

Castles Semi-Integrated Command

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Version 2.4

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Version Information

Version	Changes	Author	Date
1.0	Creation	W Zhao	December 12, 2019
1.1	Add the "Set Data" command	W Zhao	January 02, 2020
1.2	Add the "Get Data" command	W Zhao	March 02, 2020
1.3	Remove the "Set Data" command	Brady Zhao	March 27, 2020
1.4	Add the "Card Detected" command Add "Cancel Transaction" command	W Zhao	June 08, 2020
1.5	Add a flag in the sale response to indicate a transaction is re-sale.	W Zhao	June 15, 2020
1.6	Add flags in the sale respons for emv receipt, add emv response sample	Allen Yan	June 24, 2020
1.7	Add "PreAuth" / "AuthComplete" / "CancelPreAuth" command	W Zhao	July 03, 2020
1.8	1. Add "OrigAmount" in the "AuthComplete Request" command 2. Support Token function	W Zhao	October 15, 2020
1.9	1. Add "CardType"/ "ResponseMessage" / "AuthCode" in the sale response for the Apriva host 2. Add "ResponseMessage" / "AuthCode" in the Pre-Auth response and Auth-complete response	W Zhao	November 26, 2020
2.0	Add tag "Sequence" , tag "DebitAccountType" and tag "BankResponseCode" in the sale response and pre-auth response for interact card.	W Zhao	December 24, 2020
2.1	Add tag "LocalDateTime" "TimeZone" in sale and PreAuth response	Allen Yan	January 27, 2021

2.2	Add the "Adjust" command to support Apriva host	Allen Yan	February,09, 2021
2.3	Add "GIFT_TK2" tag in the Sale Response and PreAuth Response	Wendy Zhao	March 5, 2021
2.4	Add "LanguagePreference" tag in SaleResponse and PreAuth Response	Allen Yan	March 24, 2021

1. Communication Packet

1.1 Package Format

<STX> {Message Length} {Message Info} <ETX><LRC>

1.2 Control Symbol

ASCII Symbol		Description
Name	Hex Value	
STX	02h	The start of text sent by the controller to mark the start of the packet
ETX	03h	The end of text sent by the controller to mark the end of the packet
ACK	06h	The acknowledge symbol informs the packet was received correctly.
NAK	15h	The not acknowledge symbol is sent if the previous packet was not received correctly. The current session is ended.
LRC	Variable (but a single symbol)	The Longitudinal Redundancy Check is calculated by XORing all characters including the ETX symbol. The STX symbol is not included in the calculation.

1.3 Message Length

2 bytes' binary length of the message excluding the length field itself and <STX> <ETX> <LRC>.

The message length is used as an indicator of the length (in number of bytes) of the message. The first byte contains the quotient (in binary) of the message length (excluding the length field itself) and 256. The second byte contains the remainder of this division.

1.4 Message Info

Message Info is JSON format. It contains the messages which needed by the sender and receiver.

Every command should contain the "CMDType", "TXNType" and "STN".

See more detail in Appendix A.

1.5 Protocol Handling

The communication is processed by the following method:

ACK/NAK

Both sender and receiver should check LRC to response ACK/NAK in 500ms after receiving last byte. (The interval between each byte of the same packet should be less than 50ms)

ACK, if LRC checks OK

NAK, if LRC does not match.

Sender Implementation

If send REQ/RSP packet, then wait for ACK/NAK or time out after packet is sent. Follow ACK/NAK protocol. If receive ACK then ready for next send session. Cannot send next REQ/RSP until ACK is received or timer is arrived (500ms).

Receiver Implementation

If receive buffer is empty, then filter input data as below

If ACK/NAK then notify send function

If STX then starts receiving packet assembly.

Ignore any other data received

During receiving packet assembly function

Follow packet receiving rule

If message length > max length (2000 bytes), then empty the buffer and return NAK.

