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Contact – TCK Check Character Requirement in ATR

This Specification Bulletin clarifies the terminal requirements when handling the TCK byte in the ATR and as a consequence clarifies when an ICC may return a TCK byte

Applicability

This Specification Bulletin applies to:

- *EMV Integrated Circuit Card Specifications for Payment Systems, Book 1 - Application Independent ICC to Terminal Interface Requirements, Version 4.3, November 2011.*

Related Documents

- *INTERNATIONAL STANDARD, ISO/IEC 7816-3, Identification cards — Integrated circuit cards — Part 3: Cards with contacts — Electrical interface and transmission protocols, Third edition, 2006-11-01*

Description

The handling of the TCK byte of an ATR presenting T=0 only protocol and other scenarios by the terminal is clarified in line with ISO/IEC standards and as a consequence the requirements for when an ICC may return a TCK is clarified.

For terminals:

Requirements	Date for application
The changes (new requirements) in this bulletin	Approved terminals due for renewal: from January 2026
EMV Book 1 version 4.3	New terminal approvals: until end December 2022
The changes (new requirements) in this bulletin	New terminal approvals: from January 2023

For cards:

Requirements	Date for application
The changes (new requirements) in this bulletin	Approved cards due for renewal: from January 2024
EMV Book 1 version 4.3	New card approvals: until end December 2022
The changes (new requirements) in this bulletin	New card approvals: from January 2023

Specification Changes

8.3.4 TCK - Check Character

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An ATR shall contain TCK if a protocol type other than T=0 is indicated and shall not contain TCK if T=0 only is indicated.

Basic responses: The ATR shall not contain TCK if T=0 only is ~~to be used~~indicated. In all other cases TCK shall be returned in the ATR.

Terminal behaviour:

The terminal shall be able to evaluate TCK when appropriately returned. It shall accept an ICC returning an ATR:

- containing a correct TCK if a protocol type other than T=0 is indicated, and
- not containing TCK if T=0 only is indicated.

~~In all other cases, t~~The terminal shall reject an ICC returning an ATR:

- not containing TCK if a protocol type other than T=0 is indicated, or
- containing TCK if T=0 only is indicated, or
- containing an incorrect TCK.

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