



**DSP2**  
3DSv2 Integration Manual  
Version 1.4

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**Verifone**<sup>®</sup>

Verifone  
12 rue Paul Dautier 78140 Vélizy-Villacoublay

## CHANGE HISTORY

DATE	VERSION	DESCRIPTION	AUTHOR
2020-04-01	1.0	Creation	Project management
2020-05-14	1.1	Ajout de Paybox Direct	Project management
2020-06-05	1.1	Translation	Project management
2020-10-06	1.4	Catch-back on the French versions	Project management

## REFERENCES

All of the manuals referenced below are available on Paybox by Verifone website : [www.paybox.com](http://www.paybox.com) :

REF.	DOCUMENT	DESCRIPTION
Réf 1	<a href="http://www1.paybox.com/wp-content/uploads/2017/08/ManuelIntegrationVerifone_PayboxSystem_V8.0_EN.pdf">http://www1.paybox.com/wp-content/uploads/2017/08/ManuelIntegrationVerifone_PayboxSystem_V8.0_EN.pdf</a>	Paybox System integration manual
Réf 2	<a href="http://www1.paybox.com/wp-content/uploads/2017/08/ManuelIntegrationVerifone_PayboxDirect_V8.1_EN.pdf">http://www1.paybox.com/wp-content/uploads/2017/08/ManuelIntegrationVerifone_PayboxDirect_V8.1_EN.pdf</a>	Paybox Direct integration manual
Réf 3	ParametresTestPaybox_CB55_V8.0_FR.pdf	Paramètres de tests spécifiques à CB5.5.
Réf 4	<a href="http://www1.paybox.com/wp-content/uploads/2018/03/ManuelIntegrationVerifone_RemoteMPI_V8.0_EN.pdf">http://www1.paybox.com/wp-content/uploads/2018/03/ManuelIntegrationVerifone_RemoteMPI_V8.0_EN.pdf</a>	RemoteMPI Manual

The following convention is applied throughout this document:

**An information area:** Its content details a certain point, for better understanding.

**A warning area:** Important content to pay attention to.

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## INFORMATION & ASSISTANCE

For any information or support enquiries for installation and use of our products, our teams remain at your disposal, whether you are a merchant or an integrator.

### Customer and technical support

mon-fri , 9am to 6pm

[support-paybox@verifone.com](mailto:support-paybox@verifone.com)

0 825 305 004

Service 0,15 € / min  
+ prix appel

For any request to our customer and technical support, please have your Paybox Identifiers at hand :

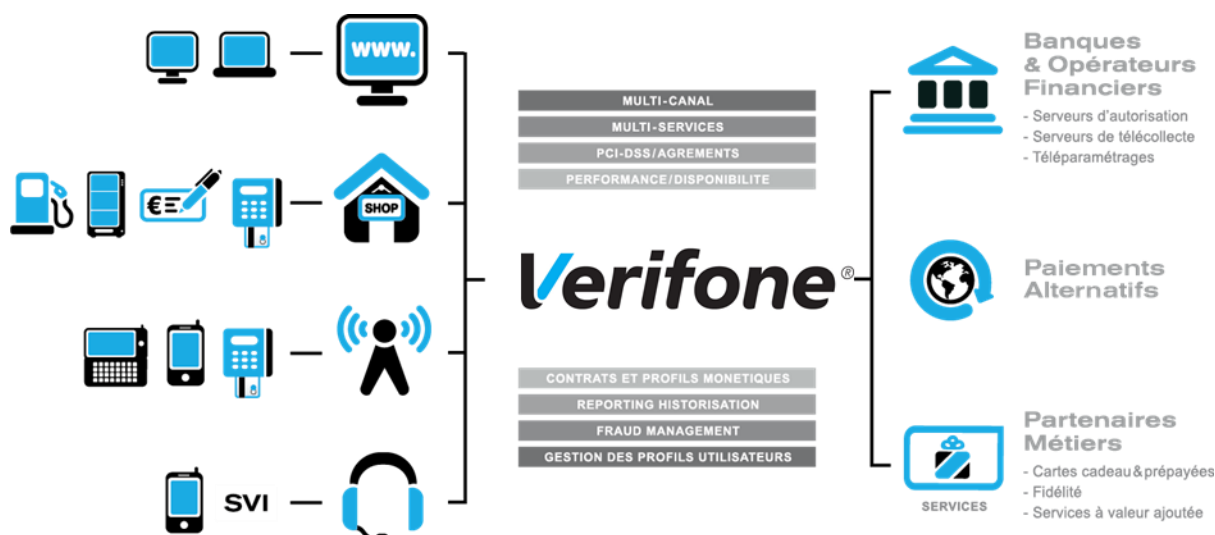
- SITE Number (7 digits)
- Rank Number (3 digits)
- Paybox Identifier (1 to 9 digits)

# SUMMARY

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# 1. INTRODUCTION

Verifone has developed and is managing its own centralized platform to provide an interface between different channels for payments or services and the corresponding recipients for processing (financial operators, banking institutions, business partners).



