



July 24, 2007  
Boris Volfman  
SYSTEMA LLC  
Federativnyi Prospect 5-2  
111399 Moscow  
Russia

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

*Approval Number(s):* **2-01286-1-1S-TUU-0707-4.1.c**

*EMV Application Kernel:* **shq-emv 1.0**

*As Tested In*

*Terminal:* **DORS**

*PinPad:* **n/a**

*Operating System:* **Win32 4.0**

*Report ID*      Session 1: **75900846 Report 01 Issue 1**      **TUV Product Service Ltd (United Kingdom)**

*Approved Configurations:*

Config	Vendor Config I	Terminal	Checksum
1S	SK	14	08 2E F7 EB F3 43 21 B8

Dear Boris Volfman:

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 2 terminal type approval for the EMV Application Kernel (hereafter referred to as Application) identified above. 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 Kernel sufficiently conform to EMV 2000 Integrated Circuit Card, Specifications for Payment Systems version 4.0 December 2000.

EMVCo hereby (a) grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.0 Specifications, and (b) agrees to include your Application Kernel in EMVCo's approved Application list. EMVCo's grant to your Application Kernel 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 interface modules published on the EMVCo website ([www.emvco.com](http://www.emvco.com)).

SYSTEMA LLC

*This Letter of Approval is effective on dispatch from EMVCo..*

EMVCo, LLC, a Delaware limited liability company

By: \_\_\_\_\_  
Name: Esther Salk  
Title: EMVCo Terminal Approval Secretariat

<b>Terminal Capabilities-4.x</b>	<b>Value</b>
<b>Card Data Input Capability</b>	
Manual Key Entry	No
Magnetic Stripe	Yes
IC with Contacts	Yes
<b>CVM Capability</b>	
Plaintext PIN for ICC Verification	No
Enciphered PIN for Online Verification	Yes
Signature (Paper)	No
Enciphered PIN for Offline Verification	No
No CVM Required	No
<b>Security Capability</b>	
Static Data Authentication (Mandatory for offline capable terminals supporting DDA)	Yes
Dynamic Data Authentication (Mandatory for offline capable terminals supporting CDA)	Yes
Card Capture	Yes
Combined Dynamic Data Authentication/Application Cryptogram Generation	No
<b>Additional Terminal Capabilities</b>	
<b>Transaction Type Capability</b>	
Cash	Yes
Goods	Yes
Services	Yes
Cash Back	No
Inquiry	Yes
Transfer	Yes
Payment	Yes
Administrative	No
Cash Deposit	Yes
<b>Terminal Data Input Capability</b>	
Does terminal have a keypad? (If keypad is supported the terminal shall support one or more of the following key types)	Yes
Numeric Keys	Yes
Alphabetic and Special Character Keys	Yes
Command Keys	Yes
Function Keys	Yes

<b>Terminal Data Output Capability</b>	
Print, Attendant (Mandatory for Attended terminals)	No
Print, Cardholder	Yes
Display Attendant (Mandatory for terminals supporting signature)	No
Display Cardholder	Yes
Code Table 10	No
Code Table 9	No
Code Table 8	No
Code Table 7	No
Code Table 6	No
Code Table 5	Yes
Code Table 4	No
Code Table 3	No
Code Table 2	No
Code Table 1	No

<b>Application Selection</b>	<b>Value</b>
Support PSE selection Method	Yes
Support Cardholder Confirmation	Yes
Does the terminal have a preferred order of displaying applications?	No
Does Terminal Support Parital AID Selection?	Yes
Does Terminal have Multi Language Support?	No
Does the terminal support the Common Character Set as defined in Annex B Table 20 Book 4	Yes

<b>Data Authentication</b>	<b>Value</b>
What is the maximum supported Certificate Authority Public Key Size in bytes	248
What Exponents does the terminal support (Mandatory for terminals supporting Data Authentication)	3 and $2^{16}+1$
During Data authentication does the terminal check validity for revocation of Issuer Public Key Certificate	No
When supporting certificate revocation, what is the Certificate Revocation List format?	
Does the Terminal contain a DDOL (Mandatory for terminals supporting DDA)	Yes
Is operator action required when loading of CA Public Key fails?	No
CA Public Key verified with CA Public Key Check Sum?	Yes

<b>Cardholder Verification Method</b>	<b>Value</b>
Terminal supports bypass PIN Entry	No
Terminal supports GET Data for PIN Try Counter	No
Terminal supports Fail CVM	Yes
Are amounts known before CVM processing?	Yes

<b>Terminal Risk Management</b>	<b>Value</b>
Floor Limit Checking	Yes
Random Transaction Selection (Mandatory for terminals with offline/online capabilities)	No
Velocity Checking	No
Transaction Log	No
Exception File	No
Performance of Terminal Risk Management based on AIP setting?	Yes

<b>Terminal Action Analysis</b>	<b>Value</b>
Does terminal support the Terminal Action Codes	Yes
<i>Offline Only terminals must answer yes to either one of the following questions:</i>	
Does Offline Only Terminal process Default Action Codes prior to First Generate AC	No
Does Offline Only Terminal process Default Action Codes after First Generate AC	Yes
Does online only terminal skip processing TAC/IAC-Default and automatically request AAC?	Yes
Does online only terminal process TAC/IAC-Default as normal when unable to go online?	No
Device capable of detecting CDA failure before Terminal Action Analysis	No
CDA is always requested in a 1st GENERATE AC, ARQC request	No
CDA is never requested in a 1st GENERATE AC, ARQC request	No
When successfully going online CDA is always requested in a 2nd GENERATE AC, TC request	No
CDA is never requested in a 2nd GENERATE AC when successful host is received, with TC request	No

<b>Completion Processing</b>	<b>Value</b>
Transaction Forced Online Capability	No
Transaction Force Acceptance Capability	No
Does Terminal Support Advices	Yes
Does terminal Support Issuer initiated Voice Referrals	No
Does Terminal Support Batch Data Capture (Mandatory for Offline Capable Terminals)	No
Does Terminal Support Online Data Capture	Yes
Does Terminal Support a Default TDOL	Yes

<b>Exception Handling</b>	<b>Value</b>
What is the POS Entry Mode value when IC cannot be read and the transaction falls back using magstripe (Mandatory for attended terminals)	021

<b>Miscellaneous</b>	<b>Value</b>
Is the terminal equipped with a PINPAD	Yes
Is the amount and PIN entered at the same keypad?	Yes
Is the ICC/Magstripe Reader combined?	Yes
If Combined, is Magstripe read first?	Yes
Does the terminal support account type selection?	No
Is Issuer Script device limit greater than 128 bytes?	No
If greater than 128 bytes, what is the value supported?	