

November 21, 2024

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 v1.0.10**

**Approval Number(s):**      **2-05505-1-1C-ICTK-1124-4.4b**  
   **2-05505-1-2C-ICTK-1124-4.4b**  
   **2-05505-1-3C-ICTK-1124-4.4b**  
   **2-05505-1-4C-ICTK-1124-4.4b**  
   **2-05505-1-5C-ICTK-1124-4.4b**  
   **2-05505-1-6C-ICTK-1124-4.4b**  
   **2-05505-1-7C-ICTK-1124-4.4b**  
   **2-05505-1-8C-ICTK-1124-4.4b**  
   **2-05505-1-9C-ICTK-1124-4.4b**  
   **2-05505-1-10C-ICTK-1124-4.4b**  
   **2-05505-2-11C-ICTK-1124-4.4b**  
   **2-05505-2-12C-ICTK-1124-4.4b**  
   **2-05505-2-13C-ICTK-1124-4.4b**  
   **2-05505-2-14C-ICTK-1124-4.4b**  
   **2-05505-2-15C-ICTK-1124-4.4b**  
   **2-05505-2-16C-ICTK-1124-4.4b**  
   **2-05505-2-17C-ICTK-1124-4.4b**  
   **2-05505-1-1P-ICTK-1124-4.4b**  
   **2-05505-1-2P-ICTK-1124-4.4b**  
   **2-05505-1-1OS-ICTK-1124-4.4b**

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The EMV Application Kernel has been tested on the following terminal

**Terminal:**                      **SATURN1000**  
**PinPad:**                        **1P = SATURN1000, CTOS v1.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C, 11, 12, 15, 16, 17**  
   **2P = VEGA3000 UltraLite, PCIPAD v1.0.0 - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C, 11, 12, 15, 16, 17**  
**Operating System:**        **1OS = CTOS, 32-bit Version v1.0.0**

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**Renewal Date:**                      **20-Nov-2028**

Report ID

Session 1: EDT24061\_1 Version 1.0 - ICTK Co., Ltd.

Session 2: EDT24061\_2 Version 1.0 - ICTK Co., Ltd.

Kernel Checksum:

4EE5EB6A8957B38089AF9E6E0BDC9931D8FE66F2
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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	Cfg22B0-2	22	BE8433AA8EFD2A06A06482766081DA7353C5C4CD
7C	Cfg22F0-2	22	DADDFDE1586287E9E109B47193348F7DCF9FBD6D3
8C	Cfg25D8-1	25	3A51300DCD3ED2E523708ADD13C65EEE8BC024E2
9C	Cfg25D0-1	25	0C3783EF46158B957D8B799627012E68B6AA2DB4
10C	Cfg2508-1	25	1C9375F00B610000937E4F649C0C5A8CDF53DB74
11C	Cfg25D8-2	25	D1FF47FAF8F3EED3B8C7D07BFC8A4B0835928013
12C	Cfg22F0-3	22	801225097B77040174E7DB88D81CD98B932301A7
13C	Cfg2208-1	22	DAAF8B677616112CCBCE17E58ACC22F4531C2CF4
14C	Cfg2228-1	22	6EED3E51C3E2FEA9020062166EBB9C69D6D735EB
15C	Cfg12F0-1	12	5167DDB61403F3E2B15E236D1FE61B4801D69E08
16C	Cfg2298-1	22	C711F6C359854A76C196BD956A6E5E431360378B
17C	Cfg22B8-4	22	AC26DCE0596784C569E74436444C58279B8DAB12

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](http://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.***

Authorised by Frédéric Fortin  
Terminal Testing Group Chair  
EMVCo, LLC

**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.**

<b>Terminal Capabilities</b>	<b>1C</b>	<b>2C</b>	<b>3C</b>	<b>4C</b>	<b>5C</b>	<b>6C</b>	<b>7C</b>	<b>8C</b>	<b>9C</b>	<b>10C</b>
<b>Card Data Input Capability</b>										
Terminal Type	12	22	11	25	22	22	22	25	25	25
Manual Key Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
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
<b>CVM Capability</b>										
Plaintext PIN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Online Enciphered PIN	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Signature (Paper)	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
No CVM	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes
Offline Enciphered PIN (ECC)	No	No	No	No	No	No	No	No	No	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
<b>Security Capability</b>										
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
XDA	No	No	No	No	No	No	No	No	No	No
<b>Transaction Type Capability</b>										
Tran Type - Cash	Yes	Yes	Yes	No	Yes	No	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	No	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
<b>Terminal Data Input Capability</b>										
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
<b>Terminal Data Output Capability</b>										
Print, Attendant	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Print, Cardholder	No	No	No	Yes	No	No	No	No	No	No
Display, Attendant	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Display, Cardholder	No	No	No	Yes	No	No	No	Yes	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
<b>Application Selection</b>										
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
<b>Data Authentication</b>										
MAX CA Public key	248	248	248	248	248	248	248	248	248	248
Exponents	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1	3 and 2 <sup>16</sup> +1
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
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
<b>Cardholder Verification Method</b>										
Bypass PIN Entry	Yes	Yes	Yes	No	Yes	Yes	Yes	No	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	No
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
<b>Terminal Risk Management</b>										
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	No	No	Yes	No	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
<b>Terminal Action Analysis</b>										
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
<b>Completion Processing</b>										
Forced Online	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Forced Acceptance	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
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
<b>Exception Handling</b>										
POS Entry Mode	8x	8x	8x	8x	8x	8x	8x	8x	8x	8x
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
ICC/Magstripe Reader Combined	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	No

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

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



(continued)	11C	12C	13C	14C	15C	16C	17C			
<b>Terminal Action Analysis</b>										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
TAC can be deleted or disabled	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			
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			
<b>Completion Processing</b>										
Forced Online	No	Yes	Yes	Yes	Yes	Yes	Yes			
Forced Acceptance	No	Yes	Yes	Yes	Yes	Yes	Yes			
Voice Referrals Initiated by Issuer	No	Yes	Yes	Yes	Yes	Yes	Yes			
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Default TDOL not configured	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
<b>Exception Handling</b>										
POS Entry Mode	8x	8x	8x	8x	8x	8x	8x			
<b>Miscellaneous</b>										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
ICC/Magstripe Reader Combined	No	No	No	No	No	No	No			
Supports account type selection	No	No	No	No	No	Yes	Yes			
Supports 'on fly' script processing	No	No	No	No	No	No	No			
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
If limit > 128, value supported?	1024	1024	1024	1024	1024	1024	1024			
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Does the terminal support Receipt?	No	Yes	Yes	Yes	Yes	Yes	Yes			

# **Attachment 1**

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

Restriction:

**None**