It is an Omni-channel and multi-services centralized platform:

- **Omni-channel** : the Verifone platform accepts connections originating from different kinds of systems, physical POS (Card Present) as well as remote payments (Card Not Present, E-Commerce/M-Commerce) :
  - Internet, Merchant Web Sites
  - Electronic Payment Terminals, POS in a shop or retailer
  - Vending machines
  - Smartphones or PDA
  - Call centers, Interactive vocal servers (IVR), ...
- **Multi-services** : the Verifone platform is able to process many different types of payments instruments:
  - Debit cards and credit cards,
  - Private label cards,
  - Gift cards,

But the platform is also able to process multiple services and business oriented transactions:

- Loyalty cards,
- Consumer finance,
- Fleet management,
- Taxi booking, ...

## 2. PURPOSE OF THIS DOCUMENT

In the Card Not Present and E-Commerce/M-Commerce areas, Verifone is offering several solutions, each of them offering specific functionalities:

- **PAYBOX SYSTEM**: Paybox System requires an integration within the Merchant Web or mobile site. At the time of payment, cardholders are automatically redirected to a secured multilingual payment page hosted by Verifone. This payment page can be personalized to fit the merchant website look and feel. PAYBOX SYSTEM complies with the highest security requirements for card payments on E-Commerce/M-Commerce websites by using amongst others, a SSL 256 bits technology for the payment page and by managing the 3-D Secure protocol (if option subscribed by the Merchant).
  
- **PAYBOX DIRECT (PPPS)**: Paybox Direct ensures processing of payment in the most seamless way for the cardholder who will not be redirected. The merchant sales application has to collect the card information (such as Card number, expiry date ...) and send it to Paybox within a SSL secure server to server request, in order to process the payment.  

Paybox Direct can also be used to capture transactions which have already been authorized through Paybox System. Combining Paybox System with Paybox Direct allows merchants to improve flexibility by driving their operations post-payment in server to server mode, directly from their sales application (or back-office).
  
- **PAYBOX DIRECT Plus**: Refers to the Paybox service where the sales application asks Paybox to store cardholder information. This solution interfaces nicely with Paybox System or can be used alone directly in server to server mode.  

Paybox Version Plus allows the merchant to manage recurring payments, as well as express checkouts with 1-click payment where the cardholder doesn't have to enter its data for each transaction.
  
- **PAYBOX BATCH FILE PROCESSING**: This solution is based on mutual off-line deposits of structured files between the merchant and Paybox. The merchant information system has to collect the card information (such as card number, expiry date ...) and send it to PAYBOX through a secure file transfer, in order to process the payments. Paybox batch file processing can also be used to capture transactions which have already been authorized through Paybox System. Paybox batch file processing also provides functionalities like refund and cancel of transactions, again through file deposit mechanism.

This document is an integration manual, specifying the expectations related to the second Payment Services Directive (PSD2), and particularly the **3DSv2 authentication** on the Paybox platform.

It is aimed at people requiring information on the mode of operation for this solution, choosing the best way to interface with it.

## 3. 3DSV2 PRESENTATION

### 3.1 GENERAL OPERATION PRINCIPLE

The Second Payment Services Directive (PSD2) coming into effect imposes the authentication of the cardholder for all e-commerce payments before April 2021. All merchants

A new authentication protocol, defined by the Carte Bancaire group, Visa and Mastercard allows to obtain this authentication without a systematic challenge of the cardholder, usually done by sending an SMS or using an official banking application.

This document presents the changes linked to the regulation, for both Paybox System and Paybox Direct integration.

It is an addition to the existing manuals for these solutions, and only the evolution from these manuals will be described here.

### 3.2 REQUIREMENTS

In order to fulfill conformity with the PSD2, the changes described in the following paragraphs will be mandatory.

To be eligible to the migration process, the merchant needs to:

- Use the Vision Back-Office for the visualization and exploitation of the transactions.
- Carry a CB2A v5.5 payments acceptance contract (this version change is processed between Verifone and each acquiring Bank).



