

August 02, 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: **Dynamo v5 L2 Kernel 4.3j Version A**

Approval Number(s):
2-04875-1-1C-CETI-0821-4.3j
2-04875-1-2C-CETI-0821-4.3j
2-04875-1-3C-CETI-0821-4.3j
2-04875-1-4C-CETI-0821-4.3j
2-04875-1-5C-CETI-0821-4.3j
2-04875-1-1OS-CETI-0821-4.3j

The EMV Application Kernel has been tested on the following terminal

Terminal: **mDynamo**

PinPad: **n/a**

Operating System: **1OS = mDynamo Version A**

Renewal Date: **27-Jul-2025**

Report ID Session 1: **2MAGT_1-2832-1-2-21-A_CETI Version -A - CTC advanced GmbH**

Kernel Checksum:

1ad5a311ff71b3980b8b5a08285fc47d8c6b440d

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	mDynamo C3	22	cba5661937ced20af5a97b52e3f1f12b434f8cb3
2C	mDynamo C2	21	0808c11f73e1d9656d1e5f7b248452dcc5db1d9a
3C	mDynamo C1	21	f996fa8306592da068e90c88d6aeca34be16d743
4C	mDynamo C14	24	61698ddcc402581782e1c81a2ca2e57030231fee
5C	mDynamo C15	25	bbbd6a44e6c85071ec086521013acd3744052f85

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 and the Cryptographic Functions are part of the EMV specifications. This Contact Level 2 Kernel utilizes a specific Hardware component in the tested terminal to generate random numbers and/or Cryptographic Functions. 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					
Card Data Input Capability										
Terminal Type	22	21	21	24	25					
Manual Key Entry	No	No	No	No	No					
Magnetic Stripe	No	No	No	No	No					
IC with Contacts	Yes	Yes	Yes	Yes	Yes					
CVM Capability										
Plaintext PIN	No	No	No	No	No					
Online Enciphered PIN	No	No	No	No	No					
Signature (Paper)	Yes	Yes	Yes	No	No					
Offline Enciphered PIN	No	No	No	No	No					
No CVM	Yes	Yes	Yes	Yes	Yes					
SB185	No	No	No	No	No					
Offline Finger	No	No	No	No	No					
Online Finger	No	No	No	No	No					
Offline Facial	No	No	No	No	No					
Online Facial	No	No	No	No	No					
Offline Palm	No	No	No	No	No					
Online Palm	No	No	No	No	No					
Offline Iris	No	No	No	No	No					
Online Iris	No	No	No	No	No					
Offline Voice	No	No	No	No	No					
Online Voice	No	No	No	No	No					
Security Capability										
SDA & DDA	Yes	No	Yes	No	Yes					
Card Capture	No	No	No	No	No					
CDA	Mode 1	No	Mode 1	No	Mode 1					
Transaction Type Capability										
Tran Type - Cash	No	No	No	Yes	Yes					
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes					
Tran Type - Services	Yes	Yes	Yes	Yes	Yes					
Tran Type - Cash Back	Yes	Yes	Yes	No	No					
Tran Type - Inquiry	No	No	No	No	No					
Tran Type - Transfer	No	No	No	No	No					
Tran Type - Payment	Yes	Yes	Yes	Yes	Yes					
Tran Type - Admin	No	No	No	No	No					
Tran Type - Cash Deposit	No	No	No	No	No					
Terminal Data Input Capability										
Keypad	No	No	No	No	No					
Numeric Keys	No	No	No	No	No					
Alpha and Special Character Keys	No	No	No	No	No					
Command Keys	No	No	No	No	No					
Function Keys	No	No	No	No	No					

(continued)	1C	2C	3C	4C	5C					
Terminal Data Output Capability										
Print, Attendant	Yes	Yes	Yes	No	No					
Print, Cardholder	No	No	No	Yes	Yes					
Display, Attendant	Yes	Yes	Yes	No	No					
Display, Cardholder	Yes	Yes	Yes	Yes	Yes					
Code Table 10	No	No	No	No	No					
Code Table 9	No	No	No	No	No					
Code Table 8	No	No	No	No	No					
Code Table 7	No	No	No	No	No					
Code Table 6	No	No	No	No	No					
Code Table 5	No	No	No	No	No					
Code Table 4	No	No	No	No	No					
Code Table 3	No	No	No	No	No					
Code Table 2	No	No	No	No	No					
Code Table 1	Yes	Yes	Yes	Yes	Yes					
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes					
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes					
Preferred display order	Yes	Yes	Yes	Yes	Yes					
Partial AID Selection	Yes	Yes	Yes	Yes	Yes					
Multi language	Yes	Yes	Yes	Yes	Yes					
EMV Language Selection method	Yes	Yes	Yes	Yes	Yes					
Common Character Set	Yes	Yes	Yes	Yes	Yes					
Data Authentication										
MAX CA Public key	248		248		248					
Exponents	3 and 2 ¹⁶ +1		3 and 2 ¹⁶ +1		3 and 2 ¹⁶ +1					
Revocation of Issuer PK Certificate	Yes	No	Yes	No	Yes					
Certificate Revocation List Format	RID, CAPK Index and CSN		RID, CAPK Index and CSN		RID, CAPK Index and CSN					
Default DDOL	Yes	No	Yes	No	Yes					
Manual act. when CA PK loading fails	No	No	No	No	No					
CA PK verified with check sum	Yes	No	Yes	No	Yes					
Cardholder Verification Method										
Bypass PIN Entry	No	No	No	No	No					
Subsequent Bypass PIN Entry	No	No	No	No	No					
Get Data for PIN Try Counter	No	No	No	No	No					
Fail CVM	Yes	Yes	Yes	Yes	Yes					
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes					
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes					
Random Transaction Selection	Yes	No	No	No	Yes					
Velocity Checking	Yes	No	No	No	Yes					
Transaction Log	No	No	No	No	No					
Exception File	No	No	No	No	No					
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes					

(continued)	1C	2C	3C	4C	5C					
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes					
TAC can be deleted or disabled	No	No	No	No	No					
How does offline only Terminal process Default Action Codes?	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	Normal	Normal	Normal	N/A					
Completion Processing										
Forced Online	No	No	No	No	No					
Forced Acceptance	No	No	No	No	No					
Advices	No	No	No	No	No					
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	No	No					
Batch Data Capture	No	No	No	No	No					
Online Data Capture	Yes	Yes	Yes	Yes	Yes					
Default TDOL	Yes	Yes	Yes	Yes	Yes					
Default TDOL not configured	No	No	No	No	No					
Exception Handling										
POS Entry Mode	pt Applicab	pt Applicab	pt Applicab	pt Applicab	pt Applicab					
Miscellaneous										
Amount and PIN on same keypad	No	No	No	No	No					
ICC/Magstripe Reader Combined	No	No	No	No	No					
If Combined, is Magstripe read first?	No	No	No	No	No					
Supports account type selection	No	No	No	No	No					
Supports 'on fly' script processing	No	No	No	No	No					
Issuer Script device limit > 128 bytes	No	No	No	No	No					
If limit > 128, value supported?										
Internal Date Management	Yes	Yes	Yes	Yes	Yes					
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes					

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None