

January 22, 2024



Cory Bradford
Equinox Payments
703 Evans Ave
Suite 400
Toronto, Ontario M9C 5E9
CANADA

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

EMV Application Kernel: EP_L2_1.0.11_p Version 1.0.11

Approval Number(s):
2-05326-1-1C-ULVS-0124-4.4a
2-05326-1-2C-ULVS-0124-4.4a
2-05326-1-3C-ULVS-0124-4.4a
2-05326-1-4C-ULVS-0124-4.4a
2-05326-1-5C-ULVS-0124-4.4a
2-05326-1-6C-ULVS-0124-4.4a
2-05326-1-7C-ULVS-0124-4.4a
2-05326-1-8C-ULVS-0124-4.4a
2-05326-1-10S-ULVS-0124-4.4a

The EMV Application Kernel has been tested on the following terminal

Terminal: Luxe 8500i
PinPad: n/a
Operating System: 10S = Linux Version 4.3

Renewal Date: 02-Jan-2028

Report ID Session 1: 2 EQUI-RP15077709JD01A-ULVS Version 1.0 - UL VS Ltd

Kernel Checksum:

2ABE692517E888884514DD131AD2164B

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	1C	22	A9A0927E
2C	2C	22	0608EB CD
3C	3C	22	2E88734B
4C	4C	22	C7351870
5C	5C	25	6A11FAE1
6C	6C	25	B0CB37BD
7C	7C	25	4D1A2067
8C	8C	25	01B8B78F

Dear Cory Bradford:

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 referred 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.

EMVCo, LLC, a Delaware limited liability company

By:

Name: Frédéric Fortin

Title: EMVCo Terminal Testing Group Chair

Note:

The Random Number Generator is part of the EMV specifications. This Contact Level 2 Kernel utilizes a specific Hardware component in the tested terminal to generate random numbers. To be EMV compliant, this Contact Level 2 Kernel shall be used in conjunction with terminals having this specific hardware component.

Terminal Capabilities	1C	2C	3C	4C	5C	6C	7C	8C		
Card Data Input Capability										
Terminal Type	22	22	22	22	25	25	25	25		
Manual Key Entry	Yes	Yes	Yes	Yes	No	No	No	No		
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
CVM Capability										
Plaintext PIN	Yes	Yes	No	No	Yes	Yes	No	Yes		
Online Enciphered PIN	Yes	No	No	No	Yes	No	No	Yes		
Signature (Paper)	Yes	Yes	No	Yes	No	No	No	No		
Offline Enciphered PIN (RSA)	Yes	Yes	No	No	Yes	Yes	No	Yes		
No CVM	Yes	No	Yes	Yes	Yes	No	Yes	Yes		
Biometric	No	No	No	No	No	No	No	No		
Offline Finger	No	No	No	No	No	No	No	No		
Online Finger	No	No	No	No	No	No	No	No		
Offline Facial	No	No	No	No	No	No	No	No		
Online Facial	No	No	No	No	No	No	No	No		
Offline Palm	No	No	No	No	No	No	No	No		
Online Palm	No	No	No	No	No	No	No	No		
Offline Iris	No	No	No	No	No	No	No	No		
Online Iris	No	No	No	No	No	No	No	No		
Offline Voice	No	No	No	No	No	No	No	No		
Online Voice	No	No	No	No	No	No	No	No		
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Card Capture	No	No	No	No	No	No	No	No		
CDA	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1		
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	No	Yes	No	No	No	No		
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Tran Type - Cash Back	Yes	Yes	No	Yes	No	No	No	No		
Tran Type - Inquiry	No	No	No	No	No	No	No	No		
Tran Type - Transfer	No	No	No	No	No	No	No	No		
Tran Type - Payment	No	No	No	No	No	No	No	No		
Tran Type - Admin	No	No	No	No	No	No	No	No		
Tran Type - Cash Deposit	No	No	No	No	No	No	No	No		
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

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

(continued)	1C	2C	3C	4C	5C	6C	7C	8C		
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
TAC can be deleted or disabled	No	No	No	No	No	No	No	No		
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
How does online only terminal process TAC/IAC-Default when unable to go online?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Completion Processing										
Forced Online	Yes	Yes	Yes	Yes	No	No	No	No		
Forced Acceptance	Yes	Yes	Yes	Yes	No	No	No	No		
Advices	No	No	No	No	No	No	No	No		
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	Yes	No	No	No	No		
Batch Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Exception Handling										
POS Entry Mode	8x	8x	8x	8x	8x	8x	8x	8x		
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
ICC/Magstripe Reader Combined	No	No	No	No	No	No	No	No		
If Combined, is Magstripe read first?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Supports account type selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Supports 'on fly' script processing	No	No	No	No	No	No	No	No		
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
If limit > 128, value supported?	0	0	0	0	0	0	0	0		
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None