September 19, 2024

Mr. Person in charge Person in charge

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 Version 4.1**
Approval Number(s):	**2-05428-1-1C-CETI-0924-4.4b**
	2-05428-1-2C-CETI-0924-4.4b
	2-05428-1-3C-CETI-0924-4.4b
	2-05428-1-4C-CETI-0924-4.4b
	2-05428-1-5C-CETI-0924-4.4b
	2-05428-1-6C-CETI-0924-4.4b
	2-05428-1-1P-CETI-0924-4.4b
	2-05428-1-1OS-CETI-0924-4.4b
	2-05428-1-2OS-CETI-0924-4.4b

The EMV Application Kernel has been tested on the following terminal

Terminal:	**DN Series**
PinPad:	**1P = EPP V8, XFS 3 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C**
Operating System:	**1OS = Microsoft Windows 10 Version 1607 (LTSB 2016)**
	2OS = Microsoft Windows 11 Version 24H2

Renewal Date:	**11-Jul-2028**

Report ID	Session 1:	**2WIN2_1-7288-24-01-02-TR1-R02_CETI Version R02 - CTC advanced GmbH**

Kernel Checksum:

519ad0e05b62fa57315c7bccea4fc059d063d5e9

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	K4	14	d3e75e41f58152d4e5ff7f9e6f628f308f259860
2C	K1	14	f25bd96ae32da3ed977804541b3e860c0b013165
3C	K2	24	2759d750956feda81df8127da155b2d7c1e01121
4C	K5	21	d1d9424bb0119fb148f1f30dfee1458f97d417a6
5C	K6	21	64035f54af7fafb965cbeeea56cb95febc1a610a
6C	K7	24	0738b1187cecee1e1797ce19adacb5a1786379ad

PIN Pads Checksums:

PinPad	Checksum
1P	not applicable

Dear Mr. Person in charge:

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	6C				
Card Data Input Capability										
Terminal Type	14	14	24	21	21	24				
Manual Key Entry	No	No	No	No	No	No				
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes				
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes				
CVM Capability										
Plaintext PIN	Yes	No	No	No	No	No				
Online Enciphered PIN	Yes	Yes	Yes	Yes	No	Yes				
Signature (Paper)	No	No	No	No	Yes	No				
Offline Enciphered PIN (RSA)	Yes	No	No	No	No	No				
No CVM	No	No	Yes	No	Yes	No				
Offline Enciphered PIN (ECC)	No	No	No	No	No	No				
Biometric	No	No	No	No	No	No				
Offline Finger	No	No	No	No	No	No				
Online Finger	No	No	No	No	No	No				
Offline Facial	No	No	No	No	No	No				
Online Facial	No	No	No	No	No	No				
Offline Palm	No	No	No	No	No	No				
Online Palm	No	No	No	No	No	No				
Offline Iris	No	No	No	No	No	No				
Online Iris	No	No	No	No	No	No				
Offline Voice	No	No	No	No	No	No				
Online Voice	No	No	No	No	No	No				
Security Capability										
SDA & DDA	Yes	No	No	No	No	No				
Card Capture	Yes	Yes	Yes	Yes	Yes	Yes				
CDA	Mode 2	No	No	No	No	No				
XDA	No	No	No	No	No	No				
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	No	No	No	No				
Tran Type - Goods	Yes	Yes	Yes	No	No	No				
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes				
Tran Type - Cash Back	No	No	No	No	No	No				
Tran Type - Inquiry	Yes	Yes	No	No	No	No				
Tran Type - Transfer	Yes	Yes	No	No	No	No				
Tran Type - Payment	Yes	Yes	No	No	No	No				
Tran Type - Admin	Yes	Yes	No	No	No	No				
Tran Type - Cash Deposit	Yes	Yes	No	No	No	No				
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes				
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes				
Alpha and Special Character Keys	No	No	No	No	No	No				
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes				
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes				

(continued)	1C	2C	3C	4C	5C	6C				
Terminal Data Output Capability										
Print, Attendant	No	No	No	Yes	Yes	No				
Print, Cardholder	Yes	Yes	Yes	No	No	Yes				
Display, Attendant	No	No	No	Yes	Yes	No				
Display, Cardholder	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 10	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 9	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 8	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 7	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 6	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 5	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 4	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 3	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 2	Yes	Yes	Yes	Yes	Yes	Yes				
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes				
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes				
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes				
Preferred display order	Yes	Yes	Yes	Yes	Yes	Yes				
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes				
Multi language	Yes	Yes	Yes	Yes	Yes	Yes				
EMV Language Selection method	No	No	No	No	No	No				
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes				
Data Authentication										
MAX CA Public key	248	248	248	248	248	248				
Exponents	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1	3 and 2^16+1				
Revocation of Issuer PK Certificate	No	No	No	No	No	No				
Certificate Revocation List Format										
Default DDOL	Yes	No	No	No	No	No				
Cardholder Verification Method										
Bypass PIN Entry	No	No	No	No	No	No				
Subsequent Bypass PIN Entry	n/a	n/a	n/a	n/a	n/a	n/a				
Get Data for PIN Try Counter	Yes	No	No	No	No	No				
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes				
Amount known before CVM proces.	No	No	No	No	No	No				
Terminal Risk Management										
Floor Limit Checking	Yes	No	No	No	No	No				
Random Transaction Selection	No	No	No	No	No	No				
Velocity Checking	No	No	No	No	No	No				
Transaction Log	No	No	No	No	No	No				
Exception File	No	No	No	No	No	No				
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes				

(continued)	1C	2C	3C	4C	5C	6C				
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes				
TAC can be deleted or disabled	Yes	Yes	Yes	Yes	Yes	Yes				
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A	N/A				
How does online only terminal process TAC/IAC-Default when unable to go online?	Skipped	Skipped	Skipped	Skipped	Skipped	Skipped				
Completion Processing										
Forced Online	No	No	No	No	No	No				
Forced Acceptance	No	No	No	No	No	No				
Voice Referrals Initiated by Issuer	No	No	No	Yes	Yes	No				
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes				
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes				
Exception Handling										
POS Entry Mode	80	80	80	80	80	80				
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes				
ICC/Magstripe Reader Combined	Yes	Yes	Yes	Yes	Yes	Yes				
Supports account type selection	No	No	No	No	No	No				
Supports 'on fly' script processing	No	No	No	No	No	No				
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes				
If limit > 128, value supported?	16000	16000	16000	16000	16000	16000				
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes				
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes				

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restriction:

None