If timeout (50ms) occurs and missing ETX or LRC, then ignore the data and return NAK.

Check ETX & verify LRC, send ACK/NAK based on result from LRC

If LRC is OK, then pass buffer to FW/AP for processing

2. Message Detail

Attributes define

M	Mandatory
O	Optional
C	Conditional

2.1 Sale

2.1.1 Sale Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"Sale"	
"STN"	M	"000000" – "999999"	
"TransAmount"	M	"10.00"	
"Vends"	C	3	
"Date"	M	YYMMDD	
"Time"	M	HHMMSS	
"RequestToken"	C	"TRUE"/"FALSE"	The default value in the APP is "FALSE". When cardholder do a payment using a card, if this tag is send with the "TRUE" value, then the APP will try to get the Token of this card. and the Token value will be returned in the response message. (currently, only Heartland Portico USA and GP Canada support this function)
"TokenValue"	C	"335HS41MdRRioV MFPq525671"	If you want to use the Token to do the transaction, you need to fill the token value in this tag. (currently, only Heartland Portico USA and GP Canada support this function)

2.1.2 Sale Response

Tag Name	Attributes	Value	Comments
----------	------------	-------	----------

"CMDType"	M	"Response"	
"TXNType"	M	"Sale"	
"STN"	M	Same value with Request	
"TXNResult"	M	"Approve"	
"RspCode"	C	"00"	Will be added when the terminal get the data from the host.
"CardBrand"	C	"VISA"	Will be added when the terminal can get this value based on the card information.
"CardNumber"	C	"*****3911"	Will be added when the terminal get the data from the card
"STAN"	C	"000102"	Will be added when the terminal receives this value from the host
"TimeStamp"	C	"2019-12-27T07:12:50.000Z"	Will be added when the terminal receives this value from the host
"HostTXNID"	C – HL/Apriva	"1936120483"	Will be added when the terminal receives this value from the host
"POSEntryMode"	C	"INSERT"/"TAP"/"SWIPE"/"FALLBACK SWIPE"	Will be added when the terminal detected the card
"Re-Sale"	C	"TRUE"/"FALSE"	Will be added when the APP supports the "re-sale" function
"TransAmount"	M	"10.00"	If failed, the value is "0.00"
"AID"	C	"A0000000031010"	Application ID Number
"TSI"	C	"E800"	Transaction Status Indicator
"TVR"	C	"0000208800"	Transaction Verification Results
"IAD"	C	"01102040006A0000C58C000000000000FF"	Issuer Application Data
"ARC"	C	"5A33"	Authorization Response Code
"CVR"	C	"00"	Card Verification Results
"AIDLabel"	C	"4D415354455243415244"	Application ID Label
"AC"	C	"F349F7DD66DF9F17"	9F26

"TC"	C	"06B4"	9F26
"AAC"	C		9F26
"ATC"	C		Application Transaction Counter
"CVM"	C	"1F0302"	Cardholder Verification Method
"LanguagePreference"	C	"fr"	Will be added if get value of tag 5F2D
"TokenValue"	C	"335HS41MdRRioVMFPq 525671"	The token value of the current card. return from the host (currently, only Heartland Portico USA and GP Canada support this function)
"CardType"	C	"Credit"	"Credit" / "Debit" / "Others"
"ResponseMessage"	C	"Test Processor Success"	The response text from the host.
"AuthCode"	C	"3780167379"	The Auth code from the host.
"Sequence"	C	"000010014860"	This is the Interac sequence number.
"DebitAccountType"	C	"CHEQUING"	This is the Interac debit account type. "CHEQUING" / "SAVINGS"
"BankResponseCode"	C	"001"	Will be added when the terminal receives this value from the host.
"LocalDateTime"	M	"210127T140258"	Cashless reader datetime, Format "YYMMDDTHHMMSS"
"TimeZone"	M	"-5"	UTC-5
"GIFT_TK2"	C		

2.2 GetData

2.2.1 GetData Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"GetData"	

"STN"	M	"000000" – "999999"	
"ModelName"	O	""	
"SN"	O	""	
"RTC"	O	""	
"APPVersion"	O	""	
"FWVersion"	O	""	

User can specify the desired tags to return from the device, send the tags in the request message with empty "" value.

