SMARTVISTA HOST-TO-HOST INTERFACE

API developer reference

June 2018

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1. PREFACE
   1. Revision history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Revision | Date | Author | | Details |
| 1.0 | 15.06.2018 | | Kolodkina Y. | Initial version |
| 1.1 | 05.07.2018 | | Kolodkina Y. | MC mandatory changes:   * Added new values for fields pdc\_1 and pdc\_12 (‘S’) * Added new tag ‘DST\_ACC\_NUMBER’ into part 3 – tags |
| 1.2 | 30.07.2018 | | Kolodkina Y. | Added new tags in part 3 for h2h interfaces with Amex, JCB, Diners:  Amex:   * Format Code * Media code * ICC Chip/PIN Indicator   JCB: Acquirer Switch Date, Time  Diners: Network response code |
| 1.3 | 23.10.2018 | | Kolodkina Y. | Part 5. Added notation for reconciliation record |

* 1. Document purpose

The SV host-to-host interface (SV H2H hereafter) is an inward/outward interface for the SmartVista system. SV H2H format is based on XML format.

SV H2H format describe transaction records and the edit criteria applied to each field of a record. The manuals are intended for programmers, system analysts, and technical managers responsible for member or processor pre- and post-edit programs.

The interface makes it possible, for example, to exchange clearing information and receive settlement information from MasterCard, Visa international payment systems.

1. SmartVista Host-To-Host Interchange Interface
   1. HOST-TO-HOST MESSAGES LAYOUT

The structure of message fields and field attributes (length, optionality, etc.) can change. In such cases, compatibility with previous versions is ensured: fields can only be added, length can only be extended.

Within the current document all the SV H2H messages are described in the table structure below. In description of some fields added ISO-defined name.

