Level II and Level III Transactions

Supplement to the *Credit Card Services User Guide*

April 2018

CyberSource®

the power of payment

CyberSource Contact Information

For technical support questions, go to the Home page in the Business Center to see the contact information appropriate for your account.

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For sales questions about any CyberSource Service, email sales@cybersource.com or call 650-432-7350 or 888-330-2300 (toll free in the United States).

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Recent Revisions to This Document

Release	Changes
April 2018	GPN: updated the descriptions for the following fields, which are listed in "Order-Level Fields," page 62 and "Item-Level Fields," page 65. • invoiceHeader_summaryCommodityCode • purchaseTotals_discountAmount fields • item_#_discountAmount
December 2017	This revision contains only editorial changes and no technical updates.
August 2017	Moved the relaxed requirements information to a web page: Relaxed Requirements for Address Data and Expiration Date page.
January 2017	All processors: added "Numbered Elements," page 14.
September 2016	All processors: updated the terminology in step 5 of "Requesting Captures and Credits with Level III Data," page 16. The step had previously referred to captures but it was updated to refer to credits. All processors: updated description for **item_#_productCode** field to specify when the field is required. All processors that support Level III transactions: updated description for **item_#_unitPrice** field to specify that the value cannot be zero (0) for a Level III transaction. FDC Compass: updated requirements for **item_#_commodityCode**. See "Item-Level Fields," page 36. GPN: Updated Level III requirements for the following item-level fields: **item_#_commodityCode, item_#_discountAmount, item_#_discountRate, item_#_productCode, item_#_quantity, item_#_unitOfMeasure, item_#_unitPrice**. See "Item-Level Fields," page 65.
March 2016	Chase Paymentech Solutions, FDC Compass, FDC Nashville Global, FDMS South, and GPN: added support for relaxed requirements for address data and expiration dates. See "Relaxed Requirements for Address Data and Expiration Date," page 12.

About This Guide

Audience and Purpose

This guide is written for application developers who want to use the CyberSource Simple Order API to integrate credit card processing with Level II or Level III data into their order management system.

Implementing the CyberSource credit card services requires software development skills. You must write code that uses the API request and reply fields to integrate the credit card services with Level II or Level III data into your existing order management system.

Conventions

The following special statements are used in this document:

Note	A *Note* contains helpful suggestions or references to material not contained in this document.

Important	An *Important* statement contains information essential to successfully completing a task or learning a concept.

The following text conventions are used in this document:

Convention	Meaning
bold	Field and service names in text; for example: Include the **ccCaptureService_run** field.
italic	Titles of documents

Convention	Meaning
`screen text`	■ XML elements ■ Code examples ■ Values for API fields; for example: Set the **ccCaptureService_run** field to `true`.

Related Documentation

■ The *Credit Card Services User Guide* (PDF | HTML) describes how to integrate CyberSource payment processing services into your business.

Refer to the Support Center for complete CyberSource technical documentation:

http://www.cybersource.com/support_center/support_documentation

Customer Support

For support information about any CyberSource service, visit the Support Center:

http://www.cybersource.com/support

Introduction to Level II and Level III Processing

This supplement to the *Credit Card Services User Guide* describes:

- Level II processing for American Express, Visa, and Mastercard
- Level III processing for Visa and Mastercard

After this introductory chapter, there is a chapter for each processor that supports Level II or Level III.

Important This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Prerequisites for Level II Processing

To activate Level II processing for American Express, contact American Express and CyberSource Customer Support.

On OmniPay Direct, when you are ready to go live with Level II processing, contact CyberSource Customer Support to have your account configured to process Level II data. If your account is not enabled, and you try to send Level II transactions on OmniPay Direct, you will receive an error for invalid data.

Prerequisites for Level III Processing

Check with your processor to determine whether you need to add Level III processing to your contract or account setup.

When you are ready to go live with Level III processing, contact CyberSource Customer Support to have your account configured to process Level III data. If your account is not enabled, and you try to send Level III transactions, you will receive an error for invalid data.

