

July 21, 2023

Mr. James Tsai

Castles Technology Co., Ltd.

6F., No. 207-5, Sec. 3, Beixin Rd.

Xindian District

New Taipei City 23143

TAIWAN, PROVINCE OF CHINA

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

EMV Application Kernel: **CBM-EMV Version v1.0.9**

Approval Number(s): **2-05238-1-1C-ICTK-0723-4.4a**
2-05238-1-2C-ICTK-0723-4.4a
2-05238-1-3C-ICTK-0723-4.4a
2-05238-1-4C-ICTK-0723-4.4a
2-05238-1-5C-ICTK-0723-4.4a
2-05238-1-6C-ICTK-0723-4.4a
2-05238-1-7C-ICTK-0723-4.4a
2-05238-1-8C-ICTK-0723-4.4a
2-05238-1-9C-ICTK-0723-4.4a
2-05238-1-10C-ICTK-0723-4.4a
2-05238-2-11C-ICTK-0723-4.4a
2-05238-2-12C-ICTK-0723-4.4a
2-05238-2-13C-ICTK-0723-4.4a
2-05238-2-14C-ICTK-0723-4.4a
2-05238-2-15C-ICTK-0723-4.4a
2-05238-2-16C-ICTK-0723-4.4a
2-05238-2-17C-ICTK-0723-4.4a
2-05238-2-18C-ICTK-0723-4.4a
2-05238-1-1P-ICTK-0723-4.4a
2-05238-1-2P-ICTK-0723-4.4a
2-05238-1-1OS-ICTK-0723-4.4a

The EMV Application Kernel has been tested on the following terminal

Terminal: VEGA3000
PinPad: 1P = VEGA3000, CTOS v1.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C, 10, 12, 13, 16, 17, 18
2P = VEGA3000 UltraLite, PCIPAD v1.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C, 10, 12, 13, 16, 17, 18
Operating System: 1OS = CTOS, 32-bit Version v1.0.0

Renewal Date: 19-Jul-2027

Report ID Session 1: EDT23045 Version 1.0 - ICTK Co., Ltd.
Session 2: EDT23045 Version 1.0 - ICTK Co., Ltd.

Kernel Checksum:

9ABDA9856EB606EA6E2F3FE9FF6F3CB4896D0B7E
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Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	Cfg12F8-1	12	61754985934F9E17DBC84884D12F091AAD859600
2C	Cfg22B8-3	22	956F2B42C4B1D04A51906BB6B69EC187CBE91693
3C	Cfg11F8-1	11	83D3955A73E6B8B137C5B85708FD4A9A0F8AC047
4C	Cfg25D8-3	25	32E8F11851A77A9BA4E69BD746FC32D6F92DE2FA
5C	Cfg22F8-1	22	E8974A9DCCF7D45D48BD4DA818E2848576816FDE
6C	Cfg22F8E-1	22	916906D3D8813E619F7159C5CF02F3548EA60806
7C	Cfg22B0-2	22	BE8433AA8EFD2A06A06482766081DA7353C5C4CD
8C	Cfg22F0-2	22	DADFDE1586287E9E109B47193348F7DCF9FBD6D3
9C	Cfg25D8-1	25	3A51300DCD3ED2E523708ADD13C65EEE8BC024E2
10C	Cfg25D0-1	25	0C3783EF46158B957D8B799627012E68B6AA2DB4
11C	Cfg2508-1	25	1C9375F00B610000937E4F649C0C5A8CDF53DB74
12C	Cfg25D8-2	25	D1FF47FAF8F3EED3B8C7D07BFC8A4B0835928013
13C	Cfg22F0-3	22	801225097B77040174E7DB88D81CD98B932301A7
14C	Cfg2208-1	22	D1E5D7E351B3BB891837F7E312B1D173C0CB8643
15C	Cfg2228-1	22	80758BE347F3153B1ECB431199053B50B98C73A7
16C	Cfg12F0-1	12	5167DDB61403F3E2B15E236D1FE61B4801D69E08
17C	Cfg2598-1	25	C26F52CCC7FF3A7C3F3C30A45E526AD185211494
18C	Cfg25D8C-3	25	0E62268DF1D882708D1051746876859D93F14E05

PIN Pads Checksums:

PinPad	Checksum
1P	
2P	

Dear Mr. Tsai:

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 4.4 of October 2022.

EMVCo hereby grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.4 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.

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 Testing Group Chair

Note:

The Random Number Generator and the Cryptographic Functions are part of the EMV specifications. This Contact Level 2 Kernel utilizes a specific Hardware component in the tested terminal to generate random numbers and/or Cryptographic Functions. To be EMV compliant, this Contact Level 2 Kernel shall be used in conjunction with terminals having this specific Hardware component.

