

October 10, 2015



James Chiu
Uniform Industrial Corporation
1F., No.1, Ln. 15, Ziqiang St.,
Tucheng Dist.,
New Taipei City 236
Taiwan (R.O.C.)

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

EMV Application Kernel: PP791 EMV L2 Kernel Version 1.0

Approval Number(s): 2-03288-1-1S-FMT-1015-4.3.d
2-03288-1-1OS-FMT-1015-4.3.d

The EMV Application Kernel has been tested on the following terminal

Terminal: PP791
PinPad: n/a
Operating System: 1OS = Linux Version 2.6.35

Renewal Date: 02-Oct-2018

Report ID Session 1: T15RAP09-02-3_V2.0 - FIME Asia

Kernel Checksum:

62d57e4537a2114b860b9546bbaf3c3eac434e9b
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Configuration Checksum:

Config	Vendor Config ID	Terminal	Checksum
1S		22	22E0E1C87000F0A001

Dear James Chiu:

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).

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.

Uniform Industrial Corporation

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

Note:

The Random Number Generator functions are part of the EMVCo specification and in the present Contact Level 2 Kernel the random number is generated by a specific Hardware device in the tested terminal. To be fully EMVCo compliant, the present Contact Level 2 Kernel shall be used in conjunction with this specific Hardware.

The Checksum of this Contact Level 2 Kernel covers all functions specified by EMVCo that are located in software. Functions, such as the random number generator, that are managed by this specific Hardware device in the tested terminal are not part of this Checksum.

Terminal Capabilities		Value Supported
Card Data Input Capability		
Manual Key Entry		Yes
Magnetic Stripe		Yes
IC with Contacts		Yes
CVM Capability		
Plaintext PIN for ICC Verification		Yes
Enciphered PIN for online Verification		Yes
Signature (Paper)		Yes
Enciphered PIN for offline Verification		Yes
No CVM Required		No
Security Capability		
Static Data Authentication and Dynamic Data Authentication		Yes
Card Capture		No
Combined Dynamic Data Authentication / Application Cryptogram Generation		Mode 1
Transaction Type Capability		
Cash		No
Goods		Yes
Services		Yes
Cash Back		Yes
Inquiry		No
Transfer		No
Payment		No
Administrative		No
Cash Deposit		No
Terminal Data Input Capability		
Does terminal have keypad		Yes
Numeric Keys		Yes
Alphabetic and Special Character Keys		Yes
Command Keys		Yes
Function Keys		Yes
Terminal Data Output Capability		
Print, Attendant (Mandatory for terminals supporting signature)		Yes
Print, Cardholder		No
Display, Attendant (Mandatory for Attended terminals)		Yes
Display Cardholder		No
Code Table 10		No
Code Table 9		No
Code Table 8		No
Code Table 7		No
Code Table 6		No
Code Table 5		No
Code Table 4		No
Code Table 3		No
Code Table 2		No
Code Table 1		Yes

Terminal Capabilities		Value Supported
Application Selection		
Support PSE selection Method		Yes
Support Cardholder Confirmation		Yes
Does Terminal have a preferred order of displaying applications		No
Does terminal perform partial AID selection		Yes
Does the terminal have multi language support		Yes
Does the terminal support the EMV Language Selection method		Yes
Does the terminal support the Common Character Set as defined in Annex B table 20 Book 4		Yes
Selectable Kernel Configurations		
Is your Multi-Configuration Kernel capable of dynamically selecting a configuration at the time of transaction		No
Data Authentication		
What is the maximum supported Certificate Authority Public Key Size (Mandatory for terminals supporting Data Authentication with minimal support for 248 bytes)		248
What exponents does the terminal support (Mandatory for terminals supporting Data Authentication, 3 and $2^{16}+1$)		3 and $2^{16}+1$
During data authentication does the terminal check validity for revocation of Issuer Public Key Certificate		No
When supporting certificate revocation, what is the Certificate Revocation List format?		N/A
Does the terminal contain a default DDOL (Mandatory for terminals supporting DDA)		Yes
Is operator action required when loading CA Public Key fails		Yes
CA Public Key verified with CA Public Key Check Sum		Yes
Cardholder Verification Method		
Terminal supports bypass PIN Entry		Yes
Terminal supports Subsequent bypass PIN Entry		Yes
Terminal supports Get Data for PIN Try Counter		Yes
Terminal supports Fail CVM		Yes
Are amounts known before CVM processing		Yes
Terminal Risk Management		
Floor Limit Checking (Mandatory for offline only terminals and offline terminals with online capability)		Yes
Random Transaction Selection (Mandatory for offline terminals with online capability, except when cardholder controlled)		Yes
Velocity Checking (Mandatory for offline only terminals and offline terminals with online capability)		Yes
Transaction Log		No
Exception File		No
Performance of Terminal Risk Management irrespective of AIP setting (expected behavior)		Yes