Supported Processors and Card Types

Table 1   Supported Processors and Card Types

Processor	Level II Card Types Supported	Level III Card Types Supported
Chase Paymentech Solutions	Visa Mastercard American Express	Visa Mastercard
FDC Compass	Visa Mastercard American Express	Visa Mastercard
FDC Nashville Global	Visa Mastercard American Express	Visa Mastercard
FDMS Nashville	Visa Mastercard	None
FDMS South	Visa Mastercard	None
GPN	Visa Mastercard	Visa Mastercard
RBS WorldPay Atlanta	Visa Mastercard	Visa Mastercard
TSYS Acquiring Solutions	Visa Mastercard	Visa Mastercard

About Level II Data

Level II cards, which are also called *Type II cards*, provide customers with additional information on their credit card statements about their purchases. Level II cards enable customers to easily track the amount of sales tax they pay and to reconcile transactions with a unique customer code. There are two categories of Level II cards:

■   Business/corporate cards are given by businesses to employees for business-related expenses such as travel and entertainment or for corporate supplies and services.

■   Purchase/procurement cards are used by businesses for expenses such as supplies and services. These cards are often used as replacements for purchase orders.

Each processor supports a different set of Level II fields. If your business is not in the United States, you must use additional fields.

About Level III Data

You can provide Level III data for purchase/procurement cards, which are used by businesses for expenses such as supplies and services. These cards are often used as replacements for purchase orders. The Level III data is forwarded to the company that made the purchase, and it enables the company to manage its purchasing activities.

CyberSource Level II and Level III Data Processing

CyberSource does not store the Level II and Level III data. Instead, it functions as a pass-through service for the data. If you request multiple partial captures or credits for an order, you must include the Level II and Level III data in each request.

CyberSource enforces only a minimal level of field validation to avoid interfering with the business policies between you and the companies that purchase your goods and services.

Note CyberSource temporarily disables your account's Level III processing capability and contacts you if your Level III transactions produce batching errors when the information is sent to your processor. When this happens, your request is not rejected, but the reply message from CyberSource includes a field indicating that the Level III information was ignored and was not sent to the processor.

- For captures, the reply field is **ccCaptureReply_ purchasingLevel3Enabled**.
- For credits, the reply field is **ccCreditReply_purchasingLevel3Enabled**.

The possible values for the reply fields are:

- Y: the Level III data was included in the request to the processor.
- N: the Level III data was not included in the request to the processor.

Relaxed Requirements for Address Data and Expiration Date

To enable relaxed requirements for address data and expiration date, contact CyberSource Customer Support to have your account configured for this feature. For details about relaxed requirements, see Relaxed Requirements for Address Data and Expiration Date page.

Using Decimals and Strings

CyberSource uses decimal points in all amount and tax rate fields; CyberSource does not use implied decimal points. For example, if the amount of the product being purchased is 29.95, set that field to `29.95`.

For tax rates used with Level III transactions, you need to include a decimal point in the value. For example, if a tax rate is 1%, you should set that field to `0.01`.

For many of the fields described in this document, Visa and Mastercard permit different lengths for alphanumeric (string) input. CyberSource accepts any length you provide. If the value you provide is longer than the payment card company permits, CyberSource truncates the value, keeping the left-most portion of the value. If the value you provide is shorter than the payment card company requires, CyberSource pads the field before sending it to the processor.

Numbered Elements

The CyberSource XML schema includes several numbered elements. You can include these complex elements more than once in a request. For example, if a customer order includes more than one item, you must include multiple `<item>` elements in your request. Each item is numbered, starting with `0`. The XML schema uses an `id` attribute in the item's opening tag to indicate the number. For example:

```
<item id="0">
```

For the name-value pair field names, this tag is represented as **item_0**. In this portion of the field name, the underscore before the number does not indicate hierarchy in the XML schema. The item fields are generically referred to as **item_#_<element name>** in the documentation.

Below is an example of the numbered `<item>` element and the corresponding name-value pair field names. If you are using SOAP, the client contains a corresponding `Item` class.

