



# POSLink (Windows) API Guide

[Version:1.00.17]

PAX

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# Preface

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## REVISION HISTORY

Date	Version	Author	Description
2011/9/21	V1.00.00_20110921	Jacob.W	The First Version
2011/9/23	V1.00.00_20110923	Jim.X Jacob.W	Modify document descriptions. Modify 3.3.4 ReportResponse
2011/10/12	V1.00.00_20111012	Jacob.W	<ol style="list-style-type: none"> <li>1. Modify the commsetting, commtype value, modify the resultTxt</li> <li>2. Remove the authcode from the extdata.</li> <li>3. Fix defect 66, remove some spaces in xml element &lt;&gt;&lt;/&gt;</li> <li>4. Modify 3.8 ResultCode&amp;ResultTxt</li> </ol>
2011/10/18	V1.00.00_20111018	Jacob.w	<ol style="list-style-type: none"> <li>1. Add description of Force in paymentRequest, EDCType in BatchRequest</li> <li>2. Modify BogusAccountNum</li> <li>3. Add a description of input properties items.</li> <li>4. Update 3.8 Result Code and Result Txt</li> </ol>
2011/11/08	V1.00.01_20111108	Jacob.w	Add an “VERIFY” transaction in section 3.5
2011/11/17	V1.00.01_20111117	Jacob.w	Modify some format and grammar of the document
2011/11/18	V1.00.01_20111118	Jacob.w	Remove default value of parameter variable
2012/3/2	V1.00.01_20120302	Jacob.w	Modify according Charles’s comments
2012/5/29	V1.00.01_20120529	Brain.c	Add command for UPDATEIMAGE/ DOSIGNATURE/ DELETEIMAGE
2012/5/30	V1.00.02_20120530	Brain.c	Modify description Add ResultCode and ResultTxt. Add “intervalTime” variable define. Add “HRefNum” in ExtData.
2012/6/1	V1.00.02_20120601	Brain.c	Fix Description for TimeOutV shuld 1000 not 1.
2012/6/20	V1.00.02_20120620	Brain.c	Modify property TimeOutV to TimeOut Add “TIPREQ” in additional information
2012/6/21	V1.00.02_20120621	Brain.c	Fix bugs
2012/7/13	V1.00.02_20120713	Brain.c	Remove offset and reqlen for Get Signature.
2012/7/19	V1.00.02_20120719	Brain.c	Remove offset and reqlen Modify * mean required , -U mean unsupported
2012/10/08	V1.00.02_20121008	Brain.c	Add ConvertSigToPic function for Converting signature data to picture.
2012/10/12	V1.00.03_20121012	Brain.c	Remove CLEARSCREEN command Add response code: 100003 PLZ VOID ADDTIP
2012/10/15	V1.00.03_20121015	Brain.c	Add SIGNSTATUS/DISAMT/CHGAMT number description in PaymentResponse.

2012/12/11	V1.00.04_20121211	Brain.c	Add Property length description. Add LogManagement class for Log Setting. Modify Force description in ExtData.
2013/1/11	V1.00.05_20130111	Brain.c	Add CancelTrans api in PosLink. Add “msgTitle” in variable define.
2013/1/15	V1.00.05_20130115	Brain.c	Changed the max length of “msgTitle” to 36. Change the max length of “DisplayMessage” to 36 in show message command. Change the max length of “AvsResponse” to 8. Changed the max length of “CvResponse” to 8. Delete “LOGIN”\”LOGOUT” from PaymentTransType definition. Modify “SHOWMESSAGE” description for display line from 5 to 10.
2013/1/28	V1.00.05_20130128	Brain.c	Delete “LOGIN”\”LOGOUT” from PaymentTransType definition. Modify “TableNum”-“SignStatusNum” Format in ExtData. Add EDC type table description. Delete “msgTitle”.
2013/3/15	V1.00.06_20130315	Brain.c	Add “ExtraBalance” in paymentResponse Add “msgTitle” “MID” “TID” Modify description of “amountOrder”
2013/3/22	V1.00.06_20130322	Brain.c	1. Add new api “SHOWTHANKYOU” in ManageRequest 2. Add “SignUploadFlag” in Exdata.
2013/3/27	V1.00.07_20130327	Martin.h	Add support single EBT type.
2013/5/9	V1.00.08_20130509	Martin.h	1. Add new API “REBOOT”, “GETPINBLOCK” and “INPUTACCOUNT” in MangaeRequest. And add related property 2. Add property “FPS”, “FPSSIGN” and “FPSRECEIPT” in PaymentResponse 3. Add option 5 and 6 as “SignatureStatus” to indicate the uploading status of signature. 4. Add description of if “SignUploadFlag” not sent to terminal, POS will upload the signature by default when signature uploading is supported by host. 5. Property “GiftVoidCout/GiftVoidAmount” should be “GiftAdjustCount/GiftAdjustAmount” for ReportResponse. 6. Add configurable parameter “idleImageName”/”signLine1”/”signLine2”. 7. “ShowDialog”/”ShowMessage” are not limited for MT30 only, and there are also applicable for SP30 and the other models. 8. Update description about “INIT” command

			<p>in ManageRequest.</p> <ol style="list-style-type: none"> <li>Update chapter “EDC Supported Trans Types”.</li> <li>Remove properties “X/Y/W/H” for ManageRequest since “ClearScreen” is not supported.</li> <li>Make use of var "accountFlag" to control whether FULL PAN can be returned to ECR for Gift and Loyalty.</li> <li>Make sure the BMP format is 24bit only.</li> </ol>
2013/5/15	V1.00.08_20130515	Martin.h	<ol style="list-style-type: none"> <li>“intervalTime” should be between 10 and 9999.</li> <li>For ShowDialog, the button after the empty button will also be ignored.</li> <li>Add description about the size of Signature Box in MT30.</li> </ol>
2013/7/24	V1.00.09_20130724	Martin.h	<ol style="list-style-type: none"> <li>Add a new Api “ParseTrans” in Class ManageRequest</li> <li>Modify the values list in the Trans property in Class ManageRequest.</li> <li>Add new API “RESETMSR” in MangaeRequest</li> <li>Add a transtype “REACTIVATE” in PaymentTransType in Appendix</li> <li>Add a method “GetReportedStatus” in Class Poslink.</li> <li>Add “ReportStatus” in the property of ExtData in Class PaymentRequest</li> <li>Add swipeAnyTime in Configurable Parameter Definition in Appendix.</li> </ol>
2013/8/9	V1.00.09_20130809	Martin.h	<ol style="list-style-type: none"> <li>Modify the values list in the Trans property in Class BatchRequest.</li> <li>Add description about the restriction of log size in 4.1.2 Set Logmanagement Parameter.</li> </ol>
2013/9/12	V1.00.10_20130912	Martin.h	<ol style="list-style-type: none"> <li>Add “LogLevel” in the property in the Calss LogManagement.</li> <li>Add description about image zip file generation, it not support which generated by Winzip in the property if ImagePath in Class ManageRequest.</li> <li>Add descriptionabout getPinBlock time out in the property of TimeOut in Clasee ManageRequest.</li> <li>Support Mutli-threading mode, and add a sample in Appedix.</li> </ol>
<b>2013/10/31</b>	V1.00.11_20131031	Martin.h	<ol style="list-style-type: none"> <li>Add new API “INPUTTEXT” in Class ManageRequest and related property</li> <li>Add new API “CHECKFILE” in Class ManageRequest and related property</li> <li>Add description about INPUTTEXT time</li> </ol>

			<p>out in the property of TimeOut in Class ManageRequest.</p> <p>4. Add “Text” in the property in Class ManageResponse.</p>
<b>2013/12/19</b>	V1.00.12_20131219	Martin.h	<p>1. Add “SigSavePath” in the property in Class ManageRequest.</p>
<b>2014/5/27</b>	V1.00.13_20140527	Martin.h	<p>1. The max length of limiLen in Configurable Parameter Definition should be 4096, not 3999.</p> <p>2. Add description for communication method.</p> <p>3. Change description about “Hostcode”, “HostResponse”, “Message”.</p> <p>4. Add “EDCTYPE” and “ORIGTIP” in the property in Class “PaymentResponse”.</p>
<b>2014/10/9</b>	V1.00.14_20141009	Martin.h	<p>1. Add “TC”, “TVR”, “AID”, “TSI”, “ATC”, “APPLAB”, “APPPN” in the property in Class “PaymentResponse” and Class “ReportResponse”.</p> <p>2. Add Entry mode about “Chip” and “Chip Fall Back Swipe” for EMV entry in Class “PaymentResponse”</p> <p>3. Add “hostRspBeep”, “terminalFloorLimit”, “terminalCtlessLimit”, “terminalCtlessTranLimit”, “CVMRequiredLimit” in Appendix 5.5, Configurable Parameter Definition</p> <p>4. Add a value 2 which means TDES method in the property of Encryption Flag</p> <p>5. The property of Key Slot not only valid in GETPINBLOCK but also in INPUTACCOUNT</p> <p>6. Add a property LogFilePath in Class LogMangement.</p>
<b>2014/10/27</b>	V1.00.15_20141027	Martin.h	<p>1. Add a transaction type which name is PURGE BATCH in tranType in the property of the class BatchRequest.</p>
<b>2014/11/4</b>	V1.00.15_20141104	Martin.h	<p>1. Add “ENCRYPTION ERROR” in section of ResultCode &amp; ResultTxt.</p>
<b>2014/12/24</b>	V1.00.16_20141224	Martin.h	<p>1. Add authPhone/batchPhone in Configurable Parameters Definition</p> <p>2. Add “Token” in ExtData field in Class PaymentRequest and PaymentResponseProperty.</p> <p>3. Add ecrBaudRate in Configurable Parameter Definition.</p> <p>4. Add error message “FULL INTEGRATION/SEMI INTEGRATION ONLY” as notification that command not supported in current mode.</p> <p>5. Add a property which name is BaudRate</p>

			in Class CommSetting.
<b>2015/2/25</b>	V1.00.17_20150225	Bill.K	1. Doc Updates
<b>2015/6/17</b>	V1.00.17_20150617	Martin.h	1. Add more description about image size in Class ManageRequest. 2. Add more description about error message of “EBT TYPE INVALID” 3. Add a transtype which is TOKENIZE
<b>2015/7/1</b>	V1.00.17_20150701	Martin.h	1. Add a default value for the property of AccountNum in Class MangeRequest 2. Add some description for the property of KeySlot in Class ManageRequest.
<b>2015/7/7</b>	V1.00.17_20150707	Luke.L	1. Add configurable parameter “supportPrint”/”resellerInfor”/”hostInfor”. 2. Missed “CVM” in EXT Data for PaymentResponse. 3. Missed “TokenRequest” in EXT Data for PaymentRequest.

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# 1. Introduction

## 1.1. Purpose

This document is aimed to provide the API Manual about how to use POSLink. The following topics are contained in this document.

- Introduction.
- Overall Description
- Methods and Properties

## 1.2. Document Conventions

ECR: Electronic Cash Register.

## 1.3. Intended Audience and Reading Suggestions

In the whole design process of such application, the following persons should pay attention to this document.

- POS System Developer
- Tester/QA

## 2. Overall Description

### 2.1. Product Perspective

PAX provides a flexible integration interface between the PAX device and the POS system, and removes the POS from the PCI and EMV loops. In the semi-integrated configuration, the PAX device assumes all responsibility for the security of sensitive cardholder data passed between the merchant location and the processing host. The responsibility of the POS system is limited to communicating the transaction request via the POSLink API to the PAX device and printing the receipt. No sensitive data is passed between the PAX device and the POS, thereby relieving the POS developer of the responsibility for data security required in the credit card transaction.

PAX terminal also takes care of the E2EE data encryption from the point of data entry to the payment processor.

### 2.2. Communication Method

The POSLink can communicate with the terminal by RS232 or ETHERNET.

- Serial

For RS232 communication, the terminal will use the following default parameters.

Baud: 9600

Data Bits: 8

Stop Bits: 1

Parity: None.

- ETHERNET

For Ethernet communication, POSLink supports TCP/IP and HTTP.

- TCP/IP

For ETHERNET communication, the Terminal acts as the server, and ECR as client. The server IP and Port are configurable in POSLink. HTTP

- HTTP

Currently, HTTP Get method is the only supported method. For detailed information, please refer to the document ***The Interface Specification between ECR/PC and Terminal.***

## 2.3. Product Features

Supports Credit/Debit/EBT/Gift/Loyalty/Check/Cash payment types. The API is independent of the processor or gateway.

## 2.4. User Classes and Characteristics

This document relates to these major users.

User	Description
<b>POS System Developer</b>	The user who develops the POS system for the merchant.
<b>Merchant/Operator</b>	The customer who uses the ECR and terminal to process the payment transaction.

