

February 06, 2024



Glenn Liu

Fujian Wazan Technology Co., Ltd.

601, Building 1, Huajian Mansion, No.12 Science and Technology East
Road, High-tech zone, Fuzhou, Fujian, China

Fuzhou 350000

China

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

EMV Application Kernel: EMV LIB Version L100

Approval Number(s):
2-05340-1-1C-BCTS-0224-4.4a
2-05340-1-2C-BCTS-0224-4.4a
2-05340-1-3C-BCTS-0224-4.4a
2-05340-1-4C-BCTS-0224-4.4a
2-05340-1-5C-BCTS-0224-4.4a
2-05340-1-6C-BCTS-0224-4.4a
2-05340-1-7C-BCTS-0224-4.4a
2-05340-1-8C-BCTS-0224-4.4a
2-05340-1-9C-BCTS-0224-4.4a
2-05340-1-10C-BCTS-0224-4.4a
2-05340-1-10S-BCTS-0224-4.4a

The EMV Application Kernel has been tested on the following terminal

Terminal: Su3
PinPad: n/a
Operating System: IOS = Linux Version 4.4 32bits

Renewal Date: 18-Jan-2028

Report ID Session 1: **TEMV236PL1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.
Shenzhen Branch**

Kernel Checksum:

d9362bdd

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	C1	22	b700b47b
2C	C2	22	f30bc102
3C	C3	22	84effa1c
4C	C4	22	c0e48f65
5C	C5	22	22ed8887
6C	C6	25	e42e9d26
7C	C7	25	0e546992
8C	C8	25	a025e85f
9C	C9	25	100f198b
10C	C10	25	54046cf2

Dear Glenn Liu:

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).

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
Card Data Input Capability										
Terminal Type	22	22	22	22	22	25	25	25	25	25
Manual Key Entry	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
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
CVM Capability										
Plaintext PIN	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Online Enciphered PIN	Yes	No	Yes	No	No	Yes	No	No	No	Yes
Signature (Paper)	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
No CVM	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	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
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Mode 1	Mode 1
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes
Tran Type - Inquiry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Transfer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Payment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Admin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Cash Deposit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terminal Data Input Capability										
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
Terminal Data Output Capability										
Print, Attendant	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Print, Cardholder	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Display, Attendant	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Display, Cardholder	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
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
Application Selection										
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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi language	No	No	No	No	No	No	No	No	No	No
EMV Language Selection method	No	No	No	No	No	No	No	No	No	No
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Data Authentication										
MAX CA Public key	248	248	248	248	248	248	248	248	248	248
Exponents	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Certificate Revocation List Format	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN	RID+CAPK Index+Certificate SN
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manual act. when CA PK loading fails	No	No	No	No	No	No	No	No	No	No
CA PK verified with check sum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes
Subsequent Bypass PIN Entry	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	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
Terminal Risk Management										
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
Terminal Action Analysis										
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?	N/A	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Completion Processing										
Forced Online	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Forced Acceptance	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Advices	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
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
Exception Handling										
POS Entry Mode	80	80	80	80	80	80	80	80	80	80
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	No	No	No	No	No	No
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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None