

May 03, 2024

Mr. Gavin Demonte  
Block, Inc.  
1955 Broadway  
Suite 600  
Oakland 94612  
United States

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

**EMV Application Kernel: Square EMVCO Kernel Version 4.2**

**Approval Number(s):**  
**2-04615-1-1C-FIMA-0120-4.3h**  
**2-04615-1-2C-FIMA-0120-4.3h**  
**2-04615-1-3C-FIMA-0120-4.3h**  
**2-04615-1-1OS-FIMA-0120-4.3h**

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The EMV Application Kernel has been tested on the following terminal

**Terminal: Square Terminal SPD2-01**  
**PinPad: n/a**  
**Operating System: 1OS = SquareOS Version 3.0**

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**Expiry Date: 01-Jan-2028**

**Report ID Session 1: M23REP00-205 & 24-060-RA-SQUA-KERNEL-10 Version 1.0 - FIME Inc.**

**Kernel Checksum:**

91F58BAE
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**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	4C	22	FABED5DF
2C	5C	22	517DD69A
3C	6C	22	9EC0EF06

Dear Mr. Demonte:

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 Restricted Renewal, 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. According to EMVCo Restricted Renewal policy the extension to the original Type Approval is granted for a period of three years. At the end of that additional validity period the Application Kernel will expire and cannot be submitted for another renewal.

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.**

<b>Terminal Capabilities</b>	<b>1C</b>	<b>2C</b>	<b>3C</b>							
<b>Card Data Input Capability</b>										
Terminal Type	22	22	22							
Manual Key Entry	Yes	Yes	Yes							
Magnetic Stripe	Yes	Yes	Yes							
IC with Contacts	Yes	Yes	Yes							
<b>CVM Capability</b>										
Plaintext PIN	Yes	No	No							
Online Enciphered PIN	Yes	No	No							
Signature (Paper)	Yes	Yes	No							
Offline Enciphered PIN (RSA)	Yes	No	No							
No CVM	Yes	Yes	Yes							
Biometric	No	No	No							
Offline Finger	No	No	No							
Online Finger	No	No	No							
Offline Facial	No	No	No							
Online Facial	No	No	No							
Offline Palm	No	No	No							
Online Palm	No	No	No							
Offline Iris	No	No	No							
Online Iris	No	No	No							
Offline Voice	No	No	No							
Online Voice	No	No	No							
<b>Security Capability</b>										
SDA & DDA	Yes	Yes	Yes							
Card Capture	No	No	No							
CDA	Mode 1	Mode 1	Mode 1							
<b>Transaction Type Capability</b>										
Tran Type - Cash	No	No	No							
Tran Type - Goods	Yes	Yes	Yes							
Tran Type - Services	Yes	Yes	Yes							
Tran Type - Cash Back	No	No	No							
Tran Type - Inquiry	No	No	No							
Tran Type - Transfer	No	No	No							
Tran Type - Payment	No	No	No							
Tran Type - Admin	No	No	No							
Tran Type - Cash Deposit	No	No	Yes							
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes	Yes							
Numeric Keys	Yes	Yes	Yes							
Alpha and Special Character Keys	No	No	No							
Command Keys	Yes	Yes	Yes							
Function Keys	No	No	No							

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

(continued)	1C	2C	3C							
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes	Yes							
TAC can be deleted or disabled	No	No	No							
How does offline only Terminal process Default Action Codes?	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							
<b>Completion Processing</b>										
Forced Online	No	No	No							
Forced Acceptance	No	No	No							
Advices	Yes	Yes	Yes							
Voice Referrals Initiated by Issuer	Yes	Yes	Yes							
Batch Data Capture	Yes	Yes	Yes							
Online Data Capture	Yes	Yes	Yes							
Default TDOL	Yes	Yes	Yes							
Default TDOL not configured	No	No	No							
<b>Exception Handling</b>										
POS Entry Mode	80	80	80							
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes							
ICC/Magstripe Reader Combined	No	No	No							
If Combined, is Magstripe read first?	No	No	No							
Supports account type selection	Yes	Yes	Yes							
Supports 'on fly' script processing	No	No	No							
Issuer Script device limit > 128 bytes	Yes	Yes	Yes							
If limit > 128, value supported?	200	200	200							
Internal Date Management	Yes	Yes	Yes							
Does the terminal support Receipt?	Yes	Yes	Yes							

# **Attachment 1**

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

Restriction:

**None**

Conditions:

- SB272 is not supported. Kernel treats year 'YY' associated with Application Expiration and Certificate Expiration dates in the range of 50-99 as 1950-1999.
  - The candidate list during Selection Process is limited to the storage of 10 AIDs, each of them having the FCI set to the maximum allowed size.
- Contact Vendor for more information on these limitations.