

# AIM Global Standard

## for the use of the AIM RFID Emblem<sup>™</sup> and Index to identify RFID-enabled labels



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This standard is intended as an aid the manufacturer, the consumer, and the general public.

NOTE: THIS DOCUMENT MAY BE REVISED OR WITHDRAWN AT ANY TIME.

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The document shall not be included in its entirety in any standard or guideline. This standard will be continually updated and interested parties should check for the most current version. The document is available at no charge on the AIM Global website at <http://www.aimglobal.org/rfidemblem.asp>.

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**ABOUT AIM GLOBAL**

AIM Global, the trade association for the Automatic Identification and Mobility industry, is the source for technically accurate, unbiased, commercial-free, and up-to-date information on all AIM technologies including:

*Bar Code including 2-D Symbolologies*  
*Biometrics*  
*Enterprise Mobile Computing*  
*Machine Vision*  
*Magnetic Stripe*  
*Optical Cards*  
*Optical Character Recognition*  
*Radio Frequency Identification*  
*Smart Cards*  
*Touch Memory*  
*Voice Recognition*  
*WLAN*

The association serves members world-wide through a network of AIM chapters.

Our member companies represent a wide array of AIDC technologies either as manufacturers or as providers of equipment, systems, and services. A listing of AIM Global's membership and chapters can be found at <http://www.aimglobal.org>.

AIM maintains a web site dedicated to RFID news, information and standards at <http://www.rfid.org>.

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First publication

**SAG-0501 v2.0, 2005-09-01**

Added Publication Revision History  
Renamed "AIM RFID Emblem"  
Included sunset date for "AIM RFID Mark" graphic  
Included new "AIM RFID Emblem" graphic  
Changed URL for RFID Emblem  
Revised assignment list as follows:  
    Removed A1, A2, A3 as redundant  
    Assign "B8" for "ISO 17363 - Freight containers"  
    Assign "B9" for "ISO 17366 - Product packaging"

**SAG-0501 v2.01, 2005-10-27**

Replaced several overlooked references to "mark" with "Emblem"

**SAG-0501 v2.02, 2006-04-03** (unpublished)

Updated text and assignment list to indicate designation of air interface protocol.  
Updated assignment list to add requested designations L, H and N

**SAG-0501 v2.03, 2007-05-22** (published)

Changed data defining agency on N\* to ISO/IEC 7816-5  
Updated Mode 1 to Mode 3 for H category

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## 1 Introduction and Scope

With the growing use of RFID-enabled labels in business, industry and military environments, it may be difficult for workers with hand-held readers to identify labels that contain RFID tags. Additionally, there may be more than one type of RFID tag on an item (e.g., aircraft) as well as different types of tags and different data formats.

In order to provide workers with a simple, visual guide to identify RFID-enabled labels and tags, the AIM North America Standards Action Group (NASAG) developed the AIM RFID Emblem™ to be placed on a label or tag. In addition, the NASAG developed an index to indicate the frequency and type of tag and the structure of the data on the tag.

This standard addresses the design and use of the AIM RFID Emblem. It does not address location of the Emblem on a label. Specific placement requirements are left to application standards developers.

## 2 Relevant Standards

### 2.1 EPC Global

2.1.1 EPCGLOBAL CLASS 0 SPECIFICATION

2.1.2 EPCGLOBAL CLASS 1 SPECIFICATION

2.1.3 EPCGLOBAL GENERATION 2 SPECIFICATION

2.1.4 EPC TAG DATA STANDARDS VERSION 1.1 REV 1.24

### 2.2 ISO/IEC standards

2.2.1 ISO 15394:2000(E)

2.2.2 ISO/IEC 18000 SERIES

2.5.3 ISO/IEC 18047 SERIES

2.5.4 ISO 17363 - SUPPLY CHAIN APPLICATIONS OF RFID - FREIGHT CONTAINERS

2.5.5 ISO 17364 - SUPPLY CHAIN APPLICATIONS OF RFID - RETURNABLE TRANSPORT ITEMS

2.5.6 ISO 17365 - SUPPLY CHAIN APPLICATIONS OF RFID - TRANSPORT UNITS

2.5.7 ISO 17366 - SUPPLY CHAIN APPLICATIONS OF RFID - PRODUCT PACKAGING

2.5.8 ISO 17367 - SUPPLY CHAIN APPLICATIONS OF RFID - PRODUCT TAGGING

### 3 The AIM RFID Emblem™

The AIM RFID Emblem consists of a unique, public domain Emblem with a two-character code to indicate the frequency range and in certain cases, the data structure contained within the encoded RFID transponder.

#### 3.1 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. The first character defines the frequency, air interface protocol and defining authority, the second character defines the data structure.

To help workers 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 readers and encoders and shall not be used on labels or tags.

Table 1 shows currently assigned two character codes. Codes not currently assigned are reserved for future use.

