
Identification cards — ICC-managed devices —

Part 1: General framework

*Cartes d'identification — Dispositifs contrôlés par carte à circuit
intégré (ICC) —*

Partie 1: Cadre général

This document is a preview generated by EMS



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Contents

| | Page |
|---|-----------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Terms and definitions | 1 |
| 3 Symbols and abbreviated terms | 1 |
| 4 Framework for ICC-managed devices | 2 |
| 4.1 Device categories of ICC-managed devices..... | 2 |
| 4.2 Targeted subjects in the ISO/IEC 18328 series..... | 2 |
| 4.3 System architecture overview..... | 4 |
| 4.4 Logical architecture..... | 5 |
| Annex A (informative) Device application context | 6 |
| Annex B (informative) Use cases | 8 |
| Annex C (informative) Usage of legacy card-IC | 17 |
| Bibliography | 18 |

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*.

ISO/IEC 18328 consists of the following parts, under the general title *Identification Cards — ICC-managed Devices*:

- *Part 1: General framework*
- *Part 2: Physical characteristics and test methods for cards with devices*
- *Part 3: Organisation, security and commands for interchange*

Introduction

New upcoming technologies are providing flexible and suitable devices for input and output operations on ICCs and open a wide area of applications and use cases. Interoperability in current developments of new projects underlines the need of standardisation.

Integrated Circuit Card (ICC) consists of a card body with an embedded integrated circuit (or several integrated circuits). International Standards such as ISO/IEC 7816 and ISO/IEC 14443 define the physical and logical requirements of the ICC, e.g. location of the contacts, size of the card, electrical signals and communication protocols, security mechanisms, etc.

A lot of new requirements have to be considered when ICC-managed devices are on an ICC. This also incorporates physical aspects, as well as logical view on this type of card. The needs of useful applications and their environments have to be also taken into account for the ICC-managed devices on or in a card body. The nature of the device type leads to different definitions in physical and logical aspects. The intention of this part of ISO/IEC 18328 is to minimize the technology-dependent differences and to increase interchange.

This part of ISO/IEC 18328 offers a basic framework of different aspects which allows interoperability for application of ICC-managed devices on a card or possibly external off the card.

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this part of ISO/IEC 18328 may involve the use of a patent and their foreign counterparts.

- FR99/09818: Smart card architecture incorporating peripherals
- PCT/EP2011/058914: Bank card with display screen
- PCT/EP2011/059021: Bank card with display screen
- EP2001949522A: Contact-free display peripheral device for contact-free portable object
- WO2009077398, US20100263034, EP2225703, JP2010-538574, KR10-1162443: A method for authorizing a communication with a portable electronic device, such as an access to an electronic memory zone corresponding device and system.

ISO and IEC take no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the ISO and IEC that he/she is willing to negotiate licenses under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with ISO and IEC. Information may be obtained from:

Gemalto
Intellectual Property and Licensing Department,
6, Rue de la Verrerie,
92197 Meudon Cedex, France

Gemplus
Avenue Pic de Bertagne,
Parc d'Activités de Gémenos BP 100
FR-13881 Gémenos Cedex

ASK SA
Les Boullides,
15, Traverse des Bruccs, Sophia Antipolis,
06560 Valbonne, France

ISO/IEC 18328-1:2015(E)

Attention is drawn to the possibility that some of the elements of this part of ISO/IEC 18328 may be the subject of patent rights other than those identified above. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO (www.iso.org/patents) and IEC (<http://patents.iec.ch>) maintain on-line databases of patents relevant to their standards. Users are encouraged to consult the databases for the most up to date information concerning patents.

This document is a preview generated by EVS

Identification cards — ICC-managed devices —

Part 1: General framework

1 Scope

This part of ISO/IEC 18328 describes the general architecture of an ICC with ICC-managed devices. This part of ISO/IEC 18328 is one of a series of International Standards which outlines the content and the boundaries covered and standardised by the other parts of ISO/IEC 18328. The general principle of this part of ISO/IEC 18328 is that all activities regarding the ICC-managed devices are controlled by the card-IC. This principle also applies when ICC-managed devices are outside the card. This part of ISO/IEC 18328 is applicable for all kind of cards independent from interface technology for communication.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

button

tactile device used as a single input key

2.2

card-IC

integrated circuit with COS

2.3

ICC-managed devices

device or devices whose activities are controlled only by ICC

2.4

keypad

array of several *buttons* (2.1) organized as one entity

2.5

biometric capture device

sensor whose purpose is to acquire biometric data

Note 1 to entry: See also ISO/IEC 17839.

2.6

electronic display

electronic device to show information

3 Symbols and abbreviated terms

CLF contactless frontend

COS card operating system

NOTE COS is a logical element for implementation of functionalities defined in ISO/IEC 7816-4.