Australian Standard®

Information technology—Radio frequency identification for item management

Part 4: Parameters for air interface communications at 2.45 GHz

This Australian Standard® was prepared by Committee IT-034, Automatic Identification and Data Capture Techniques. It was approved on behalf of the Council of Standards Australia on 15 November 2006.
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The following are represented on Committee IT-034:

- Australian Custom Service
- Australian Data Capture Association
- Australian Electrical and Electronic Manufacturers Association
- Australian Retailers Association
- Australian Veterinary Association
- Department of Communication, Information Technology and the Arts
- Department of Defence
- Department of Primary Industries, Vic
- GS1 Australia
- RFID Association of Australia
- The University of Adelaide

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PREFACE

This Standard was prepared by the Standards Australia Committee IT-034, Automatic Identification and Data Capture Techniques.

The objective of this Standard is to provide a common technical specification for RFID devices operating in the 2.45 GHz Industrial, Scientific, and Medical (ISM) band used in item management applications.

This Standard is identical with, and has been reproduced from ISO/IEC 18000-4:2004 *Information technology—Radio frequency identification for item management*—Part 4: *Parameters for air interface communications at 2,45 GHz*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text 'this part of ISO/IEC 18000' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO/IEC 15963	Information technology—Radio frequency identification for item management—Unique identification for RF tags	AS 1596	Information technology—Radio frequency identification for item management—Unique identification for RF tags
ISO/IEC 18000-1	Information technology—Radio frequency identification for item management—Part 1: Reference architecture and definition of parameters to be standardized	AS ISO/IEC 18000.1	Information technology—Radio frequency identification for item management—Part 1: Reference architecture and definition of parameters to be standardized
ISO/IEC TR 18047-4	Information technology—Radio frequency identification device conformance test methods—Part 4: Test methods for air interface communications at 2,45 GHz	AS ISO/IEC 18047.4	Information technology—Radio frequency identification device conformance test methods—Part 4: Test methods for air interface communications at 2,45 GHz
ISO/IEC 19762 (all parts)	Information technology—Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary	AS ISO/IEC 19762 (all parts)	Information technology—Automatic identification and data capture (AIDC) techniques —Harmonized vocabulary

Only international references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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1 Scope

This part of ISO/IEC 18000 defines the air interface for radio frequency identification (RFID) devices operating in the 2,45 GHz Industrial, Scientific, and Medical (ISM) band used in item management applications. The purpose of this part of ISO/IEC 18000 is to provide a common technical specification for RFID devices that may be used by ISO committees developing RFID application standards. This part of ISO/IEC 18000 is intended to allow for compatibility and to encourage inter-operability of products for the growing RFID market in the international marketplace. This part of ISO/IEC 18000 defines the forward and return link parameters for technical attributes including, but not limited to, operating frequency, operating channel accuracy, occupied channel bandwidth, maximum EIRP, spurious emissions, modulation, duty cycle, data coding, bit rate, bit rate accuracy, bit transmission order, and where appropriate, operating channels, frequency hop rate, hop sequence, spreading sequence, and chip rate. This part of ISO/IEC 18000 further defines the communications protocol used in the air interface.

This part of ISO/IEC 18000 contains two modes. The first is a passive tag operating as an interrogator talks first while the second in a battery assisted tag operating as a tag talks first. The detailed technical differences between the modes are shown in the parameter tables.

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

ISO/IEC 15963, *Information technology — Radio frequency identification for item management — Unique identification for RF tags*

ISO/IEC 18000-1, *Information technology — Radio frequency identification for item management — Part 1: Reference architecture and definition of parameters to be standardized*

ISO/IEC TR 18047-4, *Information technology — Radio frequency identification device conformance test methods — Part 4: Test methods for air interface communications at 2,45 GHz*[1)]

ISO/IEC 19762 (all parts), *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*[1)]

1) To be published.