- Information about the registration authority has been updated in [5.1](#)
- Annex D has been deleted
- RFID markings proposed by other organisations have been updated.

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

Radio frequency identification (RFID) is a technology that concerns all aspects of the supply chain, from manufacturing all the way to the end-user or 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 document 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 conformance to this document.

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

1 Scope

This document 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.

This document 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 in existence (frequency, protocol and data structure). The RFID Index is a two-character code that provides specific information about 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 documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 abbreviated terms

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

Bluetooth SIG	bluetooth special interest group
CAGE	commercial and government entity
EPC	electronic product code
EPCIS	electronic product code information service
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

4.1 General

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.

4.2 RFID Index

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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, while 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.

4.3 Representation

The two representations of the RFID Emblem are dark-on-light and light-on-dark. [Figure 1](#) gives examples of these representations. For use of the RFID emblems on RFID-enabled printers/encoders and interrogators, this identifies compatible reader/encoders for each type. For use on labels, inlays and tags, this indicates frequency, coding and data content/structure.

Earlier forms and representations of the emblem do not conform to this document and shall not be used.

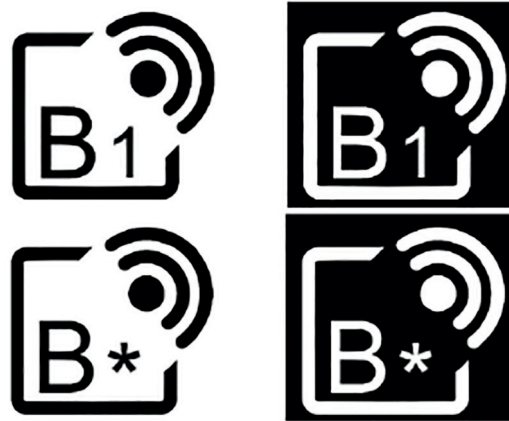


Figure 1 — Examples of the RFID Emblem with B1 (ISO/IEC 17364 tag) and B* (ISO/IEC 18000-63 compatible interrogator)

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 preferred.

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 4.6 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. (standards.iteh.ai)

4.4 Size

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The RFID Emblem should be printed no smaller than (5 × 5) mm with a 1 mm clear, unprinted area around the RFID Emblem. <https://standards.iteh.ai/catalog/standards/sist/b82dfe97-3168-4fae-8a48-c0016c183504/iso-iec-29160-2020>

When represented in a low contrast form, it should be large enough to be easily recognizable under typical conditions of use.

Design graphics for the RFID Emblem are shown in Annex B.

4.5 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.

4.6 Using the RFID Emblem

The RFID Emblem is free to use for any RFID label, tag, encoder or interrogator manufacturer and companies printing or using RFID labels and tags who conform to the assignments of Table A.1.

Manufacturers of RFID equipment who do not conform to the assignments of Table A.1 may use the graphical symbol shown in Figure 2 to denote “RFID inside”.



Figure 2 — Graphical symbol for generic RFID equipment (RFID tag, general, ISO 7000-3010)

Large, high-quality graphics of the RFID Emblem for all current assignments are available at the Registration Authority which can be found at https://www.iso.org/maintenance_agencies.html. These graphics may be resized to meet user needs.

Graphic files are available in BMP, JPG, EPS and PCX formats. Additional formats are made available upon request.

4.7 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

5.1 General

Additional index assignments are to be made as more standards and user applications evolve. Corresponding graphics are to be made available for download from the Registration Authority website.

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

For up-to-date information and the complete list of current assignments and downloadable graphics, please refer to the Registration Authority.

Additional assignments may be requested by completing and submitting the application form that is provided by the Registration Authority.

5.2 Criteria for additional index assignments

- Requests shall come from an internationally recognized standards developing organisations (SDO).
- The technology standard(s) shall be stable.
- The SDO shall be a widely recognized coding authority.
- There is a demonstrated need for the assignment.

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