| Tag | Type | Size | Occurs | Description |
| --- | --- | --- | --- | --- |
| clearing | | | | |
| file\_type | string | 8 | 1-1 | Type of incoming/ongoing file. Describe the purpose of data in file. Dictionary FLTP:  FLTPH2H – network to host-to-host  FLTP2200 – host-to-host reconciliation |
| file\_date | date |  | 1-1 | File Reference Date |
| forw\_inst\_id | long | 11 | 1-1 | Forwarding Institution ID |
| receiv\_inst\_id | long | 11 | 1-1 | Receiving Institution ID |
| file\_id | long | 16 | 1-1 | Unique identifier of file |
| **operation** | **operation** |  | **1-\*** | **Operation data** |
| operation | | | | |
| oper\_type | string | 8 | 1-1 | Operation type. Dictionary OPTP in SV.  Articles:  OPTP0000 - Purchase  OPTP0001 - ATM Cash withdrawal  OPTP0009 - Purchase with casback  OPTP0012 - POS Cash advance  OPTP0018 - Unique Transaction (Quasi Cash)  OPTP0028 - Payment transaction  OPTP0020 - Purchase return (Credit)  OPTP0010 - P2P Debit  OPTP0026 - P2P Credit |
| msg\_type | string | 8 | 1-1 | Message type. Dictionary MSGT in SV  Articles: MSGTPRES |
| oper\_date | date |  | 1-1 | Date when operation occurs (de 12) |
| oper\_amount | amount |  | 1-1 | Original operation amount (de 4/de 49) |
| oper\_surcharge\_amount | amount |  | 0-1 | Operation surcharge amount (de 54) |
| oper\_cashback\_amount | amount |  | 0-1 | Operation cashback amount (de 54) |
| sttl\_amount | amount |  | 0-1 | Settlement operation amount (de 5/de50)  Used for h2h transactions in which participate IPS. |
| sttl\_rate | float | 11 | 0-1 | Settlement conversion rate (de 9) |
| crdh\_bill\_amount | amount |  | 0-1 | Cardholder billing amount (de 6/de 51) |
| crdh\_bill\_rate | float | 11 | 0-1 | Cardholder billing conversion rate (de 10) |
| acq\_inst\_bin | long | 11 | 0-1 | Acquiring Institution ID Code (de 32) |
| arn | string | 23 | 0-1 | Acquirer Reference Data (de 31)  Used for h2h transactions in which participate IPS. Field contains ARN which it get from IPS. |
| is\_reversal | int | 1 | 1-1 | 0 – operation is not reversal  1 – operation is reversal |
| merchant\_number | string | 15 | 1-1 | Merchant number (de 42) |
| mcc | string | 4 | 1-1 | Merchant category code |
| merchant\_name | string | 200 | 1-1 | Merchant name (de 43) |
| merchant\_street | string | 200 | 0-1 | Merchant street address (de 43) |
| merchant\_city | string | 200 | 0-1 | Merchant’s city (de 43) |
| merchant\_region | string | 3 | 0-1 | Region of merchant (de 43) |
| merchant\_country | string | 3 | 0-1 | Country of merchant (de 43) |
| merchant\_postcode | string | 10 | 0-1 | Merchant’s postal code (de 43) |
| terminal\_type | string | 1 | 0-1 | Terminal type. Dictionary TRMT in SV.  Articles:  ‘0’ - Unknown terminal type  ‘1’ - Imprinter  ‘2’ - ATM  ‘3’ - POS  ‘4’ - ePOS  ‘5’ - Mobile  ‘6’ - Internet  ‘7’ - Mobile POS |
| terminal\_number | string | 8 | 0-1 | Terminal number (de 41) |
| card\_number | string | 19 | 1-1 | Card number (de 2) |
| card\_seq\_num | int | 4 | 0-1 | Card sequential number (de 23) |
| card\_expiry | date |  | 0-1 | Card expiration date (de 14) |
| service\_code | string | 3 | 0-1 | Card service code (de 40) |
| approval\_code | string | 6 | 1-1 | Approval Code (de 38) |
| rrn | string | 12 | 1-1 | Retrieval Reference Number (de 37) |
| trn | string | 16 | 0-1 | Transaction Reference Number (de 63) |
| oper\_id | string | 30 | 0-1 | Internal identifier of a transaction (created by the sender's system)  Used for h2h transactions in which does not participate IPS. |
