

May 31, 2021

Samuel Parr

MagTek, Inc.

1710 Apollo Court

Seal Beach CA 90740

UNITED STATES OF AMERICA

Re: EMVCo Letter of Approval - Contact Terminal Level 2

EMV Application Kernel: LibContact Version V1.0.0

Approval Number(s):

- 2-04787-1-1C-LGAS-0521-4.3i**
- 2-04787-1-2C-LGAS-0521-4.3i**
- 2-04787-1-3C-LGAS-0521-4.3i**
- 2-04787-1-4C-LGAS-0521-4.3i**
- 2-04787-2-5C-LGAS-0521-4.3i**
- 2-04787-2-6C-LGAS-0521-4.3i**
- 2-04787-1-1P-LGAS-0521-4.3i**
- 2-04787-1-1OS-LGAS-0521-4.3i**

The EMV Application Kernel has been tested on the following terminal

Terminal: tDynamo GEN II

PinPad: 1P = MagtekPinpad, SW_MagtekPinpad V1.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C

Operating System: IOS = IMC_OS_MINI Version V1.0.0

Renewal Date: 21-Jan-2025

Report ID

Session 1: **2020_8300_FUNMAGTA009_EXP-M1 Version M1 - Applus (Shanghai) Quality Inspection Co., Ltd.**

Session 2: **2021_8300_FUNMAGTA003_EXP Version M0 - Applus (Shanghai) Quality Inspection Co., Ltd.**

Kernel Checksum:

D9F50E1F

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	C8	21	05D013BD
2C	C9	24	9D70BB85
3C	C10	21	C64390B5
4C	C11	24	60A09C46
5C	C12	21	1194E051
6C	C13	24	EED96A56

PIN Pads Checksums:

PinPad	Checksum
1P	N/A

Dear Samuel Parr:

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).

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				
Card Data Input Capability										
Terminal Type	21	24	21	24	21	24				
Manual Key Entry	Yes	Yes	Yes	Yes	Yes	Yes				
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes				
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes				
CVM Capability										
Plaintext PIN	Yes	Yes	Yes	Yes	No	No				
Online Enciphered PIN	Yes	Yes	Yes	Yes	No	No				
Signature (Paper)	Yes	No	Yes	No	Yes	No				
Offline Enciphered PIN	Yes	Yes	Yes	Yes	No	No				
No CVM	Yes	Yes	Yes	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				
Security Capability										
SDA & DDA	Yes	Yes	No	No	No	No				
Card Capture	No	No	No	No	No	No				
CDA	Mode 1	Mode 1	No	No	No	No				
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	Yes	Yes	Yes	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	Yes	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				
Terminal Data Input Capability										
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				
Terminal Data Output Capability										
Print, Attendant	Yes	No	Yes	No	Yes	No				
Print, Cardholder	No	Yes	No	Yes	No	Yes				
Display, Attendant	Yes	No	Yes	No	Yes	No				
Display, Cardholder	No	Yes	No	Yes	No	Yes				
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				
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes				
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes				
Preferred display order	Yes	Yes	Yes	Yes	Yes	Yes				
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes				
Multi language	Yes	Yes	Yes	Yes	Yes	Yes				
EMV Language Selection method	No	No	No	No	No	No				
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes				
Data Authentication										
MAX CA Public key	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						
Revocation of Issuer PK Certificate	Yes	Yes	No	No	No	No				
Certificate Revocation List Format	RID+CAPK Index +Certificate SN	RID+CAPK Index +Certificate SN								
Default DDOL	Yes	Yes	No	No	No	No				
Manual act. when CA PK loading fails	No	No	No	No	No	No				
CA PK verified with check sum	Yes	Yes	No	No	No	No				
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes	Yes	Yes	No	No				
Subsequent Bypass PIN Entry	Yes	Yes	Yes	Yes	No	No				
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	No	No				
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes				
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes				
Terminal Risk Management										
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				
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes				
TAC can be deleted or disabled	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				
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal	Normal	Normal	Normal	Normal	Normal				
Completion Processing										
Forced Online	Yes	Yes	Yes	Yes	Yes	Yes				
Forced Acceptance	No	No	No	No	No	No				
Advices	Yes	Yes	Yes	Yes	Yes	Yes				
Voice Referrals Initiated by Issuer	Yes	No	Yes	No	Yes	No				
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				
Exception Handling										
POS Entry Mode	80	80	80	80	80	80				
Miscellaneous										
Amount and PIN on same keypad	No	No	No	No	No	No				
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	No	No	No	No	No	No				
If limit > 128, value supported?										
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