Date: August 26, 2024

Justin Powelson

Mastercard International Incorporated
2000 Purchase Street
Purchase 10577
United States

Re: **EMV 3-D Secure Directory Server Product**

Approval / Reference Number: **3DS_LOA_DIS_MAST_020301_00931**

Approval Date: **August 26, 2024**

Approval Expiration Date: **August 21, 2026**

Product Provider Name:	Mastercard International Incorporated
Registration Number:	MAST.V 17 0005
Directory Server Name:	Mastercard Directory Server
Directory Server Version:	2.3.1
Operating System or Virtual Machine Name and Version:	Oracle Linux Server 7.9
Implementation Conformance Statement:	3DS_ICS_DIS_MAST_020301_00931
EMV 3-D Secure Specification:	Version 2.3.1.1
	Version 2.2.0
EMV 3-D Secure Specification Bulletin(s):	SB214 v3, SB255 v4
3-D Secure Test Plan Names and Versions:	EMV 3-D Secure 2.3.1 Test Plan version 2.3.1.12
	EMV 3-D Secure 2.2.0 Test Plan version 2.2.0.12
3-D Secure Test Plan Bulletin(s):	
EMV 3-D Secure Specification Bulletin(s) tested:	SB214 v3, SB255 v4

Dear Justin Powelson,

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for EMV 3-D Secure approval for the Directory Server identified above. In connection with your request for approval, we have reviewed your report, identified by file number FIME_CompTestReport_ID4403 which was generated by Fime India Private Limited.

After assessing such file, EMVCo has determined that the above referenced Directory Server sufficiently conforms to EMV 3-D Secure – Protocol and Core Functions Specification.

EMVCo hereby grants your Directory Server EMV 3-D Secure Approval, based on the requirements stated in the EMV 2.2.0, and/or 2.3.1 Specifications. Please note that EMVCo may publicly identify your Directory Server as an approved Directory Server, including in EMVCo's published list of approved 3DS Products.

EMVCo's grant of Approval status to your Directory Server is subject to the Supported Options as identified in Attachment B hereto and the Tested 3DS Extensions identified in Attachment C hereto and specifically incorporates (i) the terms and conditions of your 3-D Secure Approval Contract with EMVCo, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment A. Because EMVCo's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved Directory Server published on the EMVCo website (www.emvco.com)

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

EMVCo, LLC

Authorized by **Akif Qazi**

EMVCo 3-D Secure Testing Group Chair

EMVCo LLC, 900 Metro Center Blvd. Foster City, CA 94404 USA

V240613 / 3DS_LOA_DIS_MAST_020301_00931   Page 2 of 5   26 August 2024

Attachment A
Specific Terms and Conditions to Letter of Approval

During testing, the following issues were identified. Restrictions identified must be disclosed to customers (issuers or other product providers to whom the Product Provider intends to sell the product).

<u>Restrictions, if any:</u>

<u>Comments, if any:</u>

Mastercard International Incorporated has requested to issue LoA as soon as report received and reviewed and before payment (as per bulletin 5)

EMVCo LLC, 900 Metro Center Blvd. Foster City, CA 94404 USA

V240613 / 3DS_LOA_DIS_MAST_020301_00931   Page 3 of 5   26 August 2024

Attachment B
Supported Options

This product has been tested for the following DS options:

DS supports Card Range Data File download	☐
DS supports the Partial Cache update	☐
DS supports Card Security Code	☐
DS able to creates the ARes message on the ACS's behalf	☐
Split-SDK Server Signature algorithm supported	☒ PS256 ☐ ES256

EMVCo LLC, 900 Metro Center Blvd. Foster City, CA 94404 USA

V240613 / 3DS_LOA_DIS_MAST_020301_00931   Page 4 of 5   26 August 2024

Attachment C
Tested 3DS Extensions

This product has been tested for the following 3DS extensions:

Bridging Message Extension	Version 2.0
Recurring data	☐
Challenge data	N/A
Additional data	☐
File URL data	☐

EMVCo LLC, 900 Metro Center Blvd. Foster City, CA 94404 USA

V240613 / 3DS_LOA_DIS_MAST_020301_00931   Page 5 of 5   26 August 2024