Example 1   Numbered XML Schema Element Names and Name-Value Pair Field Names

XML Schema Element Names	Corresponding Name-Value Pair Field Names

`<item id="0">`
  `<unitPrice>`
  `<quantity>`
`</item>`
	item_0_unitPrice
	item_0_quantity

`<item id="1">`
  `<unitPrice>`
  `<quantity>`
`</item>`
	item_1_unitPrice
	item_1_quantity

!
Important

When a request is in XML format and includes an `<item>` element, the element must include an `id` attribute. For example: `<item id="0">`.

Requesting Captures and Credits with Level II Data

To include Level II data in a capture or credit request:

Step 1 Authorize a credit card payment.

Step 2 Capture the authorization.

Include the following information in the capture request:

- Level II data: see the chapter in this document for the processor you are using. Also see "Using Decimals and Strings," page 13.

> **⚠ Important**
> If you omit required Level II fields from a request, the transaction does not result in an error. Instead, it is processed as a regular non-Level II transaction. However, your processor could charge you penalties or increase your fees. Contact your processor to ensure you understand your processor's specific requirements for Level II transactions.

- Basic fields required for every capture request.

  For more information, see the *Credit Card Services User Guide.*

Step 3 If necessary, credit the payment.

Include the following information in the credit request:

- Level II data: see the chapter in this document for the processor you are using. Also see "Using Decimals and Strings," page 13.

> **⚠ Important**
> If you omit required Level II fields from a request, the transaction does not result in an error. Instead, it is processed as a regular non-Level II transaction. However, your processor could charge you penalties or increase your fees. Contact your processor to ensure you understand your processor's specific requirements for Level II transactions.

> **✎ Note**
> OmniPay Direct does not require Level II data for credits. When you include Level II data in a credit request for OmniPay Direct, CyberSource does not pass the Level II data to OmniPay Direct.

> **✎ Note**
> RBS WorldPay Atlanta does not require Level II data for credits.

■ Basic fields required for every credit request.

For more information, see the *Credit Card Services User Guide*.

Requesting Captures and Credits with Level III Data

To include Level III data in a capture or credit request:

Step 1 Authorize a credit card payment.

CyberSource recommends that for Level III transactions you include the total order amount in the authorization request, even though it is not required. Doing so ensures that CyberSource uses your total order amount and that the capture or credit request total amount matches the original authorization total amount. The field to use in the authorization request is **purchaseTotals_grandTotalAmount**.

Step 2 Capture the authorization.

Include the following information in the capture request:

■ Level II and Level III data: see the chapter in this document for the processor you are using. Also see "Using Decimals and Strings," page 13.

■ Purchasing level field: the field name is **ccCaptureService_purchasingLevel**. Set this field to 3 to indicate that the request includes Level III data.

■ Basic fields required for every capture request.

For more information, see the *Credit Card Services User Guide*.

Step 3 For all processors except CyberSource through VisaNet, check the capture reply message.

The reply message includes a field that indicates whether CyberSource sent the Level III information to the processor. The field name is **ccCaptureReply_ purchasingLevel3Enabled**. The possible values are:

- Y: the account is enabled for Level III transactions. The Level III data was included in the request to the processor.

- N: the account is not enabled for Level III transactions. The Level III data was not included in the request to the processor.

If your account is not enabled for Level III data or if you did not include the purchasing level field in your request, CyberSource does not include the Level III data in the request sent to the processor.

Step 4 If necessary, credit the payment.

Include the following information in the credit request:

- Level II and Level III data: see the chapter in this document for the processor you are using. Also see "Using Decimals and Strings," page 13.

> **Note** OmniPay Direct does not require Level III data for credits. When you include Level III data in a credit request for OmniPay Direct, CyberSource does not pass the Level II data to OmniPay Direct.

> **Note** RBS WorldPay Atlanta does not require Level II data for credits.

- Purchasing level field: the field name is **ccCreditService_purchasingLevel** Set this field to 3 to indicate that the request includes Level III data.

- Basic fields required for every credit request.

  For more information, see the *Credit Card Services User Guide*.

Step 5   For all processors except CyberSource through VisaNet, check the credit reply message.

