



EXTERNAL INTERFACE SPECIFICATIONS AUTHORIZATION RECORD FORMAT

EIS 1080

VERSION 17.6
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Chapter 3

Related documentation

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3.1 Applicable documents

This document describes the request and response record formats for Second Generation Point Of Sale (POS) authorization devices using TSYS Acquiring Solutions' authorization services. The following documents provide additional definition and background information. Please refer to the related documents listed for applicable information.

3.2 Related TSYS Acquiring Solutions documents

Related TSYS Acquiring Solutions documents are listed in [Table 3.1](#).

Table 3.1 Related TSYS Acquiring Solutions documents

Reference number	Name	Revision / generation	Related topic
EIS 1051	External Interface Specification	v3.2	Authorization Link Level Protocol
EIS 1052	External Interface Specification	v3.3	Data Capture Link Level Protocol
EIS 1081	External Interface Specification	v7.5.1	Data Capture Record Formats
EIS 1053	External Interface Specification	v1.0	Authorization Direct Connect Protocol

3.3 Document revisions

Table 3.2 Version 17.6 document revisions

Date Published	Chapter	Section	Action
June 21, 2019	Message formats	5.2.74	Added 0 to the Length for Directory Server Transaction ID
	Field definitions	6.36.2	Updated the definition for Section 6.36.2 Merchant city
		6.77	Updated the valid value 21 description in Table 6.40
		6.117	Updated value 216 - from Android Pay to Google Pay in Section 6.117 Mastercard wallet identifier
		6.203	Updated definition for Transaction fee amount in Section 6.203 Transaction fee amount
		6.214	Removed column labeled Condition (each condition must be present) in Table 6.92 Updated descriptions for Code 04, 40, and 99 in Table 6.92
	Message format examples	8.1.4.1	Added information in Table 8.37
		8.1.4.2	Added information in Table 8.38

Table 3.3 Version 17.5 document revisions

Date Published	Chapter	Section	Action
May 24, 2019	Message formats	5.1.1	Renamed Verified by Visa to Visa Secure
	Field definitions	6.56	Renamed Verified by Visa to Visa Secure
		6.136	Renamed Verified by Visa to Visa Secure
		6.201	Removed transaction codes G1, G8, G9, GA, GD and GE in Table 6.87
	Message format examples	8.1.4.1	Removed content from field definition for Merchant Number Added content - Must be 6532 or 6533 for field definition Merchant Category Code in Table 8.37

Table 3.4 Version 17.4 document reversions

Date Published	Chapter	Section	Action
May 03, 2019	Message formats	5.1.1	Updated table in Section 5.1.1 3D Secure Authentication
		5.2.2	Updated definition in Section 5.2.2 Debit or EBT additional fields in authorization message (G2)
		5.2.59	Updated length for Merchant ID Code, Merchant City, Merchant Region Code, Merchant Country Code, and Payment Service Provider Name in Table 5.122
	Field definitions	6.10.2	Updated description for value 80 and 81 in Table 6.5
		6.49	Updated description for ID Codes G, Z, and @ in Table 6.22
		6.55	Added Table 6.31 in Section 6.55 CAVV results code
		6.70.1	Updated description in Section 6.70.1 Track one data
		6.117	Updated description in Section 6.117 Mastercard wallet identifier
		6.134	Updated description in Section 6.134 Message reason code
		6.144	Updated description in Section 6.144 Payment account reference

Date Published	Chapter	Section	Action
		6.149	Updated description by changing 00 to 20 in Section 6.144 Payment account reference
		6.151.1	Updated description for value 5 and E in Table 6.60
		6.151.2	Removed MC from value 3 in Table 6.61 in Section 6.151.2 Subfield 2 - Terminal cardholder authentication capability
		6.163	Added Response Codes in Table 6.80
		6.166.5	Updated description for Section 6.166.5 Retrieval reference number
		6.212	Added value 3 in Table 6.91
	Message format examples	8.1.1.16	Removed Field Full Track 1 from Customer Data Field in Table 8.16
		8.1.1.17	Removed Field Full Track 1 from Customer Data Field in Table 8.17

Table 3.5 Version 17.3 document revisions

Date Published	Chapter	Section	Action
April 12, 2019	Message formats	5.2.52	Updated the note in Section 5.2.52 Message reason code (G3v056)
		5.2.62	Updated definition and added 0 for a length for Payment Facilitator/Marketplace identifier in Section 5.2.62 Payment Facilitator (G3v066)
	Field definitions	6.36.2	Updated definition in Section 6.36.2 Merchant city
		6.77	Updated description for valid value 21 in Section 6.77 Electronic commerce security level indicator
		6.145	Updated description in Section 6.145 Payment facilitator/marketplace identifier
		6.146	Updated definition for Usage 1 - Payment Facilitator Name *Sub-Merchant Name
		6.151.5	Updated description for value 4 in Table 6.64
		6.151.7	Updated description for value 7 in Table 6.66
		6.181	Updated description in Section 6.181 Sub-merchant city
		6.182	Updated description in Section 6.182 Sub-merchant country code

Date Published	Chapter	Section	Action
		6.183	Updated description in Section 6.183 Sub-merchant identifier
		6.184	Updated description in Section 6.184 Sub-merchant postal code
		6.185	Updated description in Section 6.185 Sub-merchant state/province code

Table 3.6 Version 17.2 document revisions

Date Published	Chapter	Section	Action
February 28, 2019	Message formats	5.2.62	Updated by removing debit from Section 5.2.62 Payment Facilitator (G3v066)

Table 3.7 Version 17.1 document revisions

Date Published	Chapter	Section	Action	Data
February 25, 2019	Message formats	5.1.1	Add	Added table in Section 5.1.1 3D Secure Authentication
		5.2.73	Update	Updated Format from NUM to A/N for Transaction Status and Acceptance Device Type Table 5.150
		5.2.74	Update	Updated Format from NUM to A/N for Program Protocol and NUM to A/N/S for Directory Server Transaction ID Table 5.151

Date Published	Chapter	Section	Action	Data
	Field definitions	6.151.2	Add	Added (MC) to the value of 3 in Table 6.61
		6.207	Add	Added information in the definition for Section 6.207 Transaction status
	Message format examples	8.1.4	Update	Updated Byte 61-62 in Table 8.37
		8.1.4.1	Update	Updated Table 8.37
		8.1.4.2	Add	Added new Section 8.1.4.2 Account funding - reversal

Date Published	Chapter	Section	Action	Data
February 11, 2019	Message formats	5.1.1	Add	Add 3D Secure value of G3v078 - Authentication Data in Section 5.1.1 3D Secure Authentication
		5.2.14	Update	Updated Section 5.2.14 Special condition indicator (G3v018)
		5.2.62	Update	Updated Section 5.2.62 Payment Facilitator (G3v066)
		5.2.73	Add	Added new Section 5.2.73 Extended POS Data(G3v077)
		5.2.74	Add	Added new Section 5.2.74 Authentication Data (G3v078)
		5.3.9	Add	Added new Section 5.3.9 Negative option billing merchant business model
	Field definitions	6.1	Add	Added new Section 6.1 Acceptance device type
		6.36.1	Update	Updated description for Section 6.36.1 Merchant name
		6.75	Add	Added new Section 6.75 Directory server transaction ID
		6.145	Update	Updated Section 6.145 Payment facilitator/marketplace identifier
		6.146	Update	Updated Section 6.146 Payment facilitator name*sub-merchant name
		6.151.2	Add	Added value 3 in Table 6.61 in Section 6.151.2 Subfield 2 - Terminal cardholder authentication capability
		6.154	Add	Added Section 6.154 Program protocol
		6.178	Update	Updated Section 6.178 Special Condition Indicator
		6.181	Update	Updated Section 6.181 Sub-merchant city
		6.182	Update	Updated Section 6.182 Sub-merchant country code

Date Published	Chapter	Section	Action	Data
		6.183	Update	Updated Section 6.183 Sub-merchant identifier
		6.184	Update	Updated Section 6.184 Sub-merchant postal code
		6.185	Update	Updated Section 6.185 Sub-merchant state/province code
		6.201	Update	Updated Table 6.87 in Section 6.201 Transaction code
		6.207	Add	Added new Section 6.207 Transaction status
	Message format examples	8.1.4	Add	Added new Section 8.1.4 Account funding

Table 3.8 Version 17.0 document revisions

Date Published	Chapter	Section	Action	Data
January 23, 2019	Message formats	5.1	Remove	Removed the request record Z in Table 5.1
		5.1.1	Add	Added new Section 5.1.1 3D Secure Authentication
		5.2.14	Update	Updated Section 5.2.14 Special condition indicator (G3v018)
		5.2.16	Remove	Removed format Z from Section 5.2.16 Developer information (G3v020)
		5.2.49	Remove	Removed Format Z from Section 5.2.49 TSYS token request/response (G3v053)
	Field definitions	6.12	Update	Updated Address Verification Result Codes value descriptions and added new column for Card Brands in Table 6.7
		6.116	Update	Updated the description in Section 6.116 Market specific data identifier
		6.116.3	Update	Updated the description in Section 6.116.3 Stay or rental duration
		6.151.1	Update	Updated values 1 and 6 in Table 6.60
		6.151.4	Update	Updated value 0 in Table 6.63
		6.151.7	Remove	Removed only from value 1 in Table 6.66

Date Published	Chapter	Section	Action	Data
January 10, 2019		6.162	Update	Updated description of value R in Table 6.79
		6.163	Update	Updated response codes in Table 6.80
		6.166	Update	Updated description by added EBT in Section 6.166 Reversal and cancel data I
		6.167	Update	Updated description in Section 6.167 Reversal and cancel data II
		6.201	Remove	Removed Format Z in Section 6.201 Transaction code added Visa only to Transaction code 5B and 9 B in Table 6.87

Table 3.9 Version 16.10 document revisions

Date Published	Chapter	Section	Action	Data
December 18, 2018	Message formats	5.2.72	Add	Added new Section 5.2.72 Card Brand MCC(G3v076)
	Field definitions	6.12	Update	Updated Address Verification Result Codes for 1-8 in Table 6.7
		6.163	Update	Updated Response Code R1 and added Response Code R3 in Table 6.80
		6.94	Add	Added Values 061-076 in Table 6.46
		6.201	Remove	Removed Transaction code GG from Table 6.87

Table 3.10 Version 16.9 document revisions

Date Published	Chapter	Section	Action	Data
October 08, 2018	Message formats	5.2.25	Update	Updated definition for Section 5.2.25 Extended AVS data (G3v029)
	Field definitions	6.151	Update	Updated Section 6.151 POS data code
		6.161	Remove	Removed Value D - Tax exempt organizations in Table 6.77
		6.162	Update	Updated description for Value R in Table 6.78

Table 3.11 Version 16.8 document revisions

Date Published	Chapter	Section	Action	Data
September 28, 2018	Message formats	5.2.62	Update	Updated definition for Section 5.2.62 Payment Facilitator (G3v066)

Date Published	Chapter	Section	Action	Data
	Field definitions	6.26	Update	Updated description for code P and F in Table 6.16
		6.36.3	Update	Updated definition for Section 6.36.3 Merchant state/province
		6.77	Update	Updated Section 6.77 Electronic commerce security level indicator
		6.145	Update	Updated Section 6.145 Payment facilitator/marketplace identifier
		6.146	Update	Updated Section 6.146 Payment facilitator name*sub-merchant name
		6.151.7	Add	Added note at the end of Table 6.66 in Section 6.151.7 Subfield 7 - Card data input mode
		6.181	Update	Updated Section 6.181 Sub-merchant city
		6.182	Update	Updated Section 6.182 Sub-merchant country code
		6.183	Update	Updated Section 6.183 Sub-merchant identifier
		6.184	Update	Updated Section 6.184 Sub-merchant postal code
		6.185	Update	Updated Section 6.185 Sub-merchant state/province code
		6.201	Update	Updated the comments for Transaction Code 5C in Table 6.87

Table 3.12 Version 16.7 document revisions

Date Published	Chapter	Section	Action	Data
August 24, 2018	Message formats	5.2.9	Add	Added P in the description in Section 5.2.9 Chip condition code (G3v011)
	Field definitions	6.77	Update	updated definition to include Mastercard in Section 6.77 Electronic commerce security level indicator
		6.151.5	Add	Added Discover Only to the I - Incremental authorizations in Section 6.151.5 Subfield 5 - Cardholder present data

Date Published	Chapter	Section	Action	Data
August 13, 2018	Message formats	5.2.48	Update	Updated Encryption Transmission Block (ETB) field from 250-340 to 250-380 in Table 5.98
		5.2.50	Update	Updated definition in Section 5.2.50 Transit program (G3v054)
		5.2.58	Add	Added additional information in Section 5.2.58 Card brand tokenization (G3v062)
	Field definitions	6.10.2	Add	Added Discover in value 43 in Table 6.5
		6.70	Update	Updated definitions in Table 6.38
		6.70.3	Add	Added Mastercard Card Brand Token in Section 6.70.3 Manually entered data
		6.70.5	Add	Added note in Section 6.70.5 Encrypted manually entered data
		6.134	Remove	Removed Discover from Incremental in Section 6.134 Message reason code
		6.151.5	Add	Added value I - Incremental authorization in Section 6.151.5 Subfield 5 - Cardholder present data
		6.161	Add	Added value D - Tax exempt organizations in Table 6.77
		6.162	Remove	Removed Discover from Incremental in Section 6.162 Requested Authorization Characteristics Indicator (ACI)
		6.215	Add	Added information in Section 6.215 Verification code (CVV2, CVC2, CID)
		6.216	Add	Added information in Section 6.216 Verification code result code

Date Published	Chapter	Section	Action	Data
	Message format examples	8.4.1	Update	Updated Encryption Transmission Block (ETB) field from 250-300 to 250-380 in Table 8.55
		8.4.2	Update	Updated Encryption Transmission Block (ETB) field from 250-300 to 250-380 in Table 8.56
		8.4.3	Update	Updated Encryption Transmission Block (ETB) field from 250-300 to 250-380 in Table 8.57
		8.1.1.9	Remove	Removed Discover from the note in Section 8.1.1.9 Incremental authorization - request

Table 3.13 Version 16.6 document revisions

Date Published	Chapter	Section	Action	Data
July 11, 2018	Field definitions	6.134	Update	Updated definition for Incremental in Section 6.134 Message reason code
		6.151.7	Update	Updated definition for value 7 in Section 6.151.7 Subfield 7 - Card data input mode
		6.162	Update	Updated definition for value I in Table 6.78
		6.163	Update	Updated Table 6.80
	Message format examples	8.1.1.9	Add	Added note in Section 8.1.1.9 Incremental authorization - request
		8.2.1.9	Add	Added new Section 8.2.1.9 Recurring transaction - request (Visa)
		8.2.1.10	Add	Added new Section 8.2.1.10 Recurring transaction - request (Visa)
		8.2.1.11	Add	Added new Section 8.2.1.11 Installment transaction - request
		8.2.1.12	Add	Added new Section 8.2.1.12 Installment transaction - request

Table 3.14 Version 16.5 document revisions

Date Published	Chapter	Section	Action	Data
June 19, 2018	Message formats	5.2.48	Update	Updated the length for Encryption Transmission Block (ETB) from 250-300 to 250 - 340 in Section 5.2.48 Voltage encryption transmission block (G3v052)
	Field definitions	6.70	Remove	Removed some card ranges for Discover Network in Section 6.70 Customer data field
		6.85	Update	Updated definition in Section 6.85 Encryption Transmission Block (ETB)
		6.86	Update	Updated Value V in Table 6.45
		6.163	Add	Added new Response Codes P0-P7 in Table 6.80

Table 3.15 Version 16.4 document revisions

Date Published	Chapter	Section	Action	Data
May 25, 2018	Field definitions	6.49	Update	Updated ID codes M and F in Table 6.22
		6.70	Update	Updated Table 6.38
		6.201	Add	Added Transaction Codes 5V and 9V in Table 6.87
	Message format examples	8.1.2.2	Update	Updated Table 8.21 in Section 8.1.2.2 Debit authorization reversal - request
		8.1.2.7	Add	Added new Section 8.2.1.7 MIT standing instruction - request
		8.2.1.8	Add	Added new Section 8.2.1.8 MIT industry practice - request

Table 3.16 Version 16.3 document revisions

Date Published	Chapter	Section	Action	Data
May 04, 2018	Message formats	5.2.1	Update	Update field name in Table 5.5
		5.2.49	Add	Added note in Section 5.2.49 TSYS token request/response (G3v053)
	Field definitions	6.168	Add	Added information in Section 6.168 Reversal, incremental, MIT transaction ID
		6.201	Update	Updated Table 6.87 by removing Transaction code 5D and 9C
	Message format examples	8.1.2.1	Update	Updated Table 8.21 in Section 8.1.2.1 Debit non-confirmation - request
		8.2.1.7	Add	Added new Section 8.2.1.7 MIT standing instruction - request
		8.2.1.8	Add	Added new Section 8.2.1.8 MIT industry practice - request

Table 3.17 Version 16.2 document revisions

Date Published	Chapter	Section	Action	Data
April 24, 2018	Message formats	5.2.63	Update	Updated definition for Section 5.2.63 Authorization indicator (G3v067)
		5.2.70	Update	Updated definition for Section 5.2.70 Transaction Integrity Class (G3v074)
	Field definitions	6.26	Update	Updated definition in Section 6.26 Authorization indicator
		6.205	Update	Updated definition in Section 6.205 Transaction integrity class

Table 3.18 Version 16.1 document revisions

Date Published	Chapter	Section	Action	Data
March 16, 2018	Field definitions	6.70	Add	Added Union Pay International in Table 6.38
		6.149	Add	Added information in Section 6.149 PayPass mobile device type

Table 3.19 Version 16.0 document revisions

Date Published	Chapter	Section	Action	Data
February 27, 2018	Message formats	5.2.62	Update	Updated the length for Payment Facilitator Name * Sub-Merchant Name from 3-35 to 4-25 and Updated the Data Type from NUM to A/N for the Sub-Merchant Identifier
February 12, 2018	Message formats	5.2.24	Update	Updated the Length to 16-301 in Table 5.52
		5.2.63	Update	Updated Format from Numeric (NUM) to Alpha (A) for Authorization Indicator in Table 5.2.63

Date Published	Chapter	Section	Action	Data
	Field definitions	6.16	Add	Added information in Section 6.16 American Express additional data
		6.16.1	Update	Updated definition in Section 6.16.1 AMEX card not present internet telephone data (TTD) and updated Table 6.8
		6.16.2	Add	Added new Section 6.16.2 AMEX Internet Airline Customer (IAC) Data
		6.16.3	Update	Updated Section 6.16.3 Amex Airline Passenger Data (APD) and updated Table 6.9
		6.16.4	Update	Updated Section 6.16.4 Card present Goods Sold Data and updated Table 6.11
		6.16.5	Add	Added new Section 6.16.5 American Express Additional Data Related Fields
		6.30	Update	Updated code space in Table 6.17
		6.55	Update	Updated Table 6.30
		6.56	Update	Updated Table 6.33
		6.136	Update	Updated Table 6.53
		6.137	Remove	Removed Network ID 0023 NETS in Table 6.54
		6.151.7	Add	Added new value of 7 in Section 6.151.7 Subfield 7 - Card data input mode in Table 6.66
		6.152	Update	Updated Section 6.152 POS environment indicator
		6.161	Add	Added value of F and M in Table 6.77
		6.165	Update	Updated the R definition in Table 6.81

Date Published	Chapter	Section	Action	Data
		6.166.1	Update	Updated Section 6.166.1 Approval code
		6.166.2	Update	Updated Section 6.166.2 Local transaction date
		6.166.3	Update	Updated Section 6.166.3 Local transaction time
		6.214	Update	Updated Section 6.214 Validation code

Table 3.20 Version 15.11 document revisions

Date Published	Chapter	Section	Action	Data
December 12, 2017	Field definitions	6.164	Update	Updated description in Section 6.164 Retrieval reference number
		6.205	Update	Updated description in Section 6.205 Transaction integrity class

Table 3.21 Version 15.10 document revisions

Date Published	Chapter	Section	Action	Data
September 20, 2017	Message formats	5.2.68	Add	Added a Field Separator in Table 5.140
	Field definitions	6.70.3	Update	Updated description in Section 6.70.3 Manually entered data

Table 3.22 Version 15.9 document revisions

Date Published	Chapter	Section	Action	Data
September 12, 2017	Message formats	5.2.25	Update	Updated description in Section 5.2.25 Extended AVS data (G3v029)
		5.2.50	Update	Updated description in Section 5.2.50 Transit program (G3v054)
		5.2.70	Add	Added description in Section 5.2.70 Transaction Integrity Class (G3v074)
		5.2.71	Add	Added description in Section 5.2.71 Mastercard Service Parameters (G3v075)

Date Published	Chapter	Section	Action	Data
	Field definitions	6.26	Update	Updated description in Section 6.26 Authorization indicator
		6.35	Update	Updated description in Section 6.35 Canada domestic indicator
		6.77	Update	Updated Section 6.77 Electronic commerce security level indicator
		6.116.2	Update	Updated value T in Table 6.52
		6.151.1	Update	Updated description in Section 6.151.1 Subfield 1 - Terminal card data input capability
		6.151.4	Remove	Removed V, MC from values M, P, Q and R in Table 6.63
		6.151.10	Update	Updated description in Section 6.151.10 Subfield 10 - Card data output capability
		6.152	Update	Updated Format C definition in Section 6.152 POS environment indicator
		6.159	Update	Updated definition in Section 6.159 Registered user indicator

Date Published	Chapter	Section	Action	Data
August 14, 2017	Message formats	5.2.58	Update	Updated Section 5.2.58 Card brand tokenization (G3v062)
		5.2.68	Update	Updated Table 5.140 in Section 5.2.68 Electronic Commerce Security Level Indicator (G3v072)
		5.2.70	Add	Added Section 5.2.70 Transaction Integrity Class (G3v074)
		5.2.71	Add	Added Section 5.2.71 Mastercard Service Parameters (G3v075)
	Field definitions	6.30	Add	Added valid values in Table 6.17
		6.35	Add	Added Section 6.35 Canada domestic indicator
		6.77	Update	Updated Section 6.77 Electronic commerce security level indicator
		6.117	Add	Added Section 6.117 Mastercard wallet identifier
		6.205	Add	Added Section 6.205 Transaction integrity class
		6.212	Update	Updated Section 6.212 UCAF collection indicator
		6.215	Add	Added Visa Checkout usage for position 3-6 in Section 6.215 Verification code (CVV2, CVC2, CID)
	Appendix A		Add	Added Tag 9F24 in Table A2

Table 3.24 Version 15.7 document revisions

Chapter	Section	Action	Data
Field definitions	6.109	Update	Updated the definition in Section 6.109 Lane ID

Table 3.25 Version 15.6 document revisions

Chapter	Section	Action	Data
Message formats	5.2.64	Update	Updated the format field for Registered User Indicator from NUM to A/N in Table 5.132
Field definitions	6.152	Update	Updated the definition in Section 6.152 POS environment indicator
	6.201	Add	Added CR and CV in Table 6.87 for Purchase Return Authorization
Message format examples	8.1.1.1	Add	Added CR- Purchase Return Authorization in Table 8.1
	8.1.1.10	Add	Added CR- Purchase Return Authorization Reversal in Table 8.10
	8.1.1.12	Add	Added CR- Purchase Return Authorization in Table 8.12
	8.1.1.14	Add	Added CR- Purchase Return Authorization in Table 8.14
	8.1.1.16	Add	Added CR- Purchase Return Authorization in Table 8.16
	8.2.1.1	Add	Added CR- Purchase Return Authorization in Table 8.39
	8.2.1.5	Add	Added CR- Purchase Return Authorization in Table 7.41
	8.2.1.6	Add	Added CR- Purchase Return Authorization in Table 8.44

Table 3.26 Version 15.5 document revisions

Chapter	Section	Action	Data
Field definitions	6.134	Add	Add information in Section 6.134 Message reason code at the end of the Message Reason Code table
	6.168	Remove	Removed Amex system generated reversals from Section 6.168 Reversal, incremental, MIT transaction ID

Table 3.27 Version 15.4 document revisions

Chapter	Section	Action	Data
Field definitions	6.57	Update	Updated description in Section 6.57 Chip condition code and in Table 5.37
	6.119	Add	Added new value of 04 in Section 6.119 Merchant advice code
	6.144	Update	Updated the description in Section 6.144 Payment account reference

Table 3.28 Version 15.3 document revisions

Chapter	Section	Action	Data
Message formats	5.2.58	Update	Updated and clarified Card Brand Token Request and Card Brand Token Purchase in Section 5.2.58 Card brand tokenization (G3v062)

Table 3.29 Version 15.2 document revisions

Chapter	Section	Action	Data
Field definitions	6.50.3	Update	Updated definition for Section 6.50.3 DUK/PT key with thirty-two byte cardholder ID

Table 3.30 Version 15.1 document revisions

Chapter	Section	Action	Data
Field definitions	6.151	Add	Added AMEX information to Section 6.151 POS data code
	6.151.6	Add	Added Chip to the description for the value of X in Table 6.65
	6.151.7	Remove	Removed Mastercard from value S in Table 6.66

Table 3.31 Version 15.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.13	Update	Updated Section 5.2.13 Secure e-Commerce transaction (G3v017)
	5.2.19	Add	Added Discover in Section 5.2.19 Mastercard or Discover healthcare (G3v023)
	5.2.69	Added	Added Section 5.2.69 Business Application Identifier (G3v073)
Field definitions	6.10.2	Update	Updated Table 6.5 to include Mastercard for the value 4S
	6.34	Add	Added Section 6.34 Business Application Identifier
	6.18	Add	Added new Section 6.18 Amex SafeKey/Token Blocks
	6.42	Update	Updated the description in Section 6.42 Card sequence number
	6.54	Update	Updated Section 6.54 CAVV
	6.56	Add	Added Section 6.56 CAVV, revised
	6.144	Add	Added Mastercard as a valid value
	6.151.5	Add	Added T as a new value in Table 6.64
Appendix B		Add	Added new description for X^

Table 3.32 Version 14.14 document revisions

Chapter	Section	Action	Data
Field definitions	6.117	Update	Updated Section 6.117 Mastercard wallet identifier

Table 3.33 Version 14.13 document revisions

Chapter	Section	Action	Data
Message formats	5.2.38	Add	Added additional information in Section 5.2.38 RESERVED Visa contactless (G3v042) and removed the reference column in Table 5.80 and Table 5.81
	5.2.41	Add	Added additional information in Section 5.2.41 RESERVED Integrated Chip Card (G3v045) and removed the reference column in Table 5.86 and Table 5.87
Field definitions	6.96	Add	Added additional information in Section 6.96 Healthcare, Mastercard or Discover member defined data
	6.195	Update	Updated Section 6.195 TLV data

Table 3.34 Version 14.12 document revisions

Chapter	Section	Action	Data
Message formats	5.2.1	Add	Added an additional length for Reversal and Incremental Transaction ID in Table 5.5
	5.2.17	Add	Added an additional length for Merchant Verification Value in Table 5.37
Field definitions	6.109	Update	Updated the description for Section 6.109 Lane ID
	6.133	Update	Updated the description for Section 6.133 Merchant Verification Value (MVV)
	6.168	Add	Added American Express System Generated Reversals in Section 6.168 Reversal, incremental, MIT transaction ID

Table 3.35 Version 14.11 document revisions

Chapter	Section	Action	Data
Field definitions	6.10.2	Add	Added Visa only and removed Discover only from Value 43 in Table 6.5

Table 3.36 Version 14.10 document revisions

Chapter	Section	Action	Data
Field definitions	6.136	Add	Added Amex as a card brand applicable to value A in Section 6.136 MOTO/e-Commerce indicator

Table 3.37 Version 14.9 document revisions

Chapter	Section	Action	Data
Field definitions	6.201	Add	Added Transaction codes 55- 58 in Table 6.87 they were inadvertently left out of EIS 1080 version 14.8.

Table 3.38 Version 14.8 document revisions

Chapter	Section	Action	Data
Message formats	5.2.15	Update	Updated Section 5.2.15 Mastercard universal cardholder authentication field (G3v019) with correct usage
	5.2.32	Update	Updated section name with correct field name Payment transaction type identifier (G3v036) previously Payment transaction identifier (G3v036)
	5.2.33	Update	Updated section name with correct field name Real time substantiation indicator (G3v037) previously Real time substantiation (G3v037)
	5.2.44	Update	Updated length 9 in Table 5.91
	5.2.47	Update	Updated Section 5.2.47 EMS service request/response (G3v051)
	5.2.56	Update	Updated definition in Section 5.2.56 Mastercard PayPass mobile (G3v060)
	5.2.63	Update	Updated definition in Section 5.2.63 Authorization indicator (G3v067)
	5.2.64	Update	Updated definition in Section 5.2.64 Fraud enhanced data (G3v068)

Chapter	Section	Action	Data
Field definitions	6.26	Update	Updated definition in Section 6.26 Authorization indicator
	6.41	Update	Updated definition in Section 6.41 Card product code
	6.51	Update	Updated Section 6.51 Cardholder verification method
	6.70	Add	Added new Mastercard ranges in Table 6.38
	6.77	Update	Updated Section 6.77 Electronic commerce security level indicator
	6.148	Update	Updated definition in Section 6.148 Payment transaction type identifier
	6.149	Update	Updated definition in Section 6.149 PayPass mobile device type and added information in Table 6.58
	6.150	Update	Updated definition in Section 6.150 PayPass mobile domain server
	6.156	Update	Updated definition in Section 6.156 Real time substantiation indicator
	6.160	Update	Update definition in Section 6.160 Registered user last profile date change
	6.209	Update	Updated definition in Section 6.209 Transportation mode indicator
	6.211	Update	Updated definition in Section 6.211 UCAF authentication data
	6.212	Update	Updated definition in Section 6.212 UCAF collection indicator

Table 3.39 Version 14.7 document revisions

Chapter	Section	Action	Data
Message formats	5.2.13	Add	Added definition to Section 5.2.13 Secure e-Commerce transaction (G3v017) updated Table 5.29 and Table 4.30
	5.2.22	Update	Updated section name from Product participation group(G3v026) to Partial authorization indicator (G3v026)
	5.2.66	Add	Added new Section 5.2.66 Payment Specific Data (G3v070)
	5.2.67	Add	Added new Section 5.2.67 POS Environment Indicator (G3v071)
	5.2.68	Add	Added new Section 5.2.68 Electronic Commerce Security Level Indicator (G3v072)

Chapter	Section	Action	Data
Field definitions	6.10.2	Add	Added a note about Discover merchant initiated transactions in Section 6.10.2 Additional amount - amount type and new value of 43 added in Table 6.5
	6.55	Add	Added a new value U in Table 6.30
	6.73	Update	Updated the device type for code A in Table 6.39
	6.77	Add	Added new section Section 6.77 Electronic commerce security level indicator
	6.134	Add	Added information in Section 6.134 Message reason code removed the message reason code table
	6.136	Add	Added Amex SafeKey to Indicator 5 in Table A6.53
	6.137	Remove	Removed Network ID 002 in Table 6.54
	6.142	Add	Added new Section 6.142 PAN reference identifier
	6.143	Update	Updated Section 6.143 Partial authorization indicator previously named Product participation group
	6.144	Add	Added new Section 6.144 Payment account reference
	6.149	Add	Added value A in Table 6.64
	6.163	Add	Added value D3 in Table 6.80
	6.168	Add	Added Discover merchant initiated transactions in Section 6.169 Reversal request/adjustment response code
	6.169	Update	Updated value 17 in Section 6.169 Reversal request/adjustment response code

Chapter	Section	Action	Data
	6.199	Add	Added Mastercard Authorization Chargeback Protection in Section 6.199 Transaction amount
	6.212	Update	Updated Table 6.91
Control and character sets	7.2	Update	Updated Table 7.1
	7.3	Update	Updated Table 7.2

Table 3.40 Version 14.6 document revisions

Chapter	Section	Action	Data
Field definitions	6.73	Add	Adding Code A - TSYS Secure EPayments (TSEP) in Table 6.39
	6.137	Add	Added the Network ID of 0777 and 1001 in Table 6.54
	6.212	Update	Updated Section 6.212 UCAF collection indicator and value 0 in Table 6.91

Table 3.41 Version 14.5 document revisions

Chapter	Section	Action	Data
Field definitions	6.50.3	Update	Updated Table 5.25 by adding Visa and Discover only
	6.151.6	Update	Updated value X in Table 6.65
Appendix A		Remove	Removed Tags 9F0D, 9F0E and 9F0F in Table A2

Table 3.42 Version 14.4 document revisions

Chapter	Section	Action	Data
Message formats	5.2.9	Add	Added definition to Section 5.2.9 Chip condition code (G3v011)
	5.2.16	Update	Updated definition in Section 5.2.16 Developer information (G3v020) and changed Version ID to Application ID in Table 5.35
	5.2.23	Update	Updated definition for Section 5.2.23 POS data code (G3v027)
	5.2.24	Add	Added definition to Section 5.2.24 American Express additional data (G3v028)

Chapter	Section	Action	Data
Field definitions	6.20	Update	Updated Version ID to Application ID
	6.149	Update	Updated Section 6.149 PayPass mobile device type
	6.151.1	Add	Added sub-heading Section 6.151.1 Subfield 1 - Terminal card data input capability and updated values 0, 1, 2 and H in Table 6.60
	6.151.2	Add	Added sub-heading Section 6.151.2 Subfield 2 - Terminal cardholder authentication capability and updated value 9 in Table 6.61
	6.151.3	Add	Added sub-heading Section 6.151.3 Subfield 3 - Terminal card-capture capability and updated value 9 in Table 6.62
	6.151.4	Add	Added sub-heading Section 6.151.4 Subfield 4 - Terminal operating environment and updated values 0 and 9 in Table 6.63
	6.151.5	Add	Added sub-heading Section 6.151.5 Subfield 5 - Cardholder present data and updated value 8 in Table 6.64
	6.151.6	Add	Added sub-heading Section 6.151.6 Subfield 6 - Card present data
	6.151.7	Add	Added sub-heading Section 6.151.7 Subfield 7 - Card data input mode and updated values 0 and 1 in Table 6.66
		Add	Added sub-heading Section and updated value 9 in Table 6.67
	6.151.9	Add	Added sub-heading Section 6.151.9 Subfield 9 - Cardholder authentication entity and updated value 9 in Table 6.68
	6.151.10	Add	Added sub-heading Section 6.151.10 Subfield 10 - Card data output capability and updated value 0 in Table 6.69

Chapter	Section	Action	Data
	6.151.11	Add	Added sub-heading Section 6.151.11 Subfield 11 - Terminal data output capability and updated value 0 Table 6.70
	6.151.12	Add	Added sub-heading Section 6.151.12 Subfield 12 - PIN capture capability and updated value 1 Table 6.71

Table 3.43 Version 14.3 document revisions

Chapter	Section	Action	Data
Field definitions	6.136	Update	Updated definition for values 5 and 6 in Table 6.53

Table 3.44 Version 14.2 document revisions

Chapter	Section	Action	Data
Field definitions	6.70	Add	Added length of 19 to the Visa and Mastercard in Table 6.38
Message format examples		Removed	Removed PINless debit bill payment - request and PINless debit authorization reversal- request

Table 3.45 Version 14.1 document revisions

Chapter	Section	Action	Data
Field definitions	6.149	Update	Updated value X in Table 6.60 Updated values X and Y and added value Z in Table 6.151.7

Table 3.46 Version 14.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.65	Add	Added new G3v09 for Lane ID Section 5.2.65 Lane ID (G3v069) NOTE The Lane ID will not be effective until April 2016.
Field definitions	6.109	Add	Added new Section 6.109 Lane ID NOTE The Lane ID will not be effective until April 2016.

Table 3.47 Version 13.8 document revisions

Chapter	Section	Action	Data
Message formats	5.2.65	Add	Added new G3v09 for Lane ID Section 5.2.65 Lane ID (G3v069)
Field definitions	6.109	Add	Added new Section 6.109 Lane ID

Table 3.48 Version 13.7 document revisions

Chapter	Section	Action	Data
Message formats	5.2.27	Update	Updated Reserved length and format in Table 5.58

Table 3.49 Version 13.6 document revisions

Chapter	Section	Action	Data
Field definitions	6.26	Update	Updated definition in Section 6.26 Authorization indicator

Table 3.50 Version 13.5 document revisions

Chapter	Section	Action	Data
Field definitions	6.136	Update	Updated Table 6.53

Table 3.51 Version 13.4 document revisions

Chapter	Section	Action	Data
Message formats	5.2.13	Update	Updated Table 5.29
	5.2.27	Update	Updated Section 5.2.27 Digital entity identifier (G3v031)
	5.2.58	Update	Updated Section 5.2.58 Card brand tokenization (G3v062)
	5.2.59	Update	Updated Table 5.122
	5.2.63	Add	Added new Section 5.2.63 Authorization indicator (G3v067)
	5.2.64	Add	Added new Section 5.2.64 Fraud enhanced data (G3v068)

Chapter	Section	Action	Data
Field definitions	6.26	Add	Added new Section 6.26 Authorization indicator
	6.40	Update	Updated Section 6.40 Card brand token requestor ID
	6.74	Add	Added new Section 6.74 Digital entity identifier
	6.111	Add	Added new Section 6.111 Local transaction date
	6.122	Add	Added new Section 6.122 Merchant city
	6.123	Add	Added new Section 6.123 Merchant country code
	6.124	Add	Added new Section 6.124 Merchant region code
	6.125	Update	Updated Section 6.125 Merchant DBA name
	6.136	Update	Updated Section 6.136 Merchant DBA name
	6.147	Add	Added new Section 6.147 Payment service provider name
	6.159	Add	Added new Section 6.159 Registered user indicator
	6.197	Update	Updated Section 6.197 Token status
	5.196	Update	Updated Section 5.196 Token Cryptogram Block B
	6.212	Add	Added value 7 in Table 6.91
	6.214.1	Update	Updated Section 6.214.1 Discover usage
Appendix A	8.4	Add	Added Section 8.4 MasterCard

Table 3.52 Version 13.3 document revisions

Chapter	Section	Action	Data
Field definitions	6.2	Update	Updated Note in Section 6.2 Account data source code
	6.50	Update	Updated description in Section 6.50 Cardholder identification data
	6.149	Update	Updated description in Section 6.149 PayPass mobile device type
Control and character sets	7.8	Update	Updated Section 7.8 Conversion of binary to ASCII characters
Message format examples	8.1.1.16	Update	Updated Byte 1 Content in Table 8.16
	8.1.2.4	Add	Added fields in Table 8.23
	8.1.2.5	Add	Added fields in Table 8.24
	8.1.2.6	Add	Added fields in Table 8.25
	8.1.2.7	Add	Added fields in Table 8.26
	8.1.2.9	Add	Added fields in Table 8.28
	8.1.2.11	Add	Added fields in Table 8.30
Appendix A	8.3	Update	Updated Section 8.3 Discover/PayPal

Table 3.53 Version 13.2 document revisions

Chapter	Section	Action	Data
Related documentation	3.2	Add	Added reference document in Table 3.1
Field definitions	6.136	Update	Updated Table 6.58
	6.137	Remove	Removed Alaska Option from Section 6.137 Network ID
Appendix B		Add	Added description information to value S1 in Section Card product codes

Table 3.54 Version 13.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.59	Remove	Removed Merchant City from Table 5.122

Chapter	Section	Action	Data
Field definitions		Remove	Removed Merchant City section

Table 3.55 Version 13.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.44	Update	Updated Section 5.2.44 Cardholder verification results (G3v048)
	5.2.58	Update	Updated Section 5.2.58 Card brand tokenization (G3v062)
	5.2.59	Update	Updated Section 5.2.59 Amex card acceptor name/location (G3v063)
	5.2.61	Add	Added Section 5.2.61 ISO Identifier (G3v065)
	5.2.62	Add	Added Section 5.2.62 Payment Facilitator (G3v066)
Field definitions	6.17	Add	Added new values in Table 6.25
	6.100	Add	Added new Section 6.100 Independent Sales Organization (ISO) identifier
	6.122	Add	Added new Section 6.122 Merchant city
	6.142	Add	Added new Section 6.142 PAN reference identifier
	6.146	Add	Added new Section 6.146 Payment facilitator name*sub-merchant name
	6.149	Remove	Removed 9 as a value from Table 6.151.5 and Table 6.151.6
	6.181	Add	Added new Section 6.181 Sub-merchant city
	6.182	Add	Added new Section 6.182 Sub-merchant country code
	6.183	Add	Added new Section 6.183 Sub-merchant identifier
	6.184	Add	Added new Section 6.184 Sub-merchant postal code
	6.185	Add	Added new Section 6.185 Sub-merchant state/province code

Table 3.56 Version 12.4 document revisions

Chapter	Section	Action	Data
Message formats	5.2.13	Update	Updated Table 5.29
	5.2.58	Update	Updated Section 5.2.58 Card brand tokenization (G3v062)
	5.2.59	Add	Added Table 5.124 and Table 5.125
Field definitions		Update	Updated Section .
	6.40	Update	Updated Section 6.40 Card brand token requestor ID
	6.50.4	Update	Updated Section 6.50.4 Address verification data
	6.117	Add	Added Section 6.117 Mastercard wallet identifier
	6.149	Add	Added new values in Table 6.151.5
	6.211	Update	Updated Section 6.211 UCAF authentication data
	6.212	Add	Added new values in Table 6.91
Message format examples	8.1.1.14	Update	Updated field 64 in Table 8.14

Table 3.57 Version 12.3 document revisions

Chapter	Section	Action	Data
Message formats	5.2.59	Update	Updated Section 5.2.59 Amex card acceptor name/location (G3v063)
Field definitions	6.122	Update	Updated Section 6.122 Merchant city

Table 3.58 Version 12.2 document revisions

Chapter	Section	Action	Data
Message formats	5.1.1	Update	Updated Section 5.1.1 3D Secure Authentication
	5.2.13	Update	Updated Section 5.2.13 Secure e-Commerce transaction (G3v017)
	5.2.25	Update	Updated Table 5.54
	5.2.26	Update	Updated Section 5.2.26 Amex merchant name/location data (G3v030)
	5.2.49	Add	Updated Section 5.2.49 TSYS token request/response (G3v053)
	5.2.55	Add	Updated Section 5.2.55 Mastercard mapping service (G3v059)
	5.2.58	Add	Added Section 5.2.58 Card brand tokenization (G3v062)
	5.2.59	Add	Added Section 5.2.59 Amex card acceptor name/location (G3v063)

Chapter	Section	Action	Data
Field definitions	6.15	Update	Updated Section 6.15 Alternate account ID 1
	6.37	Add	Added Section 6.37 Card brand token account range status
	6.37	Add	Added Section 6.37 Card brand token account range status
	5.38	Add	Added Section 5.38 Card brand token assurance level
	5.39	Add	Added Section 5.39 Card brand token expiration date
	6.38	Add	Added Section 6.38 Card brand token assurance level
	6.40	Add	Added Section 6.40 Card brand token requestor ID
	6.40	Add	Added Section 6.40 Card brand token requestor ID
	5.40	Add	Added Section 5.43 Card brand token status
	6.87.2	Update	Updated Section 6.87.2 Cardholder billing address
	6.87.6	Update	Updated Section 6.87.6 Cardholder billing first name
	6.87.7	Update	Updated Section 6.87.7 Cardholder billing last name
	6.114	Add	Updated Section 6.114 Mapped PAN indicator
	6.122	Add	Added Section 6.122 Merchant city
	6.126	Add	Added Section 6.126 Merchant email
	6.127	Add	Added Section 6.127 Merchant ID code
	6.129	Add	Added Section 6.129 Merchant phone
	6.130	Add	Added Section 6.130 Merchant postal code
	6.132	Add	
	6.149	Add	
	6.165	Update	
	6.179	Update	
	6.197	Add	
	5.196	Add	
	6.201	Update	

Chapter	Section	Action	Data
			Added Section 6.132 Merchant street address Added values in Table 6.151.6 Updated Table 6.78 Updated Table 6.84 Added Section 6.197 Token status Added Section 5.196 Token Cryptogram Block B Updated Table 6.87
Message format examples	8.1.1.10	Update	Updated Table 8.10
	8.1.2.2	Update	Updated Table 8.21
Appendix A	8.2	Add	Added new value in Section 8.2 American Express

Table 3.59 Version 12.1 document revisions

Chapter	Section	Action	Data
Field definitions	6.50	Update	Updated Table 6.23
Message format examples	8.1.2.1	Update	Updated Table 8.20
	8.1.2.4	Update	Updated Table 8.23
	8.1.2.5	Update	Updated Table 8.24
	8.4.2	Update	Updated Table 8.56
	8.4.5	Update	Updated Table 8.59

Table 3.60 Version 12.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.24	Update	Updated heading in Section 5.2.24 American Express additional data (G3v028)
	5.2.25	Update	
	5.2.44	Update	Updated Section 5.2.25 Extended AVS data (G3v029) and Table 5.54
	5.2.57	Add	Updated Section 5.2.44 Cardholder verification results (G3v048) Added Section 5.2.57 Spend qualified indicator (G3v061)
Field definitions	6.16	Update	Updated Section 6.16 American Express additional data
	6.16.1	Update	
	6.16.4	Add	Updated Section 6.16.1 AMEX card not present internet telephone data (ITD)
	6.17	Update	
	6.50.4	Update	Added Section 6.16.4 Card present Goods Sold Data
	6.58	Update	Updated Section 6.17 Amex merchant name/location data
	6.87.6	Update	
	6.87.7	Update	Updated Section 6.50.4 Address verification data
	6.146	Update	Updated Section 6.58 City code
	6.179	Add	Updated Section 6.87.6 Cardholder billing first name
	6.200	Update	
	6.211	Update	Updated Section 6.87.7 Cardholder billing last name
	6.212	Update	Updated Table 6.57 Added Section 6.179 Spend qualified indicator Updated Table 6.87 Updated Section 6.211 UCAF authentication data Updated Table 6.91
Message format examples		Remove	Removed the section on gift card

Chapter	Section	Action	Data
Appendix B		Update	Updated Section Card product codes

Table 3.61 Version 11.4 document revisions

Chapter	Section	Action	Data
Message formats	5.2.1	Update	Updated Table 5.5
	5.2.16	Update	Updated Section 5.2.16 Developer information (G3v020)
	5.2.25	Update	Updated Table 5.54
	5.2.51	Update	Updated Table 5.104
	5.2.56	Update	Updated 5.114
Field definitions	6.2	Update	Updated Section 6.2 Account data source code
	6.36.3	Update	Updated Section 6.36.3 Merchant state/province
	6.49	Update	
	6.50.4	Update	Updated Table 6.22
	6.52	Update	Updated Section 6.50.4 Address verification data
	6.92	Add	
	6.157	Update	Updated Section 6.52 Cardholder Verification Method (CVM) results
			Added Section 6.92 Gateway ID
Message format examples			Updated Table 6.74 to remove Stored Value Systems Gift Card
	8.1.1.12	Update	Updated Table 8.12
	8.1.1.14	Update	Updated Table 8.14
	8.1.1.15	Update	Updated Table 8.15
	8.1.2.2	Update	Updated Table 8.4
	8.1.2.11	Add	Added Section 8.1.2.11 Debit integrated chip card (ICC - EMV format) - request
	8.1.2.12	Add	Added Section 8.1.2.12 Debit integrated chip card (ICC - EMV format) - response
Appendix A		Update	Updated Table B.2 and added Table B.3

Table 3.62 Version 11.3 document revisions

Chapter	Section	Action	Data
Message formats	5.2.23	Update	Updated Section 5.2.23 POS data code (G3v027)
	5.2.30	Update	Updated Section 5.2.30 Card product code (G3v034)
	5.2.53	Update	Updated Table 5.108
	5.2.54	Add	Updated Section 5.2.54 Alternate account ID 1 (G3v058)
	5.2.56	Add	Added Section 5.2.55 Mastercard mapping service (G3v059)
			Added Section 5.2.56 Mastercard PayPass mobile (G3v060)

Chapter	Section	Action	Data
Field definitions	6.2	Update	Updated Table 6.1
	6.11	Update	Updated Section 6.11 Additional response data
	6.24	Update	Updated Section 6.24 Approval code
	6.37	Update	Updated Section 6.37 Card brand token account range status
	6.43	Update	
	6.70	Update	Updated Table 6.21
	6.74	Add	Updated Table 6.38
	6.94	Update	Added Section 6.74 Digital entity identifier
	6.113	Add	Updated Table 6.46
	6.114	Add	
	6.115	Add	Added Section 6.113 Mapped Card Expiration Date
	6.136	Add	Added Section 6.114 Mapped PAN indicator
	6.149	Update	
	6.143	Update	Added Section 6.115 Mapped product code
	6.152	Update	Added Section 6.136 MOTO/e-Commerce indicator
	6.169	Update	
	6.201	Update	Updated Section 6.149 PayPass mobile device type
	6.204	Update	Updated Table 6.56
	6.215	Update	Updated Section 6.152 POS environment indicator
			Updated Section 6.169 Reversal request/adjustment response code
			Updated Table 6.87
			Updated Section 6.204 Transaction identifier
			Updated Section 6.215 Verification code (CVV2, CVC2, CID)

Chapter	Section	Action	Data
Message format examples	8.1.1.6	Update	Updated Section 8.1.1.6 AFD completion advice request (Visa, Mastercard, PayPal and Discover)
	8.1.1.7	Update	
	8.1.2.9	Update	Updated Section 8.1.1.7 AFD completion advice response (Visa, Mastercard, PayPal and Discover) Updated Section 8.1.2.9 Direct debit - request
Appendix A	8.3	Update	Updated Section 8.3 Discover/PayPal
Appendix B		Add	Added Appendix B

Table 3.63 Version 11.2 document revisions

Chapter	Section	Action	Data
Message formats	5.2.23	Update	Updated Section 5.2.23 POS data code (G3v027)
	5.2.51	Update	Updated Section 5.2.51 Integrated Chip Card (ICC) EMV (G3v055)
Field definitions	6.134	Update	Updated Section 6.134 Message reason code
	6.149	Update	Updated Section 6.149 PayPass mobile device type
Appendix A		Add	Added information to Appendix A

Table 3.64 Version 11.1 document revisions

Chapter	Section	Action	Data
Field definitions	6.27	Update	Updated link in Section 6.27 Authorization request cryptogram (ARQC)
	6.28	Update	
	6.134	Update	Updated link in Section 6.28 Authorization response cryptogram (ARPC) Updated Section 6.134 Message reason code

Table 3.65 Version 11.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.53	Add	Added Section 5.2.53 Additional response data (G3v057)
	5.2.54	Add	Added Section 5.2.54 Alternate account ID 1 (G3v058)
Field definitions	6.11	Add	Added Section 6.11 Additional response data
	6.15	Add	Added Section 6.15 Alternate account ID 1
	6.24	Add	Added values to Table 6.13
	6.37	Add	Added value to Table 4.16
	6.94	Add	Added values to Table 6.46
	6.134	Update	Updated Section 6.134 Message reason code
	6.163	Update	Updated Table 6.80
	6.169	Update	Updated Section 6.169 Reversal request/adjustment response code
	6.203	Add	Updated Section 6.203 Transaction fee amount
	6.208	Add	Added values to Table 6.89

Chapter	Section	Action	Data
Message format examples	8.1	Add	Added values to Table 8.1
	8.1.1.6	Update	Updated heading name in Section 8.1.1.6 AFD completion advice request (Visa, Mastercard, PayPal and Discover) and added values to Table 8.6
	8.1.1.7	Update	
	8.1.1.12 and 6.1.1.13	Update	Updated heading name in Section 8.1.1.7 AFD completion advice response (Visa, Mastercard, PayPal and Discover) and added values to Table 8.7
	8.1.2.9 and 6.1.2.10	Update	
	8.1.4	Add	Updated information in Section 8.1.1.12 Credit integrated chip card (ICC - EMV format) - request (G3v055) and Section 6.1.1.13 Updated information in Section 8.1.2.9 Direct debit - request and Section 6.1.2.10 Added values to Table 8.39

Table 3.66 Version 10.4 document revisions

Chapter	Section	Action	Data
Message formats	5.2.24	Update	Updated Table 5.52
	5.2.38	Update	Updated Table 5.80 and Table 5.81 title caption
	5.2.41	Update	Updated Table 5.86 and Table 5.87 title caption
	5.2.51	Update	Updated Section 5.2.51 Integrated Chip Card (ICC) EMV (G3v055)
	5.2.52	Add	Added new Section 5.2.52 Message reason code (G3v056)

Chapter	Section	Action	Data
Field definitions	6.2	Update	Updated Table 6.1
	6.49	Update	Updated Table 6.22
	6.50	Update	Updated Section 6.50 Cardholder identification data
	6.73	Update	Updated Table 6.39
	6.134	Add	Added new Section 6.134 Message reason code
	6.149	Update	Updated Table 6.151.6 and Table 6.151.7
Message format examples	8.1.1.16	Update	Updated Table 8.16
	8.1.1.17	Update	Updated Table 8.17
Appendix A		Update	Updated Table B.