2.2.2 GetData Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"GetData"	
"STN"	M	Same value with Request	
"ModelName"	O	Ex. "UPTS1000F"	
"SN"	O	16 digitals	
"RTC"	O	Ex. "20131123143456" = 2013/11/23 14:34:56	
"APPVersion"	O	Version of the APP	
"FWVersion"	O	Version of the FW	

2.3 Card Detected

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Notification"	
"TXNType"	M	"CardDetected"	

"STN"	M	"000000" – "999999"	Same value with Sale
"POSEntryMode"	M	"INSERT"/"TAP"/"SWIPE"/"FALLBACK SWIPE"	

2.4 CancelTransaction (Cancel the transaction before the card detected)

2.4.1 CancelTXN Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"CancelTXN"	
"STN"	M	"000000" – "999999"	

2.4.2 CancelTXN Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"CancelTXN"	
"STN"	M	Same value with Request	
"CancelResult"	M	"Approve"/"Decline"	

2.5 Pre-Auth

2.5.1 PreAuth Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"PreAuth"	
"STN"	M	"000000" – "999999"	

"TransAmount"	M	"20.00"	
"Date"	M	YYMMDD	
"Time"	M	HHMMSS	
"RequestToken"	C	"TRUE"/"FALSE"	The default value in the APP is "FALSE". When cardholder do a payment using a card, if this tag is send with the "TRUE" value, then the APP will try to get the Token of this card. and the Token value will be returned in the response message. (currently, only Heartland Portico USA and GP Canada support this function)
"TokenValue"	C	"335HS41MdRRioVMFPq525671"	If you want to use the Token to do the transaction, you need to fill the token value in this tag. (currently, only Heartland Portico USA and GP Canada support this function)

2.5.2 PreAuth Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"PreAuth"	
"STN"	M	"000000" – "999999"	Same value with Request
"TXNResult"	M	"Approve"	
"TransAmount"	M	"20.00"	Amount approved in the host. If failed, the value is "0.00"
"RspCode"	C	"00"	Will be added when the terminal get the data from the host.
"CardBrand"	C	"VISA"	Will be added when the terminal can get this value based on the card information.
"CardNumber"	C	"*****3911"	Will be added when the terminal get the data from the card
"STAN"	C	"000102"	Will be added when the terminal receives this value from the host

"TimeStamp"	C	"2019-12-27T07:12:50.000Z"	Will be added when the terminal receives this value from the host
"HostTXNID"	C	"1936120483"	Will be added when the terminal receives this value from the host. it used for heartland. Need to be added in the Auth-Complete request or the CancelPreAuth request.
"POSEntryMode"	C	"INSERT"/"TAP"/"SWIPE"/"FALLBACK SWIPE"	Will be added when the terminal detected the card
"AID"	C	"A0000000031010"	Application ID Number
"TSI"	C		Transaction Status Indicator
"TVR"	C		Transaction Verification Results
"IAD"	C		Issuer Application Data
"ARC"	C	"00"	Authorization Response Code
"CVR"	C	"00"	Card Verification Results
"AIDLabel"	C	"VISA Credit Debit"	Application ID Label
"AC"	C		9F26
"TC"	C		9F26
"AAC"	C		9F26
"ATC"	C		Application Transaction Counter
"CVM"	C		Cardholder Verification Method
"LanguagePreference"	C	"fr"	Will be added if get value of tag 5F2D
"TokenValue"	C	"335HS41MdRRioVMFPq525671"	The token value of the current card. return from the host (currently, only Heartland Portico USA and GP Canada support this function)
"ResponseMessage"	C	"Test Processor Success"	The response text from the host.
"AuthCode"	C	"3780167379"	The Auth code from the host.