Terminal Capabilities	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C
Card Data Input Capability										
Terminal Type	12	22	11	25	22	22	22	22	25	25
Manual Key Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CVM Capability										
Plaintext PIN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Online Enciphered PIN	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Signature (Paper)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No CVM	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
Biometric	No	No	No	No	No	No	No	No	No	No
Offline Finger	No	No	No	No	No	No	No	No	No	No
Online Finger	No	No	No	No	No	No	No	No	No	No
Offline Facial	No	No	No	No	No	No	No	No	No	No
Online Facial	No	No	No	No	No	No	No	No	No	No
Offline Palm	No	No	No	No	No	No	No	No	No	No
Online Palm	No	No	No	No	No	No	No	No	No	No
Offline Iris	No	No	No	No	No	No	No	No	No	No
Online Iris	No	No	No	No	No	No	No	No	No	No
Offline Voice	No	No	No	No	No	No	No	No	No	No
Online Voice	No	No	No	No	No	No	No	No	No	No
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Card Capture	No	No	No	No	No	No	No	No	No	No
CDA	Mode 3	Mode 1	Mode 3	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tran Type - Cash Back	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No
Tran Type - Inquiry	Yes	No	Yes	No	No	No	No	No	No	No
Tran Type - Transfer	Yes	No	Yes	No	No	No	No	No	No	No
Tran Type - Payment	Yes	No	Yes	No	No	No	No	No	No	No
Tran Type - Admin	Yes	No	No	No	No	No	No	No	No	No
Tran Type - Cash Deposit	Yes	No	Yes	No	No	No	No	No	No	No
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C
Terminal Data Output Capability										
Print, Attendant	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Print, Cardholder	No	No	No	Yes	No	No	No	No	No	No
Display, Attendant	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Display, Cardholder	No	No	No	Yes	No	No	No	No	Yes	Yes
Code Table 10	No	No	No	No	No	No	No	No	No	No
Code Table 9	No	No	No	No	No	No	No	No	No	No
Code Table 8	No	No	No	No	No	No	No	No	No	No
Code Table 7	No	No	No	No	No	No	No	No	No	No
Code Table 6	No	No	No	No	No	No	No	No	No	No
Code Table 5	No	No	No	No	No	No	No	No	No	No
Code Table 4	No	No	No	No	No	No	No	No	No	No
Code Table 3	No	No	No	No	No	No	No	No	No	No
Code Table 2	No	No	No	No	No	No	No	No	No	No
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Preferred display order	Yes	No	No	No	No	No	No	No	No	No
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi language	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMV Language Selection method	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Data Authentication										
MAX CA Public key	248	248	248	248	248	248	248	248	248	248
Exponents	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}	3 and 2 ^{*16+1}
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Certificate Revocation List Format	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manual act. when CA PK loading fails	No	No	No	No	No	No	No	No	No	No
CA PK verified with check sum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Subsequent Bypass PIN Entry	No	Yes	No	No	No	No	No	No	No	No
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Random Transaction Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Velocity Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Transaction Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exception File	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TAC can be deleted or disabled	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
How does online only terminal process TAC/IAC-Default when unable to go online?	N/A	N/A	Normal	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Completion Processing										
Forced Online	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No
Forced Acceptance	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No
Advices	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Batch Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exception Handling										
POS Entry Mode	8x	8x	8x	8x	8x	8x	8x	8x	8x	8x
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
ICC/Magstripe Reader Combined	No	No	No	No	No	No	No	No	No	No
If Combined, is Magstripe read first?	No	No	No	No	No	No	No	No	No	No
Supports account type selection	No	Yes	No	No	No	No	No	No	No	No
Supports 'on fly' script processing	No	No	No	No	No	No	No	No	No	No
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If limit > 128, value supported?	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Terminal Capabilities	11C	12C	13C	14C	15C	16C	17C	18C		
Card Data Input Capability										
Terminal Type	25	25	22	22	22	12	25	25		
Manual Key Entry	No	No	Yes	Yes	Yes	Yes	No	Yes		
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
CVM Capability										
Plaintext PIN	No	Yes	Yes	No	No	Yes	Yes	Yes		
Online Enciphered PIN	No	Yes	Yes	No	No	Yes	No	Yes		
Signature (Paper)	No	No	Yes	No	Yes	Yes	No	No		
Offline Enciphered PIN (RSA)	No	Yes	Yes	No	No	Yes	Yes	Yes		
No CVM	Yes	Yes	No	Yes	Yes	No	Yes	Yes		
Biometric	No	No	No	No	No	No	No	No		
Offline Finger	No	No	No	No	No	No	No	No		
Online Finger	No	No	No	No	No	No	No	No		
Offline Facial	No	No	No	No	No	No	No	No		
Online Facial	No	No	No	No	No	No	No	No		
Offline Palm	No	No	No	No	No	No	No	No		
Online Palm	No	No	No	No	No	No	No	No		
Offline Iris	No	No	No	No	No	No	No	No		
Online Iris	No	No	No	No	No	No	No	No		
Offline Voice	No	No	No	No	No	No	No	No		
Online Voice	No	No	No	No	No	No	No	No		
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Card Capture	No	No	No	No	No	No	No	No		
CDA	Mode 1	Mode 1	Mode 3	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1		
Transaction Type Capability										
Transaction Type - Cash	No	No	Yes	Yes	Yes	Yes	No	No		
Transaction Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Transaction Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Transaction Type - Cash Back	No	No	Yes	Yes	Yes	Yes	No	No		
Transaction Type - Inquiry	No	No	No	No	No	Yes	No	No		
Transaction Type - Transfer	No	No	No	No	No	Yes	No	No		
Transaction Type - Payment	No	No	No	No	No	Yes	No	No		
Transaction Type - Admin	No	No	No	No	No	Yes	No	No		
Transaction Type - Cash Deposit	No	No	No	No	No	Yes	No	No		
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