## 2.5. Operating Environment

### 2.5.1. Terminal

- MT30
- SP30
- S58
- S300
- D200/D210
- S80

### 2.5.2. ECR or PC POS system

- Electronic Cash Register

### 3. Data Definition

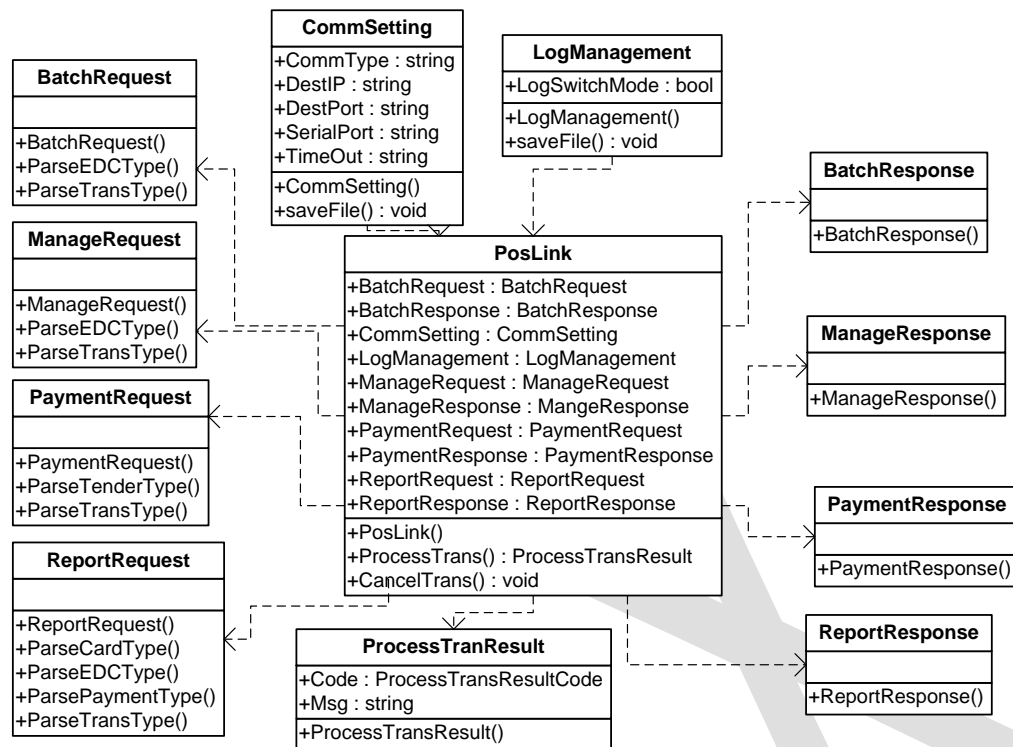
#### 3.1. Data Attributes

Modifier	Description
<b>n</b>	Numeric digits, 0 through 9
<b>a</b>	Alphabetic characters A-Z and a-z
<b>s</b>	Special characters, other printable characters
<b>an</b>	Alphabetic, numeric
<b>ans</b>	Alphabetic, numeric and special characters
<b>YYYY</b>	Year, 0000 through 9999
<b>YY</b>	Year, 00 through 99
<b>MM</b>	Month, 01 through 12
<b>DD</b>	Day, 01 through 31
<b>hh</b>	Hour, 00 through 23
<b>mm</b>	Minute, 00 through 59
<b>ss</b>	Second, 00 through 59
<b>digits</b>	The fixed length Example: n6 indicates the fixed length numeric field of 6 digits an11 indicates the fixed length alpha/numeric field of 11 characters
<b>...digits</b>	The variable length, with the maximum specified by the digit Example: n...6 indicates a variable length numeric field of 0 – 6 digits an...11 indicates a variable length alpha/numeric field of 0 – 11 characters
<b>var</b>	The length is variable

### 4. Class

#### 4.1. Summary

POSLink is divided into 12 classes as shown in the following UML diagram:



Notes that the properties of Class BatchRequest, ManageRequest, PaymentRequest, ReportRequest, BatchResponse, ManageResponse, PaymentResponse and ReportResponse are not mentioned in the UML diagram, please see the following section for those properties.

#### 4.1.1. Set Communication Parameter

The communication parameter is stored in a file named "commsetting.ini".

The file is written by CommSetting class and read by PosLink class.

The CommSetting class provides a convenient way to write the commsetting.ini file to a specified folder.

PosLink uses the specified communication parameters in the commsetting.ini file in specified folder.

If the "read commsetting.ini" process fails or the related values are not set, PosLink will default to UART(CommType) -1(TimeOut) COM1(SerialPort).

#### ➤ File Structure

The "commsetting.ini" file structure is as follows:



[COMMUNICATE]

PORT=

IP=

SERIALPORT=

TIMEOUT=

CommType=

For example:

```
[COMMUNICATE]
PORT=10009
IP=192. 168. 21. 25
SERIALPORT=COM1
TIMEOUT=30000
CommType=TCP
```

### 4.1.2. Set Logmanagement Parameter

The logmanagement parameter is stored in the file named LogSetting.ini .

The file is written by LogManagement class and read by PosLink class.

LogManagement class provides a convenient way to write the LogSetting.ini file in a specified folder.

PosLink uses the specified communication parameters in the commsetting.ini file in a specified folder.

If reading “LogSetting.ini” fails or the related values are not set, PosLink will use 1 (default LogSitchMode) to record the log in a “POSLog.txt” file. The log will record the most recent 30 days of log information. The maximum log size is 30MB. If the file is larger than 30MB, the log size will be reset to zero.

#### ➤ File Structure

The “LogSetting.ini” file structure is as follows:

[LOGSETTING]

LOGSWITCH =

For example:

```
[LOGSETTING]
LOGSWITCH=1
```

## 4.2. Class CommSetting

### 4.2.1. Constructors

Name	Description
<b>CommSetting()</b>	Instantiate the CommSetting object.

### 4.2.2. Methods

Prototype	Description
<b>void saveFile()</b>	Gets all properties and saves them to the commsetting.ini file located in the current “execute” folder.

### 4.2.3. Properties

Name	Description
<b>CommType</b>	UART-default TCP
<b>TimeOut</b>	-1: no timeout – default  >0 wait in milliseconds to timeout  measured in 1ms (i.e. “60000 = 60 seconds)
<b>SerialPort</b>	value is COMx – default is COM1 valid only when CommType = UART
<b>DestIP</b>	Terminal IP address  EX: 192.168.1.1  Valid only when CommType = ETHERNET
<b>DestPort</b>	Terminal port number 1~65535  Valid only when CommType = ETHERNET

	default port is "10009"
<b>BaudRate</b>	Value is 9600 or 115200:Default = 9600 bps Valid only when CommType = UART

### 4.3. Class LogManagement

#### 4.3.1. Constructors

Name	Description
<b>LogManagement()</b>	Instantiate the LogManagement object

#### 4.3.2. Methods

Prototype	Description
<b>void saveFile()</b>	Gets all properties and saves them to the LogSetting.ini file located in the current "execute" folder.

#### 4.3.3. Properties

Name	Description
<b>LogSwitchMode</b>	1 = Default On 0 = Off
<b>LogLevel</b>	0 = Error mode (default) 1 = Debug mode
<b>LogFilePath</b>	Designates the path to save LogSetting.ini and POSLog.txt. If the path does not exist, the command will have no effect.

### 4.4. Class PosLink

#### 4.4.1. Constructors

Name	Description
<b>PosLink()</b>	Instantiate PosLink object

#### 4.4.2. Methods

POSLink uses two methods: ProcessTrans and CancelTrans. The ProcessTrans method will be called after all required transaction parameters have been set. The results of the ProcessTrans method should be the first thing reviewed if any results are returned from POSLink. Please see the "Processing Results" descriptions in the "Output Properties" section ([ProcessTrans](#)

[ResultCode](#)). The CancelTrans method is used to cancel a transaction while being processed via POSLink. The CancelTrans method will either return no value or void the transaction.

Prototype	Description
<b>ProcessTrans</b>	Call POSLink to process a transaction.
<b>CancelTrans</b>	Call POSLink to cancel a transaction.
<b>int GetReportedStatus</b>	<p>The PosLink will report the status during the payment processing. The POS will get following status report while waiting for the authorization response</p> <p>0 Off (Default) 1 On</p> <p>Returned values:</p> <p>-1: No status returned. 0: Ready for card input. 1: Ready for PIN entry 2: Ready for Signature 3: Ready for Online Processing. 4: Ready for second card input(for REPLACE/MERGE).</p>

#### 4.4.3. Properties

Name	Description
<b>CommSetting</b>	To set communication parameter
<b>LogManagement</b>	To set Log parameter
<b>PaymentRequest</b>	To set payment transaction request properties
<b>ManageRequest</b>	To set manage transaction request properties
<b>BatchRequest</b>	To set batch transaction request properties
<b>ReportRequest</b>	To set report transaction request properties
<b>PaymentResponse</b>	To get payment a transaction response. Valid only after a payment transaction command successfully processes.

<b>ManageResponse</b>	To get manage transaction response. Valid only after a “manage transaction” command has been successfully processed.
<b>BatchResponse</b>	To get a batch transaction response. Valid only after a “batch transaction” command has been successfully processed.
<b>ReportResponse</b>	To get a report transaction response. Valid only after a “report transaction” command has been successfully processed..

## 4.5. Class PaymentRequest

### 4.5.1. Constructors

Name	Description
<b>PaymentRequest ()</b>	Initialize a newly created PaymentRequest object

### 4.5.2. Methods

Prototype	Description
<b>int ParseTenderType(String type)</b>	Parse the String Tender type to integer type.
<b>int ParseTransType(String type)</b>	Parse the String transaction type to integer type.

### 4.5.3. Properties

\* = Required, -U = Not currently supported.

Value	Attribute	Description
<b>TenderType *</b>		ALL = 0 -U CREDIT = 1 DEBIT = 2 CHECK = 3 EBT_FOODSTAMP = 4 EBT_CASHBENEFIT = 5

		GIFT = 6  LOYALTY = 7  CASH = 8  EBT = 9  Setting any other value will generate an error response.
<b>TransType *</b>		See <a href="#">PaymentTransType</a> below  Setting any other value will generate an error response.
<b>Amount</b>	n...8	Transaction total amount\$\$\$\$\$CC.
<b>CashBackAmt</b>	n...8	Cash back amount \$\$\$\$\$CC.
<b>ClerkID</b>	ans...8	Employee/Clerk ID.
<b>CssPath -U</b>		Style sheet path. Allows developer to specify their own CSS file.
<b>CustomFields-U</b>		
<b>UserID-U</b>		TID, Indicates the User ID for use when supporting multiple server accounts.
<b>PassWord -U</b>		Enter the token generated from the POSLink application.
<b>CustomerName -U</b>		Card holder name.
<b>Zip</b>	n...9	Cardholder/Check Owner billing zip/postal code.
<b>TipAmt</b>	n...8	Tip amount \$\$\$\$\$CC.
<b>TaxAmt</b>	n...8	Tax amount \$\$\$\$\$CC.
<b>Street</b>	ans...32	Billing street address.
<b>SurchargeAmt</b>	n...8	Merchant surcharge fee, \$CC.  If the terminal level setting for “merchant fee” is “0”, this field must be NULL or “0”.  If the terminal level setting is not “0”, this field can be any value or “NULL”, if the value is “NULL”, terminal will fall back to the default value. Supported only in Debit sale and EBT cash benefit sale transactions.
<b>ServerID -U</b>		
<b>AutoSubmit-U</b>		True = On, False = Off, anything else = Use default setting.

<b>PONum</b>	ans...32	Purchase order number.
<b>OrigRefNum</b>	n...4	Original terminal reference number used for follow-up transactions.
<b>Misc3Amt-U</b>		
<b>Misc2Amt-U</b>		
<b>Misc1Amt-U</b>		
<b>MerchantKey-U</b>		MID.
<b>InvNum</b>	ans...16	POS system invoice/tracking number.
<b>ECRRefNum *</b>	ans...16	The ECR reference number. This is a unique code on the ECR side.
<b>AuthCode</b>	ans...10	Voice Authorization Code obtained via telephone from the payment host. The transaction type is "FORCED". This field is NULL and the terminal will prompt for the authorization.
<b>ExtData</b>		<p>Extended data in XML format</p> <p><b>Account information:</b></p> <p><b>&lt;Account&gt;</b>account number<b>&lt;/Account&gt;</b>                      Card account number /check account number,n...19</p> <p><b>&lt;ExpDate&gt;</b>card expire date<b>&lt;/ExpDate&gt;</b>                      Card expire date, MMY format,n4</p> <p><b>&lt;CVV&gt;</b>cvv<b>&lt;/CVV&gt;</b>                      The cvv code,n...4</p> <p><b>&lt;EBTFoodStampVoucher&gt;</b>voucherMode<b>&lt;/EBTFoodStampVoucher&gt;</b>                      For FoodStamp voucher mode true or false, only valid when card type is EBT_FOODSTAMP or EBT,either <b>T</b> or <b>F</b>. Default to false.</p> <p><b>&lt;VoucherNum&gt;</b> Voucher number <b>&lt;/VoucherNum&gt;</b>                      Only valid when tender type is EBT_FOODSTAMP or EBT.</p> <p><b>&lt;Force&gt;</b>Force<b>&lt;/Force&gt;</b>                      Force processing of duplicate transactions. "T" is the only valid value. Any Value other than "T" will be omitted.</p> <p><b>Check information:</b></p> <p><b>&lt;CheckSaleType&gt;</b>saleType<b>&lt;/CheckSaleType&gt;</b>                      The check sale type:</p>

