AllinPayIntl POS Integration Specification

AllinPay International Technical Integration Specification

1 Introduction

1.1 Purpose

Allinpay International Acquiring System(OATS) integration BankCard(VISA、MasterCard、JCB、DCI、AMEX、UPI.,etc),and QR payment(Wechat QR、Alipay QR、UPI QRC-Based.,etc)

The document describes the specifications on the structure, format, and field content of online messages between Parners /Payment Facilitator and Allinpay International.

1.2 Audience

The audience of this document are Allinpay International (AIP INTL) staff and AIP INTL's Institution who have adopted message format version 1.3.2 (the message format version is indicated in the online message header).

1.3 Document Version os

Version 1.3.2 replaces the previous version.

2 Key Mangement

2.1 Key Distribute

1. OATS system issues a key to each Institution developer, which is sent by Email. Please kindly safe store it .

2. Institution developers will use the email key to initiate key reset requests. OATS authentization the validity of the key and response to the request message after receiving the key reset request. Refer to the management transaction interface for relevant transaction message formats.

3. Use the key to initiate a sign-in transaction, you can get the work key plaintext.

4. In the transaction message, date element 2 (master account), date element 35 (2 track), date element 36 (3 track), and date element 52 (PIN) should be encrypted if any information fails to be decrypted, the transaction will be rejected. Except for management transactions, the MAC value should be calculated for all other transactions. Refer to Appendix C for the algorithm. If the MAC value verification fails, the transaction will be rejected.

2.2 Key management notes

1. If the oats system "Key Reset Request" transaction response is not received, the request can be reissued

2. If the access organization fails to process the "Key Reset Transaction" request, it can resend the "Key Reset Request".

3. After you apply for a new working key, the original working key is valid in three days. During this period, both the original and new working keys can be used.

3 Interface

3.1 Message Structure

The message structure of the institutional send processing center includes three parts: TPDU, message header, pre-data and application data.

The preceding data has added business type and vendor fields to the previous version, and the detailed description of the two fields is shown later.

TPDU(BCD)			Message Head(BCD)					Pre-Data	Message Body
ID	Destination Address	Source Address	Application category	Spec No	Terminal Status	Processing Request	Reserve	Pre-Data	ISO8583 Msg Transaction Data
60H	N4	N4	N2	N2	N1	N1	N6	Pre-Data	Variable Length

Pre-Data definition

distinguish(ASCII)	Institution No(ASCII)	Bussiness Type(ASCII)	Supply merchant(ASCII)	Length(ASCII)
15-digit MID&8-digit TID	15-digit IIN	8-digit business type	15-digit MID	8-byte Msg body length
23-digit	15-digit	8-digit	15-digit	NNNN NNNN

Note: Merchant ID(MID) is assigned by allinpay international.MID for example: 852999958120001(Hong Kong MID), 065999958120001(Singapore MID)

Different application types of newspaper formats need to follow different format requirements, the list is as follows:

Application category	The protocol requirements to be followed by the newspaper style
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Specification Version

Specification Version No	Comment
01	

Terminal Status

Terminal Status	Comment
0	Normal
1	UAT

Processing Request

Processing Request	Comment
0	None

Institution Number

The institution number is unique, the following is the commonly used institution number

Institution No	Institution Name
300000000000003	Allinpay INTL

Business definition

Business type is mainly used to distinguish the type of business carried by the merchant terminal, and does not do transaction type screening, and the transaction type screening is in accordance with the message specifications of each institution.

Business	Business Name
00000001	Sale
00000000	Reverse

3.2 Message Layout

3.2.1 Characters

In the exchange message between the institution and the oats system host, the data types are listed as follows:

a Letters, from A to Z, from a to z, left-justified, right padded with spaces

an Letters and numbers, left-justified, right padded with spaces

ans Letters, numbers, and special characters, left-justified, right padded with spaces

as Letters and special characters, left-justified, right padded with spaces

B Binary number with variable length, followed by numbers indicating the bytes of binary data

DD Date, from 01 to 31

HH Hour, from 00 to 23

LL Followed by the variable length value of data element, from 01 to 99

LLL Followed by the variable length value of data element, from 001 to 999

MM Month, from 01 to 12

mm Minute, from 00 to 59

N Value, leaning right, with zero in front of the first significant digit. If the amount is represented, the second far right digit is the corner point.

S Special characters, such as dash and slash

ss Second, from 00 to 59

VAR Data element with variable length

X Credit and debit symbols, with “C” indicating credit and “D” indicating debit, and they are always connected with a numeric currency amount data element. For example, X+ N16 in net reconciliation amount represents the prefixes “C” or “D” and the 16 bit numbers of net reconciliation amount.

YY Year, from 00 to 99

Z Code set of the Track 2 and Track 3 on magnetic stripe cards as defined in ISO 4909 and ISO 7813

CN Compressed numeric code, namely BCD code

Note a: The 2 or 3 bytes indicating the field length before data element only apply to the main fields rather than sub-fields, usages, TLVs, or sub-TLVs.

Note 1: There are 2 additive bytes before any data element with variable length of less than 100 characters, indicating the length of the data element that follows, and the format is LLVAR. There are 3 additive bytes before any data element with variable length of less than 1,000 characters, indicating the length of the data element that follows, and the format is LLLVAR.

Note 2: The fields used in this document follow the field sequence number in the ISO8583, sequencing from the small number to the larger. Reserved fields in ISO8583 are used in this document, and special usages are defined.

Note 3: The coding mode in this document is ASCII code. The numeric characters are also expressed by ASCII code instead of compressed BCD code.

Note 4: When the value of data field is not blank, the first byte of the field shall not be filled with a space.

3.2.2 Balance Inquiry

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	31xxxx
11	System Trace Audit Number	n6		BCD	M	M	POS transaction trace number
12	Time of Local transaction	n6	hhmmss	BCD		M	
13	Date of Local Transaction	n4	MMDD	BCD		M	

14	Date of expired	n4			C1	C2	C1：POS Can be judged when present C2：A card with an expiration date exists
22	Point of service Entry Code	n3		BCD	M		
23	Card Sequence number	n3		BCD	C	C	C：Exists when POS can get this value；
25	Point of Service Condition mode	n2		BCD	M	M	00
26	Point of Service PIN Capture Code	n2		BCD	C		When the 22 field indicates that the PIN can be entered and the card holder has entered the PIN
32	Acquiring Institution Identification code	n..11	LLVAR	BCD	M	M	
35	Track 2 data	B..24	LLVAR	BINARY	C		Field 22 indicates

							magnetic stripe input and two-track information exists
36	Track 3 data	B...56	LLLVAR	BINARY	C		Field 22 indicates magnetic stripe input and three-track information exists
37	Retrieval reference number	an12		ASCII		M	POS center trace number
39	Response code	an2		ASCII		M	
41	Card Acceptor Terminal Identification code	ans8		ASCII	M	M	POS terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
44	Additonal Response Data	ans..25	LLVAR	ASCII		M	Accepting/Acquiring institution
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Use according to specific business needs F46T5F52=0x3031 + 0x02

				BINARY			
47	Additional data-Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional Field, value-added services retain the use of fields (currently required for payment services.)
49	Currency Code Of Transaction	An3		ASCII	M	M	
52	PIN Data	B64		BINARY	C		For magnetic stripe card transactions with PIN, this parameter is mandatory. For IC card transactions based on PBOC/EMV standard, this field does not appear when offline password authentication is used. This field appears when online password authentication is used
53	Security	N16		BCD	C	C	Required when there

	Related Control Information						is a safety requirement
54	Balance Amount	an...020	LLLVAR	ASCII		C	Required when the dimension status 39 field is "00"
55	Intergrated Circuit Card System Related Data	maximum 255 bytes	LLLVAR	Multi-TAG Sub-field			M in the following sub Fields is valid only when the transaction is an IC card transaction
9F26 （tag）	Application Cryptogram	B64		BINARY	M		
9F27 （tag）	Cryptogram Information Data	b8		BINARY	M		
9F10 （tag）	Issuer Application Data (IAD)	b...256	VAR	BINARY	M		
9F37 （tag）	Unpredictable Number	B32		BINARY	M		
9F36 （tag）	Application Transaction Counter (ATC)	B16		BINARY	M	C	C: If the processing center returns a response, it appears in the response and is

							consistent with the content in the request
95 （tag）	Terminal Verification Result (TVR)	B40		BINARY	M		
9A （tag）	Transaction Date	n6		BCD	M		
9C （tag）	Transaction Type	n2		BCD	M		
9F02 （tag）	Transaction Amount or Amount Authorizeda	N12		BCD	M		
5F2A （tag）	Transaction Currency Code	n3		BCD	M		
82 （tag）	Application Interchange Profile	B16		BINARY	M		
9F1A （tag）	Terminal Country Code	n3		BCD	M		
9F03 （tag）	Amount Otherc	N12		BCD	M		
9F33	Terminal	B24		BINARY	M		

（tag）	Capabilities						
9F34（tag）	Cardholder Verification Method Result (CVMR)	B24		BINARY	O		1. If the transaction amount is less than or equal to the local CVM limit, the value of de55 tag 9f34 must start with 00011111 (1F) or 00111111 (3F). 2. If the transaction amount is greater than the local CVM limit, the value of de55 tag 9f34 cannot start with 00011111 (1F) or 00111111 (3F)
9F35（tag）	Terminal Type	n2		BCD	O		
9F1E（tag）	Interface Device Serial Number (IFD)	an8		ASCII	C		Appears if the terminal identification cannot implicitly determine the serial number of the interface device

84 （tag）	Dedicated File Name (DF)	b...128	VAR	BINARY	O		
9F09 （tag）	Terminal Application Version Number	B16		BINARY	O		
9F41 （tag）	Transaction Sequence Counter	N...4	VAR	BCD	O		
91 （tag）	Issuer Authentication Data	b...128	VAR	BINARY		C	If the processing center returns a response, it appears in the response
71 （tag）	Issuer Script Template 1	b...1024	VAR	BINARY		C	If the processing center returns a response, it appears in the response
72 （tag）	Issuer Script Template 2	b...1024	VAR	BINARY		C	If the processing center returns a response, it appears in the response
60	Reserved Private	n...019	LLLVAR	BCD	M	M	

60.1	Message Reason Code	n2		BCD	M	M	See 60.1 Field description
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	Only in the CASE of IC card transaction, Fall Back, pure magnetic stripe card transaction occurs in THE IC card terminal. In each case, fill in 5 for this field.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	Only in the CASE of IC card transaction, Fall Back, pure magnetic stripe card

							transaction occurs in THE IC card terminal. IC card transaction, Fall Back transaction according to the actual situation. Pure magnetic stripe card transactions take place on the IC card terminal by filling in a 0。
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
62	Additional data-Private	Ans...22	LLLVAR	ASC	C		This field appears when you need to carry cardholder authentication information and selects Usage 12.
64	MAC	B64		BINARY	M	C	Required when the 39 field in the response message is "00"

3.2.3 Sale

Sale message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	N4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	B64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	N6		BCD	M	M	009000
4	Amount Of Transaction	N12		BCD	M	M	
5	Amount Of Tips	N12		BCD	C	C	Note: enter the value of tip in this field.
6	Amount Of Cardholder Billing	N12		BCD	C	C	DCC transaction required
10	Conversion Rate,	N8		BCD	C	C	DCC transaction required

	Cardholder Billing						
11	System Trace Audit Number	N6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	N6	hhmmss	BCD		M	
13	Date Of Local Transaction	N4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	N3		BCD	M		
23	Card Sequence Number	n3		BCD	C	C	C: EXISTS WHEN POS CAN CAPTURE
25	Point Of Service Condition Mode	N2		BCD	M	M	Filling out 00

26	Point Of Service PIN Capture Code	n2		BCD	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
37	Retrieval Reference Number	An12		ASCII	C	M	DCC TRANSACTION REQUIRED
38	Authorization Identification Response	an6		ASCII		C	transaction approval shall be determined by the issuer
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification	ans15		ASCII	M	M	Merchant ID

	Code						
44	Additional Response Data	Ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	In response, when 39 = 00: f46t5f55, fill in: pos sale slip batch number (nullable) + 0x02, pos sale slip serial number (nullable) + 0x02, pos sale slip date mmdd (nullable) + 0x02
5F61 （tag）	UnionPay transaction indicator	an1			C		UnionPay dual branded card is required 1: UnionPay transaction 2: Non UnionPay transaction
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field. When 39 = 00, refer to usage 2. 8f03 is required and 8f05 is optional

48	Additional Data - Private	ans..512	LLLVAR	BCD	C		If it is sale transaction associated with a coupon, when the coupon was writed off after verification,the response must be submitted
49	Currency Code Of Transaction	an3		ASCII	M	M	
51	Currency Code Of Cardholder Billing	an3		ASCII	C	C	DCC transaction is required, and relevant information is submitted for currency exchange rate query
52	PIN Data	B64		BINARY	C		Required for magnetic stripe card transaction with pin input; For IC card transactions based on PBOC / EMV standard, this field does not

							appear when offline password authentication is used; This field appears when online password authentication is used
53	Security Related Control Information	N16		BCD	C	C	Required if there are security requirements
55	INTERGRATED CIRCUIT CARD SYSTEM RELATED DATA	Maximum 256 bytes	LLLVAR	Multi-TAG Sub-field			M in the following sub field is valid only when the transaction is an IC card transaction
9F26 （tag）	Application Cryptogram (AC)	b64		BINARY	M		
9F27 （tag）	Cryptogram Information Data	b8		BINARY	M		
9F10 （tag）	Issuer Application Data	b...256	VAR	BINARY	M		
9F37 （tag）	Unpredictable Number	b32		BINARY	M		

9F36 （tag）	Application Transaction Counter (ATC)	b16		BINARY	M	C	c: if the processing center returns a response, it appears in the response and is consistent with the content in the request
95 （tag）	Terminal Verification Result (TVR)	b40		BINARY	M		
9A （tag）	Transaction Date	n6		BCD	M		
9C （tag）	Transaction Type	n2		BCD	M		
9F02 （tag）	Transaction Amount or Amount Authorized	n12		BCD	M		
5F2A （tag）	Transaction Currency Code	n3		BCD	M		
82 （tag）	Application Interchange Profile	b16		BINARY	M		

9F1A（tag）	Terminal Country Code	n3		BCD	M		
9F03（tag）	Amount Other	n12		BCD	M		
9F33（tag）	Terminal Capabilities	b24		BINARY	M		
9F34（tag）	Cardholder Verification Method Result (CVMR)	b24		BINARY	O		1. If the transaction amount is less than or equal to the local CVM limit, the value of de55 tag 9f34 must start with 00011111 (1F) or 00111111 (3F). 2. If the transaction amount is greater than the local CVM limit, the value of de55 tag 9f34 cannot start with 00011111 (1F) or 00111111 (3F)
9F35（tag）	Terminal Type	n2		BCD	O		

9F1E （tag）	Interface Device Serial Number (IFD)	an8		ASCII	C		Appears if the terminal identification cannot implicitly determine the serial number of the interface device
84 （tag）	Dedicated File Name (DF)	b...128	VAR	BINARY	O		
9F09 （tag）	Terminal Application Version Number	b16		BINARY	O		
9F41 （tag）	Transaction Sequence Counter	n...4	VAR	BCD	O		
91 （tag）	Issuer Authentication Data	b...128	VAR	BINARY		C	If the processing center returns a response, it appears in the response
71 （tag）	Issuer Script Template 1	b...1024	VAR	BINARY		C	If the processing center returns a response, it appears in the response

72 （tag）	Issuer Script Template 2	b...1024	VAR	BINARY		C	If the processing center returns a response, it appears in the response
DF32 （tag）	Chip Serial No	B8..32s		BINARY	M		
DF33 （tag）	Session Key Data	B8..32		BINARY	M		
DF34 （tag）	Track Reading Time	N14		BCD	M		
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code			BCD	M	M	
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here

							with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation.

							Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
62	Self-Defined Field	ans...512	LLLVAR	ASCII	C	C	When consuming a one-time payment transaction, if you need to carry the cardholder authentication information, the Field appears and uses usage twelve.

63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message
If there is no other amount, fill in 0 in this field							

3.2.4 DCC FX Rate Inquiry

DCC FX Rate Inquiry

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	N4		BCD	0600	0610	MSG-TYPE-ID

	Bit Map	B64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	N6		BCD	M	M	970000
4	Amount Of Transactions	N12		BCD	M	M	
6	Amount Of Cardholder Billing	N12		BCD		C	39 required when field is 00
10	Conversion Rate, Cardholder Billing	N8		BCD		C	39 required when field is 00
11	System Trace Audit Number	N6		BCD	M	M	POS terminal transaction trace number
12	Time Of Local Transaction	N6	hhmmss	BCD		M	
13	Date Of Local Transaction	N4	MMDD	BCD		M	
22	Point Of Service Entry Mode	N3		BCD	M		012

25	Point Of Service Condition Mode	N2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
37	Retrieval Reference Number	An12		ASCII		M	POS CENTER SYSTEM REFERENCE NUMBER
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
49	Currency Code Of Transaction	an3		ASCII	M	M	
51	Currency Code Of Cardholder Billing	an3		ASCII		C	39 required when field is 00

60.1	Message Reason Code			BCD	M	M	“01”
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
63	Self-Defined	ans...063	LLLVAR	ASCII		M	

	Field						
63.1	International credit card company code	an3		ASCII		M	
63.2.2	Self-Defined Field2.2	ans...20	LLVAR	ASCII		C	DCC exchange rate mark up information. When the sub Field returns, the terminal will display the response information. If it does not return, it will not be displayed. Usage: fix the length of 20 bits, in the unit of one ten thousandth bit. If it is less than 20 bits, supplement 0. For example, 3.5% means 000000000000 350
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00”

							in the response message
If there is no other amount, fill in 0 in this field							

3.2.5 Sale Reversal

Sale Reversal message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original transaction request
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local	n6	hhmmss	BCD		M	

	Transaction						
13	Date Of Local Transaction	n4	MMDD	BCD		C	
14	Date Of Expired	n4			C	C	Same as the original transaction request
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		Same as the original transaction
23	Card Sequence Number	n3		BCD	C	C	C： present when POS can capture this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	Same as the original transaction
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		If the original

							transaction has, it is the same
36	Track 3 Data	B...56	LLLVAR	BINARY	C		If the original transaction has, it is the same
37	Retrieval Reference Number	an12		ASCII		M	pos center system reference number
38	Authorization Identification Response	an6		ASCII	C		C: If there is an authorization code in the original response, the original authorization code must be filled in this field
39	Response Code	an2		ASCII	M	M	In the request message,it is Rreversal reason
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction

44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	Same as the original transaction
55	INTERGRATED CIRCUIT CARD SYSTEM RELATED DATA	Maximum 256 bytes	LLLVAR	Multi-TAG Sub-field			M in the following sub field is valid only when the transaction is an IC card transaction

95 （tag）	Terminal Verification Result (TVR)	b40		BINARY	C		appears if the transaction is only initiated on the terminal and the transaction is approved by the issuer but rejected by the card.
9F1E （tag）	face Device Serial Number (IFD)	an8		ASCII	C		Appears if the terminal identification cannot implicitly determine the serial number of the interface device; Same as the original transaction
9F10 （tag）	Issuer Application Data (IAD)	b...256	VAR	BINARY	C		appears if the transaction is only initiated on the terminal and the transaction is approved by the issuer but rejected by the card.
9F36	Application	b16		BINARY	M	C	C: IF THE

（tag）	Transaction Counter (ATC)						PROCESSING CENTER RETURNS A RESPONSE, IT APPEARS IN THE RESPONSE AND IS CONSISTENT WITH THE CONTENT IN THE REQUEST
DF31 （tag）	Issuer Script Results	b...168	VAR	BINARY	C		Apprears if Issuer Script was present in the original response.
60	Reserved Private	an...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Same as the original transaction
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default

							value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic

							stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	if this field value is “20”(bank-ernterprise service), the pos service center should response to pos with value 12 in field 39 (invalid transaction)
61	Original	n...029	LLLVAR	BCD	M		

	Message Field						
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Sale Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of Original Sale Transaction
61.3	Original Transaction Date	N4		BCD	M		Transaction Date of Original Sale Transaction
62	Self-Defined Field	ans...22	LLLVAR	ASC	C		
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

Reversal is caused by the follow：

a) The POS don’t receive the response from the POS center within the time limit, reversal reason code should be “98”;

b) The POS receives the approval response from the POS center within the time limit, but it couldn’t complete the transaction for the fault POS. The reversal reason code is "96".

c) After receiving the response from the POS center, and the POS terminal failed to verify the MAC , the reversal reason code is "A0".

d) In other cases, the reversal reason code is “06”.