| original\_id | string | 30 | 0-1 | Internal identifier of original transaction (created by the sender's system)  Used for:   * h2h transactions in which does not participate IPS. * reversal transaction only.   It contains reference to original transaction. |
| amount | | | | |
| amount\_value | long | 16 | 1-1 | Amount value expressed in minimal currency units |
| currency | string | 3 | 1-1 | Amount currency |
| **emv\_data** | **emv\_data** |  | **0-1** | **EMV raw data. For ICC transactions.** |
| **pdc** | **pdc** |  | **1-1** | **Point of Service Data Code. This is a series of codes that identify terminal capability, terminal environment, and point-of-interaction (POI) security data (de 22)** |
| **tag** | **tag** |  | **0-\*** | **Additional tags which used in IPS messages.**  **Used for h2h transactions in which participate IPS** |
| **flexible\_field** | **flex\_field** |  | **0-\*** | **Flexible field block. Used for interchange additional info.** |
| emv\_data | | | | |
| tag\_5F2A | int | 4 | 0-1 | Transaction Currency Code – Tag ‘5F2A’ – Taken from terminal initialisation table or chip card. |
| tag\_5F34 | int | 4 | 0-1 | Application Primary Account Number (PAN) Sequence Number.  This field is present if it was present in the chip card. |
| tag\_71 | string | 16 | 0-1 | Issuer Script Template 1 – Tag 71’ – (Response Message) –Scripts from the issuer sent to the terminal for delivery to the ICC.  Type of data Hexadecimal. |
| tag\_72 | string | 16 | 0-1 | Issuer Script Template 2 – Tag 72’ – (Response Msg) – Scripts from the issuer sent to the terminal for delivery to the ICC.  Type of data Hexadecimal. |
| tag\_82 | string | 8 | 0-1 | Application Interchange Profile – Tag ‘82’ – Specifies the application functions that is supported by the card. The terminal attempts to execute only those functions that the ICC supports.  Type of data Hexadecimal. |
| tag\_84 | string | 32 | 0-1 | Dedicated File (DF) Name – Tag ‘84’ – Taken from the application (application specific data)  Type of data Hexadecimal. |
| tag\_8A | string | 2 | 0-1 | Authorisation Response Code – Code that defines the disposition of a message |
| tag\_91 | string | 32 | 0-1 | Issuer Authentication Data – Tag ‘91’ – (Response Message) –Sent by the issuer if on-line issuer authentication is required.  Type of data Hexadecimal. |
| tag\_95 | string | 10 | 0-1 | Terminal Verification Result (TVR) – Tag ‘95’ – Status of the different functions as seen by the terminal during the processing of a transaction.  Type of data Hexadecimal. |
| tag\_9A | int | 6 | 0-1 | Transaction Date – Tag ‘9A’ – Formatted as ‘YYMMDD’. Taken from terminal clock. |
| tag\_9C | int | 2 | 0-1 | Transaction Type – Tag ‘9C’ – Taken from the transaction data |
| tag\_9F02 | int | 12 | 0-1 | Transaction Amount – Tag ‘9F02’ – Taken from transaction data |
| tag\_9F03 | int | 12 | 0-1 | Amount Other-Tag ‘9F03’ |
| tag\_9F06 | string | 64 | 0-1 | Application Identifier (AID) – Identifies the application as described in ISO/IEC 7816-5  Type of data Hexadecimal. |
| tag\_9F09 | string | 4 | 0-1 | Terminal Application Version Number – Tag ‘9F09’  Type of data Hexadecimal. |
| tag\_9F10 | string | 64 | 0-1 | Issuer Application Data (IAD) –Tag ‘9F10’  Type of data Hexadecimal. |
| tag\_9F18 | string | 8 | 0-1 | Issuer Script Identifier – Identification of the Issuer Script  Type of data Hexadecimal. |