		<p>“V” = Check Verification</p> <p>“C” = Check Conversion</p> <p>“G” = Check Guarantee</p> <p>For transaction types “VOID” and “ADJUST”, “C” is the only valid value.</p> <p><b>&lt;CheckRoutingNum&gt;</b>routing number<b>&lt;CheckRoutingNum&gt;</b> Check routing number,n...9</p> <p><b>&lt;CheckNum&gt;</b>check number<b>&lt;/CheckNum&gt;</b> The check number,n...7</p> <p><b>&lt;CheckType&gt;</b>check type<b>&lt;/CheckType&gt;</b> Check type:</p> <p>“P” = Personal.</p> <p>“B” = Business.</p> <p>“G” = Government.</p> <p>“R” = Payroll.</p> <p>“T” = Two-Party.</p> <p><b>&lt;CheckIDType&gt;</b>check id type<b>&lt;/CheckIDType&gt;</b> ID type for CHECK:</p> <p>“D” = Driver License.</p> <p>“S” = SSN.</p> <p>“M” = Military ID.</p> <p>“C” = Courtesy card.</p> <p>“P” = Proprietary Card.</p> <p>“B” = Military Base.</p> <p>“A” = Passport Number.</p> <p><b>&lt;CheckIDValue&gt;</b>check id value<b>&lt;/CheckIDValue&gt;</b> ID value for CHECK,ans...32</p> <p><b>&lt;Birth&gt;</b>Date of Birth<b>&lt;/Birth&gt;</b> Date of Birth, MMDDYYYY format,n8</p> <p><b>&lt;PhoneNum&gt;</b>phone number<b>&lt;/PhoneNum&gt;</b> phone number,n...32</p> <p><b>Trace information:</b></p>
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		<p><b>&lt;TimeStamp&gt;</b>datetime<b>&lt;/TimeStamp&gt;</b>  The date time YYYYMMDDhhmmss,if this field is NULL, terminal will use local time, n14.</p> <p><b>&lt;CheckIDType&gt;</b>check id type<b>&lt;/CheckIDType&gt;</b>  ID type for CHECK:  “D” = Driver License.  “S” = SSN.  “M” = Military ID.  “C” = Courtesy card.  “P” = Proprietary Card.  “B” = Military Base.  “A” = Passport Number.</p> <p><b>&lt;CheckIDValue&gt;</b>check id value<b>&lt;/CheckIDValue&gt;</b>  ID value for CHECK,ans...32</p> <p><b>&lt;Birth&gt;</b>Date of Birth<b>&lt;/Birth&gt;</b>  Date of Birth, MMDDYYYY format,n8</p> <p><b>&lt;PhoneNum&gt;</b>phone number<b>&lt;/PhoneNum&gt;</b>  phone number,n...32</p> <p><b>Cashier information:</b></p> <p><b>&lt;ShiftID&gt;</b>shift id number<b>&lt;/ShiftID&gt;</b>  The shift id number,n...8</p> <p><b>Commercial information:</b></p> <p><b>&lt;CustomerCode&gt;</b>customer code<b>&lt;/CustomerCode&gt;</b>  The customer code,ans...32</p> <p><b>&lt;TaxExempt&gt;</b> Tax Exempt <b>&lt;/TaxExempt&gt;</b>  Tax exempt indicator:  Values: 0: Not Exempt, 1:Exempt.</p> <p><b>&lt;TaxExemptID&gt;</b> Tax Exempt ID<b>&lt;/TaxExemptID&gt;</b>  The tax exempt ID,ans...12</p> <p><b>MOTO/E-commerce information:</b></p> <p><b>&lt;MOTOECommerceMode&gt;</b>MOTO/e-commerce mode  <b>&lt;/MOTOECommerceMode&gt;</b>  <u>MOTO/e-Commerce mode value:</u>  <u>“M” = Mail Order mode.</u>  <u>“T” = MOTO/e-Commerce mode Tele Order mode.</u>  <u>“E” = e-Commerce mode.</u></p>
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		<p><b>&lt;MOTOECommerceTransType&gt;</b>MOTO/e-commerce transaction type</p> <p><b>&lt;/MOTOECommerceTransType&gt;</b></p> <p>MOTO/e-Commerce transaction type:</p> <p>“S” = single transaction.</p> <p>“T” = installment.</p> <p>“R” = recurring transaction.</p> <p><b>&lt;ECommerceSecureType&gt;</b>e-commerce secure type</p> <p><b>&lt;/ECommerceSecureType&gt;</b></p> <p>e-Commerce secure type:</p> <p>“N” = non secure.</p> <p>“S” = secure transaction.</p> <p><b>&lt;MOTOECommerceOrderNum&gt;</b>MOTO/e-commerce order number <b>&lt;/MOTOECommerceOrderNum&gt;</b></p> <p>Order number for MOTO/e-Commerce,ans...16</p> <p><b>&lt;Installments&gt;</b>Total Installments number <b>&lt;/Installments&gt;</b></p> <p>Total installments number,n...3</p> <p><b>&lt;CurrentInstallment&gt;</b>Current installmentnumber<b>&lt;/CurrentInstallment&gt;</b></p> <p>Current installment number,n...3</p> <p><b>Additional information:</b></p> <p><b>&lt;TableNum&gt;</b>Table Number<b>&lt;/TableNum&gt;</b></p> <p>The table number,n...4</p> <p><b>&lt;GuestNum&gt;</b>Guest Number<b>&lt;/GuestNum&gt;</b></p> <p>The guest number,n...4</p> <p><b>&lt;SignatureCapture&gt;</b>Signature Capture<b>&lt;/SignatureCapture &gt;</b></p> <p>The ECR supports signature printing and the terminal supports signature capture. If this field exists, the values below are valid:</p> <p>0: Do Not Capture, 1: Capture.</p> <p>Default value = “0”.</p> <p><b>&lt;TicketNum&gt;</b>check ticket number<b>&lt;/TicketNum&gt;</b></p> <p>The ticket number,ans...8</p> <p><b>&lt;HRefNum&gt;</b>host reference number<b>&lt;/ HRefNum&gt;</b></p> <p>Host reference number,ans...32</p> <p><b>&lt;TipRequest&gt;</b>tip request<b>&lt;/TipRequest&gt;</b></p> <p>Valid values:</p> <p>0: Tip entry not required.</p>
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		<p>1: Tip entry required.</p> <p><b>&lt;SignUploadFlag&gt;</b> sign upload flag<b>&lt;/SignUploadFlag&gt;</b></p> <p>Valid values:</p> <p>0: Signature upload not required.</p> <p>1: Signature upload required.</p> <p>Notes: If this tag is not sent to the POS, the terminal will upload the signature by default when signature upload is supported by the host.</p> <p><b>&lt;ReportStatus&gt;</b>report status<b>&lt;/ReportStatus&gt;</b></p> <p>Whether to report status back.</p> <p>1: Report.</p> <p>0 :Do not to report.</p> <p><b>&lt;Token&gt;</b>Host token value (tokenization)<b>&lt;/Token&gt;</b></p> <p>Token number, ans..64</p> <p><b>&lt;TokenRequest&gt;</b>token request<b>&lt;/TokenRequest&gt;</b></p> <p>Whether to send transaction as Token Trans Request:</p> <p>1 means YES. 0 as NO. The default value is "0".</p>
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## 4.6. Class ManageRequest

### 4.6.1. Constructors

Name	Description
<b>ManageRequest ()</b>	Initialize a newly created ManageRequest object

### 4.6.2. Methods

Prototype	Description
<b>int ParseEDCType(String type)</b>	Parse the String EDC type to integer type.
<b>int ParseTransType(String type)</b>	Parse the String "TransType" to integer type.
<b>int ConvertSigToPic(String sigpath,String type, String outfile)</b>	Convert Signature data file to picture.
<b>int ParseTrans(String ^type)</b>	Convert the String Trans to integer type.

### Note for ConvertSigToPic:

- The size of the picture is self-adapting as is the signature file.
- The default file type is BMP. Other options are ICO/JPG/PNG.

## 4.6.3. Properties

\* = Required, -U = Not currently supported.

Value	Attribute	Description
<b>TransType *</b>		<p>INIT = 1 –This command is used to initialize the PAX terminal. The terminal will perform an internal test/check and initialize transaction processing. For terminals without touch screens, if terminal doesn't receive this command after install, the idle menu will display "Disconnected". When the terminal receives this command, the idle menu will display the configurable parameter "idleMsg".</p> <p>GETVAR = 2 –This command is used to get the control variable and configure parameter in the terminal.</p> <p>SETVAR = 3 –This command is used to set the control variable and configure parameter in the terminal.</p> <p>SHOWDIALOG = 4 –Show screen with title and buttons (MT30...) or menu items(SP30...).</p> <p>GETSIGNATURE = 5 –This command is used to get the signature image file in the terminal. Supported on MT30 and S300.</p> <p>SHOWMESSAGE = 6 –The terminal can display several message lines (10 lines for MT30, 4 lines for SP30/S58). If the terminal receives an eleven line message, it displays the last 10 or 4 lines, depending on the terminal type. The newest message is always displayed on the first line.</p> <p>CLEARMESSAGE = 7 –Clears the message buffer on the terminal. If the terminal receives this command and then receives the "show message" command, it defaults to the message from the "show message"</p>

		<p>command.</p> <p>RESET = 8—Resets the terminal to the idle state.</p> <p>UPDATEIMAGE = 9—Used to update the image on the POS.</p> <p>DOSIGNATURE=10 —Allows signature directly on the POS.</p> <p>DELETEIMAGE=11—Deletes the POS idle image as image name.</p> <p>SHOWTHANKYOU=12—Displays the “Thank You” message, center aligned.</p> <p>REBOOT=13—Reboots the terminal.</p> <p>GETPINBLOCK=14—Input a PIN and get the PINBLOCK back.</p> <p>INPUTACCOUNT=15—Used to prompt for account input.</p> <p>RESETMSR = 16—Resets the terminal magnetic card reader buffer.</p> <p>INPUTTEXT = 17-Used to get text from the terminal.</p> <p>CHECKFILE=18-Used to determine whether or not a check file exists in the terminal.</p> <p>Any other value will produce an error.</p>
<b>EDCType</b>		<p>ALL = 0</p> <p>CREDIT = 1</p> <p>DEBIT = 2</p> <p>CHECK = 3</p> <p>EBT = 4</p> <p>GIFT = 5</p> <p>LOYALTY = 6</p> <p>CASH = 7</p>

		Any other values will be omitted.
<b>Trans</b>		See <a href="#">PaymentTransType</a> below  Any value other than the listed values will result in an error.
<b>VarName</b>	ans...32	The name of the variable. Valid only when the TransType = GETVAR/ SETVAR. Please refer to <a href="#">Parameter Variable Definition</a>
<b>VarValue</b>	ans...64	The value of the variable. Valid only when the TransType = SETVAR.
<b>Title</b>	ans...32	The display title on terminal. Valid only when the TransType = SHOWDIALOG, GETPINBLOCK or INPUTTEXT.
<b>Button1</b>	ans...24	The name of button1 on the terminal. Valid only when TransType = SHOWDIALOG. Buttons 2, 3 and 4 will be ignored if this is empty.
<b>Button2</b>	ans...24	The name of button2 on the terminal. Valid only when TransType = SHOWDIALOG. Buttons 3 and 4 will be ignored if this is empty.
<b>Button3</b>	ans...24	The name of button3 on the terminal. Valid only when TransType = SHOWDIALOG Button 4 will also be ignored if this is empty.
<b>Button4</b>	ans...24	The name of button4 on the terminal. Valid only when TransType = SHOWDIALOG.
<b>DisplayMessage</b>	ans...36	The display message on the terminal. Valid only when the TransType = SHOWMESSAGE.
<b>ImagePath</b>	var	The path of the image zip file. The zip includes the idle images and must be in 24bit bmp format, with the suffix “.r”. The image name must be the zip file created by Winzip, and terminal update is not supported. Image.mt30_ad0.r/mt30_ad1.r/mt30_ad2.r . The MT30 suggested image size is 480*272. The S300 suggested image size is 320*220, The PX7 suggested image size is 800*440, The POS will expand the image if the size is below the suggested size.. Valid only when TransType = UPDATEIMAGE.

<b>ImageName</b>	ans...16	The image name must be mt30_ad0/mt30_ad1/mt30_ad2 Valid only when the TransType = DELETEIMAGE.
<b>Upload</b>	n1	Upload flag. Valid values are: 1: Upload to host required. 0: Upload to host not required. The default value is 0. Valid only when TransType = DOSIGNATURE.
<b>HRefNum</b>	ans...32	HostReference Number. Valid only when TransType = DOSIGNATURE.
<b>TimeOut</b>	n...3	The timeout for DOSIGNATURE/ GETPINBLOCK / INPUTACCOUNT/INPUTTEXT in 100 ms increments. For DOSIGNATURE, the value must be greater than 150. For GETPINBLOCK, the valid value range is [0, 3000]. A value "" of "0" = wait for user cancelation or confirmation. For INPUTACCOUNT, valid value range = [200, 600]. For INPUTTEXT, Valid value range =[1, 9999].A value of "" = wait for user cancelation or confirmation.
<b>ThankYouTitle</b>	var	The title of the "Thank You" screen Valid only valid when TransType = SHOWTHANKYOU.
<b>ThankYouMessage1</b>	var	The first message on the "Thank You" screen. Valid only when TransType = SHOWTHANKYOU
<b>ThankYouMessage2</b>	var	The second message on the "Thank You" screen. Valid only when TransType = SHOWTHANKYOU
<b>ThankYouTimeout</b>	n...3	The timeout for the "Thank You" screen. Valid only when TransType = SHOWTHANKYOU
<b>AccountNumber</b>	n ..19	Account number should be last 4 digits when encryption is on, Account number should be full account number when encryption is off. When the PIN algorithm = "0" or "3", the Account Number cannot be "Null". Valid only when TransType = GETPINBLOCK.
<b>EncryptionType</b>	n1	The default and only valid value is: 1: DUKPT.

		<p>Note: DUKPT is the only method supported.</p> <p>Valid only when TransType = GETPINBLOCK.</p>
<b>KeySlot</b>	n..2	<p>Key slot number, starting with slot 1. The default value is 1 for GETPINBLOCK.</p> <p>Valid only when TransType = GETPINBLOCK or INPUTACCOUNT.</p>
<b>PinMinLength</b>	n..2	<p>The minimum value is 4, and must be not more than pin max length. Default = 4.</p> <p>Valid only when TransType = GETPINBLOCK.</p>
<b>PinMaxLength</b>	n..2	<p>The maximum value is 12 and cannot be less than the minimum PIN length. Default = 12.</p> <p>Valid only when TransType = GETPINBLOCK.</p>
<b>NullPin</b>	n1	<p>Valid values:</p> <p>0: Do not allow.</p> <p>1: Allowed.</p> <p>Default = 0.</p> <p>Valid only when TransType = GETPINBLOCK.</p>
<b>PinAlgorithm</b>	n1	<p>Valid values:</p> <p>0: ISO9564_0</p> <p>1: ISO9564_1</p> <p>3: ISO9564_3</p> <p>Default = 0.</p> <p>Valid only when TransType = GETPINBLOCK.</p>
<b>MagneticSwipeEntryFlag</b>	n1	<p>Allow or not allow magnetic card swipe.</p> <p>0: Do not allow.</p> <p>1: Allow.</p> <p>Default = 0.</p> <p>Valid only when TransType = INPUTACCOUNT.</p>
<b>ManualEntryFlag</b>	n1	<p>Allow or not allow manual entry.</p> <p>0: Do not allow.</p> <p>1: Allow.</p> <p>Default = 0.</p> <p>Valid only when TransType = INPUTACCOUNT.</p>
<b>ContactlessEntryFlag</b>	n1	<p>Allow or not allow contactless entry.</p> <p>0: Do not allow.</p> <p>1: Allow.</p>



		Default = 0. Valid only when TransType = INPUTACCOUNT.
<b>ScannerEntryFlag</b>	n1	Allow or not allow scanner entry. 0: Not allowed. 1: Allow. Default = 0. Valid only when TransType = INPUTACCOUNT.
<b>ExpiryDatePrompt</b>	n1	Prompt or not prompt expiry date. 0: Do not prompt. 1: Prompt for manual entry only. Default = 0. Valid only when TransType = INPUTACCOUNT.
<b>EncryptionFlag</b>	n1	Encrypt or not encrypt. 0: Do not encrypt. 1: DUKPT DES with PIN method. Default = 0. Valid only when TransType = INPUTACCOUNT.
<b>MINAccountLength</b>	n..2	Minimum PAN length. Valid values [1, 32]. Default = 10. Valid only when TransType = INPUTACCOUNT.
<b>MAXAccountLength</b>	n..2	Minimum PAN length. Valid values [1, 32]. Default = 19. Valid only when TransType = INPUTACCOUNT.
<b>InputType</b>	n1	Input type. 0 = Alpha-Numeric string. 1 = Numeric string. 2 = Date in MMDDYYYY format. 3 = Time in HHMMSS format. Default = 0. Valid only when TransType = INPUTTEXT.
<b>MINLength</b>	n..2	Minimum length. Valid values [0, 32]. Default = 0.

