

March 21, 2024

Mr. Kaishen Zhu

WIZARPOS International Co., Ltd.

Room 1001, SEARI Building, 509 Wuning Rd

Shanghai 200063

CHINA

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

**EMV Application Kernel:** EMVKernel Version 2.1.3

**Approval Number(s):**

- 2-05338-1-1C-BCTS-0124-4.4a
- 2-05338-1-2C-BCTS-0124-4.4a
- 2-05338-1-3C-BCTS-0124-4.4a
- 2-05338-1-4C-BCTS-0124-4.4a
- 2-05338-1-5C-BCTS-0124-4.4a
- 2-05338-1-6C-BCTS-0124-4.4a
- 2-05338-1-7C-BCTS-0124-4.4a
- 2-05338-1-8C-BCTS-0124-4.4a
- 2-05338-1-9C-BCTS-0124-4.4a
- 2-05338-1-10C-BCTS-0124-4.4a
- 2-05338-2-11C-BCTS-0324-4.4a
- 2-05338-1-10S-BCTS-0124-4.4a

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The EMV Application Kernel has been tested on the following terminal

**Terminal:** WIZARPOS Q3  
**PinPad:** n/a  
**Operating System:** 10S = WIZAROS Version 1.0

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**Renewal Date:** 08-Jan-2028

**Report ID** Session 1: TEMV236N41T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.  
Shenzhen Branch  
Session 2: TEMV240QG1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.  
Shenzhen Branch

**Kernel Checksum:**

54723E03BEA4B640
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Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	1C	22	08C2FBE929A7C835
2C	2C	22	FD039BF3388B1F0F
3C	3C	22	62416332DAD996C3
4C	4C	22	D405AB3186861BB7
5C	5C	22	A75005DDB9F05E7B
6C	6C	25	73028972BE93FD34
7C	7C	25	26508328D6130A93
8C	8C	25	8C3F207782FBEAFA
9C	9C	11	08F4F5A5AD7CDBBD
10C	10C	11	9C054208A36C0225
11C	11C	25	CB75547FE1C6119B

Dear Mr. Zhu:

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.***

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	9C	10C
<b>Card Data Input Capability</b>										
Terminal Type	22	22	22	22	22	25	25	25	11	11
Manual Key Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>CVM Capability</b>										
Plaintext PIN	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
Online Enciphered PIN	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Signature (Paper)	Yes	No	No	No	No	No	No	No	No	Yes
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
No CVM	Yes	Yes	Yes	No	No	Yes	No	Yes	No	Yes
Biometric	No	No	No	No	No	No	No	No	No	No
Offline Finger	No	No	No	No	No	No	No	No	No	No
Online Finger	No	No	No	No	No	No	No	No	No	No
Offline Facial	No	No	No	No	No	No	No	No	No	No
Online Facial	No	No	No	No	No	No	No	No	No	No
Offline Palm	No	No	No	No	No	No	No	No	No	No
Online Palm	No	No	No	No	No	No	No	No	No	No
Offline Iris	No	No	No	No	No	No	No	No	No	No
Online Iris	No	No	No	No	No	No	No	No	No	No
Offline Voice	No	No	No	No	No	No	No	No	No	No
Online Voice	No	No	No	No	No	No	No	No	No	No
<b>Security Capability</b>										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Card Capture	No	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	No	Mode 1
<b>Transaction Type Capability</b>										
Tran Type - Cash	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Cash Back	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Inquiry	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Transfer	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Payment	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Admin	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Tran Type - Cash Deposit	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C
<b>Terminal Data Output Capability</b>										
Print, Attendant	Yes	No	No	No	No	No	No	No	No	Yes
Print, Cardholder	No	No	No	No	No	No	No	No	No	No
Display, Attendant	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Display, Cardholder	No	No	No	No	No	Yes	Yes	Yes	No	No
Code Table 10	No	No	No	No	No	No	No	No	No	No
Code Table 9	No	No	No	No	No	No	No	No	No	No
Code Table 8	No	No	No	No	No	No	No	No	No	No
Code Table 7	No	No	No	No	No	No	No	No	No	No
Code Table 6	No	No	No	No	No	No	No	No	No	No
Code Table 5	No	No	No	No	No	No	No	No	No	No
Code Table 4	No	No	No	No	No	No	No	No	No	No
Code Table 3	No	No	No	No	No	No	No	No	No	No
Code Table 2	No	No	No	No	No	No	No	No	No	No
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Application Selection</b>										
PSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Preferred display order	No	No	No	No	No	No	No	No	No	No
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi language	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMV Language Selection method	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Data Authentication</b>										
MAX CA Public key	248	248	248	248	248	248	248	248		248
Exponents	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1		3 and 2 <sup>16</sup> +1
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Certificate Revocation List Format	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number	RID+CAPKI +Certificate Serial Number
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Manual act. when CA PK loading fails	Yes	Yes	No	Yes	Yes	No	No	No	No	Yes
CA PK verified with check sum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
<b>Cardholder Verification Method</b>										
Bypass PIN Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Subsequent Bypass PIN Entry	No	No	Yes	No	No	No	No	No	No	No
Get Data for PIN Try Counter	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Terminal Risk Management</b>										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Random Transaction Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Velocity Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Transaction Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exception File	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TAC can be deleted or disabled	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
How does offline only Terminal process Default Action Codes?	Option 1	Option 1	Option 1	Option 1	Option 1	Option 1	Option 1	Option 1	N/A	N/A
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
<b>Completion Processing</b>										
Forced Online	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Forced Acceptance	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes
Advices	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Batch Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Exception Handling</b>										
POS Entry Mode	80	80	80	80	80	80	80	80	80	80
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
ICC/Magstripe Reader Combined	No	No	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	n/a	n/a
Supports account type selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supports 'on fly' script processing	No	No	No	No	No	No	No	No	No	No
Issuer Script device limit > 128 bytes	No	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	Yes
Does the terminal support Receipt?	Yes	No	No	No	No	No	No	No	No	Yes

