

# MPPG v3.0 and v4.0

## PayPal \ Venmo API Developer Program Manual

February 2022

Document Number:  
D998200515-10

REGISTERED TO ISO 9001:2015

INFORMATION IN THIS PUBLICATION IS SUBJECT TO CHANGE WITHOUT NOTICE AND MAY CONTAIN TECHNICAL INACCURACIES OR GRAPHICAL DISCREPANCIES. CHANGES OR IMPROVEMENTS MADE TO THIS PRODUCT WILL BE UPDATED IN THE NEXT PUBLICATION RELEASE. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, FOR ANY PURPOSE, WITHOUT THE EXPRESS WRITTEN PERMISSION OF MAGTEK, INC.

MagTek®, MagnePrint®, and MagneSafe® are registered trademarks of MagTek, Inc.

Magensa™ is a trademark of MagTek, Inc.

DynaPro™ and DynaPro Mini™, are trademarks of MagTek, Inc.

ExpressCard 2000™ is a trademark of MagTek, Inc.

IPAD® is a trademark of MagTek, Inc.

IntelliStripe® is a registered trademark of MagTek, Inc.

AAMVA™ is a trademark of AAMVA.

American Express® and EXPRESSPAY FROM AMERICAN EXPRESS® are registered trademarks of American Express Marketing & Development Corp.

D-PAYMENT APPLICATION SPECIFICATION® is a registered trademark to Discover Financial Services CORPORATION

MasterCard® is a registered trademark and PayPass™ and Tap & Go™ are trademarks of MasterCard International Incorporated.

Visa® and Visa payWave® are registered trademarks of Visa International Service Association.

MAS-CON® is a registered trademark of Pancon Corporation.

Molex® is a registered trademark and PicoBlade™ is a trademark of Molex, its affiliates, related companies, licensors, and/or joint venture partners

ANSI®, the ANSI logo, and numerous other identifiers containing "ANSI" are registered trademarks, service marks, and accreditation marks of the American National Standards Institute (ANSI).

ISO® is a registered trademark of the International Organization for Standardization.

UL™ and the UL logo are trademarks of UL LLC.

PCI Security Standards Council® is a registered trademark of the PCI Security Standards Council, LLC.

EMV® is a registered trademark in the U.S. and other countries and an unregistered trademark elsewhere.

The EMV trademark is owned by EMVCo, LLC. The Contactless Indicator mark, consisting of four graduating arcs, is a trademark owned by and used with permission of EMVCo, LLC.

The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by MagTek is under license.

Google Play™ store, Google Wallet™ payment service, and Android™ platform are trademarks of Google Inc.

Apple Pay®, iPhone®, iPod®, Mac®, and OS X® are registered trademarks of Apple Inc., registered in the U.S. and other countries. iPad™ is a trademark of Apple, Inc. App Store<sup>SM</sup> is a service mark of Apple Inc., registered in the U.S. and other countries. IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used by Apple Inc. under license.

Microsoft®, Windows®, and .NET® are registered trademarks of Microsoft Corporation.

All other system names and product names are the property of their respective owners.

**Table 0-1 - Revisions**

| Rev Number | Date       | Notes            |
|------------|------------|------------------|
| 10         | 02/03/2022 | Initial release. |
|            |            |                  |

## Table of Contents

|   |    |
|---|----|
| Table of Contents .....                                 | 4  |
| Purpose of the document .....                           | 4  |
| Prerequisite:.....                                      | 4  |
| 1 Instructions for Process QRC-based transactions ..... | 5  |
| 2 Processing Requests.....                              | 5  |
| 2.1 Sale with Clear-text QRC .....                      | 5  |
| 2.2 Sale with Encrypted QRC.....                        | 6  |
| 2.3 Void QRC Transaction .....                          | 7  |
| 2.4 REFUND QRC Transaction .....                        | 8  |
| Appendix A Reserved.....                                | 10 |

## Purpose of the document

The purpose of this document is to describe the Instructions on support for PayPal\Venmo and their required or optional input & output parameters. It also provides sample SOAP request & response as reference for client developers.

## Prerequisite:

- Merchant onboarded to MPPG and PayPal
- PayPal mobile app to generate new QRCS

MPPGv4's ProcessData and MPPGv3's ProcessEMVSRED operations support "SALE" transaction-type for PayPal QRC. And their ProcessReferenceID operation supports "VOID" and "REFUND" transaction-types.

## 1 Instructions for Process QRC-based transactions

MPPGv4's ProcessData and MPPGv3's ProcessEMVSRED operations support "SALE" transaction-type for PayPal QRC. And their ProcessReferenceID operation supports "VOID" and "REFUND" transaction-types.

In ALL PayPal QRC-based transactions, in addition to the MPPG Authentication fields, ProcessorName and TransactionType, the client must provide a key-value pair in AdditionalRequestData with "ForHeader\_PayPal-Request-Id" as the key. Its value will be sent to PayPal as PayPal-Request-Id (As per PayPal's documentation, this is a '*Unique request id. To be used for idempotency checks if necessary. This is the idempotency id to be used in the Cancel request.*').

