April 11, 2024

Mr. WEIQUAN CAO

HERONG INTELLIGENT EQUIPMENT TECHNOLOGY CO.
LIMITED

Room901,Building15, Jingdong Road

Yantian,Fenggang Twon, Dongguan City

DONGGUAN 523690

China

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

EMV Application Kernel:	**XDC Version V1.0.0**
Approval Number(s):	**2-05386-1-1C-BCTS-0424-4.4a**
	2-05386-1-2C-BCTS-0424-4.4a
	2-05386-1-1P-BCTS-0424-4.4a
	2-05386-1-1OS-BCTS-0424-4.4a

The EMV Application Kernel has been tested on the following terminal

  Terminal: **HE SelfService**

  PinPad: **1P = SE8098B, SE8098B V1.00 - PIN pad is valid for configuration(s): 1C, 2C**

  Operating System: **1OS = Windows Version 10 64bits**

Renewal Date: **25-Mar-2028**

Report ID   Session 1: **TEMV240T81T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.
Shenzhen Branch**

Kernel Checksum:

68defc71

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	EMV01	15	9C1AFCFA
2C	EMV02	15	D2118987

PIN Pads Checksums:

PinPad	Checksum
1P	N/A

Dear Mr. CAO:

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 refered 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.

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								
Card Data Input Capability										
Terminal Type	15	15								
Manual Key Entry	Yes	Yes								
Magnetic Stripe	Yes	Yes								
IC with Contacts	Yes	Yes								
CVM Capability										
Plaintext PIN	Yes	No								
Online Enciphered PIN	Yes	Yes								
Signature (Paper)	No	No								
Offline Enciphered PIN (RSA)	Yes	No								
No CVM	Yes	Yes								
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								
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, Attendant	No	No							
Print, Cardholder	Yes	Yes							
Display, Attendant	No	No							
Display, Cardholder	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	Yes	Yes							
EMV Language Selection method	Yes	Yes							
Common Character Set	Yes	Yes							
Data Authentication									
MAX CA Public key	248	248							
Exponents	3 and $2^{16}+1$	3 and $2^{16}+1$							
Revocation of Issuer PK Certificate	No	No							
Certificate Revocation List Format									
Default DDOL	Yes	Yes							
Manual act. when CA PK loading fails	Yes	Yes							
CA PK verified with check sum	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	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?	Normal	Normal							
Completion Processing									
Forced Online	No	No							
Forced Acceptance	No	No							
Advices	Yes	Yes							
Voice Referrals Initiated by Issuer	No	No							
Batch Data Capture	No	No							
Online Data Capture	Yes	Yes							
Default TDOL	Yes	Yes							
Default TDOL not configured	Yes	Yes							
Exception Handling									
POS Entry Mode	80	80							
Miscellaneous									
Amount and PIN on same keypad	Yes	Yes							
ICC/Magstripe Reader Combined	No	No							
If Combined, is Magstripe read first?	n/a	n/a							
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