"Sequence"	C	"000010014860"	This is the Interac sequence number. --reserved
"DebitAccountType"	C	"CHEQUING"	This is the Interac debit account type. "CHEQUING" / "SAVINGS". ---reserved
"BankResponseCode"	C	"001"	Will be added when the terminal receives this value from the host.
"LocalDateTime"	M	"210127T140258"	Cashless reader datetime, Format "YYMMDDTHHMSS"
"TimeZone"	M	"-5"	UTC-5
"GIFT_TK2"	C		

2.6 Auth-Complete

2.6.1 AuthComplete Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"AuthComplete"	
"STN"	M	"000000" – "999999"	
"TransAmount"	M	"15.00"	The Auth-complete amount
"HostTXNID"	C	"1936120483"	Must be added if the host is heartland;
"OrigAmount"	M	"20.00"	The amount of PreAuth transactions

2.6.2 AuthComplete Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"AuthComplete"	
"TXNResult"	M	"Approve"	
"STN"	M	"000000" – "999999"	Same value with Request
"RspCode"	M	"00"	
"TimeStamp"	O	"2018-04-23T02:54:06"	

"HostTXNID"	O	"1936120483"	
"TransAmount"	O	"20.00"	Amount approved in the host. If failed, the value is "0.00"
"ResponseMessage"	C	"Test Processor Success"	The response text from the host.
"AuthCode"	C	"3780167379"	The Auth code from the host.

2.7 Cancel Pre-Auth (Reversal)

2.7.1 CancelPreAuth Request

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"CancelPreAuth"	
"STN"	M	"000000" – "999999"	
"OrigAmount"	M	"20.00"	
"CancelAmount"	M	"20.00"	
"Date"	M	YYMMDD	
"Time"	M	HHMMSS	
"HostTXNID"	C	"1936120483"	Must be added if the host is heartland;

2.7.2 CancelPreAuth Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"CancelPreAuth"	
"TXNResult"	M	"Approve"	
"STN"	M	"000000" – "999999"	Same value with Request
"RspCode"	M	"00"	
"TimeStamp"	O	"2018-04-23T02:54:06"	
"HostTXNID"	O	"1936120483"	

"TransAmount"	O	"20.00"	Amount approved in the host. If failed, the value is "0.00"

2.8 Adjust

2.8.1 Adjust Request

Notes: This command support Apriva host only and not support campus card

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Request"	
"TXNType"	M	"Adjust"	
"STN"	M	"000000" – "999999"	
"TransAmount"	M	"20.00"	Not support zero or less zero
"HostTXNID"	M	"1936120483"	Must be same as transaction to be adjusted

2.8.2 Adjust Response

Tag Name	Attributes	Value	Comments
"CMDType"	M	"Response"	
"TXNType"	M	"Adjust"	
"STN"	M	"000000" – "999999"	Same value with Request
"HostTXNID"	M	"1936120483"	Same value with Request
"RspCode"	C	"00"	Will be added when the terminal get the data from the host.
"ResponseMessage"	C	"Test Processor Success"	The response text from the host.
"TimeStamp"	C	"2018-04-23T02:54:06"	Will be added when the terminal get the data from the host.
"AuthCode"	C	"3780167379"	The Auth code from the host.

