

# **PosXML**

**Version 7.1 / Standard**

**Protocol Specification**

DOC 222-0/12-04/12-02



---

**VOICECOM**

**2012**

/

## Table of contents

1. Introduction.....	3
1.1 Overview.....	3
1.2 Terms .....	3
1.3 Difference between Standard and Extended PosXML version .....	3
1.4 HTTP sessions .....	3
2. Protocol .....	5
2.1 Data types .....	5
2.2 Structures .....	5
2.3 Message data fields (Elements).....	5
2.4 Aggregates .....	12
2.4.1 Card.....	12
2.4.2 IDCard .....	12
2.4.3 TransactionData .....	12
2.4.4 CardData .....	13
2.4.5 TerminalData .....	13
2.5 Transaction requests and responses .....	14
2.5.1 TransactionRequest – TransactionResponse .....	14
2.5.2 CancelAllOperationsRequest – CancelAllOperationsResponse.....	15
2.5.3 FinishTransactionRequest - TransactionResponse .....	15
2.5.4 ReverseTransactionRequest – ReverseTransactionResponse .....	16
2.5.5 RefundTransactionRequest – RefundTransactionResponse.....	17
2.5.6 ReadCardRequest - ReadCardResponse.....	17
2.5.7 ReadIDCardRequest - IDCardResponse .....	18
2.5.8 GetLastTransactionDataRequest – GetLastTransactionDataResponse .....	18
2.6 Reconciliation control requests and responses.....	19
2.6.1 TransactionSendRequest – TransactionSendResponse .....	19
2.6.2 TransactionSendStatusRequest – TransactionSendStatusResponse .....	19
2.6.3 TransactionCurrStatusRequest – TransactionCurrStatusResponse .....	19
2.7 Printing requests and responses.....	20
2.7.1 PrintImageFileRequest – PrintImageFileResponse .....	20
2.7.2 PrintLineRequest – PrintLineResponse .....	20
2.7.3 PrintCustomerReceiptRequest – PrintCustomerReceiptResponse .....	21
2.7.4 PrintMerchantReceiptRequest – PrintMerchantReceiptResponse .....	21
2.7.5 PrintLineFeedRequest - PrintLineFeedResponse.....	21
2.7.6 PrintFormFeedRequest - PrintFormFeedResponse .....	22
2.8 Miscellaneous requests and responses .....	22
2.8.1 ChangeLanguageRequest – ChangeLanguageResponse .....	22
2.8.2 DisplayMessageRequest – DisplayMessageResponse.....	22
2.8.3 ShowInfoRequest – ShowInfoResponse.....	23
2.8.4 GetTerminalStatusRequest – GetTerminalStatusResponse .....	23
2.8.5 GetParametersRequest – GetParametersResponse.....	24
2.8.6 DoBeepRequest – DoBeepResponse.....	26
2.8.7 Error.....	26
2.9 ReturnCodes .....	27
Appendix 1. Message examples .....	28
Appendix 2. Control codes for printing .....	32

## 1. Introduction

### 1.1 Overview

The document provides a short description of XML-based electronic payment interface for Ingenico Telium2 terminals with Voicecom software. The particular emphasis is on general principles and data exchange protocol. The document contains basic information that should be helpful for software developers and integrators.

PosXML simplifies EMV electronic card payment integration with different applications (POS terminals, financial applications etc.). The integrators do not need to deal with full spectrum of EMV certification issues, pending transactions storage and periodic terminal configuration update.

### 1.2 Terms

- Terminal - Card payment terminal device
- PosXML - PosXML protocol or server module
- PosXML Client - http client program, that controls terminal with PosXML commands
- Client card - a card used for client identification, loyalty card
- Payment Card - electronic payment card

### 1.3 Difference between Standard and Extended PosXML version

Due to Payment Card Industry (PCI) requirements and starting from version 7 is PosXML divided into two subversions: Standard and Extended.

The Standard version implements only most used subset of PosXML commands in easy to use Request-Response form. No customer account data is sent out of Terminal via PosXML. This should significantly simplify the PCI DSS and PA-DSS compliance reviews of PosXML Client applications.

The PosXML Extended version implements full set of commands and is mainly intended for hotels or unattended Terminals integration where Terminal must provide some customer account data to Client application, where Terminal should simultaneously accept client cards and payment cards or/and where receipt printing is done by Client application. Additional Client application PCI compliance validations may be required in this case.

### 1.4 HTTP sessions

PosXML supports only XML UTF-8 encoding.

PosXML Client initiates every operation (e.g. an electronic card payment) with a specific XML message and Terminal responds with corresponding response message (also XML). The response message contains a result code of the operation (and may also contain other information). Typical steps of electronic card payment using PosXML are shown below.

1. Client initiates TCP/IP connection to Terminal

2. Client sends http request:

```
http/1.0
content-length: 185
content-type: text/xml

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionRequest>
    <Amount>10000</Amount>
    <CurrencyName>EUR</CurrencyName>
  </TransactionRequest>
</PosXML>
```

3. After successful transaction Terminal sends response:

```
http/1.0 200 ok
content-length: 1608
content-type: text/xml
```

```

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionResponse>
    <ReturnCode>0</ReturnCode>
    <Reason></Reason>
    <TransactionData>
      <Amount>10000</Amount>
      <AdditionalAmount>0</AdditionalAmount>
      <CurrencyName>EUR</CurrencyName>
      <DateTime>24.03.2010 10:21:56</DateTime>
      <Stan>000006</Stan>
      <Type>T1</Type>
      <CardAction>2</CardAction>
      <AuthorizationNo>234961</AuthorizationNo>
      <HostAnswer>000</HostAnswer>
      <SecAmount>639</SecAmount>
      <SecAdditionalAmount>0</SecAdditionalAmount>
      <SecCurrencyName>EEK</SecCurrencyName>
      <SignatureRequired>0</SignatureRequired>
      <PINVerified>1</PINVerified>
    </TransactionData>
    <CardData>
      <PhysicalType>51</PhysicalType>
      <Pan>*****1699</Pan>
      <CardName>SWEDBANKI MC</CardName>
      <Expires>*/**</Expires>
      <ServiceCode>201</ServiceCode>
      <AL>MASTERCARD</AL>
      <AID>A0000000041010</AID>
      <CardID>A678499BC74FDE35F8252B0628219D7CF3FD83AB</CardID>
    </CardData>
    <TerminalData>
      <SerNo>9009808972</SerNo>
      <ID>VOC21201</ID>
      <Name>LIBA POS LUUK</Name>
      <Address>TALLINN, KAUBA 1</Address>
      <MerchantRegNo>11060344</MerchantRegNo>
      <PayDesk>005</PayDesk>
      <VerificationResult>0000000000</VerificationResult>
    </TerminalData>
    <ApplicationCryptogram>CB5BAFF2DEF93CE5</ApplicationCryptogram>
    <TSI>E800</TSI>
    <CVMR>410302</CVMR>
    <IAD>0111651003020000DAC100000000000000FF</IAD>
    <UPN>6B45A638</UPN>
    <ATC>0136</ATC>
    <AIP>5800</AIP>
    <TT>0</TT>
    <PrinterStatus>2</PrinterStatus>
  </TransactionResponse>
</PosXML>

```

Note: If Terminal is configured to support XML session then it closes the connection, otherwise connection remains open until client side closes it. In this case same connection can be used multiple times.

