March 21, 2025

American Express
Attn: Manik Biswas
200 Vesey Street
New York, NY 10080,
United States

Approval Number: 403.CHYP.AMEX.SOFTPOSKC.20250321-BR

RE: Expresspay 4.0.3 Reader Certification
mPOS Product Name: SoftPos Kernel Client
Architecture: mPOS-CSP
Firmware Version: 1.0.20
As Tested in: Samsung S9

Dear Manik,

We are pleased to inform you that American Express has certified the **SoftPos Kernel Client** for Expresspay 4.0.3 using Firmware Version **1.0.20**. This Expresspay 4.0.3 certification will expire on March 21st, 2028.

The certification process addresses the acceptance of American Express Proximity Device capabilities.

Because the certification process cannot possibly test for every scenario, the discovery of any subsequent bugs or issues may require the correction and recertification of your software, firmware, and/or hardware.

Sincerely,

Rodolfo E. Herrera...

Rodolfo E. Herrera
Network and Acquirer Solutions
American Express

If you have questions or for additional certification requests, please send an email to axp.contactless.terminal.support@aexp.com

Observations

- Device S9 failed collision testing
- Performance, this device has a total transaction time of >= 150 MS
- S9 device has only detected cards at 0CM distance, any other distance has failed

Expresspay 4.0.3 Contactless Reader Implementation Conformance Statement

Confidential and Trade Secret Materials

This document contains sensitive, confidential and trade secret information and may not be disclosed to third parties without the prior written consent of American Express Travel Related Services Company, Inc.

The policies, procedures, and rules in this manual are subject to change from time to time by American Express Global Network Services.

Summary of Changes

Date	Version	Modification
15-Dec-17	1.0.0	Baseline document – Expresspay 4.0
11-Dec-19	1.0.1	mPOS Architectures added. 'other' architecture added. Aligned with Expresspay 4.0.3.
27-Jul-20	1.0.2	Further updates in line with Expresspay Terminal Technical Specification 4.0.3 and Terminal Level 2 Test Plan 4.0.3 Release 01.
13-Aug-20	1.0.3	Fixed options for mPOS architecture
29-Jan-21	1.0.4	Updated formatting issues
28-Jan-22	1.0.5	Added Cashback
28-May-24	1.0.6	Changed code obfuscation options; No functional change

Contents

1.0 Using this document

1.1. Purpose of the Document

The purpose of this document is to capture the implementer specific options for contactless readers submitted for Expresspay contactless reader functional type approval. Readers are submitted for type approval to prove compliance with the functional requirements as defined in [SPEC].

1.2. Out of Scope

The following are considered out of scope of this document:

- Details of functional and technical requirements as specified in [SPEC].
- Details of the certification process as specified in [PROC].

1.3. Audience

The document is intended to be used by:

- American Express;
- Terminal vendors;
- Reader application developers;
- Test tool vendors;
- Expresspay accredited testing laboratories.

1.4. Reference Documents

The following references are cited by this document:

Reference	Document
[PROC]	Expresspay Terminal Level 2 Approval Process
[SPEC]	Expresspay Terminal Specification (Expresspay 4.0.x)

1.5. Organization of Document

This document is organised in three sections as follows:

- Certification Information – asks about the product to be certified, previous certification of the kernel and contactless components and details of the vendor;
- Product Information – asks general questions about the product to be certified and the architecture employed;
- Implementation Information – asks detailed questions about the implementation of the Expresspay kernel within the product and support for optional features;
- Declaration.

1.6. Terminology and Conventions

In this document, the use of the words “shall” and “must” indicate mandatory requirements. Use of the words “should” or “advised” indicate recommendations and best practice guidelines.