3. Appendix A – Tag List

Tag Name	Format	Description
CMDType	String "Notification" "Request" "Response"	The type of this command. (Notification/ Request/Response)
TXNType	String	The transaction type of this command. See more details in Appendix B
STN	String(6)	"000000" – "999999" This Tag is used for the POS to check if response corresponds to request. The sender will manage this data. Receiver will copy this data from the request message to the response message.
TransAmount	String Example – "10.00"	The amount of the transaction. A decimal point is required to separate integer and decimal places.
Vends	INT Example -- 3	Total number of items.
Date	String --- YYMMDD	The date of the CMD
Time	String --- HHMMSS	The time of the CMD
TXNResult	String	The result of the transaction. See more details in Appendix C
RspCode	String	The response code of the host.
CardBrand	String	See more details in Appendix D.
CardNumber	String	Masked card number
TimeStamp	String	A timestamp
STAN	String	System Trace Audit Number(Create locally)
HostTXNID	String	Gateway transaction ID(Create in host)
Exception	String	reply to this label when the terminal unable to process the request. Value list:

		<p>"CMD format error"</p> <p>"unknown exception"</p>
"ModelName"	String	The model name of the device. Ex. "UPT1000F"
"SN"	String	16 digitals format
"RTC"	String	Ex. "20131123143456" = 2013/11/23 14:34:56
"APPVersion"	String	The version of the APP
"FWVersion"	String	The version of the FW
"POSEntryMode"	String	"INSERT"/"TAP"/"SWIPE"/"FALLBACK SWIPE"
"CancelResult"	String	"Approve"/"Decline"
"Re-Sale"	String	"True"/" False" This function is configurable. – If the customer support the re-sale function, then in the sale response, we need to add this tag.
"OrigAmount"	String	The amount of PreAuth transaction which you want to reversal.
"CancelAmount"	String	The amount you want to reversal.
"RequestToken"	String	"TRUE"/ "FALSE" The default value in the APP is "FALSE". When cardholder do a payment using a card, if this tag is send with the "TRUE" value, then the APP will try to get the Token of this card. and the Token value will be returned in the response message. (currently, only Heartland Portico USA and GP Canada support this function)
"TokenValue"	String	The token value which response from the host.. (currently, only Heartland Portico USA and GP Canada support this function)
"CardType"	String	"Credit" / "Debit" / "Others"
"ResponseMessage"	String	The response message from the host. Example: "Test Processor Success"
"AuthCode"	String	"3780167379"
"Sequence"	String	This is the Interac sequence number.

"DebitAccountType"	String	This is the Interac debit account type. "CHEQUING" / "SAVINGS".
"BankResponseCode"	String	The Bank response code of the host.
"GIFT_TK2"	String	
"LanguagePreference"	String	5F2D

4. Appendix B – TXNType List

TXNType	Comments
"Sale"	
"GetData"	
"CancelTXN"	
"CardDetected"	
"PreAuth"	
"AuthComplete"	
"CancelPreAuth"	
"Adjust"	

5. Appendix C – TXNResult List

"Approve"
"DeclinebyHost"
"DeclinebyLocal"
"Cancel-TimeOut"
"Cancel-Button"
"Decline-SelectionOverLimit"
"TransactionFail"
"Decline-AmountInvalid"

6. Appendix D – Card Brand

Short name in the message	Description
---------------------------	-------------

"VISA"	VISA
"MC"	MasterCard
"AMEX"	American Express
"DISC"	Discover
"Inter"	Interac

7. Appendix E – Example

7.1 Sale

sale request

```
{  
  
  "CMDType": "Request",  
  
  "TXNType": "Sale",  
  
  "STN": "123456",  
  
  "TransAmount": "10.00",  
  
  "Vends": 3,  
  
  "Date": "191225",  
  
  "Time": "153029"  
  
}
```

sale request with transAmount 0(to get token)

```
{  
  
  "CMDType": "Request",  
  
  "TXNType": "Sale",  
  
  "STN": "123456",  
  
  "TransAmount": "0.00",  
  
  "Date": "191225",  
  
}
```

```
"Time": "153029",  
"RequestToken ": "TRUE"  
}
```