If Terminal receives an unknown PosXML message or detects a wrong message version, it responds with XML answer **Error**, described in 2.8.7.

## 2. Protocol

### 2.1 Data types

Type	Explanation
C (character)	Text with limited max length. For example, C-20 stands for string with max length of 20 characters. Multibyte characters (UTF-8) are allowed.
N (numeric)	Number, numeric text. For example, N-6 stands for numeric string with max length of 6 numbers.

### 2.2 Structures

Type	Explanation
Element	The most basic type, represents one named data item.
Aggregate	Consists of one or more data fields that are logically associated to form an entity that can be referenced by specific name.
Message	The most complex data formation. Represents either request or response. Client issues a request and server send response within the same HTTP session.
Document	Root element (according to XML specification). Incorporates all the information specified by the protocol. Must contain protocol version number.

### 2.3 Message data fields (Elements)

Field name	Field type, max length	Explanation
AcquiringInstitutionID	C-11	POS specific parameter
Action	N-1	0 – clear all previously sent DisplayMessageRequest parameters 1 – use parameters LineX 2 – use parameters MessageXID
AdditionalAmount	N-12	Additional info for the payment (a tip or another adjustment) in cents. (Can be a negative number). The transaction total is Amount + AdditionalAmount.
AdditionalInfo	C-256	Arbitrary text
AddLines	C-2	Additional number of lines to be printed. The same amount of Line1..N fields must exist.
Address	C-40	Terminal address
AID	C-32	Application identifier. EMV data
AIP	C-4	Application interchange profile. EMV data
AL	C-32	Application label. EMV data
Amount	N-12	Amount of payment in cents
AmountBefore	N-1	POS specific parameter
AnswerType	N-3	0-2 - predefined Yes/No strings in terminal. If „Yes“ or „No“ present in request, then predefined strings are not used. 101-124 – numeric input required (length = AnswerType – 100). Answer is returned in Info tag.
ApplicationCryptogram	C-20	Terminal cryptogram (TC). EMV data
ATC	C-4	Application transaction counter. EMV data
AttendantID	C-8	Unique attendant ID (issued by accounting system)
AttendantIDUsed	N-1	POS specific parameter

AuthorizationNo	C-6	Authorization number
BackLight	N-1	1 – turn on POS display backlight
CardAcceptorBusinessCode	C-4	POS specific parameter
CardAcceptorID	C-15	POS specific parameter
CardAcceptorNameLocation	C-40	POS specific parameter
CardAction	C-1	How the payment was done
CardholderLanguage	C-2	Default language code for cardholder
CardholderPresent	N-1	Used in conjunction with „Manual“ tag 0 – cardholder present, 1 – cardholder present, 2 – cardholder has sent mail or fax, 3 – cardholder on phone, 4 – cardholder permanent order.
CardID	C-40	Card unic hash (A678499BC74FDE35F8252B0628219D7CF3FD83AB)
CardName	C-40	Card name
CardNumber	C-8	Card number
CardPresent	N-1	Used in conjunction with „Manual“ tag 0 – card not present, 1 – card present.
CardStatus	N-1	Card present status 1 – present in reader 0 – not present in reader 2 – unknown (some error)
CDASupported	N-1	POS specific parameter
CID	C-2	Cryptogram information data
Citizenship	C-3	Citizenship
Comment1	C-128	Comment nr 1
Comment2	C-128	Comment nr 2
Comment3	C-128	Comment nr 3
Comment4	C-128	Comment nr 4
Copy	C-1	Add to receipt „COPY“
Count	N-2	The number of empty rows, that POS has to print.
CountryCodeStr	C-3	POS specific parameter
CurrencyCodeStr	C-3	POS specific parameter
CurrencyExpChar	N-2	POS specific parameter
CurrencyName	C-3	Currency name
CurrencyNameStr	C-3	POS specific parameter
CustomerInputTimeout	N-3	POS specific parameter
CustomPrint	C-95	POS specific parameter
CustReceipt	C-4096	Customer receipt string
CVMR	C-6	Cardholder verification method results. EMV data
DateOfBirth	C-10	Date of birth
DateTime	N-19	Payment time. Format „DD.MM.YYYY HH:MM:SS“
DateTimeRev	N-19	Reversed transaction date and time. Format „DD.MM.YYYY HH:MM:SS“
DebugEnabled	N-1	POS specific parameter
DEProtoVer	N-1	POS specific parameter
Destination	N-1	Message destination
DiscountAmount	N-12	Discount amount
DiscountEnabled	N-1	Discount request enabled/disabled
DiscountID	N-12	Discount identificator



Frequency1	N-5	Buzzer frequency in Hz (max 12700)
Frequency2	N-5	Buzzer frequency in Hz (max 12700)
Frequency3	N-5	Buzzer frequency in Hz (max 12700)
GatewayIPAddress	C-23	POS specific parameter
Gender	C-1	Gender
HostAnswer	C-3	Host answer code to authorisation (ISO field 39)
HostIPAddressA	C-23	POS specific parameter
HostIPAddressT	C-23	POS specific parameter
HostIPPortA	N-5	POS specific parameter
HostIPPortT	N-5	POS specific parameter
HostMode	N-1	POS specific parameter
HostPhoneNumber	C-23	POS specific parameter
HostPhonePrefix	C-4	POS specific parameter
HostSSLUsed	N-1	POS specific parameter
HostType	N-1	POS specific parameter
HostX25	N-1	POS specific parameter
IAD	C-128	Issuer application data. EMV data
ID	C-8	Terminal ID
IDCardEnabled	N-1	POS specific parameter
IDCode	C-11	ID code
ImageFileName	C-11	Print image file loaded to terminal
Input	C-16	Numeric string entered by customer
Interval1	N-5	Silence after beep in 10 ms
Interval2	N-5	Silence after beep in 10 ms
Interval3	N-5	Silence after beep in 10 ms
IPAddressMode	N-1	POS specific parameter
Language	C-2	Language code for display ('en', 'ru', 'et', etc). May be overwritten by chip card language
LastFourDigits	N-4	Last four digits from magnetic card cover
Line	C-2000	Symbols, that POS has to print. The field may contain a line feed symbol LF (0AH).
Line1	C-24	String to display on row 1
Line1..24	C-2000	Symbols, that POS has to print. The field may contain a line feed symbol LF (0AH).
Line2	C-24	String to display on row 2
Line3	C-24	String to display on row 3
Line4	C-24	String to display on row 4
LineFeedCount	N-2	Line feed count
LocalIPAddress	C-23	POS specific parameter
Logging	C-64	POS specific parameter
LogTCPIAddress	C-23	POS specific parameter
LogTCPIPPort	N-5	POS specific parameter
MagNotUsed	N-1	POS specific parameter
Manual	N-1	Manual PAN transaction request
MerchantID	C-10	POS specific parameter
MerchantInputTimeout	N-3	POS specific parameter
MerchantLanguage	C-2	Default language code for merchant
MerchantRegNo	C-8	Merchant registration number