3.2.6 Sale Void

Sale Void Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22 indicate a non-magnetic stripe read and the card number can be determined
3	Processing Code	n6		BCD	M	M	20XXXX
4	Amount Of Transactions	n12		BCD	M	M	Same as the original sale transaction
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE

							NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		
23	Card Sequence Number	n3		BCD	C	C	C： present when POS can capture this value; Same as original transaction
25	POS Condition Mode	n2		BCD	M	M	
26	POS PIN Capture Code	n2		BCD	C		The field 22 indicates that the pin can be entered and the cardholder has entered

							the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
37	Retrieval Reference Number	an12		ASCII	M	M	In the request of Sale Void,it is oraginal sale transaction reference number
38	Authorization Identification Response	an6		ASCII	C1	C2	C1： If there is an authorization code in the original response, the original authorization code must be filled in this field
							C2：transaction approval shall be determined by the issuer
39	Response Code	an2		ASCII		M	

41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	In response, when Field 39 is“00”: F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 + pos sale slip serial number (nullable) + 0x02+pos sale slip date mmdd (nullable) + 0x02+ item order number(nullable)+0x20
47	Additional	Ans...999	LLLVAR	Multi-	C	C	Optional field,value-

	Data - Private			TAG Sub-field BINARY			added service reserved field((it must be filled in for charge-fee service). When field 39 value is “00”, 8f03 is required
49	Currency Code Of Transaction	an3		ASCII	M	M	
52	PIN Data	b64		BINARY	C		Required for magnetic stripe card transaction with pin input; For IC card transactions based on PBOC / EMV standard, this field does not appear when offline password authentication is used; This field appears when online password authentication is used
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
55	INTERGRATED CIRCUIT CARD SYSTEM RELATED	Maximum 256 bytes	LLLVAR	Multi-TAG Sub-			

	DATA			field			
DF32 （tag）	Chip Serial No	b8..32		BINARY	C		Exists when Track 2 data or Track 3 data appears
DF33 （tag）	Session Key Data	b8..32		BINARY	C		Exists when Track 2 data or Track 3 data appears
DF34 （tag）	Track Reading Time	n14		BCD	C		Exists when Track 2 data or Track 3 data appears
60	Reserved Private	an...019	LLLVAR	BCD	M		
60.1	Message Reason Code	n2		BCD	M		23
60.2	Batch Number	n6		BCD	M		
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal	n1		BCD	M	M	(1) In IC card

	Capabilities						transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site

							payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M		
60.7	Business Code	N2		BCD	M		
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Sale Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of Original Sale Transaction
61.3	Original Transaction Date	N4		BCD	M		Transaction Date of Original Sale Transaction
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined	ans...120	LLVAR	ASCII	C	C	Occurs when POS

	Field2						terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is “00” in the response message

3.2.7 Sale Void/Installment Void Reversal

Sale Void/Installment Void Reversal Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original transaction request

11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C	C	Same as the original transaction request
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		Same as the original transaction entry mode
23	Card Sequence Number	n3		BCD	C	C	C： present when POS can capture this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	Same as the original transaction

32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		If the original transaction has, it is the same
36	Track 3 Data	B...56	LLLVAR	BINARY	C		If the original transaction has, it is the same
37	Retrieval Reference Number	an12		ASCII		M	POS CENTER SYSTEM REFERENCE NUMBER
38	Authorization Identification Response	an6		ASCII	C		If there is an authorization code in the original response, the original authorization code must be filled in this field
39	Response Code	an2		ASCII	M	M	In the request Message,it is Rreversal reason
41	Card Acceptor	ans8		ASCII	M	M	Same as the

	Terminal Identification						original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements

60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	23
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are

							valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.

60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	if this field value is “20”(bank-ernterprise service), the pos service center should response to pos with value 12 in field 39 (invalid transaction)
61	Original Message Field	n...029	LLLVAR	BCD	M		Fied 61 of Sale Void
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Sale Void Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of Original Sale Void Transaction
61.3	Original Transaction Date	N4		bcd	M		Transaction Date of Original Sale void Transaction
64	MAC	b64		BINARY	M	C	Required when Field 39 is “00” in the response message

3.2.8 Refund/Installment Refund

Refund/Installment Refund

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0220	0230	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	20xxxx
4	Amount Of Transactions	n12		BCD	M	M	
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C	C	C1: EXISTS WHEN POS CAN

							GET C2: CARD EXISTS EXPIRED DATE
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		When this field values start with “01”（Manual key entry） ）, the acquirer should reject the transaction
23	Card Sequence Number	n3		BCD	C	C	present when POS can capture this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	00/64
26	Point Of Service PIN Capture Code	n2		BCD	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification	n..11	LLVAR	BCD	M	M	

	Code						
35	Track 2 Data	B..24	LLVAR	BINARY	C		Field 22 value is Magnetic stripereadand Track2 contents exist,
36	Track 3 Data	B...56	LLLVAR	BINARY	C		Field 22 value is Magnetic striperead and Track3 contents exist
37	Retrieval Reference Number	an12		ASCII	M	M	In the request of Refund,it is oraginal sale transaction reference number
38	Authorization Identification Response	an6		ASCII	C1		If there is an authorization code in the original response, the original authorization code must be filled in this field
39	Response Code	an2		ASCII		M	
41	Card Acceptor	ans8		ASCII	M	M	

	Terminal Identification						
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	In response, when Field 39 is “00”: F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 + pos sale slip serial number (nullable) + 0x02+pos sale slip date mmdd (nullable) + 0x02+ item order number(nullable)+0x20
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)

49	Currency Code Of Transaction	an3		ASCII	M	M	
52	PIN Data	b64		BINARY	C		The field 22 indicates that the pin can be entered and the cardholder has entered the pin, and Fied 53 is Single length key algorithm
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Field description Refer to Field 60.1 description, installment refund request should be filled in “25”
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions,

							which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure

							magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		, If exist ,Same as theBatch Number of Original Sale Transaction; Otherwise, fill in 0
61.2	OriginalPOS Trace Number	n6		BCD	M		If present,same as Trace Number of Original Sale Transaction;Otherwise, fill in 0

61.3	Original Transaction Date	n4		BCD	M		Original Sale Transaction Date
63	Self-Defined Field	ans...063	LLLVAR	ASCII	M	M	
63.1	International credit card company code	an3		ASCII	M	M	If none, be filled in 0
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when field 39 is “00” in the response message

3.2.9 Pre-Authorization

IC card pre-authorized transaction requires mandatory online, if not online, terminal should directly refuse.

Pre-Authorization Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type	n4		BCD	0100	0110	MSG-TYPE-ID

	Identifier						
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	030000
4	Amount Of Transactions	n12		BCD	M	M	
11	System Trace Audit Number	n6		BCD	M	M	
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of	n4	MMDD	BCD		C	

	Settlement						
22	Point Of Service Entry Mode	n3		BCD	M		
23	Card Sequence Number	n3		BCD	C	C	C: EXISTS WHEN POS CAN CAPTURE
25	Point Of Service Condition Mode	n2		BCD	M	M	06
26	Point Of Service PIN Capture Code	n2		BCD	C		The field 22 indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		Field 22 value is Magnetic stripe read and Track2 contents exist,

36	Track 3 Data	B...56	LLLVAR	BINARY	C		Field 22 value is Magnetic stripe read and Track3 contents exist
37	Retrieval Reference Number	an12		ASCII		M	POS CENTER SYSTEM REFERENCE NUMBER
38	Authorization Identification Response	an6		ASCII		C	Required when Field 39 value is “00”
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	ans...999	LLLVAR	TAG BINARY	C	C	In response, when Field 39 is “00”:

							F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 pos sale slip serial number (nullable) + 0x02 pos sale slip date mmdd (nullable) + 0x02
5F61 （tag）	UnionPay transaction indicator	an1			C		UnionPay dual branded card is required 1: UnionPay transaction 2: Non UnionPay transaction
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code	an3		ASCII	M	M	

	Of Transaction						
52	PIN Data	b64		BINARY	C		Required for magnetic stripe card transaction with pin input; For IC card transactions based on PBOC / EMV standard, this field does not appear when offline password authentication is used; This field appears when online password authentication is used
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
55	INTERGRATED CIRCUIT CARD SYSTEM RELATED DATA	Maximum 256 bytes	LLLVAR	Multi-TAG Sub-field			M in the following sub field is valid only when the transaction is an IC card transaction
9F26 （tag）	Application Cryptogram (AC)	b64		BINARY	M		

9F27 （tag）	Cryptogram Information Data	b8		BINARY	M		
9F10 （tag）	Issuer Application Data (IAD)	b...256	VAR	BINARY	M		
9F37 （tag）	Unpredictable Number	b32		BINARY	M		
9F36 （tag）	Application Transaction Counter (ATC)	b16		BINARY	M	C	C: IF THE PROCESSING CENTER RETURNS A RESPONSE, IT APPEARS IN THE RESPONSE AND IS CONSISTENT WITH THE CONTENT IN THE REQUEST
95 （tag）	Terminal Verification Result (TVR)	b40		BINARY	M		
9A （tag）	Transaction Date	n6		BCD	M		
9C （tag）	Transaction Type	n2		BCD	M		
9F02 （tag）	Amount Of Transactions	n12		BCD	M		

5F2A（tag）	Currency Code Of Transaction	n3		BCD	M		
82（tag）	Application Interchange Profile	b16		BINARY	M		
9F1A（tag）	Terminal Country Code	n3		BCD	M		
9F03（tag）	Other Amount	n12		BCD	M		
9F33（tag）	Terminal Capabilities	b24		BINARY	M		
9F34（tag）	Cardholder Verification Method Result (CVMR)	b24		BINARY	O		1. If the transaction amount is less than or equal to the local CVM limit, the value of de55 tag 9f34 must start with 00011111 (1F) or 00111111 (3F). 2. If the transaction amount is greater than the local CVM limit, the value of de55 tag 9f34 cannot start with 00011111

							(1F) or 00111111 (3F)
9F35 （tag）	Terminal Type	n2		BCD	O		
9F1E （tag）	face Device Serial Number (IFD)	an8		ASCII	C		Appears if the terminal identification cannot implicitly determine the serial number of the interface device
84 （tag）	Dedicated File Name (DF)	b...128	VAR	BINARY	O		
9F09 （tag）	Terminal Application Version Number	b16		BINARY	O		
9F41 （tag）	Transaction Sequence Counter	n...4	VAR	BCD	O		
91 （tag）	Issuer Authentication Data	b...128	VAR	BINARY		C	If the processing center returns a response, it appears in the response
71	Issuer Script	b...1024	VAR	BINARY		C	If the processing

（tag）	Template 1						center returns a response, it appears in the response
72（tag）	Issuer Script Template 2	b...1024	VAR	BINARY		C	If the processing center returns a response, it appears in the response
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Field descriptionRefer to Field 60.1 description
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal	n1		BCD	M	M	Only present when

	Capabilities						chip transaction、Fall Back、pure magnetic stripe transaction occur at a chip-capable terminal. In the above cases, this field should filled in 5
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	Only present when chip transaction、Fall Back、magnetic stripe transaction occur at a chip-capable terminal. chip transaction、Fall Back shall be filled in according to the actual situation. pure magnetic stripe transaction at a chip-capable terminal, this field should filled in 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	if this field value is “20”(bank-

							ernterprise service), the pos service center should response to pos with value 12 in field 39 (invalid transaction)
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message
1 If there is no other amount, fill in 0 in this field							

3.2.10 Pre-Authorization Reversal

Pre-Authorization Reversal Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original Pre-Authorization transaction request
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction trace number
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C	C	Same as the original

							transaction request
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		Same as the original transaction entry mode
23	Card Sequence Number	n3		BCD	C	C	C：present when POS can obtain this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	06
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII		M	POS Service center System Reference Number
38	Authorization Identification Response	an6		ASCII	C		If there is an authorization code in the original

							response, the original authorization code must be filled in this field
39	Response Code	an2		ASCII	M	M	In the request Message,it is Rreversal reason
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code	an3		ASCII	M	M	

	Of Transaction						
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
55	INTERGRATED CIRCUIT CARD SYSTEM RELATED DATA	Maximum 256 bytes	LLLVAR	Multi-TAG Sub-field			M in the following sub field is valid only when the transaction is an IC card transaction
95 （tag）	Terminal Verification Result (TVR)	b40		BINARY	C		This field appears if the transaction is only initiated by the terminal, and the transaction is approved by the issuer but rejected by the card.
9F1E （tag）	face Device Serial Number (IFD)	an8		ASCII	C		Appears if the terminal identification cannot implicitly determine the serial number of the interface device; Same as the original

							transaction
9F10 (tag)	Issuer Application Data (IAD)	b...256	VAR	BINARY	C		This field appears if the transaction is only initiated by the terminal, and the transaction is approved by the issuer but rejected by the card.
9F36 (tag)	Application Transaction Counter (ATC)	b16		BINARY	M	C	C: IF THE PROCESSING CENTER RETURNS A RESPONSE, IT APPEARS IN THE RESPONSE AND IS CONSISTENT WITH THE CONTENT IN THE REQUEST
DF31 (tag)	Issuer Script Results	b...168	VAR	BINARY	C		When the issuer script appears in the response message of the original transaction, this field appears
60	Reserved	n...019	LLLVAR	BCD	M	M	

	Private						
60.1	Message Reason Code	n2		BCD	M	M	Same as the original transaction
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field

							are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes

							the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N3		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Pre-Authorization Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of Original Pre-Authorization Transaction
61.3	Original Transaction Date	N4		BCD	M		Transaction Date of Original Pre-Authorization Transaction
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.11 Pre-Authorization Void

Pre-Authorization Void Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0100	0110	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	20xxxx
4	Amount Of Transactions	n12		BCD	M	M	
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET

							C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		
23	Card Sequence Number	n3		BCD	C	C	C： present when POS can capture this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	06
26	Point Of Service PIN Capture Code	n2		BCD	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		Field 22 value is Magnetic stripe read

							and Track2 contents exist,
36	Track 3 Data	B...56	LLLVAR	BINARY	C		Field 22 value is Magnetic stripe read and Track3 contents exist
37	Retrieval Reference Number	an12		ASCII		M	POS Service center System Reference Number
38	Authorization Identification Response	an6		ASCII	M	C	In the request message,same as the original Pre-Authorization transaction
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification	ans15		ASCII	M	M	Same as the original transaction

	Code						
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	In response, when Field 39 is “00”: F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 pos sale slip serial number (nullable) + 0x02 pos sale slip date mmdd (nullable) + 0x02
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	

52	PIN Data	b64		BINARY	C		Required for magnetic stripe card transaction with pin input; For IC card transactions based on PBOC / EMV standard, this field does not appear when offline password authentication is used; This field appears when online password authentication is used
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private	an...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Field descriptionRefer to Field 60.1 description
60.2	Batch Number	n6		BCD	M	M	
60.3	Network	n3		BCD	M	M	The local Field does

	Management Code						not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back

							transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		If exist ,Same as the Batch Number of Original Transaction; Otherwise, fill in 0
61.2	Original POS	n6		BCD	M		If exist ,Same as

	Trace Number						trace number of Original Transaction; Otherwise, fill in 0
61.3	Original Transaction Date	n4		BCD	M		If exist ,Same as the t transaction date of Original Transaction; Otherwise, fill in 0
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.12 Pre-Authorization Void Reversal

Pre-Authorization Void Reversal

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original Pre-Authorization transaction request
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C	C	Same as the original transaction request
15	Date Of	n4	MMDD	BCD		C	

	Settlement						
22	Point Of Service Entry Mode	n3		BCD	M		
23	Card Sequence Number	n3		BCD	C	C	C： present when POS can capture this value; Same as original transaction
25	Point Of Service Condition Mode	n2		BCD	M	M	06
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII		M	POS CENTER SYSTEM REFERENCE NUMBER
38	Authorization Identification Response	an6		ASCII	M		In the request Message,Same as the original transaction
39	Response Code	an2		ASCII	M	M	In the request Message,it is Rreversal reason
41	Card Acceptor	ans8		ASCII	M	M	Same as the original

	Terminal Identification						transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private d	an...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Same as the original transaction

60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur

							in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		Same as the original transaction

61.2	Original POS Trace Number	n6		BCD	M		Same as the original transaction
61.3	Original Transaction Date	n4		BCD	M		Same as the original transaction
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.13 Pre-Authorization Completion(Online)

Pre-Authorization Completion(Online) Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When Field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	000000
4	Amount Of Transactions	n12		BCD	M	M	

6	Amount Of Cardholder Billing	N12		BCD	C	C	DCC transaction required
10	Conversion Rate, Cardholder Billing	N8		BCD	C	C	DCC transaction required
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		
25	Point Of	n2		BCD	M	M	06

	Service Condition Mode						
26	Point Of Service PIN Capture Code	n2		BCD	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		Field 22 value is Magnetic stripereadand Track2 contents exist,
36	Track 3 Data	B...56	LLLVAR	BINARY	C		Field 22 value is Magnetic striperead and Track3 contents exist
37	Retrieval Reference Number	an12		ASCII	C	M	DCC TRANSACTION REQUIRED

38	Authorization Identification Response	an6		ASCII	M	C	In the request Message,Same as the original Pre-Authorization transaction C：need
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	In response, when Field 39 is “00”: F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 pos sale slip serial number (nullable) + 0x02

							pos sale slip date mmdd (nullable) + 0x02
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
51	Currency Code Of Cardholder Billing	an3		ASCII	C	C	DCC transaction is required, and relevant information is submitted for currency exchange rate query
52	PIN Data	b64		BINARY	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved	n...019	LLLVAR	BCD	M	M	