## 4. PAYBOX SYSTEM

### 4.1 CHANGES

The implementation of the PSD2 comes with the following changes of functionalities.

#### 4.1.1 Soft Decline addition

During the migration phase, some transactions for which the cardholder was not authenticated could be rejected through a 'Soft Decline' mechanism.

The authorization center will return a specific error code to the merchants, with the value 001A1.

To receive this code in return for a Paybox System call, the PBX\_RETOUT variable will need to be valued with the 'e' parameter.

#### 4.1.2 disabling 3D-Secure temporary switch

The PSD2 regulation requires that the cardholders are authenticated for all transactions, making the existing temporary disable through the use of the PBX\_3DS variable counterproductive.

Once the contracts are properly configured to be compatible with PSD2, this variable will no longer be taken into consideration for 3D-Secure V1, and no alternative will be proposed for 3D-Secure V2.

#### 4.1.3 know which version of 3D-Secure is used

To allow the merchant to know if the transaction was completed through 3D-Secure v1 or V2, a new parameter « v » is introduced in the PBX\_RETOUT variable.

When this parameter is requested, the version of 3D-Secure that was used for the transaction is returned in the response to the merchant.

**Warning:** From Avril 2021 transactions without authentication or exemption will be refused. All e-commerce merchants must use 3D-Secure v2 or authenticate systematically the cardholder.

## 4.2 IMPACTS

All of the payment attempts passed through Paybox System are concerned by the cardholder authentication.

With PSD2 coming into effect, the cardholder authentication will be expected by the card issuer for every payment attempt.

### 4.2.1 3D-Secure v1

To allow for the authentication of the cardholder without changing the payment integration, the merchant will need to consult its bank in order to obtain a 'VADS' contract (Vente à Distance Sécurisée, French for secured distance sell). This contract will need to be transmitted to Verifone, who will then proceed with the enrollment and the configuration of said contract.

This method imposes a challenge of the cardholder during each payment attempt (sending an SMS for instance). This challenge is a source of friction during the sale.

**Warning:** From Avril 2021 transactions without authentication or exemption will be refused. All e-commerce merchants must use 3D-Secure v2 or authenticate systematically the cardholder.

### 4.2.2 3D-Secure v2

The merchant will need to consult its bank in order to obtain a 'VADS' contract (Vente à Distance Sécurisée, French for secured distance sell).

This contract will need to be transmitted to Verifone, who will then proceed with the enrollment and the configuration of said contract.

However, this new version of 3D-Secure will only be operational after some changes are made to the Paybox System integration of the merchant, as described in the paragraph:

Verifone's recommendation, as well as the French (GIE-CB) and European (ABE) regulatory institutions is to implement 3D-Secure v2.

## 4.3 CHANGES TO IMPLEMENT

These changes only concern the 3D-Secure v2 implementation.

### 4.3.1 PBX\_SHOPPINGCART

Format : XML. **Mandatory**.

This variable will contain an XML element <shoppingcart> that will be extended in future evolution of the platform.

Only one data will be mandatory for protocol reasons, the total number of items composing the order.

It will be valued within a Numeric field, ranging from 1 to 99. It will be named <totalQuantity> and will be integrated as followed:

#### Example :

```
<?xml version="1.0" encoding="utf-8"?>
<shoppingcart>
  <total>
    <totalQuantity>15</totalQuantity>
  </total>
</shoppingcart>
```

### 4.3.2 PBX\_BILLING

Format : XML. **Mandatory**.

The information regarding the cardholder and his/her billing address.

Name	Description	Type	Presence
<b>Billing</b>	XML root tag	XML	M
<b>Address</b>	XML tag	XML	M
<b>FirstName</b>	Customer first Name	ANP..30 (including / - ' )	M
<b>LastName</b>	Customer last Name	ANP..30 (including / - ' )	M
<b>Address1</b>	Billing Address	ANS..50	M
<b>Address2</b>	Billing Address	ANS..50	O
<b>ZipCode</b>	Zip code for the Billing Address	ANS..16	O
<b>City</b>	City for the Billing Address	ANS..50	M
<b>CountryCode</b>	Country code for the Billing Address	ANS..3	M

AN : Alphanumerical without special characters

ANP : Alphanumerical with spaces and special characters

ANS : Alphanumerical with special characters

N : Numerical only

A : Alphabetic only

M : Mandatory

O : Optional

**Example :**

```
<?xml version="1.0" encoding="utf-8"?>
<Billing>
  <Address>
    <FirstName>Jean</FirstName>
    <LastName>Dupont</LastName>
    <Address1>12 rue Paul Dautier</Address1>
    <ZipCode>78140</ZipCode>
    <City>Vélizy-Villacoublay</City>
    <CountryCode>250</CountryCode>
  </Address>
</Billing>
```

## 5. PAYBOX DIRECT

### 5.1 IMPACTS

All of the payment attempts passed through Paybox Direct are concerned by the cardholder authentication.