| tag\_9F1A | int | 4 | 0-1 | Terminal Country Code – Tag ‘9F1A’ |
| tag\_9F1E | string | 16 | 0-1 | Interface Device (IFD) Serial Number-Tag ‘9F1E’ |
| tag\_9F26 | string | 16 | 0-1 | Application Cryptogram (AC) – Tag ‘9F26’  Type of data Hexadecimal. |
| tag\_9F27 | string | 2 | 0-1 | Cryptogram Information Data – Tag ‘9F27’ – Used to approve offline transactions  Type of data Hexadecimal. |
| tag\_9F28 | string | 16 | 0-1 | Authorisation Request Cryptogram (ARQC) – Tag ‘9F28’  Type of data Hexadecimal. |
| tag\_9F29 | string | 16 | 0-1 | Transaction Certificate (TC) – Tag ‘9F29’  Type of data Hexadecimal. |
| tag\_9F33 | string | 6 | 0-1 | Terminal Capabilities – Tag ‘9F33’ – Specifies the capabilities of the terminal  Type of data Hexadecimal. |
| tag\_9F34 | string | 6 | 0-1 | CVM Results – Tag ‘9F34’ – Result of the last cardholder verification method  Type of data Hexadecimal. |
| tag\_9F35 | int | 2 | 0-1 | Terminal Type – Tag ‘9F35’ – Specifies the type of terminal |
| tag\_9F36 | string | 4 | 0-1 | Application Transaction Counter (АТС) – Tag ‘9F36’ – from the card  Type of data Hexadecimal. |
| tag\_9F37 | string | 8 | 0-1 | Unpredictable Number-Tag ‘9F37’ – Value to provide variability and uniqueness to the generation of the application cryptogram.  Type of data Hexadecimal. |
| tag\_9F41 | int | 8 | 0-1 | Transaction Sequence Counter-Tag ‘9F41’ – Counter maintained by the terminal that is incremented by one for each transaction |
| tag\_9F53 | string | 2 | 0-1 | Transaction Category Code / Merchant Category Code – Tag ‘9F53’ – Usually provided by the acquirer |
| pdc | | | | |
| pdc\_1 | string | 1 | 1-1 | Card data input capability. Dictionary F221 in SV.  0 - Unknown; data not available  1 - Manual; no terminal  2 - Magnetic stripe reader capability  3 - Barcode reader  4 - Optical character reader (OCR) capability  5 - Integrated circuit card (ICC) capability  6 - Key entry-only capability  A - PAN auto-entry via contactless magnetic stripe  B - Magnetic stripe reader and key entry capability  C - Magnetic stripe reader, ICC, and key entry capability  D - Magnetic stripe reader and ICC capability  E - ICC and key entry capability  M - PAN auto-entry via contactless M/Chip  V - Other capability  S - Software contactless interface |
| pdc\_2 | string | 1 | 1-1 | Cardholder authentication capability. Dictionary F222 in SV.  0 - No electronic authentication capability  1 - PIN entry capability  2 - Electronic signature analysis capability  5 - Electronic authentication capability is inoperative  6 - Other  8 - PIN entry capability with PIN pad  9 - Unknown; data unavailable |
| pdc\_3 | string | 1 | 1-1 | Card capture capability. Dictionary F223 in SV.  0 - No capture capability  1 - Card capture capability  2 - Unknown; data unavailable |
| pdc\_4 | string | 1 | 1-1 | Operating environment. Dictionary F224 in SV.  0 - No terminal used  1 - On card acceptor premises; attended terminal  2 - On card acceptor premises; unattended terminal  3 - Off card acceptor premises; attended  4 - Off card acceptor premises; unattended  5 - On cardholder premises; unattended  6 - Off cardholder premises; unattended  7 - Private use (Future use)  9 - Unknown; data unavailable  A - Attended cardholder terminal on card acceptor premises  B - Unattended cardholder terminal on card acceptor premises |