2.0 Implementation Conformance Statement

2.1. Certification Information

Certification Request	
Product name	SoftPos Kernel Client
Product version *If applicable.*	1.0.20
Certification type	○ New Kernel Certification ◉ Device Update (using unmodified previously certified kernel) ○ Kernel Update (modification of previously certified kernel)
If this is a kernel or device update, please provide the existing Expresspay Level 2 certification number for this product.	403.CHYP.AMEX.SOFTPOSKC.211111
If this is a device update, please provide details as to which components are different than those in the originally certified product	Code obfuscation option changed to maintain specified values in the package names

Vendor information					
Company legal name	American Express				
DBA *If different from legal name.*					
Company address	200 Vesey Street				
Postcode	10080	City	New York	State/province	NY
Country	USA				
Primary contact's details **(This will be used for all Expresspay contactless reader type approval communication)**					
First name	Manik	Last name	Biswas		
Title	Sr. Staff Engineer				

Email address	manik.biswas1@aexp.com		
Telephone		Fax	
Company address			

EMVCo Level 1 Certification details	
Version of EMV Contactless Protocol supported	
Level 1 Approval number	
Date EMV Contactless Protocol certification received *If the reader has not yet received EMV Contactless Protocol certification, please provide the certification start date.*	

2.2. Product Information

Product details	
Reader type	○ Integrated reader ◉ Intelligent reader ○ Transparent Reader
Operating System name and version	Android with minimum version 24
Reader architecture	○ Modular ◉ Non-Modular
mPOS Architecture (Please choose 'Not applicable' if reader is **not** mPOS)	○ Not applicable ○ Accessory (mPOS-A) ○ Accessory with PIN entered on the COTS Device (mPOS-ASP) ○ Contactless Payment on COTS Device (mPOS-C) ◉ Contactless Payment and PIN entered on COTS Device (mPOS-CSP) ○ Other - Please provide details in the next box
mPOS Architecture description (Please complete if 'Other' is selected in the previous box)	
Is the reader a Transit Access Terminal only? (For informational only. This is not applicable to mPOS)	○ Yes ◉ No

Version number of the Expresspay kernel application to be certified	1.0.20
Version number of any test application required for certification	
Modular architecture details[1] **(To be completed if the reader employs a modular architecture.)**	
Terminal Architecture Name / Identifier	
Modular Approval Number	
Checksum function output value for the Expresspay kernel, and any referenced libraries, to be certified *Instructions for how to trigger the checksum function must be included with the completed ICS form.*	

Proximity Coupling Device details **(This is not applicable to mPOS-C or mPOS-CSP)**	
PCD ID *A unique ID which identifies the PCD embedded in the product.*	
PCD hardware name or model number	
PCD software name	
Software version	

[1] Please note that filling in this section is not a request for Modular Label approval. A separate approval request form needs to be completed. Kindly contact your American Express representative for further information.

PIN Entry Device information (also applicable to mPOS-A)	
Is PIN entry supported?	◉ Yes ○ No
PED Details **(Please complete if the reader supports PIN entry device. This is not applicable to mPOS-C or mPOS-CSP)**	
PED Model name	
PED software version	
PED architecture	◉ Standalone ○ Integrated with reader ○ Integrated with terminal

Test device details **(Additional information should be provided, if necessary, in the space provided at the end of this form.)**	
Reader serial numbers	

2.3. Implementation Information

Where the reader is hard-coded to support, or not support, particular functionality, please check 'Yes' or 'No' as appropriate in answer to the questions below. Where the reader can be configured (without modification to the Expresspay kernel or any referenced libraries) to support, or not support, particular functionality, please check 'Configurable'. Readers which support such configuration are known as multi-configuration kernel readers.
The inclusion of any 'Configurable' answers will identify your reader as being able to be configured to support a variety of implementation requirements from your customers. Your reader will be tested using a variety of configurations to ensure that it is certified for implementation in any of the potential configurations that result from its capabilities. This provides the greatest flexibility for you and your clients whilst providing American Express with the necessary confidence in the product.