		Valid only when TransType = INPUTTEXT.
<b>MAXLength</b>	n..2	Maximum length. Valid values [1, 32]. Default = 32. Valid only when TransType = INPUTTEXT.
<b>DefaultValue</b>	ans..32	Default input value. Valid if " InputType" is 0 or 1. Valid only when TransType = INPUTTEXT.
<b>FileName</b>	ans..16	The file name with the suffix. Valid only when TransType = CHECKFILE.
<b>SigSavePath</b>	ans128	The file path taken to save a signature received from the POS. When set, the file will save to a specific destination folder. If not set it will save to default folder. Valid only when TransType = GETSIGNATURE

## 4.7. Class BatchRequest

### 4.7.1. Constructors

Name	Description
<b>BatchRequest ()</b>	Initialize a newly created BatchRequest object

### 4.7.2. Methods

Prototype	Description
<b>int ParseEDCType(String type)</b>	Parse the String EDC type to integer.
<b>int ParseTransType(String type)</b>	Parse the String transaction type to integer.

### 4.7.3. Properties

\* = Required, -U = Not currently supported.

Value	Attribute	Description
<b>TransType *</b>		BATCHCLOSE = 1 – Closes the current batch.  FORCEBATCHCLOSE = 2 – Force closes the current batch, if supported by the host.  BATCHCLEAR = 3 – Clears the local database.

		PURGE BATCH = 4 -Launches purge batch, if supported by host. Any other value will result in an error.
<b>EDCType</b>		ALL = 0 CREDIT = 1 DEBIT = 2 CHECK = 3 EBT = 4 GIFT = 5 LOYALTY = 6 CASH = 7 Any other value will be omitted.
<b>Timestamp</b>	n14	Transaction Time/date stamp. The date time: YYYYMMDDhhmmss

## 4.8. Class ReportRequest

### 4.8.1. Constructors

Name	Description
<b>ReportRequest ()</b>	Initialize a newly created ReportRequest object.

### 4.8.2. Methods

Prototype	Description
<b>int ParseCardType(String type)</b>	Parse the String Card type into an integer.
<b>int ParseEDCType(String type)</b>	Parse the String EDC type into an integer type.
<b>int ParsePaymentType(String type)</b>	Parse the String payment type into an integer.
<b>int ParseTransType(String type)</b>	Parse the String transaction type into an integer type.

### 4.8.3. Properties

\* = Required, -U = Not currently supported.

Value	Attribute	Description
<b>TransType *</b>		LOCALTOTALREPORT = 1 – Retrieves the total count and total amount from the terminal via EDC type or card type.  LOCALDETAILREPORT = 2 – Retrieves transaction details

		<p>from the terminal.</p> <p>LOCALFAILEDREPORT = 3 – If transactions fail during settlement, they are saved and their details can be retrieved using this message so that the merchant can directly settle the outstanding transactions with the card processor. If the record has reported, it will not reported again.</p> <p>HOSTREPORT = 4 – Retrieves the current host batch information.</p> <p>HISTORYREPORT = 5 – Retrieves previous batch information.</p> <p>Any other value will result in an error.</p>
<b>EDCType</b>		<p>ALL = 0</p> <p>CREDIT = 1</p> <p>DEBIT = 2</p> <p>CHECK = 3</p> <p>EBT = 4</p> <p>GIFT = 5</p> <p>LOYALTY = 6</p> <p>CASH = 7</p> <p>Any other value will be omitted.</p> <p>EBT includes:</p> <p>EBT_FOODSTAMP</p> <p>EBT_CASHBENEFIT</p>
<b>CardType</b>		<p>See <a href="#">Card Type</a> below</p> <p>Only values in <a href="#">Card Type</a> are accepted, other values will be omitted.</p> <p>Used only when TransType = LOCALDETAILREPORT/LOCALTOTALREPORT.</p>
<b>PaymentType</b>		<p>See <a href="#">PaymentTransType</a> below.</p> <p>Only values in <a href="#">PaymentTransType</a> are accepted, other values will be omitted.</p> <p>Used only when TransType = LOCALDETAILREPORT</p>
<b>RecordNum</b>	n...4	<p>The log index in terminal.</p> <p>Used only when TransType = LOCALDETAILREPORT</p>
<b>RefNum</b>	n...4	<p>Terminal reference number used for follow-up transactions.</p>

		Used only when TransType = LOCALDETAILREPORT
<b>AuthCode</b>	ans...10	Retrieve the transaction record with the matching authorization number. Used only when TransType =LOCALDETAILREPORT
<b>ECRRefNum</b>	ans...16	Retrieve a transaction record with the merchant reference number. Used only when TransType = LOCALDETAILREPORT

## 4.9. Class PaymentResponse

### 4.9.1. Constructors

Name	Description
<b>PaymentResponse()</b>	Initialize a newly created PaymentResponse object.

### 4.9.2. Methods

NONE

### 4.9.3. Properties

\* = Required, -U = Not currently supported.

Response	Attribute	Value Description	Remarks
<b>AuthCode</b>	ans...10	Returns the transaction authorization code from the payment processor	
<b>ApprovedAmount</b>	n...8	<b>Approved Amount</b>	Displays the actual amount approved by the host. This could be different from the requested amount.
<b>AvsResponse</b>	ans...8	<b>AVS response</b>	Displays the AVS response.
<b>BogusAccountNum</b>	n...19	<b>The number returned to the POS.</b>	Two possible conditions: 1. Semi-Integration: Displays the last 4. 2. Full Integration: Displays the full account number.
<b>CardType</b>	var	<b>Displays the card type</b>	Card type is determined by the bin range.

<b>CvResponse</b>	ans...8	<b>CVV response</b>	CVV response code.
<b>HostCode</b>	ans...32	<b>Host Reference Number</b>	
<b>HostResponse</b>	ans...8	<b>Host Response or Error Code</b>	
<b>Message</b>	ans...32	<b>Host or Gateway Message</b>	
<b>RefNum</b>	an...16	<b>Terminal Reference/Token Number</b>	
<b>RawResponse-U</b>		<b>Gateway Raw Response</b>	
<b>RemainingBalance</b>	n...8	<b>Remaining Card Balance</b>	
<b>ExtraBalance</b>	n...8	<b>Balance Extra On Card</b>	
<b>RequestedAmount</b>	n...8	<b>Requested Transaction Amount</b>	
<b>ResultCode *</b>	ans6	<b>Transaction Result Code</b>	
<b>ResultTxt</b>	ans...32	<b>Transaction Result Txt</b>	Review result txt for transaction details.
<b>Timestamp</b>	n14	<b>Transaction Time/Date Stamp</b>	
<b>SignatureResponse-U</b>		<b>Displays Signature Capture Results</b>	Contained in Ext Data
<b>PLCardPresent</b>	n1	<b>Displays Whether or Not the card Was Present at the Time of the Transaction</b>	Contained in Ext Data 0: Card Present 1: Card Not Present Mandatory for manual card entry. Credit transactions only.
<b>PLStreet-U</b>		<b>If Entered, Displays Cardholder Street Address</b>	Contained in Ext Data
<b>PLEntryMode</b>	n1	<b>Card Entry Mode</b>	Contained in Ext Data 0:Manual 1:Swipe 2:Contactless 3:Scanner 4.Chip 5.Chip Fall Back Swipe
<b>PLNameOnCard</b>	ans...32	<b>Cardholder Name</b>	Contained in Ext Data.
<b>PLZip</b>	n...9	<b>Cardholder Zip code</b>	Contained in Ext Data.
<b>PLPONumber</b>	ans...32	<b>Transaction PO Number</b>	Contained in EXT Data.
<b>PLCustCode</b>	ans...32	<b>Customer Code</b>	Contained in EXT Data.

<b>AmountDue</b>	n...8	<b>Amount Due:</b> (\$\$\$\$\$\$CC) in a partial authorization.	Contained in EXT Data Amount Information.
<b>TipAmount</b>	n...8	<b>Tip Amount:</b> (\$\$\$\$\$\$CC). Mandatory for tips.	Contained in EXT Data Amount Information.
<b>CashBackAmount</b>	n...8	<b>Cash Back Amount:</b> (\$\$\$\$\$\$CC) Mandatory for cash back.	Contained in EXT Data Amount Information.
<b>MerchantFee</b>	n...8	<b>Merchant Fee Amount:</b> (\$\$CC). Mandatory for merchant fee.	Contained in EXT Data Amount Information.
<b>TaxAmount</b>	n...8	<b>Tax Amount:</b> (\$\$\$\$\$\$CC). Mandatory for tax amount.	Contained in EXT Data Amount Information.
<b>ExpDate</b>	n4	<b>Card Expiration Date:</b> (MMYY). Mandatory for manual entry.	Contained in EXT Data Account Information.
<b>EBTFoodStampVoucher</b>	a1	<b>Food Stamp Voucher:</b> Valid only when tender type = EBT_FOODSTAMP or EBT. T: True F: False	Contained in EXT Data Account Information.
<b>VoucherNum</b>	ans...16	<b>Voucher Number:</b>  Mandatory when the EDC = EBT and EBT type = Voucher.	Contained in EXT Data Account Information.
<b>NewAccountNo</b>	n...19	<b>New Card Number:</b> Last 4 digits or All digits. Mandatory if the transaction type is Gift REPLACE.	Contained in EXT Data Account Information.
<b>CVVMessage</b>	ans...32	<b>CVV response message:</b> Mandatory if host returns a CV message. Credit transaction only.	Contained in EXT Data Account Information.
<b>CheckSaleType</b>	a1	<b>Check Transaction Type:</b>	Contained in EXT Data

		“V” = Verification “C” = Conversion “G” = Guarantee For “VOID” or “ADJUST” transactions, “C” is the correct setting.	Check Information.
<b>CheckRoutingNum</b>	n...9	<b>Check Routing Number</b>	Contained in EXT Data Check Information.
<b>CheckNum</b>	n...7	<b>Check Number</b>	Contained in EXT Data Check Information.
<b>CheckType</b>	a1	<b>Check Type:</b> “P” = Personal. “B” = Business. “G” = Government. “R” = Payroll. “T” = Two-party.	Contained in EXT Data Check Information.
<b>CheckIDType</b>	a1	<b>Check ID Type:</b> “D” = Driver License. “S” = SSN. “M” = Military ID. “C” = Courtesy Card. “P” = Proprietary Card. “B” = Military Base. “A” = Passport Number.	Contained in EXT Data Check Information.
<b>CheckIDValue</b>	ans...32	<b>Check ID Value</b>	Contained in EXT Data Check Information.
<b>Birth</b>	n8	<b>Date of Birth:</b> Format: MMDDYYYY	Contained in EXT Data Check Information.
<b>PhoneNum</b>	n...32	<b>Phone Number</b>	Contained in EXT Data Check Information.
<b>ECRRefNum</b>	an...16	<b>ECR Reference Number:</b> Echo back..	Contained in EXT Data Trace Information.
<b>AVSMessgae</b>	ans...32	<b>AVS Response Message:</b> Mandatory if the host returns an AVS response.	Contained in EXT Data AVS Information.
<b>TaxExempt</b>	ans...1	<b>Tax Exempt Indicator:</b> 0 = Not exempt 1 = Exempt Mandatory on commercial card	Contained in EXT Data Commercial Information.



		transactions when supported.	
<b>TaxExemptID</b>	ans...12	<b>Tax Exempt ID:</b> Mandatory when the “Tax Exempt” value = 1.	Contained in EXT Data Commercial Information.
<b>MOTOECommerceMode</b>	a1	<b>MOTO/e-Commerce mode:</b> M = Mail Order Mode T = Tele Order Mode E = e-Commerce Mode	Contained in EXT Data MOTO/E-commerce Information.
<b>MOTOECommerceTransType</b>	a1	<b>MOTO/e-Commerce Transaction Type:</b> S = Single Transaction I = Installment R = Recurring Transaction	Contained in EXT Data: MOTO/E-commerce Information.
<b>ECommerceSecureType</b>	a1	<b>E-Commerce secure type:</b> N = Non Secure S = Secure Transaction.	Contained in EXT Data: MOTO/E-commerce Information.
<b>MOTOECommerceOrderNum</b>	ans...16	<b>MOTO/e-Commerce Order Number</b>	Contained in EXT Data: MOTO/E-commerce Information.
<b>Installments</b>	n...3	<b>Number of Total installments</b>	Contained in EXT Data: MOTO/E-commerce Information.
<b>CurrentInstallment</b>	n...3	<b>Current Installment Number</b>	Contained in EXT Data: MOTO/E-commerce Information.
<b>HostTraceNum</b>	ans...10	<b>Host Trace Number:</b> Mandatory if the host returns a trace number. Must be printed on the receipt.	Contained in EXT Data Host Information.
<b>BatchNum</b>	ans...6	<b>Host Batch Number:</b> Mandatory if the host returns a batch number.	Contained in EXT Data Host Information.
<b>TableNum</b>	n...4	<b>Table Number</b>	Contained in EXT Data Additional Information.
<b>GuestNum</b>	n...4	<b>Guest Number</b>	Contained in EXT Data Additional Information.
<b>TicketNum</b>	ans...8	<b>Check Ticket Number</b>	Contained in EXT Data