MerchReceipt	C-4096	Merchant receipt string
Message1ID	N-4	Terminal inner message ID to display on row 1
Message2ID	N-4	Terminal inner message ID to display on row 2
Message3ID	N-4	Terminal inner message ID to display on row 3
Message4ID	N-4	Terminal inner message ID to display on row 4
MiddleName	C-64	Other Fornames
MinCustomerAmount	N-12	POS specific parameter
Name	C-40	Terminal name
NextSTAN	N-6	Next transaction STAN to be used
No	C-12	Negative answer text
NotFinishedTransactionsCount	N-3	The number of pending transactions in the terminal
OrigAmount	N-12	Original transaction amount.
OrigDate	N-19	Original transaction time. Format „DD.MM.YYYY HH:MM:SS“
OrigCardAction	C-1	Original transaction card type.
Pan	C-20	Client card number
PANList	C-1000	Up to 100 PAN (BIN) entries formatted as follows: 1 byte length + 9 bytes PAN (BIN) data. All data in ASCII numbers. For example 3 Pan entries. First 8 bytes length, second 6 and third 9 – '867639223 6676392 9676392232'.
PANStarsMask	C-6	POS specific parameter
PartialAuthorization	N-1	Partial authorization enabled/disabled
PartialReversal	N-1	Partial reversal enabled/disabled
Password	N-1	1 – masked input Default - 0
PayDesk	C-3	Paydesk
PendingCount	N-3	Count of unspent transactions
PhysicalType	N-1	Terminal type
PingEnabled	N-1	POS specific parameter
PINInputTimeout	N-3	POS specific parameter
PinpadEmulation	N-1	POS specific parameter
PINVerified	N-1	PIN verified flag
PlaceOfBirth	C-64	Place of birth
PreAuthorisation	N-1	1 – preauthorisation, 0 – no preauthorisation (default). (POS ignores this field, if it's type is not RENT)
PreAuthPercent	N-2	POS specific parameter
PrinterFooter	C-128	POS specific parameter
PrinterHeader	C-128	POS specific parameter
PrinterLanguage	C-2	Default language code for printer
PrinterMode	N-1	POS specific parameter
PrinterStatus	C-1	Terminal printer status
PrinterTerminalOwnerAddress	C-32	POS specific parameter
PrinterTerminalOwnerName	C-32	POS specific parameter
PrintReceipt	N-1	0 – merchant receipt, 1 – merchant and customer receipts (default), 2 – none.
Reason	C-256	Detailed description of payment result
ReasonCode	C-3	Host answer code (reason for voice or fallback, request)
ReceiptData	C-2048	Transaction send receipt

ReceiptMessage	C-128	Text to print to receipt
RefundActionEnabled	N-1	POS specific parameter
RefundAmount	N-12	Refund amount.
Repeat	N-2	Repeat count for buzzer
RepeatInt	N-5	Delay between repeating in 10 ms
ReqID	C-24	XML command ID
ResidencePermitType	C-64	Residence permit type
Restart	N-1	POS specific parameter
ReturnCode	N-6	Result code of the operation
ReturnReceipts	N-2	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
ReversalActive	N-1	1 – autoreversal active in POS 0 – no autoreversal in POS
ReverseAmount	N-12	Reverse transaction amount
SecAdditionalAmount	N-12	Additional amount in second currency
SecAmount	N-12	Amount in second currency
SecCurrencyName	C-3	Secondary urrency name
SecondaryCurrencyCodeStr	C-3	POS specific parameter
SecondaryCurrencyNameStr	C-3	POS specific parameter
SecondaryCurrencyRate	N-8	POS specific parameter
SelectAmount	N-12	Customer should select amount (partial transaction)
SendTime	C-4	The time of sending the transaction file
SerNo	C-64	Terminal serial number
SerPrintDataRate	N-5	POS specific parameter
ServiceCode	N-3	Service code for the client card
ShowLogo	C-15	POS specific parameter
ShowText1	C-32	POS specific parameter
ShowText2	C-32	POS specific parameter
ShowText3	C-32	POS specific parameter
SignatureRequired	N-1	Signature required on receipt
Stan	N-6	STAN of the payment
StanRev	N-6	Reversed transaction STAN
StartMNT	N-1	POS specific parameter
SubnetMask	C-23	POS specific parameter
SupportedLanguages	C-20	POS specific parameter
Surname	C-64	Surname
TerminalCurrentLanguage	C-2	POS specific parameter
TerminalID	C-8	POS specific parameter
TerminalIndex	C-10	POS specific parameter
TerminalLanguages	C-20	POS specific parameter
TerminalOwnerAddress	C-12	POS specific parameter
TerminalOwnerCountry	C-2	POS specific parameter
TerminalOwnerName	C-25	POS specific parameter
TerminalPrintLanguage	C-2	POS specific parameter
TerminalVersion	C-1	POS specific parameter
TerminalDiscountEnabled	N-1	POS specific parameter
Time	C-19	Terminal current date/time „31.01.2009 15:31:00“

Timeout	N-3	Card waiting time in seconds
TIPAmount	N-12	Payment TIP in cents
TipPercent	N-2	POS specific parameter
Track1	C-64	Card track1
Track2	C-48	Card track2
TransactionCompletion	C-64	Payment completion state „COMPLETED“ – transaction done „NOTIFICATION“ – transaction failed „COMPLETED_REV“ – transaction reversed „WAIT_COMPL_PRE“ – transaction done, but not completed (waiting final amount) „WAIT_COMPL_PART“ – transaction done, but waiting partial reversing
TransactionID	C-16	Unique transaction ID (issued by accounting system)
TransactionsCount	N-3	The number of transactions in the terminal
TransactionSTAN	N-6	Transaction STAN
TransactionTimeStr	N-4	POS specific parameter
TSI	C-4	Transaction status information. EMV data
TT	C-1	Transaction type. EMV data
Type	C-2	Payment type
UnattEmulation	N-1	POS specific parameter
UPN	C-8	Unpredictable number. EMV data
WaitCardTimeout	N-3	POS specific parameter
WaitTaken	N-3	Wait receipt taken in seconds
ValidFrom	C-10	The beginning date of validity
ValidTo	C-10	The ending date of validity
VerificationResult	C-14	Terminal verification result (TVR) . EMV data
VerifyPIN	N-1	1 – verify ID card PIN, 0 or not present – do not verify ID card PIN.
XMLDiscountEnabled	N-1	POS specific parameter
XMLIPPort	N-5	POS specific parameter
XMLMode	N-1	POS specific parameter
Yes	C-12	Affirmative answer text

File	Set	ID	PAN	Name	Exp	Datetime	STAN	F38	F39	Amount
000004	000007	00000001	*****0014	ECMC CARD	****	050112183348	000020	322915	000	1000
000004	000007	00000002	*****0014	ECMC CARD	****	050112183417	000021	322916	000	900
000004	000008	00000003	*****6731	VISA CARD	****	050112183442	000022	266953	000	800
000004	000008	00000003	*****6731	VISA CARD	****	050112183833	000025	266953	000	-800
000004	000008	00000004	*****2986	VISA CARD	****	050112183529	000023		100	(700)