sale response 1 (no emv data)

```
{  
  
"CMDType": "Response",  
  
"TXNType": "Sale",  
  
"STN": "123456",  
  
"TXNResult": "Approve",  
  
"RspCode": "00",  
  
"CardBrand": "VISA",  
  
"CardNumber": "*****3911",  
  
"STAN": "000102",  
  
"HostTXNID": "1936120483",  
  
"TimeStamp": "2019-12-27T07:12:50.000Z",  
  
"Re-Sale": "FALSE",  
  
"TokenValue": "335HS41MdRRioVMFPq525671",//if RequestToken is TRUE  
  
"TransAmount": "10.00",  
  
"LocalDateTime": "210127T140258",  
  
" TimeZone ": "-5"  
  
}
```

sale response 2 (include emv data)

```
{  
  
"CMDType": "Response",  
  
"TXNType": "Sale",  
  
"STN": "000001",
```

```
"TXNResult": "Approve",  
"RspCode": "00",  
"Re-Sale": "FALSE",  
"TransAmount": "1.00",  
"CardNumber": "*****4111",  
"CardBrand": "MC",  
"TimeStamp": "2020-07-22T22:41:43.5270752",  
"HostTXNID": "1329731050",  
"POSEntryMode": "INSERT",  
"CardType": "DEBIT",  
"ResponseMessage": "APPROVED 000APPROVED 858465",  
"AuthCode": "858465",  
"BankResponseCode": "001",  
"AID": "A0000000041010",  
"TSI": "E800",  
"TVR": "0000208800",  
"IAD": "01102040006A0000C58C00000000000000FF",  
"ARC": "5A33",  
"AIDLabel": "4D415354455243415244",  
"AC": "F349F7DD66DF9F17",  
"ATC": "06B4",  
"CVM": "1F0302",  
"TokenValue": "335HS41MdRRioVMFPq525671",//if RequestToken is TRUE  
"LocalDateTime": "210127T140258",  
"TimeZone": "-5",  
"LanguagePreference": "fr"  
}
```

sale response 3 (include emv data for Interac)

```
{  
  
  "CMDType": "Response",  
  
  "TXNType": "Sale",  
  
  "STN": "123456",  
  
  "TXNResult": "Approve",  
  
  "RspCode": "00",  
  
  "Re-Sale": "FALSE",  
  
  "TransAmount": "10.00",  
  
  "CardNumber": "*****1933",  
  
  "CardBrand": "Inter",  
  
  "TimeStamp": "2020-12-30T09:42:28.8124845",  
  
  "HostTXNID": "1350626776",  
  
  "POSEntryMode": "INSERT",  
  
  "CardType": "DEBIT",  
  
  "ResponseMessage": "APPROVED 000APPROVED 858465",  
  
  "AuthCode": "858465",  
  
  "BankResponseCode": "001",  
  
  "Sequence": "000010015110",  
  
  "DebitAccountType": "CHEQUING",  
  
  "AID": "A0000002771010",  
  
  "TSI": "6800",  
  
  "TVR": "8000008000",  
  
  "IAD": "06010A0364AC00",  
  
  "ARC": "3030",  
  
  "AIDLabel": "494E5445524143",  
  
  "TC": "3C4DD1F2ADFBDF91",  
  
  "ATC": "002D",  
  
  "CVM": "410302",  
  
}
```



```
"TokenValue": "335HS41MdRRioVMFPq525671",//if RequestToken is TRUE

"LocalDateTime": "210127T140258",

"TimeZone ": "-5",

"LanguagePreference": "en"

}
```

7.2 GetData

getdata request

```
{

  "CMDType": "Request",

  "TXNType": "GetData",

  "STN": "000001",

  "ModelName": "",

  "SN": "",

  "RTC": "",

  "APPVersion": "",

  "FWVersion": ""

}
```

getdata response

```
{

  "CMDType": "Response",

  "TXNType": "GetData",

  "STN": "000001",

  "ModelName": "UPT1000F",

  "SN": "0000512182100004",

  "RTC": "20200302044755",

  "APPVersion": "0.01.6",

}
```

```
"FWVersion": "VRAB12-20191206"
```

```
}
```