	Private						
60.1	Message Reason Code	n2		BCD	M	M	Field descriptionRefer to Field 60.1 description
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code	n1		BCD	M	M	(1) In IC card transactions, Fall

	based on PBOC/EMV standard						Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		If exist ,Same as the Batch Number of Original Pre-

							Authorization Transaction;Otherwise, fill in 0
61.2	Original POS Trace Number	n6		BCD	M		If exist ,Same as the Trace Number of Original Pre-Authorization Transaction; Otherwise, fill in 0
61.3	Original Transaction Date	n4		BCD	M		If exist ,Same as the Transaction date of Original Pre-Authorization Transaction; Otherwise, fill in 0
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information

64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.14 Pre-Authorization Completion(Online) Reversal

Pre-Authorization Completion(Online) Reversal Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original transaction request
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	

14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		
25	Point Of Service Condition Mode	n2		BCD	M	M	Same as the original transaction
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII		M	POS Service center System Reference Number
38	Authorization Identification Response	an6		ASCII	M		Same as the original transaction request
39	Response Code	an2		ASCII	M	M	In the request Message,it is

							Rreversal reason
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private	n...019	LLLVAR	BCD	M	M	

60.1	Message Reason Code	n2		BCD	M	M	Same as the original transaction
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code	n1		BCD	M	M	(1) In IC card transactions, Fall

	based on PBOC/EMV standard						Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		

61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of Original Transaction
61.3	Original Transaction Date	n4		BCD	M		Original Transaction Date
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.15 Pre-Authorization Completion Void

Pre-Authorization Completion Void Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	C	M	When field 22 indicate a non-magnetic stripe entry and the card number can be determined
3	Processing Code	n6		BCD	M	M	208000

4	Amount Of Transactions	n12		BCD	M	M	same as the f Original pre-authorization completion(online) Transaction
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		Fill in 022 when swiping card and 012 when not swiping card
25	Point Of Service Condition Mode	n2		BCD	M	M	06

26	Point Of Service PIN Capture Code	n2		BCD	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		Field 22 value is Magnetic stripe read and Track2 contents exist,
36	Track 3 Data	B...56	LLLVAR	BINARY	C		Field 22 value is Magnetic stripe read and Track3 contents exist
37	Retrieval Reference Number	an12		ASCII	M	M	In request message ,same as the original pre-authorization completion (online)transaction

38	Authorization Identification Response	an6		ASCII	C1	C2	C1：Same as the original transaction request C2： given by the issuer when transaction is sucessful
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
44	Additional Response Data	ans..25	LLVAR	ASCII		M	Receiver / acquirer
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	In response, when Field 39 is “00”: F46T5F55, fill in: pos sale slip batch number (nullable) + 0x02 pos sale slip serial number (nullable) +

							0x02 pos sale slip date mmdd (nullable) + 0x02
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
52	PIN Data	b64		BINARY	C		The 22 field indicates that the pin can be entered and the cardholder has entered the pin
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	见60.1Field descriptionRefer to Field 60.1 description

60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in

							IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD			
60.7	Business Code	N2		BCD			
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of the original transaction

61.3	Original Transaction Date	n4		BCD	M		Original Transaction Date
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.2.16 Pre-Authorization Completion Void Reversal

Pre-Authorization Completion Void Reversal Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID

	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	M	M	Same as the original transaction
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
14	Date Of Expired	n4			C1	C2	C1: EXISTS WHEN POS CAN GET C2: CARD WITH EXPIRED DATE EXISTS
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		

25	Point Of Service Condition Mode	n2		BCD	M	M	Same as the original transaction
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII		M	POS CENTER SYSTEM REFERENCE NUMBER
38	Authorization Identification Response	an6		ASCII	C		C：In the request message,Same as the original transaction
39	Response Code	an2		ASCII	M	M	In the request message,it is Rreversal reason
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Same as the original transaction
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Same as the original transaction
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-	C	C	

				field			
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Optional field,value-added service reserved field. (it must be filled in for charge-fee service)
49	Currency Code Of Transaction	an3		ASCII	M	M	
53	Security Related Control Information	n16		BCD	C	C	Required if there are security requirements
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Same as the original transaction
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here

							with the default value of 000
60.4	Terminal Capabilities	n1		BCD	M	M	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur

							in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
60.6	Product code	N4		BCD	M	M	
60.7	Business Code	N2		BCD	M	M	
61	Original Message Field	n...029	LLLVAR	BCD	M		(Complete void transaction field 61)
61.1	Original Batch Number	n6		BCD	M		Batch Number of Original Transaction
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of the original transaction
61.3	Original Transaction Date	n4		BCD	M		Transaction Date of the original transaction
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the

							response message

3.2.17 Tips

Tips Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	N4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	B64		BINARY	M	M	BIT MAP
2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	N6		BCD	M	M	950000
4	Amount Of Transactions	N12		BCD	C	M	Amount Of Tips
11	System Trace Audit Number	N6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	N6	hhmmss	BCD		M	
13	Date Of Local Transaction	N4	MMDD	BCD		M	

14	Date Of Expired	n4			C	C	
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	N3		BCD	M		012
25	Point Of Service Condition Mode	N2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
37	Retrieval Reference Number	An12		ASCII	M	M	In the request message, Same as the original transaction
38	Authorization Identification Response	an6		ASCII	C	C	in request message,Same as the original transaction

39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
44	Additional Response Data	Ans..25	LLVAR	ASCII		M	Receiver / acquirer
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field. When 39 = 00, refer to usage 2. 8f03 is required and 8f05 is optional
48	Additional data - Private	Ans...012	LLLVAR	BCD	C		Amount Of Tips
49	Currency Code Of Transaction	an3		ASCII	M	M	
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code			BCD	M	M	95

60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	000
60.4	Terminal Capabilities	n1		BCD	C	C	(1) In IC card transactions, occur in IC card terminals,the field is filled in with 5. (2) Appears in the case of CUPMobile live mobile payment. When the first two digits of the 22-field are valued at 96, the Field is filled in with 6.
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	C	C	(1) In IC card transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals. IC card transactions and Fall Back

							transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur in IC card terminals,the field is filled in with 0. (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 Fields are taken as 96, the Field takes the value of 0.
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n...029	LLLVAR	BCD	M		Same as the original transaction
61.2	Original POS Trace Number	n...029	LLLVAR	BCD	M		Same as the original transaction
61.3	Original Transaction	n...029	LLLVAR	BCD	M		Same as the original

	Date						transaction
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message
1: If there is no other amount, fill in 0 in this field							

3.2.18 Tips Void

Tips Void Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	N4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	B64		BINARY	M	M	BIT MAP

2	Primary Account Number	B..16	LLVAR	BINARY	M	M	
3	Processing Code	N6		BCD	M	M	200000
4	Amount Of Transactions	N12		BCD	C	M	Same as the original transaction response
11	System Trace Audit Number	N6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	N6	hhmmss	BCD		M	
13	Date Of Local Transaction	N4	MMDD	BCD		M	
14	Date Of Expired	n4			C	C	
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	N3		BCD	M		012
25	Point Of Service Condition Mode	N2		BCD	M	M	00

32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
37	Retrieval Reference Number	An12		ASCII	M	M	In the request of tip Void,it is oraginal tip transaction reference number
38	Authorization Identification Response	an6		ASCII	C	C	In the request of tip Void,it is oraginal tip transaction's authorization Identification Response
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID

44	Additional Response Data	Ans..25	LLVAR	ASCII		M	Receiver / acquirer
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field BINARY	C	C	Optional field. When 39 = 00, refer to usage 2. 8f03 is required and 8f05 is optional
48	Additional data - Private	Ans...012	LLLVAR	BCD	C		Amount Of Tips
49	Currency Code Of Transaction	an3		ASCII	M	M	
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code			BCD	M	M	95
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	000
60.4	Terminal Capabilities	n1		BCD	C	C	
60.5	IC card	n1		BCD	C	C	(1) In IC card

	condition code based on PBOC/EMV standard						transactions, Fall Back, pure magnetic stripe card transactions occur in IC card terminals, etc. IC card transactions and Fall Back transactions are filled in according to the actual situation. Pure magnetic stripe card transactions occur w (2) In the case of CUPMobile on-site payment, when the first two digits of the 22 fields are taken as 96, the field takes the value of 0.
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n...029	LLLVAR	BCD	M		Batch Number of the original tips transaction
61.2	Original POS Trace Number	n...029	LLLVAR	BCD	M		Trace Number of the original tips

							transaction
61.3	Original Transaction Date	n...029	LLLVAR	BCD	M		transaction date of the original tips transaction
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	
63.1	International credit card company code	an3		ASCII		M	
63.2	Self-Defined Field2	ans...120	LLVAR	ASCII	C	C	Occurs when POS terminals, Allinpay INTL, card issuers, merchant settlement banks, etc. need to transmit special information
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message
If there is no other amount, this field fill in 0							

3.2.19 U+plan Coupon management transaction

A successful coupon verification transaction is required before processing the U+ plan sale transaction. POS needs to provide the option of using coupons according to UnionPay card. The coupon information can be obtained by scanning the coupon barcode or manually entering the coupon code. The obtained coupon information

needs to be submitted in the field 48 (see Usage 7 of field 48 for details). After the coupon is successfully written off, the response message of the coupon write off transaction will return the payment amount (after discount) at TAG 02 and discount amount at TAG 03 in the field 48(by the usage 7), and then initiate a sale transaction with the after discount payment amount.

When the U+plan sale transaction is failed, is timeout or is void, a coupon reversal transaction shall be initiated to reset the used coupon to the unused status.

Coupon write off

Coupon write off Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	b..16	LLVAR	BINARY	M	M	When Field 22 indicate a non-magnetic stripe input and the card number can be determined
3	Processing Code	n6		BCD	M	M	469000
4	Amount Of Transactions	n12		BCD	C	C	
11	System Trace	n6		BCD	M	M	POS TERMINAL

	Audit Number						TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		M	
22	Point Of Service Entry Mode	n3		BCD	M		
25	Point Of Service Condition Mode	n2		BCD	M	M	00
35	Track 2 Data	B..24	LLVAR	BINARY	C		
36	Track 3 Data	B...56	LLLVAR	BINARY	C		
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID

48	Additional data - Private	ansb..512	LLLVAR	BCD	C	M	For discount information, see Usage 7
49	Currency Code Of Transaction	an3		ASCII	M	M	
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	22
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	fill with 000
60.4	Terminal Capabilities	n1		BCD	M	M	
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	
64	MAC	b64		BINARY	M	C	

Coupon write off reversal

Coupon write off reversal Message

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0400	0410	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
2	Primary Account Number	b..16	LLVAR	BINARY	M	M	
3	Processing Code	n6		BCD	M	M	Same as the original transaction
4	Amount Of Transactions	n12		BCD	C	C	Same as the original request
11	System Trace Audit Number	n6		BCD	M	M	Same as the original transaction
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		M	
22	Point Of Service Entry Mode	n3		BCD	M		Same as the original request

25	Point Of Service Condition Mode	n2		BCD	M	M	Same as the original transaction
32	Track 2 Data	n..11	LLVAR	BCD	M	M	
35	Track 3 Data	B..24	LLVAR	BINARY	C		Same as the original transaction
36	Response Code	B...56	LLLVAR	BINARY	C		Same as the original transaction
37	Card Acceptor Terminal Identification	an12		ASCII		M	pos center system reference number
39	Card Acceptor Identification Code	an2		ASCII	M	M	In the request message,it is Rreversal reason
41	Additional data - Private	ans8		ASCII	M	M	Same as the original transaction
42	Currency Code Of Transaction	ans15		ASCII	M	M	Same as the original transaction
49	Primary Account Number	an3		ASCII	M	M	
60	Reserved Private	n...019	LLLVAR	BCD	M	M	
60.1	Message Reason	n2		BCD	M	M	22

	Code						
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	Fill with 000
60.4	Terminal Capabilities	n1		BCD	M	M	Same as the original transaction
60.5	IC card condition code based on PBOC/EMV standard	n1		BCD	M	M	Same as the original transaction
61	Original Message Field	n...029	LLLVAR	BCD	M		
61.1	Original Batch Number	n6		BCD	M		Batch Number of the original tips transaction, otherwise,fill 0
61.2	Original POS Trace Number	n6		BCD	M		Trace Number of the original tips transaction otherwise,fill 0
61.3	Original Transaction Date	n4		BCD	M		transaction date of the original tips transaction otherwise,fill 0

64	MAC	b64		BINARY	M	C	

3.3 Wechat/Alipay/UPI QRC

3.3.1 QR Code Payment(Merchant Present QR)

Institutions can invoke this API to generate a unique payment code of merchant order information. By scanning the code in e-Wallet (Wechat\Alipay\UPI\Bank APP), users complete the payment after passing the security checks

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
3	Processing Code	n6		BCD	M	M	“700200”
4	Amount Of Transactions	n12		BCD	M	M	
5	Amount Of Tips	n12		BCD	C	C	This field value is tips amount.And the tips amount be add to transaction amount.
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER

12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
22	Point Of Service Entry Mode	n3		BCD	M		030
25	Point Of Service Condition Mode	n2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID

46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	In request,F46T5F52 should fill in: 0x3030 + 0x02 + Payment type+0x02+ Item order number (order payment need to fill in)+0x02 in response, when Field 39 is “00”: F46T5F55, fill in: sale slip date (mmdd) + 0x02 +pos sale slip batch number + 0x02 + pos trace number + 0x02 + merchat order number +0x02 + QR code +0x02 remark： 1. Payment type：

							2. 0x30 Wechat 3. 0x31:Alipay 4. 0x32: UPI Quick-Pass 5. 0x39: PAYNOW
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	
49	Currency Code Of Transaction	An3	ASCLL		M	M	
60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	C	01
60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000

60.4	Terminal Capabilities	n1			C	C	When exist sub-field, this field is present.fill in 0.
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	When exist sub-field, this field is present.fill in 0.
60.6	Product code	n4			M	M	
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000
63.1	International credit card company code	an3		ASCII		M	
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.3.2 Official Account Payment

Institution or Merchant had own a H5 e-commerce website,user open the website url in Wechat App, Institution can invoke this API to get payement information,and then User is taken to Wechat payment to finish order payment.

Field	Data Element	Data Type	Format	Type	Req	Res	Comment

	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
3	Processing Code	n6		BCD	M	M	“700300”
4	Amount Of Transactions	n12		BCD	M	M	
5	Amount Of Tips	n12		BCD	C	C	This field is filled in amount of tips.the amount of tips is accumulated to Field 4
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
22	Point Of Service Entry Mode	n3		BCD	M		030
25	Point Of Service Condition Mode	n2		BCD	M	M	00

32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	In request, F46T5F52 should fill in: 0x3030 + 0x02 + 0x30+0x02+ Item order number (order payment need to fill in)+0x02 + subAppid(option)+0x20 Openid(mandatory)

							F46T5F55, fill in: sale slip date (mmdd) + 0x02 +pos sale slip batch number + 0x02 + pos sale slip serial number + 0x02 + merchat order number +0x02 +payment information +0x02
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	
49	Currency Code Of Transaction	An3	ASCLL		M	M	
60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	C	01

60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1			C	C	When exist sub-field, this field is present.fill in 0.
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	When exist sub-field, this field is present.fill in 0.
60.6	Product code	n4			M	M	
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000
63.1	International credit card company code	an3		ASCII		M	
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response

							message

3.3.3 Quick Pay (Customer Present QR)

E-wallet（Wechat/Alipay/UPI） users present their payment code to the merchant cashier. Merchant cashier scan the code to take the payment. Quick Pay is suitable for in-store merchant, such as department stores, convenience stores, restaurants, hospitals, schools, cinemas, tourist attractions and other physical places that have clear business addresses。

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
3	Processing Code	n6		BCD	M	M	“400101”
4	Amount Of Transactions	n12		BCD	M	M	
5	Amount Of Tips	n12		BCD	C	C	This field is filled in amount of tips.the amount of tips is accumulated to Field 4
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local	n6	hhmmss	BCD		M	

	Transaction						
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		030
25	Point Of Service Condition Mode	n2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	When this field value is “AS”: The response code mean the transaction is accepted ,but don’t receive the result..need to

							lauch a inquiry request after an interval of 6 seconds to get the result.
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Field 46’s TAG In request,F46T5F52 should fill in: 0x3030 + 0x02 + Payment type+0x02+ QRcode + x002 + Item order number (order payment need to fill in)+0x02 in response, when Field 39 is “00”: F46T5F55, fill in:

							sale date (mmdd) + 0x02+ pos sale batch number + 0x02 + pos sale slip serial number + 0x02 + merchat order number +0x02+ payment no(wechat/Alipay payment no) +0x02
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	when Field 39 is “00”, this field is Required, refer to Field 47 Definition Usage2 tag 8F03 Is required
48	Additional Data - Private	ans..512	LLLVAR	BCD	C		If it is sale transaction associated with a coupon, when the coupon was writed off after verification,the response must be

							submitted
49	Currency Code Of Transaction	An3	ASCLL		M	M	
60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	C	01
60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1			C	C	This field only appears when there are subsequent sub-field. Fill in 0
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	This field only appears when there are subsequent sub-field. Fill in 00

60.6	Product code	n4			M	M	
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000
63.1	International credit card company code	an3		ASCII		M	
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

Note: Payment Type: 0x30: wechat payment 0x31: Alipay payment 0x32: UnionPay Quick Pass payment

3.3.4 Transaction Inquiry (Query Order)

1. This API provides the inquiry of Wechat / Alipay / UPI Quick Pass payment orders. Merchants can actively query the order status through this API to complete the next step of business logic.
2. The query interface needs to be invoked:
3. one ◆ when the backend, network and server of the merchant are abnormal,
4. two ◆ after invoking the payment api, return the unknown transaction result;

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP

3	Processing Code	n6		BCD	M	M	“700206”
4	Amount Of Transactions	n12		BCD	M	C	Amount of the original sale transaction
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		
25	Point Of Service Condition Mode	n2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	

37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Field 46 ‘s TAG In request message： F46T5F52 fill in: 0x3030 + 0x02 Payment type + 0x02 +payment no （wechat\alipay\upi payment no）+0x02 +merchant order no+0x02 + Specific transaction information +0x02

							In response message When field 39 is 00: F46T5F55 fill in : Request date(mmdd)+0x02 + pos batch numer+0x02 +pos trace number+0x02 Order status（1 byte）+0x02+ payment no(wechat/Alipay payment no)+0x02+ merchant order no+0x02+ Paid in amount (the format is the same as transaction amount)+0x02 Original transaction type +0x02+ Item order No(required for order payment product)+0x20

							note: original payment type： 0x30：Wechat 0x31：Alipay 0x32: UPI Quick Pass 0x33：Wechat void 0x34：Wechat refund 0x35: Alipay void 0x36: Alipay refund 0x37: UnionPay void 0x38: UnionPay refund 0x39: PAYNOW 0x40: paynow revocation 0x41: paynow refund 0x99：unknowed
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	when Field 39 is “00” & order status is succesful， this field is Required， refer to Field 47 Definition Usage2 tag 8F03 Is required

60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	M	01
60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1			C	C	This field only appears when there are subsequent sub-fields. Fill in 0
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	This field only appears when there are subsequent sub-fields. Fill in 0
60.6	Product code	n4			M	M	

63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000
63.1	International credit card company code	an3		ASCII		M	

Note: the order status should not be judged according to field 39. The correct judgment method is:

When the field 39 should be 00, the order status is judged from the field 46:

1: Successful payment;

2: Transfer in refund or void or transaction timeout;

3: Not paid or waiting for payment;

4: The transaction termination and the order is closed;

5: Payment failed (for other reasons, such as failure returned by the bank)

Note:

The payment order No. and merchant Order No. should distinguish different transaction types. For example, to query the transaction result of "order cancellation", the payment order No. and merchant Order No. (order cancellation transaction) should be submitted instead of the order No. of the cancelled transaction.