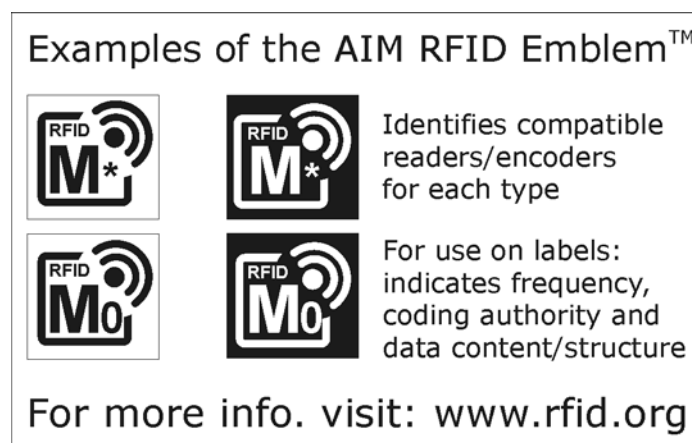
#### 3.2 Representation

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

This revision of the document shows a revised graphic for the AIM RFID Emblem (formerly the AIM RFID Mark) that was adopted as a result of cooperative international discussions.

Figure 1 illustrates the new AIM RFID Emblem. Annex A illustrates the previous version.

*Figure 1: Examples of the AIM RFID Emblem*



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

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

*Table 1 - Two Character code assignments for the AIM RFID Emblem*

2-Character Printed Code	Transponder Frequency	Air Interface Protocol	Data Structure Defining Agency	Data Structure
A*	433 MHz	ISO 18000-7	ISO JWG	Indicates compatible readers/encoders
A0	433 MHz	ISO 18000-7	(RFU)	Reserved for future use
A1	433 MHz	ISO 18000-7	ISO 17363	License plate ID plus optional application data
A2	433 MHz	ISO 18000-7	(RFU)	Reserved for future use
A3	433 MHz	ISO 18000-7	(RFU)	Reserved for future use
B*	860-960 MHz	ISO 18000-6 C	ISO JWG	Indicates compatible readers/encoders
B0	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
B1	860-960 MHz	ISO 18000-6 C	ISO 17364	License plate ID plus optional application data
B2	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
B3	860-960 MHz	ISO 18000-6 C	ISO 17365	License plate ID plus optional application data
B4	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
B5	860-960 MHz	ISO 18000-6 C	ISO 17366	License plate ID plus optional application data
B6	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
B7	860-960 MHz	ISO 18000-6 C	ISO 17367	License plate ID plus optional application data
B8	860-960 MHz	ISO 18000-6 C	ISO 17363	License plate ID plus optional application data
E*	860-960 MHz	ISO 18000-6 C	EPCglobal †	Indicates compatible readers/encoders
E0	860-960 MHz	ISO 18000-6 C	EPCglobal †	GID General Identifier
E1	860-960 MHz	ISO 18000-6 C	EPCglobal †	SGTIN Serialized GTIN
E2	860-960 MHz	ISO 18000-6 C	EPCglobal †	SSCC Serial Shipping Container Code
E3	860-960 MHz	ISO 18000-6 C	EPCglobal †	SGLN Serialized Global Location Number
E4	860-960 MHz	ISO 18000-6 C	EPCglobal †	GRAI Global Returnable Asset Identifier
E5	860-960 MHz	ISO 18000-6 C	EPCglobal †	GIAI Global Individual Asset Identifier
H*	13.56 MHz	18000-3 M3	ISO JWG	Indicates compatible readers/encoders
H0	13.56 MHz	18000-3 M3	ISO 17364	License plate ID plus optional application data
H1	13.56 MHz	18000-3 M3	ISO 17365	License plate ID plus optional application data
H2	13.56 MHz	18000-3 M3	ISO 17366	License plate ID plus optional application data
H3	13.56 MHz	18000-3 M3	ISO 17367	License plate ID plus optional application data
L*	125/134,4 kHz	ISO 18000-2	ISO JWG	Indicates compatible readers/encoders
L0	125/134,4 kHz	ISO 18000-2	ISO 17364	License plate identification only
L1	125/134,4 kHz	ISO 18000-2	(RFU)	Reserved for future use
L2	125/134,4 kHz	ISO 18000-2	ISO 17367	License plate identification only
L3	125/134,4 kHz	ISO 18000-2	(RFU)	Reserved for future use

*Table 1 (continued) - Two Character code assignments for the AIM RFID Emblem*

2-Character Printed Code	Transponder Frequency	Air Interface Protocol	Data Structure Defining Agency	Data Structure
M*	860-960 MHz	ISO 18000-6 C	US DoD	Indicates compatible readers/encoders
M0	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
M1	860-960 MHz	ISO 18000-6 C	US DoD	CAGE plus serial number
M2	860-960 MHz	ISO 18000-6 C	(RFU)	Reserved for future use
N*	13.56 MHz	ISO 14443-2,3,4	ISO 7816-5	Indicates compatible readers/encoders
N0	13.56 MHz	ISO 14443-2,3,4	--	Application Specific

† See EPC™ Tag Data Standards Version 1.3, Annex A

Note: All assignments not otherwise indicated are reserved for future use.