In the case of "SALE" transaction-type, the merchant-assigned store-Id must be provided as a key-value pair in TransactionInputDetails with "point\_of\_sale\_details.store\_details.external\_id" as the key.

As for PayPal QRCs, they can be input as clear-text string or as encrypted data from a MagTek reader capable of scanning QRCs. When a clear-text string, the QRC must be provided as a key-value pair in TransactionInputDetails with "credential\_info.customer.qr\_code" as the key. However, when input as encrypted reader data, the corresponding DataInput/EMVSREDInput fields must be populated.

For "VOID" transaction-type, the PayPal-Request-Id of the original "SALE" transaction must be provided as a key-value pair in TransactionInputDetails with "original\_request\_idempotency\_key" as the key.

Finally, for "REFUND" transaction-type, the merchant-assigned store-id must be provided as a key-value pair in TransactionInputDetails with "store\_details.external\_id" as the key. In addition, the transaction-Id of the original "SALE" transaction must be provided as input ReferenceTransactionID.

## 2 Processing Requests

### 2.1 Sale with Clear-text QRC

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:mpp="http://www.magensa.net/MPPGv4/"
xmlns:mpp1="http://schemas.datacontract.org/2004/07/MPPGv4WS.Core"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.
Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <mpp:ProcessData>
      <mpp:ProcessDataRequests>
        <mpp1:ProcessDataRequest>
          <mpp1:AdditionalRequestData>
            <sys:KeyValuePairOfstringstring>
              <sys:key>ForHeader_PayPal-Request-Id</sys:key>
              <sys:value>12345</sys:value>
            </sys:KeyValuePairOfstringstring>
          </mpp1:AdditionalRequestData>
          <mpp1:Authentication>
```

```
<mpp1:CustomerCode>{CustomerCode}</mpp1:CustomerCode>
    <mpp1:Password>{Password}</mpp1:Password>
    <mpp1:Username>{Username}</mpp1:Username>
</mpp1:Authentication>

<mpp1:CustomerTransactionID>12345</mpp1:CustomerTransactionID>
    <mpp1:DataInput>
        <mpp1:Data></mpp1:Data>
        <mpp1:DataFormatType>NONE</mpp1:DataFormatType>
        <mpp1:IsEncrypted>false</mpp1:IsEncrypted>
    <mpp1:PaymentMode>None</mpp1:PaymentMode>
    </mpp1:DataInput>
    <mpp1:TransactionInput>
        <mpp1:Amount>1.00</mpp1:Amount>
        <mpp1:ProcessorName>PayPalQRC </mpp1:ProcessorName>
        <mpp1:TransactionInputDetails>
            <sys:KeyValuePairOfstringstring>
                <sys:key>credential_info.customer.qr_code</sys:key>
                <sys:value>791234567890</sys:value>
            </sys:KeyValuePairOfstringstring>
            <sys:KeyValuePairOfstringstring>
                <sys:key>point_of_sale_details.store_details.external_id</sys:key>
                <sys:value>123 </sys:value>
            </sys:KeyValuePairOfstringstring>
        </mpp1:TransactionInputDetails>
        <mpp1:TransactionType>SALE</mpp1:TransactionType>
    </mpp1:TransactionInput>
    </mpp1:ProcessDataRequest>
</mpp:ProcessDataRequests>
</mpp:ProcessData>
</soapenv:Body>
</soapenv:Envelope>
```

## 2.2 Sale with Encrypted QRC

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:mpp="http://www.magensanet/MPPGv4/"
xmlns:mpp1="http://schemas.datacontract.org/2004/07/MPPGv4WS.Core"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.Generic">
    <soapenv:Header/>
    <soapenv:Body>
        <mpp:ProcessData>
            <mpp:ProcessDataRequests>
                <mpp1:ProcessDataRequest>
                    <mpp1:AdditionalRequestData>
```

```
        <sys:KeyValuePairOfstringstring>
            <sys:key>ForHeader_PayPal-Request-Id</sys:key>
            <sys:value>12345</sys:value>
        </sys:KeyValuePairOfstringstring>
    </mpp1:AdditionalRequestData>
    <mpp1:Authentication>

<mpp1:CustomerCode>{CustomerCode}</mpp1:CustomerCode>
    <mpp1:Password>{Password}</mpp1:Password>
    <mpp1:Username>{Username}</mpp1:Username>
</mpp1:Authentication>

<mpp1:CustomerTransactionID>12345</mpp1:CustomerTransactionID>
    <mpp1:DataInput>
        <mpp1:Data>{Data}</mpp1:Data>
        <mpp1:DataFormatType>TLV</mpp1:DataFormatType>
        <mpp1:EncryptionInfo>

<mpp1:EncryptionType>{EncryptionType}</mpp1:EncryptionType>
        <mpp1:KSN>{KSN}</mpp1:KSN>

<mpp1:NumberOfPaddedBytes>{NumberOfPaddedBytes}</mpp1:NumberOfPaddedBy
tes>
        </mpp1:EncryptionInfo>
        <mpp1:IsEncrypted>true</mpp1:IsEncrypted>
    <mpp1:PaymentMode>EMV</mpp1:PaymentMode>
    </mpp1:DataInput>
    <mpp1:TransactionInput>
        <mpp1:Amount>1.00</mpp1:Amount>
        <mpp1:ProcessorName>PayPalQRC </mpp1:ProcessorName>
        <mpp1:TransactionInputDetails>
            <sys:KeyValuePairOfstringstring>

<sys:key>point_of_sale_details.store_details.external_id</sys:key>
            <sys:value>123</sys:value>
            </sys:KeyValuePairOfstringstring>
        </mpp1:TransactionInputDetails>
        <mpp1:TransactionType>SALE</mpp1:TransactionType>
    </mpp1:TransactionInput>
    </mpp1:ProcessDataRequest>
</mpp1:ProcessDataRequests>
</mpp:ProcessData>
</soapenv:Body>
</soapenv:Envelope>
```

