

March 01, 2018

Kim Dons Laursen  
Nets Denmark A/S  
Lautrupbjerg 10  
Ballerup 2750  
DENMARK

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

**EMV Application Kernel: PSAM Version 9.10.02**  
**Approval Number(s): 2-04135-1-1C-ULVS-0318-4.3f**  
**2-04135-1-2C-ULVS-0318-4.3f**  
**2-04135-1-1P-ULVS-0318-4.3f**  
**2-04135-1-1OS-ULVS-0318-4.3f**

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The EMV Application Kernel has been tested on the following terminal  
**Terminal: PS UPT 2200 + Sankyo SLM Reader with PSAM**  
**PinPad: 1P = Cryptera 2200 EPP, 414-5010 R3x**  
**Operating System: 1OS = Nets embedded transaction scheduler Version 9.00**

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**Renewal Date: 18-Jan-2022**

**Report ID Session 1: 2 NETS-RP11992500JD01A-ULVS - UL VS Ltd**

**Kernel Checksum:**

31 ED FE 8D 7D 6B 04 DB
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**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	Baseline with PIN Pad	25	84 E5 81 97 63 39 20 B5
2C	UPT without PIN	25	35 05 EF 5C 42 4A 96 7B

**PIN Pads Checksums:**

PinPad	Checksum
1P	

Dear Kim Dons Laursen:

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 referred 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](http://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

<b>Terminal Capabilities</b>	<b>1C</b>	<b>2C</b>								
<b>Card Data Input Capability</b>										
Terminal Type	25	25								
Manual Key Entry	No	No								
Magnetic Stripe	Yes	Yes								
IC with Contacts	Yes	Yes								
<b>CVM Capability</b>										
Plaintext PIN	Yes	No								
Online Enciphered PIN	Yes	No								
Signature (Paper)	No	No								
Offline Enciphered PIN	Yes	No								
No CVM	Yes	Yes								
<b>Security Capability</b>										
SDA & DDA	Yes	Yes								
Card Capture	No	No								
CDA	Mode 1	Mode 1								
<b>Transaction Type Capability</b>										
Tran Type - Cash	No	No								
Tran Type - Goods	Yes	Yes								
Tran Type - Services	Yes	Yes								
Tran Type - Cash Back	No	No								
Tran Type - Inquiry	No	No								
Tran Type - Transfer	No	No								
Tran Type - Payment	No	No								
Tran Type - Admin	No	No								
Tran Type - Cash Deposit	No	No								
<b>Terminal Data Input Capability</b>										
Keypad	Yes	No								
Numeric Keys	Yes	No								
Alpha and Special Character Keys	No	No								
Command Keys	Yes	Yes								
Function Keys	Yes	No								
<b>Terminal Data Output Capability</b>										
Print, Attendant	No	No								
Print, Cardholder	Yes	Yes								
Display, Attendant	No	No								
Display, Cardholder	Yes	Yes								
Code Table 10	No	No								
Code Table 9	No	No								
Code Table 8	No	No								
Code Table 7	No	No								
Code Table 6	No	No								
Code Table 5	No	No								
Code Table 4	No	No								
Code Table 3	No	No								
Code Table 2	No	No								
Code Table 1	Yes	Yes								

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

<b>(continued)</b>	<b>1C</b>	<b>2C</b>								
<b>Completion Processing</b>										
Forced Online	No	No								
Forced Acceptance	No	No								
Advices	No	No								
Voice Referrals Initiated by Issuer	No	No								
Batch Data Capture	Yes	Yes								
Online Data Capture	No	No								
Default TDOL	Yes	Yes								
<b>Exception Handling</b>										
POS Entry Mode	80	80								
<b>Miscellaneous</b>										
PIN Pad	Yes	No								
Amount and PIN on same keypad	No	No								
ICC/Magstripe Reader Combined	Yes	Yes								
If Combined, is Magstripe read first?	No	No								
Supports account type selection	No	No								
Supports 'on fly' script processing	Yes	Yes								
Issuer Script device limit > 128 bytes	Yes	Yes								
If limit > 128, value supported?	300	300								
Internal Date Management	No	No								
Does the terminal support Receipt?	Yes	Yes								

# **Attachment 1**

## **Specific Terms and Conditions to the Letter of Approval**

Restriction:

**None**