Technical Specification

120-Byte Batch Processing Format Specification
Version 3.0.0 Revision 5.0
Addendum in Support of Chip EMV
Rev. 1
September 15, 2010

CHASE ™
Paymentech

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CHASE Paymentech

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The following updates, additions, corrections have been incorporated in
**120–Byte Batch Processing Format Specification Version 3.0.0 Revision 5.0
Addendum In Support of Chip EMV**

Page No(s)	Action	Description of Change
Product Records		
1-12	Added	Product Records: Chip EMV1, Chip EMV2, Chip EMV3, Chip EMV4

Definition of Chip EMV: EMV® is a global standard for credit and debit payment cards based on chip card technology. EMV chip-based payment cards, also known as smart cards, contain an embedded microprocessor, a type of small computer. The microprocessor chip contains the information needed to use the card for payment, and is protected by various security features.

Notes: This addendum is used for deposits of authorizations obtained outside of Chase Paymentech's Stratus platform. This product is only supported for MasterCard and Visa. The MOP specific extended authorization data records must also be sent (EVI001 or EMC001).

There are several types of machines used for EMV processing at the point of sale. Specific fields within the EMV product records may be required based on the type of machine. For further information, please contact your Chase Paymentech representative.

EMV data between card and device is generally in binary format, commonly referred to as BER-TLV (Basic Encoding Rules-Tag Length Value). It must be converted to ASCII format by the merchant prior to submitting to Chase Paymentech. Chase Paymentech does not require either the Tag or the Length of this data. In addition, to minimize file size, all data must be submitted in single byte ASCII, unless otherwise stated.

TECHNICAL SPECIFICATION
120-BYTE BATCH PROCESSING FORMAT SPECIFICATION

Table of Contents

Product Record: Chip EMV 1

```
         1         2         3         4         5         6         7
1234567890123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNAAAAA
PCP001005BCA0BD7BB9E11B0000000005000002000000000AB000101124124100610112354
```

```
  8         9        10        11        12
012345678901234567890123456789012345678901234567890
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
   40000000007071CB98              5800↵
```

Position	Length	Data Type	Field Name	Comments
1	1	A	Product Record Identifier	"P" Constant – Specifies this record as a product record of the Chase Paymentech standard format.
2,3	2	A	Product Record Type	"CP" Constant
4,6	3	N	Product Record Sequence Number	"001" Constant
7,8	2	N	Card Sequence Number (EMV Tag: 5F34)	Identifies the specific account when the same card number is associated with different cards. Right justified/zero filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
9,24	16	A	Cryptogram (EMV Tag: 9F26)	The cryptogram returned by the Integrated Circuit Card (ICC) in response to the GENERATE AC command. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.

Product Record: Chip EMV 1, (Continued)

```
          1         2         3         4         5         6         7
123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNNNNNNNAAAA
PCP001005BCA0BD7BB9E11B0000000005000002000000000AB00010112412410061011234
```

```
   8         9        10        11        12
012345678901234567890123456789012345678901234567890
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
   40000000007071CB98              5800↵
```

Position	Length	Data Type	Field Name	Comments
25,36	12	N	Cryptogram Amount (EMV Tag: 9F02)	The amount associated with the cryptogram. Two decimal implied/right justified/zero filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
37,48	12	N	Other Amount (EMV Tag: 9F03)	A secondary amount associated with the transaction representing a cashback amount. (Optional) Two decimal implied/right justified/zero filled **Notes:** Required for MasterCard. If this field is not populated for a MasterCard transaction, EMV data is not sent to the Issuer.
49,50	2	A	Cryptogram Information Data (EMV Tag: 9F27)	The type of cryptogram and the actions to be performed by the terminal. (Optional) Left justified/blank filled **Notes:** Required for MasterCard. If this field is not populated for a MasterCard transaction, EMV data is not sent to the Issuer.
51,54	4	A	Application Transaction Counter (EMV Tag: 9F36)	A counter representing the number of application transactions. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.