			Additional Information.
<b>DisamtNum</b>	n...8	<b>Amount of Discount:</b> DISAMT	Contained in EXT Data Additional Information.
<b>ChgamNum</b>	n...8	<b>Amount Charged:</b> CHGAMT	Contained in EXT Data Additional Information.
<b>SignStatusNum</b>	n1	<b>Signature Status:</b> 1 = Captured Locally 2 = Aborted 3 = Timeout 4 = NA 5 = Successful Upload 6 = Upload Failed	Contained in EXT Data Additional Information.
<b>FPSOffline</b>	n1	1 = Transaction amount is below the required Authorization threshold. Transaction approved offline.	Contained in EXT Data Additional Information.
<b>FPSSignStatusNum</b>	n1	1 = Transaction amount is below the required Signature threshold. No signature required.	Contained in EXT Data Additional Information.
<b>FPSReceiptModeNum</b>	n1	<b>FPS Receipt Mode:</b> 1 = Merchant copy only 2 = Customer copy only 3 = No receipt Default = Print Both	Contained in EXT Data Additional Information.
<b>EDCTYPE</b>	ans...16	When the CREDIT/DEBIT prompt is enabled and the user makes a selection, the corresponding EDC type will be returned.	Contained in EXT Data Additional Information.
<b>ORIGTIP</b>	n..8	The original tip amount for CREDIT ADJUSTMENT.	Contained in EXT Data Additional Information.
<b>TC</b>	ans..16	EMV Transaction Certificate	Contained in EXT Data Additional Information.
<b>TVR</b>	ans..10	EMV Terminal Verification Results	Contained in EXT Data Additional Information.
<b>AID</b>	ans..32	EMV Application Dedicated File (ADF) Name	Contained in EXT Data Additional Information.

		Application ID	
<b>TSI</b>	ans..4	EMV Transaction Status Information	Contained in EXT Data Additional Information.
<b>ATC</b>	ans..4	EMV Application Transaction Counter	Contained in EXT Data Additional Information.
<b>APPLAB</b>	ans..16	EMV Application Label	Contained in EXT Data Additional Information.
<b>APPPN</b>	ans..16	EMV Application Preferred Name	Contained in EXT Data Additional Information.
<b>CVM</b>	n1	Cardholder Verification Method (CVM) Codes 0 – Fail CVM processing 1 - Plaintext Offline PIN Verification 2 – Online PIN 3 – Plaintext Offline PIN and Signature 4 – Enciphered Offline PIN Verification 5 – Enciphered Offline PIN Verification and Signature 6 – Signature 7 – No CVM Required.	Contained in EXT Data Additional Information.
<b>ExtData</b>		Catch all for additional transactional information	Extended data in XML format Ex <BatchNum>12</BatchNum>

## 4.10. Class ManageResponse

### 4.10.1. Constructors

Name	Description
<b>ManageResponse()</b>	Initialize a newly created ManageResponse object

### 4.10.2. Methods

NONE

### 4.10.3. Properties

\* = Required, -U = Not currently supported.

Response	Attribute	Value Description	Remarks
<b>ResultCode *</b>	ans6	<b>Transaction Result Code:</b> Determines transaction results.	Result code of transaction. Used to determine the results of a transaction.
<b>ResultTxt</b>	ans...32	<b>Transaction Result Text</b>	Review result txt for details of a transaction.
<b>SN</b>	ans...32	<b>Terminal Serial Number</b>	Valid when the requested transaction =INIT.
<b>VarValue</b>	ans...60	<b>The Value of the Variable</b>	Valid when the requested transaction =GETVAR
<b>BottonNum</b>	n1	<b>The Button Number of the Selection</b>	Valid when the requested transaction =SHOWDIALOG
<b>SigFileName</b>	var	<b>File Name of the Captured Signature</b> Ex: 201108111743.The file type is File. If SigSavePath was not set, it will be saved at <install dir> \img\receipts\ 201108111743 If SigSavePath was set, it will be saved at <DestinationPath>\201108111743	Valid when the requested transaction =GETSIGANTURE .
<b>PinBlock</b>	ans...16	<b>PIN BLOCK Value</b>	Valid when the request = GETPINBLOCK
<b>KSN</b>	ans...20	<b>The KSN Value</b>	Valid when the requested transaction = GETPINBLOCK or INPUTACCOUNT
<b>EntryMode</b>	n1	0: Manual 1: Magnetic Card Swipe 2: Contactless 3: Scanner.	Valid when the requested

			transaction = INPUTACCOUNT
<b>Track1Data</b>	ans...128	<b>Track1 Data</b> (May be encrypted.)	Valid when the requested transaction = INPUTACCOUNT
<b>Track2Data</b>	ans...128	<b>Track2 data</b> (May be encrypted.)	Valid when the requested transaction = INPUTACCOUNT
<b>Track3Data</b>	ans...128	<b>Track3 data</b> (May be encrypted.)	Valid when the requested transaction = INPUTACCOUNT
<b>PAN</b>	ans...32	<b>PAN for Manual Entry</b> (May be encrypted.)	Valid when the requested transaction = INPUTACCOUNT
<b>ExpiryDate</b>	n4	<b>Account Expiration Date:</b> MMYY	Valid when the requested transaction = INPUTACCOUNT
<b>QRCode</b>	ans...128	<b>QR Code From Scanner in Plain Text</b>	Valid when the requested transaction = INPUTACCOUNT
<b>Text</b>	ans..32	<b>Text Input by Customer</b>	Valid when the request = INPUTTEXT.

Note:

- For signature capture, saves the signature vector coordinates. The value of vector coordinates is delimited with a caret (^) in the following format:  $x1,y1^x2,y2^xN,yN^{\sim}$
- In the case of a pen-up event, use the coordinate 0,65535 to signal a break in the line. ^ is the coordinate delimiter, ~ is the ending delimiter, and a comma (,) is the vector delimiter.

## 4.11. Class BatchResponse

### 4.11.1. Constructors

Name	Description
<b>BatchResponse()</b>	Initialize a newly created BatchResponse object

### 4.11.2. Methods

NONE

### 4.11.3. Properties

\* = Required, -U = Not currently supported.

Response	Attribute	Value Description	Remarks
<b>ResultCode *</b>	ans6	<b>Transaction Result Code:</b> Determines transaction results.	
<b>ResultTxt</b>	ans...32	<b>Transaction Result Text</b>	Review transaction details.
<b>CreditCount</b>	var	<b>Total Credit Transaction Count</b>	Does not include voids or authorizations.
<b>CreditAmount</b>	var	<b>Total Credit Transaction Amount</b>	Does not include voids or authorizations
<b>DebitCount</b>	var	<b>Total Debit Transaction Count</b>	
<b>DebitAmount</b>	var	<b>Total Debit Transaction Amount</b>	
<b>EBTCount</b>	var	<b>Total EBT Transaction Count</b>	
<b>EBTAmount</b>	var	<b>Total EBT Transaction Amount</b>	
<b>GiftCount</b>	var	<b>Total Gift Transaction Count</b>	
<b>GiftAmount</b>	var	<b>Total Gift Transaction Amount</b>	
<b>LoyaltyCount</b>	var	<b>Total Loyalty Transaction Count</b>	
<b>LoyaltyAmount</b>	var	<b>Total Loyalty Transaction Amount</b>	
<b>CashCount</b>	var	<b>Cash Transaction Count</b>	
<b>CashAmount</b>	var	<b>Total Cash Transaction</b>	

		<b>Amount</b>	
<b>CHECKCount</b>	var	<b>Total CHECK Transaction Count</b>	
<b>CHECKAmount</b>	var	<b>Total CHECK Transaction Amount</b>	
<b>Timestamp</b>	n14	<b>Transaction Time/Date Stamp:</b> Date/Time format: YYYYMMDDhhmmss	
<b>TID</b>	ans...20	<b>Terminal ID</b>	
<b>MID</b>	ans...20	<b>Merchant ID</b>	
<b>HostTraceNum</b>	ans...10	<b>Host Trace Number:</b> Mandatory when returned by the host. Will print on the receipt.	
<b>BatchNum</b>	ans...6	<b>Batch Number:</b> Mandatory when returned by host.	
<b>AuthCode</b>	ans...10	<b>Authorization Code:</b> Returns the transaction auth code from the payment processor.	
<b>HostCode</b>	ans...32	<b>Reference Number:</b> Payment processing host reference number.	
<b>HostResponse</b>	ans...8	Payment processing host response	
<b>Message</b>	ans...32	<b>Host or Gateway Message</b>	
<b>ExtData</b>		<b>Catch All for Additional Transactional Information:</b> <Line></Line> Line message return from the POS terminal. There may be several elements named "Line".	Extended data in XML format Ex:< Line ></ Line >

## 4.12. Class ReportResponse

### 4.12.1. Constructors

Name	Description
<b>ReportResponse()</b>	Initialize a newly created ReportResponse object

## 4.12.2. Methods

NONE

## 4.12.3. Properties

\* = Required, -U = Not currently supported.

Response	Attribute	Value Description	Remarks
<b>ResultCode *</b>	ans6	<b>Transaction Result Code:</b> Used to determine the results of a transaction.	
<b>ResultTxt</b>	an...32	<b>Transaction Result Text</b>	Review transaction details.
<b>EDCType</b>		<b>Payment Types:</b> “ALL” “CREDIT” “DEBIT” “CHECK” “EBT” “GIFT” “LOYALTY” “CASH”	EBT includes: EBT_FOODSTA MP and EBT_CASHBEN EFIT
<b>TotalRecord</b>	n...4	The total number of records. Reported by the POS.	
<b>RecordNumber</b>	n...4	<b>The Number of the Current Record</b>	
<b>PaymentType</b>	n2	See <a href="#">PaymentTransType</a> Below	
<b>OrigPaymentType</b>	n2	<b>Refer to TransType</b>	
<b>HostTraceNum</b>	ans...10	<b>Host Trace Number:</b> Mandatory if the host returns a trace number. The trace number will be printed on the receipt.	Host Information
<b>BatchNum</b>	ans...6	<b>Batch Number:</b> Mandatory if the host returns a batch number.	Host Information
<b>AuthCode</b>	ans...10	<b>Authorization Code:</b> Returns the transaction auth code from the payment processor.	Host Information
<b>HostCode</b>	ans...32	<b>Processing Host Reference Number</b>	payment processing host reference number Host Information
<b>HostResponse</b>	ans...8	<b>Processing Host Response</b>	payment



			processing host response Host Information
<b>Message</b>	ans...32	<b>Host Error Message:</b> Mandatory if the host returns an error message.	Host Information
<b>ApprovedAmount</b>	n...8	<b>Amount Approved</b> Displays the actual amount approved by the host. This could be different from the requested amount.	Displays the actual amount approved by the host. This could be different from the requested amount
<b>RemainingBalance</b>	n...8	<b>Remaining Balance On A Gift or PrePaid Card</b>	Balance remaining on gift or prepaid card amount information. If the EDCType is EBT, it is the cash benefit account
<b>ExtraBalance</b>		Remaining Balances On EBT Card food stamp account or other extra balances.	
<b>BogusAccountNum</b>	n...19	<b>The number returned to the POS.</b>	Two conditions: 1. Displays the last 4. 2. Display the full account number.
<b>CardType</b>	n2	<b>Displays The Card Type</b> Card type determined by bin range.	Card type determined by bin range. account information
<b>CvResponse</b>	ans...8	<b>CVV response:</b> CVV response code.	CVV response code account information
<b>RefNum</b>	ans...8	<b>Gateway Reference/Token Number</b>	Gateway

			reference/token number. Trace information.
<b>ECRRefNum</b>	ans...16	<b>The ECR Reference Number:</b> Echo back.	Trace information
<b>Timestamp</b>	n14	<b>Transaction Time/Date Stamp</b>	Trace information
<b>ClerkID</b>	ans...8	<b>Employee/Clerk ID</b>	Cashier Information
<b>ShiftID</b>	ans...8	<b>Shift ID Number</b>	Cashier Information
<b>ReportType</b>	ans...32	<b>Host Report:</b> Will be returned from the host if supported.	
<b>CreditCount</b>	var	<b>Total Credit Transaction Count</b>	Excludes void and auth transactions.
<b>CreditAmount</b>	var	<b>Total Credit Transaction Amount</b>	Excludes void and auth transactions.
<b>DebitCount</b>	var	<b>Total Debit Transaction Count</b>	
<b>DebitAmount</b>	var	<b>Total Debit Transaction Amount</b>	
<b>EBTCount</b>	var	<b>Total EBT Transaction Count</b>	
<b>EBTAmount</b>	var	<b>Total EBT Transaction Amount</b>	
<b>GiftCount</b>	var	<b>Total Gift Transaction Count</b>	
<b>GiftAmount</b>	var	<b>Total Gift Transaction Amount</b>	
<b>LoyaltyCount</b>	var	<b>Total Loyalty Transaction Count</b>	
<b>LoyaltyAmount</b>	ar	<b>Total Loyalty Transaction Amount</b>	
<b>CashCount</b>	var	<b>Total Cash Transaction Count</b>	
<b>CashAmount</b>	var	<b>Total Cash transaction Amount</b>	
<b>CHECKCount</b>	var	<b>Total Check Transaction Count</b>	
<b>CHECKAmount</b>	var	<b>Total Check Transaction Amount</b>	
<b>CreditSaleCount</b>	var	<b>Total Credit Sale Transaction Count</b>	Contained in TransTotal.
<b>CreditSaleAmount</b>	var	<b>Total Credit Sale Transaction Amount</b>	Contained in TransTotal.
<b>CreditForcedCount</b>	var	<b>Total Credit Force Transaction</b>	Contained in TransTotal.