With PSD2 coming into effect, the cardholder authentication will be expected by the card issuer for every payment attempt.

#### 5.1.1 3D-Secure v1

To allow for the transaction to be processed on the Paybox platform, the data from a 3D-Secure authentication will need to be integrated to the Paybox Direct implementation. The processing of the 3D-Secure authentication associated with a payment request can be done by integrating Verifone's RemoteMPI Solution. The details for this integration are available in the dedicated integration manual (see Ref 4).

To allow for the authentication of the cardholder without changing the payment integration, the merchant will need to consult its bank in order to obtain a 'VADS' contract (Vente à Distance Sécurisée, French for secured distance sell). This contract will need to be transmitted to Verifone, who will then proceed with the enrollment and the configuration of said contract.

This method imposes a challenge of the cardholder during each payment attempt (sending an SMS for instance). This challenge is a source of friction during the sale.

**Warning:** From Avril 2021 transactions without authentication or exemption will be refused. All e-commerce merchants must use 3D-Secure v2 or authenticate systematically the cardholder.

#### 5.1.2 3D-Secure v2

To allow for the transaction to be processed on the Paybox platform, the data from a 3D-Secure authentication will need to be integrated to the Paybox Direct implementation.

To simplify the transition from a 3D-Secure V1 to 3D-Secure V2; the 3DS V2 Authentication associated with a payment request will also be available by integrating Verifone's RemoteMPI Solution.

However, this new version of 3D-Secure will only be operational after some changes to the integration of the RemoteMPI are made, as described in the paragraph **:4.3 Changes to implement**.

To allow for the authentication of the cardholder without changing the payment integration, the merchant will need to consult its bank in order to obtain a 'VADS' contract (Vente à Distance Sécurisée, French for secured distance sell). This contract will need to be transmitted to Verifone, who will then proceed with the enrollment and the configuration of said contract.

Verifone's recommendation, as well as the French (GIE-CB) and European (ABE) regulatory institutions is to implement 3D-Secure v2.

## 5.2 CHANGES TO IMPLEMENT

These changes only concern the 3D-Secure v2 implementation.

### 5.2.1 API call to modify

The changes concern the stage 3 of the RemoteMPI cinematics, the call to the iFrame remoteMPI.cgi.

The structure of the call remains the same, but some additional data will need to be sent in order to allow for the correct processing of 3D-Secure v2.

The data necessary to display the 3D-Secure v2 authentication pages will be obtained through a JavaScript integrated to the Verifone hosted page with no additional change needed on the merchant's pages.

### 5.2.2 Data to add

Data to be added to the call made to the remoteMPI.cgi page :

Name	Description	Type	Presence
<b>EmailPorteur</b>	Cardholder item	AN.6.120 (including @ et .)	M
<b>TypeCarte</b>	Card scheme choosed by the Cardholder.	Amongst the following : CB, VISA, MASTERCARD, ELECTRON, MAESTRO, E_CARD, VPAY	O
<b>FirstName</b>	Customer first Name	ANP..30 (including / - ' )	M
<b>LastName</b>	Customer last Name	ANP..30 (including / - ' )	M
<b>Address1</b>	Billing Address	ANS..50	M
<b>Address2</b>	Billing Address	ANS..50	O
<b>ZipCode</b>	Zip code for the Billing Address	ANS..16	O
<b>City</b>	City for the Billing Address	ANS..50	M
<b>CountryCode</b>	Country Code for the Billing Address	ANS..3	M
<b>TotalQuantity</b>	Total number of items composing the order.	N..2	M

AN : Alphanumerical without special characters

ANP : Alphanumerical with spaces and special characters

ANS : Alphanumerical with special characters

N : Numerical only

A : Alphabetic only

M : Mandatory

O : Optional

**Notice :** If the value of TypeCarte given does not exist, a default value will be used following merchant account configuration on Verifone platform – CB by default.

### 5.2.3 Making a Paybox Direct call

Implementing an authentication using RemoteMPI is only completed when the 3D-Secure context is sent in a Paybox Direct call. This transmission is mandatory to trigger a payment request.

