July 17, 2025

Mr. Sunny Yoon

SCSpro Co.,Ltd

#1513 Ace Gasan-ForHu 225 Gasan-Digital 1-ro

Geumcheon-gu

Seoul 08501

KOREA, REPUBLIC OF

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

EMV Application Kernel: **SCSpro EMV Level2 Version v44cF**

Approval Number(s): **2-05635-1-1C-ICTK-0725-4.4c**
2-05635-1-2C-ICTK-0725-4.4c
2-05635-1-3C-ICTK-0725-4.4c
2-05635-1-4C-ICTK-0725-4.4c
2-05635-1-5C-ICTK-0725-4.4c
2-05635-1-1P-ICTK-0725-4.4c
2-05635-1-1OS-ICTK-0725-4.4c

The EMV Application Kernel has been tested on the following terminal
Terminal: **RAY10**
PinPad: **1P = RAY10, Firmware MH19 v1.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C**
Operating System: **1OS = Firmware MH19 Version v1.0**

Renewal Date: **07-Jul-2029**

Report ID Session 1: **EDT25046 Version 1.0 - Bureau Veritas ICTK Co., Ltd.**

Kernel Checksum:

c4e615d7

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	CONF1	22	52a3adb7
2C	CONF2	22	1c068ece
3C	CONF3	22	90ec1f7d
4C	CONF4	22	eb071131
5C	CONF5	21	7f2def44

PIN Pads Checksums:

PinPad	Checksum
1P	

Dear Mr. Yoon:

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.

Authorised by Frédéric Fortin
Terminal Testing Group Chair
EMVCo, LLC

Terminal Capabilities	1C	2C	3C	4C	5C					
Card Data Input Capability										
Terminal Type	22	22	22	22	21					
Manual Key Entry	No	No	No	No	No					
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes					
IC with Contacts	Yes	Yes	Yes	Yes	Yes					
CVM Capability										
Plaintext PIN	Yes	Yes	Yes	Yes	No					
Online Enciphered PIN	Yes	No	No	Yes	Yes					
Signature (Paper)	Yes	Yes	Yes	Yes	Yes					
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	No					
No CVM	Yes	Yes	No	No	Yes					
Offline Enciphered PIN (ECC)	No	No	No	No	No					
Biometric	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	Yes	Yes	Yes	No					
Card Capture	No	No	No	No	No					
CDA	Mode 1	Mode 1	Mode 1	Mode 1	No					
XDA	No	No	No	No	No					
Transaction Type Capability										
Tran Type - Cash	No	No	No	No	No					
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes					
Tran Type - Services	Yes	Yes	Yes	Yes	Yes					
Tran Type - Cash Back	No	No	No	No	No					
Tran Type - Inquiry	No	No	No	No	No					
Tran Type - Transfer	No	No	No	No	No					
Tran Type - Payment	No	No	No	No	No					
Tran Type - Admin	No	No	No	No	No					
Tran Type - Cash Deposit	No	No	No	No	No					
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes					
Numeric Keys	Yes	Yes	Yes	Yes	Yes					
Alpha and Special Character Keys	No	No	No	No	No					
Command Keys	Yes	Yes	Yes	Yes	Yes					
Function Keys	Yes	Yes	Yes	Yes	Yes					

(continued)	1C	2C	3C	4C	5C					
Terminal Data Output Capability										
Print	Yes	Yes	Yes	Yes	Yes					
Display	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	No	No	No	No	No					
Partial AID Selection	Yes	Yes	Yes	Yes	Yes					
Multi language	No	No	No	No	No					
EMV Language Selection method	No	No	No	No	No					
Common Character Set	Yes	Yes	Yes	Yes	Yes					
Data Authentication										
Revocation of Issuer PK Certificate	No	No	No	No	No					
Certificate Revocation List Format										
Default DDOL	Yes	Yes	Yes	Yes	No					
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes	Yes	Yes	Yes					
Subsequent Bypass PIN Entry	Yes	Yes	Yes	Yes	Yes					
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	Yes					
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	Yes	Yes	Yes	Yes					
Velocity Checking	Yes	Yes	Yes	Yes	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	Yes	Yes	Yes	Yes	Yes					
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	N/A	N/A	N/A	Skipped					
Completion Processing										
Forced Online	Yes	Yes	Yes	Yes	Yes					
Forced Acceptance	No	No	No	No	No					
Voice Referrals Initiated by Issuer	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	02	02	02	02	02					
Miscellaneous										
Amount and PIN on same keypad	No	No	No	No	No					
ICC/Magstripe Reader Combined	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	Yes	Yes	Yes	Yes	Yes					
If limit > 128, value supported?	256	256	256	256	256					
Internal Date Management	No	No	No	No	No					
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes					

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None