| pdc\_5 | string | 1 | 1-1 | Cardholder presence indicator. Dictionary F225 in SV.  0 - Cardholder present  1 - Cardholder not present (unspecified)  2 - Cardholder not present (mail/facsimile transaction)  3 - Cardholder not present (phone order or from automated response unit [ARU])  4 - Cardholder not present (standing order/recurring transaction)  5 - Cardholder not present (electronic order [PC, Internet, mobile phone or PDA])  9 - Unknown; data unavailable |
| pdc\_6 | string | 1 | 1-1 | Card presence indicator. Dictionary F226 in SV.  0 - Card present  1 - Card not present  9 - Unknown; data unavailable |
| pdc\_7 | string | 1 | 1-1 | Card data input mode. Dictionary F227 in SV. in SV.  0 - Unspecified; data unavailable  1 - Manual input; no terminal  2 - Magnetic stripe reader input  3 - Barcode reader  5 - Secured electronic commerce, 3D-security  6 - Key entered input  7 - Electronic commerce, channel encryption  8 - Master Pass channel encrypted  9 - Electronic commerce, cardholder does not participate in security programm  A - PAN auto-entry via contactless magnetic stripe  B - Magnetic stripe reader input; track data captured and passed unaltered  C - Online chip  D - Master Digital Secure Remote Payment  E - Credential on file  F - Offline chip  M - PAN auto-entry via contactless M/Chip  N - Contactless input, PayPass mapping service applied  P - PAN entry via contactless magstripe, with PayPass Mapping service applied  R - PAN entry via electronic commerce, including remote chip  S - Electronic commerce  W - PAN Auto Entry via Server (issuer, acquirer, or third party vendor system)  W - Automatic |
| pdc\_8 | string | 1 | 1-1 | Cardholder authentication method. Dictionary F228 in SV.  0 - Not authenticated  1 - PIN  2 - Electronic signature analysis  5 - Manual signature verification  6 - Other manual verification (such as driver's license number)  9 - Unknown; data unavailable  S - Other systematic verification |
| pdc\_9 | string | 1 | 1-1 | Cardholder authentication entity. Dictionary F229 in SV.  0 - Not authenticated  1 - ICC - offline PIN  2 - Card acceptance device (CAD)  3 - Authorizing agent - online PIN  4 - Merchant/card acceptor - signature  5 - Other  6 - Merchant is suspicious  9 - Unknown; data unavailable |
| pdc\_10 | string | 1 | 1-1 | Card data output capability. Dictionary F22A in SV.  0 - Unknown; data unavailable  1 - None  2 - Magnetic stripe write  3 - ICC  S - Other |
| pdc\_11 | string | 1 | 1-1 | Terminal output capability. Dictionary F22B in SV.  0 - Unknown; data unavailable  1 - None  2 - Printing capability only  3 - Display capability only  4 - Printing and display capability |
| pdc\_12 | string | 1 | 1-1 | Pin capture capability. Dictionary F22C in SV.  0 - No PIN capture capability  1 - Unknown; data unavailable  2 - Reserved  3 - Reserved  4 - PIN capture capability 4 characters maximum  5 - PIN capture capability 5 characters maximum  6 - PIN capture capability 6 characters maximum  7 - PIN capture capability 7 characters maximum  8 - PIN capture capability 8 characters maximum  9 - PIN capture capability 9 characters maximum  A - PIN capture capability 10 characters maximum  B - PIN capture capability 11 characters maximum  C - PIN capture capability 12 characters maximum  S - Software implemented PIN pad |
| tag | | | | |
| tag\_name | string | 200 | 1-1 | Tag name. This tag optional if present tag\_id |
| tag\_value | string | 2000 | 1-1 | Tag value |
| flexible\_field | | | | |
| field\_name | string | 200 | 1-1 | Unique flexible field name |
| field\_value | string | 200 | 1-1 | Flexible field value |

