May 31, 2024

Artyom Belyakov

CFT-Asia LLP

43 Mynbaev st.

Almaty 050008

Kazakhstan

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

EMV Application Kernel: **CFTA_EMV_L2 Version 1.01**

Approval Number(s): **2-05425-1-1S-ICTK-0524-4.4b**
2-05425-1-1P-ICTK-0524-4.4b
2-05425-1-1OS-ICTK-0524-4.4b

The EMV Application Kernel has been tested on the following terminal

Terminal: **Sankyo ICT3Q8-3H0180-S on HP ProBook 440 G5**
PinPad: **1P = CFTA Pinpad Simulator on HP ProBook 440 G5, CFTA PS 1.0**
Operating System: **1OS = Windows 10 (64 bit) Version 10.0**

Renewal Date: **28-May-2028**

Report ID Session 1: **EDT24004 Version 2.0 - ICTK Co., Ltd.**

Kernel Checksum:

C3D204103F2EE7BEA322

Configuration Checksum:

Config	Vendor Config ID	Terminal	Checksum
1S		14	BD7B952AE0D4BA6B70AD

PIN Pads Checksums:

PinPad	Checksum
1P	

Dear Artyom Belyakov:

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 4.4 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).

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
Authorised by : Frédéric Fortin
EMVCo Terminal Testing Group Chair

Terminal Capabilities	Value Supported
Card Data Input Capability	
Manual Key Entry	Yes
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 (RSA ODE)	No
No CVM Required	No
Enciphered PIN for offline Verification (ECC ODE)	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
Security Capability	
Static Data Authentication and Dynamic Data Authentication	No
Card Capture	Yes
Combined Dynamic Data Authentication / Application Cryptogram Generation	No
Extended Data Authentication (XDA)	No
Transaction Type Capability	
Cash	Yes
Goods	Yes
Services	Yes
Cash Back	No
Inquiry	Yes
Transfer	Yes
Payment	Yes
Administrative	Yes
Cash Deposit	Yes
Terminal Data Input Capability	
Does terminal have keypad	Yes
Numeric Keys	Yes
Alphabetic and Special Character Keys	Yes
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

Terminal Capabilities	Value Supported
Terminal Data Output Capability	
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	Yes
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	No
Data Authentication	
What is the maximun supported Certificate Authority Public Key Size (Mandatory for terminals supporting Data Authentication with minimal support for 248 bytes)	N/A
What exponents does the terminal support (Mandatory for terminals supporting Data Authentication, 3 and $2^{16}+1$)	N/A
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 default DDOL (Mandatory for terminals supporting DDA)	No
Cardholder Verification Method	
Terminal supports bypass PIN Entry	No
Terminal supports Subsequent bypass PIN Entry	No
Terminal supports Get Data for PIN Try Counter	No
Terminal supports Fail CVM	Yes
Are amounts known before CVM processing	No
Terminal Risk Management	
Floor Limit Checking (Mandatory for offline only terminals and offline terminals with online capability)	No
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)	No
Transaction Log	No
Exception File	No
Terminal Risk Management performed irrespective of AIP setting (expected behavior)	Yes

Terminal Capabilities	Value Supported	
Terminal Action Analysis		
Does the terminal support Terminal Action Codes	Yes	
Can the Terminal Action Codes be deleted or disabled?	No	
If yes what are the default TAC values supported? (according to Book 3 Section 10.7) TAC Denial:		
TAC Online:		
TAC Default:		
How does Offline Only Terminal process Default Action Codes prior to First Generate AC? (Offline Only Terminal shall support one option)	N/A	
How does online only terminal process TAC/IAC-Default when unable to go online?	Skipped	
Completion Processing		
Transaction Forced Online Capability	No	
Transaction Forced Acceptance Capability	No	
Does the terminal support Issuer initiated Voice Referrals	No	
Does the terminal support a Default TDOL	Yes	
If a Default TDOL is supported, can this default TDOL be not configured (or not loaded) in the terminal	No	
Default TDOL TVR bit set before or after the 1st Generate AC Terminal Action Analysis	After	
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)	80	
Miscellaneous		
Is the terminal equipped with a PIN Pad	Yes	
Is the amount and PIN entered at the same keypad	No	
Is the ICC/Magstripe Reader combined	Yes	
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	248	
Does the terminal support Internal Date Management	No	
Is the Level 2 Contact Kernel Random Generator using the algorithm described in Book2, section 11.3	Yes	
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in Book2, section 11.3, is this function PCI approved	n/a	
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in Book2, section 11.3, describe the function (such as algorithm used, etc)		
Is the Level 2 Contact Kernel Software dependent on the Terminal Hardware	No	
If answer to previous question is Yes, describe the function and the Hardware		
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		

Terminal Capabilities	Value Supported	
Miscellaneous		
Does the terminal support Receipt (by printing or any electronic means)?	Yes	
List the Currency Codes supported as for ISO 4217 If Kernel supports multiple currency codes, at least one per currency exponent supported shall be listed and at a minimum 10 regardless of the actual number supported.	156 398 417 643 840 860 934 949 972 978	
Does the terminal support the Application Selection Registered Proprietary Data (ASRPD)?	No	
List the Language(s) supported as for ISO 639 (minimum one shall be declared, and up to 10 if Multiple Languages are supported)	en ru	
Can the Kernel be configured so the data object 'Terminal Risk Management Data' '9F1D' is absent or configured with no value (00 is a value)?	Yes	
Can the Transaction Sequence Counter (TSC) be personalized to any value?	No	
If answer to previous question is Yes, what is the Maximum Value of the Transaction Sequence Counter?		
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)	BD7B952AE0D4BA6B70AD	

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None