		Count	
<b>CreditForcedAmount</b>	var	<b>Total Credit Return Transaction Count</b>	Contained in TransTotal
<b>CreditReturnCount</b>	var	<b>Total Credit Return Transaction Count</b>	Contained in TransTotal
<b>CreditReturnAmount</b>	var	<b>Total Credit Return Transaction Amount</b>	Contained in TransTotal
<b>CreditAuthCount</b>	var	<b>Total Credit Auth Transaction Count</b>	Contained in TransTotal
<b>CreditAuthAmount</b>	var	<b>Total Credit Post Auth Transaction Amount</b>	Contained in TransTotal
<b>CreditPostAuthCount</b>	var	<b>Total Credit Post Auth Transaction Count</b>	Contained in TransTotal
<b>CreditPostAuthAmount</b>	var	<b>Total Credit Void Transaction Amount</b>	Contained in TransTotal
<b>CreditVoidCount-U</b>	var	<b>Total Credit Void Transaction Count</b>	Contained in TransTotal
<b>CreditVoidAmount-U</b>	var	<b>Total Credit Void Transaction Amount</b>	Contained in TransTotal.
<b>DebitSaleCount</b>	var	<b>Total Debit Sale Transaction Count</b>	Contained in TransTotal
<b>DebitSaleAmount</b>	var	<b>Total Debit Sale Transaction Amount</b>	Contained in TransTotal
<b>DebitReturnCount</b>	var	<b>Total Debit Return Transaction Count</b>	Contained in TransTotal
<b>DebitReturnAmount</b>	var	<b>Total Debit Return Transaction Amount</b>	Contained in TransTotal
<b>EBTSaleCount</b>	var	<b>Total EBT Sale Transaction Count</b>	Contained in TransTotal
<b>EBTSaleAmount</b>	var	<b>Total EBT Sale Transaction Amount</b>	Contained in TransTotal
<b>EBTReturnCount</b>	var	<b>EBT Return Transaction Count</b>	Contained in TransTotal
<b>EBTReturnAmount</b>	var	<b>Total EBT Return Transaction Amount</b>	Contained in TransTotal

<b>EBTWithdrawalCount</b>	var	<b>Total EBT Withdrawal Transaction Count</b>	Contained in TransTotal
<b>EBTWithdrawalAmount</b>	var	<b>Total EBT Withdrawal Transaction Amount</b>	Contained in TransTotal
<b>EBTVoidCount-U</b>	var	<b>Total EBT Void Transaction Count</b>	Contained in TransTotal
<b>EBTVoidAmount-U</b>	var	<b>Total EBT Void Transaction Amount</b>	Contained in TransTotal
<b>GiftSaleCount</b>	var	<b>Total Gift Sale/UNLOAD Transaction Count</b>	Contained in TransTotal
<b>GiftSaleAmount</b>	var	<b>Total Gift Sale/UNLOAD Transaction Amount</b>	Contained in TransTotal
<b>GiftAuthCount</b>	var	<b>Total Gift Auth Transaction Count</b>	Contained in TransTotal
<b>GiftAuthAmount</b>	var	<b>Total Gift Auth Transaction Amount</b>	Contained in TransTotal
<b>GiftPostAuthCount</b>	var	<b>Total Gift Post Auth Transaction Count</b>	Contained in TransTotal
<b>GiftPostAuthAmount</b>	var	<b>Total Gift Post Auth Transaction Amount</b>	Contained in TransTotal
<b>GiftActivateCount</b>	var	<b>Gift Activate Transaction Count</b>	Contained in TransTotal
<b>GiftActivateAmount</b>	var	<b>Total Gift Activate Transaction Amount</b>	Contained in TransTotal
<b>GiftIssueCount</b>	var	<b>Total Gift Issue Transaction Count</b>	Contained in TransTotal
<b>GiftIssueAmount</b>	var	<b>Total Gift Issue Transaction Amount</b>	Contained in TransTotal
<b>GiftReloadCount</b>	var	<b>Total Gift Reload Transaction Count</b>	Contained in TransTotal
<b>GiftReloadAmount</b>	var	<b>Total Gift Reload Transaction Amount</b>	Contained in TransTotal
<b>GiftReturnCount</b>	var	<b>Total Gift Return Transaction total Count</b>	Contained in TransTotal
<b>GiftReturnAmount</b>	var	<b>Total Gift Return Transaction Amount</b>	Contained in

			TransTotal
<b>GiftForcedCount</b>	var	<b>Total Gift Forced Transaction Count</b>	Contained in TransTotal
<b>GiftForcedAmount</b>	var	<b>Total Gift Forced Transaction Amount</b>	Contained in TransTotal
<b>GiftCashoutCount</b>	var	<b>Total Gift Cashout Transaction Count</b>	Contained in TransTotal
<b>GiftCashoutAmount</b>	var	<b>Total Gift Cashout Transaction Amount</b>	Contained in TransTotal
<b>GiftDeactivateCount</b>	var	<b>Total Gift Deactivate Transaction Count</b>	Contained in TransTotal
<b>GiftDeactivateAmount</b>	var	<b>Total Gift Deactivate Transaction Amount</b>	Contained in TransTotal
<b>GiftAdjustCount-U</b>	var	<b>Gift Adjust Transaction Count</b>	Contained in TransTotal
<b>GiftAdjustAmount-U</b>	var	<b>Total Gift Adjust Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyRedeemCount</b>	var	<b>Loyalty Redeem Transaction Count</b>	Contained in TransTotal
<b>LoyaltyRedeemAmount</b>	var	<b>Total Loyalty Redeem Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyIssueCount</b>	var	<b>Loyalty Issue Transaction Count</b>	Contained in TransTotal
<b>LoyaltyIssueAmount</b>	var	<b>Total Loyalty Issue Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyReloadCount</b>	var	<b>Total Loyalty Reload Transaction Count</b>	Contained in TransTotal
<b>LoyaltyReloadAmount</b>	var	<b>Total Loyalty Reload Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyReturnCount</b>	var	<b>Total Loyalty Return Transaction Count</b>	Contained in TransTotal
<b>LoyaltyReturnAmount</b>	var	<b>Total Loyalty Return Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyForcedCount</b>	var	<b>Total Loyalty Forced Transaction Count</b>	Contained in TransTotal

<b>LoyaltyForcedAmount</b>	var	<b>Total Loyalty Forced Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyActivateCount</b>	var	<b>Total Loyalty Activate Transaction Count</b>	Contained in TransTotal
<b>LoyaltyActivateAmount</b>	var	<b>Total Loyalty Activate Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyDeactivateCount</b>	var	<b>Total Loyalty Deactivate Transaction Counts</b>	Contained in TransTotal
<b>LoyaltyDeactivateAmount</b>	var	<b>Total Loyalty Deactivate Transaction Amount</b>	Contained in TransTotal
<b>LoyaltyVoidCount-U</b>	var	<b>Total Loyalty Void Transaction Ccount</b>	Contained in TransTotal
<b>LoyaltyVoidAmount-U</b>	var	<b>Total Loyalty Void Transaction Amount</b>	Contained in TransTotal
<b>CashSaleCount</b>	var	<b>Total Cash Sale Transaction Count</b>	Contained in TransTotal
<b>CashSaleAmount</b>	var	<b>Total Cash Sale Transaction Amount</b>	Contained in TransTotal
<b>CashReturnCount</b>	var	<b>Total Cash Return Transaction Count</b>	Contained in TransTotal
<b>CashReturnAmount</b>	var	<b>Total Cash Return Transaction Amount</b>	Contained in TransTotal
<b>CashVoidCount-U</b>	var	<b>Total Cash Void Transaction Count</b>	Contained in TransTotal
<b>CashVoidAmount-U</b>	var	<b>Total Cash Void Transaction Amount</b>	Contained in TransTotal
<b>CheckSaleCount</b>	var	<b>Total Check Sale Transaction Count</b>	Contained in TransTotal
<b>CheckSaleAmount</b>	var	<b>Total Check Sale Transaction Amount</b>	Contained in TransTotal
<b>CheckAdjustCount</b>	var	<b>Total Check Adjust Transaction Count</b>	Contained in TransTotal
<b>CheckAdjustAmount</b>	var	<b>Total Check Adjust Transaction Amount</b>	Contained in TransTotal
<b>CheckVoidCount</b>	var	<b>Total Check void Transaction Count</b>	Contained in

			TransTotal
<b>CheckVoidAmount</b>	var	<b>Total Check void Transaction Amount</b>	Contained in TransTotal
<b>PLEntryMode</b>	n1	<b>Card Entry Mode:</b> 0 = Manual 1 = Swipe 2 = Contactless	Contained in Ext Data account information
<b>PLNameOnCard</b>	ans...32	<b>Cardholder Name</b>	Contained in Ext Data account information
<b>PLCardPresent</b>	n1	<b>Displays Whether Or Not The Card Was Present At The Time Of The Transaction:</b> 0 = Card Present 1 = Card Not present Mandatory for manual entry. Credit only.	Contained in Ext Data account information
<b>PLZip</b>	n...9	<b>Transaction Zip Code</b>	Contained in Ext Data
<b>PLPONumber</b>	ans...32	<b>PO Number Entered At The Time Of The Transaction</b>	Contained in EXT Data Commercial Information
<b>PLCustCode</b>	ans...32	<b>Customer Code Entered At The Time Of The Transaction</b>	Contained in EXT Data Commercial Information
<b>AmountDue</b>	n...8	<b>Amount Due \$\$\$\$\$\$CC:</b> Used where partially-authorized transactions exist.	Contained in EXT Data amount information
<b>TipAmount</b>	n...8	<b>Tip Amount \$\$\$\$\$\$CC:</b> Mandatory where a tip amount exists.	Contained in Ext Data amount information
<b>CashBackAmount</b>	n...8	<b>Cash Back Amount \$\$\$\$\$\$CC:</b> Mandatory where a cash back amount exists	Contained in Ext Data amount information

<b>MerchantFee</b>	n...8	<b>Merchant Fee Amount \$\$\$\$CC:</b> Mandatory where a merchant fee exists.	Contained in EXT Data amount information
<b>TaxAmount</b>	n...8	<b>The tax amount \$\$\$\$CC:</b> Mandatory where a tax amount exists.	Contained in EXT Data amount information
<b>ExpDate</b>	n4	<b>Account Expiration Date MMY:</b> Mandatory where the entry mode is manual.	Contained in EXT Data account information
<b>EBTType</b>	a1	<b>EBT Transaction Type:</b> C = Cash Benefits F = Food Stamp V = Voucher	Contained in EXT Data account information
<b>VoucherNum</b>	ans...16	<b>Voucher Number:</b> Mandatory where the EDC type is EBT and the EBT type is voucher.	Contained in EXT Data account information
<b>NewAccountNo</b>	n...19	<b>New Card Number:</b> Last 4 or all digits. Mandatory where the transaction type is Gift REPLACE.	Contained in EXT Data account information
<b>CVVMessage</b>	ans...32	<b>CVV Response Message:</b> Mandatory if the host returns a message. Credit only.	Contained in EXT Data account information
<b>CheckSaleType</b>	a1	<b>Check Transaction Type:</b> “V” = Verification “C” = Conversion “G” = Guarantee (“C” For transaction types “VOID” and “ADJUST”)	Contained in EXT Data check information
<b>CheckRoutingNum</b>	n...9	<b>Check Routing Number</b>	Contained in EXT Data check information
<b>CheckNum</b>	n...7	<b>Check Number</b>	Contained in EXT Data



			check information
<b>CheckType</b>	a1	<b>Check Type:</b> “P” = Personal “B” = Business “G” = Government “R” = Payroll “T” = Two-Party	Contained in EXT Data check information
<b>CheckIDType</b>	a1	<b>Check ID Type:</b> “D” = Driver License “S” = SSN “M” = Military ID “C” = Courtesy Card “P” = Proprietary Card “B” = Military Base “A” = Passport Number	Contained in EXT Data check information
<b>CheckIDValue</b>	ans...32	<b>Check ID Value</b>	Contained in EXT Data check information
<b>Birth</b>	n8	<b>Date of Birth:</b> MMDDYYYY format.	Contained in EXT Data check information
<b>PhoneNum</b>	n...32	<b>Phone Number</b>	Contained in EXT Data check information
<b>TaxExempt</b>	ans...1	<b>Tax Exempt Indicator:</b> 0 = Not Exempt 1 = Exempt Mandatory where Commercial Card is supported and used.	Contained in EXT Data Commercial information
<b>TaxExemptID</b>	ans...12	<b>Tax Exempt ID:</b> Mandatory when TaxExempt = “1”	Contained in EXT Data Commercial information
<b>TableNum</b>	n...4	<b>Table Number</b>	Contained in EXT Data Additional information