(continued)	11C	12C	13C	14C	15C	16C	17C	18C		
Terminal Data Output Capability										
Print, Attendant	No	No	Yes	Yes	Yes	Yes	No	No		
Print, Cardholder	No	No	No	No	No	No	No	Yes		
Display, Attendant	No	No	Yes	Yes	Yes	Yes	No	No		
Display, Cardholder	Yes	Yes	No	No	No	No	Yes	Yes		
Code Table 10	No	No	No	No	No	No	No	No		
Code Table 9	No	No	No	No	No	No	No	No		
Code Table 8	No	No	No	No	No	No	No	No		
Code Table 7	No	No	No	No	No	No	No	No		
Code Table 6	No	No	No	No	No	No	No	No		
Code Table 5	No	No	No	No	No	No	No	No		
Code Table 4	No	No	No	No	No	No	No	No		
Code Table 3	No	No	No	No	No	No	No	No		
Code Table 2	No	No	No	No	No	No	No	No		
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Preferred display order	No	No	No	No	No	No	No	No		
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Multi language	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
EMV Language Selection method	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Data Authentication										
MAX CA Public key	248	248	248	248	248	248	248	248		
Exponents	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1		
Revocation of Issuer PK Certificate	No	No	Yes	Yes	Yes	Yes	Yes	Yes		
Certificate Revocation List Format			RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)	RID(5B)+CA PKI(1B)+CS N(3B)		
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Manual act. when CA PK loading fails	No	No	No	No	No	No	No	No		
CA PK verified with check sum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Cardholder Verification Method										
Bypass PIN Entry	No	No	Yes	No	No	Yes	No	No		
Subsequent Bypass PIN Entry	No	No	No	No	No	No	No	No		
Get Data for PIN Try Counter	No	Yes	Yes	No	No	Yes	Yes	Yes		
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Random Transaction Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Velocity Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Transaction Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Exception File	No	No	Yes	Yes	Yes	Yes	Yes	Yes		
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

(continued)	11C	12C	13C	14C	15C	16C	17C	18C		
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
TAC can be deleted or disabled	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
How does online only terminal process TAC/IAC-Default when unable to go online?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Completion Processing										
Forced Online	No	No	Yes	Yes	Yes	Yes	No	No		
Forced Acceptance	No	No	Yes	Yes	Yes	Yes	No	No		
Advices	Yes	Yes	Yes	Yes	Yes	Yes	No	No		
Voice Referrals Initiated by Issuer	No	No	Yes	Yes	Yes	Yes	No	No		
Batch Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Online Data Capture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Exception Handling										
POS Entry Mode	8x	8x	8x	8x	8x	8x	8x	8x		
Miscellaneous										
Amount and PIN on same keypad	No	Yes	Yes	No	No	Yes	Yes	Yes		
ICC/Magstripe Reader Combined	No	No	No	No	No	No	No	Yes		
If Combined, is Magstripe read first?	No	No	No	No	No	No	No	No		
Supports account type selection	No	No	No	No	No	No	No	No		
Supports 'on fly' script processing	No	No	No	No	No	No	No	No		
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
If limit > 128, value supported?	1024	1024	1024	1024	1024	1024	1024	1024		
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Does the terminal support Receipt?	No	No	Yes	Yes	Yes	Yes	Yes	Yes		

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None