Table 3.67 Version 10.3 document revisions

Chapter	Section	Action	Data
Field definitions	6.37	Update	Updated Section 6.37 Card brand token account range status
	6.70.3 - 6.70.5	Update	Updated Section 6.70.3 Manually entered data - Section 6.70.5 Encrypted manually entered data
	6.215	Update	Updated Section 6.215 Verification code (CVV2, CVC2, CID)

Table 3.68 Version 10.2 document revisions

Chapter	Section	Action	Data
Message formats	5.2.23	Update	Updated Section 5.2.23 POS data code (G3v027)
	5.2.26	Update	Updated Table 5.56
	5.2.51	Add	Added Section 5.2.51 Integrated Chip Card (ICC) EMV (G3v055)
	5.103	Add	Added Section 5.103 Response message - Transit program response (version 054)

Chapter	Section	Action	Data
Field definitions	6.16.1	Update	Updated Table 6.8
	6.17	Update	Updated Section 6.17 Amex merchant name/location data
	6.24	Update	Updated Section 6.24 Approval code
	6.37	Update	Updated Section 6.37 Card brand token account range status
	6.66	Update	Updated Section 6.66 Cryptogram information data
	6.86	Update	Updated Table 6.45
	6.94	Update	Updated Table 6.46
	6.116.2	Update	Updated Table 6.52
	6.149	Add	Updated Section 6.149 PayPass mobile device type
	6.195	Update	Added new Section 6.195 TLV data
			Updated Table 6.86
Message format examples	8.1.1.10	Update	Updated Table 8.10
	6.1.1.14	Add	Added Section 6.1.1.14
	8.1.1.13	Add	Added Section 8.1.1.15 Credit contactless using EMV data rules authorization - response
	7.2.2.1	Update	Updated Table 7.43
	8.3	Update	Updated Table 7.44
	8.4.1	Update	Updated Table 8.55
	8.4.2	Update	Updated Table 8.56
	8.4.3	Update	Updated Table 8.57
	8.4.7	Update	Updated Table 8.61
		Add	Added Section

Table 3.69 Version 10.1.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.9	Update	Updated Section 5.2.9 Chip condition code (G3v011)
	5.2.23	Add	Added new line in Section 5.2.23 POS data code (G3v027)
	5.2.41	Update	Updated Table 5.86
Field definitions	6.2	Update	Updated Table 6.1
	6.49	Update	Updated Table 6.22
	6.57	Update	Updated Section 6.57 Chip condition code
	6.149	Update	Updated Section 6.149 PayPass mobile device type
Message format examples	8.1.1.12	Update	Updated Table 6.12
	6.1.1.13	Update	Updated Table 6.13
	6.1.1.14 - 8.1.1.17	Add	Added Section 6.1.1.14 - Section 8.1.1.17 Retail/restaurant - Chip Card Fallback- response
	8.1.2.9	Update	Updated Table 8.24
	6.1.2.10	Update	Updated Table 8.25

Table 3.70 Version 10.1 document revisions

Chapter	Section	Action	Data
Message formats	5.1	Add	Added rows to Table 5.1
	5.1.1	Add	Added paragraph to the end of Section 5.1.1 3D Secure Authentication
	5.2.4	Add	Added response code in comments column to Table 5.12
	5.2.35	Update	Updated Table 5.74
	5.2.48	Update	Updated Section 5.2.48 Voltage encryption transmission block (G3v052) and Table 5.98

Chapter	Section	Action	Data
Field definitions	6.17	Add	Added new Section 6.17 Amex merchant name/location data
	6.60	Add	
	6.70	Add	Added row to Table 6.37
	6.158	Add	Added new paragraph to Section 6.201 Transaction code
	6.163	Add	Added new rows to Table 6.75
	6.201	Add	Added new codes to Table 6.80
			Added new column to Table 6.87
Message format examples	8.3.2	Update	Updated Table 8.52
	8.4.7	Add	Added new Section 8.4.7 Tokenized bill pay

Table 3.71 Version 10.0 document revisions

Chapter	Section	Action	Data
Message formats	5.1.1	Updated	Updated Section 5.1.1 3D Secure Authentication
	5.2.48	Update	
	5.2.49	Update	Updated Table 5.98
	5.2.50	Add	Updated Table 5.101
			Added Section 5.2.50 Transit program (G3v054)

Chapter	Section	Action	Data
Field definitions	6.29	Add	Added sentence to Section 6.29 Authorization response text
	6.56	Add	
	6.73	Add	Added table to Section 6.56 CAVV, revised
	6.94	Add	Added new code and updated Table 6.39
	6.143	Update	Added new value to Table 6.46
	6.169	Update	Updated Table 6.56
	6.195	Update	Updated sentence in Section 6.169 Reversal request/adjustment response code
	6.201	Update	
	6.208	Add	Updated Section 6.195 TLV data
	6.209	Add	Updated Table 6.87
	6.215	Update	Added Section 6.208 Transit transaction type indicator
Message format examples			Added Section 6.209 Transportation mode indicator
			Updated Table 6.93
	8.1.1.6	Update	Updated the name for Section 8.1.1.6 AFD completion advice request (Visa, Mastercard, PayPal and Discover) and updated Table 8.6
	8.1.1.7	Update	
	8.1.2.1	Update	Updated the name of Section 8.1.1.7 AFD completion advice response (Visa, Mastercard, PayPal and Discover) and updated Table 8.7
	8.4.2	Updated	
	8.4.4	Update	Updated Table 8.20
	8.4.5	Update	Updated Table 8.56
			Updated Table 8.58
	8.4.6	Update	Updated the name of Section 8.4.5 Debit non-confirmation with token request - request and updated Table 8.59
			Updated Table 8.60

Table 3.72 Version 9.2.1 document revisions

Chapter	Section	Action	Data
Message formats	5.1	Add	Added information in Table 5.1
	5.1.1	Add	Added Section 5.1.1 3D Secure Authentication
	5.2.48	Add	Added Section 5.2.48 Voltage encryption transmission block (G3v052)
	5.2.49	Add	Added Section 5.2.49 TSYS token request/response (G3v053)
Field definitions	6.85	Add	Added Section 6.85 Encryption Transmission Block (ETB)
	6.86	Add	Added Section 6.86 Encryption type
	6.94	Add	Added values in Table 6.94
	6.158	Add	Added rows in Table 6.75
	6.163	Add	Added and updated rows in Table 6.80
	6.195	Add	Added Section 6.195 TLV data
	6.201	Add	Added row in Table 6.87
Message format examples	8.4	Add	Added Section 8.4 Encryption and token examples
	8.4.1 - 8.4.6	Add	Added Section 8.4.1 Encrypted credit - Section 8.4.6 Debit card/EBT with token request-response

Table 3.73 Version 9.2 document revisions

Chapter	Section	Action	Data
Message formats	5.2.4	Update	Updated the title for Table 5.11
	5.2.47	Add	Added new Section 5.2.47 EMS service request/response (G3v051)

Chapter	Section	Action	Data
Field definitions	6.37	Update	Updated Table 4.16
	6.79	Add	Added new Section 6.79 EMS additional information
	6.80	Add	Added new Section 6.80 EMS results code
	6.81	Add	Added new Section 6.81 EMS risk score
	6.82	Add	Added new Section 6.82 EMS risk score reason code
	6.83	Add	Added new Section 6.83 EMS scoring response indicator
	6.84	Add	Added new Section 6.84 EMS service request indicator
	6.87	Add	Added new Section 6.87 EMS scoring response indicator
	6.163	Update	Added new Section 6.84 EMS service request indicator
	6.166	Add	Added new value to Table 6.46
	6.169	Add	Updated Table 6.80
			Added Section 6.166.4 Response code
Message format examples	8.1.1.12	Update	Added new reason code value in Section 6.169 Reversal request/adjustment response code
	8.3	Add	Updated Table 6.12

Table 3.74 Version 9.1 document revisions

Chapter	Section	Action	Data
Field definitions	6.199	Update	Updated paragraph in Section 6.199 Transaction amount
	6.201	Update	Updated Table 6.87

Table 3.75 Version 9.0 document revisions

Chapter	Section	Action	Data
Message formats	5.2.18	Update	Updated Table 5.40

Chapter	Section	Action	Data
Field definitions	6.10	Update	Updated Section 6.10 Additional amount
	6.10.5	Add	Added Section 6.10.5 Additional amount
	6.70	Update	Updated Section 6.70 Customer data field
	6.133	Add	Added paragraph to Section 6.133 Merchant Verification Value (MVV)
	6.143	Add	Added information in Table 6.56
	6.162	Update	Updated description in Table 6.78 and the Note under Table 4.56
	6.164	Add	Updated Section 6.164 Retrieval reference number
	6.199	Add	Added paragraph to Section 6.199 Transaction amount
	6.204	Add	Added paragraph to Section 6.204 Transaction identifier

Table 3.76 Version 8.9 document revisions

Chapter	Section	Action	Data
Message formats	5.2.28	Add	Added new values in Table 5.61
	5.2.36	Add	Added new value in Table 5.77
Response code	6.137	Add	Added new values to Table 6.54
	6.163	Update	Updated value in Table 6.164
	6.170	Update	Updated description in Section 6.170 Secondary amount
Message format examples	8.1.3.5	Update	Updated Table 8.36

Table 3.77 Version 8.8 document revisions

Chapter	Section	Action	Data
Field definitions	6.10.2	Add	Added value to Table 6.5
	6.24	Add	Added new values to Table 6.15
	6.163	Add	Added new value to Table 6.164
Message format examples	8.1.1.19	Add	Added new Section 8.1.1.19 Cash advance - request
	8.1.2.2	Add	
	8.1.2.2	Update	Added new Section 8.1.2.2 Debit authorization reversal - request
	8.1.2.4	Update	Updated Table 8.21
	8.1.2.5	Update	Updated Table 8.23
	8.1.2.6	Update	Updated Table 8.24
	8.1.2.7	Add	Updated Table 8.25
	8.1.2.9	Update	Added new Section 8.1.2.7 Electronic benefits transfer (EBT) non-confirmation - request
	8.1.2.10	Update	
	6.1.3.1	Update	Updated Table 6.30
	6.1.3.2	Add	Updated Section 8.1.2.10 Direct debit - confirmation message
	8.1.3.5	Update	Updated Table 6.32 Added new Section 6.1.3.2 Updated Table 8.36

Table 3.78 Version 8.7 document revisions

Chapter	Section	Action	Data
Field definitions	6.167.1	Add	Added information from Section 6.167.1 System trace audit number .
Message format examples	8.1.1.6	Remove	Removed Systems Audit Number and the Field Separator row from Table 8.6 .
	8.1.1.7	Remove	Removed Systems Audit Number and the Field Separator row from Table 8.7 .

Table 3.79 Version 8.6 document revisions

Chapter	Section	Action	Data
Message formats	5		Reorganized Chapter 3 .
	5.2.29	Update Add	Updated heading of Section 5.2.29 Reversal request/adjustment response code (G3v033)
	5.2.42	Update	Added new length to Table 5.62
	5.2.45	Add	Updated Table 5.88 and Table 5.89
	5.2.46	Add	Added new Section 5.2.45 Gen 2 terminal authentication (G3v049) Added new Section 5.2.46 Association timestamp (G3v50)
Field definitions	6	Update	Updated cross reference links to chapter 3 Updated sections 6.2 , 6.24 , 6.25 , 6.51 , 6.111 , 6.112 , 6.164 , 6.166 , 6.166.1 , 6.166.2 , 6.166.3 , 6.166.5 , 6.167 , 6.167.1 , 6.169 , 6.199 and 6.204
	6.92	Add	Added new Section 6.92 Gateway ID
	6.93.1	Add	Added new Section 6.93.1 Authentication code
	6.93.2	Add	Added new Section 6.93.2 Authentication factor 1
	6.93.3	Add	Added new Section 6.93.3 Authentication factor 2
	6.93.4	Add	Added new Section 6.93.4 GenKey
	6.94	Add	
	6.163	Add	Added new groups to Table 6.46
	6.201	Add	Added comment to Section 6.163 Response code and added transaction codes to Table 6.164
			Added new transaction codes in Table 6.87

Chapter	Section	Action	Data
Message format examples	8		Reorganized Chapter 6
	8.1.1.6	Add	Added new Section 8.1.1.6 AFD completion advice request (Visa, Mastercard, PayPal and Discover)
	6.1.1.7	Add	
	7.4	Add	Added new Section 6.1.1.7
	8.3.1	Add	Added new Section 7.4 Gen2 Terminal Authentication
	8.3.2	Add	
	8.3.3	Add	Added new Section 8.3.1 Authentication request
	8.3.4	Add	Added new Section 8.3.2 Authentication response
			Added new Section 8.3.3 Deactivation request
			Added new Section 8.3.4 Deactivation response

Table 3.80 Version 8.5 document revisions

Chapter	Section	Action	Data
Message formats	3.2	Add	Added Group 3 version 47 and Group 3 version 48
	3.3	Add	Added Table 3.93
Field definitions	4.16	Add	Added new Section 4.16
	4.21	Add	Added new Table 4.14
	4.70	Add	Added values to Table 4.28
	4.103	Add	Added value to Table 4.44
Message format examples	6.7	Update	Updated content in Table 6.7
	6.36	Add	Added information in Table 6.39
Appendix A		Update	Updated Table A8.2

Table 3.81 Version 8.4.1 document revisions

Chapter	Section	Action	Data
Message formats	5.4	Update	Updated Table 5.86

Chapter	Section	Action	Data
Field definitions	6.166	Update	Updated section 6.166 with an ATM transaction supporting statement
	6.167	Update	Updated section 6.167 with an ATM transaction supporting statement
	6.201	Add	Added two new transaction codes to Table 6.87
Message format examples	8.1.1.4	Update	Updated section 8.1.1.4
	8.1.3.2	Update	Updated section 8.1.3.2
	8.1.3.3	Update	Updated section 8.1.3.3
	8.1.3.4	Update	Updated section 8.1.3.4
	8.1.3.5	Add	Added new section 8.1.3.5
	7.3.6	Update	Updated Table 6.12
	7.3.6	Update	Updated Table 6.29

Table 3.82 Version 8.4 document revisions

Chapter	Section	Action	Data
Field definitions	6.70	Update	Updated the Discover Network in Table 6.38

Table 3.83 Version 8.3 document revision

Chapter	Section	Action	Data
Field definitions	6.173	Update	Updated the Description in Section 6.173 Settlement amount

Table 3.84 Version 8.2 document revisions

Chapter	Section	Action	Data
POS Check is no longer supported effective 4/17/09. All references to POS Check have been removed from the spec.			
All references to Diners have been removed from the spec.			

Chapter	Section	Action	Data
Message formats	3.2.21	Update	Updated the format for the IFD Serial Number in Table 5.86
		Add	Added two new rows in Table 5.86
Field definitions	6.70	Add	Added card ranges to Discover Network Card type in Table 6.38
	6.73	Add	Added two new values in Table 6.39
	6.136	Update	Updated the description for value 5 in Table 6.53
	6.156	Add	Added new value in Table 6.73
	6.191	Add	Added new field definition Section 6.191 Terminal transaction time
	6.200	Update	Updated the Transaction Type description for 9C in Table 6.87
Message format examples	7.3.6	Update	Updated the format for the IFD Serial Number in Table 6.12
		Add	Added two new rows in Table 6.12
	7.3.6	Update	Updated the format for the IFD Serial Number in Table 6.29
		Add	Added two new rows in Table 6.29

Table 3.85 Version 8.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.38	Add	Added Table 5.80
	5.2.40	Add	Added Table 5.84
	3.2.21	Add	Added Table 5.86
	5.2.42	Add	Added Table 5.88
		Add	Added Table 3.89
		Add	Added Table 3.90
		Add	Added Table 3.91

Chapter	Section	Action	Data
Field definitions	6.3	Add	Added new Section 6.3 Account type (from)
	6.4	Add	Added new Section 6.4 Account type (to)
	6.21	Add	Added new Section 6.21 Application interchange profile
		Add	Added new Section
	6.43	Add	Added new Section 6.43 Card type
	6.63	Add	Added new Section 6.63 Cryptogram amount
	6.64	Add	Added new Section 6.64 Cryptogram cashback amount
	6.65	Add	Added new Section 6.65 Cryptogram currency code
	6.66	Add	Added new Section 6.66 Cryptogram information data
	6.67	Add	Added new Section 6.67 Cryptogram transaction type
	6.73	Add	Added new Section 6.66 Cryptogram information data
	6.94	Add	Added new Section 6.67 Cryptogram transaction type
	6.99	Add	Added new Section 6.67 Cryptogram transaction type
	6.104	Add	Added code to Table 6.39
	6.107	Add	Added new value in Table 6.46
	6.137	Add	Added new Section 6.99 IFD serial number
	6.171	Add	Added new Section 6.104 Issuer application data
	6.188	Add	Added new Section 6.107 Issuer script results
	6.190	Add	Added new Section 6.107 Issuer script results
	6.192	Add	Added new Section 6.137 Network ID
	6.200	Add	Added new Section 6.171 Secondary PIN block
	6.201	Add	Added new Section 6.188 Terminal country code
	6.217	Add	Added new Section 6.188 Terminal country code
			Added new Section 6.190 Terminal transaction date
			Added new Section 6.192 Terminal type

Chapter	Section	Action	Data
			Added new Section 6.200 Transaction category code Added new codes in Table 6.87 Added new Data Element in Section 6.217 Version ID
Message format examples	8.1.1.4	Add	Added new Section 8.1.1.4 Auto rental - request
	8.1.3.2	Add	Added new Section 8.1.3.2 ATM balance inquiry - request
	8.1.3.3	Add	Added new Section 8.1.3.3 ATM deposit - request
	8.1.3.4	Add	Added new Section 8.1.3.4 ATM account transfer - request
	7.3.6	Add	Added new Section 8.1.3.4 ATM account transfer - request
	7.3.6	Add	Added Table 6.12
	7.3.6	Add	Added Table 7.3.6
	6.3.12	Add	Added Table 6.29
			Added Table 6.30

Table 3.86 Version 8.0 document revisions

Chapter	Section	Action	Data
Field definitions	6.24	Add	Added values to Table 4.11 & Table 6.13
	6.37	Add	Added values to Table 4.16
	6.73	Add	Added codes to Table 6.39

Table 3.87 Version 7.7.2 document revisions

Chapter	Section	Action	Data
Message formats	5.2.33	Update	Updated Real time substantiation indicator (G3v037)
Field definitions	6.116.2	Add	Added value to Table 6.52
	6.146	Add	Added value to Table 6.57
Message format examples		Update	Updated Table 7.43

Table 3.88 Version 7.7.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.37	Update	Updated Table 5.78
	5.2.39	Add	Added Table 5.82
		Update	Updated Table 3.84
		Update	Updated Table 3.86
		Update	Updated Table 3.87
		Add	Added Table 3.88
Field definitions	6.94	Add	Added values to Table 6.46
	6.137	Add	Added new definition Network ID
	6.201	Add	Added value to Table 6.87
Message format examples		Add	Added new message format Table 7.43

Table 3.89 Version 7.7 document revisions

Chapter	Section	Action	Data
Message formats		Update	Updated Section Group 3 version 29 examples
	5.2.33	Update	Updated Table 5.70
	5.2.35	Add	Added Table 5.74 , Table 5.76 , Table 5.78 and Table 5.80
	5.2.52	Update	Updated Table 5.106
		Add	Added Table 3.84 , Table 3.85 , Table 3.86 and Table 3.87

Chapter	Section	Action	Data
Field definitions	6.16.1	Update	Updated Section 6.16.1 AMEX card not present internet telephone data (TTD)
	6.24	Add	Added to Table 6.13 added note
	6.37	Update	Updated Table 4.16
	6.50	Add	Added note
	6.50.3	Update	Updated DUK/PT key with thirty-two byte cardholder ID and Table 5.25
	6.50.4	Add	Added to Section 6.50.4 Address verification data
	6.51	Add	Added new definition Cardholder verification method
	6.70.1	Update	Updated Section 6.70.1 Track one data
	6.70.2	Update	Updated Section 6.70.2 Track two data
	6.103	Add	Updated Section 6.70.2 Track two data
	6.116.2	Add	Added new definition ISA charge indicator
	6.139	Add	Added new value to Table 6.52
	6.165	Update	Added new definition NTIA UPC/SKU data
	6.217	Add	Updated Table 6.81
			Added new definition Version ID
Message format examples	6.3.6	Update	Updated Table 6.24
	6.1.4	Update	Updated Table 6.32
	8.2.1.6	Update	Updated Table 8.44
	6.6.1	Update	Updated Table 6.27
	6.3.10	Update	Updated Table 6.28
Appendix A		Add	Added Appendix A

Table 3.90 Version 7.6.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.34	Add	Added Table 5.72
	3.3	Add	Added Table 3.81 , Table 3.82 and Table 3.83
Field definitions	6.24	Remove	Removed Domestic JCB from table identifier
	6.50.4	Remove	Removed Domestic JCB
	6.76	Add	Added new section Electro magnetic signature
	6.94	Add	
	6.201	Remove	Added value to Table 6.46
	6.214	Remove	Removed Domestic JCB from transaction code 58 Removed Domestic JCB

Table 3.91 Version 7.6 document revisions

Chapter	Section	Action	Data
Message formats	3.3	Update	Updated Table 5.5
	5.2.26	Update	Updated section to break out version 31, 32, 33, and 34
POS Check service		Update	Updated the Industry Type content
		Update	Updated description

All revisions supporting version 7.5.3 are marked with change bars.

Table 3.92 Version 7.5.3 document revisions

Chapter	Section	Action	Data
Field definitions	6.204	Update	Updated definition

Table 3.93 Version 7.5.2 document revisions

Chapter	Section	Action	Data
Message formats	3.79	Add	Added Table 3.79, Card-level results response (version 034)
	5.66	Add	Added Table 5.66, Request message - Promotional code (version 035)
	5.42	Update	Updated Table 5.42, Request message - Mastercard or Discover healthcare data (version 023)
	5.2.20	Add	Added Mastercard advice code (G3v024)
	3.67	Update	Updated Table 3.67, Additional amounts participant (version 022)
	3.80	Add	Added Table 3.80, Response Promotional Code (version 035)
		Add	Added MasterCard or Discover free form (version 023) description
Field definitions	6.152	Add	Added new field - POS environment indicator
	6.96.1	Update	Updated definition - Mastercard and Discover free form
	6.96.2	Update	Updated definition - Healthcare
	6.94	Add	Added new values to Table 6.46, Group III version number
	6.24	Add	Added Table 6.14, Approval source values in the first position of the approval code for Discover/PayPal transactions
	6.70	Update	Updated Table 6.38, Customer data field
	6.214	Update	Updated definition - Discover usage and Non-Discover usage

Table 3.94 Version 7.5.1 document revisions

Chapter	Section	Action	Data
Message formats	3.79	Add	Added to Table 3.79, Card-level results response (version 034)
Field definitions	6.37	Add	Added new line to description - Card brand token account range status

All revisions supporting versions 7.5 are marked with change bars.

Table 3.95 Version 7.5 document revisions

Chapter	Section	Action	Data
Message formats		Update	Updated description of Table 5.42, Request message - Mastercard or Discover healthcare data (version 023)
Message formats	3.3	Update	Updated description of Table 3.68, Visa and MasterCard Healthcare (version 023)
Field definitions	6.24	Update	Updated the description of Table 4.11 and added Table 6.13 Updated the value of D - Visa Signature Preferred
Field definitions	6.96	Update	Changed the field name and updated the description
Field definitions	6.136	Update	Added two new values to Table 6.53, MOTO/e-Commerce indicator

Table 3.96 Version 7.4.2 document revisions

Chapter	Section	Action	Data
Message format examples	6.3.10	Update	Updated Table 6.28, Debit non-confirmation - request

Table 3.97 Version 7.4.1 document revisions

Chapter	Section	Action	Data
Message formats	5.2.27	Add	Added new request table: Table 5.64, Request message - Card product code (version 034)
Message formats	3.3	Add	Added new response table: Table 3.79, Card-level results response (version 034)
Field definitions	6.37	Add	Added new section - Card brand token account range status
Field definitions	6.94	Update	Updated Table 6.46, Group III version number with value 034 - Card-level results
Field definitions	6.157	Update	Change stored value in Table 6.74, RIID values
Field definitions	6.166.1	Update	Update description
Field definitions	6.166.2	Update	Update description
Field definitions	6.166.3	Update	Update description
Field definitions	6.166.5	Update	Update description

Chapter	Section	Action	Data
Field definitions	6.167.1	Update	Update description
Field definitions	6.167.2	Update	Update description
Message format examples	6.21	Add	Added Table 6.28 , Debit non-confirmation - request

Table 3.98 Version 7.4 document revisions

Chapter	Section	Action	Data
Message formats	5.4	Update	Update Table 5.5 , Request message - Authorization fields comprising Group 1
Message formats	5.2.27	Add	Added new section - Digital entity identifier (G3v031) includes Table 5.58 , Table 5.60 and Table 5.62
Message formats	3.3	Add	Added new response tables: Table 3.76 , Table 3.77 and Table 3.78
Field definitions	6.6	Add	Added new section - Acquirer transaction currency code
Field definitions	6.7	Add	Added new section - Actual amount, cardholder billing
Field definitions	6.8	Add	Added new section - Actual amount, settlement
Field definitions	6.9	Add	Added new section - Actual amount, transaction
Field definitions	6.12	Update	Added two columns, “Domestic” and “International” and deleted “Error Ineligible” authorization response message from Table 6.7 , Address verification result code
Field definitions	6.15	Add	Added new section - Alternate account ID 1
Field definitions	5.15	Add	Added new section - Agent identification result
Field definitions	6.45	Add	Added new section - Cardholder billing amount
Field definitions	6.47	Add	Added new section - Cardholder billing currency code
Field definitions	6.46	Add	Added new section - Cardholder billing conversion rate
Field definitions	6.61	Add	Added new section - Conversion date
Field definitions	6.69	Update	Updated description text
Field definitions	6.94	Update	Updated Table 6.46 , Group III version number with three new values

Chapter 4

Overview

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4.1 Introduction

This document describes the request and response record formats for Second Generation Point Of Sale (POS) authorization devices using TSYS Acquiring Solutions' authorization services. This document defines only the record format structures message.

WARNING: Direct debit and EBT card transactions utilize a third communication packet.

[Figure 4.1](#) represents an authorization request transmitted to TSYS Acquiring Solutions using public communication services with a subsequent authorization response returned by TSYS Acquiring Solutions. Note that Direct Debit and EBT card transactions utilize a third communication packet.

4.2 Authorization request and response

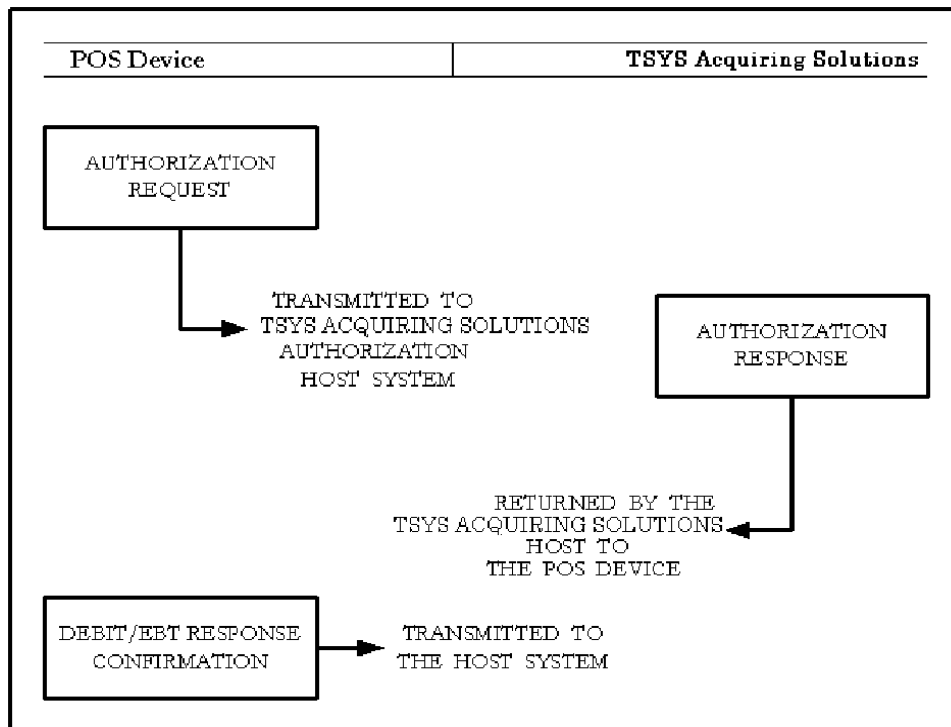


Figure 4.1 Authorization request and response

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Chapter 5

Message formats

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5.1 Introduction

The following illustrations provide examples of how the authorization message format components are structured. All authorization request and response messages are framed beginning with a Start-of-Text character and terminated with End-of-Text and Longitudinal Redundancy Check (LRC) characters. Authorization request and response message data elements are separated into functional data groupings. TSYS Acquiring Solutions currently defines and supports three separate data groupings for both authorization request and response messages:

Group I + III request fields represent base data elements which must be supplied in every authorization request. The TSYS Acquiring Solutions host always responds with a corresponding set of Group I+III response fields.

Group II + III fields are directly associated with performing Direct Debit transactions. To perform a Debit Card transaction, Group II data elements must be combined and concatenated with Base Group I and III. When Groups I, II, and III are supplied in the authorization request, the host responds with a corresponding set of Group I, II, and III response fields.

Additional Group III definitions are utilized to augment Base Group I and I + II with additional miscellaneous information as needed for authorization. Multiple group definitions exist for Group III. The formatting of any Group III representation is defined by an embedded version number ([6.94](#)).

Single or multiple Group III segments could be supplied within any given authorization request message. The presence of multiple Group III segments is designated by the insertion of a Group Separator <GS> character ([6.95](#)) between each group section.

Whenever one or more Group III request segments are supplied with Group I specifically, the host responds with Group I and corresponding Group III response segment(s). Group II cannot be supplied without Group I + III data. The presence of two or more groups is designated by the letter supplied in the Record Format field ([6.158](#)). [Table 5.1](#) provides a summary of the Record Format designation for each allowable grouping.

Table 5.1 Group and record format designations

Request record	Response record	Group designation
D	E	Credit Card/Addendum Data (Groups I + III)
W	E	Encrypted Credit Card / Addendum Data (Groups I + III)
Y	E	Tokenized Credit Card / Addendum Data (Groups I + III)

Request record	Response record	Group designation
T	U	Debit Cards or Electronic Benefits Transfer-EBT (Groups I + II + III)
X	U	Encrypted Debit Cards or Electronic Benefits Transfer - EBT (Groups I + II + III)
V	N/A	Debit Cards or EBT Confirmation Record

NOTE With the addition of encryption [5.2.48](#) or tokens [5.2.49](#), Gen2 Terminal Authentication is required.

[Table 5.2](#) through [Table 5.3](#) outline the request and response message components.

[Table 5.5](#) through [Table 5.107](#) lists valid constituent fields for all Group 1, Group 2 and Group 3 Authorization request and response messages.

Table 5.2 Authorization request record format components

Authorization Request Record format components
Start-of-text <STX>
Base Group I + III (Required)
Addendum Group II (Required for Direct Debit/EBT)
Addendum Group III (Additional Information)
Group Separator (Present only if multiple Group III addendum fields are submitted)
Addendum Group III (Additional Information)
Termination Character <ETX>
Longitudinal Redundancy Check <LRC>

Table 5.3 Authorization response record format components

Authorization Response Record format components
Start-of-text <STX>
Base Group I + III (Always Returned)
Addendum Group II (Returned for Direct Debit/EBT)
Addendum Group III (Additional Information)
Group Separator (Present only if multiple Group III addendum fields are submitted)
Addendum Group III (Additional Information)
Termination Character <ETX>
Longitudinal Redundancy Check <LRC>

NOTE: Summary of Groupings: Credit Card transactions require the use of record formats D and E. These records must include the Base Group I, and at a minimum, Base Group III Version Number 000. Direct Debit and EBT transactions require the use of record formats T, U, and V. These records must include the Base Group I, Base Group II, and at a minimum, Base Group III Version Number 000.

Table 5.4 Debit/EBT confirmation record

Group	Length	Format	Reference	Content	Comments
0	1	A/N	6.158	Record Format	
	1	NUM	6.23	Application Type	
	1	A/N	6.135	Message Delimiter	
	6	NUM	6.5	Acquirer Bank Identification Number (BIN)	
	8	A/N	6.97	Host Message Identifier	
	6	NUM	6.167.1	System Trace Audit Number	

5.1.1 3D Secure Authentication

Three Domain Secure, otherwise known as 3D Secure, is a payment authentication protocol that is designed to improve the security of online transactions.

Cardholders that use this service have registered their card with the issuer and established a password that is used to authenticate online transactions where 3D Secure is supported.

The 3D Secure mode of authentication is widely adopted among the major card brands with each supporting their own unique brand identity. The following is a list of the 3D Secure programs that are currently supported:

- Visa Secure
- Mastercard SecureCode (v1.0) and Identity Check (v2.0)
- American Express SafeKey
- Discover ProtectBuy

Digital wallet products like Apple Pay and Samsung Pay may leverage the 3DS mode of authentication for payments that originate from a mobile device.

Refer to the following for more information on 3D Secure:

- G3v014 – **MOTO/ e-Commerce**
- G3v017 – **Secure e-Commerce transaction**
- G3v072 – **Electronic Commerce Security Level Indicator**
- G3v019 – **Mastercard universal cardholder authentication**

- G3v078 - Authentication Data

Type of Transaction	Mastercard	Visa	Discover	Amex
MOTO	G3v014	G3v014	G3v014	G3v014
eCommerce	G3v014 G3v072	G3v014	G3v014	G3v014
3-D Secure (version 1)	G3v014 G3v019 G3v072	G3v014 G3v017	G3v014 G3v017	G3v014 G3v017
EMV 3-D Secure (version 2)	G3v014 G3v019 G3v072 G3v078	-	-	-
Digital Secure Remote Payments (DSRP) with Chip Data	G3v027 (SF7=R) G3v055	-	-	-
Digital Secure Remote Payments (DSRP) with UCAF (eCommerce)	G3v014 G3v019 G3v027 (SF7=S) G3v072	-	-	-
Visa Secure	-	G3v014 G3v017	-	-
Amex SafeKey/Tokenization	-	-	-	G3v014 G3v017
Discover ProtectBuy	-	-	G3v014 G3v017	-

5.1.2 Using Encryption and Tokens

Security features include the use of encryption and tokens. Encryption allows the transaction to hold encrypted data that ensures transmission security. Tokens can be requested in a transaction and returned with a response. The use of tokens does not enhance transmission security but it allows a receiver to store unique card-type data that then reduces PCI Audit Scope for the merchant. Gen 2 Terminal Authentication (G3V049) is required in order to use either security feature.

Encryption

When including encrypted data in the Customer Data Field ([6.70](#)), use Encrypted Track Data ([6.70.4](#)) or Encrypted Manually Entered Data ([6.70.5](#)). This needs to be identified in the Record Format ([6.158](#)). For Credit transactions, use Record Format 'W'. For Debit transactions, use Record Format 'X'. Group III Version 052 ([5.2.48](#)) will be required to include the Encryption Type and Encryption Transmission Block so that the data may be decrypted. Refer to details later in this document.

Tokens

Tokenization is offered in two varieties: TSYS Tokenization and Card Brand Tokenization. They are addressed in different sections. Please refer to Group III Version 053 ([5.2.49](#)) for a description of TSYS Tokenization. Please refer to Group III Version 062 ([5.2.58](#)) for a description of Card Brand Tokenization.

NOTE Card Brand Tokenization is an optional feature just like TSYS Tokenization. The merchant should feel free to make a decision on which solution is the best for the line of business.

5.2 Authorization request/response message formats and constituent fields

5.2.1 Authorization message constituent fields (G1)

NOTE: This table includes all the fields valid in a Gen 2 authorization message and does not represent a specific message type. Examples of specific messaging requirements are included in [Chapter 6](#).

Table 5.5 Request message - Authorization fields comprising Group 1

Group	Length	Format	Reference	Content
I	1	A/N	6.158	Record Format
	1	NUM	6.23	Application Type
	1	A/N	6.135	Message Delimiter
	6	NUM	6.5	Acquirer BIN
	12	NUM	6.128	Merchant Number
	4	NUM	6.180	Store Number
	4	NUM	6.189	Terminal Number
	1	A/N	6.73	Device Code
	1	A/N	6.101	Industry Code
	3	NUM	6.69	Currency Code
	3	NUM	6.62	Country Code
	9	A/N	6.58	City Code
	2	NUM	6.110	Language Indicator
	3	NUM	6.194	Time Zone Differential
	4	NUM	6.120	Merchant Category Code
	1	A/N	6.162	Requested ACI
	4	NUM	6.205	Transaction Sequence Number
	2	A/N	6.201	Transaction Code
	1	A/N	6.49	Cardholder Identification Code
	1	A/N	6.2	Account Data Source
	1 - 79	A/N	6.70	Customer Data Field
	1	ASCII	6.89	Field Separator
	0, 128	A/N	6.50	Cardholder Identification Data
	1	ASCII	6.89	Field Separator
	0, 6	NUM	6.157	Receiving Institution ID
	1	ASCII	6.89	Field Separator

Group	Length	Format	Reference	Content
	1 - 12	NUM	6.199	Transaction Amount
	1	ASCII	6.89	Field Separator
	0-12	NUM	6.170	Secondary Amount
	1	ASCII	6.89	Field Separator
	0, 4	A/N	6.116	Market Specific Data Identifier
	1	ASCII	6.89	Field Separator
	0, 40	A/N	6.35	Card Acceptor Data
	1	ASCII	6.89	Field Separator
	0, 15	A/N	6.168	Reversal, Incremental, MIT Transaction ID
	1	ASCII	6.89	Field Separator
	0, 30	A/N	6.166	Reversal and Cancel Data I
	1	ASCII	6.89	Field Separator

Table 5.6 Response message - Authorization fields comprising Group 1

Group	Length	Format	Reference	Content	Comments
I	1	A/N	6.158	Record Format	
	1	NUM	6.23	Application Type	
	1	A/N	6.135	Message Delimiter	
	1	A/N	6.165	Returned ACI	
	4	NUM	6.180	Store Number	
	4	NUM	6.189	Terminal Number	
	1	A/N	6.30	Authorization Source Code	
	4	NUM	6.205	Transaction Sequence Number	
	2	A/N	6.163	Response Code	
	6	A/N	6.24	Approval Code	
	6	NUM	6.111	Local Transaction Date	MMDDYY
	6	NUM	6.112	Local Transaction Time	HHMMSS
	16	A/N	6.29	Authorization Response Text	
	1	A/N	6.12	AVS Result Code	
	12	A/N	6.164	Retrieval Reference Number	
	1	A/N	6.116	Mkt. Specific Data Identifier	
	0, 15	A/N	6.204	Transaction Identifier	
	1	ASCII	6.89	Field Separator	<FS>
	0, 4	A/N	6.214	Validation Code	
	1	ASCII	6.89	Field Separator	<FS>

5.2.2 Debit or EBT additional fields in authorization message (G2)

Note that all Debit transactions must be captured/settled once approved. Unlike previously approved Credit transactions, Debit will not “fall off” if they are not captured.

