
**Information technology — Automatic
identification and data capture
techniques —**

**Part 21:
Crypto suite SIMON security services
for air interface communications**

*Technologies de l'information — Techniques automatiques
d'identification et de capture de données —*

*Partie 21: Services de sécurité par suite cryptographique SIMON pour
communications par interface radio*

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Foreword

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A list of all the parts in the ISO/IEC 29167 series can be found on the ISO website.

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

This document specifies a variety of security services provided by the lightweight block cipher SIMON. While SIMON supports various key and block sizes, the cipher versions that are supported in this cryptographic suite take the following block/key sizes in bits: 64/96, 96/96, 64/128, 128/128, and 128/256.

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Information technology — Automatic identification and data capture techniques —

Part 21:

Crypto suite SIMON security services for air interface communications

1 Scope

This document defines the crypto suite for SIMON for the ISO/IEC 18000 air interfaces standards for radio frequency identification (RFID) devices. Its purpose is to provide a common crypto suite for security for RFID devices that can be referred by ISO committees for air interface standards and application standards. The crypto suite is defined in alignment with existing air interfaces.

SIMON is a symmetric block cipher that is parameterized in both its block length and key length. In this standard, a variety of block/key length options are supported.

This document defines various methods of use for the cipher.

A Tag and an Interrogator can support one, a subset, or all of the specified options, clearly stating what is supported.

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 18000-63, *Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C*

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

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 and the following 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/>

3.1.1

bit string

ordered sequence of 0s and 1s