Payment order number, merchant order number and specific transaction information one of them must be sent. If all of them are sent, the payment order number has the highest priority, followed by the merchant order number, and the specific transaction information has the lowest priority.

Format of specific transaction information: 2 bytes of original transaction flag +8 bytes of original transaction date+6 bytes of original transaction batch number

+6 bytes of original transaction trace number +12 bytes of original transaction amount

Original transaction flag: 00: QR Code Payment 01: Quick Pay(customer present QR) 04: order cancellation 05: order refund 99: unknown transaction type

3.3.5 Cancellation Payment Order

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
3	Processing Code	n6		BCD	M	M	“400200”
4	Amount Of Transactions	n12		BCD	M	M	Same as the original sale transaction
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		C	

22	Point Of Service Entry Mode	n3		BCD	M		030
25	Point Of Service Condition Mode	n2		BCD	M	M	00
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Field 46 ‘s TAG In request message: F46T5F52 fill in: 0x3030 + 0x02

							Payment type + 0x02 +payment no （wechat\alipay\upi payment no）+0x02 +merchant order no+0x02 + Specific transaction information +0x02 In response message When field 39 is 00： F46T5F55 fill in : Request date(mmdd)+0x02 + pos batch numer+0x02 +pos trace number+0x02 merchant void order no+0x02+ payment no(wechat/Alipay payment no)+0x02+ original payment type + 0x02 Item order No(required

							for order payment product)+0x20
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	when Field 39 is “00”, this field is Required, refer to Field 47 Definition Usage2
49	Currency Code Of Transaction	An3	ASCLL		M	M	
60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	M	53
60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal	n1			C	C	This field only appears when there are

	Capabilities						subsequent sub-fields. Fill in 0
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	This field only appears when there are subsequent sub fields. Fill in 0
60.6	Product code	n4			M	M	
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000
63.1	International credit card company code	an3		ASCII		M	
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

Note: please refer to the query order for the request of field 46:

3.3.6 Refund Payment Order

When a refund is required due to the buyer or the seller within a period of time after the transaction and within the validity of the order, the seller can refund to the buyer through the refund api. After receiving the refund request and successfully verifying it, the channel will refund to the buyer's account according to the refund rules. Partial refund and full refund are supported.

Field	Data Element	Data Type	Format	Type	Req	Res	Comment

	Message Type Identifier	n4		BCD	0200	0210	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
3	Processing Code	n6		BCD	M	M	“400100”
4	Amount Of Transactions	n12		BCD	M	M	
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		C	
22	Point Of Service Entry Mode	n3		BCD	M		030
25	Point Of Service Condition Mode	n2		BCD	M	M	00
32	Acquiring	n..11	LLVAR	BCD	M	M	

	Institution Identification Code						
37	Retrieval Reference Number	a12		ASCII		M	
39	Response Code	an2		ASCII		M	
41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
46	Self-Defined Field	Ans...999	LLLVAR	Multi-TAG Sub-field	C	C	Field 46 ‘s TAG In request message： F46T5F52 fill in: 0x3030 + 0x02 original payment type + 0x02 +payment no （wechat\alipay\upi payment no）+0x02 +merchant order no+0x02

							+ Specific transaction information +0x02 In response message When field 39 is 00: F46T5F55 fill in : Request date(mmdd)+0x02 + pos batch numer+0x02 +pos trace number+0x02 merchant refund order no+0x02+ payment no(wechat/Alipay payment no)+0x02+ original payment type + 0x02 Item order No(required for order payment product)+0x20
47	Additional Data - Private	Ans...999	LLLVAR	Multi-TAG Sub-field		C	
49	Currency Code	An3	ASCLL		M	M	

	Of Transaction						
60	Reserved Private	ans...100	LLLVAR	BCD	C	C	
60.1	Message Reason Code	n2		BCD	M	M	55
60.2	Batch Number	n6		BCD	M	C	
60.3	Network Management Code	n3		BCD	M	C	The local Field does not appear until a subsequent sub-field exists. Non-network management transactions, which are populated here with the default value of 000
60.4	Terminal Capabilities	n1			C	C	This field only appears when there are subsequent sub fields. Fill in 0
60.5	IC card condition code based on PBOC/EMV standard	n1			C	C	This field only appears when there are subsequent sub fields. Fill in 0
63	Self-Defined Field	ans...063	LLLVAR	ASCII		M	000

63.1	International credit card company code	an3		ASCII		M	
64	MAC	b64		BINARY	M	C	Required when Field 39 is“00” in the response message

3.4 Network Management Transaction

3.4.1 Sign-In

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0800	0810	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
11	System Trace Audit Number	n6		BCD	M	M	
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	

37	Retrieval Reference Number	an12		ASCII		M	
39	Response Code	an2		ASCII		M	
60	Reserved Private	n...011	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Fill in 99
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	double long key algorithm terminal fill in 003
62	Terminal key	b...085	LLLVAR	BINARY		C	The field is requied when field 39 is "00", fill in PIK\MAK\TRK, refer to Field 62 description
63	Self-Defined Field	ans...003	LLLVAR	ASCII	M		
63.1	Operator ID	an3		ASCII	M		

3.4.2 Batch Settlement

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0800	0810	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
15	Date Of Settlement	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII		M	
39	Response Code	an2		ASCII		M	

41	Card Acceptor Terminal Identification	ans8		ASCII	M	M	Terminal ID
42	Card Acceptor Identification Code	ans15		ASCII	M	M	Merchant ID
48	Additional Data - Private	ans...062	LLLVAR	ASCII	M	M	settlement amount, refer to Field 48 description
49	Currency Code Of Transaction	an3		ASCII	M	M	
60	Reserved Private	n...011	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Fill in “00”
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	Fill in “201”
63	Self-Defined Field	ans...003	LLLVAR	ASCII	M		
63.1	Operator ID	an3		ASCII	M		

3.4.3 Sign-off

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0820	0830	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		BCD		M	
39	Response Code	an2		ASCII		M	
60	Reserved Private	n...011	LLLVAR	BCD	M	M	

60.1	Message Reason Code	n2		BCD	M	M	Fill in “99”
60.2	Batch Number	n6		BCD	M	M	
60.3	Network Management Code	n3		BCD	M	M	002

3.4.4 Echo

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0820	0830	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
39	Response Code	an12		ASCII		M	
60	Reserved Private	N...011	LLLVAR	BCD	M	M	
60. 1	Message Reason	n2		BCD	M	M	Fill in “99”

	Code						
60. 2	Batch Number	n6		BCD	M	M	
60. 3	Network Management Code	n3		BCD	M	M	301

3.4.5 Key Reset Request

Institution -> allinpay

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type Identifier	n4		BCD	0820	0830	MSG-TYPE-ID
	Bit Map	b64		BINARY	M	M	BIT MAP
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	

37	Retrieval Reference Number	an12		ASCII		M	
39	Response Code	an2		ASCII		M	
60	Reserved Private	n...011	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Fill in “98”
60.2	Batch Number	n6		BCD	M	M	Subject to the response of POS Service Center
60.3	Network Management Code	n3		BCD	M	M	double long key algorithm terminal fill in 003
63	Self-Defined Field	ans...003	LLLVAR	ASCII	M		
63.1	Operator ID	an3		ASCII	M		

3.4.6 Key Reset Transaction

allinpay -> Institution

Field	Data Element	Data Type	Format	Type	Req	Res	Comment
	Message Type	n4		BCD	0820	0830	MSG-TYPE-ID

	Identifier						
	Bit Map	b64		BINARY	M	M	BIT MAP
11	System Trace Audit Number	n6		BCD	M	M	POS TERMINAL TRANSACTION TRACE NUMBER
12	Time Of Local Transaction	n6	hhmmss	BCD		M	
13	Date Of Local Transaction	n4	MMDD	BCD		M	
32	Acquiring Institution Identification Code	n..11	LLVAR	BCD	M	M	
37	Retrieval Reference Number	an12		ASCII	M	M	
39	Response Code	an2		ASCII		M	
60	Reserved Private	n...011	LLLVAR	BCD	M	M	
60.1	Message Reason Code	n2		BCD	M	M	Fill in “99”
60.2	Batch Number	n6		BCD	M	M	Subject to the response of POS

							Service Center
60.3	Network Management Code	n3		BCD	M	M	double long key algorithm terminal fill in 003
62	Terminal key	b...085	LLLVAR	BINARY	M		The field is requied when field 39 is "00", fill in PIK\MAK\TRK, refer to Field 62 description
63	Self-Defined Field	ans...003	LLLVAR	ASCII	M		
63.1	Operator ID	an3		ASCII	M		

4 Message Field Definition

4.1 Message Type Identifier

Variable Attribute

N4, 4-byte numeric characters with fixed length

A, 2-byte fixed-length field represented by BCD code when compressed

Field descriptions

Message types are defined as follows:

1. 0100 Authorization request message:

2. POS pre-authorization request.
3. POS appends pre-authorization request.
4. POS pre-authorization void request.
5. 0110 Authorization response message:
6. POS pre-authorization response.
7. The POS appends a pre-authorization response.
8. POS pre-authorization revocation response.
9. 0200 Financial request message:
10. POS query request.
11. POS sale request.
12. POS sale void request.
13. POS pre-authorization completion (online) request.
14. POS preauthorization completion void request.
15. IC circular deposit Transaction based on PBOC/EMV e-wallet
16. Installment payment transaction request
17. remittance /deposit /QRcode payment/payback request.
18. 0210 Financial Response message:
19. POS query response.
20. POS sale response.
21. POS sale void response.
22. POS pre-authorization completion (online) response.
23. POS preauthorization completion void response.
24. IC circular deposit Transaction based on PBOC/EMV e-wallet

25. Installment and installment payment transaction response

26. remittance / deposit /QRcode payment/repayment response.

1. 0220 Financial notification messages:

2. POS Refund Notification.

3. POS settlement notification.

4. POS settlement adjustment notification.

5. POS pre-authorization completion (offline) notification.

1. 0230 Financial notification response messages:

2. POS Refund notification response.

3. POS settlement notification response.

4. POS settlement adjustment notification response.

5. POS pre-authorization completion (offline) notification response.

1. 0320 Batch sending message:

2. POS terminal batch sending.

3. 0330 Batch sending response message:

4. The POS terminal batch sending responses.

1. 0400 reversal message:

- POS pre-authorization reversal.
- POS pre-authorization void reversal.
- POS sale reversal.
- POS sale void reversal.
- POS pre-authorization completion (online) reversal.

- POS pre-authorization completion void reversal.
- IC circular deposit Transaction reversal based on PBOC/EMV e-wallet

1. 0410 reversal response message:：
2. POS pre-authorization reversal response.
3. POS pre-authorization reversal reversal response.
4. POS sale void reversed response.
5. POS sale reversal and reversal response.
6. POS pre-authorization completion (online) reversal response.
7. POS pre-authorization completion void reversal response.
8. IC loading transaction reversal based on PBOC/EMV electronic wallet

1. 0500 Reconciliation messages:
2. POS terminal batch settlement request.
3. 0510 Reconciliation response message:
4. POS terminal batch settlement response.

1. 0620 IC card script processing result notification message based on THE PBOC/EMV card standard
2. Notification of IC card script processing result based on PBOC/EMV card standard
3. 0630 Notification response of IC card script processing result based on PBOC/EMV card standard
4. Notification and response of IC card script processing result based on PBOC/EMV card standard

1. 0800 Network service management messages:
2. Institution sign-in request.
3. 0810 Network Service Management Response Message:
4. Institution sign-in response.

1. 0820 Network service management messages:

2. Institution Sign-Out Request .

3. echo to test requests.

4. Key reset request request.

5. Key reset transaction request.

1. 0830 Network Service Management Response Message:

2. Organization sign-off response.

3. Echo test response.

4. Key reset request response.

5. Key reset transaction response.

4.2 Field 2 Primary Account Number)

Variable Attribute

B..19(LLVAR), 1-byte length value in BCD code + primary account data encrypted with primary account length in TRK.

Field descriptions

The user's PAN, captured from the track 2 or track 3 in a magnetic stripe card transaction, the PAN captured from Application PAN in an IC card transaction , or the PAN by manual entry in CNP transaction. The account number can be up to 19 numeric characters. The maximum length value cannot exceed 19 .

The primary account number shall match one of the following standards:

1. international credit card organization's standard or Regulations;

2. UnionPay recognize or approve standards;

3、People's Republic of China Financial Industry Standard JR/T 0008-2000 Bank Card Issuing Bank Identification Code and Card Number

4、Other standards recognized by the People's Bank of China;

usage

If the POS terminal capture track 2 and track 3 information of the customer's magnetic stripe card, this field don't need to set value.The customer's PAN will be picked up by the POS center from the track 2 or track 3 information in the POS request message, filled in this field, and forwarded to the card issuer.

If the operator manually enters the card number at the POS terminal or capture card number by read IC card transaction, the value of this field should be placed in the request message. The POS center will take this field as normal and remain unchanged in the request and response messages.

Encryption steps:

Combine the actual 1 byte BCD length of the primary account with the BCD data of the primary account (maxnium 11 bytes in total);

If the length of the data obtained in step (1) is not a multiple of 8, add 0x00 to reach a multiple of 8.

Use TRK to encrypt the data in step 2 with 3DES to generate the encrypted primary account data.

Attach the data length of step (3) before the data of step (3) , 1 byte BCD format.

4.3 Field 3 Processing Code

Variable Attribute

N6, 6-byte fixed-length numeric character field, 3-byte fixed-length field represented by BCD code when compressed.

Field descriptions

This field is composed of 6-digit decimal numbers, Bits 1 and 2 are indicating the transaction type

The 1st and 2nd digits of the processing code are defined as follows:

The 1st and 2nd digits	Description	Remarks
00-19	Debits	
00	Goods And Service	
01	Cash	
02	Adjustment	
03	Cheque Guarantee(Funds Guaranteed)	
04	Cheque Verification(Funds Available But Not Guaranteed)	
05	Euro-cheque	
06	Traveller Cheque	
07	letter Of Credit	
08	Giro(Postal Banking)	
09	Goods And Service With Cash Disbursement Transfer	
10-13	Reserved For ISO Use	
14-16	Reserved For National Use	

17-19	Reserved For Private Use	
20-29	Credits	
20	Returns	
21	Deposits	
22	Adjustment	
23	Cheque Deposit Guarantee	
24	Cheque Deposit	
25-26	Reserved For ISO Use	
27	Reserved For National Use	
28-29	Reserved For Private Use	
30-39	Inquiry services	
30	Available Funds Inquiry	
31	Balance Inquiry	
32-35	Reserved For ISO Use	
36-37	Reserved For National Use	
38-39	Reserved For Private Use	
40-49	Transfer services	

40	Cardholder Accounts Transfer	
41-45	Reserved For ISO Use	
46-47	Reserved For National Use	
48	Reserved For Private Use	
50-99	Reserved	
60		Circle of deposit

3rd-4th Digits indicate the type of account debited,inquiry and transferred out.

The 3rd and 4th digits indicate the account type to be debited as well as the transfer out.

The 5th and 6th digits indicate the type of account to be credited as well as transferred to.

Definition of 3rd and 5th of the transaction processing code

The 3rd and 5th digits	**Description**	**Remarks**
0	Default	
1	Saving Account	
2	Cheque Account	
3	Credit Facility	
4	Universal Account number	
5	Investment Account	

6-7	Reserved For ISO Use	
8	Reserved For national Use	
9	Reserved For Private Use	

The 4th and 6th digits of the transaction processing code are defined as follows:

The 4th and 6th digits	Description	Remarks
0	Default	
1-2	Reserved For ISO Use	
3-7	Reserved For National Use	
8-9	Reserved For Private Use	
4	Universal Account number	
5	Investment Account	

Usage

Account code of transaction processing code

Card Type Not Selected	Saving Account	Cheque Account	Credit Account	Universal Account	Bank card Points account	Industry card Points account	Industry card Stored value account
00	10	20	30	40	09	99	90

4.4 Field 4 Amount Of Transactions

Whether it is an account fund transaction or an integral transaction, the amount in this field will be used for settlement between the acceptor and the acquirer.

Variable Attribute

N12, 12-byte numeric characters with fixed length, 6-byte fixed-length field represented by BCD code when compressed.

Field descriptions

Transaction amount, which does not include any handling charges.

Usage

this field is filled with the value that only contains the transaction amount. Field 49 Currency Code, Transaction indicates the transaction currency code and must be present together with this field.

When the transaction currency is RMB, the last two digits on the right of this field should contain jiao and cent of RMB.

When the transaction currency is non-RMB and has no decimal digit, this field reflects the actual transaction amount. If the currency is non-RMB and has two decimal digits, the way to fill the field is the same as that for RMB; while if it has three decimal digits, the last three digit must be zero.

Examples of usage are shown as follows:

Currency Type	Decimal Digits	Actual Amount	Field Value
RMB	2	1000.02	000000100002
Non-RMB	None	1000	000000001000
	2	1000.02	000000100002

	3	1000.112	000001000110

The field will not exist in balance inquiry requests、management requests and script notification transactions

If the transaction includes a tip amount, the tip amount accumulates to Field 4.

4.5 Field 5 Amount Of Tips

In the sale transaction, pre-authorized completion transaction, if there is a tip, This Field must be present.

4.6 Field 6 Amount Of Cardholder Billing

Variable Attribute

N12, 12-byte numeric characters with fixed length, 6-byte fixed-length field represented by BCD code when compressed.

Field descriptions

Cardholder billing amount = transaction amount (Field4) × Cardholder billing conversion rate (Field 10). There is no decimal point in this field, and the decimal place is based on the Cardholder billing currency

Usage

This field is used for deducting or freezing the fund in the Cardholder account and only present in DCC transaction messages. When this field appears, Field 10 (Cardholder Billing Conversion Rate) and Field 51 (Cardholder Billing Currency Code) must appear。This field does not appear in non-DCC transactions.

In the forced DCC mode, if the response code of the response message is 00 and the transaction has been DCC converted, this field must be present in the response message.

The rest of Usag same as Field 4 Usage.

4.7 Field 10 Conversion Rate, Cardholder Billing

Variable Attribute

N8, 8-byte numeric characters with fixed length, 4-byte fixed-length field represented by BCD code when compressed.

。

Field descriptions

it is the currency conversion rate from the transaction currency to the Cardholder billing currency. The 1st digit indicates the number position where the decimal point should be moved from the right (allowed values are 0-7). The 2nd-8th digits indicate the value of the conversion rate, and are right justified with no decimal point.

