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Update of Book A and B Due to Introduction of Book C-8

This Specification Bulletin updates the relevant sections of EMV® Contactless Books A and B to reflect information about the newly introduced specification, EMV Contactless Book C-8

Applicability

This Specification Bulletin applies to:

- *EMV Contactless Specifications for Payment Systems, Book A, Architecture and General Requirements, version 2.10, March 2021*
- *EMV Contactless Specifications for Payment Systems, Book B, Entry Point Specification, version 2.10, March 2021*

Related Documents

- *SB No.268: Introduction of New Data Object: Kernel Identifier–Terminal (tag '96'), April 2022*

Effective Date

- April 2023

Description

With the publication of *EMV Contactless Specifications for Payment Systems, Book C-8*, several relevant sections in Books A and B also need to be updated. The following section provides a detailed description of the updates.

Specification Changes

Updates to Book A

✓ In Section 2.1 Volumes of the Contactless Specifications, insert the following after Book C-7: Kernel 7 Specification:

Book C-8: Kernel 8 Specification

✓ In Section 5.6.4, replace Table 5-1 with the following:

Table 5-1: Example Combination Table per Transaction Type

	AID_1	AID_2	…	AID_{n-1}	AID_n
Kernel 2		√			
Kernel 3				√	√
Kernel 4		√			
Kernel 5	√				√
Kernel 6				√	
Kernel 7				√	√
Kernel 8		√		√	√

✓ In Annex A Data Elements for the Data Record and Discretionary Data, replace Table A.1 with the following:

Table A.1: Kernel Data Record and Discretionary Data Reference

Kernel 2	Chapter 4.6, Lists of Data Objects in OUT
Kernel 3	Annex B, Online Messages and Clearing Records
Kernel 4	Annex A, Kernel 4 Data Elements
Kernel 5	Annex C, Kernel 5 Transaction Record
Kernel 6	Annex B.9
Kernel 7	Annex C, Data Elements
Kernel 8	Annex A, Data Dictionary

Updates to Book B

✓ In Section 2.1 Volumes of the Contactless Specifications, insert the following after Book C-7: Kernel 7 Specification:

Book C-8: Kernel 8 Specification

✓ In Section 3.3.1.2, replace Table 3-4 and Table 3-5 with the following:

Table 3-4: Format of the Kernel Identifier (tag '9F2A') – Byte 1

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
x	x							Type of kernel
0	0							An international kernel, with a Kernel Identifier assigned by EMVCo and coded in the Short Kernel ID
0	1							RFU
1	0							A domestic kernel, with Kernel Identifier in EMVCo format, coded by the concatenation of the Short Kernel ID and the Extended Kernel ID (see Table 3-5)
1	1							A domestic kernel, with the Kernel Identifier in proprietary format, coded by the concatenation of the Short Kernel ID and the Extended Kernel ID (see Table 3-5)
		x	x	x	x	x	x	Short Kernel ID
		0	0	0	0	0	0	The kernel is associated with the corresponding ADF Name
		0	0	0	0	0	1	1st kernel
		0	0	0	0	1	0	Kernel 2
		0	0	0	0	1	1	Kernel 3
		0	0	0	1	0	0	Kernel 4
		0	0	0	1	0	1	Kernel 5
		0	0	0	1	1	0	Kernel 6
		0	0	0	1	1	1	Kernel 7
		0	0	1	0	0	0	Kernel 8
		0	0	1	0	0	1	9th kernel
		–	–	–	–	–	–	
		1	1	1	1	1	1	63rd kernel

Table 3-5: Format of the Kernel Identifier (tag '9F2A') – Byte 2 to Byte 8[11]

[11] Kernel Identifier is of variable size and may be one, three, or more bytes in length, but not two bytes.

<table>
<tr><th>Byte</th><th>Meaning</th></tr>
<tr><td>Byte 2

Byte 3</td><td>Extended Kernel ID:<table><tr><td>For international legacy kernel:</td><td>RFU</td></tr><tr><td>For domestic legacy kernel using the EMVCo format:</td><td>Currency Code as defined by [ISO 4217]</td></tr><tr><td>For domestic legacy kernel using a proprietary format:</td><td>Proprietary</td></tr></table></td></tr>
<tr><td>Byte 4</td><td>Each bit RFU</td></tr>
<tr><td>Byte 5</td><td>Each bit RFU</td></tr>
<tr><td>Byte 6</td><td>Each bit RFU</td></tr>
<tr><td>Byte 7</td><td>Each bit RFU</td></tr>
<tr><td>Byte 8</td><td>Each bit RFU</td></tr>
</table>

✓ In Section 3.4 Kernel Activation – Start D, replace 3.4.1.4, with the following:

3.4.1.4 Entry Point shall set the Kernel Identifier–Terminal (tag '96') as follows:

- Set Byte 1 to 3 to the value of the Kernel ID from the selected combination. If the Extended Kernel ID is not present in Kernel Identifier (tag '9F2A'), set Byte 2 and 3 = '00 00'.
- Set Byte 4 bit 8 = 1b when the reader supports Kernel 8.
- Set Byte 4 bit 7 = 1b when the AID of the selected card application and Kernel 8 are a Combination {AID – Kernel ID} on the reader for the transaction type being conducted.
- Set Byte 5 to 8 = '00 00 00 00'.

Table 3-7: Format of the Kernel Identifier-Terminal (tag '96')

Byte	Meaning
Byte 1-3	Bit assignments are identical to Kernel Identifier Byte 1-3 in Table 3-4
Byte 4	bit 8: 1b = Kernel 8 supported by reader bit 7: 1b = Kernel 8 supported for the transaction bit 6-1: Each bit RFU
Byte 5	Each bit RFU
Byte 6	Each bit RFU
Byte 7	Each bit RFU
Byte 8	Each bit RFU

✓ In Annex A, Table A-1, change the entry as below:

Name	Description	Source	Format	Template	Tag	Length
Kernel Identifier – Terminal	Identifies the kernel used for the transaction	Entry Point	b	-	'96'	~~1 or 3~~ 8

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