## 2.4 Aggregates

### 2.4.1 Card

Tag	Type	Usage	Explanation
CardID	Element	Optional	Card unic hash
CardName	Element	Optional	Card name if present
CurrencyName	Element	Optional	Currency name ('EUR')
DiscountAmount	Element	Optional	Discounting amount from table
DiscountID	Element	Optional	Discount ID from table
DiscountPercent	Element	Optional	Discounting percent from table
ECRPanID	Element	Optional	If card was in ECRPAN list, then ECRPanID from this list
ECRType	Element	Optional	If card was in ECRPAN list, then ECRType from this list
Expires	Element	Optional	Card expiration date
Pan	Element	Required	Card number
ServiceCode	Element	Required	Card service code
Track1	Element	Optional	Card track1
Track2	Element	Optional	Card track2

### 2.4.2 IDCard

Tag	Type	Usage	Explanation
CardNumber	Element	Required	Card number
Citizenship	Element	Optional	Citizenship
Comment1	Element	Optional	Comment nr 1
Comment2	Element	Optional	Comment nr 2
Comment3	Element	Optional	Comment nr 3
Comment4	Element	Optional	Comment nr 4
DateOfBirth	Element	Optional	Date of birth
FirstName	Element	Required	Forname
Gender	Element	Optional	Gender
IDCode	Element	Required	ID code
MiddleName	Element	Optional	Other fornames
PlaceOfBirth	Element	Optional	Place of birth
ResidencePermitType	Element	Optional	Residence permit type
Surname	Element	Required	Surname
ValidFrom	Element	Required	Card validity start date
ValidTo	Element	Required	Card expiration date

### 3.4.3 TransactionData

Tag	Type	Usage	Explanation
AdditionalAmount	Element	Optional	Specification of the transaction
Amount	Element	Required	Amount of payment
AuthorizationNo	Element	Optional	Authorization number
CardAction	Element	Optional	Source of card data (chip or magnetic strip)
CurrencyName	Element	Optional	Currency name ('EUR')

/

DateTime	Element	Optional	Payment moment
DateTimeRev	Element	Optional	Reversal moment
HostAnswer	Element	Optional	Answer from host
PINVerified	Element	Optional	PIN verified or not
SecAdditionalAmount	Element	Optional	Specification of the transaction in second currency
SecAmount	Element	Optional	Amount of payment in second currency
SecCurrencyName	Element	Optional	Second currency name ('EEK')
SignatureRequired	Element	Optional	Signature in receipt
Stan	Element	Optional	Transaction STAN
StanRev	Element	Optional	Reversal STAN
TransactionCompletion	Element	Optional	Payment completion state
TransactionID	Element	Optional	Unique transaction ID (issued by accounting system)
Type	Element	Optional	Transaction type

### 3.4.4 CardData

Tag	Type	Usage	Explanation
AID	Element	Optional	Application ID
AL	Element	Optional	Application label
CardID	Element	Optional	Card unic hash
CardName	Element	Optional	Card name
Expires	Element	Optional	Card expiration date (**/** for compatibility with older PosXML versions)
Pan	Element	Required	Last 4 numbers of card PAN
PhysicalType	Element	Optional	Card type
ServiceCode	Element	Optional	Card service code

### 3.4.5 TerminalData

Tag	Type	Usage	Explanation
Address	Element	Required	Terminal address
AIP	Element	Optional	EMV data
ApplicationCryptogram	Element	Optional	Application cryptogram (AC) . EMV data
ATC	Element	Optional	EMV data
CID	Element	Optional	EMV data
CVMR	Element	Optional	EMV data
IAD	Element	Optional	EMV data
ID	Element	Required	Terminal ID
MerchantRegNo	Element	Required	Merchant registration number
Name	Element	Required	Terminal name
PayDesk	Element	Required	Paydesk number
PrinterStatus	Element	Optional	Printer paper status
SerNo	Element	Required	Terminal serial number
TSI	Element	Optional	EMV data
TT	Element	Optional	EMV data
UPN	Element	Optional	EMV data
VerificationResult	Element	Optional	Card verification data (TVR). EMV data

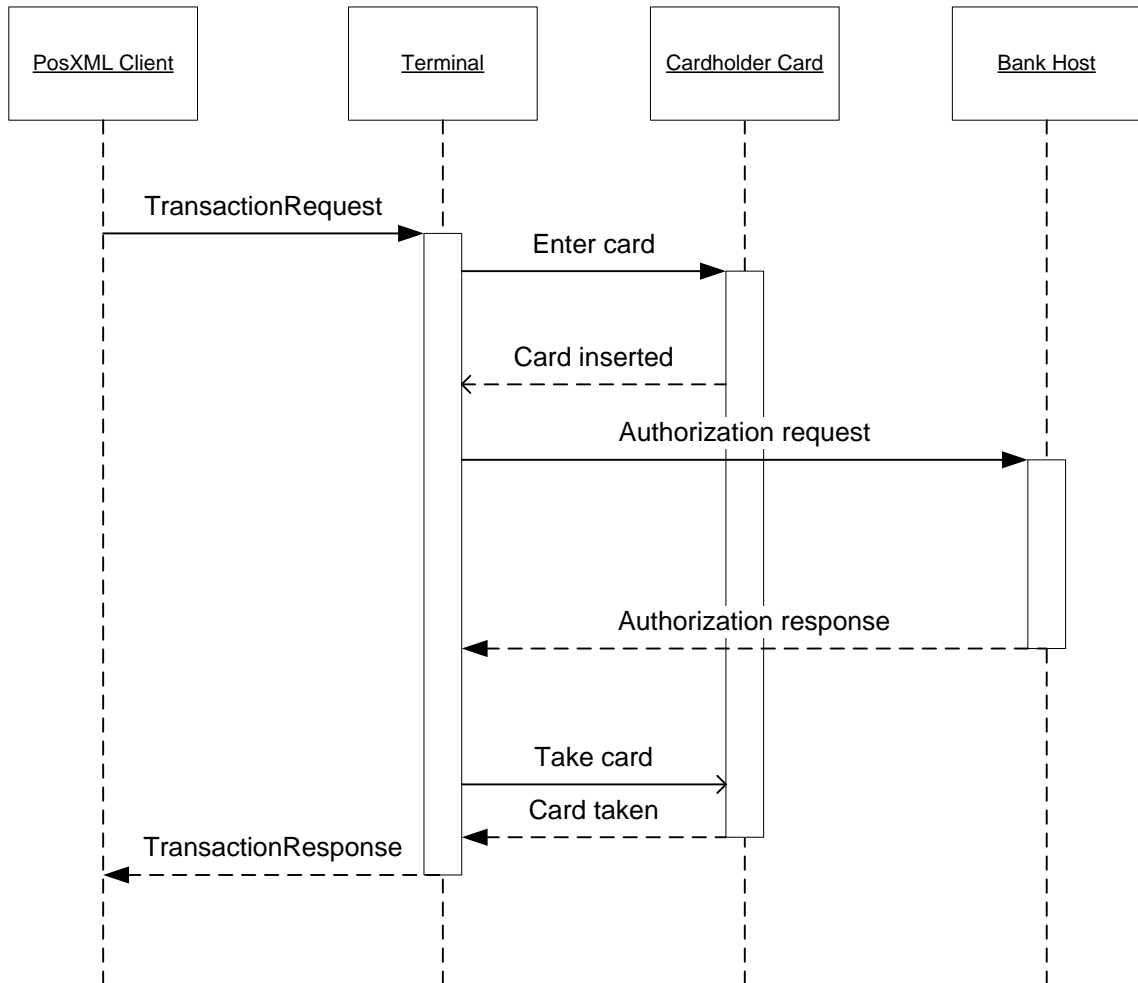
## 2.5 Transaction requests and responses

### 2.5.1 TransactionRequest – TransactionResponse

TransactionRequest is main command that should be implemented by every Client application.