For example, 71212345 indicates that the conversion rate is 0.1212345.

Usage

The field only appears in DCC transaction messages and doesn’t appear in non-DCC transactions.

In the forced DCC mode, if the response code of the response message is 00 and the transaction has been DCC converted, this field must be present in the response message.

4.8 Field 11 System Trace Audit Number

Variable Attribute

N6, 6-byte numeric characters with fixed length, 3-byte fixed-length field represented by BCD code when compressed.

Field descriptions

Field 11 is a series of numbers filled by the transaction initiator, and the combination set of Field 11 with Field 41(Card Acceptor Terminal Identification), Field 42(Card Acceptor Identification Code), Field 60.2(Batch Number) and message type is the unique identifier of a transaction.

Usage

As a POS transaction,The transaction initiator must assign a system trace audit number for every transaction. For reversal messages, the number must be the same as that of the original transaction.For the void transaction message,the Field 61.2 is filled in the value same as the field 11 value of original transaction. The number remains unchanged throughout the whole transaction cycle.

It is also a key field. Combining with the value of this field and those of other key fields (Field 41, Field 42, and Field 60.2), the whole value set should be unique. The POS service center and issuer will return the same value In the response message. The POS system will use this value to match the original request message when receiving the transaction response message.

4.9 Field 12 Time Of Local Transaction

Variable Attribute

N6, 6-byte numeric characters with fixed length, 3-byte fixed-length field represented by BCD code when compressed.

Field descriptions

The local time of the Acquirer location when the transaction occurs

Format: hhmmss, hh= hour, mm= minute, ss= second.

Usage

the POS service center must fill this field with its local time when it received the POS terminal’s request messge. The issuer will return the same Filed 12 value

In the response message after The card Issuer received the request. The POS center will return the field 12 and field 13 together to the POS terminal.

The Valid Range of Local Transaction Time

hh： 00—23

mm： 00—59

ss： 00—59

4.10 Field 13 Date Of Local Transaction

Variable Attribute

N4, 4-byte numeric characters with fixed length, 2-byte fixed-length field represented by BCD code when compressed.

Format: MMDD, MM= month, DD= day.

Field descriptions

The local date of the Acquirer location when the transaction occurs

Format: MMDD, MM= month, DD= day.

Usage

When the POS service center receives the request message from the POS terminal, the POS center must fill this field with its local date. For more details of usage, refer to Field 12

The Valid Range of Local Transaction Date：

MM： 01—12

DD： 01—31

The date and time printed on the purchase slip shall be get value from the system response message. If there is no date and time value in response message , the local date and time shall be taken

4.11 Field 14 Date Of Expired

Variable Attribute

N4, 4-byte numeric characters with fixed length, 2-byte fixed-length field represented by BCD code when compressed.

。

Field descriptions

The expiration date of bank card is the year and month. For example, the expiration date of the card is April 2000, meaning the card is invalid from May 1st, 2000.

Format: YYMM, YY= year, MM= month.

Usage

This field is filled with the expiration date of bank card. In the request message, when manually entering the card number or PAN, the expiry date of the card is required to be entered . if validity period of the card is skipped ,then this field can be filled with “0000”. In the response message, the expiry date of card is filled in by the card issuer,if the card exists the expiry date. Otherwise it isn’t be filled in.

4.12 Field 15 Date Of Settlement

Variable Attribute

N4, 4-byte numeric characters with fixed length, 2-byte fixed-length field represented by BCD code when compressed.

Field descriptions

This field is the transaction settlement date between the Pos Service Center and the Issuer.

Format: MMDD, MM= month, DD= day.

Usage

Pos Service Center assigns a settlement date for each received or initiated transaction message, indicating that the transaction will participate in the settlement on that day by the pos center.

The POS terminal can get the settlement date of the transaction in the response message.

The settlement date of a reversal message, it is same as the original message. Alternate day reversal is not supported.

The Valid Range of Settlement Date:

MM: 01—12

DD: 01—31

4.13 Field 22 Point Of Service Entry Mode

Variable Attribute

N3, 3-byte numeric characters with fixed length, 2-byte fixed-length field represented by left BCD code when compressed.

Field descriptions

Point of Service Entry Mode Code is the entry mode of Cardholder data (for example, PAN/token and PIN). Point of service means the place where the transaction is initiated. The definitions of point of service codes are specified in the following table.

Table 12 Definition of Each Digit of Point of Service Entry Mode

1st-2nd Digits	PAN/token Entry Mode	3rd Digit	PIN Entry Mode
00	Unspecified	0	Unknown
01	Manual	1	PIN included in the transaction
02	Magnetic stripe read	2	PIN excluded in the transaction
03	Consumer-presented QR Code (QRC)	3-5	Reserved for ISO use
04	Consumer-presented QRC (barcode also)	6-7	Reserved for national use
05	IC card read	8-9	Reserved for private use
06	Reserved for ISO use		
07	Fast PBOC/ Debit/Credit IC Card read (contactless)		
08-60	Reserved for ISO use		
61-89	Reserved for national use		
90	Magnetic stripe data read and reliable; Track 2 data must exist.		
92	Reserved for national use		

93	Merchant-presented QRC		
94	Merchant-presented QRC (barcode also)		
95	IC card, card data may be unreliable (contact)		
96	Read the IC card integrated in the mobile phone in CUPmobile mobile payment(contactless)		
97	Reserved		
98	Standard PBOC/ EMV Debit/Credit IC Card read (contactless)		

Usage

Currently, the commonly used POS entry mode is:

021: Swipe card, and PIN can be entered;

022: Swipe card, no PIN;

011 or 012: Manually enter the card number or PAN;

050: IC card reading, card data reliable;

950: IC card, but the card data is unreliable.

For other uses, follow instructions in Table 12

4.14 Field 23 Card Sequence Number

Variable Attribute

N3, 3-byte numeric characters with fixed length, 2-byte fixed-length field represented by right BCD code when compressed.

。

Field descriptions

Field 23 contains a number assigned to a specific IC card when two or more individual cards are associated with the same PAN, thereby enabling Issuers to distinguish among different cards linked to the same account.

The sequence number can also act as a tracking tool when cards are reissued. For example, the initial card is issued with sequence number one, and when it expires, the card can be reissued with sequence number two, and so on

Usage

It is used for distinguishing between separate cards sharing the same PAN, and is only used in IC card transactions。

4.15 Field 25 Point Of Service Condition Mode

Variable Attribute

N2, 2-byte numeric characters with fixed length, 1-byte fixed-length field represented by left BCD code when compressed.

。

Field descriptions

The service point condition code is used to determine the message type with other key fields. The description is as follows:

Table 13 Point of Service Condition Code

Code	Meaning	Note
00	Normal present	
01	Customer not present	PIN data not allowed
02	Unattended terminal	PIN must be entered.
03	Suspicious Merchant	
05	Customer present, card not present	It must be the 01x0 authorization message
06	Pre-authorized request	Pre-authorization code required
08	MO/TO authorization, MO/TO purchase	Message type must be 01X0, 00X0, but the pin will not be submitted
10	Customer identity verified	
11	Suspected Fraud	Message type must be 0100 or 0200
12	Security reason	Message type must be 0100 or0200
51	Normal submission of e- commerce transaction	
52	Pre-authorization request of e-commerce transaction	
60	Incremental authorization transaction	Applicable to incremental pre-authorization and incremental authorization

63	Coupon write-off and coupon reversal	It indicates that the transaction shall be forwarded to the U-plan platform for processing.
64	Installment payment	Applicable to installment payment transactions
65	Point exchange	Including points sale (void) transaction
70	Prepaid card transaction	Including prepaid card sale, void, reversal and balance Inquiry
91	Loading of IC card E-cash application based on PBOC/EMV Debit/Credit Standard	Applicable to loading transactions based on E-cash application of PBOC/EMV Debit/Credit standards (including account loading, cash loading, and cash loading cancellation) and related reversal

Usage

The currently used point of service condition mode is:

00: Normal present

06: Pre-authorized request;

60: Incremental authorization transaction

64: Installment payment

91: Loading of IC card E-cash application based on PBOC/EMV Debit/Credit Standard

4.16 Field 26 Point Of Service PIN Capture Code

Variable Attribute

N2, 2-byte numeric characters with fixed length, 1-byte fixed-length field represented by BCD code when compressed.

。

Field descriptions

Table 14 Point of Service PIN Capture Code

Code	Meaning
00-03	Reserved for ISO use
04-12	The maximum number of PIN characters accepted by point of service device
13-59	Reserved for ISO use
60-73	Reserved for national use
80-99	Reserved for private use

Usage

This field describes the maximum number of PIN characters accepted by point of service device

4.17 Field 32 Acquiring Institution Identification Code

Variable Attribute

an..11(LLVAR), 2-byte length value + Acquiring Institution Identification Code of maximum 11 bytes alphanumeric characters, The length value of 1 byte represented by BCD code during compression + the maximum 6 bytes the Acquiring Institution Identification Code represented by the left BCD code.

Field descriptions

This field is the Acquiring Institution Identification Code, At pos transaction ,it refers to the POS center.

Usage

This code identifies the POS acquiring institution. It is a key field. The Issuer and Card schme use this value, along with transaction transmission date/time, system trace audit number, and forwarding institution identification code to match the original request message, and then find the return routing. It should remain the same in the subsequent related transactions.

4.18 Field 35 Track 2 Data

Variable Attribute

B..24(LLVAR),2-byte length value + Track 2 data of maximum 24 bytes (characters)

, 1-byte BCD format length value + Trk encrypted second track data with second track length.

Field descriptions

This field is the Track 2 data on the card.

Usage

It is read from the 1st character after the beginning character (;) of Track 2, including field separators, and excluding the ending sentinel and LRC characters.the International card only read Track 2.

Encryption steps:

Step 1、Combine the actual 1-byte BCD length of track 2 with the BCD data of track 2 (up to 20 bytes in total);

Step 2、 If the data length obtained in step (1) is not a multiple of 8, then 0x00 is added to reach the multiple of 8;

Step 3、Use Trk to encrypt the data in step (2) with 3DES to form the encrypted 2 track data;

Step 4、Attach the data length of step (3) in 1-byte BCD format before the data of step (3).

4.19 Field 36 Track 3 Data

Variable Attribute

B...56(LLLVAR),2-digit length value+ Track 3 data of maximum56 bytes (characters)

Field descriptions

This field is the Track 3 data on the card.

Usage

It is read from the first character after the beginning character (;) of Track 3, including field separators, and excluding the ending sentinel and LRC characters.

Encryption steps:

Encryption steps:

Step1、Combine the actual 2-byte BCD length of track 3 (fill 0x00 from right to left) with the BCD data of track 3 (54 bytes in total);

Step 2、If the data length obtained in step (1) is not a multiple of 8, then 0x00 is added to reach the multiple of 8;

Step 3、 Use Trk to encrypt the data in step (2) with 3DES to form the encrypted 3 track data;

Step 4、Before the data of step (3), attach the data length of step (3) in 2-byte BCD format (0x00 from right to left).

4.20 Field 37 Retrieval Reference Number

Variable Attribute

AN12, 12-byte alphanumeric characters with fixed length

Field descriptions

This field is a system reference number for the transaction assigned by

POS SERVICE CENTER must assign a unique system reference number value to each new transaction, including sale, pre- authorization, authorization,reversal transaction received from the POS terminal within each settlement day. POS center uniquely identifies the transaction with this value and the message type, field 12 and field 13 (the re-send reversal transaction will be considered as a transaction)

Usage 1

When receiving the transaction response message, the POS terminal can obtain retrieval reference number of the POS center, and the value of this field can be used as the basis for this transaction inquiry.

Usage2

The POS center assigns the retrieval reference number to non-online transaction messages sent by the POS terminal.。

4.21 Field 38 Authorization Identification Response

Variable Attribute

AN6, 6-byte alphanumeric characters with fixed length.

Field descriptions

The issuer's authorization identification response code for the transaction shall remain unique within a certain period of time.

Usage

In the pre-authorization transaction, the issuer will return a valid authorization code in the successful response message.it will be used at the subsequent transactions.

In a pre-authorization completion request message, this field should be filled with the authorization code obtained in the pre-authorization transaction, and then be sent to the Issuer. The issuer matches the original pre authorization transaction;

For a reversal, the value of this field may be obtained from the request message of the original transaction. For cancellation, the value of this field should be obtained from the response message of the original transaction. For pre-authorization completion cancellation, the value shall be obtained from the response message of the original pre-authorization transaction. For refund, if it is required to match the refund transaction with its original transaction, the value of this field should be obtained from the response message of the original transaction.

4.22 Field 39 Response Code

Variable Attribute

AN2, 2-byte alphanumeric characters with fixed length。

Field descriptions

The issuer or POS center responds to the response code of the POS terminal.。

The reversal notice sent by the POS terminal indicates the reason for reversal.。

Usage

In the transaction response code, only "00" means the transaction is successful, and the others are unsuccessful.

Refer to Appendix D for response code table

In the reversal message triggered by the POS terminal, the reversal reason code is stored:

Reversal reason code

Reversal reason code	Meaning
98	The POS terminal fails to receive the response from the POS center within the time limit
96	The POS terminal receives the approval response message from the POS center, but the transaction cannot be completed due to the failure of the POS machine
A0	The POS terminal verifies the MAC error after receiving the approval response message from the POS Center
06	Reversal caused by other circumstances

4.23 Field 41 Card Acceptor Terminal Identification

Variable Attribute

ANS8, 8-byte alphanumeric and special characters with fixed length。

Field descriptions

Identification code of POS terminal.This identification code uniquely identifies a terminal in the network of the POS center and cannot be repeated.

Usage

It is a key data field.The POS center and the issuer should keep the value after receiving the message, and return the same value to the POS terminal in the response message.

POS terminal uses this value to match the original request message with field 11 (system tracking Audit number), field 42 (card acceptor identification code) and field60.2 s(batch number).

4.24 Field 42 Card Acceptor Identification Code

Variable Attribute

ANS15, 15-byte alphanumeric and special characters with fixed length。

Field descriptions

This field is the card acceptor identification code, namely the Merchant code. It is the unique identification code of the Merchant in the acquiring institution network.

4.25 Field 44 Additional Response Data

Variable Attribute

ANS..25, 2-byte length value + additional response data of maximum 25 bytes (alphabetic, numeric, and special characters)

Field descriptions

This field is the identifier assigned by the Issuer for an approved transaction. It can be used by the Issuer for identifying the original transaction.

Usage

The additional response data of the Issuer must be effective digits. It will be input into the response message when the Issuer approves the transaction, and not processed by the Acquirer

It is an optional field.

The field value of the original response message should be sent to the Issuer if a reversal is initiated after an approved response message has been received.

4.26 Field 46 Additional Data

Variable Attribute

ans...999(LLVAR), 3-byte length value + additional data of maximum 999 bytes (alphabetic, numeric, and special characters)

The length value of 2 bytes represented by right BCD code + ASCII data of TAG when compression

This field adopts TLV format. The total length of all TLVs cannot exceed 999 bytes.

For a detailed description of the TLV data format, see field 55.

Field descriptions

Usage 1:

Field 46 tag sub-Field list

```
[====== Field 46 TAG8F09 format ======]

POS SERVICE CENTER Download format: A+B+C+E

A: 1 byte, ASC

'1 'mapping table of product categories accepted by the terminal

'2' terminal prompt information mapping table
```

'3' process listB: 1 byte, 0-9, ASC, whether continuous transmission is required. 0 means No.If it is necessary to download class 1, 2 and 3 information of A, the POS center should set B=0 in the last package of the last class information.

C: ASC format data

E: from the first byte of A to the last byte of C to get the verification value IRC. The initial value of LRC is 0x00. POS needs to verify this value.

POS submission format: A+D

1) After receiving the response of the POS signs in every time, if the POS receives the message header processing requirement of 2 (status submission), the POS shall initiate the status submission transaction, which will end after receiving the response of status submission.

2) After receiving the response of the POS signs in each time, if the POS receives a message header processing requirement that is not 2 (status submission), the POS shall also initiate a status submission transaction, and process the processing request of the previous POSP after receiving the response.For example: parameter download transaction (field 46 is not submission).

3) Connect 2). If the processing requirement of POSP is 1 (parameter download), and if the receiving message above B is not 0, continue to initiate the parameter download transaction, fill in the content of C in this field and send it to the POS center.

A: 1 byte, ASC'1 'mapping table of product categories accepted by the terminal

'2' terminal prompt information mapping table'3' process listD: Accumulated bytes of downloaded a's C, 4-byte ASC format

[================== mapping table of product categories accepted by the terminal in Field 46 tag8f09 ======]

The product code is 4 bytes + the product name is 12 bytes (0x20 is added if it is insufficient). Multiple entries (50 entries at most) are distributed by the POS center in

several times, but the total length of each time should be less than 800 bytes (50 entries)

Where: product code 0000 represents bank card (default)

[======= mapping of terminal prompt information of Field 46 tag8f09======]

Prompt Code: 2 bytes + prompt text: 16 bytes (0x20 will be added if insufficient), multiple entries (50 entries at most), distributed by POS center in several times, but the total length of each time should be less than 900 bytes (50 entries)

[========= flow sheet of Field 46 tag 8f09 ======]

The POS Center shall distribute the BCD data by times, but the total length of the times shall be less than 900 bytes (up to 20 pieces)

The process format is as follows:

A + BCDEF + BCDEF + BCDEF + BCDEF + BCDEF + BCDEF + BCDEF + BCDEF + G

For the convenience of terminal analysis, each process is fixed from the product number of a, and at most 8 input steps are completed.Each payment product must and can only correspond to one payment process, but one payment process can correspond to multiple payment products.

A4 bytes, B2 bytes, C1 bytes, D4 bytes, E1 bytes, F2 bytes, G2 bytes

Therefore, 86 bytes (43 bytes after compression) are fixed for each process, where:

A the product number is 4 bytes, and BCDE represents a process node, occupying 10 bytes.

If the payment process of a payment product does not need 8 process nodes, fill in 0x00 to reach 8 process nodes.

The process node before G represents all the payment processes of a payment product.G means: after all the process operations are completed + the POS center is sent successfully + the POS center is received successfully + the operator presses the "OK" key, whether subsequent transactions are required after the four conditions are met (see the following description of G for the processing method).

[A process starting point number (product number), 4 bytes ASC]

For product code constraints, see the definition of Field 60.6.

[B collection source, 2-byte ASC, collected from 1-2 collection sources, for example: 12

represents card swiping or manual input]

0 not required;1 magnetic stripe card reader;2 terminal keyboard;3 password keyboard;4 IC card reader;5 RF card reader;6 scanning gun;7 printer

[C type of collected data and its requirements, 1 byte ASC]0 unlimited;1 digit (0-9);2 alphanumeric combination (0-9, A-Z, A-Z, =);3 password information (replaced by * on the display screen);

4 ASC characters of hex mode (0-9, A-F, A-F);

5. Amount input style information;

6. TPK encrypted ciphertext information (after input, add a multiple of 0x00 to 8, use TPK 3DES encryption, and then store it in the location specified by E);

7. Ciphertext information encrypted by Trk (after input, add a multiple of 0x00 to 8, use Trk 3DES to encrypt, and then store it in the location specified by E);

[D length of collected data (input length verification), 4 bytes ASC]

Range 01-99;The minimum length is in the front, and the maximum length is in the back;E.g. 1319

[e storage location of collected data, 1 byte ASC]

POS and POS centers can only resolve tags and field that they can handle.Therefore, where to put the input data must be strictly regulated.