Table 5.7 Request message - Debit card or electronic benefits transfer (EBT) authorization fields comprising Group 2

Group	Length	Format	Reference	Content	Comments
II	0, 7	A/N	6.167	Reversal and Cancel Data II	
	1	ASCII	6.89	Field Separator	<FS>
	1-30	A/N	6.177	Sharing Group	
	1	ASCII	6.89	Field Separator	<FS>
	0, 9	NUM	6.118	Merchant ABA Number	
	0, 4	A/N	6.131	Merchant Settlement Agent No.	
	1	ASCII	6.89	Field Separator	<FS>
	6	NUM	6.13	Agent Bank Number	
	6	NUM	6.14	Agent Chain Number	
	3	NUM	6.33	Batch Number	
	1	A/N	6.161	Reimbursement Attribute	
	0, 12	A/N	6.141	Original Purchase Data	
	1	ASCII	6.89	Field Separator	<FS>

Table 5.8 Response message - Debit card or electronic benefits transfer (EBT) authorization fields comprising Group 2

Debit Cards/EBT					
Group	Length	Format	Reference	Content	Comments
II	6	A/N	6.5	Acquirer BIN	
	8	A/N	6.97	Host Message Identifier	
	6	NUM	6.167.1	System Trace Audit Number	
	1	A/N	6.138	Network ID Code	
	4	NUM	6.176	Settlement Date	MMDD
	1	ASCII	6.89	*Field Separator	<FS>

* Not present for previous 'B' format response message

5.2.3 No addendum data (G3v000)

Table 5.9 Request message - No addendum data (version 000)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	000

Group	Length	Format	Reference	Content	Comments
	1	ASCII	6.95	Group Separator	<GS>

Table 5.16 Response message - Fleet fueling card (version 008)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	008
	1	ASCII	6.95	Group Separator	<GS>

5.2.7 Set e-Commerce (G3v009)

Table 5.17 Request message- Set e-Commerce (version 009)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	009
	0, 32	A/N	6.48	Cardholder Certificate Serial Number	
	1	ASCII	6.89	Field Separator	<FS>
	1-32	A/N	6.121	Merchant Certificate Serial Number	
	1	ASCII	6.89	Field Separator	<FS>
	40	A/N	6.220	XID	
	40	A/N	6.210	Transtain	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.18 Response message- Set e-Commerce (version 009)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	009
	1	ASCII	6.95	Group Separator	<GS>

5.2.8 RESERVED - CCPS (G3v010)

Table 5.19 Request message - CCPS (version 010, reserved for future use)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	010
	3	NUM	6.42	Card Sequence Number	
	6	A/N	6.187	Terminal Capability Profile	
	10	A/N	6.193	Terminal Verification Results	
	8	A/N	6.213	Unpredictable Number	
	0, 8	NUM	6.102	Interface Device Serial Number	
	1	ASCII	6.89	Field Separator	<FS>
	2	A/N	6.71	Derivation Key Index	
	2	A/N	6.68	Cryptogram Version Number	
	8	A/N	6.44	Card Verification Results	
	0, 16	A/N	6.105	Issuer Discretionary Data	
	1	ASCII	6.89	Field Separator	<FS>
	16	A/N	6.27	Authorization Request Cryptogram	
	4	A/N	6.22	Application Transaction Counter	
	4	A/N	6.21	Application Interchange Profile	
6	NUM	6.202	Transaction Date	YYMMD	
1	ASCII	6.95	Group Separator	<GS>	

Table 5.20 Response message - CCPS (version 010, reserved for future use)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	010
	16	A/N	6.28	Authorization Response Cryptogram	
	1	ASCII	6.89	Field Separator	<FS>
	0,512	A/N	6.106	Issuer Script	
	1	ASCII	6.95	Group Separator	<GS>

5.2.9 Chip condition code (G3v011)

Group 3 Version 11 must be sent when the Account Data Source Code value is equal to “Z” or “P” (see Table 4.21 for record format and version number).

Table 5.21 Request message - Chip condition code (version 011)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	011
	1	A/N	6.57	Chip Condition Code	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.22 Response message - Chip condition code (version 011)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	011
	1	ASCII	6.95	Group Separator	<GS>

5.2.10 Electronic Benefits Transfer (G3v013)

Table 5.23 Request message - Electronic Benefits Transfer (EBT) (version 013)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	013
	0, 7	A/N	6.88	FCS ID	
	1	ASCII	6.89	Field Separator	<FS>
	0, 15	A/N	6.78	Electronic Voucher Serial Number	
	1	ASCII	6.89	Field Separator	<FS>
	0, 6	A/N	6.219	Voucher Approval Code	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.24 Response message - Electronic Benefits Transfer (EBT) (version 013)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	013
	0,12	NUM	6.31	Available Balance	
	1	ASCII	6.95	Group Separator	<GS>

5.2.11 MOTO/ e-Commerce (G3v014)

Table 5.25 Request message - MOTO/e-Commerce (version 014)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	014
	1	A/N	6.136	MOTO/e-Commerce Indicator	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.26 Response - MOTO/e-Commerce (version 014)

Table 5.29 Request message - Secure e-Commerce transaction (version 017)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	017
	0, 40	A/N	6.220 or 6.197	XID or Amex SafeKey/Token Block B	
	40	A/N	6.54 or 6.56 or 6.197	CAVV or CAVV, Revised or Amex SafeKey/Token Block A	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.30 Response message - Secure e-Commerce transaction (version 017)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	017
	0, 1	A/N	6.55	CAVV Results Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.14 Special condition indicator (G3v018)

This Group is used to describe selected special conditions at the point of sale.

Table 5.31 Request message - Special condition indicator (version 018)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	018
	1	NUM	6.178	Special Condition Indicator	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.36 Response message - Developer tracking ID (version 020)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	020
	1	ASCII	6.95	Group Separator	<GS>

5.2.17 Merchant verification value (G3v021)

Table 5.37 Request message - Merchant verification value (version 021)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	021
	0, 10	A/N	6.133	Merchant Verification Value	0-9, A-F only
	1	ASCII	6.95	Group Separator	<GS>

Table 5.38 Response message - Merchant verification value (version 021)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	021
	1	ASCII	6.95	Group Separator	<GS>

5.2.18 Additional amounts (G3v022)

Group 3 Version 22 for Additional Amounts can support on the request either no additional amounts or four field separated additional amounts. If the transaction does not require additional amounts in the request but requires additional amounts in the response, the POS device should send only the 022 version number. If the transaction does require additional amounts in the request, the POS device should send the 022 version number plus the field separated additional amounts. The POS device should send the field separators for all four additional amounts even if some of the amount data fields are not used. All five subfields for an amount must be present for the amount to be valid.

Table 5.39 Request message - Additional amounts participant (no request amounts, version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	022
	1	ASCII	6.95	Group Separator	<GS>

Table 5.40 Request message - Additional amounts participant (with request amounts, version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	022
	2	NUM	6.10.1	First Additional Amount Account Type	
	1	ASCII	6.89	Field Separator	<FS>
	2	NUM	6.10.2	First Additional Amount Amount Type	

Group	Length	Format	Reference	Content	Comments
	0 or 2	NUM	6.10.2	Fourth Additional Amount Amount Type	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 3	NUM	6.10.3	Fourth Additional Amount Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 1	ALPHA	6.10.4	Fourth Additional Amount Sign	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 12	N	6.10.5	Fourth Additional Amount	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.41 Response message - Additional amounts participant (version 022)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	022
	2	NUM	6.10.1	First Additional Amount Account Type	
	1	ASCII	6.89	Field Separator	<FS>
	2	NUM	6.10.2	First Additional Amount Amount Type	
	1	ASCII	6.89	Field Separator	<FS>
	3	NUM	6.10.3	First Additional Amount Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	A/N	6.10.4	First Additional Amount Sign	
	1	ASCII	6.89	Field Separator	<FS>
	12	N	6.10	First Additional Amount	
	1	ASCII	6.89	Field Separator	<FS>
	2	NUM	6.10.1	Second Additional Amount Account Type	
	1	ASCII	6.89	Field Separator	<FS>
	2	NUM	6.10.2	Second Additional Amount Amount Type	
	1	ASCII	6.89	Field Separator	<FS>
	3	NUM	6.10.3	Second Additional Amount Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	A/N	6.10.4	Second Additional Amount Sign	

<request group 2 data>022nn<FS>nn<FS>nnn<FS>C<FS>nnnnnnnnnnnnnnnn
 <FS><FS><FS><FS><FS><FS><FS><FS><FS><FS><FS><FS><FS><FS><FS>
 <FS><FS>

Three additional amounts in request:

<request group 2 data>022nn<FS>nn<FS>nnn<FS>C<FS>nnnnnnnnnnnnnnnn<FS>
 nn<FS>nn<FS>nnn<FS>C<FS>nnnnnnnnnnnnnnnn<FS>nn<FS>nn<FS>nnn<FS>
 C<FS>nnnnnnnnnnnnnnnn<FS><FS><FS><FS><FS><FS><FS><FS>

5.2.19 Mastercard or Discover healthcare (G3v023)

Table 5.42 Request message - Mastercard or Discover healthcare data (version 023)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	023
	0-199*	ANS	6.96	Healthcare, Mastercard or Discover Member Defined Data	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

* = free form length is 0-99

Table 5.43 Response message - Mastercard or Discover healthcare data (version 023)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	023
	0-199*	ANS	6.96	Healthcare, Mastercard or Discover Member Defined Data	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

* = free form length is 0-99

5.2.20 Mastercard advice code (G3v024)

For Mastercard and Discover values unrelated to health care. May contain free form data.

Table 5.44 Request message - Merchant Advice Code (MAC) (version 024)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	024
	1	ASCII	6.95	Group Separator	<GS>

Table 5.50 Request message - POS data code (version 027)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	027
	12	A/N	6.151	POS Data Code	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.51 Response message - POS data code (version 027)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	027
	1	ASCII	6.95	Group Separator	<GS>

5.2.24 American Express additional data (G3v028)

Group 3 Version 28 is optionally used specifically for American Express transactions, to hold additional data. Please see [Section 6.16](#) for more information.

Table 5.52 Request message - Amex additional data (version 028)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	028
	16-301	ANS	6.16	Amex Additional Data	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.53 Response message - Amex additional data (version 028)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	028
	1	ASCII	6.95	Group Separator	<GS>

5.2.25 Extended AVS data (G3v029)

For American Express transactions, Group 3 Version 29 may be sent on all American Express transactions that contain Address Verification Data. For American Express, extended AVS Data in G3V29 takes priority over AVS Data sent in the Cardholder Identification Data field. If Extended AVS Data is sent in G3V29, AVS Data should not be sent in the Cardholder Identification Data field. If Extended AVS Data is sent in G3V29 and AVS Data is sent in the Cardholder Identification Data field, the AVS Data in the Cardholder Identification Data field will not be used. If this Group is used, there must at least be data in the Cardholder Billing Postal Code field or the transaction will be rejected.

For Amex Balance Inquiry Transactions, a Zip Code is required to be present in either Base1 or G3v029.

For Discover transactions, this structure is used for the Enhanced Address Verification Service, for Cardholder First and Last Names only. The postal code and first five characters of the street address should still be sent in Cardholder identification data as usual. For Discover transactions, the Cardholder Billing Postal Code is not required.

Table 5.54 Request message - Extended AVS data, (version 029)

Group	Length	Format	Reference	Content	Comments
	1	ASCII	6.89	Field Separator	<FS>
	0-50	A/N	6.87.10	Ship-to Address	
	1	ASCII	6.89	Field Separator	<FS>
	0	ALPHA	6.87.11	Ship-to City (future use)	
	1	ASCII	6.89	Field Separator	<FS>
	0	A/N	6.87.12	Ship-to State/Province (future use)	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 3	NUM	6.87.13	Ship-to Country Code	
	1	ASCII	6.89	Field Separator	<FS>
	0-15	ALPHA	6.87.14	Ship-to First Name	
	1	ASCII	6.89	Field Separator	<FS>
	0-30	ALPHA	6.87.15	Ship-to Last Name	
	1	ASCII	6.89	Field Separator	<FS>
	0-10	NUM	6.87.16	Ship-to Phone Number	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.55 Response message - Extended AVS data, (version 029)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	029
	1	ASCII	6.95	Group Separator	<GS>

Group 3 version 29 examples

Example for US postal code only:

```
54321<fs><fs><fs><fs><fs><fs><fs><fs>
<fs><fs><fs><fs><fs><fs><fs><fs>
```

Example for Canadian postal code only:

```
1A2B3C<fs><fs><fs><fs><fs><fs><fs><fs>
<fs><fs><fs><fs><fs><fs><fs><fs>
```

Example for billing address only:

```
54321<fs>123~FRONT STREET<fs><fs><fs><fs><fs><fs><fs><fs>
<fs><fs><fs><fs><fs><fs><fs><fs>
```

Example for billing address, name and phone number:

```
54321<fs>123~FRONT STREET<fs><fs><fs><fs>JOHN<fs>SMITH<fs>
3213214321<fs><fs><fs><fs><fs><fs><fs><fs>
```

Example for billing address, name, phone number and all ship-to data:

5.2.26 Amex merchant name/location data (G3v030)

Table 5.56 Request message - Amex merchant name/location data (version 030)

Table 5.57 Response message - Amex merchant name/location data (version 030)

5.2.27 Digital entity identifier (G3v031)

Table 5.58 Request message - Digital entity identifier (version 031)

Group	Length	Format	Reference	Content	Comments
III	Digital Entity Identifier (Version 031)				
	3	NUM	6.94	Group III Version Number	031
	5	A/N	6.74	Digital Entity Identifier	
	0, 12	NUM		Reserved	The point of sale does not need to send this field. This subfield is reserved for internal use only.
	1	ASCII	6.95	Group Separator	<GS>

Table 5.59 Response message - Digital Entity Identifier (version 031)

Group	Length	Format	Reference	Content	Comments
III	Digital Entity Identifier (Version 031)				
	3	NUM	6.94	Group III Version Number	031
	1	ASCII	6.95	Group Separator	<GS>

Refer to section [7.8, Conversion of binary to ASCII characters](#) for instructions on converting the six byte binary Agent Identification Result to 12 ASCII characters.

5.2.28 Currency conversion data (G3v032)

Gen2 Group 3 Version 32 “Currency Conversion Data” supports Currency Conversion data.

Table 5.60 Request Message - Currency conversion data request (version 032)

Group	Length	Format	Reference	Content	Comments
III	Currency Conversion Data (Version 032)				
	3	NUM	6.94	Group III Version Number	032
	1	ASCII	6.95	Group Separator	<GS>

Table 5.61 Response Message - Currency conversion data response (version 032)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	032
	0-12	NUM	6.45	Cardholder Billing Amount	
	1	ASCII	6.89	Field Separator	<FS>
	0-8	NUM	6.174	Settlement Conversion Rate	
	1	ASCII	6.89	Field Separator	<FS>
	0-8	NUM	6.46	Cardholder Billing Conversion Rate	
	1	ASCII	6.89	Field Separator	<FS>
	0-4	NUM	6.61	Conversion Date	
	1	ASCII	6.89	Field Separator	<FS>
	0-3	NUM	6.6	Acquirer Transaction Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	0-3	NUM	6.175	Settlement Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	0-3	NUM	6.47	Cardholder Billing Currency Code	
	1	ASCII	6.89	Field Separator	<FS>
	0-12	NUM	6.9	Actual Amount, Transaction	

Table 5.65 Response message - Card product code (version 034)

Group	Length	Format	Reference	Content	Comments
III	Card Product Code (Version 034)				
	3	NUM	6.94	Group III Version Number	034
	0 or 2	A/N	6.41	Card Product Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.31 Promotional code (G3v035)

Table 5.66 Request message - Promotional code (version 035)

Group	Length	Format	Reference	Content	Comments
III	Request Promotional Code				
	3	NUM	6.94	Group III Version Number	035
	0-50	A/N	6.154	Promotional Code	Card specific format
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.67 Response message - Promotional code (version 035)

Group	Length	Format	Reference	Content	Comments
III	Request Promotional Code				
	3	NUM	6.94	Group III Version Number	035
	0-50	A/N	6.154	Promotional Code	Card specific format
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.32 Payment transaction type identifier (G3v036)

Table 5.68 Request message - Payment transaction type identifier (version 036)

Group	Length	Format	Reference	Content	Comments
III	Payment Transaction Type Identifier				
	3	NUM	6.94	Group III Version Number	036
	3	A/N	6.148	Payment Transaction Type Identifier	
	1	ASCII	6.95	Group Separator	<GS>

5.2.35 Cardholder verification method (G3v039)

Table 5.74 Request message - Cardholder verification method (version 039)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	039
	1	A/N	6.51	Cardholder Verification Method	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.75 Response message - Cardholder verification method (version 039)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	039
	1	ASCII	6.95	Group Separator	<GS>

5.2.36 Visa ISA charge indicator (G3v040)

Table 5.76 Request message - Visa ISA charge indicator (version 040)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	040
	1	ASCII	6.95	Group Separator	<GS>

Table 5.77 Response message - Visa ISA charge indicator (version 040)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	040
	0-1	ASCII	6.103	ISA Charge Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.37 NTIA UPC/SKU data (G3v041)

Table 5.78 Request message - NTIA UPC/SKU data (version 041)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	041
	1-34	ANS	6.139	UPC/SKU	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.79 Response message - NTIA UPC/SKU data (version 041)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	041
	1	ASCII	6.95	Group Separator	<GS>

5.2.38 RESERVED Visa contactless (G3v042)

This group has been retired and cannot be used for new development effective 10/15/2012. Instead, please use Group 3, version 55 (G3v055) Integrated Chip Card (ICC) EMV.

Table 5.80 Request message - Visa contactless (version 042) Reserved

Group	Length	Format	Content	Comments
III	3	NUM	Group III Version Number	042
	0, 12	NUM	Cryptogram Amount	
	1	ASCII	Field Separator	<FS>
	0, 16	AN	Application Cryptogram	
	1	ASCII	Field Separator	<FS>
	0, 4	AN	Transaction Application Counter	
	1	ASCII	Field Separator	<FS>
	0, 2-64	AN	Customer Exclusive Data	
	1	ASCII	Field Separator	<FS>
	0, 2-8	AN	Form Factor	
	1	ASCII	Field Separator	<FS>
	0, 2-64	AN	Issuer Application Data	
	1	ASCII	Field Separator	<FS>
	0, 8	AN	Unpredictable Number	
	1	ASCII	Field Separator	<FS>
	0-3	NUM	Card Sequence Number	
	1	ASCII	Field Separator	<FS>
	1	ASCII	Group Separator	<GS>

Table 5.81 Response message - Visa Contactless (version 042) Reserved

Group	Length	Format	Content	Comments
III	3	NUM	Group III Version Number	042
	1	ASCII	Group Separator	<GS>

5.2.39 Network ID (G3v043)

Table 5.82 Request message - Network ID (version 043)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	043
	4	NUM	6.137	Network ID	Must not be “0000”

1	ASCII	6.95	Group Separator	<GS>
---	-------	----------------------	-----------------	------

Table 5.83 Response message - Network ID (version 043)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	043
	1	ASCII	6.95	Group Separator	<GS>

5.2.40 Automated teller machines (G3v044)

Table 5.84 Request message - Automated Teller Machine (ATM) (version 044)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	044
	0 or 2	NUM	6.3	Account Type (from)	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 2	NUM	6.4	Account Type (to)	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.85 Response message - Automated Teller Machine (ATM) (version 044)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	044
	1	ASCII	6.95	Group Separator	<GS>

5.2.41 RESERVED Integrated Chip Card (G3v045)

This group has been retired and cannot be used for new development effective 10/15/2012. Instead, please use Group 3, version 55 (G3v055) Integrated Chip Card (ICC) EMV.

Table 5.86 Request message - Integrated Chip Card (ICC) EMV format (version 045) Reserved

Group	Length	Format	Content	Comments
III	3	NUM	Group III Version Number	045
	12	NUM	Cryptogram Amount	Tag 9F02
	1	ASCII	Field Separator	<FS>
	0,16	AN	Authorization Request Cryptogram (ARQC)	Tag 9F26
	1	ASCII	Field Separator	<FS>
	4	AN	Transaction Application Counter	Tag 9F36
	1	ASCII	Field Separator	<FS>
	0-64	AN	Customer Exclusive Data	Visa USA only. Tag 9F7C
	1	ASCII	Field Separator	<FS>
	0-10	AN	Form Factor	Tag 9F6E
	1	ASCII	Field Separator	<FS>
	8	AN	Unpredictable Number	Tag 9F37
	1	ASCII	Field Separator	<FS>
	0-3	NUM	Card Sequence Number	Send up to 3 decimal digits. Tag 5F34
	1	ASCII	Field Separator	<FS>
	0,2	NUM	Cryptogram Information Data	Tag 9F27
	1	ASCII	Field Separator	<FS>
	0-64	AN	Issuer Application Data	Tag 9F10
	1	ASCII	Field Separator	<FS>
	3	NUM	Terminal Country Code	Tag 9F1A
	1	ASCII	Field Separator	<FS>
	0,8	ASCII	IFD Serial Number	Tag 9F1E
	1	ASCII	Field Separator	<FS>
	0,6	AN	Terminal Capability Profile	Tag 9F33
	1	ASCII	Field Separator	<FS>
	0-40	AN	Issuer Script Results	Tag 9F5B
	1	ASCII	Field Separator	<FS>
	0,4	NUM	Application Interchange Profile	Tag 82
	1	ASCII	Field Separator	<FS>

Group	Length	Format	Content	Comments
	0,10	NUM	Terminal Verification Results	Tag 95
	1	ASCII	Field Separator	<FS>
	0,2	NUM	Cryptogram Transaction Type	Tag 9C
	1	ASCII	Field Separator	<FS>
	6	NUM	Terminal Transaction Time	Tag 9F21
	1	ASCII	Field Separator	<FS>
	6	NUM	Terminal Transaction Date	YYMMDD. Tag 9A
	1	ASCII	Field Separator	<FS>
	3	NUM	Cryptogram Currency Code	Tag 5F2A
	1	ASCII	Field Separator	<FS>
	0,12	NUM	Cryptogram Cashback Amount	Required when cryptogram amount includes cashback amount. Tag 9F03
	1	ASCII	Field Separator	<FS>
	0,6	AN	Cardholder Verification Method Results	Tag 9F34
	1	ASCII	Field Separator	<FS>
	0,2	AN	Terminal Type	Tag 9F35
	1	ASCII	Field Separator	<FS>
	0,1	AN	Transaction Category Code	MC usage only. Tag 9F53
	1	ASCII	Field Separator	<FS>
	0,16	AN	Secondary PIN Block	Visa usage only. Tag C0. Only used when terminal is changing Encrypted PIN to be loaded into card.
	1	ASCII	Field Separator	<FS>
	1	ASCII	Group Separator	<GS>

Table 5.87 Response message - Integrated Chip Card (ICC) EMV format (version 045) Reserved

Group	Length	Format	Content	Comments
III	3	NUM	Group III Version Number	045
	0-510	AN	Issuer Script	Can repeat up to 10 times
	1	ASCII	Field Separator	<FS>
	0-510	AN	Authorization Response Cryptogram (ARPC)	

Table 5.91 Response message - cardholder verification results (version 48)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	048
	9	AN	6.53	Cardholder verification results	Can be used for Amex or Discover
	1	ASCII	6.95	Group Separator	<GS>

5.2.45 Gen 2 terminal authentication (G3v049)

Gen2 Group 3 Version 49 is used by POS devices that perform authentication with the transaction processing host.

Table 5.92 Request message - Gen 2 terminal authentication (version 49)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	049
	0 or 24	ASCII	6.93.4	GenKey	ASCII Representation of HEX, <ul style="list-style-type: none"> • 0 length on Authentication request • 24 length on Deactivation and Authorization request
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.47 EMS service request/response (G3v051)

This Mastercard only field is used by participating Card Not Present merchants to request and receive results on a predictive risk score by the Expert Monitoring System (EMS) that may assist in determining if a CNP transaction is fraudulent. It is valid for Mastercard Authorization Request/0100 transactions only.

Table 5.96 Request message - EMS service (version 051)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	051
	1	NUM	6.84	EMS Service Request Indicator	Mastercard usage only
	1	ASCII	6.95	Group Separator	<GS>

Table 5.97 Response message - EMS service (version 051)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	051
	2	NUM	6.83	EMS Scoring Response Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.80	EMS Results Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.79	EMS Additional Information	
	1	ASCII	6.89	Field Separator	<FS>
	0, 3	NUM	6.81	EMS Risk Score	
	1	ASCII	6.89	Field Separator	<FS>
	0, 2	ANS	6.82	Risk score reason code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.48 Voltage encryption transmission block (G3v052)

Group 3 Version 52 is used by POS devices that encrypt card data.

NOTE Group 3 Version 049 - Gen2 Terminal Authentication is required in order to use Encryption.

Table 5.98 Request message - Encrypted data

Group	Length	Format	Reference	Content	Comments
III	5	NUM	6.94	Group III Version Number	052
	1	A/N	6.86	Encryption Type	
	250-380	A/N, "+", "/", "="	6.85	Encryption Transmission Block (ETB)	Base-64 encoded
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.99 Response message - Encrypted data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	052
	1	ASCII	6.95	Group Separator	<GS>

5.2.49 TSYS token request/response (G3v053)

NOTE This group is for TSYS Tokenization only. To use Card Brand Tokenization, please refer to Group 3, version 062.

Presence of Group 3 Version 53 with any Transaction Code ([6.201](#)) indicates the POS Device is requesting a TSYS token. The token is delivered in the response.

NOTE Group 3 Version 049 - Gen2 Terminal Authentication is required in order to use TSYS Tokens.

TSYS Tokens

When requesting a token, Group III Version 053 ([5.2.49](#)) is required and the token will be sent in the response. Use of Transaction Code '5T' will send a token in the response message without performing any card verification. Use of G3V053 with any other Transaction Code ([4.163](#)) performs the usual card verification or authorization request as specified. Refer to details later in this document.

TSYS Purchase with a Token

In general, a purchase with a token is used for processing recurring payments for existing debt or repeat business. The token must have been requested previously with a valid PAN. When using a token in place of the PAN, use Record Format 'Y' for credit transactions. This functionality is not available for card present scenarios. For these types of authorization requests, the source of the customer data entered must be 'manually keyed', the Cardholder ID Code must indicate the transaction is CNP including e-Commerce and Full Address Verification Data (CID = 'N'). The token should be passed in the Customer Data Field. Please refer to [Section 6.5](#) for an example. The transaction codes acceptable for use in a token purchase are indicated as such in [Table 6.87](#). Record Format 'Y' transactions should never contain a request for token ([TSYS token request/response \(G3v053\)](#)). This type of transaction would be rejected.

NOTE While a token can be requested and will be sent back for regular PIN and EMV based debit transactions, this token cannot be used for purchase or reversal transactions.

Table 5.100 Request message - Token request

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	053
	1	ASCII	6.95	Group Separator	<GS>

Table 5.101 Response message - Token request

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	053
	2	AN	6.197	Token Status	Status of token retrieval
	1	ASCII	6.89	Field Separator	<FS>
	0, 13-19	A/N	6.196	Token	Format-preserved token with last 4 digits preserved.
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.50 Transit program (G3v054)

This group is required for Mastercard Transit Transactions. Specifically it is only for modes of transportation that use contactless transactions.

Table 5.102 Request message - Transit program request (version 054)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	054
	2	NUM	6.208	Transit Transaction Type Indicator	Valid value
	2	NUM	6.209	Transportation Mode Indicator	Valid value
	1	ASCII	6.95	Group Separator	<GS>

Table 5.103 Response message - Transit program response (version 054)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	054
	1	ASCII	6.95	Group Separator	<GS>

5.2.51 Integrated Chip Card (ICC) EMV (G3v055)

All data in Group 3 Version 55 must be expressed as hexadecimal characters A-F, 0-9.

Table 5.104 Request message - Integrated Chip Card (ICC) EMV (version 055)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	055
	6-255	Hex	6.195	TLV data Refer to Appendix A for more information	TLV data, 2 characters per byte
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

The following list of EMV tags are mandatory and must be sent on any transaction that contains group 3 version 55. If either or both of these tags are missing the transaction will be rejected.

Tag	Tag name	Description
DF79	Kernel Version Number	The version number of the kernel used to process the chip data in the transaction. (variable 1 - 32)
DF78	Device Serial Number	The manufacturer's unique serial number of the device that interacts with the chip card. (variable 1 - 20)

Table 5.105 Response message - Integrated Chip Card (ICC) EMV (version 055)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	055
	6-255	ASCII Hex	6.195	TLV data Typically includes one or more issuer scripts (tag 71 or 72) and issuer authentication data (tag 91). Refer to Appendix A for more information.	TLV data, 2 characters per byte
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.52 Message reason code (G3v056)

NOTE Group 3 Version 056 - Message Reason Code is required on all reversal and reversal advice messages.

Table 5.106 Request message - Message reason code

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	056
	4	NUM	6.134	Message Reason Code	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.107 Response message - Message reason code

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	056
	1	ASCII	6.95	Group Separator	<GS>

5.2.53 Additional response data (G3v057)

Table 5.108 Request message - Additional response data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	057
	0-25	A/N/S	6.11	Additional Response Data	Additional data for Discover/PayPal AFD messages
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.109 Response message - Additional response data

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	057
	0-25	A/N/S	6.11	Additional Response Data	Additional data for Discover/ PayPal AFD messages
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.54 Alternate account ID 1 (G3v058)

It is recommended that Group 3, version 58 be accompanied by Group 3, version 59 for Mastercard transactions.

Table 5.110 Request message - Alternate account ID 1 (G3v058)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	058
	1	ASCII	6.95	Group Separator	<GS>

Table 5.111 Response message - Alternate account ID 1 (G3v058)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	058
	1-28	NUM	6.15	Alternate Account ID 1	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.55 Mastercard mapping service (G3v059)

It is recommended that Group 3, version 59 be accompanied by Group 3, version 58 for Mastercard transit transactions.

Table 5.112 Request message-Mastercard mapping service

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	059
	1	ASCII	6.95	Group Separator	<GS>

Table 5.113 Response message-Mastercard mapping service

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	059
	1	A/N	6.114	Mapped PAN Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	4	NUM	6.113	Mapped Card Expiration Date	
	1	ASCII	6.89	Field Separator	<FS>
	3	A/N	6.115	Mapped Product Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.56 Mastercard PayPass mobile (G3v060)

This Mastercard only group indicates the Service Manager or program initiator of the Mastercard Mobile Remote Payments Program. It also identifies the type of PayPass device used by the cardholder to initiate the transaction. This is applicable in Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 MTIs.

Table 5.114 Request message- Mastercard PayPass mobile

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	060
	0, 1	A/N	6.150	PayPass Mobile Domain Server	
	1	ASCII	6.89	Field Separator	<FS>
	0, 2	A/N	6.149	PayPass Mobile Device Type	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.115 Response message- Mastercard PayPass mobile

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	060
	1	ASCII	6.95	Group Separator	<GS>

5.2.57 Spend qualified indicator (G3v061)

This group should be sent on all Visa transactions.

Table 5.116 Request message - spend qualified indicator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	061
	1	ASCII	6.95	Group Separator	<GS>

Table 5.117 Response message - spend qualified indicator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	061
	0, 1	A/N	6.179	Spend Qualified Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.58 Card brand tokenization (G3v062)

NOTE This group is for Card Brand Tokenization only. To use TSYS Tokenization, please refer to Group 3, version 053.

There are two usages for G3v062. Please see Tables 5.118, 5.119, 5.120, & 5.121 for further detail.

This group may be sent on Visa, Mastercard, American Express, or Discover token purchase transactions. This is recommended if the merchant uses or pays for card brand tokenization. This group can be included if the merchant expects to see any of the data in the response fields.

For card brand tokenization, the Token is a surrogate value for a PAN that is consistent with ISO 8583 message requirements and is a 13 to 19-digit numeric value that passes basic validation rules of an account number, including the LUHN check. Tokens are generated within a BIN range that has been designated as a token BIN range. Please refer to Section [5.1.1](#) for a high-level description of the use of this feature.

The following abbreviations are used in this description.

Abbreviation	Full Description
M	Mandatory - For a request, the field is required. For a response, the field will be present.
C	Conditional - For a request, the field will be required in some situations. For a response, the field may be present. Consult the field description for complete details.
O	Optional - The field may or may not be present. Consult the field description for complete details.
MC	Mastercard
V	Visa
AX	American Express
D	Discover

Card Brand Token Purchase

The merchant uses this scenario to authorize a transaction using a card brand Token instead of a PAN. Mastercard, Visa, American Express, and Discover card brands offer this use case.

For this scenario, use an ordinary Transaction Code as used in any purchase transaction. The Token will be contained in the Customer Data Field just as a PAN would be. The Token expiration date belongs in the Customer Data Field as well.

NOTE Effective October 2017, the functions of Token Request and Token Maintenance for Card on File Tokens previously available for Mastercard were decommissioned. Mastercard Card on File Token users should note that this token type remains available for use but can be requested and maintained only through an API available to participating token requestors as part of the token services implementation. Contact Mastercard for more information.

Effective October 2017, Visa introduced a Dynamic Token Verification Value (DTVV) for merchants that process tokenized e-commerce transactions. The DTVV is a 3-digit value that is generated by Visa Checkout, and merchants will populate this value in existing [G3v007](#) (CVC2 Verification Code). When DTVV is submitted, merchants should expect Visa to send the DTVV Verification Result Code in existing [G3v007](#) (Verification Code Result).

The new authentication option was introduced using two existing fields, a DTVV in [G3v007](#) (CVC2 Verification Code) and Dynamic Expiration Date in Group 1 (Customer Data Field, Manually Entered Expiration Date), enabling the transaction to process as a traditional e-commerce payment. Merchants should expect to receive [G3v007](#) (Verification Code Result) any time the DVTT is submitted.

ID	Field Name	MC	V	D	AX
6.40	Card Brand Token Requestor ID	C	C	N/A	C
6.70.5	Dynamic Expiration Date	C	N/A	N/A	N/A
6.215	Dynamic Token Verification Value	C	C	N/A	N/A

ID	Field Name	MC	V	D	AX
6.38	Card Brand Token Assurance Level	O	C	M	N/A
6.39	Card Brand Token PAN Last 4 Digits	O	C	M	M
6.37	Card Brand Token Account Range Status	N/A	C	N/A	N/A

NOTE Transit merchants will see additional information in Group 3, Version 58 and 59 for Mastercard transactions in this scenario.

There are two usages for G3v062. Effective October 13, 2017, all new development and rewrites should use Usage 2.

Usage 1 - This Usage applies prior to October 13, 2017.

Table 5.118 Request message- card brand tokenization -Usage 1

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	062
	0, 11	NUM	6.40	Card Brand Token Requestor ID	
	1	ASCII	6.89	Field Separator	<FS>
				Reserved for future use	
	1	ASCII	6.89	Field Separator	<FS>
				Reserved for future use	
	1	ASCII	6.89	Field Separator	<FS>
				Reserved for future use	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.119 Response message - card brand tokenization - Usage 1

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	062
	0, 2	A/N	6.38	Card Brand Token Assurance Level	
	1	ASCII	6.89	Field Separator	<FS>
	0, 4	NUM	6.38	Card Brand Token PAN Last 4 Digits	
	1	ASCII	6.89	Field Separator	<FS>
	0,1	A/N	6.37	Card Brand Token Account Range Status	

5.2.59 Amex card acceptor name/location (G3v063)

This version is used in lieu of G3v030.

This data is required for the following:

- Oil Company Industry, including Customer Activated Terminal (CAT) transactions where more than one Service Establishment Number is used for each physical location. Only the Merchant ID Code and Postal Code Fields are required.
- Payment Service Providers (Aggregators) and OptBlue participants. All Fields are required.

It is recommended that this data be populated by all merchants in every American Express authorization request.

Table 5.123 Response message - Amex card acceptor name/location

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	063
	1	ASCII	6.95	Group Separator	<GS>

5.2.60 Mastercard Wallet Identifier (G3v064)

Table 5.124 Request message - Mastercard wallet identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	064
	3	AN	6.117	Mastercard Wallet Identifier	3 char fixed length
	1	ASCII	6.95	Group Separator	<GS>

Table 5.125 Response message - Mastercard wallet identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	064
	1	ASCII	6.95	Group Separator	<GS>

5.2.61 ISO Identifier (G3v065)

This group must be provided on all Mastercard transactions where the merchant has a relationship with an ISO.

Table 5.126 Request message - ISO identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	065
	11	NUM	6.100	ISO Identifier	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.127 Response message - ISO identifier

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	065
	1	ASCII	6.95	Group Separator	<GS>

5.2.62 Payment Facilitator (G3v066)

This group must be provided and all fields must be populated unless otherwise noted for all Mastercard, Discover and Visa credit transactions where the merchant has a relationship with a Payment Facilitator.

For Discover transactions, the Discover Payment Facilitator ID value is not included because it is retrieved by the software from the merchant's profile. Additionally, Discover does not have an identifier for the Sub-Merchant. All other fields are required.

For Visa Marketplaces, only the Payment Facilitator / Marketplace Identifier and Payment Facilitator Name*Sub-Merchant Name fields must be populated. Please refer to field descriptions for more information.

Table 5.128 Request message - payment facilitator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	066
	0, 11	NUM	6.145	Payment Facilitator/Marketplace Identifier	
	1	ASCII	6.89	Field Separator	<FS>
	4-25	AN	6.146	Payment Facilitator Name*Sub-Merchant Name	
	1	ASCII	6.89	Field Separator	<FS>
	0, 15	A/N	6.183	Sub-Merchant Identifier	
	1	ASCII	6.89	Field Separator	<FS>
	0, 1-13	AN	6.181	Sub-Merchant City	
	1	ASCII	6.89	Field Separator	<FS>
	0, 2	AN	6.185	Sub-Merchant State/Province Code	
	1	ASCII	6.89	Field Separator	<FS>
	0, 3	NUM	6.182	Sub-Merchant Country Code	
	1	ASCII	6.89	Field Separator	<FS>
	0, 5-9	AN	6.184	Sub-Merchant Postal Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.129 Response message - payment facilitator

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	066
	1	ASCII	6.95	Group Separator	<GS>

5.2.63 Authorization indicator (G3v067)

This Mastercard only group must be included on all Mastercard Authorization Request transactions. This value must not be included on zero-dollar card authentication requests.

Table 5.130 Request message - Authorization indicator (version 067)

Group	Length	Format	Reference	Content	Comments
III	Authorization Indicator				
	3	NUM	6.94	Group III Version Number	067
	1	A	6.26	Authorization Indicator	
	1	ASCII	6.95	Group Separator	<GS>

Version 067 is only valid for Mastercard

Table 5.131 Response message - Authorization indicator (version 067)

Group	Length	Format	Reference	Content	Comments
III	Authorization Indicator				
	3	NUM	6.94	Group III Version Number	067
	1	ASCII	6.95	Group Separator	<GS>

5.2.64 Fraud enhanced data (G3v068)

This Discover only group indicates whether the cardholder is a registered user on a merchant's website. Merchants must populate these values in Discover Authorization Request/0100 messages for e-Commerce transactions. It may also be populated in some cases for merchants that cannot properly report e-commerce transactions.

Table 5.132 Request message - Fraud enhanced data (version 068)

Group	Length	Format	Reference	Content	Comments
III	Fraud Enhanced Data				
	3	NUM	6.94	Group III Version Number	068
	1	A/N	6.159	Registered User Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	8	NUM	6.160	Registered User Last Profile Date Change	Format: DDMMYY YY
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Version 068 is only valid for Discover

Table 5.133 Response message - Fraud enhanced data (version 068)

Group	Length	Format	Reference	Content	Comments
III	Fraud Enhanced Data				
	3	NUM	6.94	Group III Version Number	068
	1	ASCII	6.95	Group Separator	<GS>

5.2.65 Lane ID (G3v069)

Table 5.134 Request message - Lane ID (version 069)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	069
	8	NUM	6.109	Lane ID	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.135 Response message - Lane ID (version 069)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	069
	1	ASCII	6.95	Group Separator	<GS>

5.2.66 Payment Specific Data (G3v070)

Table 5.136 Request message - Payment Specific Data (version 070)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	070
	0-35	A/N	6.144	Payment Account Reference	
	1	ASCII	6.89	Field Separator	<FS>
	0-35	A/N	6.142	PAN Reference Identifier	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.137 Response message - Payment Specific Data (version 070)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	070
	0-35	A/N	6.144	Payment Account Reference	
	1	ASCII	6.89	Field Separator	<FS>
	0-35	A/N	6.142	PAN Reference Identifier	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.67 POS Environment Indicator (G3v071)

Table 5.138 Request message - POS Environment Indicator (version 071)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	071
	1	A/N	6.152	POS Environment Indicator	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.139 Response message - POS Environment Indicator (version 071)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	071
	1	ASCII	6.95	Group Separator	<GS>

5.2.68 Electronic Commerce Security Level Indicator (G3v072)

Table 5.140 Request message - Electronic Commerce Security Level Indicator (version 072)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	072
	0, 3	A/N	6.77	Electronic Commerce Security Level Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.141 Response message - Electronic Commerce Security Level Indicator (version 072)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	072
	0, 3	A/N	6.77	Electronic Commerce Security Level Indicator	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.69 Business Application Identifier (G3v073)

Table 5.142 Request message - Business Application Identifier (version 073)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	073
	2	NUM	6.34	Business Application Identifier	
	1	ASCII	6.95	Group Separator	<GS>

Table 5.147 Response message - Mastercard Service Parameters (version 075)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	075
	1	ASCII	6.95	Group Separator	<GS>

5.2.72 Card Brand MCC(G3v076)

This group applies to Format D (Credit, Credit Advice, and Reversals) only. Debits and Debit Related services are not allowed. If a merchant participates in the Card Brand MCC program, the MCC used during authorization is pulled from profile data and may not be the same as the value sent in by the Terminal. If the MCC used to populate the authorization request was taken from the profile, the new value is returned to the Point of Interaction (POI).

Table 5.148 Request message - Card Brand MCC (version 076)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	076
	1	ASCII	6.95	Group Separator	<GS>

Table 5.149 Response message - Card Brand MCC (version 076)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	076
	0, 4	NUM	6.120	Merchant Category Code	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.2.73 Extended POS Data(G3v077)

This Group is used to describe terminal conditions at the point of sale. Refer to the individual fields for further information. This group can be sent for any card brand but it will only be used for Discover and Mastercard transactions and will be ignored for other card brands.

Table 5.150 Request message - Extended POS Data (version 077)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	077
	0, 1	A/N	6.207	Transaction Status	
	1	ASCII	6.89	Field Separator	<FS>
	0, 1	A/N	6.1	Acceptance Device Type	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.151 Response message - Extended POS Data (version 077)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	077
	1	ASCII	6.95	Group Separator	<GS>

5.2.74 Authentication Data (G3v078)

This group is required if the merchant uses Mastercard Identity Check. It is used to associate a Mastercard Identity Check transaction to its subsequent authorization. After data is received from the EMV 3DS Mastercard Directory Server during authentication, it is placed in the below subfields for authorization. The data is also required for Capture/Settlement.

Refer to the individual fields for further information. This group can be sent for any card brand but it will only be used for Mastercard transactions and will be ignored for other card brands.

Table 5.152 Request message - Authentication Data (version 078)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	078
	1	A/N	6.154	Program Protocol	
	1	ASCII	6.89	Field Separator	<FS>
	0, 36	A/N/S	6.75	Directory Server Transaction ID	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.153 Response message - Authentication Data (version 078)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	078
	1	ASCII	6.95	Group Separator	<GS>

5.2.75 Gift card information (G3v200)

Table 5.154 Request message - Gift card information - request (version 200)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	200
	0-8	NUM	6.140	Operator / Clerk ID	
	1	ASCII	6.89	Field Separator	<FS>
	1	A/N	6.32	Bar Code Format	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

Table 5.155 Response message - Gift card information - request (version 200)

Group	Length	Format	Reference	Content	Comments
III	3	NUM	6.94	Group III Version Number	200
	0 or 12	NUM	6.31	Available Balance	
	1	ASCII	6.89	Field Separator	<FS>
	0 or 12	NUM	6.18	Amount Actually Used From Card	
	1	ASCII	6.89	Field Separator	<FS>
	1	ASCII	6.95	Group Separator	<GS>

5.3 General industry requirements

TSYS Acquiring Solutions' implementation of the "D" record format is intended to address the new and changing requirements associated with Visa's Custom Payment Services (CPS) and Mastercard's Merit Programs and would not be applicable for all global regions.

These programs generally provide enhanced charge back protection for participating merchants. Additionally, merchants could qualify to receive reduced interchange rates. As a participant in these incentive programs, merchants are required to either perform additional authentication procedures or provide additional industry specific information for reporting purposes. Please note that for all merchant industries, the support of "Repeat" transaction types is recommended but not required. Support of Private Label and Debit Card/EBT functionality is always optional.

The following provides information concerning general industry requirements.

5.3.1 General

This document defines this group as encompassing General Retail, Restaurant, Banking, and Passenger Transport as the message format requirements are generally the same for authorization. Please be aware that each of these industries require unique data capture settlement formats. Refer to [Chapter 6](#) for a representation of the required authorization request format.

5.3.2 Direct marketing

Direct marketing environments are classified as those environments where the card or cardholder are not physically present at the time of purchase. A merchant accepting credit card payments in a mail/telephone order environment would be an example. In order to qualify for the best possible transaction interchange rates, a merchant is required to perform an address verifications check to assist in determining the authenticity of a transaction request. Refer to [8.1.4](#) for a representation of the required authorization request formats for card not present transactions. Support of Authorization Reversal requests is required for participation in the interchange incentive programs.

5.3.3 Hotel and lodging

Refer to [8.1](#) and [8.1.4](#) for a representation of the required authorization request format. Support of Incremental and Authorization Reversal transactions is required.

5.3.4 Auto rental

Refer to [8.1](#) and [8.1.4](#) for a representation of the required authorization request format. Support of Incremental and Authorization Reversal transactions is required for participation in the interchange incentive programs. Please note that TSYS Acquiring Solutions does not currently support Visa and American Express Auto-Rental requirements.

5.3.5 Automated fueling

Transactions occurring at customer activated automated fueling systems need only perform a \$1.00 pre-authorization before fueling. The authorization code obtained is then valid for up to a \$50.00 dispersal of fuel. Fueling amounts in excess of \$50.00 should occur as “over-the-counter” transactions where the card can be physically presented. Please note that transactions occurring at an automated fuel dispenser must currently be settled separately from those occurring over-the-counter. Refer to [8.1.1.5](#) for a representation of the required authorization request format for automated fueling systems. Transactions occurring over-the-counter should utilize the general authorization format indicated in [8.1.1.1](#).

5.3.6 Direct debit

These transactions require the Track Two image of the card’s magnetic stripe and an encrypted cardholder Personal Identification Number (PIN). Refer to [8.1.2](#) for a representation of the required request format.

