

December 20, 2024

Mr. Mauro Bettiga  
MADIC ITALIA S.P.A.  
Via A.Volta 39

Cardano Al Campo 21010  
ITALY

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

**EMV Application Kernel:** MDC\_30 Version 3.0

**Approval Number(s):**  
2-05507-1-1C-LGAI-1224-4.4b  
2-05507-1-2C-LGAI-1224-4.4b  
2-05507-1-3C-LGAI-1224-4.4b  
2-05507-1-4C-LGAI-1224-4.4b  
2-05507-1-5C-LGAI-1224-4.4b  
2-05507-1-6C-LGAI-1224-4.4b  
2-05507-1-7C-LGAI-1224-4.4b  
2-05507-1-1P-LGAI-1224-4.4b  
2-05507-1-1OS-LGAI-1224-4.4b

The EMV Application Kernel has been tested on the following terminal

**Terminal:** BV1000R  
**PinPad:** 1P = BV1000K, GBK51.00.00.00 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C  
**Operating System:** 1OS = free rtos Version 10.4.3

**Renewal Date:** 06-Nov-2028

**Report ID** Session 1: 24/34600184 Version M0 - Applus+ (Barcelona) LGAI Technological Center, S.A.

**Kernel Checksum:**

0f 47 46 1a a8 24 59 64 8e a3 86 28 d4 01 67 5f 02 dd 15 28 83 91 c6 7c e7 a8 bf 23 b0 a0 87 cf
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**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	Prof_1	25	D2 08 3E 5D EA A6 C5 EA 49 7E D4 EF 05 C9 0E 5C 0D 4E 5F CC 37 DF 27 A6 FB 64 5C B0 F1 42 99 EA
2C	Prof_2	25	2D 6E 02 91 60 1F A0 19 E1 60 66 DA 97 C9 A4 E8 CA E2 2B 68 5E 0D 5D 45 E3 B9 52 17 EF D6 DE 37
3C	Prof_3	25	A7 F2 C6 AC BE F2 0E 78 42 F0 67 74 65 39 4B 36 46 67 19 CC A2 6C E8 B1 F7 92 31 5F 0A 0D 11 64
4C	Prof_4	25	72 6B 47 D7 8C C5 40 AE B3 1A AB CB 92 9B 14 11 FE 30 62 FF FC 18 56 D0 F1 B1 1E B9 66 EB C0 D8
5C	Prof_5	25	0F 7A 83 02 7E 61 7A 06 4B 4B F0 76 5B EE D0 11 46 F3 47 E9 EE 59 08 B9 0F A3 B9 1F CC FB CB F2
6C	Prof_6	25	F0 1F 17 05 C1 01 EA 48 DB 4C 33 03 02 97 9A AF C8 4B 82 4C 22 91 77 A6 D9 7E 13 57 9E 7F 1E E7

7C	Prof_7	25	FC F4 7D 9E 6A 9E 1D 75 3E C4 69 F0 BD EF CE D5 41 12 5C FC F0 56 39 59 1C 9C 74 F6 B6 0A 83 C3
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*PIN Pads Checksums:*

PinPad	Checksum
1P	N/A

Dear Mr. Bettiga:

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](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.***

Authorised by Frédéric Fortin  
Terminal Testing Group Chair  
EMVCo, LLC

**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>4C</b>	<b>5C</b>	<b>6C</b>	<b>7C</b>			
<b>Card Data Input Capability</b>										
Terminal Type	25	25	25	25	25	25	25			
Manual Key Entry	No									
Magnetic Stripe	Yes									
IC with Contacts	Yes									
<b>CVM Capability</b>										
Plaintext PIN	Yes	Yes	Yes	Yes	No	No	No			
Online Enciphered PIN	Yes	Yes	No	No	No	No	No			
Signature (Paper)	No									
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	Yes	No	No			
No CVM	Yes									
Offline Enciphered PIN (ECC)	No									
Biometric	No									
Offline Finger	No									
Online Finger	No									
Offline Facial	No									
Online Facial	No									
Offline Palm	No									
Online Palm	No									
Offline Iris	No									
Online Iris	No									
Offline Voice	No									
Online Voice	No									
<b>Security Capability</b>										
SDA & DDA	Yes									
Card Capture	No									
CDA	Mode 1									
XDA	No									
<b>Transaction Type Capability</b>										
Tran Type - Cash	No									
Tran Type - Goods	Yes									
Tran Type - Services	Yes									
Tran Type - Cash Back	No									
Tran Type - Inquiry	No									
Tran Type - Transfer	No									
Tran Type - Payment	No									
Tran Type - Admin	No									
Tran Type - Cash Deposit	No									
<b>Terminal Data Input Capability</b>										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	No			
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	No			
Alpha and Special Character Keys	No									
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	No			
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	No			

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

(continued)	1C	2C	3C	4C	5C	6C	7C			
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes									
TAC can be deleted or disabled	No									
How does offline only Terminal process Default Action Codes?	N/A									
How does online only terminal process TAC/IAC-Default when unable to go online?	Normal									
<b>Completion Processing</b>										
Forced Online	No									
Forced Acceptance	No									
Voice Referrals Initiated by Issuer	No									
Default TDOL	Yes									
Default TDOL not configured	Yes									
<b>Exception Handling</b>										
POS Entry Mode	80	80	80	80	80	80	80			
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	No	No			
ICC/Magstripe Reader Combined	Yes									
Supports account type selection	No									
Supports 'on fly' script processing	No									
Issuer Script device limit > 128 bytes	No									
If limit > 128, value supported?										
Internal Date Management	Yes									
Does the terminal support Receipt?	No									

# **Attachment 1**

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

Restriction:

**None**