Pre-Kernel processing	
Can the reader operate in **Expresspay EMV Mode only?** Please choose 'Yes' if the reader is mPOS-C or mPOS-CSP and 'Configurable' for **ALL** other readers. **'Yes'** indicates that the reader is hardcoded to operate in **EMV mode only**. This will be the only supported transaction mode. **'Configurable'** means that the reader can be configured to operate in either **EMV mode only** or **EMV and Magstripe Mode**.	☒ Yes ☐ Configurable
Can the reader check it has an online connection **during pre-processing** before activating the kernel? Please choose 'Yes' if the reader is mPOS-C or mPOS-CSP.	☒ Yes ☐ No ☐ Configurable
Does the reader detect it will be unable to go online during **pre-PDOL processing** before starting a transaction?	☒ Yes ☐ No ☐ Configurable
Configurable unpredictable range for Expresspay Magstripe mode transactions *Default UN range is 0 to 60.* Please complete only if the reader supports Expresspay Magstripe mode; otherwise, please check the "Not applicable" box.	0 to 60 ☒ Not applicable

Contactless transaction types supported	
Are “Cash” transactions supported? (Application Usage Control) Please choose ‘No’ for **ALL** mPOS readers.	☐ Yes ☒ No ☐ Configurable If the above answer is “Yes” or “Configurable”, then which type of “Cash” transactions are supported: ☐ Domestic ☐ International
Are “Cashback” transactions supported?	☐ Yes ☒ No ☐ Configurable If the above answer is “Yes” or “Configurable”, then which type of “Cashback” transactions are supported: ☐ Domestic ☐ International
Are “Goods and Services” transactions supported? (Application Usage Control)	☐ Yes ☐ No ☒ Configurable If the above answer is “Yes” or “Configurable”, then which type of “Goods and Services” transactions are supported: ☒ Domestic ☒ International

Are “ATM” transactions supported? (Application Usage Control) Please choose ‘No’ for **ALL** mPOS readers.	☐ Yes ☒ No ☐ Configurable If the above answer is “Yes” or “Configurable”, then which type of “ATM” transactions are supported: ☐ Domestic ☐ International
What type of operational control is supported by the Terminal?	Operational Control: ☒ Financial Institution ☒ Merchant ☒ Cardholder
Please specify the environment in which the Terminal will operate: Please choose ‘Attended’ for **ALL** mPOS readers.	Environment: ☒ Attended ☐ Unattended
Is the Terminal type “Offline only”? **Note**: If the terminal type is “Offline with online capability”, then the only valid options are either “No” or “Configurable” Please choose ‘No’ if the reader is mPOS-C or mPOS-CSP.	☐ Yes ☒ No ☐ Configurable
Is the Terminal type “Online only”? **Note**: If the terminal type is “Offline with online capability”, then the only valid options are either “No” or “Configurable” Please choose ‘Yes’ if the reader is mPOS-C or mPOS-CSP.	☒ Yes ☐ No ☐ Configurable

Other Interfaces supported	
Does the reader support the AEIPS contact interface? Please choose 'No' if the reader is mPOS-C or mPOS-CSP.	☐ Yes ☒ No ☐ Configurable

Transaction Processing Capability	
Is the reader capable of processing transactions in Partial Online? Please choose 'Yes' if the reader is mPOS-C or mPOS-CSP.	☒ Yes ☐ Configurable
Is the reader capable of processing transactions with Delayed Authorization? Please choose 'No' if the reader is mPOS-C or mPOS-CSP.	☐ Yes ☒ No ☐ Configurable
Is the reader capable of displaying, printing or communicating the TVR to the test tool after the GENAC1 command is completed during a Magstripe Mode transaction?	☐ Yes ☒ No

Offline data authentication	
Expresspay requires that all Terminals must support SDA. The enablement of SDA support must be configurable for deployment. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable
Expresspay requires that all Terminals must support CDA. The enablement of CDA support must be configurable for deployment. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable
What is the maximum length of CA public key supported by the reader?	1984 bits

