

MasterCard Worldwide  
2000 Purchase Street  
Purchase, NY 10577  
USA



Aron Clark  
451 El Camino Real,  
Santa Clara, CA 95050  
USA

December 6, 2010

Dear Aron:

**MasterCard® PayPass™ Vendor Product – Letter of Approval**

Approval Identifier: TLOA-VIVO-100302-100429\_Rev A  
Approval Expiration Date: April 29, 2013  
Product Vendor: ViVOtech  
Vendor Product Name: ViVOpay 4500 version M/1.2.1  
Product Identifier Name: 525-2141/GR  
Product Type: Intelligent Card Reader  
PayPass Application Name: PayPass MChip 2.0 AN17 version Imp 1.0  
Technical Features (\*): Online capable

CVM Configuration	Below CVM limit	Above CVM limit
OnlinePIN + SGN + noCVM	XXXXXXXXXX	Approved
No Online PIN + SGN + noCVM	XXXXXXXXXX	Not Approved
OnlinePIN + No SGN + No noCVM	XXXXXXXXXX	Approved
No Online PIN + No SGN + noCVM	Approved	Not Approved

Test Registration Numbers: VIVO-100302 and VIVO-100701  
EMVCo Letter of Approval – Terminal Level 1: 10017 0410 200 20 RFI  
Level 2 Test Assessment Certificate: T VIVO 1004 L2\_01 and T VIVO 1010 L2\_01  
(\* ) Please contact the product vendor to obtain the full description of all the technical features

Under the terms of the PayPass Specification License Agreement dated 1<sup>st</sup> April 2004, this letter permits you to advise your customers that the above product has successfully completed the requirements for a vendor product approval by MasterCard as a **PayPass Reader supporting both Magnetic Stripe and M/Chip profiles**.

**Please see page 2 for the Conditions of Approval.**

This letter does not constitute an endorsement or warranty by MasterCard regarding the functionality, quality or performance of the submitted product, including without limitation any warranties of merchantability, fitness for purpose or non-infringement, all of which are expressly disclaimed by MasterCard.

The product will be listed on the MasterCard PayPass web site as an approved PayPass vendor product until the Approval Expiration Date. Any change to the product must be promptly notified to MasterCard.

MasterCard reserves the right to use any approved PayPass product as a reference for future testing, certification or approval of other PayPass products.

Yours sincerely,

Arnaud du Chéné  
Senior Business Leader  
Chip Engineering / Chip Certification

## Detail of Vendor Product Approval

Testing was performed against the **EMV 2.0 Specifications and MasterCard *PayPass* - MChip Reader Card Application Interface Specification V2.0**

### Conditions of Approval

The following actions are to be taken by the vendor for this approval to be valid:

- i. During the Term of the Letter of Approval, the vendor shall ensure that all terminals are produced so that they are materially identical with the samples that were submitted for testing. Any change in the terminal that generates a different behavior of the terminal with respect to the *PayPass* Specifications and *PayPass* Test Assessments, in MasterCard's sole discretion, will be considered a major modification subject to a requirement of new vendor product testing and approval.
- ii. No PIN entry security testing (PCI PED) has been performed on this card reader. PIN entry is not a supported option on this device.
- iii. The vendor must make buyers of the product aware that successful completion of *PayPass* transactions using CDA cannot be guaranteed when performed with cards personalized such that the combined length of the following data objects exceeds 428 bytes:
  - ICC Public Key Certificate
  - ICC Public Key Exponent
  - ICC Public Key Remainder
  - Static data used in data authentication
- iv. The vendor must make buyers of the product aware that successful completion of *PayPass* transactions using SDA cannot be guaranteed when performed with cards personalized such that the combined length of the following data objects exceeds 428 bytes:
  - Signed Static Application Data
  - Static data used in data authentication
- v. The vendor must make buyers of the product aware that successful completion of *PayPass* transactions cannot be guaranteed when performed with cards personalized such that the combined length of all the card responses (PPSE, Select, GetPO, ReadRecord, GenerateAC) exceeds 1500 bytes.