7.3 Card Detected

card detected notification

```
{
```

```
    "CMDType": "Notification",
```

```
    "TXNType": "CardDetected",
```

```
    "STN": "000002",
```

```
    "POSEntryMode": "SWIPE"
```

```
}
```

7.4 Cancel Transaction

cancel transaction request

```
{
```

```
    "CMDType": "Request",
```

```
    "TXNType": "CancelTXN",
```

```
    "STN": "000005"
```

```
}
```

Cancel transaction response

```
{
```

```
    "CMDType": "Response",
```

```
    "TXNType": "CancelTXN",
```

```
    "STN": "000005",
```

```
    "CancelResult": "Approved"
```

```
}
```

7.5 Re-Sale

Re-sale request

```
{  
  
    "CMDType": "Request",  
  
    "TXNType": "Sale",  
  
    "STN": "000006",  
  
    "TransAmount": "1.25",  
  
    "Date": "191225",  
  
    "Time": "123010"  
  
}
```

Re-sale response

```
{  
  
    "CMDType": "Response",  
  
    "TXNType": "Sale",  
  
    "STN": "000006",  
  
    "TXNResult": "Approve",  
  
    "RspCode": "00",  
  
    "HostTXNID": "1323664844",  
  
    "Re-Sale": "TRUE",  
  
    "CardNumber": "*****4111",  
  
    "CardBrand": "MC",  
  
    "TimeStamp": "2020-06-20T03:21:05.172421",  
  
    "POSEntryMode": "TAP"  
  
    "TransAmount": "1.25"  
  
}
```

7.6 Pre-Auth

Pre-Auth request

```
{  
  
    "CMDType": "Request",  
  
    "TXNType": "PreAuth",  
  
    "STN": "000002",  
  
    "TransAmount": "10.00",  
  
    "Date": "191225",  
  
    "Time": "123010"  
  
}
```

Pre-Auth request transAmount 0(to get token)

```
{  
  
    "CMDType": "Request",  
  
    "TXNType": "PreAuth",  
  
    "STN": "000002",  
  
    "TransAmount": "0.00",  
  
    "Date": "191225",  
  
    "Time": "123010",  
  
    "RequestToken ": "TRUE"  
  
}
```

Pre-Auth response 1 (no emv data)

```
{  
  
    "CMDType": "Response",  
  
    "TXNType": "PreAuth",  
  
    "STN": "000002",  
  
    "TXNResult": "Approve",  
  
    "TransAmount": "10.00",  
  
    "RspCode": "00",  
  
}
```

```
"CardBrand": "VISA",  
  
"CardNumber": "*****6781",  
  
"TimeStamp": "2020-07-16T21:13:50.0513789",  
  
"HostTXNID": "1329097621",  
  
"TokenValue": "335HS41MdRRioVMFPq525671",//if RequestToken is TRUE  
  
"POSEntryMode": "SWIPE",  
  
"LocalDateTime": "210127T140258",  
  
" TimeZone ": "-5"  
  
}
```

Pre-Auth response 2 (include emv data)

```
{  
  
"CMDType": "Response",  
  
"TXNType": "PreAuth",  
  
"STN": "000003",  
  
"TXNResult": "Approve",  
  
"TransAmount": "10.00",  
  
"RspCode": "00",  
  
"CardBrand": "VISA",  
  
"CardNumber": "*****0119",  
  
"TimeStamp": "2020-07-20T02:04:25.2524863",  
  
"HostTXNID": "1329506585",  
  
"POSEntryMode": "TAP",  
  
"ResponseMessage": "APPROVED 000APPROVED 858465",  
  
"AuthCode": "858465",  
  
"BankResponseCode": "001",  
  
"TSI": "0000",  
  
"TVR": "0000000000",
```

```
"IAD": "06010A03A00000",  
"AIDLabel": "5649534120435245444954",  
"TC": "14432E053BD1727B",  
"ATC": "0185",  
"CVM": "3F0000",  
"TokenValue": "335HS41MdRRioVMFPq525671",//if RequestToken is TRUE  
"LocalDateTime": "210127T140258",  
"TimeZone": "-5",  
"LanguagePreference": "fr"  
}
```