5.3.7 Electronic Benefits Transfer (EBT)

These transactions require either the Track Two image of the card’s magnetic stripe or a manually entered account number, an encrypted cardholder PIN, and an FCS ID for Food Stamp and Cash Benefit Purchases or the Serial Number of a Food Stamps Electronic Voucher. Please refer to [8.1.2](#) for a representation of the required request format.

Please note that the aforementioned conditions are subject to change.

5.3.8 Health care benefits

Healthcare/Transit Auto-Substantiation Transaction

If merchants do not support Partial Authorizations and the amount requested exceeds the available balance on the benefit account, the transaction will be declined.

5.3.9 Negative option billing merchant business model

A negative option billing merchant refers to a type of retailer that provides a sampling of goods or services at a free or reduced price to consumers. The merchant requires the consumer to provide payment card information in order to receive the sample and then, calling it a subscription, the merchant bills the consumer at a future date unless the consumer proactively cancels the subscription.

Mastercard has several rules regarding negative option billing merchants. Among them are these:

- MCC must be 5968 – Direct Marketing—Continuity/Subscription Merchants
- For e-commerce credit transactions, the Merchant Name ([6.36.1](#)) field must include the website URL where the cardholder requested the product.
- The phone number field used in capture/settlement must contain the merchant’s contact telephone number that is valid and accessible by all consumers worldwide.

Chapter 6

Field definitions

.....

This section describes the individual fields contained in the authorization request and response formats.

6.1 Acceptance device type

This Mastercard field identifies the type of device used by the merchant for accepting mPOS transactions.

Value	Description
0	Dedicated mPOS Terminal with PCI compliant dongle (with or without key pad)
1	Off the Shelf Mobile Device

The combinations below can be used to indicate the terminal capability (G3v027, Subfield 2) and the mPOS Acceptance Device Type.

mPOS Devices	PIN Entry Capability	NFC Capability	G3v027 Subfield 2	Acceptance Device Type
Phone / Tablet + Dongle with PIN Pad	Hardware	Dongle	1-PIN Entry Capability	0-Dedicated mPOS Terminal with PCI compliant dongle (with or without keypad)
Phone / Tablet + Dongle No PIN Pad	Software	Dongle	3-mPOS Software-based PIN Entry Capability	0-Dedicated mPOS Terminal with PCI compliant dongle (with or without keypad)
Phone / Tablet No Dongle	Software	Phone / Tablet	3-mPOS Software-based PIN Entry Capability	1-Off the Shelf Mobile Device
Phone / Tablet + Dongle No PIN Pad	Software	Phone / Tablet	3-mPOS Software-based PIN Entry Capability	1-Off the Shelf Mobile Device

6.2 Account data source code

This field contains a one-character code identifying the source of the customer data entered in field 4.1 (see [Table 5.5](#) for record format and version number).

Table 6.1 Account data source code

Code	Description
A	Bar code/Payment code read
D	Full magnetic stripe read and transmit, Track two
G	Chip Card Read Data (CCPS)
H	Full magnetic stripe read and transmit, Track one
P	Manually keyed, Chip Card read capable terminal
Q	Proximity payment device using track data rules (transmit only Track two to Sierra)
R	Proximity payment device using EMV-Chip data rules
S	Full magnetic stripe read (Track two only), Chip Card capable terminal
T	Manually keyed, Track two capable
X	Manually keyed, Track one capable
@	Manually keyed, terminal has no card reading capability
E-F, I-O	Reserved for Asia/Pacific Region
W	Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.
Z	Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure
U-V, Y, 1-9	Reserved for future use

NOTES: For Authorization Reversal transactions and AFD Completion advice transactions, this field must contain a value indicating the transaction was manually keyed.

If a dual Track reading terminal is being used, the correct value of D or H for the magnetic stripe data must be transmitted.

When data is manually keyed at a dual Track reading terminal, transmit either a T or an X.

6.3 Account type (from)

A two digit code identifying the account type affected by this transaction. For domestic account transfers, the account from which an account transfer is made.

Table 6.2 Account type (from)

Value	Description
00	Not Applicable
10	Savings Account
20	Checking Account
30	Credit Card Account
40	Universal

6.4 Account type (to)

For domestic account transfers, a two digit code identifying the account type to which an account transfer is made.

Table 6.3 Account type (to)

Value	Description
00	Not Applicable
10	Savings Account
20	Checking Account
30	Credit Card Account
40	Universal

6.5 Acquirer Bank Identification Number (BIN)

This field contains a six-character numeric Visa assigned Bank Identification Number (BIN) issued by the merchant's member bank or processor (see [Table 5.5](#) for record format and version number). The Acquirer BIN identifies the member bank that signed the merchant using the POS application. This field cannot be zero-filled.

This field should be configured as a parameter.

6.6 Acquirer transaction currency code

This is the local currency of the acquirer or source location of the transaction. It specifies the currency that is used in the transaction amount field.

6.7 Actual amount, cardholder billing

This field indicates the transaction amount in the issuer's currency. It is the amount billed to the Cardholder in the cardholder account currency. This field may be populated in partial reversal transactions.

6.8 Actual amount, settlement

This field contains the amount of the funds to be transferred between the issuer and acquirer. This field may be populated in partial reversal transactions.

6.9 Actual amount, transaction

This field contains the actual transaction amount in the acquirer's transaction currency. This field may be populated in partial reversal transactions.

6.10 Additional amount

This field contains any additional amounts related to the authorization request or response, including identifiers for account type, amount type, and currency code and whether the amount is a debit or credit. (See [Table 5.39](#) and [Table 5.40](#))

6.10.1 Additional amount - account type

Table 6.4 Additional amount - account type

Value	Description
00	Not specified
10	Savings
20	Checking
30	Credit Card
40	Universal
60	Stored Value Account
96	Cash Benefits Account (for use by Electronic Benefits Transfer transactions only)
98	Food Stamps Account (for use by Electronic Benefits Transfer transactions only)

6.10.2 Additional amount - amount type

Table 6.5 Additional amount - amount type

Value	Description
01	Deposit account; Ledger balance Credit card account; Open to buy
02	Deposit account; Available balance Credit card account; Credit limit
05	Amex Prepaid Card available amount remaining (Amex only)
10	Partial authorized amount
3S	Amount Co-payment
43	Total cumulative authorized amount for series of incremental authorization transactions (Visa and Discover only)
4S	Amount Healthcare (Visa and Mastercard authorization requests only)
4T	Amount Transit (Visa authorization request only)
4U	Amount Prescription/Rx (Visa and Mastercard authorization requests)
4V	Amount Vision/Optical (Visa authorization request only)
4W	Amount clinic/other qualified medical (Visa authorization request only)
4X	Amount Dental (Visa authorization request only)
57	Original Amount
80	Amount cash over (Discover only) In a request, this value indicates the requested cash over amount. In a response, this indicates the approved amount.
81	Original Amount Cash Over (Discover only) In a response, this value indicates the originally requested amount in situations with a partial approval.

NOTE A Discover Merchant Initiated Transactions [MIT] is any transaction that relates to a previous consumer-initiated transaction that originated from a digital wallet. The Additional amount - amount type field will contain the original transaction amount [value 57] for the following types of merchant initiated transactions: partial shipment, recurring, and reauthorization of full amount

6.10.3 Additional amount - currency code

This field contains a three-character numeric Currency Code identifying the currency for the returned additional amount.

6.10.4 Additional amount - sign

Table 6.6 Additional amount - sign

Value	Description
C	Positive balance
D	Negative balance

6.10.5 Additional amount

The 12-character numeric amount, left justified and zero filled.

6.11 Additional response data

This field contains additional data from a Discover/PayPal AFD authorization response message that must be used in a Discover/PayPal AFD completion advice message.

Example:

Original Discover/PayPal AFD authorization message

- Request: G3v057 is required, but contains no data
- Response: G3v057 is populated with data required for an AFD completion advice transaction

Advice Transaction

- Request: Echo back G3v057 data from the original authorization response
- Response: G3v057 is empty

Sub-field	Description
1	Response Source/Reason Code
2	Address Verification Result Code
3	Reserved
4	Reserved
5	CVV Results Code (requests and responses)
6	Reserved
7	Reserved
8	Card Authentication Results Code
9	Reserved
10	CVV2 Results Code

Address Verification Result Code	Authorization Response Message	Response Definition	Code Applies to		Card Brands
			Domestic	International	
G	Ver Unavailable	Issuer is not an AVS participant, or AVS data was present in the request but issuer did not return an AVS result, or Visa performs AVS on behalf of the issuer and there was no address record on file for this account.		X	V
I	Ver Unavailable	Address information not verified		X	V, D, PP, JCB
M	Exact Match	Street Address and postal code match		X	V
N	No Match	No match. Transaction contained Postal/ZIP code only, or street address only, or postal code and street address. Also used when transaction requests AVS but sends no AVS data.	X	X	V, MC, AX, D, PP, JCB
P	Zip Match	Postal Codes match; Postal code and street address were sent, but street address not verified due to incompatible formats.	X	X	V
R	Retry	Retry, system unable to process	X		V, MC, AX, D, PP, JCB
S	Serv Unavailable	Service not supported	X		MC, AX, D, PP, JCB
U	Ver Unavailable	No data from Issuer/Authorization platform	X		V, MC, AX, D, PP, JCB
W	Zip Match	Nine character postal code matches; address does not	X	X (MC)	MC, D, PP, JCB
X	Exact Match	Nine character postal code and address match	X	X (MC)	MC, D, PP, JCB
Y	Exact Match	Street address and postal code match	X		V, MC, AX, D, PP, JCB
Z	Zip Match	Postal code matches; street address does not match or street address not included in request.	X	X(V)	V, MC, AX, D, PP, JCB
1	APPROVAL	Cardholder name and ZIP match	X		AX
2	APPROVAL	Cardholder name, address, and ZIP match	X		AX

For Mastercard transit transactions, this field will contain the Primary Account Number (PAN).

6.16 American Express additional data

This field is optionally used specifically for American Express transactions, to hold additional data. Only one of these formats can be used at a time.

- The Internet Telephone Data (ITD) format has a minimum length of 71 bytes and a maximum of 262. This format is for merchants in mail, telephone, and internet order industries that submit Card Not Present data via Internet or Telephone.
- The Internet Airline Customer (IAC) format has a minimum length of 129 bytes and a maximum of 301. For these merchants, IAC subfields may contain travel specific information, including passenger name, departure date, travel origin and destination, routing cities, airline carriers, fare basis, number of passengers, and customer IP and email addresses. This is the recommended format for Airline Passenger Data.
- The Airline Passenger Data (APD) format has a minimum of 148 bytes and a maximum of 287. This is specific for airline industry merchants that submit Card Not Present APD. For these merchants, APD subfields may contain additional travel-specific information, including departure date, passenger and cardholder names, travel origin and destination, routing cities, airline carriers, fare basis, number of passengers, e-ticket indicator and reservation code. **Effective April 2018, the APD format should not be used for new development.**
- The Card Present - Goods Sold format has a specific length of 16 bytes. This format is for Card Present information identifying the product being purchased, which at this time is only Gift Cards.

Within the airline industry, the IAC format is recommended over the APD format, as it is more comprehensive. The APD format should NOT be used for new development. It is retained only for merchants, processors, and vendor software currently sending data in this format.

6.16.1 AMEX card not present internet telephone data (ITD)

This format can be used for Merchants in mail, telephone, and internet order industries that submit Card Not Present Internet Telephone Data (ITD). For merchants using this format, ITD subfields may contain source data, including the Cardmember's web and email addresses, host computer name, HTTP browser, product SKU (Stock Keeping Unit) inventory reference number, shipping method, and country to which the product will be shipped. This format has a minimum length of 71 bytes and a maximum of 262.

NOTE There is no field separator after each field as in other groups. The field separator and group separator come at the end of the entire chunk of data. Please refer to Section [5.2.24](#) for more information.

Table 6.8 Card not present (mail, telephone, and internet order) ITD format

Length	Format	Reference	Field Description	Content
2	A/N	Constant Literal	Primary ID	Primary ID (Card Type Code) is constant literal "AX" (American Express)

Length	Format	Reference	Field Description	Content
3	A/N		Secondary ID	ITD = Internet Telephone Data
3	A/N	Constant Literal	Customer Email ID	Customer EMail ID is constant "CE~" (Customer EMail) Note: ~ = character space
2	NUM		Variable Length Indicator (CE VLI)	
1-60	A/N & special characters		Customer Email	Example: CFFROST@EMAILADDRESS.COM
3	A/N	Constant Literal	Customer Hostname ID	Customer Hostname ID is constant "CH~" (Customer Hostname) Note: ~ = character space
2	NUM		Variable Length Indicator (CH VLI)	
1-60	A/N & special characters		Customer Hostname	Example: PHX.QW.AOL.COM
3	A/N	Constant Literal	HTTP Browser Type ID	HTTP Browser Type ID is constant "HBT" (HTTP Browser Type)
2	NUM		Variable Length Indicator (HBT VLI)	
1-60	A/N & special characters		HTTP Browser Type	Example: MSIE~5.0;~ Note: ~ = character space
3	A/N	Constant Literal	Ship To Country ID	Ship To Country ID is constant "STC" (Ship To Country)
2	NUM		Variable Length Indicator (STC VLI)	This value must be "03".
3	A/N		Ship To Country	
3	A/N	Constant Literal	Shipping Method ID	Shipping Method ID is constant "SM~" (Shipping Method) Note: ~ = character space
2	NUM		Variable Length Indicator (SM VLI)	This value must be "02".
2	A/N		Shipping Method	

Length	Format	Reference	Field Description	Content
3	A/N	Constant Literal	Merchant Product SKU ID	Merchant Product SKU ID is constant “MPS” (Merchant Product SKU)
2	NUM		Variable Length indicator (MPS VLI)	
1-15	A/N		Merchant Product SKU	Example: TKDC315U
15	A/N & special characters		Customer IP	Format: nnn.nnn.nnn.nnn
10	A/N & special characters		Customer ANI	Example: 6025551212
2	A/N		Customer II Digits	Example: 00

Card not present (mail, telephone, and internet order) ITD example

The example below corresponds to [Table 6.8](#) and illustrates a field entry for mail-, telephone- and Internet-order merchants that submit Card Not Present data (Data Type Code “ITD”).

```

      1      2      3      4      5      6
12345678901234567890123456789012345678901234567890
AXITDCE~24CFFROST@EMAILADDRESS.COMCH~14PHX.QW.AOL.COMHBT46MO

      1      1      1
6      7      8      9      0      1      2
12345678901234567890123456789012345678901234567890
ZILLA/4.0~(COMPATIBLE;~MSIE~5.0;~WINDOWS~95)STC03840SM~02

      1      1      1      1      1
      2      3      4      5      6
123456789012345678901234567890123456789012
02MPS08TKDC315U127.142.005.056602555121200

```

In the example above, tilde (~) characters represent character spaces.

This example represents data for multiple scenarios of a Card Not Present transaction. A typical transaction will probably not include all subfields (e.g., an Internet-order would not include Customer ANI and Customer II Digits, and a phone-order would not include Customer Hostname or Customer IP).

6.16.2 AMEX Internet Airline Customer (IAC) Data

The Internet Airline Customer (IAC) format has a minimum length of 132 bytes and a maximum of 304. Within the airline industry, the IAC format is recommended over the APD format, as it is more comprehensive.

NOTE There is no field separator after each field as in other groups. The field separator and group separator come at the end of the entire chunk of data. Please refer to Section [5.2.24](#) for more information.

Table 6.9 Internet Airline Customer (IAC) data

Length	Format	Reference	Field Description	Content
2	A/N	Constant Literal	Primary ID	Primary ID (Card Type Code) is constant literal "AX" (American Express)
3	A/N		Secondary ID	IAC = Internet Airline Customer
8	NUM		Departure Date	CCYYMMDD
3	A/N	Constant Literal	Airline Passenger Name ID	Airline Passenger Name ID is Constant Literal "APN" (Airline Passenger Name)
2	NUM		Variable Length Indicator (APN VLI)	
23-40	A/N & special characters		Passenger Name	Example: FROST~JANE~M~MRS~~~~~ ~~~~ Note: ~ = character space
5	A/N & special characters		Origin Airport	Example: ABC~~ Note: ~ = character space
5	A/N & special characters		Destination Airport	Example: XYZ~~ Note: ~ = character space
3	A/N	Constant Literal	Routing ID	Routing ID is Constant Literal "RTG" (Routing)
2	NUM		Variable Length Indicator (RTG VLI)	
2	NUM		Number of Cities	10 max
11-59	A/N & virgule (/)		Routing Cities	Example: ABC~~/DEF~~ Note: ~ = character space
3	A/N	Constant Literal	Airline Carriers ID	Airline Carriers ID is Constant Literal "ALC" (Airline Carrier)

Length	Format	Reference	Field Description	Content
23-40	A/N		Cardmember Name	Example: FROST~JANE~M~MRS~~~~~ Note: ~ = character space
5	A/N & special characters		Origin Airport	Example: ABC~~ Note: ~ = character space
5	A/N & special characters		Destination Airport	Example: XYZ~~ Note: ~ = character space
3	A/N	Constant Literal	Routing ID	Routing ID is Constant Literal "RTG" (Routing)
2	NUM		Variable Length Indicator (RTG VLI)	
2	NUM		Number of Cities	10 max
11-59	A/N		Routing Cities	Example: ABC~~/DEF~~ Note: ~ = character space
3	A/N	Constant Literal	Airline Carriers ID	Airline Carriers ID is constant literal "ALC" (Airline Carrier)
2	NUM		Variable Length Indicator (ALC VLI)	
2	NUM		Number of Airline Carriers	09 max
5-53	A/N		Airline Carriers	Example: AB~~~/XY~~~ Note: ~ = character space
24	A/N		Fare Basis	Example: ABC123DEF456GHI789JKL012
3	NUM		Number of Passengers	Example: 001
1	A/N & special characters		E-Ticket Indicator	E = E-Ticket
3	A/N	Constant Literal	Reservation Code ID	Reservation Code ID is the Constant Literal "RES" (Reservation Code)
2	NUM		Variable Length Indicator (RES VLI)	

Length	Format	Reference	Field Description	Content
6-15	A/N		Reservation Code	Example: ABCDE1234567890

Card Not Present - Airline Passenger Data (APD) Example

The following example corresponds to the APD Position Format Table on the preceding pages, and illustrates a data field entry for airline industry Merchants that submit Airline Passenger Data (Data Type Code "APD").

In the example below, tilde (~) = character spaces. The example contains 253 bytes.

1	2	3	4	5	6
12345678901234567890123456789012345678901234567890					
AXAPD20030101APN23FROST~JANE~M~MRS~~~~~CN~23FROST~CHARLES~					

			1	1	1
7	8	9	0	1	2
12345678901234567890123456789012345678901234567890					
F~MR~~~~ABC~~XYZ~~RTG6110ABC~~/DEF~~/GHI~~/JKL~~/MNO~~/PQR~					

1	1	1	1	1	1	1
2	3	4	5	6	7	8
12345678901234567890123456789012345678901234567890						
~/STU~~/VWX~~/YZA~~/XYZ~~ALC5509AB~~~/XY~~~/BC~~~/CD~~~/DE~~						

1	1	2	2	2	2	2
8	9	0	1	2	3	4
12345678901234567890123456789012345678901234567890						
~/DE~~~/CD~~~/BC~~~/AB~~ABC123DEF456GHI789JKL012001ERES15AB						

2	2
4	5
1234567890123	
CDE1234567890	

6.16.4 Card present Goods Sold Data

This format can be used to identify merchandise such as gift cards, computers, and other electronics that can be resold for cash. This format is used only during Card Present transactions. The Goods Sold value will be evaluated as part of the real-time Authorization process. The merchants will pass Goods Sold data according to the format. This format has a specific length of 16 bytes.

There is no field separator after each field as in other groups. The field separator and group separator come at the end of the entire chunk of data. Please refer to Section [5.2.24](#) for more information.

Table 6.11 Goods Sold Data format

Length	Format	Reference	Field Description	Content
2	A/N	Constant Literal	Primary ID	Primary ID (Card Type Code) is constant literal “AX” (American Express)
3	A/N		Secondary ID	CPD = Card Present Data
2	NUM	Constant Literal	Version Number	Card Present - Goods Sold data version is currently constant literal "01" (Version 1)
3	A/N	Constant Literal	Goods Sold ID	Goods Sold Code is constant literal "GS~" (Goods Sold) Note: ~ = character spaces.
2	NUM		Variable Length Indicator (GS VLI)	
4	A/N		Goods Sold Indicator	1000 = Gift Card

Card Present - Goods Sold Example

The example below corresponds to the Goods Sold Format Table on the preceding pages, and illustrates a data field entry for Goods Sold merchants that submit Card Present Gift Card data.

1
1234567890123456
AXCPD01GS~041000

In the example above, tilde (\sim) characters represent character spaces.

6.16.5 American Express Additional Data Related Fields

This section contains data field definitions for the fields contained in the formats described above for:

- AMEX card not present internet telephone data (ITD) [6.16.1](#)
- AMEX Internet Airline Customer (IAC) Data [6.16.2](#)
- AMEX Airline Passenger Data (APD) [6.16.3](#)
- Card present Goods Sold Data [6.16.4](#)

Airline Carriers

This field contains the Airline Carrier Code for each leg on the ticket (including Origin Airport and Destination Airport) in five-byte segments with a virgule (/) separator.

Example: (Note: \sim = character space)

AB~~~/XY~~~/BC~~~/CD~~~/DE~~~/DE~~~/ CD~~~/BC~~~/AB~~~

NOTE Each leg must have an Airline Carrier Code entry, even if multiple (or all) legs are on the same Airline.

Cardmember Name

This field represents the Amex Cardmember Name in the following format:

SURNAME~ FIRSTNAME~MIDDLEINITIAL~ TITLE

Use a character space as a sub-element separator. Variable data must be as follows:

- 23 bytes minimum
- 40 bytes maximum
- Space fill as necessary
- Truncate at 40 bytes, if necessary.

Example: FROST~CHARLES~F~MR~~~~~ (Note: ~ = character space)

Customer ANI

This field contains the Automatic Number Identification (ANI) specified phone number that the customer used to place the order with the merchant.

Example: 6025551212

Customer Email

This field contains the Customer's email address.

Example: CFFROST@EMAILADDRESS.COM

Customer Hostname

This field contains the name of the server to which the customer is connected.

Example: PHX.QWAOL.COM

Customer II Digits

This field contains Automatic Number Identification (ANI) Information Identifier (II) coding digits (telephone company-provided) associated with the CUSTOMER ANI phone number that corresponds to the call type; e.g., cellular, government institution, etc.

Example: 00

Customer IP

This field contains the customer's Internet IP address, left justified and character space filled as necessary, to 15 bytes. The format is nnn.nnn.nnn.nnn.

HTTP Browser Type

This field contains the customer's HTTP browser type.

Example: MOZILLA/4.0~(COMPATIBLE;~MSIE~5.0;~WINDOWS~9 (**Note:** ~ = character space)

Merchant Product SKU

This field contains the unique SKU (Stock Keeping Unit) inventory reference number of the product associated with this authorization request. For multiple items, enter the SKU for the single, most expensive item.

Example: TKDC315U

Number of Airline Carriers

This field contains the Number of Airline Carriers entered in the Amex Airline Carriers subfield (9 maximum).

Example: 09

Number of Cities

This field indicates the number of Airports or Cities on the airline ticket (10 maximum).

Number of Passengers

This field contains the number of passengers in the party.

Example: 001

Origin Airport

This field contains the first segment of the travel origination airport.

Note that the five-byte code sequence allows for anticipated expansion of the current three character airport code. If necessary, left justify codes and character space fill each code sequence to five bytes.

Example: ABC~~ (**Note:** ~ = character space)

Passenger Name

This field contains the Passenger Name in format:

SURNAME~ FIRSTNAME~MIDDLEINITIAL~ TITLE

Use character space as a sub-element separator. Variable data must be 23 bytes minimum, space filled as necessary, with 40 bytes maximum. Truncate at 40 bytes, if necessary.

Example: FROST~JANE~M~MRS~~~~~ (**Note:** ~ = character space)

This field contains the Reservation Code, a precursor to a ticket number, and corresponds to an airline ticket purchase reservation made by an airline or Global Distribution System (GDS).

Routing Cities

This field represents the Routing Airport or City Codes for each leg on the ticket (including ORIGIN and DEST) in five-byte segments with a virgule (/) separator.

Example:

ABC~~/DEF~~/GHI~~/JKL~~/MNO~~/PQR~~/STU~~/VWX~~/YZA~~/XYZ~~ (Note: ~ = character space)

This field contains the Secondary ID for Amex Airline Data. Valid Secondary ID types include:

- APD = Airline Passenger Data
- CPD = Card Present Data
- IAC = Internet Airline Customer
- ITD = Internet Telephone Data for Mail, Telephone, and Internet Order Industries

This field represents the three byte numeric country code.

Example for USA: 840

This field contains a two-byte shipment-type code representing the shipping method.

01 - Same Day

02 - Overnight / Next Day

03 - Priority, 2-3 days

04 - Ground, 4 or more days

05 - Electronic Delivery

06 - Ship to Store

07-ZZ - Reserved for future use

Variable Length Indicator (VLI)

This field indicates the length of one of the following values:

- The ALC VLI indicates the combined length of the AMEX NUMBER OF AIRLINE CARRIERS and AMEX AIRLINE CARRIERS variable data (not including ALC ID or VLI).
- The APN VLI indicates the length of the AMEX AIRLINE PASSENGER NAME variable data (not including APN ID or VLI).
- The CE VLI indicates the length of the AMEX CUSTOMER EMAIL variable data (not including CE ID or VLI).
- The CH VLI indicates the length of the AMEX CUSTOMER HOSTNAME variable data (not including CH ID or VLI).
- The CN VLI indicates the length of the CARDMEMBER NAME variable data (Not including CN ID or VLI).
- The GS VLI indicates the length of the GOODS SOLD variable data (not including GS ID or VLI).
- The HBT VLI indicates the length of the AMEX HTTP BROWSER TYPE variable data (not including HBT ID or VLI).
- The MPS VLI indicates the length of the AMEX MERCHANT PRODUCT SKU variable data (not including MPS ID or VLI).
- The RES VLI indicates the length of the Reservation Code variable data (not including RES ID or VLI).
- The RTG VLI indicates the combined length of the AMEX NUMBER OF CITIES and AMEX ROUTING CITIES variable data (not including RTG ID or VLI).
- The SM VLI indicates the length of the AMEX SHIPPING METHOD variable data (not including SM ID or VLI). This value must be "02".
- The STC VLI indicates the length of the SHIP TO COUNTRY variable data. This value must be "03".

6.17 Amex merchant name/location data

This field supports oil company cardholder activated terminal (CAT) and aggregator merchant location data for AMEX transactions only. Details are shown here.

For Oil Company CATs the name/location data will have the format:

`S#sssssssss\\ppppp~~~~\\`

S# is a field use indicator.

sssssssss is a variable length (12 bytes max), merchant assigned Station Location Code.

\\ is 3 delimiters

ppppp~~~~ is the postal code, left justified space filled to 10 characters.

American Express does not offer a breakdown of the cryptogram detail.

6.18.2 Usage

SafeKey: The SafeKey Cardholder Verification Value (CAVV) is a cryptographic value derived by the Issuer during the Amex SafeKey payment authentication that can provide evidence of the results of payment authentication during an online purchase. It is sent in the CAVV Field of G3v017 ([5.2.13](#)). In this case, a valid value should be sent in G3v014 ([5.2.11](#)), MOTO/e-Commerce Indicator. If the XID is present, it must be included in the XID Field in G3v017 ([5.2.13](#)).

Tokens: Token Data Block A, which contains bytes 1-20 of the cryptographic value is required. Token Data Block B is optionally present when Token Data Block A is used. These values are sent in G3v017 ([5.2.13](#)).

6.19 Amount actually used from card

The Amount Actually Used from Card represents the actual approved transaction amount when a transaction request is received from a client using the Purchase for Remaining Balance support option (this option is designated on the gift card system and is not requested in the online authorization request). The Amount Actually Used from Card in a Purchase for Remaining Balance amount will be the amount of the transaction amount that was actually covered by the remaining balance on the card when the requested authorization amount exceeds the available card balance (see [Table 5.106](#) for record format and version number).

For example, a card may have an available balance of \$7.50 and the cardholder does not know their Available Balance. Rather than submit a Balance Inquiry followed by a Purchase/Redemption Request, the retailer can use the Purchase for Remaining Balance transaction option. If a purchase for \$10.00 is attempted on the card with \$7.50 balance, the system will respond with an approval and the Amount Actually Used From Card field will represent the approved amount of \$7.50. In this case, the response code will also be 00 (Approval). The merchant must tender the difference between the requested amount and the approved amount (amount actually used) using another form of payment. If the transaction is fully covered by the balance remaining on the gift card (i.e., Card Balance is greater than the requested Purchase/Redemption) Amount then this field will be zero.

6.20 Application ID

The Application ID provides a unique value to identify the software application (see [Table 5.35](#) for record format and version number). This identifier is assigned by TSYS Acquiring Solutions during certification.

6.21 Application interchange profile

This fixed length, 4-character numeric field might be carried in EMV transactions and provides a series of indicators that reflect the specific functions supported by the chip card account, for example, whether cardholder verification is supported.

6.22 Application transaction counter (ATC)

This field contains a counter maintained by the application resident in the integrated chip card and is used to identify each transaction conducted by the chip card (see [Table 5.19](#) for record format and version number). This is a four-character field supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of Binary to ASCII data.

6.23 Application type

The TSYS Acquiring Solutions authorization system supports a number of communication interface applications (see [Table 5.5](#), [Table 5.4](#) for record formats and version numbers). These applications include:

- Single Transaction: a half-duplex, single-threaded interface option where only one authorization is performed per host connection.
- Multi-Transaction: a half-duplex, single-threaded interface option where multiple authorizations can be performed per host connection.
- Interleaved: A full-duplex multi-threaded interface option where multiple transactions are performed per host connection.

Refer to the EIS 1051 (Authorization Link Level Protocol) specification for additional information on these communication applications.

Table 6.12 Application type

Application	Description
0	Single authorization per connection (“Single-Trans.”)
2	Multiple authorizations per connection, single-threaded (“Multi- Trans.”)
4	Multiple authorizations per connection, full-duplex (“Interleaved”)
1, 3, 5, and 6	Reserved for TSYs Acquiring Solutions Central Data Capture (CDC)
9	Reserved
7, 8, A-Z	Reserved for future use

6.24 Approval code

This six-character field contains an authorization code when a transaction has been approved (see [Table 5.23](#), [Table 5.6](#) for record formats and version numbers). If the Response Code ([Response code](#)) returned indicates that the transaction is not approved, then the contents of the field should be ignored. The approval code must be stored and submitted in the settlement data capture record.

The last position of the Approval Code will contain the Card Product Value for Mastercard, and Discover only.

Effective October 12, 2012, the Card Product Value in the sixth position of the approval code will no longer be supported by Visa.

For Discover approved transactions on prepaid cards, the approval code will contain the available balance on the prepaid card.

Mastercard supports card product identification at the card-level for U.S. Consumers Credit products.

Table 6.13 Card product values in sixth position of approval code for Mastercard transactions

Value	Account Type	Description
B	Mastercard Enhanced Value Platform	Enhanced (Consumer) Account qualifies for Mastercard Enhanced Value Platform only
C	Core Value Small Business (MCB, MEB, and MPC)	Account qualifies for Mastercard Core Value Small Business
D	Core Value Small Business (MCB, MEB, and MPC) and Product Graduation	Account qualifies for Mastercard Core Value Small Business and Mastercard Product Graduation
E	Business World (MWB)	Account qualifies for Mastercard Small Business
F	Business World (MWB) and Product Graduation	Account qualifies for Mastercard Small Business and Mastercard Product Graduation
G	Business World Elite (MAB)	Account qualifies for Mastercard Small Business
H	Business World Elite (MAB) and Product Graduation	Account qualifies for Mastercard Small Business and Mastercard Product Graduation
J	N/A	Account qualifies for Mastercard Small Business
K	N/A	Account qualifies for Mastercard Small Business and Mastercard Product Graduation

Value	Card Product	Description
E	Commercial Credit Card	Commercial Executive Business Credit Card
Z	Unspecified Card Product	NA

6.25 Association timestamp

The Association timestamp version supports a specific date/time and other data elements provided by the association for message matching. Currently only valid on Mastercard AFD credit advice messages.

6.26 Authorization indicator

This field defines the type of authorization indicator. The value must be included on all Mastercard Authorization Request transactions. The value must not be included on zero-dollar (transaction type 58) card authentication requests. Please refer to G3v067 ([5.2.63](#)).

Table 6.16 Authorization indicator

Code	Description	Description
P	Pre-Authorization	This indicator is used when the transaction is a request for an estimated amount.
F	Final Authorization	This indicator is used when the transaction is not an estimated amount.
U	Undefined Authorization	This indicator may be used when the intent is unknown, and the transaction is neither a pre-authorization, nor a final authorization

6.27 Authorization request cryptogram (ARQC)

This field contains the Authorization Request Cryptogram (ARQC) received from the integrated chip card (see [Section 5.2.51](#)). This is a 16-character field in ASCII-coded binary format. Refer to [7.8](#) for instructions on converting binary to ASCII characters.

6.28 Authorization response cryptogram (ARPC)

This field contains the Authorization Response Cryptogram (ARPC) received from the issuer and returned to the chip card during online authorization (see [Section 5.2.51](#)). This is a 16-character field in ASCII-coded binary format. Refer to [7.8](#) for instructions on converting binary to ASCII characters.

6.29 Authorization response text

This field contains a 16-character response or display text message (see [Table 5.6](#) for record format and version number). This message can be used by the terminal to display the authorization result. The display text must not be used to determine the nature of a response

message. TSYS Acquiring Solutions translates the responses according to the Language Indicator submitted in the authorization request message. [Table 6.164](#) provides the (U.S.) English message summary.

6.30 Authorization source code

Table 6.17 Authorization source code

6.31 Available balance

6.31.1 Available balance for Gift card only

Table 6.19 Card acceptor data

Sub-field	Byte	Format	Sub-field name	Section
NNNN...	1-25	A/N	Merchant Name	6.36.1
LL.....LL	26-38	A/N	Merchant City	6.36.2
SS	39-40	A/N	Merchant State/Province	6.36.3

6.36.1 Merchant name

This 25-character sub-field contains the merchant name provided by the signing member or processor. The name provided must correspond to the name printed on the customer receipt. The name must be left-justified and space-filled. The first character position cannot be a space. This field must contain the same data used in the data capture batch.

For preferred customer/passenger transport transactions, characters 1-12 of this field should contain the shortened name, left-justified and space-filled to 12. Characters 13-25 of this field should contain the ticket number, left-justified and space-filled to 25.

This field should be configured as a parameter.

Mastercard Negative Option Billing Merchants:

For negative option billing merchants ([5.3.9](#)), this field must contain the website URL where the cardholder requested the product.

6.36.2 Merchant city

This 13-character sub-field contains the merchant location/city name provided by the signing member or processor. The name provided must correspond to the location/city name printed on the customer receipt. The name is left justified and space-filled. The first character position cannot be a space. This field must contain the same data used in the data capture batch.

For Direct Marketing merchants and preferred customer/passenger transport and card not present transactions, this field must contain a phone number for merchant customer service in format XXX-XXXXXXX. The dash is required. If the phone number is not available, use the website URL.

This field should be configured as a parameter.

6.36.3 Merchant state/province

This two-character subfield contains the merchant State/Province Code provided by the signing member or processor. The US and Canada require valid codes in the field. The same data should be used in the capture batch. Alpha characters must be supplied in upper case form.

This field should be configured as a parameter.

6.37 Card brand token account range status

This field contains a one-character value that indicates the Visa regulatory status of the actual card number for which the token represents. Valid values are shown below.

Table 6.20 Account status

Code	Description
space	Blank/no value
R	Regulated
N	Non-Regulated

6.38 Card brand token assurance level

Defined by the token service provider, this Visa, Discover, or Mastercard value indicates the assigned confidence level of the token-to-PAN/cardholder binding.

6.39 Card brand token PAN last 4 digits

This field contains 4 characters that represent the last 4 digits of the actual cardholder PAN. This can be used to print on the paper receipt for cardholder reference.

6.40 Card brand token requestor ID

This field contains eleven digits that uniquely identify the pairing of token requestor with the token domain. It is assigned by the token service provider and is unique within the token vault. If present, it should be included in the authorization request.

The Card Brand Token Requestor ID must be included in a reversal message if it was present in the original transaction.

Refer to the EMVCo Payment Tokenization Specification - Technical Framework specification for additional information.

6.41 Card product code

This field contains a two-character code created by Visa during the authorization process.

This field is conditional in the response record. It will only be returned if the values are non-zero. (see [Appendix B](#) Card product code table)

6.42 Card sequence number

This three-character numeric field contains a counter maintained and supplied by the integrated chip card (see [Table 5.19](#) for record format and version number). This field identifies the card when multiple chip cards are associated with a single account number. See EMV specifications for additional details.

6.43 Card type

The variable length 1-20 character field indicates the type of card sent in the authorization request.

Table 6.21 Valid values for card type

Possible values
Visa
Mastercard
Amex
Discover
PayPal
JCB
Private Label
Gift Card
Debit
EBT

6.44 Card verification results

This eight-character field contains a code used to identify exception conditions detected by the chip card (see [Table 5.19](#) for record format and version number). This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.45 Cardholder billing amount

This is the transaction amount in the issuer's currency. It is the amount that is billed to the cardholder in the cardholder account currency exclusive of cardholder billing fees.

6.46 Cardholder billing conversion rate

This is the factor used in the conversion from transaction to cardholder billing amount. The leftmost digit must be in the range 0-7 and denotes the number of positions that the decimal point will be moved from the right. For example, a value of “69972522,” the conversion rate is 9.972522.

The transaction amount is multiplied by the value in this field to determine the cardholder billing amount.

6.47 Cardholder billing currency code

This field defines the currency of the cardholder billing amount and the cardholder billing fee amount. This field is provided whenever the cardholder billing amount is present.

6.48 Cardholder certificate serial number

This zero to 32-character field was used to submit a SET cardholder certificate issued by the Issuer's certificate authority (see [Table 5.17](#) for record format and version number).

6.49 Cardholder identification code

This one-character field contains a code that specifies the method used to verify the identity the cardholder (see [Table 5.5](#) for record format and version number). The values can be used in conjunction with AVS and Recurring and Installment Requested ACI Indicators.

Table 6.22 Cardholder identification code

ID Code	Identification Method
A	Personal Identification Number - 23-character static key (non-USA)
B	PIN at Automated Dispensing Machine - 32-character static key
C	Self-Service Limited Amount Terminal (No ID method available)
D	Self-Service Terminal (No ID method available)
E	Customer Activated Automated Fuel Dispenser (No ID method available)
F	PIN Authentication by ICC (Offline PIN authentication for debit and credit chip card transactions) If F is sent then Cardholder Identification Data does not need to be sent in the transaction; Also used for CDCVM/On device CVM

Length	Description	Value(s) from Table 6.22
0-29	Signature ID used, no PIN pad present, AVS data may be optionally provided	@
0-29	Signature ID used on a terminal with a PIN pad, AVS data may be optionally provided	Z
0-29		C, D, E
0	Signature ID used on a terminal with a PIN pad	Z
0	No ID method used	C, D, E
23	A PIN was entered on a STATIC key PIN pad	A
32	A PIN was entered on a STATIC key PIN pad	B or S
32, 42	A PIN was entered on a DUK/PT key PIN pad	J or K
1 - 29	Address verification was requested (Retail/Unable to read Magnetic Stripe)	M
1 - 29	Address verification was requested	N

6.50.1 Static key with twenty-three byte cardholder ID

The 32-character static key technology is NOT supported.

6.50.2 Static key with thirty-two byte cardholder ID

NOTE: The 32-character static key technology is NOT supported.

6.50.3 DUK/PT key with thirty-two byte cardholder ID

When a PIN is entered on a PIN pad supporting DUK/PT (Derived Unique Key/Per Transaction) methodology, the terminal forwards the following characters as provided by the PIN pad. TSYS Acquiring Solutions-certified PIN Pads use the first 32 characters.

Format 1: (standard usage: used by most applications)

aaaaaaaaaaaaakkkkkkkkkkkkkkkkkkkkk

Format 2: (remains only for backwards compatibility)

aaaaaaaaaaaaakkkkkkkkkkkkkkkkkkkkkssssssssss

Where:

aaaaaaaaaaaaaa is the encrypted pin block (16 chars of hex data)

kkkkkkkkkkkkkkkk is the KSN. KSN is the lower (right hand side) 16 chars of the full KSN(20 digits). The unsent upper 4 digits of the KSN is assumed to be FFFF. The breakdown of the sent KSN is not as relevant, but it is comprised of three parts: first 6 chars (24 bits) is the KSI, the next roughly 5 chars (19 bits) is the DID (TRSM-ID), and the last roughly 5 chars (21 bits) is the transaction counter.

The remaining 10 digits were used in the past and remain here for backwards compatibility. Normally, these digits are not used.

6.50.4 Address verification data

Address verification is allowed in two instances to assist in authentication of the cardholder.

- When the card is not physically present.
- In a Retail environment that is capable of reading a magnetic stripe, but the stripe is unreadable.
- AVS data should not be sent in manually generated reversal messages.

Address verification is currently supported for Visa, Mastercard, American Express, and Discover cards. If address verification is requested on an American Express transaction, Group 3 Version 29 should be used. Group 3 Version 29 should also be used as a supplement for Discover Address Verification Service Enhancement.

When address verification is requested, the Account Data Source field ([Account data source code](#)) must indicate that the transaction was manually entered. When address verification is requested, this field contains the mailing address and ZIP Code of the cardholder's monthly statement. This field cannot exceed 29 characters in length, and the format for this field is:

<street address><apt no.><Space><Zip Code>

Or

<post office box number><Space><Zip Code>

If any of the address fields are not available or not applicable, they can be omitted. If available, the last five or nine digits, without embedded spaces, should be the ZIP Code. If the ZIP Code is sent along with an address, the zip code must always be preceded by a <Space>. In the address, numbers are not spelled out. "First Street" becomes "1ST Street," "Second" becomes "2ND," and so on.

There must be a <Space> between consecutive data elements that are only numeric.

For example:

1234 56th Street 40404 is equivalent to: 1234 56Street 40404

1391 ELM STREET 40404 is equivalent to: 1391ELMSTREET 40404

P.O. BOX 24356 55555 is not equivalent to: P.O.BOX2435655555

NOTE When AVS is requested on card present, unreadable magnetic stripe transactions, only the ZIP Code is required. In this case, no <Space> is required before the ZIP Code.

On Card Not Present, ZIP code only validation requests, the postal code may be sent with the appropriate space or without for Canadian and UK postal codes.

Examples:

Canadian postal code ANA NAN or ANANAN (no space)

UK Postal code AN NAA or ANNAA (no space)

UK Postal code AANN NAA or AANNNAA (no space)

UK Postal code AAN NAA or AANNAA (no space)

UK Postal code AANN NAA or AANNNAA (no space)

UK Postal code ANA NAA or ANANAA (no space)

UK Postal code AANA NAA or AANANAA (no space)

NOTE Terminals using Device Code 'Q' can receive a valid Address Verification Result Code with any authorization response code.

6.51 Cardholder verification method

This one character field is used by Mastercard in auth advice request/0120, reversal request/0400, and reversal advice/ 0420 transactions. Valid values are shown here. Please refer to G3v039 ([5.2.35](#)).

Value	Description
P	Online PIN Verification
S	Can signify: <ul style="list-style-type: none">• Signature• Offline PIN Verification (for chip transactions)• M-PIN for Mobile Device with PIN entry capability• No CVM used• Auto-fuel dispensing advice

6.52 Cardholder Verification Method (CVM) results

This field is optionally carried in Mastercard EMV transactions and indicates the results of the most recent CVM performed.

6.53 Cardholder verification results

For American Express (Amex) transactions, Amex will respond to an authorization request with verification results for cardholder identification data. This data is arranged in order of 5 bytes, one for each result of a cardholder identification data element, and 4 bytes reserved for future use. Bytes 1 - 5 will contain a result value for a cardholder data element. Bytes 6-9 will be spaced filled. Please refer to G3v048 (5.2.44).

Table 6.24 Ccrdbholder verification results

	Description	Possible values for each byte
Byte 1	Billing ZIP Code	Y=Data Matches
Byte 2	Billing Street Match Code	U=Data Unchecked
Byte 3	Billing Name Match Code	N=No Match
Byte 4	Telephone Number Match Code	S=Service not allowed
Byte 5	E-mail Address Match Code	R=Retry
Byte 6-9	Reserved	<i>Space</i> =Data not sent

For Discover transactions, only Byte 3 will be populated because Discover only sends a response for Cardholder First and Last Name match. Please refer to G3v048 ([5.2.44](#)). This service is available for Authorization Request/0100 or Authorization Advice/0120 transactions.

Table 6.25 Discover response values for cardholder name verification - Byte 3 ONLY

Code	Description
B	No response due to blank input
K	Unknown
P	Not processed
M	First Name and Last Name match
F	First Name Matches, Last Name does not match
L	First Name does not match, Last Name matches
N	Nothing matches
W	No data from Issuer/Authorization system
U	Retry, system unable to process

6.54 CAVV

This field usage is applicable for Visa 3-D Secure and contains the Cardholder Authentication Verification Value (CAVV) for 3-D Secure transactions. It applies to a CAVV Verification Service for a credit authorization request that is for full authentication; the XID ([Section 6.220](#)) must also be included. It is not returned in credit responses. It is not present in reversal requests. The CAVV is a cryptographic value calculated by the issuer's Access Control Server (ACS) using the issuer's encryption key and related elements according to Protocol 1.0.1. The CAVV value is unique to the cardholder and to the transaction that was authenticated. The endpoint transfers the ACS data to this field when preparing the request. Visa or the issuer verifies the CAVV to ensure that the issuer's ACS authenticated the cardholder for the transaction and that its contents have not been altered. Refer to [Section 7.8](#) for instructions on performing the necessary binary to ASCII data conversion.