2. Tags

Tags used for H2H transactions in which participate IPS (MC or Visa). Table below shows tags that can be set in the field ‘tag’ of the aggregate ‘clearing\operation’.

* 1. LIST OF TAGS

| Tag name | SVFE tag | MC field | Visa field | AmEx field | JCB field | Diners field | Description |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SENDER\_NAME | CUSTOMER\_NAME | Payer Name/User ID | Sender Name | - | - | - | Money Sender Name  MC (PDS 0670\_1)  Visa (TCR3 74-103) |
| SENDER\_ADDRESS | SENDER\_STREET | Payer Address | Sender Address | - | - | - | Money Sender address  MC (PDS 0670\_2)  Visa (TCR3 104-138) |
| SENDER\_CITY | SENDER\_CITY | Payer City | Sender City | - | - | - | Money Sender city  MC (PDS 0670\_3)  Visa (TCR3 139-163) |
| SENDER\_COUNTRY | SENDER\_COUNTRY | Payer Country Code | Sender Country | - | - | - | Money sender country  MC (PDS 0670\_5)  Visa (TCR3 166-168) |
| SENDER\_POSTCODE | SENDER\_POSTCODE | Payer Postal Code | - | - | - | - | Money sender postal code  MC (PDS 0670\_6) |
| PAYEE\_FIRST\_NAME | PERSON\_NAME | Payee First Name | - | - | - | - | Payee First Name  MC (PDS 0765\_1) |
| PAYEE\_LAST\_NAME | PERSON\_SURNAME | Payee Last Name | - | - | - | - | Payee Last Name  MC (PDS 0765\_2) |
| PAYEE\_ADDRESS | DF8767 | Payee Address | - | - | - | - | Payee address  MC (PDS 0765\_3) |
| PAYEE\_CITY | DF8769 | Payee City | - | - | - | - | Payee city  MC (PDS 0765\_4) |
| PAYEE\_STATE | DF876B | Payee State | - | - | - | - | Payee State/Province Code  MC (PDS 0765\_5) |
| PAYEE\_COUNTRY | DF8768 | Payee Country Code | - | - | - | - | Payee country  MC (PDS 0765\_6) |
| PAYEE\_POSTCODE | DF876A | Payee Postal Code | - | - | - | - | Payee postal code  MC (PDS 0765\_7) |
| PAYEE\_BIRTH | DF876C | Payee Date of Birth | - | - | - | - | Payee date of birth  MC (PDS 0765\_8) |
| PAYEE\_PHONE | DF876D | Payee Phone Number | - | - | - | - | Payee phone  MC (PDS 0765\_9) |
| INSTALL\_TYPE | DF8754 | Type of Installment | - | - | - | - | Installment Payment Data 2  MC (PDS 0181\_2) |
| INSTALL\_COUNT | DF8770 | Number of Installments | - | - | - | - | Installment Payment Data 1  (PDS 0181\_1) |
| SENDER\_ACCOUNT | DF8608 | Sender Account Number | Sender Account Number | - | - | - | Sender account number  MC (PDS 0004\_2)  Visa (TCR3 40-73) |
| FACILITATOR | DF8775 | Payment Facilitator ID | - | - | - | - | Payment Facilitator ID  MC (PDS 0208\_1) |
| SUB\_MERCHANT | DF8776 | Sub-Merchant ID | - | - | - | - | Sub-Merchant ID  MC (PDS 0208\_2 and for calculate de 31) |
| IND\_ORG\_ID | DF8777 | Independent Sales Organization ID | - | - | - | - | Independent Sales Organization ID  MC (PDS 0209) |
| WALLET\_ID | DF8760 | Wallet Identifier | - | - | - | - | Wallet ID  MC (PDS 0207) |
| ATM\_FEE | DF877B | ATM Service Fee | - | - | - | - | ATM Service Fee  MC (PDS 1001) |
| PROGRAM\_ID | DF8A6B | Program Registration ID | - | - | - | - | Program Registration ID  MC (PDS 0043) |
| ASSIGNED\_ID | DF8A22 | Mastercard Assigned ID | - | - | - | - | MasterCard Assigned ID  MC (PDS 0176) |
| FUNDING\_SOURCE | DF8A32 | - | Source of Funds  (source\_of\_funds) | - | - | - | Funding source type  Visa (TCR3 21) |
| BAI | DF8A24 | - | Business Application ID | - | - | - | Business Application ID  Visa (TCR3 15-16 or 19-20 for CR) |
| FORMAT\_CODE | DF8A48 | - | Business Format Code | - | - | - | Business format code  Visa (TCR3 17-18) |
| PASSENGER\_NAME | DF8A49 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Passenger Name  Visa (TCR3 27–46). |
| DEPART\_DATE | DF8A4A | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Departure Date (MMDDYY)  Visa (TCR3 47–52). |
| AIRPORT\_CODE | DF8A4B | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Origination City/Airport Code  Visa (TCR3 53–55). |
| CARRIER\_CODE\_1 | DF8A4C | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 1. Carrier Code  Visa (TCR3 56–57). |
| SERVICE\_CLASS\_1 | DF8A4D | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 1. Service Class  Visa (TCR3 58). |
| STOP\_CODE\_1 | DF8A4E | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 1. Stop-Over Code  Visa (TCR3 59). |
| AIRPORT\_CODE\_1 | DF8A4F | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 1. Destination City/Airport Code  Visa (TCR3 60–62). |
| CARRIER\_CODE\_2 | DF8A50 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 2. Carrier Code  Visa (TCR3 63–64). |
| SERVICE\_CLASS\_2 | DF8A51 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 2. Service Class  Visa (TCR3 65). |
| STOP\_CODE\_2 | DF8A52 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 2. Stop-Over Code  Visa (TCR3 66). |
| AIRPORT\_CODE\_2 | DF8A53 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 2. Destination City/Airport Code  Visa (TCR3 67–69). |
| CARRIER\_CODE\_3 | DF8A54 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 3. Carrier Code  Visa (TCR3 70–71). |