The amount information involved in settlement can only be placed in the fourth field (whether it is the amount entered on the POS or the amount calculated and distributed by the POS Center).

1 put it into the field 2 (card number). For example, the POS center may require that the mobile phone number, phone number, user number and other information be put into the field 2.

POS needs to be verified when entering, with a maximum length of 19 digits, and only numbers can be entered;

2. Put in the field 52 (password), the maximum length of input on the password keyboard is 12

digits, and only numbers can be input;

3 put tag6f02 (new password) in the field 46. The maximum length of input on the password keyboard is 12 digits, and only numbers can be input;

4 put it into the field 4 (amount, integer, divided into units), and POS needs to verify it when entering. The maximum length is 12 digits, divided into units, and only numbers can be entered;

5 put it into the field 46 tag6f04 (the number of points consumed, integer, and the input method is the same as the amount);

6 put into the field 46 tag6f06 (number of times consumed, integer);

7 put into the field 46 tag6f08 (user defined data)

1) During POS delivery, if the required data is not within the range specified in 1-6 above (user-defined data), it should be placed in field 46 tag6f08.The results of multiple operation steps must be appended to field 46 tag6f08, and each segment of data should be converted to hexadecimal string before appending.Each segment of data is separated by a 0x00.The specific meaning of each segment of data in this field is determined by the background system according to the specific application. The arrangement order and operation steps of each segment of data in this field are the same.

2) The POS center can also include field 46 tag6f08 in the response message, but the POS does not parse its content.Similarly, each segment of data sent by the POS Center shall also be separated by 0x00.

[number of prompt message on the screen during f input, 01-99, 2 bytes ASC]

[G subsequent transactions, the process nodes before G represent all the payment processes of a payment product.]

1) If G is not equal to 0x3030, it means that subsequent transactions are required after the payment process of the current payment product is completed. POS needs to carry all the contents of field 46 tag6f08 returned from the POS center of the previous transaction into the subsequent g transaction.The transaction category code of G transaction is in the field 62 tag 26 transmitted by the POS center at the time of check-in.

2) If the POS receives the field 39 transaction successfully, the content specified by field46 tag8f01 (if there is field46 tag8f01) will be displayed.

After the operator presses the "OK" key, the POS will judge the last two bytes of the payment process of the current payment product. If it is not equal to 0x3030 (that is, G is not 0x3030), the POS should immediately transfer to the transaction represented by G,Meanwhile, fill the contents of field46 tag6f08 received into field46 tag6f08 of G transaction intact, and the user-defined data entered by the operator in G transaction shall be added to field46 tag6f08.				
TAG value	L Number of bytes occupied by L itself	Content of L (length of V, BCD)	value of V (non BCD) attribute	meaning
6F01-6FFF industry card special tag, any tag length cannot exceed 999 bytes (cannot include industry card bank card public tag)				
6F02	1	8	B	The new password of the card or the card password of the merchant card submitted by the POS is used to modify the password of the industry card / sell the card in cash / recharge the cash. The data organization of the V value in this sub field is the same as that of the 52 field
6F04	1	12	N	amount of points submitted by POS, integer
6F06	1	3	N	Times of payment by installments submitted by POS, integer

6F08	1	200	Ans	Custom data
7f01-7fff bank card value-added service tag, any tag length cannot exceed 999 bytes (cannot include industry card bank card public tag)				
8f01-8fff bank card industry card public tag, any tag length cannot exceed 999 bytes (it cannot include the special tag for industry card and the special tag for bank card value-added business)				
8F01	1	34	Ans	Error prompt issued by POS center, format: 2-byte error code + error meaning 1) For information that exceeds the width of the POS screen, the POS shall automatically wrap lines. 2) Regardless of the value of the field 39, as long as there is tag8f01, the information of tag8f01 shall prevail and be displayed on the POS screen.
8F03	1～2	200	Ans	Additional thermal printing information issued by POS center.

				Print in the amount column of the standard purchase slip. After printing this information, continue to print the remarks, signature column and other information already available in the POS program (see the thermal purchase slip style in the appendix of this article). Note: 1) Any print blocks must be provided in the order of lxyrxysxymxybabccd. If a new block format is required, LxyRxySxyMxyBabCcd must be redefined. 2) The block is composed of LxyRxySxyMxyBabCcdTEXT Lxy: left margin of thermal paper xy=00-45mm RXY: right margin of thermal paper xy=00-45mm Sxy:2 character spacing xy=00-10mm Mxy:2 row spacing xy=00-10mm Bab: the font is black, ab=00 or 01

				CCD: the size of a single character. C represents the width and D represents the height. The values of C and D can only be 0 normal, 1 single width and height, or 2 double width and height Text: print the real data of the block and print its contents as is 3) 0x0d0a in or after text can be used for line feed
8F09	1～2	Var..999	Ans	Multi purpose, for example, for parameter downloading, please refer to the above usage and transaction message for parameter downloading.

Usage 2:

The terminal uploads customized information or the integrated platform-POSP issues special business information

TAG BCD	L own bytes	L value (v length) Bin	V value attribute	meaning

5F51	1	48	ans	Integrated platform - posp special issue tag (POS screen display information): This tag is mainly used for field 39==00, but it is also used to display information when field 39==00, such as query results. Data segment format (each background business system issues content by itself, and POSP transparently transmits it to POS): ASC segments visible Attention to background return and POS display: 1) POS will display the response code of field 39 on the first line of the screen, and the central display format is: response code: ?? 2) How to display the second line of POS screen: Step a> after the POS receives the response,

				regardless of whether the transaction succeeds or fails, the POS needs to find the tag in the Field 46 first. If there is a tag with a length of <48 bytes, the content will be displayed from the second line of the screen. Step b> if the field 46 field has this tag but is larger than 48 bytes;Or there is no current tag of field 46;Or if there is no field 46, POS should use the code of field 39 to find the corresponding meaning of the code in the POS local code mapping table, and display it from the second line of the screen.If the meaning corresponding to the field 39 code cannot be found, only the first line will be displayed.This is mainly done to show the integrity of the meaning. 3) POS shall realize automatic line feed

				display according to the size of its own display font and the width of the display screen. Note that Chinese characters cannot be displayed as half Chinese characters (the highest bit of each byte in the two bytes of Chinese characters is bit==1) 4) POS display will ignore the requirement of line break in background content, POS only decide how to line break according to point 3 above!
5F52	1~3	512	ans	POS upload special TAG (data acquisition) : Format of data segment (each background business system processes the content by itself, and POSP

				transparently transmits it to its own system) : Visible ASC data segment 1 + 0x02 +... Visible ASC data segment n + 0x02
5F55	1~3	512	and	POSP continuously trades TAG The format of the data segment is defined by each background service system. In associated transactions, when POS receives a POSP response packet containing the TAG, the TAG must be sent to POSP in the following transaction.
5F60	1~3	512	and	Description of Geographical Location Information

5F61	1	1	an1	Unionpay Transaction Identifier (ASCII code) 1: UnionPay transaction 2: Non-UnionPay transactions

4.27 Field 47 Additional Data - Private

Variable Attribute

ans...999(LLVAR), 3-byte length value + additional data-private of maximum 999 bytes (alphabetic, numeric, and special characters)。

The length value of 2 bytes represented by right BCD code + actual data when compression

The actual data is in TLV format, and the total length of all TLV cannot exceed 999 bytes.

Field descriptions

Private, used for special use by value-added services. For details, see Usage.

Usage:

TAG	Length	Value	meaning
4F01	1 byte	Payment type	0x01--- water bill 0x02--- electricity

			bill 0x03--- gas bill 0x04--- communication fee 0x05--- Other fees
4F02	1 byte	Payment data (variable length)	The barcode actually scanned or entered may also be other bound numbers depending on the situation.

4.28 Field 48 Additional Data - Private

Variable Attribute

N...322(LLLVAR), 3-byte length value + additional data-private of maximum 322 bytes (numeric).

When compressing, the length value of 2 bytes represented by the BCD code on the right + the maximum data of 161 bytes represented by the BCD code on the left

Field description

Private, used to store the total settlement amount during POS batch settlement, the transaction details and the total number of transaction details when the batch is sent.

Usage 1 : Total Settlement Amount

The total settlement amount is stored during batch settlement.

N...062(LLLVAR) , 3 -byte length value + maximum 62 -byte data.

When compressing, the length value of 2 bytes represented by the BCD code on the right + the maximum data of 31 bytes represented by the BCD on the left.

When the POS batch settlement request is made, the total amount of debits, the total number of debits, the total amount of credits, and the total number of credits of successful transactions in this batch are sent to the POS center. If the processing result of the POS center is " unbalanced account reconciliation " , the total settlement amount of the POS center is returned in the POS batch settlement response message , otherwise, the original value is returned.

If the domestic and cross-border cards are settled separately in batches, the total amount of domestic card settlement and the total amount of cross-border card settlement are required. If the domestic and cross-border cards are settled in batches, only the total amount of domestic card settlement can be used to store the total amount.

The format is defined as follows:

Data element length N3

The total amount of domestic card settlement, including:

The total amount of debit N12

The total number of debit N3

The total amount of credit N12

The total number of credit N3

Reconciliation Response Code N1

The total amount of cross-border card settlement, including:

The total amount of debit N12

The total number of debit N3

The total amount of credit N12

The total number of credit N3

Reconciliation Response Code N1

The statistical algorithm for the total settlement amount is as follows:

a) Total amount of debit:

∑ (sale transaction amount + pre-authorization completion (online) transaction amount + pre-authorization completion (offline) transaction amount + offline settlement amount + settlement adjustment amount + offline sale amount based on PBOC/EMV e-wallet / passbook standard + offline sale amount based on PBOC/EMV standard sale amount + transfer credit amount of non-designated account based on PBOC/EMV e-wallet / passbook standard + installment sale amount)

b) Total number of debit:

∑ (sale transaction count + pre-authorization completion (online) transaction count + pre-authorization completed (offline) transactions count + offline settlement transaction count+ settlement adjustment transaction count + offline sale transactions based on PBOC/EMV e-wallet / passbook standards + PBOC/EMV standard offline sale count + PBOC/EMV e-wallet / passbook standard - based non-designated account transfer credits and recharge count + installment sale count)

c) Total amount of credit:

∑ (refund transaction amount + sale void amount + pre-authorization completion (online) void amount + sale void based on PBOC/ EMV standard amount + cash recharge amount based on PBOC/EMV e-wallet / passbook standard + installment return amount + installment void amount)

d) Total number of credit:

∑ (refund transacation count + sale void transaction count + pre-authorization completion (online) transaction count + sale void based on PBOC/EMV standard count + cash recharges based on PBOC/EMV e-wallet / passbook standard count + installment refund count + installment void count)

Note: Except for the purchase order, the amount of transaction statistics, details, and settlement documents only calculates the amount of goods, not the total amount of sales

Reconciliation Reply Code:

Fill in "0" in the request message, and indicate the processing result of the receiver (POS center) in the reconciliation response message. in:

:

Reconciliation Response Code Description

reconciliation response code	Reconciliation Response Code Description
0	ISO reserved
1	balanced reconciliation
2	Unbalanced reconciliation
3	error
4-5	ISO reserved for use
6-7	nation reserved for use
8-9	Private reserved use

Usage 2: Magnetic stripe card transaction details

The detailed information of the magnetic stripe card transaction is stored in the batch sending message , all of which are identified by BCD code compression, and the maximum size is 161 bytes.

Its format is as follows:

Data element length N3

The transaction number N2 , the following transaction number, maximum value is 8 .

Transaction Details 1 N40, The first transaction record.

Transaction details 2 N40, The second transaction record.

...

Transaction details 8 N40, The eighth transaction record.

From transaction details 1 to transaction details 8 is detailed records of each transaction, which is defined as:

Card category N2,

1. domestic cards transaction

2. cross-border cards transactions

Transaction serial number N6,

System Trace Audit Number, the value of the original transaction field 11 .

Card number N20, card number (right-aligned, left-padded with 0) .

Transaction amount N12, amount.

Usage 3: The total number of transaction details

This field in the batch upload message is used to store the total number of transaction details contained in all batch upload messages in this batch, which is expressed by BCD code compression and occupies 2 bytes in total:

Data element length N3

Total Number N4, The total number of transactions upload in this batch.

Usage 4: Tip Amount

The amount of tips stored in offline settlement and settlement adjustment transactions is expressed by BCD code compression, occupying a total of 6 bytes. Defined as follows:

Data element length N3

Amount N12, tip amount.

Usage 5: The Point of Service Entry Code of the transfer-in card in the non-designated account loading information based on the PBOC/EMV e-wallet / passbook standard and the small-amount payment non-designated account loading based on the PBOC/EMV debit and credit application .

This usage appears in the request message and is used to store the point of service entry code of the transfer-in card (that is, the e-wallet card) based on the PBOC/EMV e-wallet standard for non-designated account transfer.

The specific format is as follows:

Field 48 usage 5

position number	meaning	length
1	Point of Service entry Mode code	n3 , refer to the description of field 22 for the value

Usage 6 : Order number of order payment transaction

by BCD code compression, and the length is not limit. Defined as follows:

Data element length N3 + merchant order number

4.29 Field 49 Currency Code Of Transaction

Variable Attribute

AN3, 3 alphabetic and numeric characters with fixed length

Field description

It identifies the currency for Field 4 Amount, Transaction

Usage

All authorization / financial transaction messages use this field to identify the transaction currency.

The currency code of RMB is 156.

4.30 Field 51 Currency Code Of Cardholder Billing

Variable Attribute

AN3, 3 alphabetic and numeric characters with fixed length

Field description

This field contains the Cardholder billing currency

Usage

This field only appears in DCC transaction. In non- DCC transactions, this field does not appear.

In forced DCC mode, if the response code of the response message is 00 and the transaction has been converted by DCC , this field is required in the response message .

4.31 Field 52 PIN Data

Variable Attribute

B64, 64 bits binary data。

Field description

Cipher text of PIN。

Usage

This field must be present if field 22 indicates a PIN entry . The customer's Personal Identification Number (PIN) must be encrypted and stored in this field. The format of the PIN is indicated in field 53 .

PIN length allowed by this system is 12 digits.

4.32 Field 53 Security Related Control Information

Variable Attribute

n16, 16 numeric characters with fixed length。

8 bytes expressed in BCD code during compression。

Field description

Security-related control information

Usage

In transactional messages, this field is used to identify the type of PIN .

The data structure is defined as follows:

PIN-FORMAT-USED N1 PIN format

ENCRYPTION-METHOD-USED N1 encryption algorithm flag

RESERVED N14 set to all "0"

Security control information value

PIN-FORMAT-USED	PIN encryption method 1: ANSIX9.8Format (without PAN information) 2: ANSIX9.8Format (with PAN information)
ENCRYPTION-METHOD-USED	Encryption algorithm symbol;. 0 : Single-length key algorithm 6 : Double long key algorithm Other values: other encryption algorithms (unused)

4.33 Field 54 Balance Amount

Variable Attribute

AN...020(LLLVAR), 2-byte length value + maximum 20 bytes alphabetic and numeric characters。

When compressing, the length value of 2 bytes represented by the right BCD code + the maximum 20 bytes of data represented by the ASCII code.

Field description

Indicates additional amount data.

Usage 1 : The available balance amount

The available balance of the cardholder's account is indicated in the query transaction response message.

This field is a custom field, and the content is defined as follows:

LENGTH N3, data element length

AVAILABLE-BALANCE-AMOUNT recorded as:

ACCOUNT-TYPE N2, account type

AMOUNT-TYPE N2, quantity type

CURRENCY-CODE AN3, Currency Code

AMOUNT SIGN AN1, balance symbol

AMOUNT N12, balance

The values of the above data items are:

Field 54 **Usage1**

data item	value
Length	020
Amount Type	Available balance: 02
Account Type	Savings Account: 10 Credit card account: 30
Currency Code	156
Amount Sign	Credit Amount: C is a positive value
Amount	value of balance

Usage 2: Accumulated authorized amount

It is used in additional pre-authorization transactions, and is filled in by the card issuer, indicating the cumulative authorized amount after the additional pre-authorization is completed.

a) Usage flag - 2 bytes, the value is "TA" , which means the accumulated authorized amount.

b) The format of the remaining bytes is as follows:

Field 54 Usage 2

content	data
Accumulated authorized amount	N 12
reserved for use	Ans 6

If this additional pre-authorization is successful, then

Accumulated authorized amount = the additional authorized amount + accumulated amount in the previous period;

If this additional pre-authorization fails, then

Accumulated authorized amount = accumulated amount in the previous period.

Usage 3 : Account Book Balance Available Balance

The structure is as follows, and can carry up to two balance information:

field length	account type	Balance type	currency code	balance symbol	balance	account type	Balance type	currency code	balance symbol	balance
n3	n2	n2	an3	an1	n12	n2	n2	an3	an1	n12

Book Balance Available Balance

of the above data items are shown in the following table:

field length	020 or 040
account type	00 - Default account 10 - Savings Account (for bank accounts only) 30 - Credit Card Account (Bank Account Only)
Balance type	01 - Book Balance 02 - Available Balance 11 - Amount due from credit card account 12 - Credit card account minimum payment 16 - Book Balance (SP User Account) 17 - Available Balance (SP User Account)
currency code	Value: 156
balance symbol	Delinquent status: D Non-Arrears Status: C
balance	balance symbol is D , this field represents the arrears amount balance symbol is C , this field

	represents the actual balance

4.34 Field 55 Intergrated Circuit Card System Related Data

Variable Attribute

ansb..255(LLLVAR), 3 bytes length value + maximum 255 bytes

This field is a variable-length field (LLLVAR), which can be up to 255 bytes long, and is initially a 3 -byte length value information.

When compressing, the BCD code on the right is used to represent the length information, and the length information occupies two bytes.

The supported data attributes are:

b Binary (binary number or combination of bits).

cn BCD code. Align right, padding left ’ 0’. For example, the number 12345 can be stored in the authorized amount data object of n12 , in the form of ’00 01 23 45’.

An contains one character alphanumeric data element (AZ , az , 0-9) per byte.

var. up to N variable-length data, the maximum length can be N .

Field description

This field will contain different sub-field according to different transaction types. The processing center only transfers these unique data applicable to IC card transactions between the acquirer and the card issuer , without any modification or processing to them. In order to adapt to the situation that the sub-field needs to change constantly, this field adopts the TLV (tag -length-value) representation, that is, each sub-field consists of a tag (T) , the length of the sub-field value (L) and the sub-field value (V) Composition.

