

September 21, 2022

Mr. Hui Lin  
Shenzhen Xinguodu Technology Co. Ltd  
17B JinSong Mansion, Terra Industrial & Trade Park Chegongmi  
Shenzhen 518040  
CHINA

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

**EMV Application Kernel: XGD-EMVL2 Version V4.3f**

**Approval Number(s):**  
**2-05091-1-1C-BCTS-0922-4.3k**  
**2-05091-1-2C-BCTS-0922-4.3k**  
**2-05091-1-3C-BCTS-0922-4.3k**  
**2-05091-1-4C-BCTS-0922-4.3k**  
**2-05091-1-5C-BCTS-0922-4.3k**  
**2-05091-1-6C-BCTS-0922-4.3k**  
**2-05091-1-1OS-BCTS-0922-4.3k**

The EMV Application Kernel has been tested on the following terminal

**Terminal: G25**  
**PinPad: n/a**  
**Operating System: 1OS = XLP OS Version V1.0**

**Renewal Date: 22-Aug-2026**

**Report ID** Session 1: **TEMV223YP1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd. Shenzhen Branch**

**Kernel Checksum:**

81 41 D5 7F

**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	XGDEM V CFG	22	3A 2F CE BC
2C	XGDEM V CFG2	22	E8 17 B1 A3
3C	XGDEM V CFG3	22	46 D1 94 3A
4C	XGDEM V CFG4	25	52 91 CE F4
5C	XGDEM V CFG5	25	00 7B 95 28
6C	XGDEM V CFG6	22	9F 53 96 77

Dear Mr. Lin:

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](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 Type Approval 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				
<b>Card Data Input Capability</b>										
Terminal Type	22	22	22	25	25	22				
Manual Key Entry	Yes	Yes	Yes	No	No	Yes				
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes				
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes				
<b>CVM Capability</b>										
Plaintext PIN	Yes	Yes	Yes	Yes	Yes	Yes				
Online Enciphered PIN	Yes	No	Yes	Yes	No	No				
Signature (Paper)	Yes	Yes	Yes	No	No	Yes				
Offline Enciphered PIN	Yes	Yes	Yes	Yes	Yes	Yes				
No CVM	Yes	No	No	Yes	Yes	Yes				
SB185	No	No	No	No	No	No				
Offline Finger	No	No	No	No	No	No				
Online Finger	No	No	No	No	No	No				
Offline Facial	No	No	No	No	No	No				
Online Facial	No	No	No	No	No	No				
Offline Palm	No	No	No	No	No	No				
Online Palm	No	No	No	No	No	No				
Offline Iris	No	No	No	No	No	No				
Online Iris	No	No	No	No	No	No				
Offline Voice	No	No	No	No	No	No				
Online Voice	No	No	No	No	No	No				
<b>Security Capability</b>										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes				
Card Capture	No	No	No	No	No	No				
CDA	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1				
<b>Transaction Type Capability</b>										
Tran Type - Cash	Yes	Yes	Yes	Yes	No	Yes				
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Cash Back	Yes	Yes	Yes	Yes	No	Yes				
Tran Type - Inquiry	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Transfer	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Payment	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Admin	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Cash Deposit	Yes	Yes	Yes	Yes	Yes	Yes				
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes				
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes				
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes				
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes				
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes				

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

(continued)	1C	2C	3C	4C	5C	6C				
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes				
TAC can be deleted or disabled	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				
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				
<b>Completion Processing</b>										
Forced Online	Yes	Yes	Yes	No	No	Yes				
Forced Acceptance	Yes	Yes	Yes	No	No	Yes				
Advices	Yes	Yes	Yes	Yes	Yes	Yes				
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	No	No	Yes				
Batch Data Capture	Yes	Yes	Yes	Yes	Yes	Yes				
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes				
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes				
Default TDOL not configured	No	No	No	No	No	No				
<b>Exception Handling</b>										
POS Entry Mode	92	92	92	92	92	80				
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes				
ICC/Magstripe Reader Combined	No	No	No	No	No	No				
If Combined, is Magstripe read first?	No	No	No	No	No	No				
Supports account type selection	Yes	Yes	Yes	Yes	Yes	Yes				
Supports 'on fly' script processing	No	No	No	No	No	No				
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes				
If limit > 128, value supported?	256	256	256	256	256	256				
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes				
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes				

## **Attachment 1**

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

Restriction:

**None**