Continued on next page

Product Record: Chip EMV 1, (Continued)

```
          1         2         3         4         5         6         7
123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNNNNNNNAAAAA
PCP001005BCA0BD7BB9E11B000000005000002000000000AB00010112412410061011254
```

```
8         9        10        11        12
012345678901234567890123456789012345678901234567890
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
    40000000007071CB98              5800↵
```

Position	Length	Data Type	Field Name	Comments
55,56	2	N	Transaction Type (EMV Tag: 9C)	Indicates the type of the transaction. Right justified/zero filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
57,59	3	N	Terminal Country Code (EMV Tag: 9F1A)	Indicates the country of the terminal as defined by ISO 3166. Right justified/zero filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
60,62	3	N	Terminal Currency Code (EMV Tag: 5F2A)	The currency of the transaction according to ISO 4217. (Optional) Right justified/zero filled **Notes:** Required for MasterCard. If this field is not populated for a MasterCard transaction, EMV data is not sent to the Issuer.
63,68	6	N	Terminal Transaction Date (EMV Tag: 9A)	The local date on which the transaction was authorized at the terminal. YYMMDD format **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.

Continued on next page

Product Record: Chip EMV 1, (Continued)

```
         1         2         3         4         5         6         7
123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNNNNNAAAAA
PCP001005BCA0BD7BB9E11B0000000050000020000000000AB000101124124100610112354
```

```
8         9        10        11        12
0123456789012345678901234567890123456789
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
    40000000007071CB98            5800↵
```

Position	Length	Data Type	Field Name	Comments
69,74	6	N	Terminal Transaction Time (EMV Tag: 9F21)	The local time that the transaction was authorized at the terminal. (Optional) HHMMSS format
75,80	6	A	Terminal Capability Profile (EMV Tag: 9F33)	Indicates the card data input, Cardholder Verification Method (CVM), and security capabilities of the terminal. (Optional) Left justified/blank filled **Notes:** Required for Visa. If this field is not populated for a Visa transaction, EMV data is not sent to the Issuer.
81,82	2	N	Terminal Type (EMV Tag: 9F35)	Indicates the environment of the terminal, its communications capability, and its operational control. (Optional) Right justified/zero filled
83,92	10	A	Terminal Verification Results (EMV Tag: 95)	Status of the different functions as seen from the terminal. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.

Continued on next page

Product Record: Chip EMV 1, (Continued)

```
         1         2         3         4         5         6         7
1234567890123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNNNAAAA
PCP001005BCA0BD7BB9E11B00000000050000020000000000AB000101124124100610112354
```

```
   8         9        10        11        12
012345678901234567890123456789012345678901234567890
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
    40000000007071CB98                5800↵
```

Position	Length	Data Type	Field Name	Comments
93,100	8	A	Unpredictable Number (EMV Tag: 9F37)	A value to provide variability and uniqueness to the generation of a cryptogram. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
101,108	8	A	Form Factor ID (EMV Tag: 9F6E)	Indicates the form factor of the consumer payment device and the type of contactless interface over which the transaction was conducted. (Optional) Left justified/blank filled **Notes:** Optional for Visa. The Form Factor Indicator is both an implementation and Issuer option. Inclusion of the Form Factor Indicator in online messages (and clearing records for offline capable readers) is an option for qVSDC and MSD readers. The Form Factor Indicator is updateable via an Issuer script command.
109,116	8	A	Issuer Script ID (EMV Tag: 9F18)	Identification of the Issuer Script. (Optional) Left justified/blank filled **Notes:** Optional for Visa. This field must be sent if the Issuer Script Results field on Product Record: Chip EMV 2 (PCP002) is sent or EMV data is not sent.

Product Record: Chip EMV 1, (Continued)

```
          1         2         3         4         5         6         7
123456789012345678901234567890123456789012345678901234567890123456789
AAANNNNNAAAAAAAAAAAAAAAAAANNNNNNNNNNNNNNNNNNNNNNAAAAAANNNNNNNNNNNNNNNNNNNNNNNAAAAA
PCP001005BCA0BD7BB9E11B0000000005000002000000000AB00010112412410061011 2354
```

```
8         9        10        11        12
012345678901234567890123456789012345678901234567890
ANNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
   4000000000 07071CB98                5800↵
```

Position	Length	Data Type	Field Name	Comments
117,120	4	A	Application Interchange Profile (EMV Tag: 82)	Specifies the application functions supported by the card. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.

Notes: Send this record if the authorization was obtained from a source other than Chase Paymentech's Stratus platform.

If any of the required EMV fields are not sent, Chase Paymentech does not send any of the EMV data records.

If this record is sent when Transaction Type does not = R, the transaction rejects with Response Reason Code 253 (Invalid Transaction Type).