After request is received the Terminal activates it's card reader, displays corresponding text on screen and waits for a customer card. After card is entered the full EMV transaction including host authorization query is performed and result of transaction is given in Transactionresponse.

#### TransactionRequest-TransactionResponse sequence diagram



#### TransactionRequest

Tag	Type	Usage	Explanation
Amount	Element	Required	Amount of payment in cents
AttendantID	Element	Optional	Attendant unic ID. Default – empty.
CardholderPresent	Element	Optional	0 – cardholder present, 1 – cardholder present, 2 – cardholder has sent mail or fax, 3 – cardholder on phone, 4 – cardholder permanent order. Used in conjunction with „Manual“ tag
CardPresent	Element	Optional	0 – card not present, 1 – card present. Used in conjunction with „Manual“ tag
CashbackAuthorisation	Element	Optional	Transaction type

			1 – cash, 0 – no
CurrencyName	Element	Required	Currency name ('EUR')
DiscountEnabled	Element	Optional	1 – Discount request to PosXML Client enabled, 0 – Discount request disabled. Default – 0.
GoodsAuthorisation	Element	Optional	Transaction type 1 – goods, 0 – no
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc). May be overwritten by chip card language
LastFourDigits	Element	Optional	Last four digits from card. Default – empty. If customer card is mag. stripe card and tag is not empty then terminal bypasses manual entering last four digits.
Manual	Element	Optional	Start manual PAN transaction.
PartialAuthorization	Element	Optional	Transaction type 1 – partial authorization, 0 – no
PreAuthorisation	Element	Optional	Transaction type 1 – preauthorisation, 0 – no
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
Timeout	Element	Optional	Card waiting time in seconds. If 0 – wait forever
TipAuthorisation	Element	Optional	Transaction type 1 – TIP, 0 – no
TransactionID	Element	Optional	Transaction unique ID. Default – empty.
UserSelectedAmount	Element	Required	Amount selected by client (partial transaction)

## 2.5.2 CancelAllOperationsRequest – CancelAllOperationsResponse

### CancelAllOperationsRequest

Tag	Type	Usage	Explanation
No parameters			

### CancelAllOperationsResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Result code of the operation

## 2.5.3 FinishTransactionRequest - TransactionResponse

### FinishTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FinishAmount Amount	Element	Optional	Transaction final amount. Amount tag can be one of described in Tag column.

TIPAmount			
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements - TransactionID or TransactionSTAN)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements - TransactionID or TransactionSTAN)

### TransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Required	Card data used for making the transaction
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	requires	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Required	Terminal data used for making the transaction
TransactionData	Aggregate	Required	Transaction data

### 2.5.4 ReverseTransactionRequest – ReverseTransactionResponse

#### ReverseTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Required	Currency name ('EUR')
ForcedAction	Element	Optional	If 1 – do it without card reading
LastFourDigits	Element	Optional	Last four digits from mag. card
PartialReversal	Element	Optional	1 – partial reversal enabled, 0 – partial reversal disabled. Default – 0.
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
ReverseAmount Amount	Element	Optional	Transaction amount. Amount tag can be one of described in Tag column.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements - TransactionID or TransactionSTAN)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements - TransactionID or TransactionSTAN)

#### ReverseTransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Optional	Card data used for making the transaction



CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Terminal data used for making the transaction
TransactionData	Aggregate	Optional	Transaction data

### 2.5.5 RefundTransactionRequest – RefundTransactionResponse

#### RefundTransactionRequest

Tag	Type	Usage	Explanation
CurrencyName	Element	Required	Currency name ('EUR')
OrigAmount	Element	Optional	Original transaction amount.
OrigCardAction	Element	Optional	Original transaction card type.
OrigDate	Element	Optional	Original transaction date.
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
RefundAmount	Element	Optional	Refund amount.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

#### RefundTransactionResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Additional info
CardData	Aggregate	Optional	Card data used for making the transaction
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Terminal data used for making the transaction
TransactionData	Aggregate	Optional	Transaction data

### 2.5.6 ReadCardRequest - ReadCardResponse

#### ReadCardRequest

Tag	Type	Usage	Explanation
Amount	Element	Optional	If present and > 0 terminal waits payment card
CurrencyName	Element	Optional	Currency name ('EUR')
DiscountEnabled	Element	Optional	1 – Discount request to PosXML Client enabled, 0 – Discount request disabled. Default – 0.
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc).
Timeout	Element	Optional	Card waiting time in seconds, if 0 then wait forever

/

**ReadCardResponse**

Tag	Type	Usage	Explanation
Card	Aggregate	Optional	Client card data
IDCard	Aggregate	Optional	ID card data
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Return code for operation
SelectAmount	Element	Optional	Cardholder should select amount (partial transaction)

**2.5.7 ReadIDCardRequest - IDCardResponse****ReadIDCardRequest**

Tag	Type	Usage	Explanation
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc).
Timeout	Element	Optional	Card waiting time in seconds
VerifyPIN	Element	Optional	1 – verify ID card PIN, 0 or not present – do not verify ID card PIN.

**IDCardResponse**

Tag	Type	Usage	Explanation
IDCard	Aggregate	Optional	ID card data
ReturnCode	Element	Required	Operation result code

**2.5.8 GetLastTransactionDataRequest – GetLastTransactionDataResponse****GetLastTransactionDataRequest**

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY“ on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

**GetLastTransactionDataResponse**

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Arbitrary text
CardData	Aggregate	Optional	Data from card that was used for the payment
CustReceipt	Element	Optional	Customer receipt string
MerchReceipt	Element	Optional	Merchant receipt string
Reason	Element	Optional	Error description
ReturnCode	Element	Required	Operation result code
TerminalData	Aggregate	Optional	Data from terminal that was used for the payment
TransactionData	Aggregate	Optional	Transaction details

## 2.6 Reconciliation control requests and responses

### 2.6.1 TransactionSendRequest – TransactionSendResponse

#### TransactionSendRequest

Tag	Type	Usage	Explanation
No parameters			

#### TransactionSendResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Last sent transactions from the transaction file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number
FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsent transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

### 2.6.2 TransactionSendStatusRequest – TransactionSendStatusResponse

#### TransactionSendStatusRequest

Tag	Type	Usage	Explanation
No parameters			

#### TransactionSendStatusResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Last sent transactions from the transaction file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number
FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsent transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

### 2.6.3 TransactionCurrStatusRequest – TransactionCurrStatusResponse

#### TransactionCurrStatusRequest

Tag	Type	Usage	Explanation
No parameters			

#### TransactionCurrStatusResponse

Tag	Type	Usage	Explanation
CurrencyName	Element	Optional	Currency name ('EUR')
FileData	Element	Optional	Current (not sent jet) transactions in terminal file.
FileDateTime	Element	Optional	Date and time of the transaction file
FileNumber	Element	Optional	Transaction file number
FileSendStatus	Element	Optional	Status of sending the transaction file
FileTotalAmount	Element	Optional	The total of transactions in the transaction file
FileTransactionCount	Element	Optional	The number of transactions in the transaction file
PendingCount	Element	Optional	Number of unsend transactions
ReceiptData	Element	Optional	Current (not sent jet) transactions receipt.
ReturnCode	Element	Required	Operation result code
SendTime	Element	Optional	Transaction sending time

## 2.7 Printing requests and responses

### 2.7.1 PrintImageFileRequest – PrintImageFileResponse

#### PrintImageFileRequest

Tag	Type	Usage	Explanation
ImageFileName	Element	Required	Preloaded image file name in terminal.

#### PrintImageFileResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Result code of the operation

### 2.7.2 PrintLineRequest – PrintLineResponse

#### PrintLineRequest

Tag	Type	Usage	Explanation
AddLines	Element	Optional	Number of additional rows for printing. The number of Line1..24 fields has to be equal to that.
FormFeed	Element	Optional	1 - eject receipt, 0 or element not present – don't eject Default - 0
Language	Element	Optional	Print language ('en', 'ru', 'et', etc)
Line	Element	Required	Symbols to be printed by POS. Maximum number of symbols in one message is 2000 bytes. The message may contain a line feed symbol LF (0AH).
Line1..24	Element	Optional	Symbols POS has to print. Maximum number of symbols in one message is 2000 bytes. The message may contain a line feed symbol LF (0AH).
LineFeedCount	Element	Optional	Linefeeds at the end of printing
WaitTaken	Element	Optional	Max wait taken time in seconds (external printer only).

#### PrintLineResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status

ReturnCode	Element	Required	Result code of the operation
------------	---------	----------	------------------------------

**2.7.3 PrintCustomerReceiptRequest – PrintCustomerReceiptResponse**

**PrintCustomerReceiptRequest**

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY“ on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

**PrintCustomerReceiptResponse**

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
CustReceipt	Element	Optional	Customer receipt string
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Result code of the operation

**2.7.4 PrintMerchantReceiptRequest – PrintMerchantReceiptResponse**

**PrintMerchantReceiptRequest**

Tag	Type	Usage	Explanation
Copy	Element	Optional	Print „COPY“ on receipt
PrintReceipt	Element	Optional	0 – merchant receipt, 1 – merchant and customer receipts, 2 – none; Default – 1.
ReturnReceipts	Element	Optional	24-64 - return receipt strings. Line length 24-64 characters. Default – none.
TransactionID	Element	Optional	Transaction ID (has to be one of two elements)
TransactionSTAN	Element	Optional	Transaction STAN (has to be one of two elements)

**PrintMerchantReceiptResponse**

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
MerchReceipt	Element	Optional	Merchant receipt string
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

**2.7.5 PrintLineFeedRequest - PrintLineFeedResponse**

**PrintLineFeedRequest**

Tag	Type	Usage	Explanation
Count	Element	Optional	Number of rows

**PrintLineFeedResponse**

Tag	Type	Usage	Explanation
-----	------	-------	-------------

AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

## 2.7.6 PrintFormFeedRequest - PrintFormFeedResponse

### PrintFormFeedRequest

Tag	Type	Usage	Explanation
WaitTaken	Element	Optional	Max wait taken time in seconds

### PrintFormFeedResponse

Tag	Type	Usage	Explanation
AdditionalInfo	Element	Optional	Error explanation
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code

## 2.8 Miscellaneous requests and responses

### 2.8.1 ChangeLanguageRequest – ChangeLanguageResponse

#### ChangeLanguageRequest

Tag	Type	Usage	Explanation
CardholderLanguage	Element	Optional	Language code for cardholder ('en', 'ru', 'et', 'lv', 'lt', 'fr')
DisplayLanguage	Element	Optional	Language code for display ('en', 'et', 'lv', 'lt')
MerchantLanguage	Element	Optional	Language code for merchant ('en', 'et', 'lv', 'lt')
PrinterLanguage	Element	Optional	Language code for printer ('en', 'et', 'lv', 'lt')

#### ChangeLanguageResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

### 2.8.2 DisplayMessageRequest – DisplayMessageResponse

#### DisplayMessageRequest

Tag	Type	Usage	Explanation
Action	Element	Optional	0 – clear all previously sent DisplayMessageRequest parameters 1 – use parameters LineX 2 – use parameters MessageXID
BackLight	Element	Optional	0 – turns backlight off, 1 - turns backlight on
Destination	Element	Optional	Message destination 1 – terminal, 2 – pinpad, 3 - both
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Optional	String to display line 1
Line2	Element	Optional	String to display line 2
Line3	Element	Optional	String to display line 3
Line4	Element	Optional	String to display line 4
Message1ID	Element	Optional	String ID in terminal application to display line 1
Message2ID	Element	Optional	String ID in terminal application to display line 2

Message3ID	Element	Optional	String ID in terminal application to display line 3
Message4ID	Element	Optional	String ID in terminal application to display line 4

**DisplayMessageResponse**

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

**2.8.3 ShowInfoRequest – ShowInfoResponse****ShowInfoRequest**

Tag	Type	Usage	Explanation
AnswerType	Element	Optional	0-2 - predefined Yes/No strings in terminal. If „Yes“ or „No“ present in request, then predefined strings are not used. 101-124 – numeric input required (length = AnswerType – 100). Only Line1 and Line2 are displayed and input is done in Line3. Default 0
Destination	Element	Optional	Message destination 1 – terminal, 2 – pinpad, 3 - both
Language	Element	Optional	Language code for display ('en', 'ru', 'et', etc)
Line1	Element	Optional	String to display line 1
Line2	Element	Optional	String to display line 2
Line3	Element	Optional	String to display line 3
No	Element	Optional	String to display refusal answer
Password	Element	Optional	Masked input (*)
Timeout	Element	Optional	Answer waiting time in seconds
Yes	Element	Optional	String to display affirmative answer

**ShowInfoResponse**

Tag	Type	Usage	Explanation
Input	Element	Optional	Numeric input if required
ReturnCode	Element	Required	Operation result code

**2.8.4 GetTerminalStatusRequest – GetTerminalStatusResponse****GetTerminalStatusRequest**

Tag	Type	Usage	Explanation
No parameters			

**GetTerminalStatusResponse**

Tag	Type	Usage	Explanation
CardStatus	Element	Required	Card present status 1 – present in reader 0 – not present in reader 2 – unknown (some error)
DisplayLanguage	Element	Optional	Default language code for display
NextSTAN	Element	Required	Next transaction unic number for host
NotFinishedTransactionsCount	Element	Required	The number of not finished (preauthorised) transactions in the

			terminal
PrinterLanguage	Element	Optional	Default language code for printer
PrinterStatus	Element	Optional	Printer paper status
ReturnCode	Element	Required	Operation result code
ReversalActive	Element	Required	Autoreversal state
Time	Element	Required	Terminal current date/time „31.01.2009 15:31:00“
TransactionsCount	Element	Required	The number of transactions in the terminal

