

February 02, 2026

Mr. Zhou Xiaohang

Vanstone Electronic (Beijing) Co., Ltd.

3F, Building 2, Aisino Corporation Park, No.18A,Xingshikou Road,
Haidian District, Beijing, China

Beijing 100195

China

Re: EMVCo Letter of Approval - Contact Terminal Level 2

EMV Application Kernel: EMV2 LIB Version 2.31
Approval Number(s): 2-05626-1-1C-BCTC-0825-4.4c
2-05626-2-2C-BCTC-0226-4.4c
2-05626-1-1P-BCTC-0825-4.4c
2-05626-1-1OS-BCTC-0825-4.4c

The EMV Application Kernel has been tested on the following terminal

Terminal: A90 Pro
PinPad: 1P = A90 Pro, EMV2PP LIB V1.0.0 - PIN pad is valid for configuration(s): 1C, 2C
Operating System: IOS = VanDroid-32bits Version V1.0.0

Renewal Date: 30-Jun-2029

Report ID Session 1: **TEMV2531E1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.**
Session 2: **TEMV256R01T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.**

Kernel Checksum:

4cb8cde1

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	EMV-BASE	22	8784d2d1
2C	EMV-TT11	11	76921543

PIN Pads Checksums:

PinPad	Checksum
1P	8ebefd66

Dear Mr. Xiaohang:

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

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								
Card Data Input Capability										
Terminal Type	22	11								
Manual Key Entry	Yes	Yes								
Magnetic Stripe	Yes	Yes								
IC with Contacts	Yes	Yes								
CVM Capability										
Plaintext PIN	Yes	Yes								
Online Enciphered PIN	Yes	Yes								
Signature (Paper)	Yes	Yes								
Offline Enciphered PIN (RSA)	Yes	Yes								
No CVM	Yes	Yes								
Offline Enciphered PIN (ECC)	No	No								
Biometric	No	No								
Offline Finger	No	No								
Online Finger	No	No								
Offline Facial	No	No								
Online Facial	No	No								
Offline Palm	No	No								
Online Palm	No	No								
Offline Iris	No	No								
Online Iris	No	No								
Offline Voice	No	No								
Online Voice	No	No								
Security Capability										
SDA & DDA	Yes	Yes								
Card Capture	No	No								
CDA	Mode 1	Mode 1								
XDA	No	No								
Transaction Type Capability										
Tran Type - Cash	Yes	Yes								
Tran Type - Goods	Yes	Yes								
Tran Type - Services	Yes	Yes								
Tran Type - Cash Back	Yes	Yes								
Tran Type - Inquiry	Yes	Yes								
Tran Type - Transfer	Yes	Yes								
Tran Type - Payment	Yes	Yes								
Tran Type - Admin	Yes	Yes								
Tran Type - Cash Deposit	Yes	Yes								
Terminal Data Input Capability										
Keypad	Yes	Yes								
Numeric Keys	Yes	Yes								
Alpha and Special Character Keys	Yes	Yes								
Command Keys	Yes	Yes								
Function Keys	Yes	Yes								

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

(continued)	1C	2C								
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes								
TAC can be deleted or disabled	No	No								
How does offline only Terminal process Default Action Codes?	N/A	N/A								
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal	Normal								
Completion Processing										
Forced Online	Yes	Yes								
Forced Acceptance	No	No								
Voice Referrals Initiated by Issuer	Yes	Yes								
Default TDOL	Yes	Yes								
Default TDOL not configured	Yes	Yes								
Exception Handling										
POS Entry Mode	92	92								
Miscellaneous										
Amount and PIN on same keypad	Yes	No								
ICC/Magstripe Reader Combined	No	No								
Supports account type selection	No	No								
Supports 'on fly' script processing	No	No								
Issuer Script device limit > 128 bytes	No	No								
If limit > 128, value supported?										
Internal Date Management	Yes	Yes								
Does the terminal support Receipt?	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