July 07, 2016

Richard Pohl
Triton Systems of Delaware, LLC
21405 B Street

Long Beach MS 39560
UNITED STATES

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

EMV Application Kernel: **EMV.LIB Version v3.0**

Approval Number(s): **2-03573-1-1S-TUVP-0716-4.3.e**
2-03573-1-1OS-TUVP-0716-4.3.e

The EMV Application Kernel has been tested on the following terminal

Terminal: **Triton Z180**
PinPad: **n/a**
Operating System: **1OS = Z180 Version Z180**

Renewal Date: **20-Jun-2019**

Report ID Session 1: **Document 75934632 Report 01 Issue 1 - TÜV SÜD Product Service Ltd**

Kernel Checksum:

40020ebff8faea3a3134d9bcbe9c47b64ab753e9

Configuration Checksum:

Config	Vendor Config ID	Terminal	Checksum
1S		14	6608EF861BADF24024DCF6219009B9D015B28C9A

Dear Richard Pohl:

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 refered 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.

Triton Systems of Delaware, LLC

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

EMVCo, LLC, a Delaware limited liability company
Frédéric Fortin
By: 2016.07.07 14:16:31 +02'00'
Name: Frédéric Fortin
Title: EMVCo Terminal Type Approval

Note:

The Random Number Generator is part of the EMV specifications. This Contact Level 2 Kernel utilizes specific Hardware device in the tested terminal to generate random numbers. To be EMV compliant, this Contact Level 2 Kernel shall be used in conjunction with Terminal Type having this specific Hardware.

Terminal Capabilities	Value Supported
Card Data Input Capability	
Manual Key Entry	No
Magnetic Stripe	Yes
IC with Contacts	Yes
CVM Capability	
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
Security Capability	
Static Data Authentication and Dynamic Data Authentication	No
Card Capture	No
Combined Dynamic Data Authentication / Application Cryptogram Generation	No
Transaction Type Capability	
Cash	Yes
Goods	Yes
Services	Yes
Cash Back	No
Inquiry	Yes
Transfer	Yes
Payment	No
Administrative	No
Cash Deposit	No
Terminal Data Input Capability	
Does terminal have keypad	Yes
Numeric Keys	Yes
Alphabetic and Special Character Keys	No
Command Keys	Yes
Function Keys	Yes
Terminal Data Output Capability	
Print, Attendant (Mandatory for terminals supporting signature)	No
Print, Cardholder	Yes
Display, Attendant (Mandatory for Attended terminals)	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	No
Code Table 4	No
Code Table 3	No
Code Table 2	No
Code Table 1	Yes

Terminal Capabilities	Value Supported
Application Selection	
Support PSE selection Method	Yes
Support Cardholder Selection & Confirmation	Yes
Does Terminal have a preferred order of displaying applications	No
Does terminal perfom partial AID selection	Yes
Does the terminal have multi language support	Yes
Does the terminal support the EMV Language Selection method	Yes
Does the terminal support the Common Character Set as defined in Annex B table 20 Book 4	Yes
Selectable Kernel Configurations	
Is your Multi-Configuration Kernel capable of dynamically selecting a configuration at the time of transaction	n/a
Data Authentication	
What is the maximun supported Certificate Authority Public Key Size (Mandatory for terminals supporting Data Authentication with minimal support for 248 bytes)	
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?	N/A
Does the terminal contain a default DDOL (Mandatory for terminals supporting DDA)	No
Is operator action required when loading CA Public Key fails	No
CA Public Key verified with CA Public Key Check Sum	No
Cardholder Verification Method	
Terminal supports bypass PIN Entry	No
Terminal supports Subsequent bypass PIN Entry	n/a
Terminal supports Get Data for PIN Try Counter	No
Terminal supports Fail CVM	Yes
Are amounts known before CVM processing	Yes
Terminal Risk Management	
Floor Limit Checking (Mandatory for offline only terminals and offline terminals with online capability)	Yes
Random Transaction Selection (Mandatory for offline terminals with online capability, except when cardholder controlled)	No
Velocity Checking (Mandatory for offline only terminals and offline terminals with online capability)	Yes
Transaction Log	No
Exception File	No
Performance of Terminal Risk Management irrespective of AIP setting (expected behavior)	Yes

Terminal Capabilities	Value Supported
Terminal Action Analysis	
Does the terminal support Terminal Action Codes	Yes
Can the values of the Terminal Action Codes be changed	Yes
Can the Terminal Action Codes be deleted or disabled?	Yes
If yes what are the default TAC values supported? (according to Book 3 Section 10.7) TAC Denial:	0000000000
TAC Online:	0000000000
TAC Default:	0000000000
How does Offline Only Terminal process Default Action Codes prior to First Generate AC? (Offline Only Terminal shall support one option)	
How does online only terminal process TAC/IAC-Default when unable to go online? (Online Only Terminal shall support one option)	Skip TAC/IAC and automatically request AAC
Completion Processing	
Transaction Forced Online Capability	No
Transaction Forced Acceptance Capability	No
Does terminal Support advices	No
Does the terminal support Issuer initiated Voice Referrals	No
Does the terminal support Batch Data Capture	No
Does the terminal support Online Data Capture	Yes
Does the terminal support a Default TDOL	No
Exception Handling	
What is the POS Entry Mode value when IC cannot be read and the transaction falls back using Magstripe (Mandatory for attended terminals)	90
Miscellaneous	
Is the terminal equipped with a PIN Pad	Yes
Is the amount and PIN entered at the same keypad	Yes
Is the ICC/Magstripe Reader combined	Yes
If Combined ICC/Magstripe reader is supported, is Magstripe read first	No
Does the terminal support account type selection	No
Does the terminal support 'on fly' script processing (not recommended behavior)	No
Is the Issuer Script device limit greater than 128 bytes	Yes
If the Issuer Script device limit is greater than 128 bytes, what is the value supported	256
Does the terminal support Internal Date Management	Yes
Is the Level 2 Contact Kernel Random Generator using the algorithm described in SB144	No
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, is this function PCI approved	No
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, describe the function (such as algorithm used, etc)	Proprietary combination of non-synchronized clocks/events, external noise sources, and system clocks fed into hash algorithm.
Is the Level 2 Contact Kernel Software dependent on the Terminal Hardware	Yes
If answer to previous question is Yes, describe the function and the Hardware	The Security Module/Dispenser Mechanism provides the source of Random Data asynchronous and independent of the terminal's main CPU board.
Are the Cryptographic functions (RSA, Hash, etc) of the Level 2 Contact Kernel Software dependent on the Terminal Hardware	No
If answer to previous question is Yes, describe the Hardware	
Is any other functions of the Level 2 Contact Kernel Software dependent on the Terminal Hardware	No
If answer to previous question is Yes, describe the functions and the Hardware	
Does the terminal support Receipt (by printing or any electronic means)?	Yes
Checksum	
Does the product comply with the Checksum rules as defined in Contact Terminal Level 2 administrative process	Yes
This is an Initial submission or Subsequent submission or renewal of the original approved product prior to the effective date of checksum rules (cf Terminal Type Approval Bulletin No. 134)	n/a
Configuration Checksum (Static Kernel only)	6608EF861BADF24024DCF6219009B9D015B28C9A

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None