

July 23, 2025

Mr. George Jiang  
ID TECH  
10721 Walker Street  
Cypress 90630-4720  
UNITED STATES OF AMERICA

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

**EMV Application Kernel: Android GEN1 kernel Version V1.00**

**Approval Number(s):**  
2-05639-1-1C-BCTC-0725-4.4c  
2-05639-1-2C-BCTC-0725-4.4c  
2-05639-1-3C-BCTC-0725-4.4c  
2-05639-1-4C-BCTC-0725-4.4c  
2-05639-1-5C-BCTC-0725-4.4c  
2-05639-1-1P-BCTC-0725-4.4c  
2-05639-1-1OS-BCTC-0725-4.4c

The EMV Application Kernel has been tested on the following terminal

**Terminal: AP3880P**  
**PinPad: 1P = AP3880P, Android Pinpad V1.00 - PIN pad is valid for configuration(s): 1C, 3C**  
**Operating System: IOS = Android Version 11**

**Renewal Date: 16-Jul-2029**

**Report ID Session 1: TEMV2537L1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.**

**Kernel Checksum:**

D85E4566E38ED06FAAA9C7E5F729600E6E8790B5
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**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	1C	22	F003E1F9090D38B6D177659980B3816CF1079ED5
2C	2C	21	CD0783589059BEC0417B5AF0817751418E727B29
3C	3C	25	5A40969877D6FF95E86582414F5B096F3D74F900
4C	4C	25	F10CFC402B54925B46C9AC63F912C5CBC096A1B9
5C	5C	21	EA40D5EAB8685FFD22DACCF5520E23476656497E

**PIN Pads Checksums:**

PinPad	Checksum
1P	5ff308dcbf1c5c35b2698da7c0b4be1bc391a862

Dear Mr. Jiang:

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](http://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.**

<b>Terminal Capabilities</b>	<b>1C</b>	<b>2C</b>	<b>3C</b>	<b>4C</b>	<b>5C</b>					
<b>Card Data Input Capability</b>										
Terminal Type	22	21	25	25	21					
Manual Key Entry	No	No	No	No	No					
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes					
IC with Contacts	Yes	Yes	Yes	Yes	Yes					
<b>CVM Capability</b>										
Plaintext PIN	Yes	No	Yes	No	No					
Online Enciphered PIN	Yes	No	Yes	No	No					
Signature (Paper)	Yes	Yes	No	No	Yes					
Offline Enciphered PIN (RSA)	Yes	No	Yes	No	No					
No CVM	Yes	Yes	Yes	Yes	Yes					
Offline Enciphered PIN (ECC)	No	No	No	No	No					
Biometric	No	No	No	No	No					
Offline Finger	No	No	No	No	No					
Online Finger	No	No	No	No	No					
Offline Facial	No	No	No	No	No					
Online Facial	No	No	No	No	No					
Offline Palm	No	No	No	No	No					
Online Palm	No	No	No	No	No					
Offline Iris	No	No	No	No	No					
Online Iris	No	No	No	No	No					
Offline Voice	No	No	No	No	No					
Online Voice	No	No	No	No	No					
<b>Security Capability</b>										
SDA & DDA	Yes	Yes	Yes	Yes	Yes					
Card Capture	No	No	No	No	No					
CDA	Mode 1									
XDA	No	No	No	No	No					
<b>Transaction Type Capability</b>										
Tran Type - Cash	Yes	Yes	No	No	Yes					
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes					
Tran Type - Services	Yes	Yes	Yes	Yes	Yes					
Tran Type - Cash Back	Yes	Yes	No	No	Yes					
Tran Type - Inquiry	No	No	No	No	No					
Tran Type - Transfer	No	No	No	No	No					
Tran Type - Payment	No	No	No	No	No					
Tran Type - Admin	No	No	No	No	No					
Tran Type - Cash Deposit	No	No	No	No	No					
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes	Yes	Yes	Yes					
Numeric Keys	Yes	Yes	Yes	Yes	Yes					
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes					
Command Keys	Yes	Yes	Yes	Yes	Yes					
Function Keys	Yes	Yes	Yes	Yes	Yes					

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

<b>(continued)</b>	<b>1C</b>	<b>2C</b>	<b>3C</b>	<b>4C</b>	<b>5C</b>					
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes					
TAC can be deleted or disabled	No	No	No	No	No					
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A					
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal	Skipped	Normal	Normal	Skipped					
<b>Completion Processing</b>										
Forced Online	Yes	No	No	No	No					
Forced Acceptance	No	No	No	No	No					
Voice Referrals Initiated by Issuer	Yes	Yes	No	No	Yes					
Default TDOL	Yes	Yes	Yes	Yes	Yes					
Default TDOL not configured	No	No	No	No	No					
<b>Exception Handling</b>										
POS Entry Mode	0x80	0x80	0x80	0x80	0x80					
<b>Miscellaneous</b>										
Amount and PIN on same keypad	No	No	No	No	No					
ICC/Magstripe Reader Combined	No	No	No	No	No					
Supports account type selection	Yes	Yes	Yes	Yes	Yes					
Supports 'on fly' script processing	No	No	No	No	No					
Issuer Script device limit > 128 bytes	No	No	No	No	No					
If limit > 128, value supported?										
Internal Date Management	Yes	Yes	Yes	Yes	Yes					
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes					

# **Attachment 1**

## **Specific Terms and Conditions to the Letter of Approval**

Restriction:

**None**