<b>GuestNum</b>	n...4	<b>Guest Number</b>	Contained in EXT Data Additional information
<b>TicketNum</b>	ans...8	<b>Check Ticket Number</b>	Contained in EXT Data Additional information
<b>DisamtNum</b>	n...8	<b>Amount of Discount:</b> DISAMT	Contained in EXT Data Additional information
<b>ChgamtNum</b>	n...8	<b>Amount Charged:</b> CHGAMT	Contained in EXT Data Additional information
<b>SignStatusNum</b>	n1	<b>Signature Status:</b>  1 = Captured Locally 2 = Aborted 3 = Timeout 4 = NA 5 = Successful Upload 6 = Upload Failed	Contained in EXT Data Additional information
<b>FPSOffline</b>	n1	1 = Transaction amount is below the required Authorization threshold. Transaction approved offline.	Contained in EXT Data Additional information
<b>FPSSignStatusNum</b>	n1	1 = Transaction amount is below the required Signature threshold. No signature required.	Contained in EXT Data Additional information
<b>FPSReceiptModeNum</b>	n1	<b>FPS Receipt Mode:</b>  1 = Merchant copy only 2 = Customer copy only 3 = No receipt Default = Print Both	Contained in EXT Data Additional information
<b>EDCTYPE</b>	ans...16	When the CREDIT/DEBIT prompt is enabled and the user makes a selection, the corresponding EDC	Contained in EXT Data Additional

		type will be returned.	information
<b>ORIGTIP</b>	n..8	<b>The original tip amount in a CREDIT ADJUSTMENT.</b>	Contained in EXT Data Additional information
<b>TC</b>	ans..16	<b>Transaction Certificate</b>	Contained in EXT Data Additional information
<b>TVR</b>	ans..10	<b>Terminal Verification Results</b>	Contained in EXT Data Additional information
<b>AID</b>	ans..32	<b>Application Dedicated File (ADF) Name</b>	Contained in EXT Data Additional information
<b>TSI</b>	ans..4	<b>Transaction Status Information</b>	Contained in EXT Data Additional information
<b>ATC</b>	ans..4	<b>Application Transaction Counter</b>	Contained in EXT Data Additional information
<b>APPLAB</b>	ans..16	<b>Application Label</b>	Contained in EXT Data Additional information
<b>APPPN</b>	ans..16	<b>Application Preferred Name</b>	Contained in EXT Data Additional information
<b>Line</b>	var	<b>Line Message Returned By The POS terminal</b> (There may be several elements named "Line".)	Contained in EXT Data
<b>TransTotal</b>	var	<b>Catch All For Additional Transaction Total Amount And Count Information</b>	Transaction total data in XML format

			Ex < DebitSaleCount> 12</ DebitSaleCount>
<b>ExtData</b>		<b>Catch All For Additional Transaction Information</b>	Extended data in XML format Ex < ExpDate>1212</ ExpDate>

### 4.13. Class ProcessTransResult

- The ProcessTransResult response tells the caller if the POSLink library was properly processed and is not to be confused with the PaymentResponse, ManageResponse, BatchResponse or ReportResponse. The ProcessTransResult only reports whether or not POSLink library processed properly, timed out or resulted in an error.
- When calling POSLink, the ProcessTransResult results should first be checked in order to determine if the POSLink library was successfully invoked. Only when the library is successfully invoked (results OK) should the PaymentResponse, ManageResponse, BatchResponse or ReportResponse be checked. If a TIMEOUT or ERROR is returned, then POSLink was not properly processed and you should not look for the PaymentResponse, ManageResponse, BatchResponse or ReportResponse. If an ERROR is returned, review the result of the ProcessTransResult.Msg to discern its cause.

#### 4.13.1. Constructors

Name	Description
<b>ProcessTransResult ()</b>	Initialize a newly created ProcessTransResult object

#### 4.13.2. Methods

Prototype	Description
<b>int ParseCardType(String type)</b>	Parse the String Card type to integer type.
<b>int ParseEDCType(String type)</b>	Parse the String EDC type to integer type.
<b>int ParsePaymentType(String type)</b>	Parse the String payment type to integer type.
<b>int ParseTransType(String type)</b>	Parse the String transaction type to integer type.

### 4.13.3. Properties

Property	Description
<b>Code</b>	<p>Enum:</p> <p><b>ProcessTransResultCode.OK</b></p> <p>-- Transaction processed normally</p> <p><b>ProcessTransResultCode.TimeOut</b></p> <p>-- Transaction timeout occurred</p> <p><b>ProcessTransResultCode.ERROR</b></p> <p>-- POSLink was not properly executed, and the transaction was not processed. Review the accompanying message to determine why the POSLink execution failed. Usually a result of the required data not being passed into POSLink.</p>
<b>Msg</b>	Detail error message while Code is ProcessTransResultCode.ERROR.

## 5. Appendix

### 5.1. PaymentTransType

TransType	Description
UNKNOWN = 0	Ask the terminal to select transaction type.
AUTH = 1	Verify/Authorize a payment. Do not put into the batch.
SALE = 2	To make a purchase with a card or Echeck/ACH with a check. Puts card payment into the open batch.
RETURN = 3	Returns payment amount to the card open to buy.
VOID = 4	Removes a transaction from an unsettled batch.
POSTAUTH = 5	Completes an Authorization Only transaction.
FORCEAUTH = 6	Forces a transaction into an open batch. Typically used for voice authorizations.
CAPTURE = 7-U	
REPEATSALE = 8-U	Performs a repeat sale, using the PnRef, on a previously processed card.
CAPTUREALL = 9-U	Performs a settlement or batch close.
ADJUST = 10	Adjusts a previously processed transaction. Typically used for tip adjustment
INQUIRY = 11	Performs an inquiry to the host. Typically used to obtain the balance on a food stamp card or gift card.
ACTIVATE = 12	Activates a payment card. Typically used for gift card activation.
DEACTIVATE = 13	Deactivates an active card account. Typically used for gift cards.
RELOAD = 14	Adds value to a card account. Typically used for gift cards.
VOID SALE = 15	
VOID RETURN = 16	
VOID AUTH = 17	
VOID POSTAUTH = 18	
VOID FORCEAUTH = 19	
VOID WITHDRAWAL = 20	
REVERSAL = 21	
WITHDRAWAL = 22	
ISSUE = 23	
CASHOUT = 24	

REPLACE = 25	
MERGE = 26	
REPORTLOST = 27	
REDEEM = 28	
STATUS_CHECK = 29-U	
SETUP = 30-U	
INIT = 31-U	
VERIFY = 32	
REACTIVATE=33	
FORCED ISSUE = 34	
FORCED ADD = 35	
UNLOAD = 36	
RENEW = 37	
TOKENIZE=38	

## 5.2. CardType

CardType
VISA = 1
MASTERCARD = 2
AMEX = 3
DISCOVER = 4
DINERCLUB = 5
ENROUTE = 6
JCB = 7
REVOLUTIONCARD = 8
OTHER = 9

## 5.3. EDC Type Definition

EDC Type	Description
ALL = 0	All EDC type (unsupported now)
CREDIT = 1	Credit card
DEBIT = 2	Debit card
EBT = 3	EBT card
EBT_FOODSTAMP = 3	EBT card
EBT_CASHBENEFIT= 3	EBT card

GIFT = 4	Gift card
LOYALTY = 5	Loyalty card
CASH = 6	Cash
CHECK = 7	Check

## 5.4. EDC Supported Trans Type

EDC Type	Transaction Type	Description
CREDIT	UNKNOWN	
	SALE	
	RETURN	
	FORCEAUTH	
	AUTH	
	POSTAUTH	
	VOID	
	V/SALE	Void SALE
	V/RTRN	Void RETURN
	V/AUTH	Void AUTH
	V/POST	Void POSTAUTH
	V/FRCD	Void FORCED
	INQUIRY	
	ADJUST	
	REVERSAL	
	VERIFY	
	TOKEN	
DEBIT	UNKNOWN	
	SALE	
	RETURN	
	INQUIRY	
	VOID	
	V/SALE	
	V/RTRN	
	REVERSAL	
	TOKENIZE	
EBT EBT_FOODSTAMP EBT_CASHBENEFIT	UNKNOWN	
	SALE	
	RETURN	
	WITHDRAWAL	
	VOID	
	V/SALE	Void SALE
	V/RTRN	Void RETURN
	V/WITHDRAW	Void WITHDRAWAL
	INQUIRY	
	REVERSAL	
GIFT	SALE	
	AUTH	



EDC Type	Transaction Type	Description
	POSTAUTH	
	INQUIRY	
	ACTIVATE	
	ISSUE	
	RELOAD	
	RETURN	
	FORCED AUTH	
	VOID	
	CASHOUT	
	DEACTIVATE	
	REPLACE	
	ADJUST	
	MERGE	
	REPORTLOST	
	FORCED ISSUE	
	FORCED ADD	
	UNLOAD	
	REVERSAL	
	RENEW	
LOYALTY	REDEEM	
	ISSUE	
	RELOAD	
	VOID	
	INQUIRY	
	REPLACE	
	DEVACTIVATE	
	RETURN	
	ACTIVATE	
	MERGE	
	RENEW	
	UNLOAD	
	REVERSAL	
CASH	SALE	
	RETURN	
	VOID	
	V/SALE	
	V/RTRN	
CHECK	SALE	
	VOID	
	ADJUST	

## 5.5. Configurable Parameter Definition

Parameter	Length (byte)	Description	R/W
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<b>demoMode</b>	1	N = Not in demo mode Y = In demo Mode	R/W
<b>idleMsg</b>	16	After terminal received command "A00" this message will be displayed on the POS during the idle state.	R/W
<b>MID</b>	20	Get MID	R/W
<b>TID</b>	20	Get TID	R/W
<b>batchNo</b>	6	Get Batch Number	R/W
<b>accountFlag</b>	1	0 = Terminal returns the last 4 digits of the card number. 1 = Terminal will return the entire card number (For non CREDIT/DEBIT/EBT/CASH transactions).	R/W
<b>serverAddr</b>	15	The IP address when the terminal acts as a server.	R
<b>amountOrder</b>	1	For partially approved transactions, the terminal will respond to the ECR with the additional amount required in their specific listed orders.  Valid values are: 1: "Merchant fee> tip> cash back 2: Merchant fee> cash back> tip 3: Tip> merchant fee>cash back 4: Tip> cash back> merchant fee 5: Cash back> merchant fee> tip 6: Cash back> tip> merchant fee	R/W
<b>menuTimeout</b>	4	The menu timeout in 100ms.	R/W
<b>Industry</b>	16	The industry type. The values: "RETAIL", "RESTAURANT"	R/W
<b>hrType</b>	1	The health report type: "N" = No automatic health report. "T" = Automatic health report at specified time. "I" = Automatic health report in specified interval.	R/W
<b>hrTime</b>	4	Automatic health report time. In HHMM format.	R/W
<b>hrInterval</b>	8	Automatic health report interval. In 100ms. The max value is "99999999";	R/W
<b>commType</b>	1	The communication type between terminal and ECR/PC. "U" = UART "E" = Ethernet	R/W
<b>port</b>	5	The Ethernet port when the communication type is Ethernet between terminal and ECR/PC.	R/W
<b>Primary</b>	1	Primary communication channel.	R/W

		<p>"L" =LAN (Ethernet).</p> <p>"D" =Dial-up.</p>	
<b>secondary</b>	1	<p>Back-up communication channel.</p> <p>"L" = LAN (Ethernet).</p> <p>"D" = Dial-up.</p> <p>"N" = not used.</p>	R/W
<b>maxTries</b>	1	<p>Maximum connection attempts.</p> <p>The value must be "1" ~ "9".</p>	R/W
<b>connTimeout</b>	4	<p>Connection Timeout in 100ms.</p> <p>Maximum allowable value = "9999".</p>	R/W
<b>recvTimeout</b>	4	<p>Receive Timeout in 100ms.</p> <p>Maximum allowable value = "9999".</p>	R/W
<b>IP</b>	15	The local IP address	R/W
<b>Netmask</b>	15	The local netmask	R/W
<b>Gateway</b>	15	The local gateway	R/W
<b>DNS</b>	15	The local DNS	R/W
<b>DHCP</b>	1	<p>Is DHCP enabled?</p> <p>"Y" = Enabled</p> <p>"N" = Static IP mode.</p>	R/W
<b>limitLen</b>	4	<p>The length limitation of ECR/PC's receiving buffer. If the data size exceeds the limit, the data will be broken up into multiple packets.</p> <p>Maximum length = 3999 bytes. If the size exceeds 3999 bytes, the terminal will return an error.</p> <p>Minimum length is 10 bytes. If the size is less than 10 bytes, the terminal will return an error.</p>	R/W
<b>cashBack</b>	128	<p>Cash back amount options.</p> <p>If option 1 = "0", cash back is not allowed. The last option is for a user entered amount.</p>	R/W
<b>"authURL0"</b> <b>"authURL1"</b>	~ 64	Host Authorization URLs. Cannot exceed 64 bytes.	R
<b>"authPort0"</b> <b>"authPort1"</b>	~ 5	Host Authorization ports. Cannot exceed 65535.	R
<b>"authPhone0"</b> <b>"authPhone2"</b>	~ 32	Host Authorization dial numbers, cannot exceed 32 bytes.	R
<b>"batchURL0"</b> <b>"batchURL1"</b>	~ 64	Host Batch URLs, cannot exceed 64 bytes.	R

