

Dear Mr. Fung:

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 2 terminal type approval for the EMV Application Kernel (hereafter referred to as Application) identified above. 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 Kernel sufficiently conform to EMV Integrated Circuit Card Specifications for Payment Systems, Version 4.2 of June 2008.

EMVCo hereby (a) grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.2 Specifications, and (b) agrees to include your Application Kernel in EMVCo's approved Application list. EMVCo's grant to your Application Kernel 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 Application Kernels published on the EMVCo website (www.emvco.com).

Spectra Technologies Holding Co., Ltd

This Letter of Approval is effective on dispatch from EMVCo..

EMVCo, LLC, a Delaware limited liability company

By:

Name: Pierre Girod

Title: EMVCo Terminal Type Approval

Terminal Capabilities	1C	2C								
Card Data Input Capability										
Terminal Type	22	22								
Manual Key Entry	Yes	Yes								
Magnetic Stripe	Yes	Yes								
IC with Contacts	Yes	Yes								
CVM Capability										
Plaintext PIN	Yes	Yes								
Online Enciphered PIN	Yes	No								
Signature (Paper)	Yes	Yes								
Offline Enciphered PIN	Yes	Yes								
No CVM	No	No								
Security Capability										
SDA	Yes	Yes								
DDA	Yes	Yes								
Card Capture	No	No								
CDA	Yes	Yes								
Transaction Type Capability										
Tran Type - Cash	Yes	Yes								
Tran Type - Goods	Yes	Yes								
Tran Type - Services	Yes	Yes								
Tran Type - Cash Back	Yes	Yes								
Tran Type - Inquiry	No	No								
Tran Type - Transfer	No	No								
Tran Type - Payment	No	No								
Tran Type - Admin	No	No								
Tran Type - Cash Deposit	No	No								
Terminal Data Input Capability										
Keypad	Yes	Yes								
Numeric Keys	Yes	Yes								
Alpha and Special Char Keys	Yes	Yes								
Command Keys	Yes	Yes								
Function Keys	Yes	Yes								

Terminal Data Output Capability										
Print, Attendant	Yes	Yes								
Print, Cardholder	Yes	Yes								
Display Attendant	Yes	Yes								
Display Cardholder	Yes	Yes								
Code Table 10	No	No								
Code Table 9	No	No								
Code Table 8	No	No								
Code Table 7	No	No								
Code Table 6	No	No								
Code Table 5	No	No								
Code Table 4	No	No								
Code Table 3	No	No								
Code Table 2	No	No								
Code Table 1	Yes	Yes								

(continued)	1C	2C								
Application Selection										
PSE	Yes	Yes								
Cardholder Confirmation	Yes	Yes								
Preferred order	No	No								
Parital AID Selection	Yes	Yes								
Multi language	No	No								
Common Character Set	Yes	Yes								
Data Authentication										
MAX CA Public key	248	248								
Exponents	3 and 2 ¹⁶ +1	3 and 2 ¹⁶ +1								
Revocation of IPKC	Yes	Yes								
Certificate Revocation List format	RID, CA Public Key Index, Certificate Serial Numbe	RID, CA Public Key Index, Certificate Serial Numbe								
Default DDOL	Yes	Yes								
Manual when CA PK load fails	Yes	Yes								
CA PK verified with check sum	No	No								
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes								
Subsequent Bypass PIN Entry	Yes	Yes								
Get Data for PIN Try Ctr.	Yes	Yes								
Fail CVM	Yes	Yes								
Amount known before CVM	Yes	Yes								
Terminal Risk Management										

Floor Limit Checking	Yes	Yes								
Random Trans Sel	Yes	Yes								
Velocity Checking	Yes	Yes								
Transaction Log	Yes	Yes								
Exception File	No	No								
Term Risk based on AIP	Yes	Yes								
Terminal Action Analysis										
Terminal Action Codes	Yes	Yes								
Default process prior to AC	No	No								
Default process after to AC	No	No								
Skip processing TAC/IAC	No	No								
Default as normal	Yes	Yes								
CDA fail detected prior TAA	Yes	Yes								
CDA always requested at GENAC1	Yes	Yes								
CDA never requested at GENAC1	No	No								
CDA always requested at GENAC2	Yes	Yes								
CDA never requested at GENAC2	No	No								
Completion Processing										
Forced Online	Yes	Yes								
Forced Acceptance	No	No								
Advices	Yes	Yes								
Issuer Referrals	Yes	Yes								
Batch Data Capture	Yes	Yes								
Online Data Capture	Yes	Yes								
Default TDOL	Yes	Yes								

(continued)	1C	2C								
Exception Handling										
POS Entry Mode	92	92								
Miscellaneous										
PIN Pad	Yes	Yes								
Amt and PIN same keypad	Yes	Yes								
ICC/Magstripe Combined	No	No								
Magstripe read first	No	No								
Supports account type sel?	No	No								
Issuer Script device limit >128?	No	No								
If >128, value supported?	128	128								
Internal Date Management ?	Yes	Yes								

Attachment 1
Specific Terms and Conditions to the Letter of Approval

Restrictions, if any:

None