## 2.8.5 GetParametersRequest – GetParametersResponse

### GetParametersRequest

Tag	Type	Usage	Explanation
No parameters			

### GetParametersResponse

Tag	Type	Usage	Explanation
AcquiringInstitutionID	Element	Optional	
AmountBefore	Element	Optional	
AttendantIDUsed	Element	Optional	
CardAcceptorBusinessCode	Element	Optional	
CardAcceptorID	Element	Optional	
CardAcceptorNameLocation	Element	Optional	
CDASupported	Element	Optional	
CountryCodeStr	Element	Optional	
CurrencyCodeStr	Element	Optional	
CurrencyExpChar	Element	Optional	
CurrencyNameStr	Element	Optional	
CustomerInputTimeout	Element	Optional	
CustomPrint	Element	Optional	
DebugEnabled	Element	Optional	
DEProtoVer	Element	Optional	
DUKPTInitialized	Element	Optional	
DWLIPAddress	Element	Optional	
DWLIPPort	Element	Optional	
DWLMode	Element	Optional	
EMVDUKPTUsed	Element	Optional	
EMVOnlinePINOnly	Element	Optional	
EthernetUsed	Element	Optional	
GatewayIPAddress	Element	Optional	
HostIPAddressA	Element	Optional	
HostIPAddressT	Element	Optional	



---

HostIPPortA	Element	Optional	
HostIPPortT	Element	Optional	
HostMode	Element	Optional	
HostPhoneNumber	Element	Optional	
HostPhonePrefix	Element	Optional	
HostSSLUsed	Element	Optional	
HostType	Element	Optional	
HostX25	Element	Optional	
IDCardEnabled	Element	Optional	
IPAddressMode	Element	Optional	
LocalIPAddress	Element	Optional	
MagNotUsed	Element	Optional	
MerchantID	Element	Optional	
MerchantInputTimeout	Element	Optional	
MerchantRegNo	Element	Optional	
MinCustomerAmount	Element	Optional	
PANStarsMask	Element	Optional	
PayDesk	Element	Optional	
PingEnabled	Element	Optional	
PINInputTimeout	Element	Optional	
PinpadEmulation	Element	Optional	
PreAuthPercent	Element	Optional	
PrinterFooter	Element	Optional	
PrinterHeader	Element	Optional	
PrinterMode	Element	Optional	
PrinterTerminalOwnerAddress	Element	Optional	
PrinterTerminalOwnerName	Element	Optional	
RefundActionEnabled	Element	Optional	
SeconCurrencyNameStr	Element	Optional	
SecondaryCurrencyRate	Element	Optional	
SecondCurrencyCodeStr	Element	Optional	
SerPrintDataRate	Element	Optional	
ShowLogo	Element	Optional	
ShowText1	Element	Optional	
ShowText2	Element	Optional	
ShowText3	Element	Optional	
SubnetMask	Element	Optional	
SupportedLanguages	Element	Optional	
TerminalCurrentLanguage	Element	Optional	

TerminalDiscountEnabled	Element	Optional	
TerminalID	Element	Optional	
TerminalIndex	Element	Optional	
TerminalLanguages	Element	Optional	
TerminalOwnerAddress	Element	Optional	
TerminalOwnerCountry	Element	Optional	
TerminalOwnerName	Element	Optional	
TerminalPrintLanguage	Element	Optional	
TerminalVersion	Element	Optional	
TipPercent	Element	Optional	
TransactionTimeStr	Element	Optional	
UnattEmulation	Element	Optional	
WaitCardTimeout	Element	Optional	
XMLDiscountEnabled	Element	Optional	
XMLIPPort	Element	Optional	
XMLMode	Element	Optional	

## 2.8.6 DoBeepRequest – DoBeepResponse

### DoBeepRequest

Tag	Type	Usage	Explanation
Duration1	Element	Optional	* 10ms
Duration2	Element	Optional	* 10ms
Duration3	Element	Optional	* 10ms
Frquency1	Element	Optional	Hz
Frquency2	Element	Optional	Hz
Frquency3	Element	Optional	Hz
Interval1	Element	Optional	* 10ms
Interval2	Element	Optional	* 10ms
Interval3	Element	Optional	* 10ms
Repeat	Element	Optional	times
RepeatInt	Element	Optional	* 10ms

### DoBeepResponse

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

## 2.8.7 Error

Tag	Type	Usage	Explanation
ReturnCode	Element	Required	Operation result code

## 2.9 ReturnCodes

Response messages may contain the following ReturnCode values:

ReturnCode	Category	Explanation
0	Info	Operation succeeded
1	Info	Card inserted
32769	Error	XML message error
32770	Error	Wrong XML message version
32771	Error	Incorrect parameter in the XML message
32772	Error	Communication problem
32773	Error	XML syntax error
32774	Error	Technical error
32775	Error	Sequence error
32776	Error	Timeout. Could not perform operation within specified time period
32778	Error	Transaction failed
32779	Error	Operation can not be performed, try again
32780	Error	Disconnected from the client
32781	Error	Specified transaction missing
32782	Error	Operation cancelled manually
32783	Error	This command is not supported by POS (for example because of terminal configuration)
32784	Error	ID card PIN error
32785	Error	Smartcard reader error
32786	Error	Amount error
32787	Error	Currency error

## Appendix 1. Message examples

### 1. ReadCardRequest - ReadCardResponse

```
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <ReadCardRequest>
  </ReadCardRequest>
</PosXML>

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <ReadCardResponse>
    <ReturnCode>0</ReturnCode>
    <Card>
      <Pan>9233660000103227</Pan>
      <Expires>07/05</Expires>
      <ServiceCode>700</ServiceCode>
    </Card>
  </ReadCardResponse>
</PosXML>
```

### 2. ReadIDCardRequest - IDCardResponse

```
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <ReadIDCardRequest>
  </ReadIDCardRequest>
</PosXML>

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <IDCardResponse>
    <ReturnCode>0</ReturnCode>
    <IDCard>
      <Surname>Smith</Surname>
      <FirstName>John</FirstName>
      <MiddleName></MiddleName>
      <Gender>M</Gender>
      <IDCode>30901010245</IDCode>
      <CardNumber>A01234567</CardNumber>
      <ValidFrom>01.01.2009</ValidFrom>
      <ValidTo>01.01.2019</ValidTo>
      <Citizenship>EST</Citizenship>
      <PlaceOfBirth>Tallinn</PlaceOfBirth>
      <DateOfBirth>01.01.2009</DateOfBirth>
      <ResidencePermitType></ResidencePermitType>
    </IDCard>
  </IDCardResponse>
</PosXML>
```

### 3. TransactionRequest - TransactionResponse

```
<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionRequest>
    <Amount>50000</Amount>
    <CurrencyName>EUR</CurrencyName>
    <TransactionID>ABC123</TransactionID>
    <PrintReceipt>48</PrintReceipt>
  </TransactionRequest>
</PosXML>
```