Does the reader support revocation of an installed CA public key without the key's removal?	☐ Yes ☒ No ☐ Configurable
Does the reader detect CDA failure during Issuer or ICC public key recovery prior to the First Terminal Action Analysis?	☒ Yes ☐ No ☐ Configurable

Processing Restrictions	
Is Dynamic Reader Limits functionality implemented and configurable for use? Please choose 'No' if the reader is mPOS-C or mPOS-CSP.	☐ Yes ☒ No
Is exception list processing supported?	☐ Yes ☐ No ☒ Configurable

Cardholder verification	
Does the reader support Online PIN as a CV method? If supported, the enablement of Online PIN capability must be configurable at deployment. Please choose 'No' if the reader is mPOS-C and 'Configurable' for all the other readers.	☐ No ☒ Configurable
Does the reader support Signature as a CV method? If supported, the enablement of Signature capability must be configurable at deployment. Please choose 'No' for mPOS readers that do not support electronic signatures and 'Configurable' for all the other readers.	☐ No ☒ Configurable

The reader must be able to support Mobile CVM as a CV method. The enablement of Mobile CVM capability must be configurable at deployment. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable
The reader must support a configurable deactivation timer for when restarting transactions due to Mobile CVM failure. The default value of this timer shall be 1.5 seconds. Please confirm that this is the case by checking the 'Yes' checkbox.	☐ Yes
Is the reader exempt from No CVM checks? Please choose 'No' if the reader is mPOS-C or mPOS-CSP.	☐ Yes ☒ No ☐ Configurable

Printing or emailing receipts	
Is the reader connected to a terminal with a printing capability or, in the case of mPOS terminals, can provide electronic receipts via email or an alternative method? ***Note**: This is mandatory for an integrated reader.*	☒ Yes ☐ No
Is the printing or displaying/emailing of Terminal Verification Results supported?	☒ Yes ☐ No
Is the printing or displaying/emailing of Authorisation Response Codes supported?	☒ Yes ☐ No
Does the reader support Cardmember display messages?	☒ Yes ☐ No

Membership-Related Data Processing	
Does the reader support membership-related data processing?	☒ Yes ☐ No ☐ Configurable

3.0 Declaration

I confirm that all of the information I have provided, in answer to the questions on this form, is correct and complete.	
Please confirm that the terminal does not support random transaction selection or velocity checking for Expresspay transactions.	☒ Confirmed ☐ Not Confirmed
Please confirm that all terminal data elements and all card public data elements can be retrieved from the kernel.	☒ Confirmed ☐ Not Confirmed
Please confirm that any data elements that can be retrieved from the kernel are not filtered.	☒ Confirmed ☐ Not Confirmed
Name	Rhonda Marx
Title	VP
Signature	
Date	
Modular Architecture Declaration[2] **(To be completed if the reader employs a modular architecture)**	
Please confirm that the terminal architecture identified above is structured using self-contained modules that can be updated independently.	☐ Confirmed ☐ Not Confirmed
Please confirm that the terminal architecture identified above is capable of calculating a unique checksum value over the Expresspay kernel and any external libraries utilised in the processing of Expresspay transactions.	☐ Confirmed ☐ Not Confirmed
Please confirm that the configuration of a terminal implementing the architecture identified above can be modified without the need for re-compilation of the Expresspay kernel or any external libraries utilised in the processing of Expresspay transactions.	☐ Confirmed ☐ Not Confirmed
Please confirm that you have supplied design documentation in accompaniment with this form which correctly and completely describes the structure and interfaces of the terminal architecture identified above.	☐ Confirmed ☐ Not Confirmed

[2] Please note that filling in this section is not a request for Modular Label approval. A separate approval request form needs to be completed. Kindly contact your American Express representative for further information.

Please confirm that all products listed above implement the same terminal architecture as described in the accompanying design documentation.	☐ Confirmed ☐ Not Confirmed

3.1. Additional Information

~ End of Document ~