June 23, 2017

Mr. Hans-Henning Kochsmeier

Wincor Nixdorf International GmbH

Heinz-Nixdorf-Ring 1

Paderborn 33106

GERMANY

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

EMV Application Kernel:	**ProChip/EMV D/C Version V3.2**
Approval Number(s):	**2-03962-1-1C-CETI-0617-4.3f**
	2-03962-1-2C-CETI-0617-4.3f
	2-03962-1-3C-CETI-0617-4.3f
	2-03962-1-1OS-CETI-0617-4.3f
	2-03962-1-2OS-CETI-0617-4.3f

The EMV Application Kernel has been tested on the following terminal

Terminal:	**CS 2070**
PinPad:	**n/a**
Operating System:	**1OS = Microsoft Windows 10 Version 10.0.14393**
	2OS = Microsoft Windows 7 Version 6.1.7601

Renewal Date:	**22-Jun-2021**

Report ID   Session 1: **2WIN2_1-3650-01-02-17-A_CETI - CTC advanced GmbH**

Kernel Checksum:

b5df30ae10ef33f8a5006fac47e3e3ed4ef9f6be

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	BASE	14	f25bd96ae32da3ed977804541b3e860c0b013165
2C	K2	24	2759d750956feda81df8127da155b2d7c1e01121
3C	K3	24	80afc363635af2303a50554488ad4434e4ce3147

Dear Mr. Kochsmeier:

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.

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

EMVCo, LLC, a Delaware limited liability company

By:

Name: Frédéric Fortin

Title: EMVCo Terminal Type Approval Chair

Terminal Capabilities	1C	2C	3C						
Card Data Input Capability									
Terminal Type	14	24	24						
Manual Key Entry	No	No	No						
Magnetic Stripe	Yes	Yes	Yes						
IC with Contacts	Yes	Yes	Yes						
CVM Capability									
Plaintext PIN	No	No	No						
Online Enciphered PIN	Yes	Yes	No						
Signature (Paper)	No	No	No						
Offline Enciphered PIN	No	No	No						
No CVM	No	Yes	Yes						
Security Capability									
SDA & DDA	No	No	No						
Card Capture	Yes	Yes	Yes						
CDA	No	No	No						
Transaction Type Capability									
Tran Type - Cash	Yes	No	No						
Tran Type - Goods	Yes	Yes	Yes						
Tran Type - Services	Yes	Yes	Yes						
Tran Type - Cash Back	No	No	No						
Tran Type - Inquiry	Yes	No	No						
Tran Type - Transfer	Yes	No	No						
Tran Type - Payment	Yes	No	No						
Tran Type - Admin	Yes	No	No						
Tran Type - Cash Deposit	Yes	No	No						
Terminal Data Input Capability									
Keypad	Yes	Yes	Yes						
Numeric Keys	Yes	Yes	Yes						
Alpha and Special Character Keys	No	No	No						
Command Keys	Yes	Yes	Yes						
Function Keys	Yes	Yes	Yes						
Terminal Data Output Capability									
Print, Attendant	No	No	No						
Print, Cardholder	Yes	Yes	Yes						
Display, Attendant	No	No	No						
Display, Cardholder	Yes	Yes	Yes						
Code Table 10	Yes	Yes	Yes						
Code Table 9	Yes	Yes	Yes						
Code Table 8	Yes	Yes	Yes						
Code Table 7	Yes	Yes	Yes						
Code Table 6	Yes	Yes	Yes						
Code Table 5	Yes	Yes	Yes						
Code Table 4	Yes	Yes	Yes						
Code Table 3	Yes	Yes	Yes						
Code Table 2	Yes	Yes	Yes						
Code Table 1	Yes	Yes	Yes						

(continued)	1C	2C	3C							
Application Selection										
PSE	Yes	Yes	Yes							
Cardholder Confirmation	Yes	Yes	Yes							
Preferred display order	Yes	Yes	Yes							
Partial AID Selection	Yes	Yes	Yes							
Multi language	Yes	Yes	Yes							
EMV Language Selection method	No	No	No							
Common Character Set	Yes	Yes	Yes							
Data Authentication										
MAX CA Public key	248	248	248							
Exponents	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1							
Revocation of Issuer PK Certificate	No	No	No							
Certificate Revocation List Format										
Default DDOL	No	No	No							
Manual act. when CA PK loading fails	No	No	No							
CA PK verified with check sum	No	No	No							
Cardholder Verification Method										
Bypass PIN Entry	No	No	No							
Subsequent Bypass PIN Entry	n/a	n/a	n/a							
Get Data for PIN Try Counter	No	No	No							
Fail CVM	Yes	Yes	Yes							
Amount known before CVM proces.	No	No	No							
Terminal Risk Management										
Floor Limit Checking	No	No	No							
Random Transaction Selection	No	No	No							
Velocity Checking	No	No	No							
Transaction Log	No	No	No							
Exception File	No	No	No							
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes							
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes							
TAC can be changed	Yes	Yes	Yes							
TAC can be deleted or disabled	Yes	Yes	Yes							
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A							
How does online only terminal process TAC/IAC-Default when unable to go online?	Skipped	Skipped	Skipped							

(continued)	1C	2C	3C							
Completion Processing										
Forced Online	No	No	No							
Forced Acceptance	No	No	No							
Advices	No	No	No							
Voice Referrals Initiated by Issuer	No	No	No							
Batch Data Capture	No	No	No							
Online Data Capture	Yes	Yes	Yes							
Default TDOL	Yes	Yes	Yes							
Exception Handling										
POS Entry Mode	80	80	80							
Miscellaneous										
PIN Pad	Yes	Yes	Yes							
Amount and PIN on same keypad	Yes	Yes	Yes							
ICC/Magstripe Reader Combined	Yes	Yes	Yes							
If Combined, is Magstripe read first?	Yes	Yes	Yes							
Supports account type selection	No	No	No							
Supports 'on fly' script processing	No	No	No							
Issuer Script device limit > 128 bytes	Yes	Yes	Yes							
If limit > 128, value supported?	16000	16000	16000							
Internal Date Management	Yes	Yes	Yes							
Does the terminal support Receipt?	Yes	Yes	Yes							

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None