Please refer to the [AIM Global website](https://www.aimglobal.org/rfidemblem.asp) (<https://www.aimglobal.org/rfidemblem.asp>) for the complete list of current assignments and downloadable graphics.

### 3.3 Size

The Emblem should be printed no smaller than 13 mm (1/2 in) square, in any color. There shall be a minimum 3 mm (1/8 in) clear, unprinted area around the Emblem. When represented in a low contrast form, it should be large enough to be easily recognizable under typical use conditions.

### 3.4 Accompanying Human-Readable Text

It is recommended that the text "AIM RFID Emblem" be placed adjacent to the Emblem, if desired, as an aid to recognition and worker education. The Emblem may not be referred to in any other manner.

Text shall be any easily readable font. The reference text may be translated into other languages or represented in non-Roman alphabets as required by the application.

For international applications, English shall be used.

### 3.5 Placement

Placement of the AIM RFID Emblem shall be determined by an appropriate application standard. In the absence of an appropriate application standard, the Emblem shall be placed such that it is easily visible to those trying to read the RFID tag or label.

### 3.6 Using the AIM RFID Emblem

The AIM RFID Emblem is free to use by any RFID label, tag, encoder or reader manufacturer and companies printing or using RFID labels and tags who self-certify their compliance to the assignments of Table 1.



Large, high-quality (300 dpi) graphics of the AIM RFID Emblem for all current assignments are available at: <https://www.aimglobal.org/rfidemblem.asp>. 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.

### 3.7 Restrictions On Use

The AIM RFID Emblem shall not be modified in any way.

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

## 4 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.

The standard is maintained by a subcommittee of the AIM North America Standards Action Group.

### 4.1 Requesting an Index Assignment

Anyone may request additional index assignments. Requests should be addressed to [idxrequest@aimglobal.org](mailto:idxrequest@aimglobal.org). Requests may also be mailed to the AIM Global headquarters (see page 1). Requests will be acted upon promptly.

The following information must be provided for all requests.

#### CONTACT INFORMATION

Name of Requestor:

Company/Association:

Telephone:

E-mail:

#### TAG TECHNOLOGY

Frequency/frequencies (or frequency range):

Active/passive/battery-assisted passive:

#### AIR INTERFACE PROTOCOL

Applicable protocol standard

#### DATA CONTENT

Data Structure Defining Agency:

Data content/structure standard (include section references):

Data content bit length:

Data content description:

#### JUSTIFICATION

Describe why the assignment(s) is(are) needed (e.g. where will this tag type and data content be used and who will use it).

#### **4.2 Criteria for Additional Index Assignments**

1. The technology standard(s) must be stable.
2. The issuer of the technology standard(s) must be an internationally recognized standards-setting organization.
3. The data authority must be a widely recognized coding authority.
4. There is a demonstrated need for the assignment.

## **5 Graphic Files**

The following graphic files are included in the Zip file download of this document and separately from the AIM website (<http://www.aimglobal.org/rfidemblem.asp>).

AIM\_RFID\_Emblem\_A\_bmp.zip  
AIM\_RFID\_Emblem\_A\_eps.zip  
AIM\_RFID\_Emblem\_A\_jpg.zip  
AIM\_RFID\_Emblem\_A\_pcx.zip  
AIM\_RFID\_Emblem\_B\_bmp.zip  
AIM\_RFID\_Emblem\_B\_eps.zip  
AIM\_RFID\_Emblem\_B\_jpg.zip  
AIM\_RFID\_Emblem\_B\_pcx.zip  
AIM\_RFID\_Emblem\_E\_bmp.zip  
AIM\_RFID\_Emblem\_E\_eps.zip  
AIM\_RFID\_Emblem\_E\_jpg.zip  
AIM\_RFID\_Emblem\_E\_pcx.zip  
AIM\_RFID\_Emblem\_M\_bmp.zip  
AIM\_RFID\_Emblem\_M\_eps.zip  
AIM\_RFID\_Emblem\_M\_jpg.zip  
AIM\_RFID\_Emblem\_M\_pcx.zip

## Annex A

The previous AIM RFID Mark is not to be produced following 31 December 2005. International consensus was that the revised graphic was more easily recognizable and easier to print/produce.

Figure 2 illustrates the previous graphic.

*Figure 2: Examples of the old AIM RFID Mark*  
NOT TO BE PRODUCED AFTER 31 December 2005

