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**Identification cards — ICC-managed  
devices —**

**Part 2:  
Physical characteristics and test  
methods for cards with devices**

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

*Partie 2: Caractéristiques physiques et méthodes d'essai des cartes  
avec les dispositifs*

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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.

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](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

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](http://www.iso.org/patents)) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

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

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and security devices for personal identification*.

This second edition cancels and replaces the first edition (ISO/IEC 18328-2:2015), which has been technically revised.

The main changes are as follows:

- updated [Annex A](#) and changed status to normative: ID-T size card;
- added a new normative [Annex B](#): ID-B size card;
- added a new informative [Annex C](#): Applicability of ISO/IEC 10373-1 test methods for ID-T and ID-B size cards;
- added a new informative [Annex D](#): Further test methods.

A list of all parts in the ISO 18328 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](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

# Identification cards — ICC-managed devices —

## Part 2:

# Physical characteristics and test methods for cards with devices

## 1 Scope

This document defines physical characteristics and test methods for cards with devices, including but not limited to, power supplying devices, displays, sensors, microphones, loudspeakers, buttons or keypads. This document also covers aspects of coexistence of technologies of devices on the card and other machine-readable card technologies.

Additional requirements related to biometric capture devices are defined in ISO/IEC 17839-2. Such requirements can be applied in addition to the ones defined in this document. ISO/IEC 17839-2 defines a type S2 card; the physical dimensions of the type S2 card are specified in [Annex A](#).

## 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 7810, *Identification cards — Physical characteristics*

ISO/IEC 7816-1, *Identification cards — Integrated circuit cards — Part 1: Cards with contacts — Physical characteristics*

<https://standards.iteh.ai/catalog/standards/iso/c38db847-fc43-4952-a29c-8fd7fea9533a/iso-iec-18328-2-2021>

ISO/IEC 10373-1, *Cards and security devices for personal identification — Test methods — Part 1: General characteristics*

ISO/IEC 14443-1, *Cards and security devices for personal identification — Contactless proximity objects — Part 1: Physical characteristics*

ISO/IEC 18328-1, *Identification cards — ICC-managed devices — Part 1: General framework*

ISO/IEC 18745-1:2018, *Test methods for machine readable travel documents (MRTD) and associated devices — Part 1: Physical test methods for passport books (durability)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 7810, ISO/IEC 18328-1 and the following apply.

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### active display area

area of the display that has active dots or segments