| SERVICE\_CLASS\_3 | DF8A55 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 3. Service Class  Visa (TCR3 72). |
| STOP\_CODE\_3 | DF8A56 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 3. Stop-Over Code  Visa (TCR3 73). |
| AIRPORT\_CODE\_3 | DF8A57 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 3. Destination City/Airport Code  Visa (TCR3 74–76). |
| CARRIER\_CODE\_4 | DF8A58 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 4. Carrier Code  Visa (TCR3 77–78). |
| SERVICE\_CLASS\_4 | DF8A59 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 4. Service Class  Visa (TCR3 79). |
| STOP\_CODE\_4 | DF8A5A | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 4. Stop-Over Code  Visa (TCR3 80). |
| AIRPORT\_CODE\_4 | DF8A5B | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Trip Leg 4. Destination City/Airport Code  Visa (TCR3 81–83). |
| AGENCY\_CODE | DF8A5C | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Travel Agency Code  Visa (TCR3 84–91). |
| AGENCY\_NAME | DF8A5D | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Travel Agency Name  Visa (TCR3 92–116). |
| TICKET\_ID | DF8A5E | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Restricted Ticket Indicator  Visa (TCR3 117). |
| FARE\_CODE\_1 | DF8A3D | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Fare Basis Code - Leg 1  Visa (TCR3 118–123). |
| FARE\_CODE\_2 | DF8A3E | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Fare Basis Code - Leg 2  Visa (TCR3 124–129). |
| FARE\_CODE\_3 | DF8A3F | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Fare Basis Code - Leg 3  Visa (TCR3 130–135). |
| FARE\_CODE\_4 | DF8A40 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Fare Basis Code - Leg 4  Visa (TCR3 136–141). |
| RESERV\_SYSTEM | DF8A41 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Computerized Reservation System  Visa (TCR3 142–145). |
| FLIGHT\_NUM\_1 | DF8A42 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Flight Number - Leg 1  Visa (TCR3 146–150). |
| FLIGHT\_NUM\_2 | DF8A43 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Flight Number - Leg 2  Visa (TCR3 151–155). |
| FLIGHT\_NUM\_3 | DF8A44 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Flight Number - Leg 3  Visa (TCR3 156–160). |
| FLIGHT\_NUM\_4 | DF8A45 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Flight Number - Leg 4  Visa (TCR3 161–165). |
| CREDIT\_ID | DF8A46 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Credit Reason Indicator  Visa (TCR3 166). |
| TICKET\_CHANGE\_ID | DF8A47 | - | TCR3 — passenger itinerary data | - | - | - | Passenger Itinerary. Ticket Change Indicator  Visa (TCR3 167). |
| VALID\_CODE | DF860E | - | Validation Code | - | - | - | Validation Code  Visa (TCR5 37-40) |
| MVV | DF8A21 | - | Merchant Verification Value | - | - | - | Merchant Verification Value (VISA MVV)  Visa (TCR5 82-91) |
| DCC\_INDICATOR | DCC\_INDICATOR | - | Dynamic Currency Conversion (DCC) Indicator | - | - | - | DCC Indicator  Visa (TCR5 144) |
| AVS\_CODE | DF8A2C | - | AVS Response Code | - | - | - | AVS Response Code  Visa (TCR1 127) |
| AUTH\_SOURCE\_CODE | DF8A09 | - | Authorization Source Code | - | - | - | Authorization source code  Visa (TCR1 128) |
| ECI | - | Electronic Commerce Security Level Indicator | Mail/Phone/Electronic Commerce and Payment Indicator | Electronic Commerce Indicator (ECI) | - | - | Electronic Commerce Indicator  MC (PDS 0052)  Visa (TCR1 116)  Amex (183-184)  Used only for transfer MC/Visa/Amex presentment’s field to member. |
| FPI | - | - | Fee Program Indicator | - | - | - | Fee Program Indicator  Visa (TCR1 76-78)  Used only for transfer Visa field to member. |
| REIMB\_ATTR | - | - | Reimbursement Attribute | - | - | - | Reimbursement Attribute  Visa (TCR0 168)  Used only for transfer Visa field to member. |
| DST\_ACC\_NUMBER | DF8A1B | Masterpass QR Receiving Account Number |  | - | - | - | Masterpass QR Receiving Account Number  MC (PDS 0028) |
| PMT\_ACC\_REF | DF8800 | - | Payment Account Reference | - | - | - | Payment Account Reference  Visa (TCR4 120–148) |
| AMX\_FORMAT\_CODE | - | - | - | Amex Format Code | - | - | Format Code Amex (923-924)  Used only for transfer Amex presentment’s field to member |
| MEDIA\_CODE | - | - | - | Media code | - | - | Media Code  Amex (936-937)  Used only for transfer Amex presentment’s field to member |
| ICC\_CHIP\_PIN\_IND | - | - | - | ICC Chip/PIN Indicator | - | - | ICC Chip/PIN Indicator  Amex (784-785) Used only for transfer Amex presentment’s field to member |
| ACQ\_SWITCH\_DATE | DF8423 | - | - | - | Acquirer Switch Date, Time | - | Acquirer Switch Date, Time  JCB(Bit 12 - Date and Time, Local Transaction) |
| NET\_RESP\_CODE | DF8634 | - | - | - | - | Network response code | Network response code  Diners(Field 15 - APPCD - Action Code) |