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1	2	3	4	5
3-D Secure Authentication Results Code	Second Factor Authentication Code	CAVV Key Indicator	CAVV Value	CAVV Unpredictable Number
Byte 1	Byte 2	Byte 3	Bytes 4-5	Bytes 6-7

6.1	6.2	6.3
Card Sequence Number	Card Verification Results	Reserved
Byte 8-9	Byte 10-13	Byte 14-20

Table 6.26 CAVV, Position 1 values

Code	Description
0	Authentication successful (status Y)

Table 6.27 CAVV, Position 2 values

Code	Description
00	Not present
11	VSDC card used, cryptogram failed
12	VSCD card used, cryptogram passed

Position 3, CAVV Key Indicator: This 1-byte/1-BCD value is a 1-digit code indicating the CAVV key set used to calculate the CAVV value. A leading zero is required to pad the first unused half-byte of the CAVV Key Indicator. This value is determined by the V.I.P. key ID. The valid values are in [Table 6.28](#).

Table 6.28 CAVV, Position 3 values

Code	Description
01	CAVV key set 1
02	CAVV key set 2

Position 4, CAVV: This 2-byte/3-BCD value is a 3-digit code generated by the issuer's ACS that may be used by the issuer to validate the authentication response during authorization. A leading zero is required in byte 4 to pad the first unused half-byte of the CAVV, for example, **0456**. This value is determined by the ACS and the keys loaded in V.I.P.

Position 5, CAVV Unpredictable Number: This 2-byte/4-BCD value is a 4-digit code used by the issuer's ACS to generate the CAVV.

Position 6.1 and Position 6.2: When a 3D-Secure transaction involves another method of authentication, such as a VSDC card, the positions 6.1 and 6.2 are formatted as shown below. Otherwise, the rest of the field (byte 8-20) is filled with binary zeros. If the first digit of the Second Factor Authentication Code is **1**, it indicates that a VSDC card was used and position 6 will contain the following VSDC authentication data.

Position 6.1, Card Sequence Number: This 2-byte/3-BCD value is a 3-digit code identifying the VSDC card's sequence number that distinguishes it from other cards having the same primary account number. A leading zero in byte 8 is required to pad the first unused half-byte of the Card Sequence Number, for example, **0123**.

When the number of digits is less than 3 digits, zero-fill byte 8 and pad the first unused half-byte of byte 9 with a zero, for example, **0002**. This value is determined by the second factor authentication.

Positions 6.2, Card Verification Results: This position is 4 bytes (binary). It contains a series of card-recorded offline and online processing indicators. This value is determined by the chip terminal.

Positions 6.3, Reserved: Not used For VSDC-bytes 14-20 are zero-filled. [Table 6.29](#) is an example of field CAVV with 3-D Secure CAVV data

Table 6.29 CAVV Example with 3-D Secure CAVV Data

Field	Value	Meaning
3-D Secure Authentication Results Code	00	Authentication successful
Second Factor Authentication Code	00	Non-VSDC card used
CAVV Output	0114	CAVV
CAVV Unpredictable Number	7993	
Card Sequence Number	0000	
Card Verification Results (CVR)	00000000	
Zero-fill	0000000000000000	

6.55 CAVV results code

The CAVV Results Code indicates whether the authentication value submitted by the merchant can be validated by the Card Brand or the issuer (see [Table 5.29](#) for record format and version number).

Table 6.30 CAVV results code

Code	Description
Blank or not present	CAVV not present or CAVV not verified, issuer has not selected CAVV verification option
0	CAVV could not be verified or CAVV data was not provided when expected
1	CAVV failed verification-cardholder authentication
2	CAVV passed verification-cardholder authentication
3	CAVV passed verification-attempted authentication A 3-D Secure Authentication Results Code value of 07 from the Issuer Attempts Server indicates that authentication was attempted. Issuer attempts CAVV key was used to generate the CAVV.
4	CAVV failed verification-attempted authentication A 3-D Secure Authentication Results Code value of 07 from the Issuer Attempts Server indicates authentication was attempted. Issuer attempts CAVV key was used to generate the CAVV.
5	Reserved for future use
6	Reserved for future use
7	CAVV failed verification-attempted authentication A 3-D Secure Authentication Results Code value of 07 from Visa Attempts Service indicates that an authentication attempt was performed. Visa attempts CAVV key was used to generate the CAVV. Note that Results Code value of 7 is also valid for American Express SafeKey responses, including those for non-U.S. cards.

Code	Description
8	<p>CAVV passed verification-attempted authentication</p> <p>A 3-D Secure Authentication Results Code value of 07 from Visa Attempts Service indicates that an authentication attempt was performed. Visa attempts CAVV key was used to generate the CAVV.</p> <p>Note that Results Code value of 8 is also valid for American Express SafeKey responses, including those for non-U.S. cards.</p>
9	<p>CAVV failed verification-attempted authentication</p> <p>A 3-D Secure Authentication Results Code value of 08 from Visa Attempts Service indicates that an authentication attempt was performed when the Issuer ACS was not available. Visa attempts CAVV key was used to generate the CAVV.</p> <p>Note that Results Code value of 9 is also for American Express SafeKey responses, including those for non-U.S. cards.</p>
A	<p>CAVV passed verification-attempted authentication</p> <p>A 3-D Secure Authentication Results Code value of 08 from Visa Attempts Service indicates that an authentication attempt was performed when the Issuer ACS was not available. Visa attempts CAVV key was used to generate the CAVV.</p> <p>Note that Results Code value of A is also for American Express SafeKey responses, including those for non-U.S. cards.</p>
B	<p>CAVV passed verification-attempted authentication, no liability shift</p> <p>Only Visa generates this code; issuers do not.</p>
C	<p>CAVV was not verified-attempted authentication (for Visa use only)</p> <p>If 3-D Secure Authentication Results Code value is 07 in the CAVV and the issuer did not return a CAVV results code in the authorization response, or CAVV results code = 0 in the response message and the CAVV encryption keys do not exist in V.I.P., V.I.P. sets the value to C in CAVV results code.</p>
D	<p>CAVV was not verified-cardholder authentication (for Visa use only)</p> <p>If 3-D Secure Authentication Results Code value is 00 in the CAVV and the issuer did not return a CAVV results code in the authorization response, or CAVV results code = 0 in the response message and the CAVV encryption keys do not exist in V.I.P., V.I.P. sets the value to D in CAVV results code.</p>
U	CAVV Unchecked [AX]

Visa provides additional detail for the CAVV Results Code as shown in [Table 6.31](#) below.

Table 6.31 Visa Cardholder Authentication Verification Value Detail

Code	Description	Code	Description
Blank	CAVV not present - no verification performed. Standard e-commerce or non-e-commerce transaction. Use standard authorization criteria with issuer retaining chargeback rights.	7	CAVV failed verification (attempt) – issuer approves authorization. U.S.-issued cards ONLY. Issuer or cardholder does not participate in CAVV verification. Transaction was approved by the issuer knowing that the authentication data failed verification and was not reliable. Transaction is not eligible for Reason Code 75 (cardholder does not recognize transaction) or 83 (fraud transaction - card absent environment).
0	CAVV authentication results invalid - no verification performed. CAVV data not properly formatted use standard authorization criteria with issuer retaining chargeback rights.	8	CAVV passed verification (attempt) - issuer approves authorization. U.S.-issued cards ONLY. Issuer or cardholder does not participate in CAVV verification. Use standard authorization criteria with issuer - not eligible for chargebacks.

Code	Description	Code	Description
1	CAVV failed verification (authentication) - issuer approves authorization. Transaction was approved by the issuer knowing that the authentication data failed verification and was not reliable. Transaction is not eligible for Reason Code 75 or 83.	9	CAVV failed verification (attempt) - issuer approves authorization. U.S.-issued cards ONLY. Issuer ACS unavailable - Visa generated CAVV. Transaction was approved by the issuer knowing that the authentication data failed verification and was not reliable. Transaction is not eligible for Reason Code 75 (cardholder does not recognize transaction) or 83 (fraud transaction - card absent environment).
2	CAVV passed verification (authentication) - issuer approves authorization. Use standard authorization criteria. Transaction is not eligible for chargebacks because a valid CAVV indicates that the cardholder authentication was performed.	A	CAVV passed verification (attempt) - issuer approves authorization. U.S.-issued cards ONLY. Issuer ACS unavailable - Visa generated CAVV. Use standard authorization criteria with issuer - not eligible for chargebacks.
3	CAVV passed verification (attempt) - issuer approves authorization. Issuer or cardholder does not participate in CAVV verification. Transaction is not eligible for chargebacks because a valid CAVV indicates that the merchant did attempt to authenticate the cardholder.	B	CAVV passed verification (authentication). Information only with no liability shift since ECI value and/or card type is excluded.

Code	Description	Code	Description
4	CAVV failed verification (attempt) - Issuer approves authorization. Issuer or cardholder does not participate in CAVV verification. Transaction was approved by the issuer knowing that the authentication data failed verification and was not reliable transaction is not eligible for Reason Code 75 or 83.	C	CAVV was not verification (attempt). Issuer elected to return CAVV verification results and CAVV Result Code field blank. Visa generated CAVV - results are valid.
5	Not Used - Reserved	D	CAVV was not verification (authentication). Issuer elected to return CAVV verification results and CAVV Result Code field blank. Visa generated CAVV - results are valid.
6	CAVV not verified (VisaNet flag for issuer not selected) - issuer approves authorization. VisaNet processes as if CAVV is valid and use standard authorization criteria to avoid adversely impacting cardholders. Transaction is not eligible for chargebacks because a valid CAVV indicates that the merchant did attempt to authenticate the cardholder. Issuer has requested no verification.		

6.56 CAVV, revised

This field usage is applicable for Visa 3-Domain (3-D) Secure and Discover ProtectBuy and applies to a Cardholder Authentication Verification Value (CAVV) Verification Service credit authorization request being submitted as an attempt or as a full authentication where the

Authentication Tracking Number (ATN) is being used in place of the Transaction Identifier (XID). The field is not present in subsequent reversals. It is not returned in response messages. Refer to [Section 7.8](#) for instructions on performing the necessary binary to ASCII data conversion.

Visa Token Service: This field is required with a value of **3** in position 7, byte 16 - version and authentication in e-commerce messages containing token data.

Visa Token Convert Service: This field is required with a value of **3** in position 7, byte 16 - version and authentication, for application-based e-commerce and NFC Visa payWave messages using the Visa Token Convert Service.

CAVV Revised, can contain the Token Authentication Verification Value (TAVV).

The field contains an ATN and the CAVV in compressed format for CAVV Verification Service transactions. The CAVV is a cryptographic value calculated by the issuer's Access Control Server (ACS) using the issuer's encryption key and related elements. The CAVV value is unique to the cardholder and to the transaction that was authenticated. The ATN replaces the need for the XID (field [6.220](#)).

See CAVV ([6.53](#)) for sending only the CAVV in uncompressed format.

Positions:

1	2	3	4	5
3-D Secure Authentication Results Code	Second Factor Authentication Code	CAVV Key Indicator	CAVV Value	Unpredictable Number
Byte 1	Byte 2	Byte 3	Bytes 4-5	Bytes 6-7

See description below.

6	7	8
Authentication Tracking Number	Version and Authentication Action	IP Address in Hex Format
Byte 8-15	Byte 16	Byte 17-20

Position 1, 3-D Secure Authentication Results Code: This 1-byte/2-BCD value is a 1-digit code indicating the result of the issuer's ACS authentication decision. A leading zero is required to pad the first unused half-byte of the Visa Secure Authentication Results Code. The value is determined from the Payer Authentication Request's transaction status. [Table 6.32](#) contains position 1 valid values.

First BCD digit = **0**.

Table 6.32 CAVV, Revised Position 1, 3-D CAVV Secure Authentication Results Code

Status	CAVV ACS Result	CAVV ACS Result Definition	Associated MOTO/ECI
Y (Success)	0	Authentication successful (status Y)	5
U (Unable)	5	Authentication could not be performed (status U)	7
N (Failed)	9	Authentication failed (status N)	n/a issuer unable to authenticate cardholder; merchants are not permitted to submit these transactions for authorization
A (Attempt)	7	Acquirer attempt (status A); proof of authentication attempt generated for non-participating issuer or cardholder	6
N (Attempt - issuer)	8	Acquirer attempt, issuer ACS not available (status A); proof of authentication attempt generated for participating issuer with server unavailable (Visa Proof of Attempts STIP)	6

Note: Visa sets the CAVV Results Code to 0 when position 1 is 5 or 9.

Position 2, Second Factor Authentication Code: This 1-byte/2-BCD value is a 2-digit code, determined by the issuer's ACS based on the type of additional authentication performed. This value may indicate when a Visa Smart Debit/Smart Credit (VSDC) card is used. This value is determined by the second factor authentication. [Table 6.33](#) contains position 2 valid values.

Table 6.33 CAVV, Revised Position 2 values

Code	Description
00	3DS 1.0.2, or prior, All authentication methods
01	3DS 2.0 Challenge flow using static passcode
02	3DS 2.0 Challenge flow using One Time Passcode (OTP) via SMS method
03	3DS 2.0 Challenge flow using OTP via key fob or card reader method
04	3DS 2.0 Challenge flow using OTP via App method
05	3DS 2.0 Challenge flow using OTP via any other method
06	3DS 2.0 Challenge flow using Knowledge Based Authentication (KBA) method
07	3DS 2.0 Challenge flow using Out of Band (OOB) authentication with biometric method

Code	Description
08	3DS 2.0 Challenge flow using OOB authentication with App login method
09	3DS 2.0 Challenge flow using OOB authentication with any other method
10	3DS 2.0 Challenge flow using any other authentication method
11	Deprecated ¹
12	Deprecated ²
97	3DS 2.0 Frictionless flow, risk-based authentication (RBA) review
98	3DS 2.0 Attempts server responding
99	3DS 2.0 Frictionless flow
Unrecognized value	3DS unrecognized authentication method

1. This value is deprecated, formerly known as 11 (VSDC card used; cryptogram failed).
2. This value is now deprecated and was formerly known as 12 (VSDC card used; cryptogram passed).

Position 3, CAVV Key Indicator: This 1-byte/1-BCD value is a 1-digit code indicating the CAVV key set used to calculate the CAVV value. A leading zero is required to pad the first unused half-byte of the CAVV Key Indicator. This value is determined by the V.I.P. key ID. [Table 6.34](#) contains position 3 valid values.

Table 6.34 CAVV, Revised Position 3 values

Code	Description
01	CAVV key set 1
02	CAVV key set 2
03-09	Reserved for Visa keys(s)
10	US Region attempt server Visa key #1
11	US Region attempt server Visa key #2
12-99	Reserved for Visa key(s)

Position 4, CAVV: This 2-byte/3-BCD value is a 3-digit code generated by the issuer's ACS that may be used by the issuer to validate the authentication response during authorization. A leading zero is required in byte 4 to pad the first unused half-byte of the CAVV, for example, **0456**. This value is determined by the ACS and the keys loaded in V.I.P (attempts only).

Position 5, Unpredictable Number: This 2-byte/4-BCD value is a 4-digit code that contains the four least significant digits for the authentication tracking number. The value is derived from the authentication tracking number by the ACS.

Position 6, Authentication Tracking Number (ATN): This 8-byte/16-BCD value is a 16-digit code generated by the issuer's ACS to identify the transaction.

Position 7, Version and Authentication Action: The left nibble of this 1-byte/1-BCD value identifies a version; the right nibble identifies the authentication action. [Table 6.35](#) contains position 7 valid values.

Table 6.35 CAVV, Revised Position 7 values

Code	Description
Version	
0	Authentication action and cardholder IP address not present
1	Authentication action and cardholder IP address present
3	Visa Token Service Payment Requirements
Authentication Value	
0	Standard authentication performed (no ADS or FYP performed).
1	ADS-registration authentication performed.
2	Forgot your password (FYP)-re-registration/re-authorization performed.
	Note that if an invalid value is submitted for this position, CAVV Results Code (6.55) will be populated with a 0 (CAVV authentication results invalid) for U.S. issuers.
4	Token authentication verification value (TAVV)-Token authentication verification performed.

Position 8, IP Address in Hex Format: This 4-byte value identifies the client IP address submitted in the authorization message from ACS. The IP address must be in hexadecimal format to fit in the field.

6.57 Chip condition code

This one-character field provides information about fallback transactions, which are magnetic stripe read transactions using chip capable cards at chip capable POS devices. It is used when the chip card's magnetic stripe is read instead of the chip. When Service Code value (from Track 1 or Track 2) begins with 2 or 6, this indicates the card is chip capable. This field is required when POS Data Code Subfield 7 - Card Data Input Mode is set to N.

Table 6.36 Chip condition code

Value	Description
0	Use this value when service code does not begin with 2 or 6 (indicates this is not a chip capable card).

Value	Description
1	Use this value when the transaction was initiated from a magnetic swipe with a service code value that begins with 2 or 6 (indicating chip capable card) and the last read from the chip capable terminal was a successful chip read or was not a chip transaction.
2	Use this value when the transaction was initiated at a chip capable terminal from a magnetic swipe that contains a service beginning with 2 or 6 (indicating chip capable card) and the previous transaction initiated by that terminal was an unsuccessful chip read.

6.58 City code

This field contains the nine-character code used to further identify the merchant location (see [Table 5.5](#) for record format and version number). This field is left-justified and space-filled.

Within the United States, the five or nine-character numeric ZIP Code of the address of the store location is used. Outside of the United States, this field is assigned by the signing member or processor.

The formatting should be:

Usage	Format
U.S. ZIP Code	5 character numeric, left-justified, space-filled.
U.S. ZIP Code + Extension	9 character numeric.
Canadian Postal Code	6 character "AnAnAn" format, left-justified, space-filled.

This field should be configured as a parameter.

6.59 Commercial card request indicator

This four-character field is utilized to request that TSYS Acquiring Solutions systems return a value in the authorization response message identifying whether the card type being presented was a Commercial Card (see [Table 5.11](#) for record format and version number). This field is currently defaulted to **!010**, and is supported for Visa and Mastercard transactions only.

6.60 Commercial card response indicator

If the Commercial Card Request Indicator ([Section 6.59](#)) was supplied in the authorization request, the host responds with one of the following response indicators identifying the card being processed (see [Table 5.12](#) for record format and version number). Currently defined values include:

Table 6.37 Commercial card response indicator

Value	Description
B	Business Card
D	Visa Commerce (reserved for future use)
L	Card eligible for B2B settlement match edits
R	Corporate Card
S	Purchasing Card
0	Non-commercial Card
<SPACE>	Invalid Request Indicator Received

When a response indicator has been received indicating that the approved card is a Business, Corporate, or Purchasing Card, the POS device should prompt for addendum data elements as needed for settlement. Please refer to EIS 1081 Specifications for data capture record format requirements.

6.61 Conversion date

This is the month and day that the conversion rate is effective to convert the transaction amount from the original currency into the settlement and cardholder billing currency.

6.62 Country code

This field contains a three-character numeric assigned by the signing member or processor to identify the merchant's location country (see [Table 5.5](#) for record format and version number). For the United States, use "840."

This field should be configured as a parameter.

6.63 Cryptogram amount

This fixed length, 12-character numeric field is carried in EMV transactions and contains the transaction amount used by the chip when calculating the cryptogram. It must contain numeric right-justified data with leading zeros. If the transaction is a purchase with cashback transaction, this field contains the purchase amount plus the cashback amount. If this is a cashback transaction, the message must also contain the Cryptogram Cashback Amount field.

6.64 Cryptogram cashback amount

This fixed length, 12-character numeric field might be carried in EMV transactions and contains the cashback amount that the chip uses when calculating the cryptogram. If the transaction does not include cashback, this field can either not be sent or be sent zero filled.

6.65 Cryptogram currency code

This fixed length, 3-character numeric field is carried in EMV transactions and contains the currency code used by the chip when calculating the cryptogram. A leading zero is required to pad the first unused half-byte of this field. The zero is filler and is not part of the code.

6.66 Cryptogram information data

This fixed length, 2-character numeric field carries a series of bit switches that indicate the following: type of cryptogram generated; a limited set of status codes that provide information about why the stated cryptogram was generated; and actions that the EMV chip card instructs the terminal to perform.

6.67 Cryptogram transaction type

This fixed length, 2-character numeric field is carried in EMV transactions and indicates the type of financial transaction provided by the terminal. It usually corresponds to the first two digits of the Processing Code. Field 144 is carried in the message to ensure that the issuer and the card are using the same value to compute the cryptogram.

6.68 Cryptogram version number

This two-character field contains a code used to indicate which version of the cryptogram was used by the application for ARQC, TC, and AAC generation (see [Table 5.19](#) for record format and version number). This binary field is passed to the POS device in the Issuer Application Data field supplied by the integrated chip card. This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.69 Currency code

This field contains the three digit currency code that designates the currency in which the transaction will be processed. For U.S. currency, use 840. Other values may be used when processing multi-currency.

This field should be configured as a parameter.

6.70 Customer data field

This is a variable length field containing the customer account data in one of three formats (see [Table 5.5](#) for record format and version number). The cardholder account information can be read from one of two magnetic stripes on the card or it can contain data that has been entered manually. Most frequently supported card ranges include:

6.70.1 Track one data

This is a variable length field with a maximum data length of 76 characters.

The Track One data read from the cardholder's card is checked for parity and LRC errors and then converted from the six-bit characters encoded on the card to seven bit characters as defined in ANSI X3.4. The character set definitions are provided in [7.1](#) for reference. As part of the conversion, the terminal must remove the framing characters (start sentinel, end sentinel, and LRC characters). The separators must be converted to either an ASCII “^” (HEX 5E) or ASCII <US> (HEX 1F) characters. The entire UNALTERED Track (excluding framing characters) must be provided in the authorization request and debit pre-authorization messages or an error condition results. It must not be included in responses, completions or reversals.

For American Express cards, any spaces in the card account number field of Track One must be removed before the application executes a Mod-10 check of the card account number. However, any spaces in the card account number field should be present when the application transmits the Track One data to the host for authorization. In other words, the card account number field of Track One should be sent to the authorization host unmodified.

Note that Track One data cannot be used in fallback transactions.

6.70.2 Track two data

This is a variable length field with a maximum data length of 37-characters.

The Track Two data read from the cardholder's card is checked for Parity and LRC errors and then converted from the four-bit characters encoded on the card to seven bit characters as defined in ANSI X3.4. The character set definitions are provided in [7.1](#) for reference. As part of the conversion, the terminal must remove the start sentinel, end sentinel, and LRC characters. The separators must be converted to either an ASCII “=” (HEX 3D) or ASCII “D” (HEX 44) characters. The entire UNALTERED Track (excluding framing characters) must be provided in the authorization request and debit pre-authorization messages or an error message is generated. It must not be included in responses, completions or reversals.

6.70.3 Manually entered data

The customer credit card data can be key entered when the card magnetic stripe cannot be read, the card is not physically present, or when a card reader is not available. Debit cards cannot be manually entered. A manual entry is allowed for Electronic Benefits Transfer. For manually entered data, there will be three data items present (defined below) and a field separator ([6.89](#)) will show between each item.

- Manually entered account data

This is a variable length field consisting of 5 to 28 alphanumeric characters and contains manually entered information to be validated. For credit card transactions, this field contains the cardholder account number.

- This 4-character numeric field contains the card expiration date in the form MMYT (month-month-year-year). EBT/Electronic Voucher transactions can utilize this field in MMYT format.

- Include the Dynamic Expiration Date in the Customer Data Field for a Mastercard tokenized e-commerce transaction. Please refer to [G3v062](#) Card Brand Tokens for more information.

NOTE The manually entered Verification Code belongs in G3v007 ([6.215](#)).

6.70.4 Encrypted track data

If the field contains track one or track two encrypted with Voltage, the Track Encryption Protocol (TEP) used must be structure preserving encryption (TEP2). Track one will contain up to 79 ASCII characters corresponding to the ISO 7813 64-character alphabet. Track two data contains up to 40 ASCII characters corresponding to the ANSI/ISO BCD 16-character alphabet.

6.70.5 Encrypted manually entered data

The customer credit card data can be key entered when the card magnetic stripe cannot be read, the card is not physically present, or when a card reader is not available. Debit cards cannot be manually entered. A manual entry is allowed for Electronic Benefits Transfer. For manually entered data, there will be three data items present and a field separator (6.89) will show between each item. This data noted as encrypted is done so with Voltage encryption.

- Manually entered encrypted account number

This is a variable length field consisting of 13-19 alphanumeric characters and contains manually entered information to be validated. For credit card transactions, this field contains the encrypted cardholder account number that is encrypted with Voltage encryption.

- Manually entered expiration date

This 4-character numeric field contains the card expiration date in the form MMY (month-month-year-year). This data is not encrypted.

- Manually entered encrypted verification code

When the verification code (CVV2, CVC2, CID) is Voltage encrypted, the 3 or 4-digit code is transformed into a 7-digit number. When decrypted, it will be used in authenticating the physical presence of the credit card.

NOTE For this use case, the Verification Code value entered in G3v007 ([6.216](#)) must be space filled.

6.71 Derivation key index

This two-character field contains a code reflecting a value extracted from the integrated chip card that is used to identify the Issuer's unique derivation key (see [Table 5.19](#) for record format and version number). This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.72 Developer ID

The Developer ID provides a unique value to identify transactions originated by the Developer (see [Table 5.35](#) for record format and version number). This number is provided by TSYS Acquiring Solutions during certification.

6.73 Device code

This one-character field is used to identify the device type of the merchant submitting the authorization request (see [Table 5.5](#) for record format and version number). [Table 6.39](#) provides a summary of the currently defined codes. This field should be configured as a parameter.

Table 6.39 Device code

Code	Device type
O	Unknown or Unsure
A	TSYS Secur-ePayment (TSEP)
B	Automated Teller Machine (ATM)
C	P.C.
D	Dial Terminal
E	Electronic Cash Register
G	Mobile Payment Acceptance
H	TSYS Hosted Payment
I	In-store Promotion
J	Multi Payment Acceptance
M	Main Frame
P	POS-port

- Electronic Commerce Security Level Indicator (6.77 in G3v072) - This usage requires all three positions and is recommended. UCAF Authentication Data (6.211) must still be sent in G3v019.
- UCAF Collection Indicator (6.212 in G3v019) - This field allows only for the UCAF Collection Indicator and is one position, fixed. The Security Protocol and Cardholder Authentication values are not included in this usage, and will be derived internally by TSYS software using other elements of the transaction. Note that this can result in inaccuracies based on the transaction values and the nature of such derivation.

NOTE If the POS Software should send position 3 in both G3v019 and G3v072, the data in the latter field will take precedence.

If the merchants do not pass the appropriate authentication detail in UCAF Authentication Data (G3v019) demonstrating they actually authenticated or attempted to authenticate the cardholder, Mastercard will downgrade the Authorization Request/0100 and send it to the Issuer. The correct values will be returned in the response message in G3v072, whether downgraded or not. It is critical to have the proper indicators during settlement.

Mastercard will also reject clearing/settlement records if the indicators do not match the authorization indicators. The response field will contain the correct values needed for settlement, whether the transaction was downgraded or not.

This field is not applicable for Mastercard Full Financial/0200 (Debit) transactions.

Table 6.40 Valid values for electronic commerce security level indicator

Length	Format	Position	Description
2	Numeric	1 and 2	Security Protocol/Cardholder Authentication Valid combinations of positions 1 and 2: 21 - Channel encryption; cardholder certificate not used (preferred value for Mastercard SecureCode, Identity Check, and all eCommerce) 22 - Masterpass-generated transaction 24 - Digital Secure Remote Payment (DSRP) with UCAF Data 91 - No security protocol; cardholder certificate not used

Value	Description
(blank)	No value present

6.80 EMS results code

This field indicates the results of the EMS scoring performed by Mastercard.

Table 6.42 EMS results code

Value	Description
C	EMS scoring was successful
I	Invalid request, transaction does not qualify for EMS scoring due to: <ul style="list-style-type: none"> Transaction is card present, or Card was issued outside of valid issuing region
U	Scoring was not successfully performed

6.81 EMS risk score

This field contains the risk score provided by the MasterCard EMS service. Score values range from 001 through 999 where 001 indicates the least likely fraudulent transaction and 999 indicates the most likely fraudulent transaction.

6.82 EMS risk score reason code

This field indicates the key factors that influenced the EMS score. Only the reason code value is provided. (Participating merchants may contact their acquirer for a list of reason codes.)

6.83 EMS scoring response indicator

This field indicates whether EMS scored the transaction. If the transaction was not scored by EMS, no response is received.

Table 6.43 EMS scoring response indicator

Value	Description
90	EMS scoring was performed

6.84 EMS service request indicator

This field indicates whether the merchant is requesting the transaction be scored by Mastercard.

Table 6.44 EMS service request indicator

Value	Description
0	No action required
1	Transaction to be scored

6.85 Encryption Transmission Block (ETB)

This is the Encryption Transmission Block (ETB) TSYS uses to decrypt encrypted data. See [5.1.1](#) for record format and version number. The ETB must be Base-64 encoded before transmission to TSYS Acquiring Solutions.

For the Point-to-Point and NESA Encryption solutions, the Serial Number of the device must be included in the ETB. Please refer to the appropriate documentation for each solution for proper instructions.

6.86 Encryption type

This describes the type of encryption used in the transaction. The following provides a listing of encryption types accepted.

Table 6.45 Encryption type

Value	Description
V	Voltage Encryption

6.87 Extended AVS data

6.87.1 Cardholder billing postal code

This is the nine-character, cardholder billing postal code (see [Table 5.54](#) for record format and version number). For addresses in the USA, this is a numeric 5+4 ZIP; or a five-digit ZIP, left justified and character space filled to nine characters.

For international addresses, the postal code may vary in length and contain alpha characters. International postal codes must be padded with character spaces to nine characters. Alpha characters must be upper case.

6.87.2 Cardholder billing address

This is the first 20 characters of the cardholder billing address (including the unit, apartment, flat, or suite number), left justified and character space filled, if necessary. Alpha characters must be upper case (see [Table 5.54](#) for record format and version number). Leading or trailing zeros and/or virgules (/) are not permitted. Other special characters are allowed.

6.87.3 Cardholder billing city

Reserved for future use (see [Table 5.54](#) for record format and version number).

6.87.4 Cardholder billing state/province

Reserved for future use (see [Table 5.54](#) for record format and version number).

6.87.5 Cardholder billing country code

Reserved for future use (see [Table 5.54](#) for record format and version number).

6.87.6 Cardholder billing first name

This is the 35-character, cardholder first name (as it appears on the card), left justified and character space filled, if necessary (see [Table 5.54](#) for record format and version number). For American Express transactions, this field should be a maximum of 15 characters.

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. If a cardholder first and last name are not entered, this subfield must be character space filled. Other special characters are allowed

6.87.7 Cardholder billing last name

This is the 35-character, cardholder last name (as it appears on the card), left justified and character space filled, if necessary (see [Table 5.54](#) for record format and version number). For American Express transactions, this field should be a maximum of 30 characters.

Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted. Other special characters are allowed. If a cardholder first and last name are not entered, this subfield must be character space filled.

6.87.8 Cardholder billing phone number

This is the 10-digit, cardholder phone number (see [Table 5.54](#) for record format and version number).

Format is XXXXXXXXXX

6.87.9 Ship-to postal code

This is the nine-character, ship-to postal code (see [Table 5.54](#) for record format and version number). For addresses in the USA, this is a numeric 5+4 ZIP; or a five-digit ZIP, left justified and character space filled to nine characters.

For international addresses, the postal code may vary in length and contain alpha characters. International postal codes must be padded with character spaces to nine characters. Alpha characters must be upper case.

6.87.10 Ship-to address

This is the 50-character, ship-to address, left justified and character space filled, if necessary (see [Table 5.54](#) for record format and version number). Alpha characters must be upper case. Leading or trailing zeros and/or virgules (/) are not permitted.

6.87.11 Ship-to city

Reserved for future use (see [Table 5.54](#) for record format and version number).

6.90 Filler (spaces)

This field is defined as containing spaces.

6.91 Filler (zeros)

This field is defined as containing zeros.

6.92 Gateway ID

The Gateway ID provides a unique value to identify a Gateway or Aggregator. This number is provided by TSYS Acquiring Solutions during the certification process.

6.93 Gen2 terminal authentication

6.93.1 Authentication code

An alphanumeric code provided to the POS user for input when authenticating a POS device during the POS device authentication process.

6.93.2 Authentication factor 1

Authentication factor 1 (AF1) is the merchant's 5 digit US zip code or 6 character postal code.

6.93.3 Authentication factor 2

Authentication factor 2 is the Merchant Phone Number. Left zero fill to 7 digits if the phone number is shorter than 7 digits. If phone number is longer than 10 digits, send the right-most 10 digits. North American phone numbers should include the area code.

6.93.4 GenKey

A randomly generated string of alphanumeric characters that will be returned in the POS device authentication response and associated with the terminal hierarchy. The Genkey must be stored in the POS device, must be sent with every request to the TSYS Acquiring Solutions host after authentication, and will be checked against the terminal hierarchy.

6.94 Group III version number

This field must contain a valid three-character numeric version number whenever an optional addendum Group III is appended to an authorization request message. This field is required to properly identify the addendum data group being provided.

Table 6.46 Group III version number

Value	Description
000	No Addendum Data
001	Commercial Card Request Indicator

Value	Description
042	Visa Contactless
043	Network ID
044	Automated Teller Machine (ATM)
045	Integrated Chip Card EMV
046	Card Type Response group
047	TSYS Internal Use Only
048	Amex Cardholder Verification Results
049	Gen 2 Terminal Authentication
050	Association Timestamp
051	Mastercard EMS Fraud Scoring
052	Voltage Encryption Transmission Block (ETB)
053	Token Request/Response
054	Transit Program
055	Integrated Chip Card EMV TLV
056	Message Reason Code
057	Additional Response Data (Discover /PayPal Only)
058	Alternate Account ID 1
059	Mastercard PayPass Mapping Service
060	PayPass Mobile
061	Spend Qualified Indicator
062	Card Brand Tokenization
063	Amex Card Acceptor Name/Location
064	Mastercard Wallet Identifier
065	ISO Identifier
066	Payment Facilitator
067	Authorization Indicator
068	Fraud Enhanced Data
069	Lane ID
070	Payment Specific Data
071	POS Environment Indicator
072	Electronic Commerce Security Level Indicator
073	Business Application Identifier
074	Transaction Integrity Class
075	Mastercard Service Parameters
076	Card Brand MCC

6.96.2 Healthcare

If this field contains health care data, it may contain up to 199 alphanumeric characters. For the purpose of Healthcare Eligibility inquiry transactions, Mastercard has defined the following subelements and subfields:

- Subelement 1: Healthcare Service 1
- Subelement 2: Healthcare Service 2
- Subelement 3: Healthcare Service 3
- Subelement 4: Healthcare Service 4
- Subelement 5: Healthcare Service 5

Each subelement may contain up to four subfields:

- Subfield 1: Healthcare Provider ID
- Subfield 2: Service Type Code
- Subfield 3: Payer ID/Carrier ID
- Subfield 4: Approval or Reject Reason Code

Each subelement will represent a single prescribed healthcare service or treatment. Endpoints may request eligibility information for up to five healthcare services within a single Authorization Request/0100 message.

- For each subelement, endpoints must provide subfields 1 and 2 only in the Authorization Request/0100 message.
- For each subelement provided by the endpoint in the endpoint's Authorization Request/0100 message, issuers will respond with subfields 3 and 4 in the Authorization Request Response/0110 message. Subfields 1 and 2 are optional in the issuer Authorization Request Response/0110 message.

6.97 Host message identifier

This eight-character field contains a unique host message identifier assigned by the authorizing system and returned in debit card response messages (see [Table 5.7](#), [Table 5.8](#) for record formats and version numbers). This field is reserved for future use and will most likely contain spaces. This value must be recorded and submitted in the debit confirmation record.

6.98 Identification number

This 17-character field contains either a Driver ID, Vehicle ID, or other Identification number to be used in the authorization of a Visa Fleet Fueling Card. Visa cards issued in the range 448460 - 448699 contain instructions for customized prompts in the last position of the magnetic stripe (before the end sentinel character) (see [Table 5.15](#) for record format and version number). Prompting should occur as defined in [Table 6.47](#).

Table 6.47 Fleet fueling prompting criteria

Value	Description
1	ID Number and Odometer Reading

Code	Industry Type
R	Retail

6.102 Interface device serial number

This optional eight-character numeric field contains the serial number of the peripheral interface device that reads chip cards or allows for entry of a customer PIN (see [Table 5.19](#) for record format and version number).

6.103 ISA charge indicator

The Visa International Service Assessment (ISA) charge is payable by the U.S. acquirers. The new Acquirer ISA applies to single currency and multicurrency transactions that are submitted by acquirers in the U.S. region. The merchant must be in the U.S. and the issuer country is non US. (See [Table 5.76](#) for record format and version number).

C	Single currency ISA assessed
S	Multicurrency ISA assessed

6.104 Issuer application data

This field content is defined by the issuer and contains the entire IAD to be transmitted in online messages for use by the issuer in online processing. This field can be up to 64 characters in length and is required if it is present on the chip card.

6.105 Issuer discretionary data

This field is passed to the terminal from the integrated chip card in the Issuer Discretionary Data (see [Table 5.19](#) for record format and version number). This field can be zero or 16-characters in length. This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.106 Issuer script

This field is used by an issuer to send dynamic changes to the chip card without reissuing the card (see [Table 5.20](#) for record format and version number). This field is variable length with a maximum allowable length of 512 bytes. This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.107 Issuer script results

This variable length, 1 byte binary + up to 40 hexadecimal digit, maximum 21 byte field is carried in EMV transactions. During online processing, the issuer has the option to send commands to the card in the authorization response. These commands instruct the card to

6.111 Local transaction date

This six-character numeric field contains a Local Transaction Date (MMDDYY) calculated by the authorization center using the time zone differential (see [Table 5.6](#) for record format and version number). This field can be used as the transaction date printed on the receipt and as input for the data capture settlement record. For authorization Reversals and AFD Completion Advices, use the Transaction Date of the original purchase.

6.112 Local transaction time

This six-character numeric field contains the Local Transaction Time returned by the authorizing system (HHMMSS). For direct debit, the transaction time should be printed on the receipt. The Settlement Time should be recorded and submitted in the transaction data capture settlement record. For authorization Reversals and AFD Completion Advices, use the Transaction Time of the original purchase (see [Table 5.6](#) for record format and version number).

6.113 Mapped Card Expiration Date

This conditional four-character field identifies the expiration date of the mapped card and comes in the Group 3, version 59 response message. The characters represent MMY (two-digit month and two-digit year). When used, this field will likely be combined with the Alternate Account ID 1 value in Group3, version 58.

6.114 Mapped PAN indicator

This conditional one-character field maps to Mastercard Account Number Indicator and indicates the type of mapping account used and comes in the Group 3, version 59 response message for the Mastercard mapping service. When used, this field will be combined with the Alternate Account ID 1 value in Group 3, version 58.

6.115 Mapped product code

This conditional three-character field represents the product code for the mapped account used and comes in the Group 3, version 59 response message for the Mastercard PayPass mapping service. When used, this field will likely be combined with the Alternate Account ID 1 field found in Group 3, Version 58.

6.116 Market specific data identifier

This field is specific to Visa. Its subfields contain market specific data for hotel, auto rental, bill payment, and several other transaction types (see [Table 6.52](#) for a listing of all usages). The market specific data subfields need not be supplied for incremental authorization or authorization reversal transactions. The format of this four-character field is “PIDD.” See [Table 5.5](#) for record format and version number.

NOTE: If the Market specific data identifier subfield ([Section 6.116.2](#)) is a space, do not use this field.

[Table 6.50](#) provides a summary of the four-character market specific data field.

Table 6.50 Market specific data identifier

Sub-field	Byte	Format	Sub-field name	Selection
P	1	A/N	Prestigious Indicator	6.116.1
I	2	A/N	Market Specific Data Identifier	6.116.2
DD	3-4	NUM	Stay or Rental Duration	6.116.3

6.116.1 Prestigious property indicator

This indicator is used by participants in Visa's Prestigious Lodging Program. [Table 6.51](#) provides a summary of the Prestigious Property Indicators. A transaction amount of \$1 should be entered in the request if the merchant wishes the transaction to participate in the Visa Prestigious Property Program.

When this sub-field is supplied in an incremental transaction, it must contain the value submitted in the original authorization transaction.

Auto rental and non-participating properties should put a “space” in this sub-field.

Table 6.51 Prestigious property indicator

Value	Description
<SPACE>	Auto Rental or Non-Participating Property
D	Prestigious Property with \$500 Limit
B	Prestigious Property with \$1000 Limit
S	Prestigious Property with \$1500 Limit

6.116.2 Market specific data identifier

The market specific data identifier is used to indicate which industry data is being submitted. [Table 6.52](#) provides a summary of the currently defined Market Specific Data Identifiers.

When this sub-field is supplied in an incremental transaction, it should use the same value that was requested in the original authorization transaction.

Table 6.52 Market specific data identifier

Value	Description
A	Auto Rental
B	Bill Payment Transaction
E	eCommerce Transaction Aggregation
H	Hotel/Lodging
J	B2B Invoice Payments
N	Failed Market-Specific Data
M	Healthcare
T	Transit (used only for healthcare transactions such as ambulance and medivac)
<SPACE>	Other Industries

6.116.3 Stay or rental duration

The value of this subfield is the anticipated length of the hotel stay or auto rental.

When the market specific data is supplied in an incremental transaction, this subfield represents the number of additional days for the hotel stay or auto rental.

This subfield must be in the range of “01” to “99” for all original authorization requests. For incremental authorization requests, the range for this subfield is “01” to “99.” For No Show Authorizations, this subfield should be set to “01.” For Advanced Lodging Deposits and Auto Rental prepaids, this subfield should reflect the number of days being paid for in the advanced payment.

For Bill Payment, eCommerce Transaction Aggregation, B2B Invoice Payments, Healthcare, and Transit Transactions this subfield should be set to “00.”

6.117 Mastercard wallet identifier

This value provides information about transactions initiated through the Masterpass Online platform or through the Mastercard Digital Enablement Service (MDES) and identifies the Wallet Provider. For MDES, Mastercard inserts the Wallet Identifier that is in the system, when available. For Masterpass, Mastercard passes the Wallet Identifier as sent in from the Point of Sale. This value is applicable for authorization request and authorization advice messages.

6.122 Merchant city

This field contains the city of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value should be spelled out completely and truncated, if necessary, rather than abbreviated.

6.123 Merchant country code

This field contains the Country Code of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value must correspond to the Region Code used.

6.124 Merchant region code

This field contains the Region/State/Province Code of the Merchant. It is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator. The value must correspond to the Country Code used.

6.125 Merchant DBA name

This is the first 30 characters of the merchant's business name that appears on the storefront and/or customer receipts. It is commonly referred to as the DBA (Doing Business As) name. If applicable, spaces should be included and the field should be truncated, if necessary, rather than abbreviated. This field is required for transactions that arrive via an Aggregator/Payment Service Provider. It should not be included for Oil Co. CATs.

6.126 Merchant email

This field contains the first 20 characters of the e-mail address of the seller/vendor referenced in Merchant ID Code ([6.127](#)). The value should be left-justified. It should be truncated, if necessary, rather than abbreviated. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs.

6.127 Merchant ID code

This field contains the Seller ID, a maximum 20-byte, numeric code that uniquely identifies an American Express Payment Service Provider's (Aggregator's) seller or vendor code. It can also represent the merchant-assigned, station location code for Oil Company Customer Activated Terminal's (CAT). This field is required for Aggregator Merchants and for Oil Co. CATs.

6.128 Merchant number

This 12-character numeric field contains a unique number, assigned by the signing merchant's bank or processor (see [Table 5.5](#) for record format and version number). This field is used to identify the merchant within the TSYS Acquiring Solutions system. This number should be right-justified and zero-filled. This field should be configured as a parameter.

6.129 Merchant phone

This field contains the Phone Number of the seller/vendor referenced in Merchant ID Code (6.127). The value should include the area code. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs.

6.130 Merchant postal code

This field contains the postal code of the seller/vendor referenced in Merchant ID Code (6.127). The value should be uppercase, left justified, and character-space filled. This field is required for Aggregator Merchants and Oil Co. CATs.

6.131 Merchant settlement agent number

This zero or four-character field identifies the merchant settling agent (see [Table 5.7](#) for record format and version number). This number is provided by the signing member or processor.

This field should be configured as a parameter.

6.132 Merchant street address

This field contains the first 20 characters of the street address of the seller/vendor referenced in Merchant ID Code (6.127). The value should be left-justified and include spaces if applicable. The value should be truncated, if necessary, rather than abbreviated. This field is required for Aggregator Merchants. It should not be included for Oil Co. CATs

6.133 Merchant Verification Value (MVV)

This is a 10-character fixed-length field (see [Table 5.37](#) for record format and version number). Merchant Verification Value (MVV) is used by Visa to determine a merchant's eligibility to participate in a Select Merchant Fee (SMF) program. The value is unique to the merchant and characters in the field can only be 0-9 and A-F.

If available, the MVV must be included on credit, debit, adjustments, advices, and reversal Visa transactions.

6.134 Message reason code

This field is required in all reversal and reversal advice messages. It is not used in responses.

This field is required in AFD advice messages. Use Reason Code 2104, Acquirer Authorization Advice.

Visa Merchant Initiated Transactions

The Message Reason Code field will be used to identify Merchant Initiated Transactions [MIT] for Visa. A MIT is any transaction that relates to the previous consumer-initiated transaction but is conducted without the consumer being present, and without any cardholder validation performed.

MIT	Definition
Incremental	This is a continuation of the consumer purchase where the original approved amount can be modified to reflect the scope of the consumer and merchant agreement. Incremental authorization transactions are common in the hotel and car rental industries. Incremental authorization transactions are not supported on Amex.
Resubmission	This is an event that occurs when the original purchase occurred, but the merchant was not able to obtain authorization at the time the goods or services were provided. A resubmission is only valid when the original authorization was declined for insufficient funds. There are a limited number of merchant categories approved to utilize this type of MIT, and resubmission is only valid for a limited number of days after the consumer purchase.
Delayed Charges	A delayed charge is an account charge associated with an agreement between a cardholder and a merchant for services rendered. Delayed charges are typical in hotel and car rental industries.
Reauthorization	A reauthorization is a purchase made after the original purchase and can reflect a number of specific conditions. A split shipment is the most common type of reauthorization. A split shipment occurs when the goods are not available for shipment at the time of the consumer's purchase. A separate authorization is conducted to ensure that the consumer funds are available when the goods become available to ship. A reauthorization is also used when an estimated amount is presented and the merchant wants to authorize the final amount.
No Show	A no show transaction is where the merchant is able to charge for service that the consumer entered into an agreement to purchase, but did not meet the terms of the agreement, typically used by hotels for a single night's stay.

