

Ralph Qin
 Verifone Systems (China) Inc.
 Room 301, ZhuoMing Plaza
 No. 1069, South Huihe Street
 Chaoyang District
 Beijing 100025
 CHINA

Re: EMVCo Letter of Approval - Contact Terminal Level 2

EMV Application Kernel: VFC-EMV Version 0.1.0.1
Approval Number(s): 2-05715-1-1C-BCTC-1225-4.4c
 2-05715-1-2C-BCTC-1225-4.4c
 2-05715-1-3C-BCTC-1225-4.4c
 2-05715-1-4C-BCTC-1225-4.4c
 2-05715-1-1P-BCTC-1225-4.4c
 2-05715-1-1OS-BCTC-1225-4.4c

The EMV Application Kernel has been tested on the following terminal

Terminal: X990 PINPad

PinPad: 1P = X990 PINPad, VFC-EMV-PP 0.1.0.1 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C

Operating System: 1OS = Veriod 32bit Version VanOS-10

Renewal Date: 26-Nov-2029

Report ID Session 1: TEMV255ZJ1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.

Kernel Checksum:

47ACAFAD

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	e01	22	056449A6
2C	e02	22	416F3CDF
3C	e03	22	728072B8
4C	e04	22	368B07C1

PIN Pads Checksums:

PinPad	Checksum
1P	D0581762

Dear Ralph Qin:

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.

Authorised by Frédéric Fortin
Terminal Testing Group Chair
EMVCo, LLC

Terminal Capabilities	1C	2C	3C	4C					
Card Data Input Capability									
Terminal Type	22	22	22	22					
Manual Key Entry	Yes	Yes	Yes	Yes					
Magnetic Stripe	Yes	Yes	Yes	Yes					
IC with Contacts	Yes	Yes	Yes	Yes					
CVM Capability									
Plaintext PIN	Yes	Yes	Yes	Yes					
Online Enciphered PIN	Yes	No	No	Yes					
Signature (Paper)	Yes	Yes	Yes	Yes					
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes					
No CVM	Yes	Yes	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	Yes	Yes					
Card Capture	No	No	No	No					
CDA	Mode 1	Mode 1	Mode 1	Mode 1					
XDA	No	No	No	No					
Transaction Type Capability									
Tran Type - Cash	Yes	Yes	Yes	Yes					
Tran Type - Goods	Yes	Yes	Yes	Yes					
Tran Type - Services	Yes	Yes	Yes	Yes					
Tran Type - Cash Back	Yes	Yes	Yes	Yes					
Tran Type - Inquiry	Yes	Yes	Yes	Yes					
Tran Type - Transfer	Yes	Yes	Yes	Yes					
Tran Type - Payment	Yes	Yes	Yes	Yes					
Tran Type - Admin	Yes	Yes	Yes	Yes					
Tran Type - Cash Deposit	Yes	Yes	Yes	Yes					
Terminal Data Input Capability									
Keypad	Yes	Yes	Yes	Yes					
Numeric Keys	Yes	Yes	Yes	Yes					
Alpha and Special Character Keys	Yes	Yes	Yes	Yes					
Command Keys	Yes	Yes	Yes	Yes					
Function Keys	Yes	Yes	Yes	Yes					

(continued)	1C	2C	3C	4C					
Terminal Data Output Capability									
Print	Yes	Yes	Yes	Yes					
Display	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	Yes	Yes	Yes	Yes					
Application Selection									
PSE	Yes	Yes	Yes	Yes					
Cardholder Confirmation	Yes	Yes	Yes	Yes					
Preferred display order	No	No	No	No					
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									
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes					
Certificate Revocation List Format	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN					
Default DDOL	Yes	Yes	Yes	Yes					
Cardholder Verification Method									
Bypass PIN Entry	Yes	Yes	Yes	Yes					
Subsequent Bypass PIN Entry	Yes	Yes	Yes	Yes					
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	Yes	Yes	Yes	Yes					
Velocity Checking	Yes	Yes	Yes	Yes					
Transaction Log	Yes	Yes	Yes	Yes					
Exception File	Yes	Yes	Yes	Yes					
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	Yes	Yes	Yes	Yes					
Forced Acceptance	No	No	No	No					
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	Yes					
Default TDOL	Yes	Yes	Yes	Yes					
Default TDOL not configured	Yes	Yes	Yes	Yes					
Exception Handling									
POS Entry Mode	80	80	80	80					
Miscellaneous									
Amount and PIN on same keypad	Yes	Yes	Yes	Yes					
ICC/Magstripe Reader Combined	No	No	No	No					
Supports account type selection	Yes	Yes	Yes	Yes					
Supports 'on fly' script processing	No	No	No	No					
Issuer Script device limit > 128 bytes	No	No	No	No					
If limit > 128, value supported?									
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

Conditions:

This product is not able to handle transaction date beyond the 31st of December 2037