Terminal Capabilities		Value Supported
Terminal Action Analysis		
Does the terminal support Terminal Action Codes	Yes	
Can the values of the Terminal Action Codes be changed	No	
Can the Terminal Action Codes be deleted or disabled? If yes what are the default TAC values supported? (according to Book 3 Section 10.7)	No	
TAC Denial:		
TAC Online:		
TAC Default:		
How does Offline Only Terminal process Default Action Codes prior to First Generate AC? (Offline Only Terminal shall support one option)	No	
How does online only terminal process TAC/IAC-Default when unable to go online? (Online Only Terminal shall support one option)	No	
Completion Processing		
Transaction Forced Online Capability	Yes	
Transaction Forced Acceptance Capability	No	
Does terminal Support advices	No	
Does the terminal support Issuer initiated Voice Referrals	Yes	
Does the terminal support Batch Data Capture	Yes	
Does the terminal support Online Data Capture	No	
Does the terminal support a Default TDOL	Yes	
Exception Handling		
What is the POS Entry Mode value when IC cannot be read and the transaction falls back using Magstripe (Mandatory for attended terminals)	0x80	
Miscellaneous		
Is the terminal equipped with a PIN Pad	Yes	
Is the amount and PIN entered at the same keypad	No	
Is the ICC/Magstripe Reader combined	No	
If Combined ICC/Magstripe reader is supported, is Magstripe read first	No	
Does the terminal support account type selection	Yes	
Does the terminal support 'on fly' script processing (not recommended behavior)	No	
Is the Issuer Script device limit greater than 128 bytes	No	
If the Issuer Script device limit is greater than 128 bytes, what is the value supported		
Does the terminal support Internal Date Management	Yes	
Is the Level 2 Contact Kernel Random Generator using the algorithm described in SB144	No	
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, is this function PCI approved	Yes	
If the Level 2 Contact Kernel Random Generator is not using the algorithm described in SB144, describe the function (such as algorithm used, etc)	Generated by H/W	
Is the Level 2 Contact Kernel Software dependent on the Terminal Hardware	Yes	
If answer to previous question is Yes, describe the function and the Hardware	PP791 has a Random number Generator in main Processor(IMX258)	
Are the Cryptographic functions (RSA, Hash, etc) of the Level 2 Contact Kernel Software dependent on the Terminal Hardware	No	
If answer to previous question is Yes, describe the Hardware	N/A	
Is any other functions of the Level 2 Contact Kernel Software dependent on the Terminal Hardware	No	
If answer to previous question is Yes, describe the functions and the Hardware	N/A	
Checksum		
Does the product comply with the Checksum rules as defined in Contact Terminal Level 2 administrative process	Yes	
This is an Initial submission or Subsequent submission or renewal of the original approved product prior to the effective date of checksum rules (cf Terminal Type Approval Bulletin No. 134)	n/a	
Configuration Checksum (Static Kernel only)	22E0E1C87000F0A001	

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None