Message Reason Code		
Category	Code	Definition
Reversals	2501	Transaction voided by customer

Table 6.53 MOTO/e-Commerce indicator

Indicator	Description
SPACE	Not a Mail/Telephone Order Transaction
1	One Time Occurrence of a Mail/Telephone Order Transaction
2	Recurring Mail/Telephone Order Transaction
3	Installment Payment of a Mail/Telephone Order Transaction
4	Unknown Classification/Other mail order
5	Secure electronic commerce transaction This is used for fully authenticated CAVV Verification transactions using the 3-D Secure Protocol for Visa Secure, Mastercard SecureCode, Amex SafeKey and Discover Protect Buy.
6	This is used for non-authenticated security transactions at a 3-D Secure-capable merchant. The merchant attempted to authenticate the cardholder using 3-D Secure.
7	Non-authenticated Security Transaction
8	Non-secure Transaction
A	In-App Authentication (Discover, Mastercard and Amex)
R	First recurring SecureCode Phone Order transaction (Mastercard Only)
T	Single nonrecurring SecureCode Phone Order transaction (Mastercard Only)

NOTE: Do not use this field in conjunction with Transaction Code 58.

6.137 Network ID

Contains a code that specifies the network to be used for transmission of the message and determines the program rules that apply to the transaction. See [Table 6.54](#) for a full listing of Network IDs.

Table 6.54 Network identification and sharing group codes

Network ID ISO F63.1	Shared group code ISO F63.12	Network
0003	G	Interlink
0004	B	Plus ATM
0006	O	Cirrus ATM
0007	J	Mastercard ATM
0008	N	STAR

It is important to note that a value of “V” or “5” in this field returned in the response indicates that the transaction was processed as a credit card purchase transaction (Transaction Code 54) even though it was originally submitted as a debit transaction. When these values (“V” or “5”) are returned, the transaction must be processed and settled as a credit card (non-debit) transaction. Please note that this does not apply to “R3” type transactions.

6.139 NTIA UPC/SKU data

This variable length field is used for UPC/SKU data used in conjunction National Telecommunications and Information Administration (NTIA) issued coupons. These coupons are used for the purchase of a digital-to-analog converter box.

6.140 Operator/clerk ID

The operator/clerk ID identifies the operator initiating this transaction and should be a unique value defined for each employee within the client (see [Table 5.107](#) for record format and version number). This field is only required if the merchant participates in a program where operator level reporting is performed.

6.141 Original purchase data

This field is either zero, four, six, eight, 10, or 12-characters in length (see [Table 5.7](#) for record format and version number). It is broadly defined to accommodate other date-related requirements in the future. The length of the field determines how the host interprets it. At this time, it is used in the Interlink Merchandise Credit transaction where the date/time of the original purchase transaction is required. It is also used in the reversal of an Interlink Merchandise Credit Transaction. Currently, the only valid value for EBT Transactions is zero. [Table 6.55](#) provides a summary of the formats and uses of the various lengths defined within this field.

Table 6.55 Original purchase data

Length	Date and time format
0	Not in use (or EBT)
4	MMDD
6	YYMMDD (Visa International Standard)
8	MMDDhhmm (Interlink Return Transaction)
10	YYMMDDhhmm
12	YYMMDDhhmmss

6.142 PAN reference identifier

The PAN Reference Identifier (PRI) is a value assigned by Discover at the time of token provisioning and is associated with a specific mobile wallet.

6.143 Partial authorization indicator

This field contains a group of single character flags (see [Table 5.48](#) for record format and version number). This value indicates the merchant's level of participation in partial authorization transactions.

Table 6.56 Partial authorization indicator

Code	Description
Visa, Mastercard, Discover, PayPal and American Express (merchandise only)	
A	Partial Approval Supported
Discover only (merchandise & cash over)	
A	Merchandise can be partially approved Cash Over can be partially approved
B	Merchandise can be partially approved Cash Over must be fully approved or declined
C	Merchandise must be fully approved or declined Cash Over can be partially approved (only if merchandise fully approved)
D	Merchandise must be fully approved or declined Cash Over must be fully approved (if merchandise is approved) or declined
Visa only (estimated amount)	
E	Estimated Amount
F	Estimated Amount (partial approval supported)

6.144 Payment account reference

The Payment Account Reference (PAR) is a value assigned by the BIN Controller, which is defined as either an issuer or card brand. This field is associated directly with the cardholder's account. The PAR is considered a non-financial value that cannot be used to initiate a financial transaction.

This value enables merchants, acquirers, and payment processors to link a payment token to a cardholder's underlying payment account. It can be included on the authorization request if available. If received in the authorization response, the value must be included in Capture.

This value is valid for Visa, Mastercard, and Discover.

6.145 Payment facilitator/marketplace identifier

This is a subfield of Payment Facilitator, G3v066 (5.2.62). The value is assigned to the Service Provider during registration with the card brand and must be included on all transactions where the merchant has a relationship with a Payment Facilitator/Service Provider.

For Discover transactions, the value is not included because it is retrieved by the software from the merchant's profile. For Visa and Mastercard transactions, the value must be right justified and padded to a length of 11 bytes with leading zeroes. For example, if the Identifier is '123456', the value would be '00000123456'.

For Visa Marketplaces, the Marketplace ID must be included in this field.

6.146 Payment facilitator name*sub-merchant name

This 25-character field is a subfield of Payment Facilitator G3v066 (5.2.62) and must be included on all transactions where the merchant has a relationship with a Payment Facilitator. It has two usages.

Usage 1 – Payment Facilitator Name*Sub-Merchant Name

This usage is valid for Visa, Mastercard, and Discover.

For Payment Facilitators, the field contains two parts in a concatenation of two fields separated by an asterisk (*). The Payment Facilitator Name is three characters in length and is followed by the asterisk. The remainder of the field consists of the Sub-Merchant name.

For example, if the Payment Facilitator is "MONSTER FACILITATOR", and the Sub-Merchant is "BOB'S CAR WASH AND AUTO WAX", then it would be "MON*BOBS CAR WASH AND AUT". This field is required to be populated (not all spaces) for this usage.

Usage 2 – Marketplace Name

For Visa Marketplaces, the field simply contains the name of the Marketplace.

6.147 Payment service provider name

This is the name of the Payment Service Provider, Aggregator, or Facilitator. This field is required for Amex transactions that originate from an Aggregator, Payment Service Provider, or Facilitator.

It must contain no spaces. For example, if the aggregator name is 'Monster PSP', the value sent should be 'MonsterPSP'.

6.148 Payment transaction type identifier

This Mastercard field indicates the type of Funding/Payment Transaction taking place. It can be used for the following message types.

- Auth Request/0100
- Response/0110
- Auth Advice/0120
- Reversal Request/0400
- Response/0410
- Reversal Advice/0420

It should be set only for transactions with 'Transaction Code' ([6.201](#)) set to '5G'. Please refer to G3v036 ([5.2.32](#)).

Table 6.57 Payment transaction identifier

Code	Description
C01	Person to person
C02	Mastercard Rebate
C03	rePower Load Value
C04	Gaming Repay
C05	Other payment transaction
C06	Payment Credit Card Balance with Cash or Check

6.149 PayPass mobile device type

This two-character, Mastercard only field is required for Mastercard PayPass (contactless) transactions. It identifies the type of PayPass device used by the cardholder to initiate the transaction. This is applicable in Authorization Request/0100, Authorization Advice/0120, and Reversal Request/0400 MTIs.

This field is also known as Form Factor. Where practicable, the new codes with values 20-33 must be used. The mobile device type is obtained from the card in contactless tag 9F6E, bytes five and six. This tag can be present on both Mastercard contactless EMV and Mastercard contactless MSR cards. The value from bytes five and six should be converted from hex to ASCII and passed in the mobile device type in G3V060.

Note: If tag 9F6E is not provided by the card or if bytes five and six are not present or if bytes five and six are not valid values then the mobile device type value should be defaulted to "20".

Table 6.58 Mobile device type

Device type value	Device description	Example
00	Card (default)	

Device type value	Device description	Example
01	Mobile Network Operator (MNO) controlled removable secure element (SIM or UICC) personalized for use with a mobile phone or smartphone	
02	Key Fob	
03	Watch using a contactless chip or a fixed (non-removable) secure element not controlled by the MNO	
04	Mobile Tag	
05	Wristband	
06	Mobile Phone Case or Sleeve	
07	Mobile Phone or Smartphone with a fixed (non-removable) secure element controlled by the MNO (such as CDMA)	
08	Removable secure element not controlled by the MNO, for example, memory card personalized for use with a mobile phone or smartphone	
09	Mobile Phone or Smartphone with a fixed (non-removable) secure element not controlled by the MNO	
10	MNO controlled removable secure element (SIM or UICC) personalized for use with a tablet or e-book	
11	Tablet or E-Book with a fixed (non-removable) secure element controlled by the MNO	
12	Removable secure element not controlled by the MNO (such as memory card personalized for use with a tablet or e-book)	
13	Tablet or E-Book with fixed (non-removable) secure element not controlled by the MNO	
14	Mobile Phone or Smartphone with a payment application running in a host processor	

6.150 PayPass mobile domain server

This Mastercard only field indicates the Service Manager or program initiator of the Mastercard Mobile Remote Payments Program. It is applicable in Auth Request/0100 and Auth Advice/0120 MTIs.

Table 6.59 PayPass mobile domain server

Domain value	Domain server
0	No domain
1	Issuer domain
2	Acquirer domain

6.151 POS data code

The POS data code is a fixed string of 12 characters, representing Subfields 1 through 12, that indicate the condition, or state, of the POS device at the time of the transaction (see [Table 5.50](#) for record format and version number).

The information in the POS data code takes precedence over the values in the Account Data Source (ADSC) and the Cardholder Identification Code (CID) fields. Information in the POS data code should accurately indicate the condition of the POS device at the time of transaction. Even though the POS data code has precedence over the ADSC and CID fields, the ADSC and CID fields still need to be populated to match the condition of the transaction as closely as possible.

Group 3 Version 27 is mandatory for all transactions.

Please note that for all card brands, the POS Data Code values used in the original authorization request must also be used in the reversal.

The fields come in two types, static or dynamic.

Static Fields:

Static fields have the same value for every transaction. They do not typically change once the software and hardware are considered together in the environment in which they are deployed.

Example:

In Subfield 1 (Terminal Card Data Input Capability), say a terminal, its software, and the environment in which it is deployed have the value set at 2 - Magnetic stripe reader capability. For most cardholders, the magnetic stripe will work just fine. However, for a scenario where a cardholder's magnetic stripe is damaged and it will not swipe properly, the merchant has to enter it manually. This does not change the capability of the terminal, software, and environment.

Dynamic Values:

Dynamic fields can change based on the transaction scenario.

Example:

In Subfield 5 (Cardholder Present Data), for one transaction, the cardholder may be present (value 0), and for the next, the transaction is initiated by phone (value 3).

The definitions of subfields 1 through 12 and the allowed values are provided in the following subparagraphs.

6.151.1 Subfield 1 - Terminal card data input capability

This subfield indicates the highest-level capability of the device and its software used to originate this transaction. The value should be static depending on the card data input capabilities in the environment in which it is deployed.

Table 6.60 Subfield 1: Terminal data - card data input capability

Value	Description
0	Unspecified, data not available (INVALID-Internal Use Only)
1	Manual; no terminal; Voice auth/ARU
2	Magnetic stripe reader capability only
3	Bar code/ Payment code
4	Optical character reader (OCR) capability [MC, AX]
5	Integrated circuit card (ICC) capability and magnetic stripe reader
6	Key entry only capability; Mastercard recurring and installment transactions
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 entry capability
H	ICC Reader and Contactless Capability; Magnetic stripe & manual entry implied
M	PAN auto-entry via contactless chip
V	Other capability, [MC]
X	Reserved for private use

6.151.2 Subfield 2 - Terminal cardholder authentication capability

This subfield indicates the highest-level capability of the device and its software used to verify the Cardholder's identity at this terminal. The value is static depending on the terminal cardholder-authentication capabilities in the environment in which it is deployed.

Table 6.61 Subfield 2: terminal data - cardholder authentication capability

Value	Description
0	No electronic authentication capability
1	PIN entry capability
2	Electronic signature analysis capability
3	mPOS software-based PIN entry capability
5	Electronic authentication capability is inoperative
6	Other
9	Unspecified, data not available (INVALID - Internal Use Only)

6.151.3 Subfield 3 - Terminal card-capture capability

This subfield indicates if the terminal is capable of pulling the card into the device while the transaction is taking place. The value is static depending on the terminal card-capture capabilities in the environment in which it is deployed.

Table 6.62 Subfield 3: terminal data - card capture capability

Value	Description
0	No capture capability
1	Card capture capability
9	Unspecified, data not available (INVALID - Internal Use Only)

6.151.4 Subfield 4 - Terminal operating environment

This subfield indicates the terminal's location and indicates whether it is attended by the card acceptor. The value is static depending on the terminal's operating capabilities in the environment in which it is deployed.

Table 6.63 Subfield 4: terminal operating environment

Value	Description
0	No terminal used; Voice auth/ARU; Mastercard recurring/installment transactions
1	On card acceptor premises; attended terminal
2	On card acceptor premises; unattended terminal

Value	Description
A	Reauthorization for full amount (original transaction was token-based with a valid cryptogram; Discover only)
I	Incremental authorization (Discover Only)
P	Partial shipment purchase transaction (original transaction was token-based with valid cryptogram)
R	Recurring purchase transaction (original transaction was token-based with valid cryptogram)
T	PayButton (Discover only)

6.151.6 Subfield 6 - Card present data

This subfield indicates if the card is present at the point of service. The value is dynamic based on the card presence at the time of the transaction.

Table 6.65 Subfield 6: card present data

Value	Description
0	Card not present
1	Card present
W	Transponder, [AX]
X	Contactless Chip Transactions, including AMEX Expresspay
Z	Digital Wallet [AX]

6.151.7 Subfield 7 - Card data input mode

This subfield indicates the method used to capture information from the card. The value is dynamic based on the input mode at the time of the transaction.

Table 6.66 Subfield 7: card data - input mode

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	Manual input; no terminal; Voice auth/ARU
2	Magnetic stripe reader input
3	Bar code/Payment code
6	Key entered input
7	Payment Credential stored on file NOTE: This value is required for all Mastercard recurring transactions.

Value	Description
9	Unspecified, data not available (INVALID - Internal Use Only)
S	Other systematic verification
T	Electronic ticket environment, [AX]

6.151.9 Subfield 9 - Cardholder authentication entity

This subfield indicates the component or person who verified Cardholder Identity reported in Cardholder Authentication (Subfield 8). The value is dynamic based on the Entity that performed the Authentication at the time of the transaction.

Table 6.68 Subfield 9: cardholder authentication entity

Value	Description
0	Not authenticated
1	ICC – Offline PIN
2	Card acceptance device (CAD)
3	Authorizing agent – Online PIN
4	Merchant/card acceptor - signature
5	Other
9	Unspecified, data not available (INVALID - Internal Use Only)

6.151.10 Subfield 10 - Card data output capability

This subfield indicates the ability of the terminal and software to update or change the card. The value should be static depending on the terminal and software capabilities in the environment in which it is deployed.

Table 6.69 Subfield 10: card data output capability

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	None
2	Magnetic stripe write
3	ICC
S	Other

6.151.11 Subfield 11 - Terminal data output capability

This subfield indicates the ability of the terminal and/or software to print and/or display messages. This value is static depending on the terminal and/or software capabilities in the environment in which it is deployed.

Table 6.70 Subfield 11: terminal data output capability

Value	Description
0	Unspecified, data not available (INVALID - Internal Use Only)
1	None
2	Printing capability only
3	Display capability only
4	Printing and display capability

6.151.12 Subfield 12 - PIN capture capability

This subfield indicates the length of the PIN that the terminal is capable of capturing. The value is static depending on the capability of the terminal in the environment in which it is deployed.

Table 6.71 Subfield 12: PIN capture capability

Value	Description
0	No PIN capture capability
1	Unspecified, data not available (INVALID - Internal Use Only)
2	Reserved
3	Reserved
4	PIN capture capability four characters maximum
5	PIN capture capability five characters maximum
6	PIN capture capability six characters maximum
7	PIN capture capability seven characters maximum
8	PIN capture capability eight characters maximum
9	PIN capture capability nine characters maximum
A	PIN capture capability 10 characters maximum
B	PIN capture capability 11 characters maximum
C	PIN capture capability 12 characters maximum

6.152 POS environment indicator

This field provides additional information about Visa transactions.

Usage 1: Merchant stores payment credential for the first time

C - Credential on File

The merchant stores the payment credential for the first time with the intention of using it for subsequent Unscheduled Credentials on File (UCOF) transactions on the cardholder's behalf.

R - Recurring

The merchant stores the payment credential for the first time with the intention of using it for subsequent Recurring transactions on the cardholder's behalf.

I - Installment

The merchant stores the payment credential for the first time with the intention of using it for subsequent Installment transactions on the cardholder's behalf.

NOTE The value in G3v027 - POS Data Code (SF7 - Card Data Input Mode) should be populated with a value that reflects the actual entry mode for the transaction (i.e. manual input, key entered).

Usage 2: Merchant initiates a transaction using a stored payment credential**C - Credential on File**

The merchant submits a UCOF transaction on the cardholder's behalf.

R - Recurring

The merchant submits a Recurring transaction on the cardholder's behalf.

I - Installment

The merchant submits an Installment transaction on the cardholder's behalf.

NOTE The value in G3v027 - POS Data Code (SF7 - Card Data Input Mode) should be populated with a value of '7' for Credential on File.

6.153 Real time substantiation indicator

This one character Mastercard only field is used to indicate whether the merchant terminal verified the purchased items against an Inventory Information Approval System (IIAS). Please refer to G3v037 ([5.2.33](#)). This field is used for Authorization Request/0100 and Authorization Advice/0120 transactions only.

Table 6.72 Real time substantiation

Value	Description
0	Merchant terminal did not verify the purchased items against an IIAS
1	Merchant terminal verified the purchased items against an IIAS
2	Merchant claims exemption from IIAS based on the 90 percent rule

6.158 Record format

This one-character field identifies the message format with the TSYS Acquiring Solutions system (see [Table 5.5](#), [Table 5.4](#), [Table 5.6](#) for record formats and version numbers). The second-generation authorization format is specified by placing one of the defined values in the record format field. [Table 6.75](#) provides a brief summary of the current formats.

Table 6.75 Record format

Format	Description
D	Credit Card Authorization request messages (Groups I and III)
W	Encrypted Credit Card Authorization request messages (Group I and III)
Y	Tokenized Credit Card Authorization request messages (Groups I and III)
E	Credit Card authorization response messages (Groups I and III)
T	Debit/Electronic Benefits Transfer - EBT request messages (Groups I, II, and III)
X	Encrypted Debit/Electronic Benefits Transfer - EBT request messages (Groups I, II, and III)
Z	Tokenized Debit/Electronic Benefits Transfer - EBT request non-confirm messages (Groups I, II, and III)
U	Debit/Electronic Benefits Transfer - EBT response messages (Groups I, II, and III)
V	Debit/Electronic Benefits Transfer - EBT confirmation message

6.159 Registered user indicator

This field indicates if the cardholder is a registered user on a merchant's website (Discover transactions only). This field is required for Discover e-Commerce transactions.

Table 6.76 Registered user indicator

Code	Description
Y	The cardholder is a registered user with an online profile and login credentials
N	The cardholder is not a registered user, and may shop only as a guest

6.160 Registered user last profile date change

This field defines the date when the cardholder last voluntarily changed his or her registered profile (Discover transactions only). If the Registered User Indicator ([6.159](#)) value is **N**, this value should be space filled. Format: DDMMYYYY.

NOTE: This field is not valid for Visa Account Funding Transactions.

Table 6.79 Mastercard requested authorization characteristics indicator

Value	Description
N	Device is not Merit capable
Y	Device is Merit capable
P	Mastercard TIPS (Travel Industries Premiere Service)
R	Recurring Payment; Mastercard SIIP (Service Industries Interchange Program) for telecommunications and cable/satellite MCCs

6.163 Response code

This field contains a two-character response code indicating the status of the authorization request (see [Table 5.6](#) for record format and version number). The POS system must evaluate the response code and *NOT* the response text to determine the nature of a response message. [Table 6.80](#) provides a listing of currently defined response codes. **Do NOT** interpret all non-approved response codes as “DECLINED.”

AFD Completion Advice messages must include the Response Code returned in the AFD preauthorization response message.

Table 6.80 Response code

Response code	Authorization response message	Response definition
00	APPROVAL	Approved and completed
01	CALL	Refer to issuer
02	CALL	Refer to issuer-Special condition
03	TERM ID ERROR	Invalid Merchant ID
04	HOLD-CALL	Pick up card (no fraud)
05	DECLINE	Do not honor
06	ERROR	General error
07	HOLD-CALL	Pick up card, special condition (fraud account)
08	APPROVAL	Honor Mastercard with ID
10	PARTIAL APPROVAL	Partial approval for the authorized amount returned in Group III version 022
11	APPROVAL	VIP approval
12	INVALID TRANS	Invalid transaction
13	AMOUNT ERROR	Invalid amount
14	CARD NO. ERROR	Invalid card number
15	NO SUCH ISSUER	No such issuer
19	RE ENTER	Re-enter transaction

Response code	Authorization response message	Response definition
21	NO ACTION TAKEN	Unable to back out transaction
25	NO CARD NUMBER	Unable to locate the account number
28	NO REPLY	File is temporarily unavailable
30	MSG FORMAT ERROR	Transaction was improperly formatted
39	NO CREDIT ACCT	No credit account
41	HOLD-CALL	Lost card, pick up (fraud account)
43	HOLD-CALL	Stolen card, pick up (fraud account)
51	DECLINE	Insufficient funds
52	NO CHECK ACCOUNT	No checking account
53	NO SAVE ACCOUNT	No savings account
54	EXPIRED CARD	Expired card
55	WRONG PIN	Incorrect PIN
57	SERV NOT ALLOWED	Transaction not permitted-Card
58	SERV NOT ALLOWED	Transaction not permitted-Terminal
61	DECLINE	Exceeds withdrawal limit
62	DECLINE	Invalid service code, restricted
63	SEC VIOLATION	Security violation
65	DECLINE	Activity limit exceeded
75	PIN EXCEEDED	PIN tried exceeded
76	UNSOLIC REVERSAL	Unable to locate, no match
77	NO ACTION TAKEN	Inconsistent, reversed, or repeat data
78	NO ACCOUNT	No account
79	ALREADY REVERSED	Already reversed at switch
80	NO IMPACT	No Financial impact (used in reversal responses to decline originals)
81	ENCRYPTION ERROR	Cryptographic error
82	INCORRECT CVV	CVV data is not correct
83	CANT VERIFY PIN	Cannot verify PIN
85	CARD OK	No reason to decline
86	CANT VERIFY PIN	Cannot verify PIN
91	NO REPLY	Issuer or switch is unavailable
92	INVALID ROUTING	Destination not found
93	DECLINE	Violation, cannot complete
94	DUPLICATE TRANS	Unable to locate, no match
96	SYSTEM ERROR	System malfunction
A1	ACTIVATED	POS device authentication successful
A2	NOT ACTIVATED	POS device authentication not successful
A3	DEACTIVATED	POS device deactivation successful
B1	SRCHG NOT ALLOWD	Surcharge amount not permitted on debit cards or EBT food stamps

Response code	Authorization response message	Response definition
B2	SRCHG NOT ALLOWD	Surcharge amount not supported by debit network issuer
CV	FAILURE CV	Card Type Verification Error
D3	SECUR CRYPT FAIL	Transaction failure due to missing or invalid 3D-Secure cryptogram
E1	ENCR NOT CONFIGD	Encryption is not configured
E2	TERM NOT AUTHENT	Terminal is not authenticated
E3	DECRYPT FAILURE	Data could not be decrypted
EA	ACCT LENGTH ERR	Verification error
EB	CHECK DIGIT ERR	Verification error
EC	CID FORMAT ERROR	Verification error
HV	FAILURE HV	Hierarchy Verification Error
K0	TOKEN RESPONSE	Token request was processed
K1	TOKEN NOT CONFIG	Tokenization is not configured
K2	TERM NOT AUTHENT	Terminal is not authenticated
K3	TOKEN FAILURE	Data could not be de-tokenized
M0	DOM DBT NOT ALWD	Mastercard: Canada region-issued Domestic Debit Transaction not allowed
N3	CACHBACK NOT AVL	Cash back service not available
N4	DECLINE	Exceeds issuer withdrawal limit
N7	CVV2 MISMATCH	CVV2 Value supplied is invalid
P0	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P1	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P2	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P3	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P4	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P5	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P6	SERV NOT ALLOWED	Contact Merchant Services/Technical Support
P7	MISSING SERIAL NUM	The terminal has not yet completed the boarding process. The Serial Number has not been set up.
Q1	CARD AUTH FAIL	Card authentication failed
R0	STOP RECURRING	Customer requested stop of specific recurring payment
R1	STOP RECURRING	Customer requested stop of all recurring payments from specific merchant
R3	STOP ALL RECUR	All recurring payments have been canceled for the card number in the request

6.165 Returned Authorization Characteristics Indicator (ACI)

This one-character field contains the Returned Authorization Characteristics Indicator (ACI). This value provides information concerning the transactions' CPS qualification status. It is not recommended that the POS system attempt to interpret the meaning of this value. Instead, the POS system should extract whatever value is returned in this field and submit it in the data capture settlement record. The POS system should not interpret any relationship between this field and the presence of data in either the Transaction Identifier or Validation Code fields.

Table 6.81 Returned Authorization Characteristics Indicator (ACI)

Value	Description
A	CPS qualified
B	Tokenized e-commerce with mobile device
E	CPS qualified and Card Acceptor Data was supplied in the authorization request
F	CPS qualified for Visa Account Funding Transactions
I	CPS qualified incremental authorization request
J	Card Not Present, Recurring Bill Payment
C	CPS qualified for a self-service automated fuel dispense
K	CPS qualified and included an address verification request in the authorization request (Unable to read magnetic stripe)
M	Meets national payment service requirements with no address verification: Direct Marketing
N	Not CPS qualified
P	CPS qualified and accepted for Preferred Customer qualification or 3D Secure validation failure for T&E transaction
R	Recurring or Installment Payments, Healthcare and select developing market MCCs may submit the ACI of R to bypass AVS requirements
S	CPS attempted for Preferred e-Commerce (3D Secure)
T	Transaction cannot participate in CPS
U	CPS qualified for Preferred e-Commerce (3D Secure)
V	CPS qualified and included an address verification request in the authorization request
W	CPS qualified for Basic e-Commerce (Non-3D Secure)
<SPACE>	If "Y" sent and transaction not qualified (VAS downgrade)

6.166.5 Retrieval reference number

In AFD Completion Advice messages and reversal transactions, this field must contain the 12-character numeric Retrieval Reference Number returned in the original authorization response. For debit non-confirm purchase, EBT, or ATM authorization transactions, this field contains three parts. The first four characters must be the Julian Date format “yddd”. Positions 5-6 must be the current hour in GMT time zone. Positions 7-12 are a unique POS generated number.

6.167 Reversal and cancel data II

The following sub-fields are required when performing an ATM, Debit Non-Confirm, or EBT Authorization request, or when performing an Authorization Reversal request, a Debit or EBT Reversal/Cancel request, or an AFD Completion Advice message (see [Table 5.7](#) for record format and version number).

This field does not contain data for any other transaction types.

6.167.1 System trace audit number

This field must contain the six-character numeric System Trace Audit Number returned in the confirmation data field of the debit authorization response record for the transaction to be canceled or reversed. For a debit non-confirm purchase transaction, this number uniquely identifies a cardholder transaction. The trace number remains unchanged for all messages throughout the life cycle of the transaction. For example, the same trace number is used in an authorization request and response and in a subsequent reversal request and response message.

6.167.2 Network identification code

When returned in a debit authorization response message, this value designates the debit network through which the request was processed.

When performing an Authorization Reversal, this field must contain the one-character Network Identification Code returned in the confirmation data field of the authorization response record for the item to be canceled or reversed. For a debit non-confirm or ATM authorization transactions, the network identification code field will be space-filled.

6.168 Reversal, incremental, MIT transaction ID

When performing either an Incremental Authorization, Authorization Reversal, or Merchant Initiated Transaction, this 15-character field must contain the Transaction Identifier returned in the original authorization response record (see [Table 5.5](#) for record format and version number). For all other transaction types, this field should be submitted without data.

Merchant Initiated Transactions [MIT]

Discover

Visa

A standing instruction is an agreement between the cardholder and the merchant for the provision of goods or services. This MIT must contain the original transaction identifier and is for the following types of merchant initiated transactions: credential on file, recurring, and installment. Refer to G3v071 - POS Environment Indicator for a description of valid values.

An Industry Practice MIT is a follow-up to an original cardholder merchant interaction that could not be completed with a single transaction. If an Industry Practice MIT transaction is sent, it must include the transaction identifier of the original transaction. The message reason code is also required for the Industry Practice MIT and can be of type: incremental, resubmission, delay charges, reauthorization, and no show. Refer to G3v056 - Message Reason Code for a description of valid values.

This code can be present in the reversal request for Mastercard transactions to signify the reason for the reversal.

Value	Description
17	Valid for Mastercard <u>Non-Debit</u> Reversal Requests Only. This value is used in a reversal message to indicate that the cardholder cancelled the transaction after an authorization request was sent.
32	Partial reversal
34	Card not present Suspect Fraud

6.170 Secondary amount

This is a variable length field from zero to 12-character numeric in length (see [Table 5.5](#) for record format and version number). This field contains a secondary transaction amount related to the transaction type and industry indicated. The transaction amount is to be presented with an implied decimal point. For example, \$.01 could be represented as 1, 01, or 001. The

allowable number of significant digits, as well as the positioning of any implied decimal point, are dictated by the Currency Code designated. In the United States, the allowable number of significant characters is seven with an implied decimal point.

In industries where cash back is permitted on purchase transactions, this field could contain a cash back amount.

For Authorization Reversal transactions, this field must contain the final settlement amount for a partial reversal, and is not used for a full reversal.

6.171 Secondary PIN block

This Visa-usage field contains a new PIN to replace an existing PIN. It is encrypted and formatted as a block of 16 hexadecimal digits. (A new PIN is chosen to replace the current PIN when the cardholder does not remember the current PIN, or the current PIN is compromised, or just wants a new PIN.)

6.172 Service development indicator

The Service Development Indicator indicates merchant participation in a Visa Service Development program (see [Table 5.27](#) for record format and version number).

Table 6.82 Service development indicator

Value	Description
5	Transponder Indicator - transactions from participating merchants use radio frequency transponder to exchange information with the terminal (supports both Visa and American Express transponder programs).
6	Relationship Participant Indicator - indicates merchant's participation in the Visa Relationship Manager Service.
7	Deferred Billing Indicator - notifies issuer that transaction being submitted bills the cardholder for merchandise that was received within the past 90 days.

6.173 Settlement amount

When performing an Authorization Reversal transaction, this field must contain a one to 12-character numeric transaction amount to be settled. The Settlement Amount must be less than the Total Authorized Amount (Transaction Amount). The Settlement amount is submitted in the Secondary Amount field ([Section 6.170](#)).

Table 6.83 Key Fields and Values for Visa Debt Repayment Program

Location	Field Name	Value
Group 1	Market specific data identifier	B - Bill Payment Transaction
Group 1	Transaction code	5B - Bill Payment Transaction (Credit) or 9B - Bill Payment Transaction (Debit)

6.179 Spend qualified indicator

This value is optionally sent by Visa in an authorization response message. The merchant's interchange rate may be determined by the value of the Spend Qualified Indicator. Valid values are shown below in Table 4.70. (see [Table 5.117](#) for record format and version number).

Table 6.84 Spend qualified indicator valid values

Code	Description
B	Base spend assessment threshold has been met.
N	Spend qualification threshold has not been met.
Q	Spend qualification threshold has been met.

6.180 Store number

This four-character numeric field contains a number assigned by the signing member, processor, or merchant to identify a specific merchant store within the TSYS Acquiring Solutions' system (see [Table 5.5](#), [Table 5.6](#) for record formats and version numbers). This field must be right-justified and zero-filled.

This field should be configured as a parameter.

6.181 Sub-merchant city

This subfield of Payment Facilitator, G3v066 ([5.2.62](#)) is 13 bytes in length. For Visa and Mastercard transactions, enter the city of the sub-merchant location (not the Payment Facilitator location).

For Discover transactions, enter the location where the transaction took place; this may or may not be the sub-merchant location.

For Direct Marketing merchants and preferred customer/passenger transport and card not present transactions, this field must contain a phone number for merchant customer service in format XXX-XXXXXXX. The dash is required. This field can also be used for e-mail or a URL.

6.182 Sub-merchant country code

This subfield of Payment Facilitator, G3v066 ([5.2.62](#)) consists of three digits and indicates the country of the Sub-Merchant location (not the Payment Facilitator location) using ISO-specified numeric codes. It is used for Visa, Mastercard, and Discover transactions and must be included on all transactions where the merchant has a relationship with a Payment Facilitator.

Note that this field must be populated if the Sub-Merchant Postal Code (6.184) or Sub-Merchant State/Province Code (6.185) is populated.

6.183 Sub-merchant identifier

This 15-digit field, assigned by the Payment Facilitator or the Acquirer, must be provided on all Visa or Mastercard transactions where the merchant has a relationship with a Payment Facilitator. Discover does not provide a sub-merchant identifier. The value must be left justified with trailing spaces. For example, if the Identifier is '123456', the value would be '123456 '. This is a subfield of the Payment Facilitator group G3v066 (5.2.62).

6.184 Sub-merchant postal code

This 9-character field indicates the postal code of the Sub-Merchant location (not the Payment Facilitator location). This is a subfield of Payment Facilitator, G3v066 ([5.2.62](#)) and must be included on all transactions where the merchant has a relationship with a Payment Facilitator. It is used for Visa, Mastercard, and Discover transactions.

Note that this field must be populated if the Sub-Merchant Country Code (6.182) or Sub-Merchant State/Province Code (6.185) is populated.

6.185 Sub-merchant state/province code

This 2-character field indicates the state or province code of the Sub-Merchant location (not the Payment Facilitator location). If the Sub-Merchant is non-U.S. and non-Canadian, this field should be '00'. This is a subfield of Payment Facilitator, G3v066 ([5.2.62](#)) and must be included on all transactions where the merchant has a relationship with a Payment Facilitator. It is used for Visa, Mastercard, and Discover transactions.

Note that this field must be populated if the Sub-Merchant Country Code (6.182) or Sub-Merchant State/Province Code (6.185) is populated.

6.186 System trace audit number

This six-character numeric field contains a unique host message identifier assigned by the authorizing system and returned in debit card response messages (see [Table 5.4](#), [Table 5.8](#) for record formats and version numbers). This field must be recorded and submitted in the debit confirmation record.

6.187 Terminal capability profile

This six-character field contains a code indicating the card data being supplied and security capabilities of the terminal (see [Table 5.19](#) for record format and version number). This field is supplied as ASCII-coded binary data. Refer to [7.8](#) for information concerning the conversion of binary to ASCII data.

6.188 Terminal country code

This fixed length, 3-character, 2 byte numeric field is carried in EMV transactions and identifies the country where the merchant terminal is located. A leading zero is required to pad the first unused half-byte of this field. The zero is filler and is not part of the code.

6.189 Terminal number

This four-character numeric field contains a number assigned by the signing member, processor, or merchant to identify a unique terminal within a merchant location (see [Table 5.5](#), [Table 5.6](#) for record formats and version numbers). Because the terminal number submitted in the authorization request is echoed back to the terminal in the authorization response, this field can additionally be used in controller-based environments to assist in the matching and routing of authorization request and response messages at the point of concentration.

This field should be configured as a parameter.

6.190 Terminal transaction date

This fixed length, 6-character numeric field is carried in EMV transactions and contains the local date at the terminal on which the transaction was authorized. This field is used in the calculation of the cryptogram. The format is YYMMDD, where:

YY = 00-99

MM = 01-12

DD = 01-31

6.191 Terminal transaction time

This fixed length, 6 character numeric field is carried in EMV transactions and contains the local time at the terminal on which the transaction was authorized. This field is used in the calculation of the cryptogram. The format is hhmmss, where:

hh = 00-23

mm = 00-59

ss = 00-59

Byte	Length	Format	Contents
			For Byte #1 - 0, 1, 6, and 7
			0 <= Time Zone Region <= 12
			For Byte #1 - 2 to 5
			0 <= Time Zone Region <= 48

6.195 TLV data

This variable length field is composed solely of hexadecimal characters (0-9, A-F or a-f). Each pair of characters represents one byte of information. The string of characters represents a series of TLV data that represent the information passed between the card and the terminal. Each item has:

- TAG - one or two bytes (two or four characters)
- LENGTH - one byte (two characters)
- VALUE - one or more bytes (two or more characters)

The length byte always represents the number of bytes directly following the length. Please refer to [Appendix A](#) for more information.

6.196 Token

This is the Token received from the TSYS Host when a request for token (G3v053) is sent. The token is formatted as a card number, with the last 4 digits preserved. Other characters in the number will be letters rather than numbers.

The token will be sent without card verification with Transaction Code 5T ([6.201](#)).

With other Transaction Codes, the token is sent and the usual transaction request is also processed ([6.163](#)).

6.197 Token status

This value indicates the status of retrieval of the token. In some cases, the transaction may still be processed even though the request for token was not successful. Values can be as indicated below.

Table 6.86 Token status

Value	Description
0	Token retrieval was successful and is included
1	Terminal not configured to receive a token
2	Terminal was not authenticated

6.201 Transaction code

This field contains a two-character code identifying the type of authorization or function being requested (see [Table 5.5](#) for record format and version number).

In conditions where an authorization request has been submitted to the host but no response was ever received, the transaction code should be converted to its corresponding “Repeat” value and resubmitted for authorization.

If the transaction request is made using a TSYS token rather than an account number, the 'Token Purchase' column below specifies whether the transaction code can be used with Record Format 'Y'. Please refer to [Section 5.1.1](#) for more details. This applies to TSYS Tokens only and not Card Brand Tokens.

Table 6.87 Transaction code

Transaction code	Repeat code	Transaction type	Comments	Token purchase
54	64	Purchase	Standard Authorization Request	N
55	65	Cash Advance	Use in Banks and Financial Institutions Only (Visa, Mastercard, Discover only).	N
56	66	Card Not Present	Used primarily in Direct Marketing, Mail, and Telephone Order Environments	Y
57	67	Quasi-Cash	Used for purchase of semi-cash items such as casino chips, travelers check, stamps. (Visa and Mastercard)	N
58	68	Card Authentication	To determine if an account is open for use or to verify cardholder information. Transaction amounts must be zero filled. AVS and CVV2 may be attempted. (Visa, Mastercard, American Express, Discover and PayPal only)	Y
59	69	Online Authorization Reversal	Used to reverse a completed credit authorization prior to batch settlement.	Y
5A	6A	Store and Forward Authorization Reversal	Same as code “59,” except the reversal is being submitted after batch settlement occurred	Y
5B	6B	Bill Payment Transaction	By Credit Card - Visa only	Y
5C		Credit Advice	Completion Advice; for example, an AFD final sale amount (Visa and Mastercard only)	Y

Transaction code	Repeat code	Transaction type	Comments	Token purchase
5T		Token Request	This indicates a request for TSYS Token only. No card verification will be performed. (Group III version 053 is needed)	N
5V	6V	Bill Pay Reversal - Credit	Used to reverse a Bill Pay transaction that was processed using a credit card	Y
9V		Bill Pay Reversal - Debit	Used to reverse a Bill Pay transaction that was processed using a debit card	N
84		Private Label: Purchase	Private Issue Card	N
85		Private Label: Cash Advance	Private Issue Card	N
86		Private Label: Card Not Present	Private Issue Card	Y
87		Private Label: Quasi-Cash	Private Issue Card	N
88		Private Label: Card Authentication	Private Issue Card	Y
92		Food Stamps: Return	Electronic Benefits Transfer	N
93		Direct Debit: Purchase	Standard Debit Authorization Request	N
94		Direct Debit: Purchase Return	Debit Refund Transaction (Full or Partial Amount)	N
96		Cash Benefits: Cash Withdrawal	Electronic Benefits Transfer	N
98		Food Stamp: Purchase	Electronic Benefits Transfer	N
9A		Direct Debit: Balance Inquiry	Debit Balance Inquiry	N
9B		Bill Payment Transaction	By Debit Card - Visa only	N
9E		Food Stamps: Electronic Voucher	Electronic Benefits Transfer	N
9F		Cash Benefits: Purchase or Purchase with Cash Back	Electronic Benefits Transfer	N
9G		Debit Account Funding Transaction (Visa), Debit Payment Transaction (MC)	Debit card used for payment of account to account transactions	N

Transaction code	Repeat code	Transaction type	Comments	Token purchase
9H		Debit Account Funding Transaction Return (Visa), Debit Payment Transaction Return (MC)	Debit card return for account to account transactions	N
9J		Debit Cardholder Funds Transfer (Visa)	Debit card used for payment of cardholder funds transfer	N
9K		Debit Cardholder Funds Transfer Return (Visa)	Debit card return for cardholder funds transfer	N
9L		EBT Food Stamp Balance Inquiry	Balance Inquiry (Group III version 022 needed)	N
9M		EBT Cash Benefits Balance Inquiry	Balance Inquiry (Group III version 022 needed)	N
A3		Automatic Reversal: Direct Debit Purchase (for use in limited availability)	Used in Controller-based environments only (optional)	N
A4		Automatic Reversal: Direct Debit Purchase Return (for use in limited availability)	Used in Controller-based environments only (optional)	N
B1		ATM Cash Disbursement	Cash disbursement from the specified account type	N
B2		ATM Balance Inquiry	Available balance of the specified account type	N
B3		ATM Deposit	ATM deposit to the specified account type	N
B4		ATM Cardholder Account Transfer	ATM transfer funds from one cardholder account to another cardholder account. Only Domestic U.S. transactions.	N
C1		ATM Cash Disbursement reversal	Reversal of cash disbursement request	N
C3		ATM Deposit Reversal	Reversal of ATM deposit request	N
C4		ATM Cardholder Account Transfer Reversal	Reversal of ATM account transfer requests	N
C8		ATM Adjustment Up (Credit)	Used in ATM messages to request a positive (credit) financial adjustment to the original transaction amount.	N

Transaction code	Repeat code	Transaction type	Comments	Token purchase
C9		ATM Adjustment Down (Debit)	Used in ATM messages to request a negative (debit) financial adjustment to the original transaction amount.	N
CR	CS	Purchase Return Authorization	Used for a purchase return authorization. Currently, Visa is the only card brand that supports on-line purchase return authorizations.	N
CV	CW	Purchase Return Authorization Reversal	Used to reverse a purchase return authorization. Currently, Visa is the only card brand that supports on-line purchase return authorizations.	N
FR		Credit Payment Transaction Return (MC)	Return a credit payment NOTE: This code is used to process account funding payment transactions for TSYS Private Label.	N
G2		Gift Card Close Card NOTE For use with Fifth Third Gift Card only	Closes a gift card	N
G3		Gift Card Balance Inquiry NOTE For use with Fifth Third Gift Card only	Remaining balance on a gift card	N
G4		Gift Card Purchase/Redemption NOTE For use with Fifth Third Gift Card only	Purchase/redemption transaction on a gift card	N
G5		Gift Card Return/Refund NOTE For use with Fifth Third Gift Card only	Return/refund transaction on a gift card	N
G6		Gift Card Add Value/Load Card NOTE For use with Fifth Third Gift Card only	Add or load value to a gift card balance	N

6.203 Transaction fee amount

Transaction Fee Amount is used in PIN POS and credit transactions to carry the acquirer-assessed surcharge for informational purposes only (see [Table 5.46](#) for record format and version number). This field can be zero length or nine alphanumeric characters in length. The format of the nine characters is “annnnnnnn”, where “a” is either “D” for debit or “C” for credit and “nnnnnnnn” is the numeric fee amount with the decimal implied.

This field must also be present in advice and reversal messages. This field is applicable for Visa, Mastercard, and Discover credit transactions only.

Example: “D00000150” is a \$1.50 transaction fee amount debited against the cardholder's account. This takes the surcharge amount from the cardholder's account. A prefix of ‘C’ would put the amount back to the cardholder account. The same value must be used in originals and reversals.

6.204 Transaction identifier

This 15-character field can contain a Transaction Identifier (Visa, American Express, PayPal or Discover) or Reference Number (Mastercard) (see [Table 5.6](#) for record format and version number). The POS device does not attempt to interpret the meaning of any data appearing in this field. Data returned in this field is recorded and submitted as part of the data capture settlement format.

For incremental authorization requests, the Transaction ID must be the same Transaction ID returned in the original authorization response.

If “MAV” is in positions 5-7 of this field, the transaction should not be submitted for capture.

6.205 Transaction integrity class

This value may be provided in the response of purchase and purchase with cash back transactions by Mastercard. It encompasses the fundamental safety and security of credit transactions, including the assessment of both the validity of the card and the cardholder. Some transactions are inherently more secure than others. For example, EMV chip cards are more secure than magnetic stripe cards. There will be nuances across both the technology (card) and the Cardholder Verification Method (cardholder), but the combination will be assessed across the spectrum to determine the overall integrity of each transaction.

This value is not used in PIN debit or reversal transactions.

NOTE This field is required when included by Mastercard. Effective in April 2019, Mastercard will incorporate the Transaction Integrity Class in the interchange process.

Table 6.88 Transaction integrity class

Classification	Description	Value
Card and Cardholder Present	EMV/Token in a Secure, Trusted Environment	A1
	EMV/Chip Equivalent	B1
	Mag Stripe	C1
	Key Entered	E1
	Unclassified	U0
Card and/or Cardholder Not Present	Digital Transactions	A2
	Authenticated Checkout	B2
	Transaction Validation	C2
	Enhanced Data	D2
	Generic Messaging	E2
	Unclassified	U0

6.206 Transaction sequence number

This four-character numeric field contains a terminal-generated transaction sequence number to be submitted in all authorization request messages (see [Table 5.5](#), [Table 5.6](#) for record formats and version numbers). This number is echoed back to the terminal for purposes of assisting in the matching of authorization request and response messages. This value must be in the range of 0001 - 9999 and is incremented on each authorization request message. This number is automatically incremented from 9999 to 0001.