The reply message includes a field that indicates whether CyberSource sent the Level III information to the processor. The field name is **ccCreditReply_ purchasingLevel3Enabled**. The possible values are:

- Y: the account is enabled for Level III transactions. The Level III data was included in the request to the processor.

- N: the account is not enabled for Level III transactions. The Level III data was not included in the request to the processor.

If your account is not enabled for Level III data or if you did not include the purchasing level field in your request, CyberSource does not include the Level III data in the request sent to the processor.

Chase Paymentech Solutions: Level II and Level III

Transaction Requirements

> **! Important**
> When you send a capture or credit request with Level II or Level III data or both, you must include the required fields for every capture or credit request. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

> **! Important**
> This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specifications that CyberSource used to implement Level III processing for Chase Paymentech Solutions are:

■ *Paymentech's 120-Byte Technical Specification, Rev 2.0.0*, December 8, 2003

■ *Paymentech's 96-Byte and 120-Byte Batch Technical Specification Addendum, Rev. 2.0.0*, April 1, 2004

The records referenced are:

■ Procurement Level 3 — Visa: Order Level Record, Record #1, Record #2

■ Procurement Level 3 — Mastercard: Order Level Record, Record #1, Record #2

Order-Level Fields

Table 2   Order-Level Fields for Chase Paymentech Solutions

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_ purchasingLevel	No corresponding Chase Paymentech Solutions field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for captures; not used for credits) ■ Mastercard (R for captures; not used for credits)	String (1)
ccCreditService_ purchasingLevel	No corresponding Chase Paymentech Solutions field	Flag that indicates the credit request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for credits; not used for captures) ■ Mastercard (R for credits; not used for captures)	String (1)

Table 2   Order-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ amexDataTAA1 invoiceHeader_ amexDataTAA2 invoiceHeader_ amexDataTAA3 invoiceHeader_ amexDataTAA4	TAA1 TAA2 TAA3 TAA4	Four transaction advice addendum fields. These fields are used to display descriptive information about a transaction on your customer's American Express card statement. If you are sending any TAA fields, start with **invoiceHeader_amexDataTAA1**, then **...TAA2**, and so on. Skipping a TAA field causes subsequent TAA fields to be ignored. Contact CyberSource Customer Support if you plan to use these fields so that your account can be configured appropriately. The **invoiceHeader_amexDataTAA1** field is required for Level II transactions for American Express cards for Chase Paymentech Solutions, but the other TAA fields are optional. However, if you are including the request ID (**ccCreditService_captureRequestID**) in a Level II credit request, you are not required to include **invoiceHeader_ amexDataTAA1**.	Level II ■ American Express (See description)	String (40)

Table 2   Order-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ userPO	Customer Reference Number	Value used by your customer to identify the order. This value is typically a purchase order number. CyberSource recommends that you do not populate the field with all zeros or nines.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O) ■ American Express (R for purchase/ procurement cards; otherwise O) Level III ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O)	String (25)
otherTax_ alternateTaxAmount	Alternate Tax Amount	Total amount of alternate tax for the order.	Level III ■ Mastercard (O)	String (10)
otherTax_ alternateTaxID	Alternate Tax ID	Your tax ID number to use for the alternate tax amount. Required if you set Alternate Tax Amount to any value, including zero. You may send this field without sending Alternate Tax Amount.	Level III ■ Mastercard (See description)	String (15)
otherTax_ vatTaxAmount	VAT/Tax Amount	Total amount of VAT or other tax included in the order.	Level III ■ Visa (O)	String (13)

Table 2   Order-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ vatTaxRate	VAT/Tax Rate	Rate of VAT or other tax for the order. **Example** 0.040 (=4%) Valid range: 0.01 to 0.99 (1% to 99%, with only whole percentage values accepted; values with additional decimal places will be truncated)	Level III ■ Visa (O)	String (4)
purchaseTotals_ discountAmount	Discount Amount Applied to Order	Total discount applied to the order. For example: a 20.00 discount off the order total.	Level III ■ Visa (R for Level III interchange)	String (13)
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (13) Mastercard: String (10)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. When you include this field in your request, you must also include **purchaseTotals_ grandTotalAmount**.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (13) Mastercard: String (10)
purchaseTotals_ grandTotalAmount	No corresponding Chase Paymentech Solutions field	Grand total for the entire capture or credit request.	Level III ■ Visa (R) ■ Mastercard (R)	String (15)

