



July 24, 2014

Paola Araco  
NCR Financial Solutions Group Limited  
Discovery Centre (2nd Floor - East)  
3 Fulton Road  
Dundee DD2 4SW  
United Kingdom

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

**EMV Application Kernel: EMV/CAM2 Kernel Version 3.00 for AANDC**

**Approval Number(s):**  
**2-02189-1-1C-CET-1211-4.2.c**  
**2-02189-1-1OS-CET-1211-4.2.c**  
**2-02189-1-2OS-CET-1211-4.2.c**

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The EMV Application Kernel has been tested on the following terminal

**Terminal: NCR SelfServ™ ATM**  
**PinPad: n/a**  
**Operating System: 1OS = Windows 7 Version version 6.1**  
**2OS = Windows XP Version version 5.1**

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**Renewal Date: 20-Dec-2017**

**Report ID Session 1: 2NCRF\_1-8210-1-2-14\_CET - CETECOM ICT Services GmbH**

**Configurations Checksums:**

Config	Vendor Config ID	Terminal	Checksum
1C	C-STD	14	93963AF0C683B89A9750822C0AC6B4B708276CBD

Dear Paola Araco:

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 2 terminal type approval for the EMV Application Kernel (hereafter referred to as Application) identified above. 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 Kernel sufficiently conform to EMV Integrated Circuit Card Specifications for Payment Systems, Version 4.3 of November 2011 and all the applicable specification bulletins at the date of the test session.

EMVCo hereby (a) grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.3 Specifications, and (b) agrees to include your Application Kernel in EMVCo's approved Application list.

EMVCo's grant to your Application Kernel 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 Application Kernels published on the EMVCo website ([www.emvco.com](http://www.emvco.com)).

NCR Financial Solutions Group Limited

***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: Arnaud du Chéné

Title: EMVCo Terminal Type Approval

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

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

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

# **Attachment 1**

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

Restriction:

**None**