Paybox Direct is able to use two different modes to receive the 3D-Secure context.

- Sending the ID3D parameter

Or

- Sending all the following parameters ; 3DSTATUS, 3DENROLLED, 3DECI, 3DERROR, 3DXID, 3DCAVV, 3DCAVVALGO et 3DSIGNVAL.

During a 3D-Secure v1 authentication, both modes are supported, but due to technical limitation a 3D-Secure v2 authentication will only work when sending the ID3D parameter.

**Attention :** During a 3D-Secure v2 authentication, sending the context to Paybox Direct will only be possible with the ID3D parameter. Sending the parameters 3DSTATUS, 3DENROLLED, 3DECI, 3DERROR, 3DXID, 3DCAVV, 3DCAVVALGO et 3DSIGNVAL will not allow a 3D-Secure v2 payment attempt.



## 6. SUBSCRIPTION AND TESTS

The surveillance of evolution to the regulation is part of Verifone's activities, and usual working order is maintained. The Verifone representative in contact with the merchant remains the preferred entry point to request changes to the configuration or to the contracts.

### 6.1 ELIGIBILITY

Testing in the Preproduction environment can be done using the generics contracts given by Verifone, it would also be possible to use the merchant contract after its migration.

**Warning:** A contract will not allow 3DSv2 testing until it has been migrated on the Verifone platform.

Tests done on the preproduction platform will use a simulator.  
Different test case can be triggered by using the following card number.

### 6.2 TEST CARDS 3DSV2

#### 6.2.1 Test cases Visa

Authentication success :

- Card number : 4000000000001091
- Expiry date : January of the following year

Authentication Frictionless success :

- Card number : 4000000000001000
- Expiry date : January of the following year

Authentication failed :

- Card number : 4000000000001091
- Expiry date : January of the following year

Authentication Frictionless failed :

- Card number : 4000000000001018

- Expiry date : January of the following year

#### Authentication status Attempt:

- Card number : 4000000000001026
- Expiry date : January of the following year

#### Error searching for card :

- Card number : 4000000000001067
- Expiry date : January of the following year

#### Authentication unavailable :

- Card number : 4000000000001117
- Expiry date : January of the following year

#### Authentication error:

- Card number : 4000000000001125
- Expiry date : January of the following year

## 6.2.2 Test cases MasterCard

### Authentication success :

- Card number : 5200000000001096
- Expiry date : January of the following year

### Authentication Frictionless success :

- Card number : 5200000000001005
- Expiry date : January of the following year

### Authentication failed :

- Card number : 5200000000001104
- Expiry date : January of the following year

### Authentication Frictionless failed :

- Card number : 5200000000001013
- Expiry date : January of the following year

### Authentication status Attempt:

- Card number : 5200000000001021
- Expiry date : January of the following year

### Error searching for card:

- Card number : 5200000000001062
- Expiry date : January of the following year

### Authentication unavailable :

- Card number : 5200000000001112
- Expiry date : January of the following year

### Authentication error :

- Card number : 5200000000001120
- Expiry date : January of the following year

## 6.3 TEST CARDS 3DSV1

The use of 3DSv1 is compliant with the DSP2 but cannot be a long-term solution.  
This version of the protocol will be stop being supported during the second semester of 2021.

### 6.3.1 Test cases Visa

#### Authentication success :

- Card number : 4000000000000002
- Expiry date : January of the following year

#### Authentication failed :

- Card number : 4000000000000028
- Expiry date : January of the following year

#### Authentication status Attempt:

- Card number : 4000000000000101
- Expiry date : January of the following year

#### Error searching for card:

- Card number : 4000000000000051
- Expiry date : January of the following year

#### Authentication unavailable :

- Card number : 4000000000000069
- Expiry date : January of the following year

#### Authentication error :

- Card number : 4000000000000093
- Expiry date : January of the following year

## 6.3.2 Test cases Mastercard

### Authentication success :

- Card number : 5200000000000007
- Expiry date : January of the following year

### Authentication failed :

- Card number : 5200000000000023
- Expiry date : January of the following year

### Authentication status Attempt:

- Card number : 5200000000000908
- Expiry date : January of the following year

### Error searching for card:

- Card number : 5200000000000056
- Expiry date : January of the following year

### Authentication unavailable :

- Card number : 5200000000000064
- Expiry date : January of the following year

### Authentication error :

- Card number : 5200000000000098
- Expiry date : January of the following year