<b>"batchPort0"</b> <b>"batchPort1"</b>	~ 5	Host Batch ports, cannot exceed 65535.	R
<b>"batchPhone0"</b> <b>"batchPhone2"</b>	~ 32	Host Batch dial numbers, cannot exceed 32 bytes.	R
<b>intervalTime</b>	4	When there is more than one image, The transition time between images. Set in 100ms segments.  The value should be between [10, 9999].	R/W
<b>Header</b>	164	Header line information to be printed on the receipt.  Formatted as below: HeaderLine1[US]HeaderLine2[US] HeaderLine3[US]HeaderLine4[US] HeaderLine5  The maximum length of each Header Line is 32.	R/W
<b>Trailer</b>	164	Trailer line information to be printed on the receipt.  Formatted as below: TrailerLine1[US]TrailerLine2[US] TrailerLine3[US]TrailerLine4[US] TrailerLine5  The maximum length of each Trailer Line is 32.	R/W
<b>msgTitle</b>	36	"Show message" command title.  The default value is "Message".	R/W
<b>hostRspTimeout</b>	3	Host Approval" or "Declined" Response "timeout in 100ms increments. A "0" setting will disable the screen.	R/W
<b>accountMenuTimeout</b>	3	Card input timeout in 100ms increments. Valid value range is between [200, 600].	R/W
<b>idleImageName</b>	14	The name of image to be displayed as the idle image. Default = empty. If empty, auto scrolling between "mt30_ad0"/" mt30_ad1"/"mt30_ad2" will be launched.	R/W
<b>signLine1</b>	26	Signature prompt line 1, default ="Transaction Approved".	R/W
<b>signLine2</b>	26	Signature prompt line 2, default ="Please Sign Your Name".	R/W
<b>swipeAnyTime</b>	1	Whether or not to enable "Swipe Any Time" mode. "Y"=YES, "N"= NO (the default value).	R/W
<b>cardSwipedTimeout</b>	3	Swiped card Timeout when in "Swipe Any Time" mode.  Valid value range is between 150 and 999.	R/W
<b>hostRspBeep</b>	1	Whether or not to enable the beep after the host	R/W

		response is received. "Y" =YES(default value), "N" =NO.	
<b>terminalFloorLimit</b>	9	Terminal Contactless transaction floor limit in cents.	R/W
<b>terminalCtlessLimit</b>	9	Terminal Contactless limit in cents:  When a transaction amount exceeds the limit, the terminal <b><u>will</u></b> request ARQC (online) @ 1st GenAC. When a transaction amount falls below the limit, the terminal <b><u>can</u></b> request TC (offline).	R/W
<b>terminalCtlessTranLimit</b>	9	Terminal Contactless transaction limit in cents:  When a transaction exceeds the limit, the terminal <b><u>will</u></b> terminate the transaction and prompt for Contact.  When a transaction amount falls below the limit, the terminal <b><u>can</u></b> allow the transaction to process.	R/W
<b>CVMRequiredLimit</b>	9	Contactless Transaction CVM required limit in cents.	R/W
<b>integrationMode</b>	1	Integration mode. "S"=Semi-Integration, "F"=Full Integration.	R
<b>ecrBaudRate</b>	6	ECR communication Baud Rate (BPS), default =9600.	R
<b>supportPrint</b>	1	Whether to enable printing function. "Y" for YES, "N" for NO(the default value).	R/W
<b>resellerInfor</b>	360	Reseller information including reseller name of this terminal. etc.	R
<b>hostInfor</b>	128	Host information. Currently it's in format as below: "Host Name_Host Version". And EDC is required along with the "GETVAR" command.	R

## 5.6. ResultCode & ResultTxt

Error Code	Error Message	description
<b>000000</b>	OK	Approve
<b>000100</b>	DECLINE	Host error (See host specific errors)
<b>100001</b>	TIMEOUT	Time out
<b>100002</b>	ABORTED	User aborted
<b>100003</b>	FORMAT ERROR	Message format error
	NO PROTOCOL VERSION	The protocol version shall be input.

FULL INTEGRATION ONLY	Wrong integration mode.
SEMI INTEGRATION ONLY	Wrong integration mode.
AMOUNT INVALID	1. Length exceeds the limit. 2. Not a numeric value. 3. The amount contains "." Or "-".
TIP INVALID	1. Length exceeds the limit. 2. Not a numeric value. 3. The amount contains "." Or "-".
CASH BACK INVALID	1. Length exceeds the limit. 2. Not a numeric value. 3. The amount contains "." Or "-".
MERCHANT FEE INVALID	1. Length exceeds the limit. 2. Not a numeric value. 3. The amount contains "." Or "-".
TAX AMOUNT INVALID	1.Length exceeds the limit 2.Not number 3. The amount has "." Or "-".
ACCT# INVALID	1. Length larger or smaller than the limit. 2. Attribute error.
EXP DATEINVALID	1. Length larger or smaller than the limit. 2. Month > than 12 or day > than 31. 3. Not a numeric value.
EBTTYPE INVALID	1. Length is larger than the limit. 2. Not "F" "C" or "V". 3. EBT doesn't support current EBT type.
VOUCHER INVALID	Length exceeds the limit.
REFERENCEINVALID	Length is greater than 16.
INVOICE INVALID	Length exceeds the limit.
AUTHCODE INVALID	Length exceeds the limit.
TRANS# INVALID	Length exceeds the limit.
TIMESTAMP INVALID	1. Length exceeds the limit.  2. Not a numeric value. 3. Year month day hour minute and second are incorrect.
CLERK INVALID	Length exceeds the limit.
SHIFT ID INVALID	Length exceeds the limit.

PO NUMBER INVALID	Length exceeds the limit.
CUSTOMER CODE INVALID	Length exceeds the limit.
TAX REASON INVALID	Length exceeds the limit.
TAX EXEMPTID INVALID	Length exceeds the limit.
ME MODE INVALID	Length exceeds the limit.
ME TYPE INVALID	Length exceeds the limit.
SECURE TYPE INVALID	Length exceeds the limit.
ORDER NUMBER INVALID	Length exceeds the limit.
INSTALLMENTS INVALID	Length exceeds the limit.
CURRENT INST INVALID	1. Length exceeds the limit 2. Please check the current installment value.
TABLE NUMBER INVALID	Length exceeds the limit
GUEST NUMBER INVALID	Length exceeds the limit
SIGN INVALID	Length exceeds the limit
CHECK INVALID	Length exceeds the limit
TICKET NUMBER INVALID	Length exceeds the limit
METYPE INVALID	Length exceeds the limit, or the MOTO/E-Commerce Type is Invalid.
TIP SWITCH CLOSED	Tip switch closed.
CASHBACK NOT ALLOWED	1. EDC or trans type not allowed. 2. Switch is closed.
MERCHANT FEE NOT ALLOWED	1. EDC or trans type switch closed. 2. Switch is closed.
COMMERCIAL NOT ALLOWED	The commercial card control switch is closed.
EBT TYPE NOT ALLOWED	Please check the EBT type and the transaction type.
TAX NOT ALLOWED	EDC or trans type not allowed.
TIP NOT ALLOWED	EDC or trans type not allowed.
VOCHER NOT ALLOWED	EBTTYPE or EDC not allowed.
AUTH CODE NOT ALLOWED	Supported on the following transactions: 1 – Credit Forced or 2 – EBT Voucher
TRANS# NOT ALLOWED	EDC or Trans type not allowed.
AMOUNT NOT ALLOWED	“BALANCE” and “DEACT” not allowed.

INSTALLMENTS NOT NULL	Please check MOTO/E-commerce information
CURRENTINST NOT NULL	Please check MOTO/E-commerce information
MOTO ARGS CONFLICT	Please check MOTO/E-commerce information.
SUBTRANS TYPE INVALID	Please check "CHECK" information.
CHECK TYPE INVALID	Please check "CHECK" information.
ID TYPE INVALID	Please check "CHECK" information.
DOB INVALID	Please check "CHECK" information.
DOB FORMAT INVALID	Please check "CHECK" information.
TABLE NUMBER NOT ALLOWED	1. Supported only in a Restaurant environment. 2. Supported only in CREDIT or DEBIT transactions. 3. The switch is closed.
GUEST NUMBER NOT ALLOWED	1. Supported only in a Restaurant environment. 2. Supported only in CREDIT or DEBIT transactions. 3. The switch is closed.
MOTO/EC NOT ALLOWED	Please check MOTO/E-commerce information.
ONLY RETAIL SUPPORT	Retail support only.
MERCHANTFEE ONLY FOR CB	Merchant fee supported only on cashback.
REGION ARGS ERROR	Do "A14": ARGS incorrect.
EDC OR CARDTYPE MUST EXIST	Do "R00": EDC or CardType must exist.
REF NO MISSING	The reference number is null.
CARDTYPE ONLY FOR CREDIT	Do "R00": CardType credit only.
UNSUPPORT CARDTYPE	CardType is not supported.
INDEX INVALID	The length is greater than 4 or not numeric.
NO TRANS AVAILABLE	No transaction to select.
EBT INFO INVALID	The EDC type is not EBT.
PLEASE SET VAR	The variable value cannot be "NULL" when calling the SETVAR command.
HOST DENIED	This variable cannot be set.
CVV INVALID	Invalid CVV length or Attribute error.
ZIPCODE INVALID	Invalid ZIP code length or Attribute error.



ADDRESS INVALID	Invalid address length or Attribute error.
CVV NOT ALLOWED	Unsupported CVV or the switch is closed.
ZIP CODE NOT ALLOWED	Unsupported zip code or the switch is closed.
ADDRESS NOT ALLOWED	Unsupported address or the switch is closed.
EDC MISSING	The EDC type does not exist.
SIGN NOT ALLOWED	Signature is not supported.
AMOUNT TOO LARGE	The current transaction amount plus The total amount in terminal exceeds 999999999.
INVALID OVERRIDE	The Dup Override Flag length is more 1 byte.
PO NUMBER NOT SUPPORT	PO Numbers are not supported.
TAX EXEMPTID NOT ALLOWED	Tax Exempt IDs are not supported.
CUSTOMER CODE NOT ALLOWED	Customer Codes are not supported.
TAX REASON NOT ALLOWED	Tax Reason is not supported.
TICKET NUMBER NOT ALLOWED	Only CHECK supports ticket number.
TRANSTYPE NULL	The transaction type must exist.
SECURETYPE NOT SUPPORT	Unsupported secure type.
TIMESTAMP INVALID	Please check the timestamp field.
SIGNATURE FILE NOT EXIST	Signature file error.
REQUESTLEN INVALID	Please check the request length attribute.
OFFSIZE INVALID	Offset is invalid.
SIGNFLAG INVALID	Please check the SignFlag field.
CLERKID INVALID	Invalid Clerk ID.
ZIP CODE INVALID	Invalid ZIP code.
MOTO/ECINFO NOT ALLOWED	Transaction Type does not support MOTO/EC.
OVERRIDE NOT SUPPORT	There is no way to override a duplicate transaction. The same transaction is not allowed more than one time within one batch.

DUP CHECK INVALID	Please check the override flag value.
ROUTING NUMBER INVALID	Please check the Routing Number length.
CHECK NUMBER INVALID	Please check the check number.
CHECK TYPE INVALID	Please check the check type.
ID TYPE INVALID	Please check the ID type in check info.
CHECKID INVALID	Please check the check ID.
PHONE NUMBER INVALID	Please check the phone number.
SUB TRANS TYPE INVALID	Please check the check information.
OFFSET INVALID	Please check the "Offset" parameter.
FLAG INVALID	Please check the "Flag" parameter.
UPLOAD FLAG INVALID	Please check the "Upload flag" parameter.
REF NUMBER INVALID	Please check the "host reference number" parameter
NO REF NUMBER	Please check the "host reference number" parameter.
TIMEOUT INVALID	Please check the "Timeout" parameter.
IMAGE NAME INVALID	Please check the "Image Name" parameter.
NO IMAGE NAME	Please check the image name.
DELETE FAILED	Delete image failed.
NO TIMEOUT	Please check the "timeout" parameter.
NO EDC TYPE	Please check the EDC type field.
EDC TYPE INVALID	Please check the EDC type field.
NO UPLOAD FLAG	Please check the upload flag field.
DATA INVALID	Please check the data field.
NO OFFSET	Please check the offset field.
INSTALL FAILED	Install failed.
IMAGE NOT FOUND	Image not found.
CARD TYPE DISABLED	Card type is disabled.
EXP DATE MISSING	Expiry date is missing.

	EXP DATE NOT ALLOWED	Expiry date is not allowed.
	PLZ VOID ADDTIP	Void the tip transaction before proceeding.
	ENCRYPTION ERROR	PIN Encryption error.
100004	UNSUPPORT TRANS	Host does not support the transaction.
100005	UNSUPPORT EDC	Terminal does not support the EDC type.
100006	BATCH FAILED	Batch failed.
100007	CONNECT ERROR	Error connecting to the processing host.
100008	SEND ERROR	Error sending a message to the host.
100009	RECEIVE ERROR	Error receiving a message from the host.
100010	COMM ERROR	Communication error.
100011	DUP TRANSACTION	Duplicate transaction: The operator should confirm that this is a new transaction. The ECR can resend the pack with “Dup Override Flag” set.
100012	GET VAR ERROR	Error getting the variable.
100013	SET VAR ERROR	Error setting the variable.
	INVALID VAR VALUE	The value of variable is not valid.
	PLEASE SET VAR	The variable value is null.
100014	INVALID DATA ENTRY	Invalid data entry.
100015	CVV ERROR	CVV Error.
100016	AVS ERROR	Address or Zip Code error.
100017	HALO EXCEED	Halo exceed.
100018	SWIPE ONLY	Cannot manually input the account number.
100019	TRACK INVALID	The track data is incorrect.
	SWIPE ERROR	Swipe error.
100020	CANNOT ADJUST	Cannot adjust the tip.
100021	ALREADY VOIDED/ ALREADY COMPL.	The transaction has been previously voided/completed
100022	PINPAD ERROR	PINPAD error.
100023	UNKNOWN ERROR/NOT FOUND/USERABORTED	The transaction is not found or an unknown error has occurred. When the user cancels a host connection, the terminal will return a “USERABORTED” message to the ECR.
100024	NO HOST APP	There is no host application.

<b>100025</b>	PLEASE SETTLE	Please initiate settlement.
<b>100027</b>	UNSUPPORT COMMAND	The command is unsupported.
<b>100028</b>	TAX EXCEED AMT.	Tax amount greater than the purchase amount.
<b>199999</b>	TERMINAL ERROR	Internal terminal error.

## 5.7. Multi-threading Sample

This is a simple C# sample, only illustrate how to call POSLink.dll in a thread if in a multi-threading mode.

```
void thread1()
```

```
{
```

```
    // 1. First create a POSLink Manage Page
```

```
    POSLink.PosLink mg = new POSLink.PosLink();
```

```
    POSLink.ManageRequest manageRequest = new POSLink.ManageRequest();
```

```
    POSLink.CommSetting commSetting = new POSLink.CommSetting();
```

```
    POSLink.ProcessTransResult result = new POSLink.ProcessTransResult();
```

```
    // 2. Next Set the manageRequest Properties
```

```
    // 3. set the commucation parameter
```

```
    commSetting.CommType = "TCP";
```

```
    commSetting.TimeOut = "30000";
```

```
    commSetting.SerialPort = "";
```

```
    commSetting.DestIP = "192.168.5.35";
```

```
    commSetting.DestPort = "10009";
```

```
// 4 execute the function

mg.ManageRequest = manageRequest;

mg.CommSetting = commSetting;

result = mg.ProcessTrans();

}
```