

May 30, 2025

Ms. Qian Tong  
GRG Banking Equipment Co., Ltd.  
9,11 Kelin Road  
Science City  
High-tech Industrial Development Zone  
Guangzhou 510663  
China

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

**EMV Application Kernel:** GrgEmvKernel Version 4.2.0.10

**Approval Number(s):**  
2-05612-1-1C-BCTS-0525-4.4c  
2-05612-1-2C-BCTS-0525-4.4c  
2-05612-1-1P-BCTS-0525-4.4c  
2-05612-1-2P-BCTS-0525-4.4c  
2-05612-1-1OS-BCTS-0525-4.4c

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The EMV Application Kernel has been tested on the following terminal

**Terminal:** DT-7000

**PinPad:** 1P = EPP, Encryption PinPad EPP-004 - PIN pad is valid for configuration(s): 1C, 2C  
2P = EPP, Encryption PinPad EPP-004A - PIN pad is valid for configuration(s): 1C, 2C

**Operating System:** 1OS = Windows 10 Version 10.0

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**Renewal Date:** 27-May-2029

**Report ID** Session 1: **TEMV252F91T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd. Shenzhen Branch**

**Kernel Checksum:**

801117E383A4644D53FB3B4214EE53742CBBF49F
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**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	CFG2	14	E6B4CAE89449F753BF942F7C9161EEC23948EC03
2C	CFG3	14	75AAA7F9CC89A098BEA202B8FD1A21D982D39DC7

**PIN Pads Checksums:**

PinPad	Checksum
1P	N/A
2P	N/A

Dear Ms. Tong:

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

Terminal Capabilities	1C	2C								
<b>Card Data Input Capability</b>										
Terminal Type	14	14								
Manual Key Entry	No	No								
Magnetic Stripe	Yes	Yes								
IC with Contacts	Yes	Yes								
<b>CVM Capability</b>										
Plaintext PIN	No	No								
Online Enciphered PIN	Yes	Yes								
Signature (Paper)	No	No								
Offline Enciphered PIN (RSA)	No	No								
No CVM	No	No								
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								
<b>Security Capability</b>										
SDA & DDA	Yes	No								
Card Capture	Yes	Yes								
CDA	Mode 1	No								
XDA	No	No								
<b>Transaction Type Capability</b>										
Tran Type - Cash	Yes	Yes								
Tran Type - Goods	Yes	Yes								
Tran Type - Services	Yes	Yes								
Tran Type - Cash Back	No	No								
Tran Type - Inquiry	Yes	Yes								
Tran Type - Transfer	Yes	Yes								
Tran Type - Payment	Yes	Yes								
Tran Type - Admin	No	No								
Tran Type - Cash Deposit	Yes	Yes								
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes								
Numeric Keys	Yes	Yes								
Alpha and Special Character Keys	No	No								
Command Keys	Yes	Yes								
Function Keys	Yes	Yes								

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

(continued)	1C	2C								
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes								
TAC can be deleted or disabled	Yes	Yes								
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?	Skipped	Skipped								
<b>Completion Processing</b>										
Forced Online	No	No								
Forced Acceptance	No	No								
Voice Referrals Initiated by Issuer	No	No								
Default TDOL	Yes	Yes								
Default TDOL not configured	Yes	Yes								
<b>Exception Handling</b>										
POS Entry Mode	21	21								
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes								
ICC/Magstripe Reader Combined	Yes	Yes								
Supports account type selection	Yes	Yes								
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**