
**Identification cards — Contactless
integrated circuit cards — Vicinity
cards —**

**Part 3:
Anticollision and transmission
protocol**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

**AMENDMENT 2: Clarification of use of
Data Elements**

ISO/IEC 15693-3:2009/Amd 2:2015

<https://standards.iteh.org/document/ISO/IEC-15693-3-2009-amd-2-2015>
*Cartes d'identification — Cartes à circuit(s) intégré(s) sans contact —
Cartes de voisinage*

Partie 3: Anticollision et protocole de transmission

AMENDEMENT 2: Clarification de l'usage des éléments de données

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC 15693-3:2009/Amd 2:2015](https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015)

<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>



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

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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.

Amendment 2 to ISO/IEC 15693-3:2009 was prepared by Technical Committee ISO/IEC/TC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO/IEC 15693-3:2009/Amd 2:2015](https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015)

<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC 15693-3:2009/Amd 2:2015](https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015)

<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>

Identification cards — Contactless integrated circuit cards — Vicinity cards —

Part 3: Anticollision and transmission protocol

AMENDMENT 2: Clarification of use of Data Elements

Page 25, 10.4.2

Replace:

“If the Option_flag is not set, the VICC shall return its response when it has completed the write operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.”

with the following text:

(standards.iteh.ai)

“Option_flag definition see 9.5”

[ISO/IEC 15693-3:2009/Amd 2:2015](https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015)

<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>

Page 26, 10.4.3

Replace:

“If the Option_flag is not set, the VICC shall return its response when it has completed the lock operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.”

with the following text:

“Option_flag definition see 9.5”

Page 28, 10.4.5

Replace:

“If the Option_flag is not set, the VICC shall return its response when it has completed the write operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.“

with the following text:

“Option_flag definition see 9.5”

Page 30, 10.4.8

“If the Option_flag is not set, the VICC shall return its response when it has completed the write operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.“

by

“Option_flag definition see 9.5”

Page 31, 10.4.9

iTeh STANDARD PREVIEW
(standards.iteh.ai)

“If the Option_flag is not set, the VICC shall return its response when it has completed the lock operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.“

by

“Option_flag definition see 9.5”

Page 32, 10.4.10

“If the Option_flag is not set, the VICC shall return its response when it has completed the write operation starting after:

t_{1nom} [4352/ f_c (320,9 μ s), see 9.1.1] + a multiple of 4096/ f_c (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.“

by

“Option_flag definition see 9.5”

Page 32, 10.4.11

Replace:

“If the Option_flag is not set, the VICC shall return its response when it has completed the lock operation starting after:

t_{1nom} $[4352/f_c$ (320,9 μ s), see 9.1.1] + a multiple of $4096/f_c$ (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If it is set, the VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.”

with the following text:

“Option_flag definition see 9.5”

Page 20, after 9.4.1

Add 9.5 Clarification of use of Option Flag in programming command

If the Option_flag is not set

The VICC shall return its response when it has completed the operation starting after:

t_{1nom} $[4352/f_c$ (320,9 μ s), see 9.1.1] + a multiple of $4096/f_c$ (302 μ s) with a total tolerance of $\pm 32/f_c$ and latest after 20 ms upon detection of the rising edge of the EOF of the VCD request.

If the Option_flag is set

The VICC shall wait for the reception of an EOF from the VCD and upon such reception shall return its response.

The VCD shall transmit an EOF at least 10 ms and no later than 20 ms after transmitting the command.

NOTE If the VCD transmits an EOF within 10 ms, the VICC may not be able to execute the command or it may reset.

Upon reception of an EOF the VICC shall wait for a duration of t_1 before transmitting its response (see 9.1.1)

ITeH STANDARD PREVIEW
(standards.iteh.ai)

ISO/IEC 15693-3:2009/Amd.2:2015
<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO/IEC 15693-3:2009/Amd 2:2015
<https://standards.iteh.ai/catalog/standards/sist/bf531812-fa01-4bc5-a164-2017e297f675/iso-iec-15693-3-2009-amd-2-2015>