

November 14, 2018

Andrew Cullen
Payment Express Limited
31 Wilkinson Rd
Ellerslie
Auckland 1060
NEW ZEALAND

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

EMV Application Kernel: LibScrEmvLib.a Version 2.0.2

Approval Number(s):
2-04334-1-1C-TUVJ-1118-4.3g
2-04334-1-2C-TUVJ-1118-4.3g
2-04334-1-3C-TUVJ-1118-4.3g
2-04334-1-4C-TUVJ-1118-4.3g
2-04334-1-5C-TUVJ-1118-4.3g
2-04334-1-6C-TUVJ-1118-4.3g
2-04334-1-7C-TUVJ-1118-4.3g
2-04334-1-8C-TUVJ-1118-4.3g
2-04334-1-9C-TUVJ-1118-4.3g
2-04334-1-1P-TUVJ-1118-4.3g
2-04334-1-1OS-TUVJ-1118-4.3g

The EMV Application Kernel has been tested on the following terminal

Terminal: PX SCR200F
PinPad: 1P = SKP200F, SKP200F 1.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C
Operating System: 1OS = PXRTOS Version 1.0

Renewal Date: 02-Nov-2022

Report ID Session 1: TYO SMT 73573017-EMV2 Version 1.0 - Tokyo Testing Center

Kernel Checksum:

0DE616E0A9EDFDB53E0FA32FCE2AE27F54C2FCE1

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	SCR_Config1	22	B870AD968F1EF50F26ABDFADD0EE0D19FCBB5D2B
2C	SCR_Config2	25	7260DA87B83577BDD7AF011C56FC87DA334DC724
3C	SCR_Config3	22	0C49796A48BE16CED06940AFD9F4BF1B677110C2
4C	SCR_Config4	25	70B78BA42B389D9AF590BCC97540976A25A670F9
5C	SCR_Config5	22	8FD2CAE582F13D57BFE40A110525F424315E0915
6C	SCR_Config6	22	069DF78887D7CB58AFAFCA85904296132324B247
7C	SCR_Config7	22	FCF59265397C9A2AC30FFD2BF6F42E90127E0269
8C	SCR_Config8	25	7F428D3769C7153D66CC6ACB7E9CE7D354110686
9C	SCR_Config9	22	B87727767D18D46297F044C63D1611DB47E397D8

PIN Pads Checksums:

PinPad	Checksum
1P	DFB2D7FA48B712F51AD64A9E157C940943B11B1A

Dear Andrew Cullen:

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 4.3 of November 2011.

EMVCo hereby grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.3 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 Type Approval Chair

Note:

The Random Number Generator and the Cryptographic Functions are part of the EMV specifications. This Contact Level 2 Kernel utilizes specific Hardware device in the tested terminal to generate random numbers and/or Cryptographic Functions. To be EMV compliant, this Contact Level 2 Kernel shall be used in conjunction with Terminal Type having this specific Hardware.

Terminal Capabilities	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Card Data Input Capability										
Terminal Type	22	25	22	25	22	22	22	25	22	
Manual Key Entry	Yes	No	No	No	No	Yes	Yes	Yes	Yes	
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CVM Capability										
Plaintext PIN	Yes	No	No	Yes	Yes	Yes	No	Yes	No	
Online Enciphered PIN	Yes	No	No	Yes	Yes	No	No	No	Yes	
Signature (Paper)	Yes	No	No	No	No	Yes	Yes	No	No	
Offline Enciphered PIN	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	
No CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Card Capture	No	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	Mode 1	
Transaction Type Capability										
Tran Type - Cash	Yes	No	No	No	Yes	Yes	Yes	No	Yes	
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Cash Back	Yes	No	No	No	Yes	Yes	Yes	No	Yes	
Tran Type - Inquiry	No	No	No	No	No	No	No	No	No	
Tran Type - Transfer	No	No	No	No	No	No	No	No	No	
Tran Type - Payment	No	No	No	No	No	No	No	No	No	
Tran Type - Admin	No	No	No	No	No	No	No	No	No	
Tran Type - Cash Deposit	No	No	No	No	No	No	No	No	No	
Terminal Data Input Capability										
Keypad	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Numeric Keys	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Alpha and Special Character Keys	No	No	No	No	No	No	No	No	No	
Command Keys	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Function Keys	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Terminal Data Output Capability										
Print, Attendant	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	
Print, Cardholder	No	Yes	No	Yes	No	No	No	Yes	No	
Display, Attendant	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	
Display, Cardholder	No	No	No	Yes	No	No	No	Yes	Yes	
Code Table 10	No	No	No	No	No	No	No	No	No	
Code Table 9	No	No	No	No	No	No	No	No	No	
Code Table 8	No	No	No	No	No	No	No	No	No	
Code Table 7	No	No	No	No	No	No	No	No	No	
Code Table 6	No	No	No	No	No	No	No	No	No	
Code Table 5	No	No	No	No	No	No	No	No	No	
Code Table 4	No	No	No	No	No	No	No	No	No	
Code Table 3	No	No	No	No	No	No	No	No	No	
Code Table 2	No	No	No	No	No	No	No	No	No	
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cardholder Confirmation	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Preferred display order	No	No	No	No	No	No	No	No	No	
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Multi language	No	No	No	No	No	No	No	No	No	
EMV Language Selection method	No	No	No	No	No	No	No	No	No	
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Data Authentication										
MAX CA Public key	248	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}	3 and 2 ^{*16+1}	
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Certificate Revocation List Format	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]	RID[5]+CAP K_Index[1]+ CERT_Seria INo[3]
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Manual act. when CA PK loading fails	No	No	No	No	No	No	No	No	No	
CA PK verified with check sum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cardholder Verification Method										
Bypass PIN Entry	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	
Subsequent Bypass PIN Entry	No	No	No	No	No	No	No	No	No	
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Random Transaction Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Velocity Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Transaction Log	No	No	No	No	No	No	No	No	No	
Exception File	No	No	No	No	No	No	No	No	No	
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TAC can be deleted or disabled	No	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	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	N/A	

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Completion Processing										
Forced Online	No	No	No	No	No	No	No	No	No	
Forced Acceptance	No	No	No	No	No	No	No	No	No	
Advices	No	No	No	No	No	No	No	No	No	
Voice Referrals Initiated by Issuer	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	
Batch Data Capture	No	No	No	No	No	No	No	No	No	
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Exception Handling										
POS Entry Mode	0x80	0x80	0x80	0x80	0x80	0x80	0x80	0x80	0x80	
Miscellaneous										
Amount and PIN on same keypad	No	No	No	No	No	No	No	No	No	
ICC/Magstripe Reader Combined	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
If Combined, is Magstripe read first?	No	No	No	No	No	No	No	No	No	
Supports account type selection	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Supports 'on fly' script processing	No	No	No	No	No	No	No	No	No	
Issuer Script device limit > 128 bytes	No	No	No	No	No	No	No	No	No	
If limit > 128, value supported?										
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None