7.7 Auth-Complete

Auth-Complete request

```
{  
  
"CMDType": "Request",  
"TXNType": "AuthComplete",  
"STN": "000002",  
"TransAmount": "5.00",  
"HostTXNID": "1329097621",  
"OrigAmount": "10.00"  
}
```

Auth-Complete response

```
{  
  
"CMDType": "Response",  
  
"TXNType": "AuthComplete",  
"STN": "000002",  
"TXNResult": "Approve",
```

```
"RspCode": "00",  
  
"TimeStamp": "2020-07-16T21:17:25.5322221",  
  
"HostTXNID": "1329096534",  
  
"TransAmount": "5.00"  
  
}
```

7.8 Cancel Pre-Auth

Cancel Pre-Auth request

```
{  
  
"CMDType": "Request",  
  
    "TXNType": "CancelPreAuth",  
  
    "STN": "000002",  
  
    "OrigAmount": "10.00",  
  
    "CancelAmount": "5.00",  
  
    "Date": "191225",  
  
    "Time": "123010",  
  
    "HostTXNID": "1329097621",  
  
}
```

Cancel Pre-Auth response

```
{  
  
"CMDType": "Response",  
  
    "TXNType": "CancelPreAuth",  
  
    "STN": "000002",  
  
"TXNResult": "Approve",  
  
    "RspCode": "00",  
  
    "TimeStamp": "2020-07-16T21:19:23.9589411",  
  
    "HostTXNID": "1329096538",
```

```
"TransAmount": "5.00"
```

```
}
```

7.9 Adjust

Adjust request

```
{
```

```
"CMDType": "Request",
```

```
"TXNType": "Adjust ",
```

```
"STN": "123456",
```

```
"TransAmount": "10.00",
```

```
"HostTXNID": "1329096538"
```

```
}
```

Adjust response

```
{
```

```
"CMDType": "Response",
```

```
"TXNType": "Adjust",
```

```
"STN": "123456",
```

```
"HostTXNID": "1329096538",
```

```
"RspCode": "00",
```

```
"ResponseMessage": "Test Processor Success",
```

```
"TimeStamp": "2020-07-16T21:19:23.9589411",
```

```
"AuthCode": "3789959479"
```

```
}
```

7.10 Gift Card

Sale Request

```
{
```

```
"CMDType": "Request",
```

```
"TXNType": "Sale",
```

```
"STN": "123456",
```



```
"TransAmount": "10.00",  
  
"Vends": 3,  
  
"Date": "191225",  
  
"Time": "153029"  
  
}
```

Sale Response

```
{  
  
  "CMDType": "Response",  
  
  "TXNType": "Sale",  
  
  "STN": "123456",  
  
  "TXNResult": "Approve",  
  
  "Re-Sale": "FALSE",  
  
  "TransAmount": "0.00",  
  
  "GIFT_TK2": ";604958001751006=24122011502123450000?",  
  
  "LocalDateTime": "210305T020813",  
  
  "TimeZone": "-5"  
  
}
```

Auth Request

```
{  
  
  "CMDType": "Request",  
  
  "TXNType": "PreAuth",  
  
  "STN": "000002",  
  
  "TransAmount": "10.00",  
  
  "Date": "191225",  
  
  "Time": "123010"  
  
}
```

Auth Response

```
{
```

```
"CMDType": "Response",  
"TXNType": "PreAuth",  
"STN": "000002",  
"TXNResult": "Approve",  
"TransAmount": "0.00",  
"GIFT_TK2": ";604958001751006=24122011502123450000?",  
"LocalDateTime": "210305T020908",  
"TimeZone": "-5"
```

```
}
```