For EMV detail information, this record and Product Record: Chip EMV 2 (PCP002) must be sent or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

This record and Product Record: Chip EMV 2 (PCP002) must be sent when either Product Record: Chip EMV 3 (PCP003) or Product Record: Chip EMV 4 (PCP004) is sent or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

EMV data between card and device is generally in binary format, commonly referred to as BER-TLV (Basic Encoding Rules-Tag Length Value). It must be converted to ASCII format by the merchant prior to submitting to Chase Paymentech. Chase Paymentech does not require either the Tag or the Length of this data. In addition, to minimize file size, all data must be submitted in single byte ASCII, unless otherwise stated.

Product Record: Chip EMV 2

```
          1         2         3         4         5         6         7         8        12
12345678901234567890123456789012345678901234567890123456789012345678901234567890 . . . 0
AAANNNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . A
PCP0020006010A03A4000000000000000000000000                                        ↵
```

Position	Length	Data Type	Field Name	Comments
1	1	A	Product Record Identifier	"P" Constant – Specifies this record as a product record of the Chase Paymentech standard format.
2,3	2	A	Product Record Type	"CP" Constant
4,6	3	N	Product Record Sequence Number	"002" Constant
7,8	2	A	Authorization Response Code (EMV Tag: 8A)	Code that defines the disposition of a message. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
9,74	66	A	Issuer Application Data (EMV Tag: 9F10)	Contains proprietary application data for transmission to the issuer in an online transaction. Left justified/blank filled **Notes:** Required for MasterCard and Visa. If this field is not populated, EMV data is not sent to the Issuer.
75,116	42	A	Issuer Script Results (EMV Tag: 9F5B)	Indicates the result of the terminal script processing. (Optional) Left justified/blank filled **Notes:** Optional for Visa. This field must be sent if the Issuer ID Script field on Product Record: Chip EMV 1 (PCP001) is sent or EMV data is not sent.
117,120	4	A	Reserved	Blanks

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Product Record: Chip EMV 2, (Continued)

Notes: Send this record if the authorization was obtained from a source other than Chase Paymentech's Stratus platform.

If this record is sent when Transaction Type does not = R, the transaction rejects with Response Reason Code 253 (Invalid Transaction Type).

For EMV detail information, this record and Product Record: Chip EMV 1 (PCP001) must be sent or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

This record and Product Record: Chip EMV 1 (PCP001) must be sent when either Product Record: Chip EMV 3 (PCP003) or Product Record: Chip EMV 4 (PCP004) is sent or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

EMV data between card and device is generally in binary format, commonly referred to as BER-TLV (Basic Encoding Rules-Tag Length Value). It must be converted to ASCII format by the merchant prior to submitting to Chase Paymentech. Chase Paymentech does not require either the Tag or the Length of this data. In addition, to minimize file size, all data must be submitted in single byte ASCII, unless otherwise stated.

Product Record: Chip EMV 3

```
          1         2         3         4         5         6         7         8        12
 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890 . . . 0
 AAANNNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . A
 PCP00340400110                                                                                  ↵
```

Position	Length	Data Type	Field Name	Comments
1	1	A	Product Record Identifier	"P" Constant – Specifies this record as a product record of the Chase Paymentech standard format.
2,3	2	A	Product Record Type	"CP" Constant
4,6	3	N	Product Record Sequence Number	"003" Constant
7,14	8	A	Interface Device Serial Number (EMV Tag: 9F1E)	Unique and permanent serial number assigned to the IFD by the manufacturer. (Optional) Left justified/blank filled

15	1	A	Card Authentication Results Code	Indicates if the Authorization Request Cryptogram (ARQC) verification passed or failed. (Optional)
				
				Valid values:
				  " "– Blank - Card Authentication not performed, or not a Visa Card.
				  1 – The ARQC was checked, but failed verification.
				  2 – The ATQC was checked and passed verification.
				
				Note: Applies to Visa only.

Continued on next page

Product Record: Chip EMV 3, (Continued)

```
         1         2         3         4         5         6         7         8        12
123456789012345678901234567890123456789012345678901234567890123456789001234567890 . . . 0
AAANNNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . A
PCP00340400110                                                                         ↵
```

Position	Length	Data Type	Field Name	Comments
16	1	A	CVV/iCVV/ CAM Results Code	Indicates the CVV/iCVV/CAM verification results. (Optional) Valid values: " " – Blank – Not verified or not a Visa Card. 1 – Failed Verification 2 – Passed Verification **Note:** Applies to Visa only.
17,22	6	A	CVM Results (EMV Tag: 9F34)	Indicates the result of the last Cardholder Verification Method (CVM) performed. (Optional) Left justified/blank filled
23,48	26	A	Issuer Script Command Data (EMV Tag: 86)	Contains a command for transmission to the Integrated Circuits Card (ICC). (Optional) Left justified/blank filled
49,80	32	A	Application Identifier (EMV Tag: 9F06)	Contains the EMV Application Identifier Card (AID) which identifies the application on the terminal as defined in ISO/IEC 7816-5. (Optional) Left justified/blank filled
81,88	8	A	Terminal Transaction Qualifier (EMV Tag: 9F66)	Qualifies the transaction on the terminal. (Optional) Left justified/blank filled