The attribute of the tag tag is bit , which is represented by hexadecimal and occupies 1 to 2 bytes in length. For example, ″ 9F33”is a tag that occupies two bytes . And ″ 95”is a tag that occupies one byte . If the first byte of the tag (Note: the byte ordering direction is from left to right, the first byte is the leftmost byte. The bit ordering rules are the same.) The last four bits are ″ 1111”, it means that the tag occupies two bytes, such as ″ 9F33”; otherwise, it occupies one byte, such as ″ 95”.

sub-field length (that is, L itself) is also bit , occupying 1 to 3 bytes in length. The specific coding rules are as follows:

a) When the leftmost bit (ie bit8) of the leftmost byte of the L field is 0 , it means that the L field occupies one byte , and its subsequent 7 bits (ie bit7 ~ bit1) indicate the length of the sub-field value , which uses a binary number to represent the decimal number of the length of the sub-field value. For example, if the value of a field occupies 3 bytes, the length of the su-bfield value is expressed as ″ 00000011”. Therefore, if the length of the sub-field value is between 1 and 127 bytes, the L field itself only occupies one byte.

b) When the leftmost bit (ie bit8) of the leftmost byte of the L field is 1 , it means that the L field occupies more than one byte, then the number of bytes it occupies is determined by the subsequent 7 bits of the leftmost byte . The decimal value representation of the bit (that is, bit7 to bit1). For example, if the leftmost byte is 10000010 , it means that the L field has two bytes in addition to this byte. The decimal value of the following bytes indicates the length of the sub-field value. For example, if the L field is ″1000 0001 1111 1111”, it means that the value of the sub-field occupies 255 bytes. Therefore, if the length of the value of the sub-field is between 127 and 255 bytes, the L field itself needs to occupy two bytes.

The value of the sub-field takes different values according to the meaning of different sub-fields. Since the sub-fields contained in this field are the information unique to the IC card and IC card terminal, not the characteristic information of the processing center, the processing center is only a bridge for

data transmission, so the specific value needs to refer to the IC card card and IC card terminal specifications, and are constantly updated according to changes in their standards. For UPI transactions, please refer to "China Financial Integrated Circuit (IC) Card Debit and Credit Specification V2.0 - Card Section" and "China Financial Integrated Circuit (IC) Card Debit and Credit Specification V2.0 - Terminal Section". For non-UPI card acquiring transactions , please refer to their corresponding card and terminal specifications according to the card policies of different international credit card scheme (eg, Visa , MasterCard, JCB , Diners Club, American Express). However, since the definitions of cards and terminals by all card scheme (including UnionPay) are based on the EMV2000 standard, no matter what the specific values of these information are, their tags are the same. Therefore, only the tag is given in this standard, and the network access agency can find the specific value of the sub-field in different organizations according to the value of the tag. The following will list the tag , length values and attributes of each sub-field .

usage

Basic Information Sub-field List

Sub-field name	abbreviation	tag value	length (unit: byte)	properties
Application Cryptogram	AC	9F26	8	B
Cryptogram Information Data	-	9F27	1	B
Issuer Application Data	IAD	9F10	up to 32	B
Unpredictable	-	9F37	4	B

Number				
Application Transaction Counter	ATC	9F36	2	B
Terminal Verificaion Result	TVR	95	5	B
Transaction Date	-	9A	3	CN (including 6 significant digits, format YYMMDD)
Transaction Type	-	9C	1	CN (contains 2 significant digits)
Transaction Amount or Amount Authorized	-	9F02	6	CN (contains 12 significant digits)
Transaction Currency Code	-	5F2A	2	CN (contains 3 significant digits)
Application Interchange Profile	-	82	2	B
Terminal Country Code	-	9F1A	2	CN (contains 2 significant digits)

Amount Other	-	9F03	6	CN (contains 12 significant digits)
Terminal Capabilities	-	9F33	3	B

List of optional information sub-fields

Sub-field name	abbreviation	tag value	length (unit: byte)	properties
Cardholder Verfication Method Results	CVM	9F34	3	B
Terminal Type	-	9F35	1	CN (two significant digits)
Interface Device Serial Number	IFD	9F1E	8	AN
Dedicated File Name	DF	84	5 to 16	B
Terminal Application Version Number	-	9F09	2	B
Transaction Sequence Counter	-	9F41	2 to 4	CN (contains 4 to 8 significant

				digits)
Issuer Authentication Data	-	91	8 to 16	B
Issuer Script Template 1	-	71	var. up to 128	B
Issuer Script Template 2	-	72	var. up to 128	B
Issuer Script Results	-	DF31	var. up to 21	B

CUPMobile mobile payment on-site payment sub-field information list

Sub-field name	abbreviation	tag value	length (unit: byte)	Properties
Chip Serial No	CSN	DF32	8 to 32	B
Session Key Data	SKD	DF33	8 to 32	B
Track Reading Time	TRT	DF34	7 , format YYYYMMDDhhmmss	EN

Note: The TAG in this table must appear in CUPMobile transactions (except reversal).

List of sub-fields dedicated to offline trading

Sub-field name	abbreviation	tag value	length (unit: byte)	Properties
Authorization Response Code	-	8A	2	an

Dedicated sub-field for billing and batch uploading

Sub-field name	abbreviation	tag value	length (unit: byte)	Properties
IC card transaction type	-	5F11	1	an

4.35 Field 59 Reserved Private

Variable Attribute

ansb..999(LLLVAR), 3 bytes length value + maximum 999 bytes

This field is a variable-length field (LLLVAR), which can be up to 999 bytes long, and is initially a 3 -byte length value information. When compressing, the BCD code on the right is used to represent the length information, and the length information occupies two bytes.

This field adopts the TLV (tag -length-value) representation, that is, each sub-field consists of a tag (T) , the length of the sub-field value (L) and the sub-field value (V) . The tag data attribute is an2 , the sub-field length data attribute is n3 , and the sub-field value data attribute is determined according to the sub-field attribute.

Field 59 Content

name	tag value	The length (unit: bytes)	Attributes	Remark
Terminal information	A1	Up to 128 bytes	ANS...128	

This field is a variable-length field (LLLVAR), which can be up to 999 bytes long, and is initially a 3 -byte length value information. When compressing, the BCD code on the right is used to represent the length information, and the length information occupies two bytes.

A1 sub-field list

name	tag value	The length (unit: bytes)	Attributes	Remark
Equipment type	01	2 bytes	AN2	00 : Smart POS (default) 01 : MPOS 02 : Traditional POS 04 : ATM

4.36 Field 60 Reserved Private

Sub-fields 60.1 to 60.7 of this Field are mandatory Fields for all non-administrative transactions

For all non-management transactions , 60.1, 60.6, 60.7 must be filled with correct values , and sub-Fields unrelated to the current transaction can be occupied by 0x00

Variable Attribute

N...019(LLLVAR) , 3 -byte length value + maximum 19 -byte numeric character field.

When compressing, the length value of 2 bytes represented by the BCD code on the right + the maximum data of 10 bytes represented by the BCD code on the left.

Field description

This Field is a custom Field.

Data element length N3

60.1 Message Reason Code N2

60.2 batch Number N6

60.3 Network management information code N3

60.4 Terminal capability N1

60.5 IC card condition code based on PBOC/EMV standard N1

60.6 Product Code N4

60.7 Business Code N2

usage

All transaction messages sent by the POS terminal to the POS center contain field 60.1 and 60.2 to indicate the transaction type and settlement batch of the transaction.

In the network management message of the POS , the combination of the network management information code and the message type code identifies different network management messages.

4.36.1 60.1 Message Reason Code

message type encoding	message type	Meaning
00	script notification	
01	Inquire	The first meaning: 0 - query transaction 1. Authorized transactions 2 - Financial transactions 3 - Offline transactions 6 - Special deals
10	Pre-authorization / Reversal / Additional pre-authorization / Reversal	
11	Pre-authorization void / reversal	
20	Pre-Authorization Completion (Online) / Reversal	
21	Pre-authorization completion void / reversal	
22	Sale /sale Adjustments	
23	Sale reversal	
24	Pre-authorization completion (offline)	
25	refund	

30	Offline billing	
32	Offline Billing Adjustments	
34	Offline settlement adjustment (additional tip)	
36	Offline Sale	
99	Institutional management transactions	

4.36.2 60.3 Network management information code

message type	network management information code	meaning
0800/0810	001	POS terminal sign-in
0820/0830	002	POS Terminal sign-out
0800/0810	003	POS terminal sign-in (double long key algorithm)
0500/0510	201	POS terminal batch settlement
0320/0330	201	POS terminal batch upload
0320/0330	202	When the reconciliation is unbalanced, the POS

		terminal batch uploading ends
0320/0330	203	When reconciliation is balanced, the POS terminal will send the successful IC card online transaction details
0320/0330	204	When reconciliation is balanced, the POS terminal will send IC card notification information
0320/0330	205	When the reconciliation is unbalanced, the POS terminal will send the successful IC card online transaction details
0320/0330	206	When the reconciliation is unbalanced, the POS terminal will send IC card notification information
0320/0330	207	When the reconciliation is balanced, the POS terminal batch uploading ends
0320/0330	208	When the reconciliation is balanced, the POS terminal will send the confirmation details of the loading

		transaction on the POS terminal
0320/0330	209	When the reconciliation is unbalanced, the POS terminal will send the load confirmation details of the load transaction
0820/0830	301	reverberation test
0820/0830	362	POS terminal status monitoring
0800/0810	360	POS terminal magnetic stripe card parameter download
0800/0810	361	POS terminal magnetic stripe card parameter download ends
0800/0810	370	POS terminal IC card public key download
0800/0810	371	POS terminal IC card public key download ends
0820/0830	372	POS terminal IC card public key information query
0800/0810	380	POS terminal IC card parameter download

0800/0810	381	POS terminal IC card parameter download ends
0820/0830	382	POS terminal IC card parameter information
0800/0810	390	POS terminal project code download
0620/0630	951	based on PBOC/EMV standard IC card script

4.36.3 60.4 Terminal capability

value	meaning
0	The terminal read capability is unknown
2	Read magnetic stripe card
5	IC card can be read . When the first 2 digits of the field 22 are 05 or 95 , this field must be filled with 5 .
6	Can read contactless terminals in the CUPMobile mobile payment solution. When the first two digits of the field 22 are 96 , the field must be filled with 6 .

4.36.4 60.5 IC Card Condition Code Based on PBOC/EMV Standard

value	Meaning
0	Unused or subsequent sub-fields exist
1	The last transaction was not an IC card transaction or a successful IC card transaction
2	The last transaction was an IC card transaction but failed
Field 22 takes the value 02 or 90 and 60.4 takes the value 5 and 60.5 takes the value 1 or 2 to indicate the Fall Back. Fall Back may occur in the following situations: a) There is a problem with the chip on the card or in the case that the chip terminal is not working , the chip card can only conduct transactions by reading the magnetic stripe information on the card. b) Although the card and the chip terminal can interact, the terminal cannot read the application on the card, and can only conduct transactions by reading the magnetic stripe information on the card.	

4.36.5 60.6 Product Code

value	Meaning 0001-8999 Allinpay INTL accepts universal payment products within the network , and

	the code is unique
0000	Acquiring
1???	Bank value-added payment products
2???	reserve
3???	Insurance and fund value-added payment products
4???	reserve
5???	reserve
6??? 7??? 8???	Industry card value-added payment products
9000-9998	The payment products customized by the merchant can only be used on the merchant's own terminal . It is unique within the merchant
9999	cash payment

4.36.6 60.7 Business Code

value	Meaning
00	Cardholders can conduct traditional POS transactions using bank cards and industry

	cards.
01	Cardholders can use bank cards, industry cards and cash for payment transactions of public utilities.
02	reserve
03	Cardholders' credit card repayment transactions, both bank cards and cash can be used
04	reserve
05	Cardholder transfer transaction, transfer between bank cards, transfer between industry cards, bank card to industry card
06	reserve
07	Cardholder recharge transaction, bank card recharge to industry card, recharge between industry cards, and cash recharge can be used
08	reserve
09	Card sales transactions, both card purchases and cash can be used
10	reserve
20	Banking and Enterprise Services

4.37 Field 61 Original Message

Variable Attribute

N...029(LLLVAR), 3-byte length value + maximum 29 bytes numeric characters

When compressing, the length value of 2 bytes represented by the BCD code on the right + the maximum data of 15 bytes represented by the BCD code on the left

Field description

This field is a custom field and represents the information of the original transaction. The field is divided into five subfields, the format is defined as follows:

Data element length N3

61.1 Original Batch Number N6

61.2 Original POS Trace Number N6

61.3 Original transaction date N4

61.4 The original transaction authorization method N2

61.5 The original transaction authorization institution code N11

usage

Fill in the original transaction data when reversal, void and retfund transactions.

61.1 Original Batch Number: Fill in the field 60.2 of the original requested transaction when reversal, void, settlement adjustment, and notifying the transaction based on the PBOC/EMV standard IC card script processing result , and set to six zeros for the rest.

61.2 Original POS Trace Number: Fill in the field 11 of the original requested transaction when reversal, void, adjusting settlement and notifying the

transaction based on the PBOC/EMV standard IC card script processing result , and set it to six zeros for the rest.

61.3 Original transaction date: fill in field 13 of the original requested transaction when reversal, void, pre-authorization void, pre-authorization completion (online), refund, offline settlement, and notification of transaction based on PBOC/EMV standard IC card script processing results , and the rest are set to to four zeros.

61.4 Authorization method of the original transaction: fill in the authorization method of the original authorized transaction during offline settlement / adjustment transaction. It can be in the following situations: 00—POS pre-authorization, 01 — Phone pre- authorization, and 02 —authorization on behalf of others.

61.5 The code of the original transaction authorization institution: when the transaction is settled offline, if the original authorized transaction is a telephone pre-authorization, the identification code of the authorized institution shall be filled in.

4.38 Field 62 Reserved Private

Variable Attribute

ANS...512(LLLVAR), 3 bytes length value + maximum 512 bytes ((alphabetic, numeric and special characters)

When compressing, the length value of 2 bytes represented by the BCD code on the right + the maximum data of 512 bytes represented by the ASCII code.

Usage 1 : Terminal work key variable attribute

B...085(LLLVAR) ,

3 bytes + binary field of maximum 85 bytes.

When compressing, the length value of 2 bytes represented by the BCD code on the right + the binary field of maximum 85 bytes.

Format: The length value of 2 bytes represented by the BCD code on the right +

1 -byte master key index (starting from 0) represented by BCD code on the right +

PIK ciphertext + checkvalue

MAK ciphertext + checkvalue

TRK ciphertext + checkvalue

Field description

The new work key agreed by the POS center to the POS terminal, if the length field is not 036 , 060 , 084 , it will be considered that the field format is wrong.

new working key of the POS terminal generated by the POS center is stored in the response message of the POS terminal signing in.

For the single-length key algorithm, the first 12 bytes are the ciphertext of the working key of the PIN , the last 12 bytes are the ciphertext of the working key of the MAC , and the last 12 bytes are the ciphertext of the Track key. (The first 8 bytes are the ciphertext, and the last 4 bytes are the checkvalue ; after the first 8 bytes are solved for the plaintext, do a single-length key algorithm for the 8 values of 0 , and take the first four bits of the result and checkvalue The value comparison should be consistent).

For the double-length key algorithm, the first 20 bytes are the ciphertext of the working key of the PIN , the last 20 bytes are the ciphertext of the working key of the MAC , and the last 20 bytes are the ciphertext of the Track key. (Among them, the first 16 bytes of "PIN working key " are ciphertext, and the last 4 bytes are checkvalue ; after the first 16 bytes are decoded as plaintext, do double-length key algorithm for 8 values of 0 , take The first four digits of the result and the checkvalue The value comparison should be consistent; the first 8

bytes of "MAC work key " are ciphertext, the next 8 bytes are binary zeros, and the last 4 bytes are checkvalue ; after the first 8 bytes are decoded as plaintext, Perform a single-length key algorithm for 8 values of 0 , and take the first four digits of the result and checkvalue The value comparison should be consistent).

For the triple -length encryption algorithm, the first 28 bytes are the ciphertext of the working key of the PIN , the last 28 bytes are the ciphertext of the working key of the MAC , and the last 28 bytes are the ciphertext of the Track key. (The first 24 bytes of "PIN working key " are ciphertext, and the last 4 bytes are checkvalue ; after the first 24 bytes are decoded as plaintext, perform a triple-length encryption algorithm for 8 values of 0 , and get the result The first four bits with checkvalue The value comparison should be consistent; the first 8 bytes of "MAC work key " are ciphertext, the next 16 bytes are binary zeros, and the last 4 bytes are checkvalue ; after the first 8 bytes are decoded as plaintext, Perform a single-length key algorithm for 8 values of 0 , and take the first four digits of the result and checkvalue The value comparison should be consistent).

terminal must verify the checkvalue of the PIK , MAK , and TRK keys .

4.39 Field 63 Reserved Private

Variable Attribute

ANS...163(LLLVAR), 3 bytes length value + maximum 163 bytes ((alphabetic, numeric and special characters)

When compressing, the length value of 2 bytes represented by the BCD code on the right side + the maximum data of 163 bytes represented by the ASCII code.

Field description

Field description

This Field is a custom Field and is divided into two sub-fields. The format is defined as follows:

Data element length N3

63.1 Custom Field 1 AN3

63.2 Custom Field 2 ANS...120 (LLLVAR)

63.1 Custom Field 1

Usage 1 : Card Scheme code

In the transaction response message, the POS center returns the Card Scheme code; for notification messages and offline transactions sent by the POS , the card scheme code must be sent . The code is:

63.1 Field usage one

Card Scheme Name	3 -digit code
China Union Pay	CUP
VISA	VIS
Master Card	MCC
Maestro Card	MAE
JCB	JCB
Dinner Club	DCC
American Express	AMX

Usage 2: Operator Code

Indicates the POS terminal operator code, which is used to send it to the POS center in POS sign-in and batch settlement transactions, and returns to the original path when responding.

63.2 Custom Field 2

This field is a variable-length field, and the length value is represented by the BCD code on the right, with a maximum of 120 bytes.

This field consists of four sub-fields, which are described as follows:

63.2.1 Issuer Reserved Field ANS...20 (LLVAR)

63.2.2 Allinpay INTL reserved field ANS...20 (LLVAR)

63.2.3 Acquier Reserved Field ANS...20 (LLVAR)

63.3.4 POS terminal reserved fields ANS...60 (LLVAR)

The above four sub-fields are arranged in order. If the subsequent sub-fields appear but the preceding sub-fields do not have a value, the preceding sub-fields are filled with spaces.

63.2.1 Issuer Reserved Field

It is used to store some special information returned by the card issuer in the transaction response message (which can be used for value-added services). For example, the winning information of the card issuer's acceptance transaction, the cardholder's point information, commodity information, or some information that the card issuer needs to inform the cardholder, etc. If this field is not empty, it needs to be printed in the remarks column of the purchase order.

63.2.2 Allinpay INTL Reserved Field

Allinpay INTL in the transaction response message (such as the winning information of the processing center, commodity information, etc.). If it is not empty, it needs to be printed in the remarks column of the purchase order. The mark up value queried by DCC needs to be displayed on the corresponding POS interface.

63.2.3 Acquier Reserved Fields

settlement bank) in the transaction response message . If it is not empty, it needs to be printed in the remarks column of the purchase order.

