

### **Contact – Terminal clock signal frequency (CLK)**

***This Specification Bulletin changes the requirement for the Terminal clock signal frequency (CLK)***

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#### **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**

- *General Bulletin No. 48, First Edition, March 2019 - EMV Contact Specifications - Increased Data Communication Speed*
  - *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*
  - *EMV® Specification Bulletin No. 219, First Edition August 2019, Terminal clock signal frequency (CLK)*
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#### **Description**

In order to reduce transaction time, EMVCo will enforce the changes outlined below, to ensure that maximum data communication speed is guaranteed in all transactions.

The terminals subject to new approval shall use a clock frequency approaching the maximum of 5 MHz starting January 2022.

The second edition of this bulletin lowers the minimum clock frequency requirement for approved terminals due for renewal.

## ***Specification Changes***

In section 5.5.4 Clock (CLK), remove the last paragraph at the bottom of the page

~~Frequency shall be in the range 1 MHz to 5 MHz and shall not change by more than  $\pm 1\%$  throughout answer to reset and the following stages of a card session (see section 6) unless changed following the answer to reset by means of a proprietary negotiation technique.~~

and replace with the following:

The terminals subject to new approval shall use a clock signal frequency signal approaching the maximum of 5 MHz starting January 2022.

The clock signal frequency (CLK) shall be as below:

<u>Minimum</u>	<u>Maximum</u>	<u>Unit</u>	<u>Date for application</u>
<u>2.8</u>	<u>5</u>	<u>MHz</u>	<u>Approved terminals due for renewal: from January 2022 to end December 2025</u>
<u>4.7</u>	<u>5</u>	<u>MHz</u>	<u>Approved terminals due for renewal: from January 2026</u>
<u>4.7</u>	<u>5</u>	<u>MHz</u>	<u>New terminal approval: from January 2022</u>

Frequency shall not change by more than  $\pm 1\%$  throughout answer to reset and the following stages of a card session (see section 6).

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