June 10, 2024

Mr. Antonio Albarrán

Diebold Nixdorf S.L.U.

Avda de manoteras nº6, 6ª planta

Madrid 28050

Spain

Re:	***EMVCo Letter of Approval - Contact Terminal Level 2***

EMV Application Kernel:	**DYNASTY JAVA KERNEL MULTIVENDOR Version 3.4.0**
Approval Number(s):	**2-05383-1-1C-ULVS-0624-4.4b**
	2-05383-1-2C-ULVS-0624-4.4b
	2-05383-1-3C-ULVS-0624-4.4b
	2-05383-1-4C-ULVS-0624-4.4b
	2-05383-1-1P-ULVS-0624-4.4b
	2-05383-1-1OS-ULVS-0624-4.4b

The EMV Application Kernel has been tested on the following terminal

Terminal:	**HP EliteBook 840**
PinPad:	**1P = Simulated PIN Pad on HP EliteBook 840, JamServicePinPadSimulator 13.0.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C**
Operating System:	**1OS = Java(TM) SE Runtime Environment (build 1.8.0_391-b13) Version 1.8.0_391**

Renewal Date:	**23-May-2028**

Report ID   Session 1: **2 DYNA-RP15225299JD01A-ULVS Version 2.0 - UL VS Ltd**

Kernel Checksum:

651849433

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	BRS1	14	605788037
2C	BRD	14	596497955
3C	ConfCECA	14	1365243850
4C	CYB Teller	11	3641143217

PIN Pads Checksums:

PinPad	Checksum
1P	NA

Dear Mr. Albarrán:

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 2 terminal type approval for the EMV Application Kernel identified above (hereafter refered to as the "Application"). In connection with your request, we have reviewed all test file number(s) listed above.

After assessing such file(s), EMVCo has found reasonable evidence that the submitted samples of the above referenced Application sufficiently conform to EMV Integrated Circuit Card Specifications for Payment Systems, Version 4.4 of October 2022.

EMVCo hereby grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.4 Specifications. Please note that EMVCo may publish this letter and publicly identify your Application as an approved Application, including in EMVCo's published list of approved Applications.

EMVCo's grant to your Application is subject to and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment 1. 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 Applications published on the EMVCo website (www.emvco.com).

Please note that EMVCo makes certain logos available for use in connection with an Application that has received EMVCo approval. To obtain permission to use the "EMV Approved" certification mark, please contact EMVCo to request a license agreement.

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

Authorised by Frédéric Fortin
Terminal Testing Group Chair
EMVCo, LLC

Terminal Capabilities	1C	2C	3C	4C						
Card Data Input Capability										
Terminal Type	14	14	14	11						
Manual Key Entry	No	No	No	No						
Magnetic Stripe	Yes	Yes	Yes	Yes						
IC with Contacts	Yes	Yes	Yes	Yes						
CVM Capability										
Plaintext PIN	No	No	No	No						
Online Enciphered PIN	Yes	Yes	Yes	Yes						
Signature (Paper)	No	No	No	No						
Offline Enciphered PIN (RSA)	No	No	No	No						
No CVM	No	No	No	No						
Offline Enciphered PIN (ECC)	No	No	No	No						
Biometric	No	No	No	No						
Offline Finger	No	No	No	No						
Online Finger	No	No	No	No						
Offline Facial	No	No	No	No						
Online Facial	No	No	No	No						
Offline Palm	No	No	No	No						
Online Palm	No	No	No	No						
Offline Iris	No	No	No	No						
Online Iris	No	No	No	No						
Offline Voice	No	No	No	No						
Online Voice	No	No	No	No						
Security Capability										
SDA & DDA	Yes	Yes	No	No						
Card Capture	Yes	Yes	Yes	No						
CDA	Mode 1	Mode 2	No	No						
XDA	No	No	No	No						
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	Yes	No						
Tran Type - Goods	Yes	Yes	Yes	Yes						
Tran Type - Services	Yes	Yes	Yes	Yes						
Tran Type - Cash Back	Yes	Yes	Yes	No						
Tran Type - Inquiry	Yes	Yes	Yes	Yes						
Tran Type - Transfer	Yes	Yes	Yes	No						
Tran Type - Payment	Yes	Yes	Yes	No						
Tran Type - Admin	Yes	Yes	Yes	No						
Tran Type - Cash Deposit	Yes	Yes	Yes	No						
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes						
Numeric Keys	Yes	Yes	Yes	Yes						
Alpha and Special Character Keys	No	No	No	No						
Command Keys	No	No	No	Yes						
Function Keys	Yes	Yes	Yes	Yes						

(continued)	1C	2C	3C	4C						
Terminal Data Output Capability										
Print, Attendant	No	No	No	Yes						
Print, Cardholder	Yes	Yes	Yes	No						
Display, Attendant	No	No	No	Yes						
Display, Cardholder	Yes	Yes	Yes	Yes						
Code Table 10	No	No	No	No						
Code Table 9	No	No	No	No						
Code Table 8	No	No	No	No						
Code Table 7	No	No	No	No						
Code Table 6	No	No	No	No						
Code Table 5	No	No	No	No						
Code Table 4	No	No	No	No						
Code Table 3	No	No	No	No						
Code Table 2	No	No	No	No						
Code Table 1	No	No	No	No						
Application Selection										
PSE	Yes	Yes	Yes	Yes						
Cardholder Confirmation	Yes	Yes	Yes	Yes						
Preferred display order	Yes	Yes	Yes	Yes						
Partial AID Selection	Yes	Yes	Yes	Yes						
Multi language	Yes	Yes	Yes	Yes						
EMV Language Selection method	Yes	Yes	Yes	Yes						
Common Character Set	Yes	Yes	Yes	Yes						
Data Authentication										
MAX CA Public key	248	248	248	248						
Exponents	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1						
Revocation of Issuer PK Certificate	Yes	Yes	No	No						
Certificate Revocation List Format	RID, CA Public Key Index, Certificate Serial Numbe	RID, CA Public Key Index, Certificate Serial Numbe	RID, CA Public Key Index, Certificate Serial Numbe	RID, CA Public Key Index, Certificate Serial Numbe						
Default DDOL	Yes	Yes	Yes	Yes						
Cardholder Verification Method										
Bypass PIN Entry	No	No	No	No						
Subsequent Bypass PIN Entry	No	No	No	No						
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes						
Fail CVM	Yes	Yes	Yes	Yes						
Amount known before CVM proces.	Yes	Yes	Yes	Yes						
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes						
Random Transaction Selection	No	No	No	Yes						
Velocity Checking	Yes	Yes	Yes	Yes						
Transaction Log	No	No	No	No						
Exception File	No	No	No	No						
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes						

(continued)	1C	2C	3C	4C						
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes						
TAC can be deleted or disabled	Yes	Yes	Yes	Yes						
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A						
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal	Normal	Normal	Normal						
Completion Processing										
Forced Online	No	No	No	No						
Forced Acceptance	No	No	No	No						
Voice Referrals Initiated by Issuer	No	No	No	Yes						
Default TDOL	Yes	Yes	Yes	Yes						
Default TDOL not configured	No	No	No	No						
Exception Handling										
POS Entry Mode	02	02	02	02						
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes						
ICC/Magstripe Reader Combined	Yes	Yes	Yes	Yes						
Supports account type selection	Yes	Yes	Yes	Yes						
Supports 'on fly' script processing	No	No	No	No						
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes						
If limit > 128, value supported?	0	0	0	0						
Internal Date Management	Yes	Yes	Yes	Yes						
Does the terminal support Receipt?	Yes	Yes	Yes	Yes						

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None