Currently in discount consumption, this field is used to store the debit cardholder amount. The format of the message filled by the Acquier must be: the discount amount plus the actual amount deducted from the cardholder. The amount deducted from the cardholder is left-aligned. If there is a decimal point, the decimal point must be included. For example, if the debit cardholder's amount is 100.06 , the field will be filled with " discount amount 100.06" .

63.2.4 POS Terminal Reserved Field

Used for some special transaction information transmitted by the POS terminal.

4.40 Field 64 Message Authentication Code

Variable Attribute

B64, 64 bits binary data

Field description

Authentication code (MAC) used to authenticate the accurate message source

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Usage

The message authentication code is the MAC data calculated with some sensitive field data in the message. Before the transaction message is sent out by the sender, MAC should be generated by the sender. After the receiver receives the message, it will re-calculate the MAC value to authenticate whether the message is changed during the transmission process.

For the detailed calculation method and usage of the field, please refer to " Appendix "

5 Appendix A: Encryption and Decryption Methods for Personal Identification Numbers (PIN)

PAN accesss method for PIN encryption and decryption

Manual card number

If the card number is entered manually, start from the second digit from the right of the entered card number (field 2), and take 12 digits to the left as the PAN involved in PIN encryption and decryption.

Magnetic stripe card method

If the entry mode is swipe Magnetic stripe card, start from the second digit from the left of the separator '=' in track 2 (field 35), and take 12 characters to the left as the PAN involved in PIN encryption; if there is only track 3 (field 36), start from track 3 The second digit from the left of the separator '=' starts, and 12 characters are taken from the left as the PAN involved in PIN encryption and decryption.

length of PIN

The length of the PIN is 6 digits (expandable to 12 digits).

PIN character set

The PIN is represented by numeric characters, and the following table gives its binary comparison table:

Table A.1 Binary representation of PIN characters

PIN character	binary representation
0	0000
1	0001

2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

PIN format

The format of PIN should conform to ANSIX9.8 Format (with PAN information)

The PINBLOCK format is equal to the PIN bitwise exclusive OR Master Account Number (PAN):

PIN format:

Table A.2 PIN format

Location	length	Meaning
1	1 BYTE	PIN length
2	7 BYTE	6-12 digits PIN (each character occupies 4 BIT, if it is insufficient , F is added to the right)

PAN format:

Table A.3 PAN format

Location	length	Meaning
1	2 BYTE	%H0000
3	6 BYTE	Take the right 12 digits of the main account number (refer to A.1)

Example 1

Example For example: the plaintext PIN is: 123456,

Example Assumption: PAN on magnetic card: 123456789012345678

Example Intercepted PAN: 678901234567

Example Then the PAN for PIN encryption is: 0x000x000x670x890x010x230x450x67

Example PINBLOCK is: 0x060x120x340x560xFF0xFF0xFF0xFF

Example XOR: 0x000x000x670x890x010x230x450x67

Example The result is: 0x060x120x530xDF0xFE0xDC0xBA0x98

Example 2

Example Assumption: PAN on the magnetic card: 1234567890123456

Example Intercepted PAN: 456789012345

Example Then the main account used for PIN encryption is: 0x000x000x450x670x890x010x230x45

Example PINBLOCK is: 0x060x120x340x560xFF0xFF0xFF0xFF

Example XOR: 0x000x000x450x670x890x010x230x45

Example The result is: 0x060x120x710x310x760xFE0xDC0xBA

The type of PIN (type 2) shall be indicated in field 53 (SECURITYRELATED-CONTROL-INFORMATION) of the message message.

6 Appendix B: Algorithm for MAC

The POS terminal adopts the ANSI9.9 encryption method of ECB, which is briefly described as follows:

a) In the message to be sent to the POS SERVICE CENTER, the part from the message type (MTI) to the 63 field constitutes the MAC ELEMEMENT BLOCK (MAB).

b) For MAB, do XOR every 8 bytes (regardless of the character format in the message), if the last 8 bytes are less than 8 bytes, add "0X00".

Example :

MAB = M1 M2 M3 M4

Among them :

M1 = MS11 MS12 MS13 MS14 MS15 MS16 MS17 MS18

M2 = MS21 MS22 MS23 MS24 MS25 MS26 MS27 MS28

M3 = MS31 MS32 MS33 MS34 MS35 MS36 MS37 MS38

M4 = MS41 MS42 MS43 MS44 MS45 MS46 MS47 MS48

The XOR operation is performed according to the following rules:

MS11 MS12 MS13 MS14 MS15 MS16 MS17 MS18

XOR) MS21 MS22 MS23 MS24 MS25 MS26 MS27 MS28

---------- -

TEMP BLOCK1 = TM11 TM12 TM13 TM14 TM15 TM16 TM17 TM18

Then, proceed to the next step:

TM11 TM12 TM13 TM14 TM15 TM16 TM17 TM18

XOR) MS31 MS32 MS33 MS34 MS35 MS36 MS37 MS38

---------- -

TEMP BLOCK2 = TM21 TM22 TM23 TM24 TM25 TM26 TM27 TM28

Then proceed to the next operation:

TM21 TM22 TM23 TM24 TM25 TM26 TM27 TM28

XOR) MS41 MS42 MS43 MS44 MS45 MS46 MS47 MS48

---------- -

RESULT BLOCK = TM31 TM32 TM33 TM34 TM35 TM36 TM37 TM38

c) Convert the last 8 bytes (RESULT BLOCK) after the XOR operation into 16 HEXDECIMAL:

RESULT BLOCK = TM31 TM32 TM33 TM34 TM35 TM36 TM37 TM38

= TM311 TM312 TM321 TM322 TM331 TM332 TM341 TM342 ||

TM351 TM352 TM361 TM362 TM371 TM372 TM381 TM382

d) Take the first 8 bytes and encrypt with MAK:

ENC BLOCK1 = eMAK (TM311 TM312 TM321 TM322 TM331 TM332 TM341 TM342)

= EN11 EN12 EN13 EN14 EN15 EN16 EN17 EN18

e) XOR the encrypted result with the last 8 bytes:

EN11 EN12 EN13 EN14 EN15 EN16 EN17 EN18

XOR) TM351 TM352 TM361 TM362 TM371 TM372 TM381 TM382

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TEMP BLOCK= TE11 TE12 TE13 TE14 TE15 TE16 TE17 TE18

f) Use the XOR result TEMP BLOCK to perform another single-length key algorithm operation.

ENC BLOCK2 = eMAK (TE11 TE12 TE13 TE14 TE15 TE16 TE17 TE18)

= EN21 EN22 EN23 EN24 EN25 EN26 EN27 EN28

g) Convert the result of the operation (ENC BLOCK2) into 16 HEXDECIMALs:

ENC BLOCK2 = EN21 EN22 EN23 EN24 EN25 EN26 EN27 EN28

= EM211 EM212 EM221 EM222 EM231 EM232 EM241 EM242 ||

EM251 EM252 EM261 EM262 EM271 EM272 EM281 EM282

Example :

ENC RESULT= %H84, %H56, %HB1, %HCD, %H5A, %H3F, %H84, %H84

Convert to 16 HEXDECIMAL:

"8456B1CD5A3F8484"

h) Take the first 8 bytes as the MAC value.

Take " 8456B1CD " as the MAC value.

7 Appendix C: Response Codes

answer	contains righteous	terminal operation	Terminal display (recommended)	Applicable conditions
00	Acceptance or transaction is successful	success	successful transaction	
01	Card issuing party	fail	Please contact the cardholder with the issuing bank	The transaction was rejected by the card issuer for reasons, and this response code is only used if the card issuer must be contacted.

03	Invalid Merchant	fail	Invalid Merchant	MCC is abnormal; this card does not allow this transaction at this type of merchant (MCC); this merchant is on the blacklist
04	confiscated card	card , confiscated	This card should be swallowed (ATM) This card is invalid (POS)	issuer believes that the card should be confiscated
05	Authentication failed	fail	Cardholder authentication failed	1. The transaction information of the online transaction was delivered overdue 2. The cardholder's identity authentication failed (such as the trust relationship or

				online transaction) 3. The certificate information (type, number, etc.) did not match 4. The exchange center judged the time difference between the security information and the transaction information more than 24 hours 5. The date of birth of the cardholder does not match
10	Partial Amount Approved	success, prompt	Displays the partially approved amount, prompting the operator	Used in transactions that allow partial amounts
11	Approval (VIP)	success	This is a VIP customer	The issuer reminds the acquirer that

				this is a VIP customer
12	Invalid affiliate transaction	fail	invalid transaction	1. The original transaction has not been accepted, and related party transactions have been received, such as reversal transactions and reversal of transactions; 2. Transactions that should occur on the next day do not occur on the next day. 3. The original transaction is cancelled and reversed the next day. 4. The transaction is not executed, but the information of the related transaction is

				received (for example, the pre-authorization transaction is not accepted, and the pre-authorization completion or pre-authorization revocation transaction is received)
13	Invalid amount	fail	Invalid amount	In a transaction that should have a valid amount, fill in 0 or other illegal value in the amount field; the accumulated amount of over-delivery / over-cash amount is accumulated; the transaction exceeds the consumption ratio; the tip amount

				exceeds the limit This institution cannot / cannot conduct transactions in this currency;
14	Invalid card number (no such account)	fail	Invalid card number	1. The card issuer does not have the primary account number 2. In the case of finding the original transaction, the primary account number of the associated transaction does not match the primary account number of the original transaction 3. The check digit of the card number is incorrect 4. The account has been

				invalidated or cancelled 5. Answer The main account of the transaction does not match the main account of the requested transaction
15	No such card issuer	fail	There is no corresponding card issuer for this card	The corresponding card issuer could not be found according to the main account of the transaction request
16	Approve the update of the third track	success	Update third track	reserve
twenty one	Card not initialized	fail	The card is not initialized or the card is sleeping	1. The card has not been activated or opened; 2. The initial password of the card has not been changed; 3. Transactions

				restricted by the initial password 4. Cards that have not been used for a long time and are frozen or in the " sleep " state .
twenty two	Suspected fault, related transaction error	fail	The operation is wrong, or the allowed number of days for the transaction is exceeded	Abnormal related party transactions, such as the following : 1. After the reversal transaction is executed , the cancellation request transaction is received again 2. The current transaction has been revoked, and its related transaction has been received, such as reversal, revocation, etc.

				3. After executing the pre-authorization revocation transaction , the pre-authorization is received to complete the transaction 4. After the pre-authorization reversal transaction is executed , the pre-authorization is received to complete the transaction 5. After executing the pre-authorization completion transaction, a pre-authorization completion request for the same pre-authorization transaction is received.

				6. The occurrence time of pre-authorization transactions (including pre-authorization completion and pre-authorization revocation) exceeds the allowable pre-authorization type. The number of transaction days is 7 , exceeding the normal payment time
25	Original transaction not found	fail	No original transaction, please contact card issuer	It can represent the following situations: 1. The original transaction could not be found, and there was an error matching the original request transaction

				2. Match the original pre-authorization, the authorization transaction fails 3. The reversal transaction request fails to match the original transaction 4. It is used for deduction, revocation and change of entrustment, and the entrustment relationship does not exist
30	message format error	fail	Please try again	It can represent the following situations: 1. The message field that should appear does not appear in the message 2. The value of

				the transaction channel is not defined in the specification 3. Domain resolution error 4. Subdomain parsing error 5. Domain check failed 6. Illegal characters appear in the field 7. The bitmap in the received message does not conform to the definition of the specification 8. The track information is wrong 9. There is no transaction amount in the transaction where the transaction amount should

				appear
34	suspected of cheating	card , confiscated	cheat card _ _	The card is suspected of cheating (including ARQC verification error), the ATM card is used, and the operator confiscates it. It is suitable for the following situations: 1. The number of CVN errors exceeds the limit of the number of card swallows; 2. The card has been counterfeited (debit)

38	Exceeding the allowed PIN attempts	fail	The number of incorrect passwords exceeds the limit, please contact the card issuer	The number of incorrect passwords exceeds the limit, and the account has been locked. The cardholder needs to go to the card issuer for unlocking
40	The requested feature is not yet supported	fail	Transaction not supported by card issuer	For the functions that are not supported by the organization, it can be expressed as the following situations: 1. The card issuer has not opened this transaction 2. Although the type of transaction can be determined from the message of the networked organization , the transaction

				is not currently open. 3. Although the network organization can determine the transaction type from the received message, the transaction is not included in the receiver's permission table or special permission table. 4. Although the transaction type can be determined from the message of the networking agency, the message version of the receiver does not support 5. For an IC card transaction, if the receiver is in Early status, but the receiver does not require

				ARQC verification 6. The card issuer cannot verify certain verification elements
41	report lost card	card , confiscated	This card has been reported lost , and the card (ATM) has been reported lost (POS)	Lost card, swallowed
43	stolen card	card , confiscated	This card has been confiscated, please contact the card issuer (ATM) Stolen card (POS)	The card issuer confirmed that the card was stolen and swallowed
51	insufficient funds	fail	Insufficient available balance	Insufficient account available balance, insufficient credit limit, and cash withdrawal limit exceeded
54	expired card	fail	The card has	Expired card with

			expired	incorrect expiration date
55	incorrect PIN	fail	wrong password	PIN verification failed
57	Transactions that the cardholder is not allowed to make	fail	This card transaction is not allowed	The card issuer does not allow transactions due to the cardholder's credit and risk status, including but not limited to: 1. This type of card cannot be used for such transactions 2. The service scope is exceeded 3. This type of card is not accepted 4 . The unit card cannot deposit 5. The account does not have the currency

				6. This card is suspected of cashing out 7. The card number or certificate number is in the blacklist
58	Transactions not allowed by the terminal	fail	The card issuer does not allow the card to be used for this transaction at this terminal	1. The card issuer is restricting such terminals to conduct related transactions (maybe for some card BINs) 2. The terminal number in the related transaction does not match the terminal number in the original transaction
59	suspected of cheating	fail	Card verification error	CVN verification failed
61	Amount limit exceeded	fail	The transaction amount exceeds	transaction amount exceeds

			the limit	the limit, including but not limited to: 1. Exceeding the single consumption limit / exceeding the ATM single cash withdrawal limit2 , ATM daily cash withdrawal /POS daily consumption amount exceeding the limit3 , exceeding the cardholder-defined single withdrawal / consumption4 , over the transfer limit
62	restricted card	fail	restricted card	Restricted cards (for reasons such as service area restrictions, etc.), not swallowed

64	The original amount is wrong	fail	The transaction amount does not match the original transaction	1. The transaction amount in the request message does not match the transaction amount in the response message (except for some deductions)
				2. The transaction amount in the related transaction message does not match the transaction amount in the original transaction message (except for some deductions)
65	Withdrawal / spending limit exceeded	fail	Withdrawal limit exceeded	1. Exceed the withdrawal / consumption limit on the same day 2. The cumulative

				number of over-delivery / over-cash payments;
68	Issuer response timed out	fail	Transaction timed out, please try again	receiving institution has not received a response from the card issuer after a timeout
75	Exceeded allowed number of PIN entries	fail	The number of incorrect passwords exceeds the limit	The number of wrong password input exceeded the limit
83	Fraudulent / Risk Transactions	fail	Suspected fraudulent / risky transaction suspected fraud/security transaction	risky transaction
90	Processing end of day()	fail	The system is out of date, please try again later	Date switch in progress
91	Card issuer cannot operate	fail	The status of the card issuer is abnormal, please try again later	a transaction was rejected due to an error by the card issuer (or transfer -in /

				transfer-out party), as in the following cases: 1. The card issuer (or the transfer -in / transfer-out party) is not functioning properly 2. The card issuer (or transfer -in / transfer-out party) is abnormal, but has not signed an agency authorization agreement with the processing center 3. The card issuer (or transfer -in / transfer-out party) signs out or fails to sign in 4. The running

				status of the card issuer (or the transfer -in / transfer-out party) is invalid 5. The line of the card issuer (or the transfer -in / transfer-out party) is abnormal 6. The internal system of the card-issuing bank (or the transfer -in / transfer-out party) times out
92	Financial institutions or intermediate network facilities cannot be found or reachable	fail	The card issuer's line is abnormal, please try again later	1. No line available 2. The IP address format and port number of the processing center or network access agency are wrong
94	repeat transaction	fail	Rejected, repeat transaction, please try again	1. It is used to detect that the original

			later	transaction is a duplicate transaction; 2. When the delegation is established, it is found that the delegation relationship already exists 3. The transaction serial number is repeated
96	Abnormality and failure of the processing center system	fail	Rejected, the exchange is abnormal, please try again later	Used to indicate that the transaction was rejected due to an error in the processing center, given by . In the following cases: 1. The processing center cannot perform normal processing, and internal processing

				failures such as database operation abnormality, shared memory operation abnormality, and function operation abnormality occur. 2. During the maintenance of the processing center, all requests are rejected
97	ATM/POS terminal number not found	fail	Terminal number not registered	Terminal number not registered
98	The processing center cannot receive the card issuer's response	fail	Issuer timed out	1. The card issuer times out 2. The transfer party times out 3. Receive response timeout
99	PIN format	fail	Incorrect PIN format, please sign in again	PIN format

A0	MAC authentication failed	fail	MAC check error, please sign in again	MAC check failed
A1	wrong currency	fail	Inconsistent transfer currency	Inconsistent transfer currency
AS	transaction processing	Inquire	The result of the transaction is unknown	For the anti-scan transaction type of WeChat Alipay Cloud QuickPass , if the answer is AS , it means that the transaction is being processed, and an inquiry transaction should be initiated to obtain the final transaction result.
M2	Merchant Status Abnormal	fail	The status of the merchant is abnormal, please contact the customer service center	The status of the merchant is abnormal, please contact the customer service center

8 Appendix F: Reconciliation File Format Description :

Note: The reconciliation file can be downloaded on the institutional platform through the page, or can be downloaded in the form of an http request.

Reconciliation file format description

1. Each line of the file content must conform to the standard format, and each line must be terminated with a carriage return and line feed.

2. Data items are separated by "," commas.

3. If the data item is empty, the corresponding data item does not need to fill in any information (including blanks)

4. The last line is total information.

End-of-file record statistics :

serial number	field name	Meaning
1.	Summary	
1.	transaction date	
1.	settlement currency	
1.	total payment	
1.	total transaction fee	
1.	Total settlement amount	

1.	Total number of transactions	
1.	total transaction amount	
1.	Total discount amount	

5. Field description description of reconciliation detail data :

serial number	field name	Meaning
1.	transaction date	yyyyMMdd
1.	Merchant ID (can be empty)	
1.	Business Name	
1.	Terminal number	
1.	Transaction order number	
1.	Transaction Type	
1.	card number	
1.	card organization	
1.	POS batch number	
1.	POS serial number	
1.	transaction hour	yyyy -MM-dd HH: mm:ss
1.	Transaction currency	

1.	Payment amount	with decimal point
1.	tip amount	
1.	settlement currency	
1.	settlement amount	
1.	Transaction Fees	
1.	lump sum	
1.	Discounted price	
1.	settlement exchange rate	
1.	Original transaction order number	
1.	Remarks (Extended)	