
**Information technology —
Identification cards — Biometric
System-on-Card —**

**Part 3:
Logical information interchange
mechanism**

*Technologies de l'information — Cartes d'identification — Système
biométrique sur carte —*

Partie 3: Mécanisme d'échange de l'information logique

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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).

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).

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

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

A list of all parts in the ISO 17839 series can be found on the ISO website.

Introduction

A Biometric System-on-Card (BSoC) is a portable card size device including the following entities: biometric acquisition, image/signal processing, storage, comparison and decision. The use of a BSoC with such specifications is subject to an information flow and security mechanisms, which are detailed in this document.

ISO/IEC 17839-1 describes two types of BSoC. Type S1 is a fully flexible card compliant with ISO/IEC 7810. Type S2 deviates from some of the requirements of size and flexibility, while keeping the rest of the requirements intact, including the use of a contactless ICC interface. The logical interface and security mechanisms are independent on whether the BSoC is of type S1 or type S2, so the specifications stated in this document are applicable to both types of BSoC.

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Information technology — Identification cards — Biometric System-on-Card —

Part 3: Logical information interchange mechanism

1 Scope

This document specifies

- logical data structures for a BSoC,
- enrolment procedures, and
- usage of commands and data structures defined in other ISO standards for BSoC.

This document does not define requirements for

- commands and data structures that apply to devices external to a BSoC, and
- commands and data structures that apply to logical interfaces inside a BSoC.

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 7816-3, *Identification cards — Integrated circuit cards — Part 3: Cards with contacts — Electrical interface and transmission protocols*

ISO/IEC 7816-4, *Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange*

ISO/IEC 7816-11, *Identification cards — Integrated circuit cards — Part 11: Personal verification through biometric methods*

ISO/IEC 14443-4, *Identification cards — Contactless integrated circuit cards — Proximity cards — Part 4: Transmission protocol*

ISO/IEC 18328-3, *Information technology — ICC-managed devices — Part 3: Organization, security and commands for interchange*

ISO/IEC 24787, *Information technology — Identification cards — On-card biometric comparison*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 2382-37 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>