1. Flexible Fields
   1. FIELDS PURPOSE

Flexible fields are used for interchange additional info which don’t needed for interchange with IPS. Flexible fields contains data used exclusively for reporting member-to-member proprietary data. Customers can use these fields to exchange with other participating customers information that is not defined and captured in other elements.

1. Message Format Field requirement
   1. NOTATION

The following notations describe the requirements for each field.

* M - Mandatory. The field is required in the message
* C - Conditional. The field is required in the message if the conditions described in the accompanying text are applicable.
* O - Optional. The field is not required but may be included in the message at the message originator’s option
* X - Not Required or Not Applicable. The field is not required or not applicable

In below table described applicability of more important fields of message in cases: H2H transaction, H2H transaction by acquiring, H2H transaction by issuing and reconciliation messages.

| Tag | H2H | H2H ACQ | H2H  ISS | RCN | Description |
| --- | --- | --- | --- | --- | --- |
| clearing | | | | | |
| file\_type | M | M | M | M | Type of incoming/ongoing file. Describe the purpose of data in file. Dictionary FLTP:  FLTPH2H – network to host-to-host  FLTP2200 – host-to-host reconciliation |
| file\_date | M | M | M | M | File Reference Date |
| forw\_inst\_id | M | M | M | M | Forwarding Institution ID |
| receiv\_inst\_id | M | M | M | M | Receiving Institution ID |
| file\_id | M | M | M | M | Unique identifier of file |
| **operation** | **M** | **M** | **M** | **M** | **Operation data** |
| operation | | | | | |
| oper\_type | M | M | M | M | Operation type. Dictionary OPTP.  Articles:  OPTP0000 - Purchase  OPTP0001 - ATM Cash withdrawal  OPTP0009 - Purchase with casback  OPTP0012 - POS Cash advance  OPTP0018 - Unique Transaction (Quasi Cash)  OPTP0028 - Payment transaction  OPTP0020 - Purchase return (Credit)  OPTP0010 - P2P Debit  OPTP0026 - P2P Credit |
| msg\_type | M | M | M | M | Message type. Dictionary MSGT  Articles: MSGTPRES |
| oper\_date | M | M | M | M | Date when operation occurs (de 12) |
| oper\_amount | M | M | M | M | Original operation amount (de 4/de 49) |
| oper\_surcharge\_amount | O | O | X | O | Operation surcharge amount (de 54) |
| oper\_cashback\_amount | O | O | X | O | Operation cashback amount (de 54) |
| sttl\_amount | X | X | M | X | Settlement operation amount (de 5/de50)  Used for H2H transactions in which participate IPS. |
| sttl\_rate | X | X | O | X | Settlement conversion rate (de 9) |
| crdh\_bill\_amount | X | X | O | X | Cardholder billing amount (de 6/de 51) |
| crdh\_bill\_rate | X | X | O | X | Cardholder billing conversion rate (de 10) |
| acq\_inst\_bin | X | X | M | X | Acquiring Institution ID Code (de 32) |
| arn | X | X | M | X | Acquirer Reference Data (de 31)  Used for H2H transactions in which participate IPS. Field contains ARN which it get from IPS. |
| is\_reversal | M | M | M | M | 0 – operation is not reversal  1 – operation is reversal |
| merchant\_number | M | M | M | M | Merchant number (de 42) |
| mcc | M | M | M | M | Merchant category code |
| merchant\_name | M | M | M | M | Merchant name (de 43) |
| terminal\_number | O | O | O | O | Terminal number (de 41) |
| card\_number | M | M | M | M | Card number (de 2) |
| approval\_code | M | M | M | M | Approval Code (de 38) |
| rrn | M | M | M | M | Retrieval Reference Number (de 37) |
| trn | X | O | M | O | Transaction Reference Number (de 63) |
| oper\_id | M | M | X | O | Internal identifier of a transaction (created by the sender's system)  Used for H2H transactions in which does not participate IPS. |
| original\_id | M | M | X | O | Internal identifier of original transaction (created by the sender's system)  Used for:   * H2H transactions in which does not participate IPS. * reversal transaction only.   It contains reference to original transaction. |
| **emv\_data** | **C** | **C** | **C** | **O** | **EMV raw data. For ICC transactions.** |
| **pdc** | **M** | **M** | **M** | **O** | **Point of Service Data Code. This is a series of codes that identify terminal capability, terminal environment, and point-of-interaction (POI) security data (de 22)** |
| **tag** | **X** | **C** | **C** | **X** | **Additional tags which used in IPS messages.**  **Can be used for H2H transactions in which participate IPS.** |
| **flexible\_field** | **O** | **O** | **O** | **X** | **Flexible field block. Used for interchange additional info.** |