Terminal Capabilities		11C								
<b>Card Data Input Capability</b>										
Terminal Type	25									
Manual Key Entry	Yes									
Magnetic Stripe	Yes									
IC with Contacts	Yes									
<b>CVM Capability</b>										
Plaintext PIN	No									
Online Enciphered PIN	Yes									
Signature (Paper)	No									
Offline Enciphered PIN (RSA)	Yes									
No CVM	Yes									
Biometric	No									
Offline Finger	No									
Online Finger	No									
Offline Facial	No									
Online Facial	No									
Offline Palm	No									
Online Palm	No									
Offline Iris	No									
Online Iris	No									
Offline Voice	No									
Online Voice	No									
<b>Security Capability</b>										
SDA & DDA	Yes									
Card Capture	No									
CDA	Mode 1									
<b>Transaction Type Capability</b>										
Transaction Type - Cash	No									
Transaction Type - Goods	Yes									
Transaction Type - Services	Yes									
Transaction Type - Cash Back	No									
Transaction Type - Inquiry	No									
Transaction Type - Transfer	No									
Transaction Type - Payment	No									
Transaction Type - Admin	No									
Transaction Type - Cash Deposit	No									
<b>Terminal Data Input Capability</b>										
Keypad	Yes									
Numeric Keys	Yes									
Alpha and Special Character Keys	Yes									
Command Keys	Yes									
Function Keys	Yes									

(continued)	11C									
<b>Terminal Data Output Capability</b>										
Print, Attendant	No									
Print, Cardholder	No									
Display, Attendant	No									
Display, Cardholder	Yes									
Code Table 10	No									
Code Table 9	No									
Code Table 8	No									
Code Table 7	No									
Code Table 6	No									
Code Table 5	No									
Code Table 4	No									
Code Table 3	No									
Code Table 2	No									
Code Table 1	Yes									
<b>Application Selection</b>										
PSE	Yes									
Cardholder Confirmation	Yes									
Preferred display order	No									
Partial AID Selection	Yes									
Multi language	Yes									
EMV Language Selection method	Yes									
Common Character Set	Yes									
<b>Data Authentication</b>										
MAX CA Public key	248									
Exponents	3 and 2 <sup>16</sup> +1									
Revocation of Issuer PK Certificate	Yes									
Certificate Revocation List Format	RID+CAPKI +Certificate Serial Number									
Default DDOL	Yes									
Manual act. when CA PK loading fails	No									
CA PK verified with check sum	Yes									
<b>Cardholder Verification Method</b>										
Bypass PIN Entry	Yes									
Subsequent Bypass PIN Entry	No									
Get Data for PIN Try Counter	Yes									
Fail CVM	Yes									
Amount known before CVM proces.	Yes									
<b>Terminal Risk Management</b>										
Floor Limit Checking	Yes									
Random Transaction Selection	Yes									
Velocity Checking	Yes									
Transaction Log	Yes									
Exception File	Yes									
TRM irrespective of AIP setting (expected behavior)	Yes									



<b>(continued)</b>	<b>11C</b>									
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes									
TAC can be deleted or disabled	Yes									
How does offline only Terminal process Default Action Codes?	Option 1									
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal									
<b>Completion Processing</b>										
Forced Online	No									
Forced Acceptance	No									
Advices	No									
Voice Referrals Initiated by Issuer	No									
Batch Data Capture	Yes									
Online Data Capture	Yes									
Default TDOL	Yes									
Default TDOL not configured	Yes									
<b>Exception Handling</b>										
POS Entry Mode	80									
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes									
ICC/Magstripe Reader Combined	No									
If Combined, is Magstripe read first?	n/a									
Supports account type selection	Yes									
Supports 'on fly' script processing	No									
Issuer Script device limit > 128 bytes	No									
If limit > 128, value supported?										
Internal Date Management	Yes									
Does the terminal support Receipt?	No									

## **Attachment 1**

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

Restriction:

**None**