6.207 Transaction status

This is a 1-character code indicating the purpose or status of the request. This field will be accepted for any card brand, but will be used in Mastercard or Discover transactions only, as indicated in the table below.

This field is required for Transit merchants who wish to identify Transit Aggregated Transactions.

Value	Description	MC	D
0	Normal request (original presentment)	X	X
2	<i>SecureCode</i> Phone Order	X	
3	ATM Installment Inquiry	X	
4	Preauthorized request	X	X

Value	Description	MC	D
5	Time Based Payment Authorization Request—Brazil domestic transactions	X	
6	ATC Update	X	
8	Account Status Inquiry Service (ASI)	X	
9	Tokenization Request/Notification	X	
A	Re-authorize for Full Amount		X
G	Transit Aggregated Transaction		X
I	Incremental Authorization		X
P	Partial Shipment		X
R	Recurring Payment		X

6.208 Transit transaction type indicator

This field contains a two-character numeric value to identify the type of transit transaction.

Table 6.89 Transit transaction type indicator

Value	Description
01	Prefunded
02	Real-time Authorized
03	Post-Authorized Aggregated
04	Authorized Aggregated Split Clearing
05	Other
07	Debt Recovery
06, 08-99	Reserved for future use

6.209 Transportation mode indicator

This Mastercard field used in Auth Request/0100 and Auth Advice/0120 transactions only, contains a two digit value to identify the mode of transportation used. Please refer to G3v054 ([5.2.50](#)).

Table 6.90 Transportation mode indicator

Value	Description
00	Unknown
01	Urban Bus
02	Interurban Bus

6.212 UCAF collection indicator

NOTE It is recommended that G3v072 (6.77) be used to send UCAF Collection Indicator values.

This Mastercard only field indicates the merchant's support and usage of UCAF (see [Table 5.33](#) for record format and version number). The UCAF Collection Indicator is required on all Mastercard SecureCode ecommerce credit transactions.

Mastercard's processing rules allow merchants to gain a liability shift and interchange benefit if they submit their electronic commerce transactions for cardholder authentication. Effective November 8, 2016, merchants must provide the described value in either of the following:

- Electronic Commerce Security Level Indicator (6.77) in G3v072) - This usage requires all three positions and is recommended. UCAF Authentication Data (6.211) must still be sent in G3v019.
- UCAF Collection Indicator (6.212 in G3v019) - This field allows only the UCAF Collection Indicator and is one position, fixed. The Security Protocol and Cardholder Authentication values are not included in this usage, and will be derived internally by TSYS software using other elements of the transaction. Note that this can result in inaccuracies based on the transaction values and the nature of such derivation.

NOTE If the POS Software should send position 3 in both G3v019 and G3v072, the data in the latter field will take precedence.

If the merchants do not pass the appropriate authentication detail in UCAF Authentication Data (6.211), demonstrating they actually authenticated or attempted to authenticate the cardholder, Mastercard will downgrade the Authorization Request/0100 message and forward it to the Issuer. The correct values will be returned in the response message in the Electronic Commerce Security Level Indicator in G3v072 (6.77), whether downgraded or not. It is critical to have the proper indicators during settlement.

The SecureCode functionality is not applicable for Full Financial/0200 Transactions.

Table 6.91 UCAF collection indicator, position 3

Value	Description
0	UCAF data collection is not supported by the merchant or a SecureCode merchant has chosen not to undertake SecureCode on this transaction
1	UCAF data collection is supported by the merchant and UCAF data must be present (G3v019 - UCAF Authentication Data must be present and contain an attempted AAV for Mastercard SecureCode)

Table 6.92 Transaction Data Condition Code

Code	Description
02	Card Present-Magnetic Stripe/Discover ZIP
03	Card Present – Magnetic Stripe/Discover Zip
04	Invalid - CVV/DCVV/iCVV contains some or all blanks
05	Card Present - Contactless Chip Card
06	Card Present – Digital 1
20	Card Present – Magnetic Stripe/Discover Zip
30	Card Present –Magnetic Stripe/Discover Zip
40	Invalid – CVV/DCVV/iCVV contains some or all blanks
50	Card Present – Chip Card
60	E-commerce – Discover ProtectBuy
70	Card Not Present - Digital 2
71	Card Not Present - Digital 4
72	Card Not Present – Digital 3
74	Card Not Present – Digital (Other)
80	Card Present – Digital 2
81	Card Present – Digital 4
82	Card Present – Digital 3
84	Card Present – Digital (Other)
99	Invalid – POS Entry Mode/MCC is invalid
00	Keyed Entry/Card Not Present/E-commerce

6.214.2 Non-Discover usage

This optional four-character field can contain specific information generated by the card issuer (see [Table 5.6](#) for record format and version number). The POS device should not attempt to interpret the meaning of any data appearing in this field. Data returned in this field is recorded and submitted as part of the data capture settlement format.

6.215 Verification code (CVV2, CVC2, CID)

This six-character field is used in assigning a value that assists in authenticating the physical presence of a Visa, Mastercard, Discover, PayPal or American Express credit card (see [Table 5.13](#) for record format and version number). Card Verification is not contained in the magnetic stripe information nor does it appear on sales receipts; it is an additional three to four-character value, printed on the front or back of Visa, Mastercard, Discover, PayPal and American Express cards. This field is used to support the following card verification programs.

- Visa - Card Verification Value 2 (CVV2)
- Visa - Dynamic Token Verification Value (Positions 3-6)
- Mastercard - Card Validation Code 2 (CVC2)
- Mastercard - Dynamic Token Verification Value (positions 3-6)
- American Express - Cardholder Identification Code (CID)
- Discover/PayPal - Cardholder Identification Code (CID)

Table 6.93 Verification code (CVV2, CVC2, CID)

Position	Code	Description
1	0	Verification Code is intentionally not provided
	1	Verification Code is present
	2	Verification Code is present but illegible
	9	Cardholder states that no Verification Code is present on the card
2	0	Only the normal Response Code should be returned
	1	Response code and the Verification Code result code should be returned
3-6		<p>Verification Code as printed on the card, right-justify/space-fill entry</p> <p>If Position 1 = 0, 2, or 9, positions 3-6 should be space-filled</p> <p>If the Verification Code is part of an encrypted (Record Format = 'W') transaction, positions 3-6 should be space-filled.</p> <p>Visa or Mastercard</p> <p>This 3-digit value may be used in positions 3-6 for Visa or Mastercard tokenized e-commerce transactions. Please refer to G3v062 Card Brand Tokens for more information.</p>

If Verification Code is sent as part of an encrypted transaction (Record Format = 'W'), Positions 1 and 2 still need to be present even though the Verification Code is sent in the Customer Data field.

NOTE:

- If Position 1 = 1, then Position 2 should be set to 0 or 1.
- If Position 1 = 0, 2, or 9, then Position 2 should be set to 0.

6.216 Verification code result code

This zero or one-character field contains the host returned CVV2/CVC2/CID Result Code as requested (see [Table 5.14](#) for record format and version number).

The merchant should expect to receive a Card Validation Code Result when submitting a Dynamic Token Verification Value in [G3v007](#) for Mastercard or Visa tokenized e-commerce transactions. Please refer to [G3v062](#) Card Brand Tokens for more information.

[Table 6.94](#) provides a listing of current CVV2/CVC2/CID Result Codes:

Table 6.94 Verification code result code

Code	Description
M	CVV2/CVC2/CID - Match
N	CVV2/CVC2/CID - No Match
P	Not Processed
S	Merchant has indicated that Verification Code is not present on card
U	Issuer is not certified and/or has not provided Visa encryption keys

6.217 Version ID

The Version ID provides a unique value to identify the version of software (see [Table 5.35](#) for record format and version number). This number is provided by TSYS Acquiring Solutions during certification.

6.218 Visa contactless

This field contains data from Visa Contactless 'payWave' cards. The group has 7 subfields separated by field separators. If a subfield is absent, the field separator must be present with no data in that subfield. (see [Table 5.81](#) for record format and version number).

Data element	Description
Amount Authorized	This field contains the amount of the transaction (cryptogram amount) used by the card to generate the cryptogram. For U.S. processors, the expected amount value is 0.
Application Cryptogram	This field contains the cryptogram used for authentication of the transaction.
Application Transaction Counter	This field contains a count of the transactions performed within the card application. The count is incremented by one each time a transaction is initiated.
Customer Exclusive Data	Description of this field will be included in the program documentation.
Form Factor Indicator	This field contains indicators about the attributes of cardholder's device and the technology used for communication between the cardholder's device and the acquiring POS device.
Issuer Application	This field contains the issuer application data transmitted from the card to the issuer and is updated by the issuer in the response messages.
Unpredictable Number	This field contains the number used in the generation of the cryptogram for contactless transactions.
Card Sequence Number	This field contains a sequence number that distinguishes between separate cards having the same primary account number.

6.219 Voucher approval code (EBT)

This zero or six alphanumeric character field contains the Voice Authorization Approval Code sent in the Request message for EBT/Electronic Voucher transactions (see [Table 5.23](#) for record format and version number). Please note that the Approval Code ([Section 6.24](#)) returned in the Response message is to be stored and submitted in the settlement data capture record.

NOTE: Cash benefits transactions do not use the Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields; food stamp transactions must use the FCS ID; and Electronic voucher transactions require Electronic Voucher Serial Number, FCS ID, and Voucher Approval Code fields.

6.220 XID

This 40-character field contains a value assigned to a SET or 3-D Secure transaction as a unique transaction identifier (see [Table 5.17](#), [Table 5.29](#) for record formats and version numbers). If an Acquirer has opted not to return the card account number to its merchants for SET or 3-D Secure transactions, the Acquirer can utilize the XID field to identify the transaction for queries or dispute resolution without divulging the credit card account number. This field contains a 40-character ASCII representation of a 20-character numeric binary field. Refer to [7.8](#) for instructions on performing the necessary binary to ASCII data conversion.

Chapter 7

Control and character sets

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7.1 Introduction

The following subsections define the authorization request record character set and the character sets used for Track one and Track two data encoded on the magnetic stripes.

The authorization request records are generated with characters defined by ANSI X3.4-1986. The data stored on the cardholder's card in magnetic or optical form must be converted to the ANSI X3.4 character set before transmission to TSYS Acquiring Solutions. [Section 7.2](#) provides Track One character set definition. [Section 7.3](#) provides Track Two character set definition. [Section 7.4](#) provides the ANSI X3.4-1986 and ISO 646 character set definitions. [Section 7.5](#) provides a cross-reference between the Track one, Track two, and ANSI X3.4 character sets. [Section 7.6](#) describes the method for generating and checking the Mod-10 Luhn check digit for credit card account numbers. [Section 7.7](#) describes the method for generating the LRC byte for the authorization request message and for testing the magnetic stripe LRC byte.

The POS device must perform the following operations on Track read data before it can be used in an authorization request message.

1. The LRC must be calculated for the data read from the Track and compared to the LRC read from the Track. The Track data is assumed to be read without errors when no character parity errors are detected and the calculated and read LRCs match.
2. The starting sentinel, ending sentinel, and LRC are discarded.
3. The character codes read from the magnetic stripe must be converted from the encoded character set to the set used for the authorization request message. The characters encoded on Track One are six bit plus parity codes and the characters encoded on Track Two are four bit plus parity codes, with the character set used for the request message defined as seven bit plus parity code.

All characters read from a Track must be converted to the request message character set and transmitted as part of the request. The converted Track data cannot be modified by adding or deleting non-framing characters and must be a one for one representation of the characters read from the Track.

7.2 Track one character definition

[Table 7.1](#) provides the ISO 7811-2 Track One character encoding definitions. This “standards” format is a sample guideline for expected credit card Track encoding. Private issue cards can differ in the way they are encoded.

Each character is defined by the six bit codes listed in [Table 7.1](#).

Track One can be encoded with up to 79 characters as shown in [Figure 7.1](#).

Table 7.1 ISO 7811-2 track one character encoding definitions

SS	FC	PAN	FS	Name	FS	Date	Discretionary Data	ES	LRC
----	----	-----	----	------	----	------	--------------------	----	-----

Track One Character Definition:

Field	Description	Length	Format
SS	Start Sentinel “%”	1	A/N
FC	Format Code (“B” for credit cards) “B”	1	A/N
PAN	Primary Account Number	19 max	NUM
FS	Field Separator “^”	1	A/N
Name	Card Holder Name	2-26 max	A/N
FS	Field Separator “^”	1	A/N
Date	Expiration Date (YYMM)	4	NUM
SVC CD	Service Code	3	A/N
Discretionary Data	Optional Issuer Data	variable	A/N
ES	End Sentinel “?”	1	A/N
LRC	Longitudinal Redundancy Check	1	
	Total cannot exceed 79 bytes	79 max	

BIT NUMBER				b6	0	0	1	1
				b5	0	1	0	1
b4	b3	b2	b1	ROW/COL	0	1	2	3
0	0	0	0	0	SP	0	(a)	P
0	0	0	1	1	(a)	1	A	Q
0	0	1	0	2	(a)	2	B	R
0	0	1	1	3	(c)	3	C	S
0	1	0	0	4	\$	4	D	T
0	1	0	1	5	(%)	5	E	U
0	1	1	0	6	(a)	6	F	V
0	1	1	1	7	(a)	7	G	W
1	0	0	0	8	(	8	H	X
1	0	0	1	9	)	9	I	Y
1	0	1	0	A	(a)	(a)	J	Z
1	0	1	1	B	(a)	(a)	K	(b)
1	1	0	0	C	(a)	(a)	L	(b)
1	1	0	1	D	-	(a)	M	(b)
1	1	1	0	E	.	(a)	N	(^)
1	1	1	1	F	/	(?)	O	(a)

(a) These character positions are for hardware use only

(b) These characters are for country use only, not for international use

(c) These characters are reserved for added graphic use

(%) Start sentinel

(?) End sentinel

(^) Field Separator

/ Surname separator

. Title separator

SP Space

PAR	MSB	B5	B4
-----	-----	----	----

Most Significant Bit

Parity Bit (ODD)

Read LSB first

Figure 7.1 Track one character set

7.3 Track two character definition

[Table 7.2](#) provides the ISO 7811-2 Track Two character encoding definitions. This “standards” format is a sample guideline for expected credit card Track encoding. Private issue cards can differ in the way they are encoded.

Each character is defined by the four bit codes listed in [Table 7.2](#).

Track Two can be encoded with up to 40-characters as shown in [Figure 7.2](#).

Table 7.2 ISO 7811-2 Track Two encoding definition

SS	PAN	FS	Date	SVC CD	Discretionary Data	ES	LRC
----	-----	----	------	--------	--------------------	----	-----

Track Two Character Definition:

Field	Description	Length	Format
SS	Start Sentinel “,”	1	A/N
PAN	Primary Account Number	19 max	NUM
FS	Field Separator “=”	1	A/N
Date	Expiration Date (YYMM)	4	NUM
SVC CD	Service Code	3	NUM
Discretionary Data	Optional Issuer Data	variable	NUM
ES	End Sentinel “?”	1	A/N
LRC	Longitudinal Redundancy Check	1	A/N
	Total cannot exceed 40 bytes	40 max	

b4	b3	b2	b1	COL		(a) These characters are for hardware use only
0	0	0	0	0	0	hardware use only
0	0	0	1	1	1	
0	0	1	0	2	2	(B) Starting Sentinel
0	0	1	1	3	3	
0	1	0	0	4	4	(D) Field Separator
0	1	0	1	5	5	
0	1	1	0	6	6	(F) Ending Sentinel
0	1	1	1	7	7	
1	0	0	0	8	8	
1	0	0	1	9	9	
1	0	1	0	A	(a)	
1	0	1	1	B	(B)	
1	1	0	0	C	(a)	
1	1	0	1	D	(D)	
1	1	1	0	E	(a)	
1	1	1	1	F	(F)	

PAR	MSB	b3	b2	LSB
<div>Most Significant Bit</div> <div>Parity Bit (ODD)</div>				
Read LSB first				

Figure 7.2 Track Two character set

7.4 Authorization message character set

[Table 7.3](#) and [Table 7.4](#) provide authorization request message character set definitions for the second generation message formats.

Table 7.3 ANSI X3.4-1986 character set

BIT NUMBER				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
b4	b3	b2	b1	ROW/COL	0	1	2	3	4	5	6	7
0	0	0	0	0	NUL	DLE	SP	0	@	P	`	p
0	0	0	1	1	SOH	DC1	!	1	A	Q	a	q
0	0	1	0	2	STX	DC2	“	2	B	R	b	r
0	0	1	1	3	ETX	DC3	#	3	C	S	c	s
0	1	0	0	4	EOT	DC4	\$	4	D	T	d	t
0	1	0	1	5	ENQ	NAK	%	5	E	U	e	u
0	1	1	0	6	ACK	SYN	&	6	F	V	f	v
0	1	1	1	7	BEL	ETB	'	7	G	W	g	w
1	0	0	0	8	BS	CAN	(	8	H	X	h	x
1	0	0	1	9	HT	EM	)	9	I	Y	i	y
1	0	1	0	A	LF	SUB	*	:	J	Z	j	z
1	0	1	1	B	VT	ESC	+	;	K	[	k	{
1	1	0	0	C	FF	FS	,	<	L	\	l	|
1	1	0	1	D	CR	GS	-	=	M	]	m	}
1	1	1	0	E	SO	RS	.	>	N	^	n	~
1	1	1	1	F	SI	US	/	?	O	_	o	DEL

BIT NUMBER				b7	0	0	0	0	1	1	1	1	
				b6	0	0	1	1	0	0	1	1	
				b5	0	1	0	1	0	1	0	1	
b4	b3	b2	b1	ROW	COL	0	1	2	3	4	5	6	7
0	0	0	0	0	NUL	DLE	SP	0	@	P	'	p	
0	0	0	1	1	SOH	DC1	!	1	A	Q	a	q	
0	0	1	0	2	STX	DC2	"	2	B	R	b	r	
0	0	1	1	3	ETX	DC3	#	3	C	S	c	s	
0	1	0	0	4	EOT	DC4		4	D	T	d	t	
0	1	0	1	5	ENQ	NAK	%	5	E	U	e	u	
0	1	1	0	6	ACK	SYN	&	6	F	V	f	v	
0	1	1	1	7	BEL	ETB	'	7	G	W	g	w	
1	0	0	0	8	BS	CAN	(	8	H	X	h	x
1	0	0	1	9	HT	EM	)	9	I	Y	i	y
1	0	1	0	A	LF	SUB	*	:	J	Z	j	z	
1	0	1	1	B	VT	ESC	+	;	K	[	k	{
1	1	0	0	C	FF	IS4	,	<	L	\	l	|	
1	1	0	1	D	CR	IS3	-	=	M	]	m	}
1	1	1	0	E	SO	IS2	.	>	N	^	n	~	
1	1	1	1	F	SI	IS1	/	?	O	_	o	DEL	

7.5 Character conversion summary

[Table 7.5](#) provides authorization request message character set definition for second generation authorization request messages cross referenced to the Track One and Track Two character set.

Table 7.5 Character conversion summary.

EBCDIC				TRACK 1		TRACK 2	
HEX	HEX	DEC		HEX		HEX	
1C	1C	28	FS				
1F	1F	31	US				
40	20	32	SP	00	SP		
4F	21	33	!	01	(a)		
7F	22	34	“	02	(a)		
7B	23	35	#	03	(c)		
5B	24	36	\$	04	\$		
6C	25	37	%	05	(%)		
50	26	38	&	06	(a)		
7D	27	39	'	07	(a)		
4D	28	40	(	08	(
5D	29	41	)	09)		
5C	2A	42	*	0A	(a)		
4E	2B	43	+	0B	(a)		
6B	2C	44	,	0C	(a)		
60	2D	45	-	0D	-		
4B	2E	46	.	0E	.		
61	2F	47	/	0F	/		
F0	30	48	0	10	0	0	0
F1	31	49	1	11	1	1	1
F2	32	50	2	12	2	2	2

(a) Hardware use
only

(c) Reserved

(%) Starting Sentinel
Track 1

EBCDIC	X3.4-1986			TRACK 1		TRACK 2		
HEX	HEX	DEC		HEX		HEX		
F3	33	51	3	13	3	3	3	
F4	34	52	4	14	4	4	4	
F5	35	53	5	15	5	5	5	
F6	36	54	6	16	6	6	6	
F7	37	55	7	17	7	7	7	
F8	38	56	8	18	8	8	8	
F9	39	57	9	19	9	9	9	(a) Hardware use only
7A	3A	58	:	1A	(a)	A	(a)	
5E	3B	59	;	1B	(a)	B	(B)	(B) Starting sentinel
4C	3C	60	<	1C	(a)	C	(a)	Track 2
7E	3D	61	=	1D	(a)	D	(D)	(D) Field Separator
6E	3E	62	>	1E	(a)	E	(a)	Track 2
6F	3F	63	?	1F	(?)	F	(F)	(F) Ending sentinel
7C	40	64	@	20	(a)			Track 2
C1	41	65	A	21	A			(?) Ending sentinel
C2	42	66	B	22	B			Track 1
C3	43	67	C	23	C			
C4	44	68	D	24	D			
C5	45	69	E	25	E			
C6	46	70	F	26	F			
C7	47	71	G	27	G			
C8	48	72	H	28	H			
C9	49	73	I	29	I			
D1	4A	74	J	2A	J			
D2	4B	75	K	2B	K			
D3	4C	76	L	2C	L			

EBCDIC X3.4-1986				TRACK 1		TRACK 2
HEX	HEX	DEC		HEX		HEX
D4	4D	77	M	2D	M	
D5	4E	78	N	2E	N	
D6	4F	79	O	2F	O	
D7	50	80	P	30	P	
D8	51	81	Q	31	Q	
D9	52	82	R	32	R	
E2	53	83	S	33	S	
E3	54	84	T	34	T	
E4	55	85	U	35	U	
E5	56	86	V	36	V	
E6	57	87	W	37	W	
E7	58	88	X	38	X	
E8	59	89	Y	39	Y	
E9	5A	90	Z	3A	Z	
A4	5B	91	[	3B	(b)	
E0	5C	92	\	3C	(b)	
5A	5D	93	]	3D	(b)	
5F	5E	94	^	3E	(^)	
6D	5F	95	_	3F	(a)	
79	60	96	`			
81	60	97	a			

(a) Hardware use only

(b) Reserved for Country use Track 1

(^) Field Separator Track 1

7.6 MOD-10 check-digit algorithm

Credit card account numbers should be checked for validity using the Luhn check digit algorithm. The following procedure must be followed in order to calculate the correct check-digit for given account number.

NOTE: Please note that some Private Label (Private Issue) and Debit cards cannot utilize an account check-digit.

1. Exclude the right-most digit from the calculation because this is the actual check digit to be examined for validity.
2. Starting with the second to the last digit, and moving right to left, alternately multiply each successive digit by two and one respectively.
3. Sum the integers comprising the product obtained from each of the calculations.
4. Subtract the resulting sum from the next higher multiple of ten (10). The resulting value is the desired account number check digit.

Assuming an account number of: 4287 9478:

[illegible]

7.7 Longitudinal Redundancy Check (LRC)

The Longitudinal Redundancy Check is used to ensure the data integrity of information packets exchanged through the TSYS Acquiring Solutions system. An LRC character is generated and appended to all data packets in order to detect and recover from transmission errors which might result of line interference. An LRC is the 8-bit EXCLUSIVE-OR (Binary ADD with no Carry) of all bytes starting with the byte AFTER the <STX> and including the final <ETX> of the message.

STX	Message	ETX	LRC
-----	---------	-----	-----

Range of LRC calculation

7.8 Conversion of binary to ASCII characters

TSYS Acquiring Solutions' Second Generation message formats allow only printable characters to appear in transaction data fields. To represent binary data, each byte of binary data is expanded into two hexadecimal characters. The upper four bits of a byte are represented by the first hexadecimal character, and the lower four bits are represented by a second hexadecimal character. Hexadecimal characters are to be encoded in ASCII. See table 6.6 below. For example, to represent a 20-byte binary field, 40 hexadecimal characters are used to define it.

Table 7.6 Byte to 2-Hex character conversion table

Byte	Byte is composed of 8 bits							
Bits in byte	7	6	5	4	3	2	1	0
Hexadecimal Character	First hexadecimal character				Second Hexadecimal character			
	0000 = '0' 1000 = '8'				0000 = '0' 1000 = '8'			
	0001 = '1' 1001 = '9'				0001 = '1' 1001 = '9'			
	0010 = '2' 1010 = 'A'				0010 = '2' 1010 = 'A'			
	0011 = '3' 1011 = 'B'				0011 = '3' 1011 = 'B'			
	0100 = '4' 1100 = 'C'				0100 = '4' 1100 = 'C'			
	0101 = '5' 1101 = 'D'				0101 = '5' 1101 = 'D'			
	0110 = '6' 1110 = 'E'				0110 = '6' 1110 = 'E'			
	0111 = '7' 1111 = 'F'				0111 = '7' 1111 = 'F'			

Chapter 8

Message format examples

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NOTE: Tables provided in this chapter are for example only. Reference the sections provided for a complete description of all applicable values. For the Acquirer BIN, Merchant Number, Store, and Terminal number in development usage, please contact the TSYS Acquiring Solutions development lab for specific values on these fields. For production development, please contact the Acquiring bank of the merchant for these and other applicable values.

8.1 Card present examples

8.1.1 Credit

8.1.1.1 Retail/restaurant - request

Table 8.1 [Retail/restaurant - request](#)

D-Format Authorization Request Message (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194

D-Format Authorization Request Message (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Purchase CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ - No Card reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	ASCII	Group Separator <GS>		6.95
-	3	NUM	Group III Version Number	025	6.94
-	0 or 9	A/N	Transaction Fee Amount		6.203

D-Format Authorization Request Message (Retail/Restaurant - Manual AVS)					
Byte	Length	Format	Field description	Content	Section
-	0-29	A/N	Address Verification Data (If Cardholder ID - "M")	Street Address<SP>Zip Code	6.50.4
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.1.3 Hotel/lodging - manual AVS - request

Table 8.3 [Hotel/lodging - manual AVS - request](#)

D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	H	6.101

D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)					
Byte	Length	Format	Field description	Content	Section
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y - CPS Capable P - Manually Keyed or Preferred Customer	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	6.201
63	1	A/N	Cardholder ID Code	@ - Signature N - AVS M - Card Present AVS	6.49
64	1	A/N	Account Data Source	@ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - "N" or "M")	Street Address<SP>Zip Code	6.50.4
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Prestigious Property Ind.	<SP> - Not Participating D - \$500 Limit B - \$1000 Limit S - \$1500	6.116.1
-	1	A/N	Market Specific Data ID	H	6.116.2

D-Format Authorization Request Message (Hotel/Lodging - Manual AVS)					
Byte	Length	Format	Field description	Content	Section
-	2	NUM	Stay of Duration		6.116.3
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.1.4 Auto rental - request

Table 8.4 [Auto rental - request](#)

D-Format Authorization Request Message (Auto Rental)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	A	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110

D-Format Authorization Request Message (Auto Rental)					
Byte	Length	Format	Field description	Content	Section
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y - CPS Capable P - Preferred Customer	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track2 Capable X - Keyed/Track1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Prestigious Property Ind	Space	6.116.1
-	1	A/N	Market Specific Data ID	A	6.116.2
-	2	NUM	Stay of Duration		6.116.3
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72

D-Format Authorization Request Message (Auto Rental)					
Byte	Length	Format	Field description	Content	Section
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.1.5 Automated fueling - request

Table 8.5 [Automated fueling - request](#)

D-Format Authorization Request Message (Automated Fueling)					
Byte	Length	Format	Field description	Contents	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	O	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Card Present	6.201
63	1	A/N	Cardholder ID Code	E - Automated Fueling	6.49
64	1	A/N	Account Data Source	D - Track 2 Read H - Track 1 Read	6.2

D-FORMAT AFD Credit Completion Advice request (Visa, Mastercard, PayPal and Discover)					
Byte	Length	Format	Field description	Content	Section
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	O	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code	5542	6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	5C- Credit Advice	6.201
63	1	A/N	Cardholder ID Code	E – Automated Fueling	6.49
64	1	A/N	Account Data Source	D – Track 2 Read H – Track 1 read	6.2
	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2	6.70
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount	Actual Amount Dispensed	6.199
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	6	A/N	Approval Code	Echo pre-auth response	6.166.1
	6	A/N	Local Transaction Date	Echo pre-auth response	6.166.2
	6	A/N	Local Transaction Time	Echo pre-auth response	6.166.3
	12	NUM	RRN	Echo pre-auth response	6.166.5

D-FORMAT AFD Credit Completion Advice request (Visa, Mastercard, PayPal and Discover)					
Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
		A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	033	6.94
	2	NUM	Adjustment Response Code	Echo pre-auth original response	6.169
	1	A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	039 (Mastercard Only)	6.94
	1	A/N	Cardholder Verification Method	“S”	6.51
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	050 (Mastercard Only)	6.94
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	056	6.94
	4	NUM	Message Reason Code		6.134
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	057	6.94
	0-25	A/N/S	Additional Response Data		6.11
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95

8.1.1.7 AFD completion advice response (Visa, Mastercard, PayPal and Discover)

Table 8.7 AFD completion advice response (Visa, Mastercard, PayPal and Discover)

D-FORMAT AFD Credit Completion Advice response (Visa, Mastercard, PayPal and Discover)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23

D-FORMAT AFD Credit Completion Advice response (Visa, Mastercard, PayPal and Discover)					
Byte	Length	Format	Field description	Content	Section
3	1	A/N	Message Delimiter	.	6.135
4	1	A/N	Returned ACI	space	6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code		6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Auth. Response Text		6.29
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Market Data Identifier		6.116
-	0-15	A/N	Transaction Identifier	MC Reference Number	6.204
-	1	A/N	Field Separator	<FS>	6.89
-	0-4	A/N	Validation Code		6.214
-	1	A/N	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	1	A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	033	6.94
	1	A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	039 (Mastercard Only)	6.94
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	050 (Mastercard Only)	6.94
	0, 10	NUM	Association Timestamp	mmddhhmmss	6.25
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	056	6.94
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	057	6.94

8.1.1.8 Quasi-cash - request

Table 8.8 [Quasi-cash - request](#)

D-Format Authorization Request Message (Quasi-Cash)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	57 - Quasi-Cash	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

D-Format Incremental Authorization Request Message					
Byte	Length	Format	Field description	Content	Section
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	I	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Card Present 56 - Card Not Present	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	15	A/N	Transaction Identifier		6.204
-	1	A/N	Field Separator <FS>		6.89
	6	A/N	Approval Code		6.24
	6	A/N	Local Transaction Date	MMDDYY	6.111

D-Format Authorization Request Message (Reversal)					
Byte	Length	Format	Field description	Content	Section
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	59 - Pre-settlement 5A - Post-settlement 5N - Balance inquiry reversal CV - Purchase Return Authorization Reversal	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	~, T , or X	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Total Authorized Amount		6.198
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Settlement Amount		6.173
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	15	A/N	Transaction Identifier		6.204
-	1	A/N	Field Separator <FS>		6.89
-	6	A/N	Approval Code		6.24
-	6	A/N	Local Transaction Date	MMDDYY	6.111
-	6	A/N	Local Transaction Time	HHMMSS	6.112
-	12	A/N	Retrieval Reference Num		6.164
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.1.11 Credit card/base group I - response

Table 8.11 Credit card/base group I - response

E-Format Authorization Response Message (Credit Card/Base Group I)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	A/N	Returned ACI		6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code	XX	6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Auth. Response Text		6.29
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Market Data Identifier		6.116
-	0-15	A/N	Transaction Identifier		6.204
-	1	A/N	Field Separator <FS>		6.89
-	0-4	A/N	Validation Code		6.214
-	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number		6.94

8.1.1.12 Credit integrated chip card (ICC - EMV format) - request (G3v055)

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 8.12 *Credit integrated chip card (ICC - EMV format) - request (G3v055)*

D-Format EMV Authorization Request Message (credit card)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158

D-Format EMV Authorization Request Message (credit card)					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transactions 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	X	6.73
31	1	A/N	Industry Code	A, B, F, G, H L, O, P, R	6.101
32-34	3	NUM	Currency Code	840-US Dollars	6.69
35-37	3	NUM	Country Code	840-USA	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54- Purchase CR - Purchase Return Authorization	6.201

D-Format EMV Authorization Request Message (credit card)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	027	6.94
	12	A/N	POS Data Code		6.149
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	055	6.94
	6-255	ASCII Hex	TLV EMV Tag Data	Send all EMV Data tags that are supported by the card and terminal interaction. Expected tags can be found in Appendix A .	6.195
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95

8.1.1.13 Credit integrated chip card (ICC - EMV format) - response (G3v055)

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 8.13 *Credit contactless using EMV data rules authorization - response*

E-Format EMV Authorization Response Message (credit card)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transactions 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	NUM	Return ACI		6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	AN	Response Code		6.163
20-25	6	AN	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Auth. Response Text		6.29

Format D Contactless Using EMV Data Rules Authorization - Request (Credit Card)					
Byte	Length	Format	Field description	Content	Section
30	1	A/N	Device Code	X	6.73
31	1	A/N	Industry Code	A, B, F, G, H, L, O, P, R	6.101
32-34	3	NUM	Currency Code		6.69
35-37	3	NUM	Country Code		6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	008 (GMT + 8 hours, non-daylight savings)	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54- Purchase CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	F - PIN Authentication by ICC (Chip Card) (Offline PIN authentication for credit chip card transactions) K - Personal Identification Number 32-character DUK/PT.(Online PIN authentication for credit transactions) Z - Cardholder Signature - Terminal has a PIN pad @ = Cardholder Signature - No PIN pad available P - No CVM Required	6.49
64	1	A/N	Account Data Source	R - Proximity payment device using EMV chip data rules	6.2
-	5-76	A/N	Customer Data Field	Full Track 2	6.70
-	1	ASCII	Field Separator	<FS>	6.89
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data.	6.50
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1-12	NUM	Transaction Amount		6.199

E-Format Contactless Using EMV Data Rules Authorization Response Message					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	NUM	Return ACI		6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Tran. Sequence Number		6.205
18-19	2	A/N	Response Code		6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.49
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Auth. Response Text		6.29
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Market Data Identifier		6.116
	0-15	A/N	Transaction identifier		6.204
	1	A/N	Field Separator	<FS>	6.89
	0-4	A/N	Validation Code		6.214
	1	A/N	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	3	NUM	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	027	6.94
	3	NUM	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	055	6.94
	6-255	ASCII Hex	TLV Data, 2 characters per byte	Typically includes one or more issuer scripts (tag 71 or 72) the response code (tag 8A) and issuer authentication data (tag 91)	6.195
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group Separator	<GS>	6.95

8.1.1.16 Retail/restaurant - Chip Card Fallback- request

Table 8.16 Retail/restaurant - Chip Card Fallback- request

D-Format Authorization Chip Card Fallback request (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54- Purchase CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	@ = Cardholder Signature P - No CVM Required	6.49

D-Format Authorization Chip Card Fallback request (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
64	1	A/N	Account Data Source	Z - Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure W - Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.	6.2
-	5-76	A/N	Customer Data Field	Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	011	6.94

E-Format Authorization Chip Card Fallback response (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54- Purchase	6.201
63	1	A/N	Cardholder ID Code	@ = Cardholder Signature P - No CVM Required	6.49
64	1	A/N	Account Data Source	Z - Chip Card transaction processed as magnetic stripe from a chip capable terminal, due to card or terminal failure W - Chip Card transaction processed as magnetic stripe due to the terminal application not having any EMV applications in common with the chip card.	6.2
-	5-76	A/N	Customer Data Field	Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1-12	NUM	Transaction Amount		6.199
	3	NUM	Group III Version Number	011	6.94
	3	NUM	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	020	6.94
	3	NUM	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	027	6.94

D-Format Authorization Request Message (Credit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])					
Byte	Length	Format	Field description	Content	Section
-	1	A/N	Field Separator <FS>		6.89
-	0-29	A/N	Field Separator <FS>	Hex 1C	6.89
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
-	1	A/N	Field Separator <FS>	Hex 1C	6.89
	3	NUM	Group III Version Number		6.94
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.1.19 Cash advance - request

Table 8.19 Credit Cash advance - request

D-Format Authorization Request Message (Cash Advance)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73

D-Format Authorization Request Message (Cash Advance)					
Byte	Length	Format	Field description	Content	Section
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential		6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Tran. Sequence Number		6.205
61-62	2	A/N	Transaction Code	55-Cash Advance	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	D - Track 2 T - Manually keyed, Track two capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 2, or Manually entered data	6.70
-	1	ASCII	Field Separator	<FS>	6.89
-	0-29	A/N	Address Verification Data	<street address><apt no.><Space><Zip Code>	6.50
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	40	A/N	Card Acceptor Data	(Required)	6.35
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89

8.1.2 Debit/EBT

8.1.2.1 Debit non-confirmation - request

Table 8.20 *Debit non-confirmation - request*

T-Format Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	6.201
63	1	A/N	Cardholder ID Code	K-DUK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2	6.2
	5-76	A/N	Customer Data Field	Full Track 2	6.70
	1	A/N	Field Separator <FS>		6.89
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	6.50
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89
	1-12	NUM	Transaction Amount		6.199

T-Format Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator <FS>		6.89
	0-12	NUM	Cash back amount		
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89
	25	A/N	Merchant Name	(Required)	6.36.1
	13	A/N	Merchant Location / City	(Required)	6.36.2
	2	A/N	Merchant State	(Required)	6.36.3
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89
	6	A/N	Approval Code	(Required)	6.166.1
	6	A/N	Local Transaction Date	(Required)	6.166.2
	6	A/N	Local Transaction Time	(Required)	6.166.3
	12	NUM	RRN	(Required)	6.166.5
	1	A/N	Field Separator <FS>		6.89
	7	A/N	System Trace Audit Number (STAN) 6 bytes 1 byte SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
	1	A/N	Field Separator <FS>		6.89
	1-30	A/N	Sharing Group		6.177
	1	A/N	Field Separator <FS>		6.89
	0 or 9	NUM	Merchant ABA Number		6.118
	0 or 4	A/N	Merch. Settlement Agent Number		6.131
	1	A/N	Field Separator <FS>		6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	6.141
	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217

T-Format Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89

8.1.2.2 Debit authorization reversal - request

Table 8.21 [Debit authorization reversal - request](#)

T-Format Authorization Request Message (Debit reversal)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840 - U.S.	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	A3, A4	6.201
63	1	A/N	Cardholder ID	®, M or Z	6.49
64	1	A/N	Account Data Source	®, T or X	6.2
	5-76	A/N	Customer Data Field	Acct # <FS> Exp Date <FS>	6.70

T-Format Authorization Request Message (Debit reversal)					
Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89
	1-12	NUM	Total Authorized Amount		6.195
	1	A/N	Field Separator <FS>		6.89
	0-12	NUM	Settlement Amount		6.170
	1	A/N	Field Separator <FS>		6.89
	0-4	A/N	Market Specific Data		6.116
	1	A/N	Field Separator <FS>		6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	A/N	Field Separator <FS>		6.89
	0-15	A/N	Reversal, Incremental, MIT Transaction ID		6.168
	1	A/N	Field Separator <FS>		6.89
	6	A/N	Approval Code		6.24
	6	NUM	Local Tran Date		6.111
	6	NUM	Local Tran Time		6.112
	12	A/N	Retrieval Reference Number		6.164
	1	A/N	Field Separator <FS>		6.89
	7	A/N	Reversal and Cancel Data II		6.167
	1	A/N	Field Separator <FS>		6.89
	1-30	A/N	Sharing Group		6.177
	1	A/N	Field Separator <FS>		6.89
	0 or 9	NUM	Merchant ABA Number		6.118
	0 or 4	A/N	Merchant Settlement Agent Number		6.131
	1	A/N	Field Separator <FS>		6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161

T-Format Authorization Request Message (Debit reversal)					
Byte	Length	Format	Field description	Content	Section
	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	A/N	Field Separator <FS>		6.89
	1	A/N	Field Separator <FS>		6.89

8.1.2.3 Debit card/EBT - response

Table 8.22 [Debit card/EBT - response](#)

U-Format Authorization Response Message (Debit Card/EBT)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	U	6.158
2	1	NUM	Application Type		6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	A/N	Returned ACI		6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code	XX	6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Auth. Response Text		6.29
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Market Specific Data ID		6.116
-	0-15	A/N	Transaction Identifier		6.204
-	1	A/N	Field Separator <FS>		6.89
-	0-4	A/N	Validation Code		6.214
-	1	A/N	Field Separator <FS>		6.89
-	6	NUM	Acquirer BIN		6.5
-	8	A/N	Host Message Identifier		6.97

T-Format Authorization Request Message (Debit Account Funding Transaction [Visa] or Debit Payment Transaction [MC])					
Byte	Length	Format	Field description	Content	Section
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	9G - Account Funding Trans./Payment Trans.	6.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2	6.2
-	5-76	A/N	Customer Data Field	Full Track 2	6.70
-	1	A/N	Field Separator <FS>		6.89
-	32	A/N	Cardholder identification data	Encrypted PIN Block Data	6.50
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	0-12	NUM	Cash Back Amount		
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name	(Required)	6.36.1
-	13	A/N	Merchant Location/City	(Required)	6.36.2
-	2	A/N	Merchant State	(Required)	6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	6	A/N	Approval Code	(Required)	6.166.1
-	6	A/N	Local Transaction Date	(Required)	6.166.2
-	6	A/N	Local Transaction Time	(Required)	6.166.3
-	12	NUM	RRN	(Required)	6.166.5
-	1	A/N	Field Separator <FS>		6.89
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
-	1	A/N	Field Separator <FS>		6.89
-	1-30	A/N	Sharing Group		6.177
-	1	A/N	Field Separator <FS>		6.89
-	0 or 9	NUM	Merchant ABA Number		6.118

T-Format Authorization Request Message (Debit Cardholder Funds Transfer [Visa])					
Byte	Length	Format	Field description	Content	Section
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	9J - Account Funding Tran./Payment Tran.	6.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2	6.2
-	5-76	A/N	Customer Data Field	Full Track 2	6.70
-	1	A/N	Field Separator <FS>		6.89
-	32	A/N	Cardholder identification data	Encrypted PIN Block Data	6.50
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	0-12	NUM	Cash back Amount		
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name	(Required)	6.36.1
-	13	A/N	Merchant Location/City	(Required)	6.36.2
-	2	A/N	Merchant State	(Required)	6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	6	A/N	Approval Code	(Required)	6.166.1
-	6	A/N	Local Transaction Date	(Required)	6.166.2
-	6	A/N	Local Transaction Time	(Required)	6.166.3
-	12	NUM	RRN	(Required)	6.166.5
-	1	A/N	Field Separator <FS>		6.89

T-Format Authorization Request Message (EBT)					
Byte	Length	Format	Field description	Content	Section
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	92 - EBT/FS Return 96 - EBT/CD Cash Withdrawal 98 - EBT/FS Purchase 9E - EBT/FS Electronic Voucher 9F - EBT/CD Purchase or Purchase with Cash back	6.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry Z - Cardholder Signature - Terminal has a PIN pad	6.49
64	1	A/N	Account Data Source	D - Track 2 T - Manual Entry/T2 capable X - Manual Entry/T1 capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 2 or manually entered data (EBT)	6.70
-	1	A/N	Field Separator <FS>		6.89
-	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89

T-Format Authorization Request Message (EBT)					
Byte	Length	Format	Field description	Content	Section
-	0-12	NUM	Secondary Amount		6.170
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name	(Required)	6.36.1
-	13	A/N	Merchant Location/City	(Required)	6.36.2
-	2	A/N	Merchant State	(Required)	6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	6	A/N	Approval Code	(Required)	6.166.1
-	6	A/N	Local Transaction Date	(Required)	6.166.2
-	6	A/N	Local Transaction Time	(Required)	6.166.3
-	12	NUM	RRN	(Required)	6.166.5
-	1	A/N	Field Separator <FS>		6.89
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
-	1	A/N	Field Separator <FS>		6.89
-	1-30	A/N	Sharing Group	K	6.177
-	1	A/N	Field Separator <FS>		6.89
-	0 or 9	NUM	Merchant ABA Number		6.118
-	0 or 4	A/N	Merch. Settlement Agent Number		6.131
-	1	A/N	Field Separator <FS>		6.89
-	6	NUM	Agent Bank Number		6.13
-	6	NUM	Agent Chain Number		6.14
-	3	NUM	Batch Number		6.33
-	1	A/N	Reimbursement Attribute		6.161
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	013	6.94
-	0 or 7	A/N	FCS ID		6.88
-	1	A/N	Field Separator <FS>		6.89
-	0 or 15	A/N	Electronic Voucher Serial Number		6.78
-	1	A/N	Field Separator <FS>		6.89

T-Format Authorization Request Message (EBT)					
Byte	Length	Format	Field description	Content	Section
-	0 or 6	A/N	Voucher Approval Code		6.219
-	1	ASCII	Group Separator		6.95
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.1.2.7 Electronic benefits transfer (EBT) non-confirmation - request

Table 8.26 EBT non-confirm - request

T-Format Authorization Request Message (EBT Non-confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4-Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential		6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number		6.205

T-Format Authorization Request Message (EBT Non-confirm)					
Byte	Length	Format	Field description	Content	Section
61-62	2	A/N	Transaction Code	9E - Food Stamps Electronic Voucher 9F - Cash benefits: Purchase or Purchase with Cash back	6.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry Z - Cardholder Signature - Terminal has a PIN pad	6.49
64	1	A/N	Account Data Source	D - Track 2 T - Manual Entry/T2 capable X - Manual Entry/T1 capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 2 or manually entered data (EBT)	6.70
-	1	ASCII	Field Separator	<FS>	6.89
-	0-29	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator	<FS>	6.89
-	0-12	NUM	Secondary Amount		6.170
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	40	A/N	Card Acceptor Data	(Required)	6.35
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	6	A/N	Approval Code	(Required)	6.166.1
-	6	A/N	Local Transaction Date	(Required)	6.166.2
-	6	A/N	Local Transaction Time	(Required)	6.166.3
-	12	NUM	RRN	(Required)	6.166.5
-	1	ASCII	Field Separator	<FS>	6.89
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
-	1	ASCII	Field Separator	<FS>	6.89
-	1-30	A/N	Sharing Group	K	6.177
-	1	ASCII	Field Separator	<FS>	6.89
-	0 or 9	NUM	Merchant ABA Number		6.118

T-Format Authorization Request Message (EBT Non-confirm)					
Byte	Length	Format	Field description	Content	Section
	0 or 4	A/N	Merch. Settlement Agent Number		6.131
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	013	6.94
	0 or 7	A/N	FCS ID		6.88
	1	ASCII	Field Separator	<FS>	6.89
	0 or 15	A/N	Electronic Voucher Serial Number		6.78
	1	ASCII	Field Separator	<FS>	6.89
	0 or 6	A/N	Voucher Approval Code		6.219
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89

8.1.2.8 Electronic benefits transfer (EBT) - confirmation message

Table 8.27 *Electronic benefits transfer (EBT) non-confirmation - request*

Authorization Request Message - Confirmation Message (EBT)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	V	6.158
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran.	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-17	8	A/N	Host Message Identifier		6.97
18-23	6	NUM	System Trace Audit Number		6.186

8.1.2.9 Direct debit - request

Table 8.28 Direct debit - request

T-Format Authorization Request Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran.	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	93 - Purchase	6.201
63	1	A/N	Cardholder ID Code	K - DUK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2	6.2
-	5-76	A/N	Customer Data Field	Full Track 2	6.70
-	1	A/N	Field Separator <FS>		6.89
-	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89

T-Format Authorization Request Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
-	0-12	NUM	Cash back Amount		
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name	(Required)	6.36.1
-	13	A/N	Merchant Location/City	(Required)	6.36.2
-	2	A/N	Merchant State	(Required)	6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	6	A/N	Approval Code	(Required)	6.166.1
-	6	A/N	Local Transaction Date	(Required)	6.166.2
-	6	A/N	Local Transaction Time	(Required)	6.166.3
-	12	NUM	RRN	(Required)	6.166.5
-	1	ASCII	Field Separator	<FS>	6.89
-	7	A/N	System Trace Audit Number (STAN) 6 bytes, 1 byte SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
-	1	A/N	Field Separator <FS>		6.89
-	1-30	A/N	Sharing Group		6.177
-	1	A/N	Field Separator <FS>		6.89
-	0 or 9	NUM	Merchant ABA Number		6.118
-	0 or 4	A/N	Merch. Settlement Agent Number		6.131
-	1	A/N	Field Separator <FS>		6.89
-	6	NUM	Agent Bank Number		6.13
-	6	NUM	Agent Chain Number		6.14
-	3	NUM	Batch Number		6.33
-	1	A/N	Reimbursement Attribute		6.161
-	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns Only)	6.141
-	1	A/N	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89

T-Format EMV Authorization Request Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
31	1	A/N	Industry Code	A, B, F, G, H, L, O, P, R	6.101
32-34	3	NUM	Currency Code		6.69
35-37	3	NUM	Country Code		6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	008 (GMT + 8 hours, non-daylight savings)	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	93 - Purchase	6.201
63	1	A/N	Cardholder ID Code	F - PIN Authentication by ICC (Chip Card) (Offline PIN authentication for debit and credit chip card transactions) K - Personal Identification Number 32-character DUK/PT. (Online PIN authentication for debit and credit transactions) Z - Cardholder Signature - Terminal has a PIN pad	6.49
64	1	A/N	Account Data Source	G - Chip Card Read Data(ICC)	6.2
-	1	ASCII	Field Separator	<FS>	6.89
-	5-76	A/N	Customer Data Field	Full Track 2	6.70
-	1	ASCII	Field Separator	<FS>	6.89
-	32	A/N	Cardholder Identification Data	Encrypted PIN Block Data	6.50
-	1	ASCII	Field Separator	<FS>	6.89
-	1	ASCII	Field Separator	<FS>	6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator	<FS>	6.89
-	0 - 12	NUM	Secondary Amount		6.170
-	1	ASCII	Field Separator	<FS>	6.89

T-Format EMV Authorization Request Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
-	3	NUM	Group Separator	<GS>	6.95
-	3	NUM	Group III Version Number	045 055	6.94
-	6-255	ASCII Hex	TLV EMV Tag Data	Send all EMV Data tags that are supported by the card and terminal interaction. Expected tags can be found in Appendix A .	6.195
-	1	ASCII	Field Separator	<FS>	6.89
-	3	NUM	Group Separator	<GS>	6.95

8.1.2.12 Debit integrated chip card (ICC - EMV format) - response

All group III version 55 alpha-numeric format data elements are hexadecimal values unless otherwise specified.