(online transaction with chip card)

```

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionResponse>
    <ReturnCode>0</ReturnCode>
    <Reason></Reason>
    <TransactionData>
      <TransactionID>ABC123</TransactionID>
      <Amount>50000</Amount>
      <AdditionalAmount>0</AdditionalAmount>
      <DateTime>07.01.2009 13:40:13</DateTime>
      <Stan>000072</Stan>
      <Type>T1</Type>
      <CardAction>2</CardAction>
      <AuthorizationNo>054247</AuthorizationNo>
      <SecAmount>3196</SecAmount>
      <SecAdditionalAmount>0</SecAdditionalAmount>
      <CurrencyName>EUR</CurrencyName>
      <SecCurrencyName>EEK</SecCurrencyName>
      <SignatureRequired>0</SignatureRequired>
      <PINVerified>1</PINVerified>
    </TransactionData>
    <CardData>
      <PhysicalType>41</PhysicalType>
      <Pan>*****1570</Pan>
      <CardName>HANSA VISA KREDIIT</CardName>
      <Expires>*/**</Expires>
      <ServiceCode>201</ServiceCode>
      <AL>Visa Credit</AL>
      <AID>A0000000031010</AID>
    </CardData>
    <TerminalData>
      <SerNo>9026808847</SerNo>
      <ID>VOC21201</ID>
      <Name>KAUBAMAJA!</Name>
      <Address>TALLINN, KAUBA 1</Address>
      <MerchantRegNo>11060344</MerchantRegNo>
      <PayDesk>005</PayDesk>
      <VerificationResult>0080000800</VerificationResult>
      <ApplicationCryptogram>FA92BA6EF529E091</ApplicationCryptogram>
      <CID>40</CID>
      <TSI>F800</TSI>
      <CVMR>010302</CVMR>
      <IAD>06010A03642000</IAD>
      <UPN>BD60438A</UPN>
      <ATC>0062</ATC>
      <AIP>5C00</AIP>
      <TT>0</TT>
      <PrinterStatus>2</PrinterStatus>
    </TerminalData>
    <AdditionalInfo></AdditionalInfo>
    <MerchReceipt>
      CARD PAYMENT RECEIPT
      KAUBAMAJA! TALLINN, KAUBA 1
      Terminal:VOC21201   Reg:11060344   Paydesk:005
      Receipt:000072     Time:07.01.2009-13:40:13
      Author. no: 054247   T1
      TRANSACTION DONE
      Amount:                                     500.00 EUR
                                              (31.96 EEK)
      Payment card: HANSA VISA KREDIIT

```

```

PAN:*****1570
AL: Visa Credit
AID:A000000031010
CID:40 TC:FA92BA6EF529E091
TVR:0080000800 TSI:F800 CVMR:010302
IAD:06010A03642000
UPN:BD60438A TT:0 AIP:5C00 ATC:0062
PIN CHECKED
</MerchReceipt>
<CustReceipt>
CARD PAYMENT RECEIPT
KAUBAMAJA! TALLINN, KAUBA 1
Terminal:VOC21201 Reg:11060344 Paydesk:005
Receipt:000072 Time:07.01.2009-13:40:13
Author. no: 054247 T1
TRANSACTION DONE
Amount: 500.00 EUR
(31.96 EEK)

Payment card: HANSA VISA KREDIIT
PAN:*****1570
AL: Visa Credit
AID:A000000031010
PIN CHECKED
Retain receipt for statement verification
</CustReceipt>
</TransactionResponse>
</PosXML>

```

#### 4. TransactionRequest - TransactionResponse

```

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionRequest>
    <Amount>10000</Amount>
    <CurrencyName>EUR</ CurrencyName>
    <TransactionID>ABC124</TransactionID>
    <PrintReceipt>48</PrintReceipt>
  </TransactionRequest>
</PosXML>

```

(online declined transaction with chip card)

```

<?xml version="1.0" encoding="UTF-8" ?>
<PosXML version="7.1.0">
  <TransactionResponse>
    <ReturnCode>32778</ReturnCode>
    <Reason>
      Card declined transaction. System error! (909).. Return card!.
    </Reason>
    <TransactionData>
      <TransactionID>ABC124</TransactionID>
      <Amount>10000</Amount>
      <AdditionalAmount>0</AdditionalAmount>
      <DateTime>07.01.2009 13:51:02</DateTime>
      <Stan>000073</Stan>
      <Type>T1</Type>
      <CardAction>2</CardAction>
      <AuthorizationNo> </AuthorizationNo>
      <SecAmount>639</SecAmount>
      <SecAdditionalAmount>0</SecAdditionalAmount>
      <CurrencyName>EUR</CurrencyName>
      <SecCurrencyName>EEK</SecCurrencyName>
      <SignatureRequired>0</SignatureRequired>
    </TransactionData>
  </TransactionResponse>
</PosXML>

```

```

        <PINVerified>1</PINVerified>
    </TransactionData>
    <CardData>
        <PhysicalType>41</PhysicalType>
        <Pan>*****1570</Pan>
        <CardName>HANSA VISA KREDIIT</CardName>
        <Expires>*/**</Expires>
        <ServiceCode>201</ServiceCode>
        <AL>Visa Credit</AL>
        <AID>A0000000031010</AID>
    </CardData>
    <TerminalData>
        <SerNo>9026808847</SerNo>
        <ID>VOC21201</ID>
        <Name>KAUBAMAJA!</Name>
        <Address>TALLINN, KAUBA 1</Address>
        <MerchantRegNo>11060344</MerchantRegNo>
        <PayDesk>005</PayDesk>
        <VerificationResult>0080000800</VerificationResult>
        <ApplicationCryptogram>1CE06FC829F004E9</ApplicationCryptogram>
        <CID>00</CID>
        <TSI>E800</TSI>
        <CVMR>010302</CVMR>
        <IAD>06010A03240400</IAD>
        <UPN>C49A93CE</UPN>
        <ATC>0063</ATC>
        <AIP>5C00</AIP>
        <TT>0</TT>
        <PrinterStatus>2</PrinterStatus>
    </TerminalData>
    <AdditionalInfo></AdditionalInfo>
    <MerchReceipt>
        ERRORMESSAGE
        Terminal:VOC21201    Reg:11060344    Paydesk:005
        Receipt:000073      Time:07.01.2009-13:51:02
        Transaction failed
        Card declined transaction
        System error! (909).
        Return card!

        Payment card: HANSA VISA KREDIIT
        PAN:*****1570
        AL: Visa Credit
        AID:A0000000031010
        CID:00 TC:1CE06FC829F004E9
        TVR:0080000800 TSI:E800 CVMR:010302
        IAD:06010A03240400
        UPN:C49A93CE TT:0 AIP:5C00 ATC:0063
    </MerchReceipt>
    <CustReceipt></CustReceipt>
</TransactionResponse>
</PosXML>

```

## Appendix 2. Control codes for printing

Each line may contain formatting code blocks. A code block has effect only on current line. Block begins with "{" and ends with "\*}". Inside block may be several formatting codes separated with comma.

Printing result depends on printer type terminal uses).

- Aligement (default – left)

CNT – center

RGT – right

- Format (default – normal)

BLD – bold

REV – dark background

ITA – italic

UND – underlined

- Letter size (default 48 symbols, normal size)

11C – 32 symbols per line

15C – 42 symbols per line

20C – 48 symbols per line

DHT – double letter height

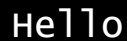
DWD – double letter width

DWH – double letter height and width

QWH – quardo letter height and width

For example "{\*11C,CNT,REV,DWH\*}Hello"

Will be printed as a centered text on dark background with double letter height stal.



He11o