8th January 2020

PAX Computer Technology (Shenzhen) Co., Ltd.
Attn: Aileen Liu
4/F, No.3 Building, Software Park,
Second Central Science-Tech Road,
High-Tech industrial Park, Shenzhen,
Guangdong, P.R.C.

Approval Number: 402.BCTC.PAX.A35.200108-F

RE: Expresspay 4.0.2 Reader Certification
Product Name: A35
Firmware Version: F AE LIB v251

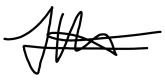
Dear Aileen,

We are pleased to inform you that American Express has certified the **A35** for Expresspay 4.0.2 using Firmware Version **F AE LIB v251** This Expresspay 4.0.2 certification is valid for three years from the date of issuance.

The certification process addressed 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,



Jose Luis Giacometto
Global Network & Merchant Services
American Express

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

Expresspay 4.0.2 Contactless Reader Implementation Conformance Statement

Confidential and Trade Secret Materials

Summary of Changes

Date	Version	Modification
15-Dec-17	1.0.0	Baseline document – Expresspay 4.0

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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)

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	A35
Product version *If applicable.*	A
Certification type	○ New Kernel Certification ○ Kernel Update (modification of previously certified kernel) ◉ Device Update (using unmodified previously certified kernel)
If this is a kernel or device update, please provide the existing Expresspay Level 2 certification number for this product.	402.BCTC.PAX.A30.200108
If this is a device update, please provide details as to which components are different than those in the originally certified product	Only The PCD is different, but it has valid EMV contactless L1 LOA.

Vendor information					
Company legal name	PAX Computer Technology (Shenzhen) Co., Ltd.				
DBA *If different from legal name.*					
Company address	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.				
Postcode	518057	City	Shenzhen	State/province	Guangdong
Country	China				
Primary contact's details **(This will be used for all Expresspay contactless reader type approval communication)**					
First name	Aileen	Last name	Liu		
Title	Manager				
Email address	certservice@paxsz.com				
Telephone	+86-755-86156483	Fax	+86-755-86155423		

Company address	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.

EMVCo Level 1 Certification details	
Version of EMV Contactless Protocol supported	EMV Contactless Interface Specification , Version 3.0 of February 2018
Level 1 Approval number	17300 0221 300 30a 30a BCTS
Date EMV Contactless Protocol certification received *If the reader has not yet received EMV Contactless Protocol certification, please provide the certification start date.*	February 5, 2021

2.2. Product Information

Product details	
Reader type	◉ Integrated reader ○ Intelligent reader ○ Transparent Reader
Operating System name and version	PayDroid II
Reader architecture	○ Modular ◉ Non-Modular
Is the reader a Transit Access Terminal only? (Informational only)	☐ Yes ☒ No
Version number of the Expresspay kernel application to be certified	F AE LIB v251
Version number of any test application required for certification	EXP4.0.2

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	
PCD ID *A unique ID which identifies the PCD embedded in the product.*	PCD-11-35-A

[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.

PCD hardware name or model number	PCD-11-35-HW
PCD software name	PCD-A04-A-SW
Software version	203

PIN Entry Device information	
Is PIN entry supported?	(•) Yes ( ) No
PED Details **(To be completed if the reader supports PIN entry)**	
PED Model name	A35
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	2290000170

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	
The reader must be able to be configured to operate only in Expresspay EMV Mode. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable
Does the reader detect it will be unable to go online before the transaction starts?	☒ Yes ☐ No ☐ Configurable
Configurable unpredictable range for Expresspay Magstripe mode transactions *Default UN range is 0 to 60.*	0 to 60

Contactless transaction types supported	
Are "Cash" transactions supported? (Application Usage Control)	☐ Yes ☐ No ☒ Configurable If the above answer is "Yes" or "Configurable", then which type of "Cash" 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)	☐ 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:	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"	☐ 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"	☐ Yes ☐ No ☒ Configurable

Other Interfaces supported	
Does the reader support the AEIPS contact interface?	☐ Yes ☐ No ☒ Configurable

Transaction Processing Capability	
Is the reader capable of processing transactions in Partial Online?	☐ Yes ☒ Configurable

Is the reader capable of processing transactions with Delayed Authorization?	☐ 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 exception list processing supported?	☒ Yes ☐ No ☐ Configurable

Cardholder verification	
The reader must be able to support Online PIN as a CV method. The enablement of Online PIN support must be configurable at deployment. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable

The reader must be able to support Signature as a CV method. The enablement of Signature support must be configurable at deployment. Please confirm that this is the case by checking the 'Configurable' checkbox.	☒ Configurable
The reader must be able to support Mobile CVM as a CV method. The enablement of Mobile CVM support 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 1.5s
Is the reader exempt of No CVM checks?	☐ Yes ☐ No ☒ Configurable

Printing receipts	
Is the reader connected to a terminal with a printing capability? ***Note**: This is mandatory for an integrated reader.*	☒ Yes ☐ No
Is the printing of Terminal Verification Results supported?	☒ Yes ☐ No
Is the printing of Authorisation Response Codes supported?	☒ Yes ☐ No
Does the reader support Card member display messages?	☒ Yes ☐ No

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

2.4. 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	Aileen Liu
Title	Manager
Signature	Aileen Liu
Date	March 16, 2021
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
Please confirm that all products listed above implement the same terminal architecture as described in the accompanying design documentation.	☐ 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.

2.5. Additional Information

~ End of Document ~