Table 8.31 Debit integrated chip card (ICC - EMV format) - response

T-Format EMV Authorization Response Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	U	6.158
2	1	NUM	Application Type	0 - Single 2 - Multiple Tran. 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	NUM	Return ACI		6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1		Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code		6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time HHMMSS		6.112
38-53	16	A/N	Auth. Response Text		6.29
54	1	A/N	AVS Result Code		6.12

T-Format EMV Authorization Response Message (Direct Debit)					
Byte	Length	Format	Field description	Content	Section
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Market Data Identifier		6.116
	0-15	A/N	Transaction Identifier		6.204
-	1	ASCII	Field Separator	<FS>	6.89
-	0-4	A/N	Validation Code		6.214
-	1	A/N	Field Separator	<FS>	6.89
-	6	NUM	Acquirer BIN		6.5
	8	A/N	Host Message Identifier		6.97
	6	NUM	System Trace Audit Number		6.186
	1	A/N	Network Identification Code		6.138
	4	NUM	Settlement Date	MMDD	6.176
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	027	6.94
	3	NUM	Group Separator	<GS>	6.95
-	3	NUM	Group III Version Number	055	6.94
-	6-255	ASCII Hex	TLV Data, 2 characters per byte	Typically includes one or more issuer scripts (tag 71 or 72) the response code (tag 8A) and issuer authentication data (tag 91)	6.195
-	1	ASCII	Field Separator	<FS>	6.89
-	3	NUM	Group Separator	<GS>	6.95

8.1.3 ATM

8.1.3.1 ATM cash disbursement - request

Table 8.32 [ATM balance inquiry - request](#)

T-Format Authorization Request Message (ATM Cash Disbursement Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128

T-Format Authorization Request Message (ATM Cash Disbursement Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	B	6.73
31	1	A/N	Industry Code	B	6.101
32-34	3	NUM	Currency Code	840 – USD	6.69
35-37	3	NUM	Country Code	840 – United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential	705 – EST 706 – CST 707 – MST 708 – PST	6.194
52-55	4	NUM	Merchant Category Code	6011	6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	B1 – ATM Cash Disbursement	6.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32-character DUK/PT	6.49
64	1	A/N	Account Data Source	D – Track 2	6.2
	5-76	A/N	Customer Data Field	Full Track 2	6.70
	1	ASCII	Field Separator	<FS>	6.89
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name	(Required)	6.36.1
	13	A/N	Merchant Location/City	(Required)	6.36.2
	2	A/N	Merchant State	(Required)	6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message (ATM Cash Disbursement Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
	3	NUM	Group III Version Number	044	6.94
	0 or 2	NUM	Account Type (From)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	6.3
	1	ASCII	Field Separator	<FS>	6.89
	0 or 2	NUM	Account Type (To)	00 = Not Applicable	6.4
	1	ASCII	Field Separator	<FS>	6.89

8.1.3.2 ATM balance inquiry - request

Table 8.33 [ATM balance inquiry - request](#)

T-Format Authorization Request Message (ATM Balance Inquiry Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	B	6.73
31	1	A/N	Industry Code	B	6.101
32-34	3	NUM	Currency Code	840 – USD	6.69
35-37	3	NUM	Country Code	840 – United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential	705 – EST 706 – CST 707 – MST 708 – PST	6.194
52-55	4	NUM	Merchant Category Code	6011	6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	B2 – ATM Balance Inquiry	6.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32-character DUK/PT	6.49

T-Format Authorization Request Message (ATM Balance Inquiry Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	025	6.94
	9	A/N	Transaction Fee Amount	required in ATM messages	6.203
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	044	6.94
	0 or 2	NUM	Account Type (From)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	6.3
	1	ASCII	Field Separator	<FS>	6.89
	0 or 2	NUM	Account Type (To)	00 = Not Applicable	6.4
	1	ASCII	Field Separator	<FS>	6.89

8.1.3.3 ATM deposit - request

Table 8.34 [ATM deposit - request](#)

T-Format Authorization Request Message (ATM deposit non-confirmation)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189

T-Format Authorization Request Message (ATM deposit non-confirmation)					
Byte	Length	Format	Field description	Content	Section
30	1	A/N	Device Code	B	6.73
31	1	A/N	Industry Code	B	6.101
32-34	3	NUM	Currency Code	840 – USD	6.69
35-37	3	NUM	Country Code	840 – United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential		6.194
52-55	4	NUM	Merchant Category Code	6011	6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	B3 – ATM Deposit	6.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32-character DUK/PT	6.49
64	1	A/N	Account Data Source	D – Track 2	6.2
	5-76	A/N	Customer Data Field	Full Track 2	6.70
	1	ASCII	Field Separator	<FS>	6.89
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name	(Required)	6.36.1
	13	A/N	Merchant Location/City	(Required)	6.36.2
	2	A/N	Merchant State	(Required)	6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message (ATM deposit non-confirmation)					
Byte	Length	Format	Field description	Content	Section
	30	A/N	Approval Code - Space Filled if not available (6 bytes) Local Transaction Date - (6 bytes) Local Transaction Time - (6 bytes) Retrieval Reference Number - (12 bytes)	(Required)	6.166
	1	ASCII	Field Separator	<FS>	6.89
	7	A/N	System Trace Audit Number (STAN) 6 bytes 1 bytes SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
	1	ASCII	Field Separator	<FS>	6.89
	1-30	A/N	Sharing Group		6.177
	1	ASCII	Field Separator	<FS>	6.89
	0 or 9	NUM	Merchant ABA		6.117
	0 or 4	A/N	Merchant Settlement Agent Number		6.131
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	025	6.94
	9	A/N	Transaction Fee Amount	required in ATM original request messages	6.203
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95

T-Format Authorization Request Message (ATM deposit non-confirmation)					
Byte	Length	Format	Field description	Content	Section
	3	NUM	Group III Version Number	044	6.94
	0 or 2	NUM	Account Type (From)	00 = Not applicable	6.3
	1	ASCII	Field Separator	<FS>	6.89
	0 or 2	NUM	Account Type (To)	10 = Savings account 20 = Checking account 30 = Credit Card account 40 = Universal	6.4
	1	ASCII	Field Separator	<FS>	6.89

8.1.3.4 ATM account transfer - request

Table 8.35 [ATM account transfer - request](#)

T-Format Authorization Request Message (ATM account transfer non-confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	B	6.73
31	1	A/N	Industry Code	B	6.101
32-34	3	NUM	Currency Code	840 – USD	6.69
35-37	3	NUM	Country Code	840 – United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential		6.194
52-55	4	NUM	Merchant Category Code	6011	6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	B4– ATM Account Transfer	6.201
63	1	A/N	Cardholder ID Code	J - PIN at Automated Dispensing Machine 32-character DUK/PT	6.49
64	1	A/N	Account Data Source	D – Track 2	6.2
	5-76	A/N	Customer Data Field	Full Track 2	6.70

T-Format Authorization Request Message (ATM account transfer non-confirm)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<FS>	6.89
	32	A/N	Cardholder ID Data	Encrypted PIN Block Data	6.50
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name	(Required)	6.36.1
	13	A/N	Merchant Location/City	(Required)	6.36.2
	2	A/N	Merchant State	(Required)	6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	30	A/N	Approval Code - Space Filled if not available (6 bytes) Local Transaction Date - (6 bytes) Local Transaction Time - (6 bytes) Retrieval Reference Number - (12 bytes)	(Required)	6.166
	1	ASCII	Field Separator	<FS>	6.89
	7	A/N	System Trace Audit Number (STAN) 6 bytes 1 bytes SPACE (' ')	(Required) STAN is left justified and space filled to 7 characters	6.167.1
	1	ASCII	Field Separator	<FS>	6.89
	1-30	A/N	Sharing Group		6.177
	1	ASCII	Field Separator	<FS>	6.89
	0 or 9	NUM	Merchant ABA		6.117
	0 or 4	A/N	Merchant Settlement Agent Number		6.131
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14

T-Format Authorization Request Message (ATM Reversal and Adjustment Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	B	6.73
31	1	A/N	Industry Code	B	6.101
32-34	3	NUM	Currency Code		6.69
35-37	3	NUM	Country Code		6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential		6.194
52-55	4	NUM	Merchant Category Code	6011	6.120
56	1	A/N	Requested ACI	N	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	C1 – ATM Cash Disbursement Reversal C3 – ATM Deposit Reversal C4 – ATM Account Transfer Reversal C8 – ATM Adjustment Up (Credit) C9 – ATM Adjustment Down (Debit)	6.201
63	1	A/N	Cardholder ID Code	D - Self - Service Terminal (No ID method available)	6.49
64	1	A/N	Account Data Source	T - Manually keyed, Track two capable	6.2
	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Total Authorized Amount	reversal C1,C3,C4 -original transaction amount adjustment C8, C9 -amount to be adjusted	6.195
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message (ATM Reversal and Adjustment Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
	25	A/N	Merchant Name	(Required)	6.36.1
	13	A/N	Merchant Location/City	(Required)	6.36.2
	2	A/N	Merchant State	(Required)	6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	15	A/N	Transaction ID	Send Transaction ID from original response	6.203
	1	ASCII	Field Separator	<FS>	6.89
	6	A/N	Approval Code	Original response value	6.24
	6	A/N	Local transaction date	reversal C1,C3,C4 –original request value adjustment C8, C9 –current date	6.111
	6	A/N	Local Transaction Time	reversal C1,C3,C4 – original request value adjustment C8, C9 –current time	6.112
	12	A/N	Retrieval Reference Number	reversal C1,C3,C4 – original request value adjustments C8, C9 – assign new value	6.164
	1	ASCII	Field Separator	<FS>	6.89
	6	A/N	System Trace Audit Number (STAN)	reversal C1,C3,C4 – original request value adjustment C8, C9 – assign new value	6.186
	1	A/N	Network Identification Code	Original request value	6.138
	1	ASCII	Field Separator	<FS>	6.89
	1-30	A/N	Sharing Group		6.177
	1	ASCII	Field Separator	<FS>	6.89
	0 or 9	NUM	Merchant ABA		6.117
	0 or 4	A/N	Merchant Settlement Agent Number		6.131
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message (ATM Reversal and Adjustment Non-Confirm)					
Byte	Length	Format	Field description	Content	Section
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	025 (If present in original)	6.94
	9	A/N	Transaction Fee Amount	For reversals Transaction Codes C1, C3, C4 - the original request value. For adjustment Transaction Codes C8, C9 - "D00000000"	6.203
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	044	6.94
	2	NUM	Account Type (FROM)	Original request value	6.3
	1	ASCII	Field Separator	<FS>	6.89
	2	NUM	Account Type (TO)	Original request value	6.4
	1	ASCII	Field Separator	<FS>	6.89

8.1.4 Account funding

8.1.4.1 Account funding - request

This is an example of an Account Funding Payment Transaction.

Table 8.37 *Account funding - request*

D-Format Authorization Request Message (Account Funding Payment)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180

D-Format Authorization Request Message (Account Funding Payment)					
Byte	Length	Format	Field description	Content	Section
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	0, 10	A/N	Gateway ID	This field is optional	6.92
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	027	6.94
	12	A/N	POS Data Code		6.151
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	036	6.94
	3	A/N	Payment Transaction Type Identifier		6.148

8.1.4.2 Account funding - reversal

This is an example of an Account Funding Payment Reversal Transaction.

Table 8.38 [Account funding - reversal](#)

D-Format Authorization Request Message (Reversal)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	A, D, H, P	6.101

D-Format Authorization Request Message (Reversal)					
Byte	Length	Format	Field description	Content	Section
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified / space-filled	6.58
47-48	2	NUM	Language Indicator	00 – English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Value returned in Original Authorization Response	6.162
57-60	4	NUM	Trans. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	5I - Credit Payment Transaction Reversal (MC)	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ , T, or X	6.2
	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Total Authorized Amount		6.198
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Settlement Amount		6.173
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	15	A/N	Transaction Identifier		6.204
	1	ASCII	Field Separator	<FS>	6.89
	6	A/N	Approval Code		6.24
	6	A/N	Local Transaction Date	MMDDYY	6.111
	6	A/N	Local Transaction Time	HHMMSS	6.112
	12	A/N	Retrieval Reference Num		6.164

D-Format Authorization Request Message (Reversal)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	0, 10	A/N	Gateway ID	This field is optional	6.92
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	027	6.94
	12	A/N	POS Data Code		6.151
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	036	6.94
	3	A/N	Payment Transaction Type Identifier		6.148

8.2 Card not present examples

8.2.1 Credit & Debit

8.2.1.1 Direct marketing - request

Table 8.39 [Direct marketing - request](#)

D-Format Authorization Request Message (Direct Marketing)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189

D-Format Authorization Request Message (Direct Marketing)

Byte	Length	Format	Field description	Content	Section
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	D	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - “N”)	Street Address<SP>Zip Code	6.50.4
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

D-Format Authorization Request Message (Direct Marketing)					
Byte	Length	Format	Field description	Content	Section
-	3	NUM	Group III Version Number	014	6.94
-	1	A/N	MOTO/Electronic Commerce Ind.	1	6.136
-	1	ASCII	Group Separator		6.95
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	ASCII	Group Separator <GS>		6.95
-	3	NUM	Group III Version Number	025	6.94
-	0 or 9	A/N	Transaction Fee Amount		6.203
	1	ASCII	Field Separator <FS>		6.89

8.2.1.2 Bill payment - request

Table 8.40 [Bill payment - request](#)

D-Format Authorization Request Message (Bill Payment)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
1	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.193
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R, D	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110

D-Format Authorization Request Message (Bill Payment)					
Byte	Length	Format	Field description	Content	Section
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y - CPS Capable	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	5B	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Full Track 1 Full Track 2 Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Prestigious Property Ind.	Space	6.116.1
-	1	A/N	Market Specific Data ID	B	6.116.2
-	2	NUM	Stay of Duration	00	6.116.3
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number	014	6.94
	1	A/N	MOTO/e-Commerce Indicator	1, 2, 3, 7, or 8	6.136

D-Format Authorization Request Message (Bill Payment)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Group Separator		6.95
	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89

8.2.1.3 Credit cardholder funds transfer [Visa] - request

Table 8.41 [Credit cardholder funds transfer \[Visa\] - request](#)

D-Format Authorization Request Message (Credit Cardholder Funds Transfer [Visa])					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	D	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205

8.2.1.4 Credit account funding transactions [Visa] or payment transaction [MC] with CPS for Internet - request

Table 8.42 *Credit account funding transactions [Visa] or payment transaction [MC] with CPS for Internet - request*

D-Format Authorization Request Message (Credit Account Funding Transactions [Visa] or Payment Transaction [MC] with CPS for Internet)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	D	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	5G - Account Funding Tran. / Payment Tran.	6.201
63	1	A/N	Cardholder ID Code	N - Card not present AVS	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89

D-Format Authorization Request Message (3-D Secure)					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	D	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	N - AVS	6.49
64	1	A/N	Account Data Source	@ - No Cardreader	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data	Street Address<SP>Zip Code if Cardholder ID Code - N	6.50.4
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89

D-Format Authorization Request Message (e-Commerce)					
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	A, B, D, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present CR - Purchase Return Authorization	6.201
63	1	A/N	Cardholder ID Code	N - AVS	6.49
64	1	A/N	Account Data Source	@ - No Cardreader	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	A/N	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data	Street Address<SP>ZipCode if Cardholder ID Code- N	6.50.4
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
	3	NUM	Group III Version Number	014	6.94

D-Format Authorization Request Message (e-Commerce)					
Byte	Length	Format	Field description	Content	Section
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	ASCII	Field Separator <FS>		6.89
-	0-15	A/N	Transaction Identifier		6.204
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	014	6.94
-	1	NUM	MOTO/e-Commerce Indicator	1	6.136
-	1	ASCII	Group Separator		6.95
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	ASCII	Group Separator <GS>		6.95

D-Format Authorization Request Message (e-Commerce)					
Byte	Length	Format	Field description	Content	Section
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	ASCII	Field Separator <FS>		6.89
-	0-15	A/N	Transaction Identifier		6.204
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	014	6.94
-	1	NUM	MOTO/e-Commerce Indicator	1	6.136
-	1	ASCII	Group Separator		6.95
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217

D-Format Authorization Request Message (Recurring) - Visa					
Byte	Length	Format	Field description	Content	Section
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y R - if MCC is in Visa's U.S. Interchange Reimbursement Fee Rate Qualification Guide	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present 5B - Bill Payment	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	ASCII	Field Separator <FS>		6.89
	0-15	A/N	Transaction Identifier	Required if VISA AND: <ul style="list-style-type: none"> If G3v071 is in (R, I, C) and POS Entry Mode is 10 (Card on File) OR If G3v056 is in (3900, 3901, 3902, 3903, 3904) 	6.204

D-Format Authorization Request Message (Recurring) - Visa					
Byte	Length	Format	Field description	Content	Section
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q, X	6.73
31	1	A/N	Industry Code		6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y R - if MCC is in Visa's U.S. Interchange Reimbursement Fee Rate Qualification Guide	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present 5B - Bill Payment	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3

D-Format Authorization Request Message (Installment)					
Byte	Length	Format	Field description	Content	Section
31	1	A/N	Industry Code		6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y R - if MCC is in Visa's U.S. Interchange Reimbursement Fee Rate Qualification Guide	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present 5B - Bill Payment	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	ASCII	Field Separator <FS>		6.89

D-Format Authorization Request Message (Installment)					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0 - Single Transaction 2 - Multiple Transaction 4 - Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer Bank Identification Number (BIN)		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q, X	6.73
31	1	A/N	Industry Code		6.101
32-34	3	NUM	Currency Code	840 - U.S. Dollars	6.69
35-37	3	NUM	Country Code	840 - United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language Indicator	00 - English	6.110
49-51	3	NUM	Time Zone Differential	705 - EST 706 - CST 707 - MST 708 - PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y R - if MCC is in Visa's U.S. Interchange Reimbursement Fee Rate Qualification Guide	6.162
57-60	4	NUM	Tran. Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	56 - Card Not Present 5B - Bill Payment	6.201
63	1	A/N	Cardholder ID Code	N - Address Verification	6.49
64	1	A/N	Account Data Source	@ - No Cardreader T - Keyed/Track 2 Capable X-Keyed/Track 1 Capable	6.2
-	5-76	A/N	Customer Data Field	Acct#<FS>ExpDate<FS>	6.70
-	1	ASCII	Field Separator <FS>		6.89
-	0-29	A/N	Address Verification Data (If Cardholder ID - N)	Street Address<SP>ZipCode	6.50.4
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89

D-Format Authorization Request Message (Installment)					
Byte	Length	Format	Field description	Content	Section
-	1-12	NUM	Transaction Amount		6.199
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	25	A/N	Merchant Name		6.36.1
-	13	A/N	Merchant Location/City		6.36.2
-	2	A/N	Merchant State		6.36.3
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	1	ASCII	Field Separator <FS>		6.89
-	3	NUM	Group III Version Number	014	6.94
-	1	NUM	MOTO/e-Commerce Indicator	3- Installment	6.136
-	1	ASCII	Group Separator		6.95
-	3	NUM	Group III Version Number	020	6.94
-	6	A/N	Developer ID		6.72
-	4	A/N	Version ID		6.217
-	1	A/N	Field Separator <FS>		6.89
-	1	A/N	Field Separator <FS>		6.89
-	1	ASCII	Group Separator <GS>		6.95
-	3	NUM	Group III Version Number	027	6.94
-	12	A/N	POS Data Code	SF5 = '8' Installment SF7 = '7' may be needed to indicate the use of credential on file	6.151
-	1	ASCII	Group Separator <GS>		6.95

8.3 Gen2 Terminal Authentication

8.3.1 Authentication request

Table 8.51 Gen2 Terminal Authentication - request

D-FORMAT Authentication Request Message					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158
2	1	NUM	Application Type	0 – Single Transaction	6.23

D-FORMAT Authentication Request Message					
Byte	Length	Format	Field description	Content	Section
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1		Device Code	same as for authorization	6.73
31	1		Industry Code	same as for authorization	6.101
32-34	3		Currency Code	same as for authorization	6.69
35-37	3		Country Code	same as for authorization	6.62
38-46	9		City Code (ZIP)	same as for authorization	6.58
47-48	2		Language indicator	same as for authorization	6.110
49-51	3		Time Zone Differential	same as for authorization	6.194
52-55	4		Merchant Category Code	same as for authorization	6.120
56	1		Requested ACI	N	6.162
57-60	4		Transaction Sequence Number		6.205
61-62	2	A/N	Transaction Code	TA – Terminal Authentication	6.201
63	1		Cardholder ID Code	N - no card present	6.49
64	1		Account Data Source	@, T, X - manually keyed	6.2
	6-10	AN	Authentication Code		6.93.1
	1	ASCII	Field Separator	<FS>	6.89
	0,5-6	NUM	Authentication Factor 1 (AF1)	Not present if AF2 present. (one of AF1 and AF2 is mandatory)	6.93.2
	1	ASCII	Field Separator	<FS>	6.89
	0,7-10	NUM	Authentication Factor 1 (AF2)	Not present if AF1 present. (one of AF1 and AF2 is mandatory)	6.93.3
	1	ASCII	Field Separator	<FS>	6.89
	3		Group 3 Version Number	049	6.94
	1		Field Separator	<FS>	6.89

8.3.2 Authentication response

Table 8.52 Gen2 Terminal Authentication - response

E-FORMAT Authentication Response Message					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 – Single Transaction	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1		Returned ACI	space	6.165
5-8	4		Store Number		6.180
9-12	4		Terminal Number		6.189
13	1		Authorization Source Code		6.30
14-17	4		Transaction Sequence Number		6.205
18-19	2	A/N	Response Code	A1 - Activated A2 - Not Activated	6.163
20-25	6		Approval Code	all spaces	6.24
26-31	6		Local Transaction Date		6.111
31-37	6		Local Transaction Time		6.112
38-53	16	A/N	Authorization Response Text		6.29
54	1		AVS Result Code	space	6.12
55-66			Retrieval Reference Number		6.164
67			Market Specific Data Identifier	space	6.116
68	1	ASCII	Field Separator	<FS>	6.89
69	1	ASCII	Field Separator	<FS>	6.89
70-72	3	NUM	Group III Version Number	049	6.94
	24	ASCII	Genkey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89

8.3.3 Deactivation request

Table 8.53 Authentication Terminal Deactivation - request

D-FORMAT Deactivation Request Message					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	D	6.158

D-FORMAT Deactivation Request Message					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0 – Single Transaction	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1		Device Code	same as for authorization	6.73
31	1		Industry Code	same as for authorization	6.101
32-34	3		Currency Code	same as for authorization	6.69
35-37	3		Country Code	same as for authorization	6.62
38-46	9		City Code (ZIP)	same as for authorization	6.58
47-48	2		Language indicator	same as for authorization	6.110
49-51	3		Time Zone Differential	same as for authorization	6.194
52-55	4		Merchant Category Code	same as for authorization	6.120
56	1		Requested ACI	N	6.162
57-60	4		Transaction Sequence Number		6.205
61-62	2	A/N	Transaction Code	TD – Terminal Deactivation	6.201
63	1		Cardholder ID Code	N - no card present	6.49
64	1		Account Data Source	@, T, X - manually keyed	6.2
65	1	ASCII	Field Separator	<FS>	6.89
66	1	ASCII	Field Separator	<FS>	6.89
67	1	ASCII	Field Separator	<FS>	6.89
68-70	3	NUM	Group III Version Number	049	6.94
71-94	24	ASCII	Genkey	ASCII Representation of HEX	6.93.4
95	1	ASCII	Field Separator	<FS>	6.89

8.3.4 Deactivation response

Table 8.54 Authentication Terminal Deactivation - response

D-FORMAT Deactivation Response Message					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 – Single Transaction	6.23

8.4 Encryption and token examples

8.4.1 Encrypted credit

This is a sample retail/restaurant credit request with encrypted track data.

Table 8.55 Encrypted retail/restaurant - request

W-Format Encrypted Authorization Request Message (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	W	6.158
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	6.69
35-37	3	NUM	Country Code	840- U.S. United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language indicator	00-English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Purchase	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ - No Card Reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2

W-Format Encrypted Authorization Request Message (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <FS> ExpDt<FS>Encrypted CVV	6.70
	1	ASCII	Field Separator	<FS>	6.89
	0-29	A/N	Address Verification Data	Street Address <SP> Zip Code	6.50.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	A/N	Field Separator <FS>	<FS>	6.89
	1	A/N	Field Separator <FS>	<FS>	6.89
	1	A/N	Group Separator <GS>	<GS>	6.95
	3	NUM	Group III Version Number	049	6.94
	24	A/N	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	052	6.94
	1	A/N	Encryption Type	V	6.86
	250-380	A/N	Encryption Transmission Block (ETB)		6.85
	1	ASCII	Field Separator <FS>	<FS>	6.89

8.4.2 Encrypted debit non-confirmation - request

This is a sample debit non-confirmation request with encrypted track data.

Table 8.56 Encrypted debit non-confirmation - request

X-Format Encrypted Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	X	6.158
2	1	NUM	Application Type	4 – Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	6.69
35-37	3	NUM	Country Code	840- U.S. United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language indicator	00-English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	6.201
63	1	A/N	Cardholder ID Code	K-DIK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2 Read	6.2
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <FS> ExpDt<FS>Encrypted CVV	6.70
	1	ASCII	Field Separator	<FS>	6.89
	0-29	A/N	Address Verification Data	Street Address <SP> Zip Code	6.50.4

X-Format Encrypted Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	6.50
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	0-12	NUM	Cash Back Amount		
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	6	A/N	Approval Code	Required	6.24
	6	A/N	Local Transaction Data	Required	6.111
	6	A/N	Local Transaction Time	Required	6.112
	12	NUM	Retrieval Reference Number (RRN)	Required	6.164
	1	A/N	Field Separator	<FS>	6.89
	7	A/N	System Trace Audit Number (STAN) (6bytes) 1 byte SPACE (' ')	STAN is left justified and space filled to 7 characters	6.167.1
	1	ASCII	Field Separator <FS>	<FS>	6.89
	1-30	A/N	Sharing Group		6.177
	1	ASCII	Field Separator <FS>	<FS>	6.89
	0 or 9	NUM	Merchant ABA Number		6.118
	0 or 4	A/N	Merch. Settlement Agent Number		6.131
	1	ASCII	Field Separator <FS>	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161

X-Format Encrypted Authorization Request Message (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	6.141
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	049	6.94
	24	ASCII	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	1	NUM	Group III Version Number	052	6.94
	1	A/N	Encryption Type	V	6.86
	250-380	A/N	Encryption Transmission Block (ETB)		6.85
	1	A/N	Field Separator	<FS>	6.89

8.4.3 Encrypted credit with token - request

This is a sample retail/restaurant credit request with encrypted track data.

Table 8.57 Encrypted credit with token - request

W-Format Encrypted Authorization Request Message with Token Request (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	W	6.158
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180

W-Format Encrypted Authorization Request Message with Token Request (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	B, F, G, P, R	6.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	6.69
35-37	3	NUM	Country Code	840- U.S. United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language indicator	00-English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	54 - Purchase	6.201
63	1	A/N	Cardholder ID Code	@ - Customer Signature	6.49
64	1	A/N	Account Data Source	@ - No Card Reader D - Track 2 Read H - Track 1 Read T - Keyed/Track 2 Capable X - Keyed/Track 1 Capable	6.2
	5-76	A/N	Customer Data Field	TEP2 Track1 TEP2 Track2 Encrypted Acct# <FS> ExpDt<FS>Encrypted CVV	6.70
	1	ASCII	Field Separator	<FS>	6.89
	0-29	A/N	Address Verification Data	Street Address<SP>Zip Code	6.50.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3

W-Format Encrypted Authorization Request Message with Token Request (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	049	6.94
	24	A/N	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	052	6.94
	1	A/N	Encryption Type	V	6.86
	250-380	A/N	Encryption Transmission Block (ETB)		6.85
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	053	6.94
	1	ASCII	Group Separator	<GS>	6.95

8.4.4 Encrypted credit with token request - response

This is a sample response to a retail/restaurant credit request with encrypted track data and a token request.

Table 8.58 Encrypted credit with token request- response

E-Format Authorization Response Message with Token (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	E	6.158
2	1	NUM	Application Type	0 – Single Transaction 2 – Multiple Transaction 4 – Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	A/N	Returned ACI	Space	6.165

E-Format Authorization Response Message with Token (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
5-8	4	NUM	Store Number		6.179
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code		6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Authorization Response Text		6.29
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Mkt. Specific Data Identifier		6.116
	0,15	A/N	Transaction Identifier	Reference Number	6.204
	1	ASCII	Field Separator	<FS>	6.89
	0,4	A/N	Validation Code		
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	049	6.94
	24	A/N	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	053	6.94
	1	A/N	Token Status	0	6.197
	1	ASCII	Field Separator	<FS>	6.89
	0,13-19	A/N	Token		6.196

E-Format Authorization Response Message with Token (Retail/Restaurant)					
Byte	Length	Format	Field description	Content	Section
	1	ASCII	Field Separator	<FS>	6.89

8.4.5 Debit non-confirmation with token request - request

This is a sample debit non-confirmation request requesting a token.

Table 8.59 Debit non-confirmation with token request -request

T-Format Authorization Request Message with Token Request (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	T	6.158
2	1	NUM	Application Type	4 – Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, D, E, I, M, Q	6.73
31	1	A/N	Industry Code	R	6.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	6.69
35-37	3	NUM	Country Code	840- U.S. United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language indicator	00-English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	93 - Purchase 94 - Purchase Return	6.201
63	1	A/N	Cardholder ID Code	K-DIK/PT PIN Entry	6.49
64	1	A/N	Account Data Source	D - Track 2 Read	6.2
	5-76	A/N	Customer Data Field	Full Track 2	6.70
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message with Token Request (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	32	A/N	Cardholder identification data	Encrypted PIN Block Data	6.50
	1	ASCII	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	ASCII	Field Separator	<FS>	6.89
	0-12	NUM	Cash back amount		
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1
	13	A/N	Merchant Location/City		6.36.2
	2	A/N	Merchant State		6.36.3
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	6	A/N	Approval Code	Required	6.24
	6	A/N	Location Transaction Date	Required	6.111
	6	A/N	Location Transaction Time	Required	6.112
	12	A/N	Retrieval Reference Number	Required	6.164
	1	ASCII	Field Separator	<FS>	6.89
	7	A/N	System Trace Audit Number (STAN) (6bytes) 1 byte SPACE (' ')	STAN is left justified and space filled to 7 characters	6.167.1
	1	ASCII	Field Separator	<FS>	6.89
	1-30	A/N	Sharing Group		6.177
	1	ASCII	Field Separator	<FS>	6.89
	0 or 9	NUM	Merchant ABA Number		6.118
	0 or 4	A/N	Merch. Settlement Agent Number		6.131
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Agent Bank Number		6.13
	6	NUM	Agent Chain Number		6.14
	3	NUM	Batch Number		6.33
	1	A/N	Reimbursement Attribute		6.161
	0 or 8	NUM	Original Purchase Data	MMDDHHMM (Returns only)	6.141
	1	ASCII	Field Separator	<FS>	6.89

T-Format Authorization Request Message with Token Request (debit non-confirm)					
Byte	Length	Format	Field description	Content	Section
	3	NUM	Group III Version Number	020	6.94
	6	A/N	Developer ID		6.72
	4	A/N	Version ID		6.217
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	049	6.94
	24	A/N	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	053	6.94
	1	ASCII	Field Separator <FS>	<FS>	6.89

8.4.6 Debit care/EBT with token request-response

This is a sample response to a debit/EBT request that is requesting a token.

Table 8.60 Debit/EBT with token request-response

U-Format Authorization Response Message with Token (Debit Card/EBT)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	U	6.158
2	1	NUM	Application Type		6.23
3	1	A/N	Message Delimiter	.	6.135
4	1	A/N	Returned ACI	Space	6.165
5-8	4	NUM	Store Number		6.180
9-12	4	NUM	Terminal Number		6.189
13	1	A/N	Authorization Source Code		6.30
14-17	4	NUM	Transaction Sequence Number		6.205
18-19	2	A/N	Response Code	XX	6.163
20-25	6	A/N	Approval Code		6.24
26-31	6	NUM	Local Transaction Date	MMDDYY	6.111
32-37	6	NUM	Local Transaction Time	HHMMSS	6.112
38-53	16	A/N	Authorization Response Text		6.29

U-Format Authorization Response Message with Token (Debit Card/EBT)					
Byte	Length	Format	Field description	Content	Section
54	1	A/N	AVS Result Code		6.12
55-66	12	A/N	Retrieval Reference Number		6.164
67	1	A/N	Mkt. Specific Data Identifier		6.116
	0,15	A/N	Transaction Identifier		6.204
	1	ASCII	Field Separator	<FS>	6.89
	0,4	A/N	Validation Code		6.214
	1	ASCII	Field Separator	<FS>	6.89
	6	NUM	Acquirer BIN		6.5
	8	A/N	Host Message Identifier		6.97
	6	NUM	System Trace Audit Number		6.186
	1	A/N	Network Identification Code		6.138
	4	NUM	Settlement Date	MMDD	6.176
	1	ASCII	Field Separator	<FS>	6.89
	3	NUM	Group III Version Number	049	6.94
	24	A/N	GenKey	ASCII Representation of HEX	6.93.4
	1	ASCII	Field Separator	<FS>	6.89
	1	ASCII	Group Separator	<GS>	6.95
	3	NUM	Group III Version Number	053	6.94
	1	A/N	Token Status	0	6.197
	1	ASCII	Field Separator	<FS>	6.89
	0,13-19	A/N	Token		6.196
	1	ASCII	Field Separator	<FS>	6.89

8.4.7 Tokenized bill pay

This is a sample bill pay request with a Token in place of the PAN. The response will be the same as any other E-Format Tokenized Auth Request Message.

Table 8.61 Tokenized bill payment -request

Y-Format Tokenized Authorization Request Message (bill payment)					
Byte	Length	Format	Field description	Content	Section
1	1	A/N	Record Format	Y	6.158

Y-Format Tokenized Authorization Request Message (bill payment)					
Byte	Length	Format	Field description	Content	Section
2	1	NUM	Application Type	0-Single Transaction 2-Multiple Transaction 4-Interleaved	6.23
3	1	A/N	Message Delimiter	.	6.135
4-9	6	NUM	Acquirer BIN		6.5
10-21	12	NUM	Merchant Number		6.128
22-25	4	NUM	Store Number		6.180
26-29	4	NUM	Terminal Number		6.189
30	1	A/N	Device Code	C, E, I, M, Q	6.73
31	1	A/N	Industry Code	R, D	6.101
32-34	3	NUM	Currency Code	840- U.S. Dollars	6.69
35-37	3	NUM	Country Code	840- United States	6.62
38-46	9	A/N	City Code (ZIP)	Left-justified/space-filled	6.58
47-48	2	NUM	Language indicator	00-English	6.110
49-51	3	NUM	Time Zone Differential	705-EST 706-CST 707-MST 708-PST	6.194
52-55	4	NUM	Merchant Category Code		6.120
56	1	A/N	Requested ACI	Y	6.162
57-60	4	NUM	Transaction Sequence Number	0001	6.205
61-62	2	A/N	Transaction Code	5B-Bill Payment	6.201
63	1	A/N	Cardholder ID Code	N-Card Not Present	6.49
64	1	A/N	Account Data Source	@-Manually Keyed	6.2
	5-76	A/N	Customer Data Field	Token<FS>ExpDate<FS>	6.70
	1	A/N	Field Separator	<FS>	6.89
	0-29	A/N	Address Verification Data (If Cardholder ID = "N")	Street Address <SP> Zip Code	6.50.4
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1-12	NUM	Transaction Amount		6.199
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	1	A/N	Field Separator	<FS>	6.89
	25	A/N	Merchant Name		6.36.1

Appendix A

The following list of EMV tags are mandatory and must be sent on any transaction that contains Group 3 Version 55. If either or both of these tags are missing, the transaction will be rejected.

Table A.1 Mandatory EMV tags

Tag	Tag name	Description
DF79	Kernal Version Number	The version number of the kernel used to process the chip data in the transaction. (variable 1 - 32)
DF78	Device Serial Number	The manufacturer's unique serial number of the device that interacts with the chip card. (variable 1 - 20)

The following list of EMV tags are the primary tags used in a chip card transaction. Not all tags are used in every transaction. The tags being sent should be included if available and in the order listed where possible.

Table A.2 Summary chip card transaction data elements

Tag	Tag name	Description
9F40	Additional Terminal Capabilities	Indicates the data input and output capabilities of the terminal.
9F02	Amount, Authorized	Authorized amount of the transaction (excluding adjustments).
9F03	Amount, Other	Secondary amount associated with the transaction representing a cashback amount
9F26	Application Cryptogram	Cryptogram returned by the ICC in response of the GENERATE AC command.
4F	Application Identifier (AID) - ICC	Identifies the application as described in ISO/IEC 7816-5.
9F06	Application Identifier (AID) - Terminal	Identifies the application as described in ISO/IEC 7816-5.
82	Application Interchange Profile	Mnemonic associated with the AID according to ISO/IEC 7816-5.

Tag	Tag name	Description
9F36	Application Transaction Counter	Counter maintained by the application in the ICC (incrementing the ATC is managed by the ICC).
9F34	Cardholder Verification Method (CVM) Results	Identifies a method of verification of the cardholder supported by the application.
9F27	Cryptogram Information Data	Indicates the type of cryptogram and the actions to be performed by the terminal.
9F39	POS Entry Mode	Indicates the method by which the PAN was entered, according to the first two digits of the ISO 8583:1987 POS Entry Mode.
9F33	Terminal Capabilities	Indicates the card data input, CVM, and security capabilities of the terminal.
9F1A	Terminal country Code	Indicates the country of the terminal, represented according to ISO 3166.
9F35	Terminal Type	Indicates the environment of the terminal, its communications capability, and its operational control.
95	Terminal Verification Results	Status of the different functions as seen from the terminal.
5F2A	Transaction Currency Code	Indicates the currency code of the transaction according to ISO 4217.
9A	Transaction Date	Local date that the transaction was authorized.
9B	Transaction Status Information	Indicates the functions performed in a transaction.
9F21	Transaction Time	Local time that the transaction was authorized.
9C	Transaction Type	Indicates the type of financial transaction, represented by the first two digits of ISO 8583:1987 Processing Code.
9F37	Unpredictable Number	Value to provide variability and uniqueness to the generation of a cryptogram.
5F2D	Language Preference	1-4 languages stored in order of preference, each represented by 2 alphabetical characters according to ISO 639.
91	Issuer Authentication Data	Data sent to the ICC for online issuer authentication.

The following list of EMV tags are only used in contactless transactions. If the tag is transaction specific, this is stated in the description.

Table A.4 Contactless chip card transaction data elements

Tag	Tag name	Description
9F4C	ICC Dynamic Number	ICC PIN Encipherment Public Key certified by the issuer (Contactless EMV only)
9F6B	Track 2 Data (Mastercard)	The Track 2 Data is present in the file read using the READ RECORD command during a PayPass - Mag Stripe transaction. The PayPass reader copies the required digits of the UN (Numeric), CVC3TRACK2, ATC and nUN into the discretionary data field of the Track 2 Data and stores the modified Track 2 Data in the Data Record to be sent to the terminal. (Mastercard Contactless mag stripe only)
9F6E	Form Factor Indicator (FFI)	The PayPass Third Party Data contains proprietary information from a third party. (contactless mag stripe only)
9F7C	Customer Exclusive Data (CED) (Visa)	Contains data for transmission to the Issuer in Magnetic Stripe Data (MSD) transactions with a cryptogram. The MSD chip may contain customer data to be sent to the issuer in a contactless MSD transaction containing a cryptogram For Visa only, the issuer may change this customer data using the Issuer Script in the response message.

The following is a list of expected response tags in a typical response message. Tags 71 and 72 are optional and if one is received the other will not be received. Other tags may be included in the response message.

Table A.5 Chip card transaction response data elements

Tag	Tag name	Description
8A	Authorization Response Code	Code that defines the disposition of a message. (response)
91	Issuer Authentication Data	Data sent to the ICC for online issuer authentication
71	Issuer Script Template 1	Contains proprietary issuer data for transmission to the ICC before the second GENERATE AC command. (response)

72	Issuer Script Template 2	Contains proprietary issuer data for transmission to the ICC after the second GENERATE AC command. (response)
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Appendix B

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Card product codes

Value	Product description
A^	Visa Traditional
AX	American Express Card
B^	Visa Traditional Rewards
C^	Visa Signature
D^	Visa Signature Preferred
DI	Discover Card
DN	Diners Card
E^	Proprietary ATM
F^	Visa Classic
G^	Visa Business
G1	Visa Signature Business
G2	Reserved
G3	Visa Business Enhanced Visa Platinum Business
G4	Visa Infinite Business Visa Infinite Privilege Business (Canada)
H^	Reserved
I^	Visa Infinite [New Consumer Credit Product]
I1	Visa Infinite Privilege
I2	[Ultra High Net Worth]
J^	Reserved
J1	Reserved
J2	Reserved
J3	Visa Healthcare
J4	Reserved

Value	Product description
JC	JCB Card
K^	Visa Corporate T & E
K1	Visa GSC Corporate T & E
L^	Electron
M^	Mastercard
N^	Visa Platinum
N1	Visa Rewards
N2	Visa Select
P^	Visa Gold
Q^	Private Label
Q1	Reserved
Q2	Private Label Basic
Q3	Private Label Standard
Q4	Private Label Enhanced
Q5	Private Label Specialized
Q6	Private Label Premium
R^	Proprietary
S^	Visa Purchasing
S1	Visa Purchasing with Fleet (outside of Canada) Visa Fleet (cards issued in Canada)
S2	Visa GSA Purchasing
S3	Visa GSA Purchasing with Fleet
S4	Commercial Loan
S5	Commercial Transport EBT
S6	Business Loan
S7	Reserved
T^	Reserved
U^	Visa Travel Money