### 2.3 Void QRC Transaction

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:mpp="http://www.magensa.net/MPPGv4/"
xmlns:mpp1="http://schemas.datacontract.org/2004/07/MPPGv4WS.Core"
```

```
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.
Generic">
  <soapenv:Header/>
  <soapenv:Body>
    <mpp:ProcessReferenceID>
      <mpp:ProcessReferenceIDRequests>
        <mpp1:ProcessReferenceIDRequest>
          <mpp1:AdditionalRequestData>
            <sys:KeyValuePairOfstringstring>
              <sys:key>ForHeader_PayPal-Request-Id</sys:key>
              <sys:value>12345</sys:value>
            </sys:KeyValuePairOfstringstring>
          </mpp1:AdditionalRequestData>
          <mpp1:Authentication>

<mpp1:CustomerCode>{CustomerCode}</mpp1:CustomerCode>
          <mpp1:Password>{Password}</mpp1:Password>
          <mpp1:Username>{Username}</mpp1:Username>
        </mpp1:Authentication>

<mpp1:CustomerTransactionID>12345</mpp1:CustomerTransactionID>
          <mpp1:TransactionInput>
            <mpp1:ProcessorName>PayPalQRC </mpp1:ProcessorName>
            <mpp1:TransactionInputDetails>
              <sys:KeyValuePairOfstringstring>

<sys:key>original_request_idempotency_key</sys:key>
                <sys:value>1234</sys:value>
              </sys:KeyValuePairOfstringstring>
            </mpp1:TransactionInputDetails>
            <mpp1:TransactionType>VOID</mpp1:TransactionType>

<mpp1:ReferenceTransactionID></mpp1:ReferenceTransactionID>
          </mpp1:TransactionInput>
        </mpp1:ProcessReferenceIDRequest>
      </mpp:ProcessReferenceIDRequests>
    </mpp:ProcessReferenceID>
  </soapenv:Body>
</soapenv:Envelope>
```

## 2.4 REFUND QRC Transaction

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:mpp="http://www.magensa.net/MPPGv4/"
xmlns:mpp1="http://schemas.datacontract.org/2004/07/MPPGv4WS.Core"
xmlns:sys="http://schemas.datacontract.org/2004/07/System.Collections.
Generic">
  <soapenv:Header/>
  <soapenv:Body>
```



```
<mpp:ProcessReferenceID>
  <mpp:ProcessReferenceIDRequests>
    <mpp1:ProcessReferenceIDRequest>
      <mpp1:AdditionalRequestData>
        <sys:KeyValuePairOfstringstring>
          <sys:key>ForHeader_PayPal-Request-Id</sys:key>
          <sys:value>12345</sys:value>
        </sys:KeyValuePairOfstringstring>
      </mpp1:AdditionalRequestData>
      <mpp1:Authentication>

<mpp1:CustomerCode>{CustomerCode}</mpp1:CustomerCode>
  <mpp1:Password>{Password}</mpp1:Password>
  <mpp1:Username>{Username}</mpp1:Username>
</mpp1:Authentication>

<mpp1:CustomerTransactionID>12345</mpp1:CustomerTransactionID>
  <mpp1:TransactionInput>
    <mpp1:Amount>1.00</mpp1:Amount>
    <mpp1:ProcessorName>PayPalQRC </mpp1:ProcessorName>
    <mpp1:TransactionInputDetails>
      <sys:KeyValuePairOfstringstring>
        <sys:key>store_details.external_id</sys:key>
        <sys:value>123 </sys:value>
      </sys:KeyValuePairOfstringstring>
    </mpp1:TransactionInputDetails>
    <mpp1:TransactionType>REFUND</mpp1:TransactionType>

<mpp1:ReferenceTransactionID>{ReferenceTransactionID}</mpp1:ReferenceT
ransactionID>
  </mpp1:TransactionInput>
</mpp1:ProcessReferenceIDRequest>
</mpp:ProcessReferenceIDRequests>
</mpp:ProcessReferenceID>
</soapenv:Body>
</soapenv:Envelope>
```

## **Appendix A      Reserved**