Product Record: Chip EMV 3, (Continued)

```
         1         2         3         4         5         6         7         8        12
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890 . . . 0
AAANNNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . A
PCP00340400110                                                                              ↵
```

Position	Length	Data Type	Field Name	Comments
89	1	A	Issuer Script Template 1 Indicator (EMV Tag: 71)	Indicates whether or not Issuer Script template 1 was present. (Optional) Left justified/blank filled
90	1	A	Issuer Script Template 2 Indicator (EMV Tag: 72)	Indicates whether or not Issuer Script template 2 was present. (Optional) Left justified/blank filled

91	1	A	Chip Condition Code	Indicates a fallback transaction. (Optional)
				Left justified/blank filled
				Valid values:
				   0 – Not applicable
				   1 – Magnetic stripe service code begins with either 2 or 6 and the last read at a chip-capable device was either a successful chip read or the transaction was not a chip transaction.
				   2 – Magnetic stripe service code begins with either 2 or 6 and the last read at a chip capable device was an unsuccessful chip read.
				Note: If the mag-stripe is used at authorization time and there is a chip on the card, this field should be populated.
				Applies to Visa only.

92,120	29	A	Reserved	Blanks

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Product Record: Chip EMV 3, (Continued)

Notes: If this record is sent when Transaction Type does not = R, the transaction rejects with Response Reason Code 253 (Invalid Transaction Type).

If this record is sent, the Product Record: Chip EMV 1 (PCP001) and Product Record: Chip EMV2 (PCP002) records must be sent. However, sending this record does not require the sending of Product Record: Chip EMV 4 (PCP004) or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

EMV data between card and device is generally in binary format, commonly referred to as BER-TLV (Basic Encoding Rules-Tag Length Value). It must be converted to ASCII format by the merchant prior to submitting to Chase Paymentech. Chase Paymentech does not require either the Tag or the Length of this data. In addition, to minimize file size, all data must be submitted in single byte ASCII, unless otherwise stated.

Product Record: Chip EMV 4

```
          1         2         3         4         5         6         7         8        12
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890 . . . 0
AAANNNNNNNNNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . A
PCP004000001                                                                                      ↵
```

Position	Length	Data Type	Field Name	Comments
1	1	A	Product Record Identifier	"P" Constant – Specifies this record as a product record of the Chase Paymentech standard format.
2,3	2	A	Product Record Type	"CP" Constant
4,6	3	N	Product Record Sequence Number	"004" Constant
7,12	6	N	Transaction Sequence Counter (EMV Tag: 9F41)	Uniquely identifies this transaction for the POS in a 24-hour period. The counter increases by one for each transaction. (Optional) Right justified/zero filled
13,76	64	A	Customer Exclusive Data (EMV Tag: 9F7C)	Customer defined data. (Optional) Left justified/blank filled
77,108	32	A	Issuer Authentication Data (EMV Tag: 91)	Data sent to the Integrated Circuits Card (ICC) for online issuer authentication. (Optional) Left justified/blank filled
109,120	12	A	Reserved	Blanks

Product Record: Chip EMV 4, (Continued)

Notes: If this record is sent when Transaction Type does not = R, the transaction rejects with Response Reason Code 253 (Invalid Transaction Type).

If this record is sent, the Product Record: Chip EMV 1 (PCP001) and Product Record: Chip EMV 2 (PCP002) records must be sent. However, sending this record does not require the sending of Product Record: Chip EMV 3 (PCP003) or the transaction rejects with Response Reason Code 227 (Missing Companion Data).

EMV data between card and device is generally in binary format, commonly referred to as BER-TLV (Basic Encoding Rules-Tag Length Value). It must be converted to ASCII format by the merchant prior to submitting to Chase Paymentech. Chase Paymentech does not require either the Tag or the Length of this data. In addition, to minimize file size, all data must be submitted in single byte ASCII, unless otherwise stated.

END OF THE TECHNICAL SPECIFICATION

120-Byte Batch Processing Version 3.0.0 Revision 5.0
Addendum In Support of Chip EMV Rev. 1

09/15/2010