Table 2   Order-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipFrom_ postalCode	Ship From ZIP/ Postal Code	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C4	Level III ■ Visa (O) ■ Mastercard (R for best rate. Do not use all zeros or nines.)	String (10)
shipTo_country	Destination Country Code	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Level III ■ Visa (R for best rate) ■ Mastercard (O but recommended)	String (2)
shipTo_postalCode	Destination ZIP/Postal Code	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C3 This value is the same as the value for **shipFrom_postalCode** when your customer takes possession of the items at your location.	Level III ■ Visa (R for best rate) ■ Mastercard (R for best rate. Do not use all zeros or nines.)	String (10)

Item-Level Fields

> ![!] **Important**
>
> The maximum number of items you can have in a Level III Chase Paymentech Solutions transaction is 98. If the number of items exceeds 98, Chase Paymentech Solutions rejects the batch

Table 3   Item-Level Fields for Chase Paymentech Solutions

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_commodityCode	Item Commodity Code	Commodity code used to classify the item. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange)	String (12)
item_#_discountAmount	Visa: Discount Amount for Line Item Mastercard: Discount Amount	Discount applied to the item. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (13) Mastercard: String (10)
item_#_discountIndicator	Discount Indicator	Flag that indicates whether the amount is discounted. Possible values: ■ Y: amount is discounted ■ N: amount is not discounted If you do not provide a value but you set Discount Amount to a value greater than zero, then CyberSource sets this field to Y. See "Numbered Elements," page 14.	Level III ■ Mastercard (R for Level III interchange)	String (1)
item_#_grossNetIndicator	Gross/Net Indicator	Flag that indicates whether the tax amount is included in the Line Item Total. See "Numbered Elements," page 14. Possible values: ■ Y: item amount includes tax amount ■ N: item amount does not include tax amount	Level III ■ Mastercard (R)	String (1)

Table 3   Item-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_invoiceNumber	No corresponding Chase Paymentech Solutions field	Field to support an invoice number for a transaction.You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level II ■ Visa (O) ■ Mastercard (O) ■ American Express (O) Level III ■ Visa (O) ■ Mastercard (O)	String (23)
item_#_productCode	Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_productName**, and **item_#_productSKU** fields are required.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	String (12)
item_#_productName	Description	Text description of the item. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	Visa: String (26) Mastercard: String (35)

Table 3   Item-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_quantity	Quantity	Number of units of the item purchased. Must be a whole number. If you do not provide this value, CyberSource sets it to 1. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	Visa: Integer (12) Mastercard: Integer (5)
item_#_taxAmount	Tax Amount	Total tax to apply to the product. This value cannot be negative. See "Numbered Elements," page 14. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_taxAmount** and the **item_#_unitPrice** must be in the same currency.	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (13) Mastercard: String (10)
item_#_taxRate	Tax Rate	Tax rate applied to the item. See "Numbered Elements," page 14. Visa: Valid range is 0.01 to 0.99 (1% to 99%, with only whole percentage values accepted; values with additional decimal places will be truncated). Mastercard: Valid range is 0.00001 to 0.99999 (0.001% to 99.999%).	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (4) Mastercard: String (7)
item_#_taxTypeApplied	Tax Type Applied	Type of tax being applied to the item. See "Numbered Elements," page 14.	Level III ■ Mastercard (O)	String (4)

Table 3   Item-Level Fields for Chase Paymentech Solutions (Continued)

CyberSource Field Name	Chase Paymentech Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_totalAmount	Line Item Total	Total amount for the item. Normally calculated as the unit price x quantity. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R. Do not use all zeros or spaces.)	Visa: String (13) Mastercard: String (10)
item_#_unitOfMeasure	Unit of Measure	Unit of measure, or unit of measure code, for the item. See Appendix A, "Codes for Units of Measurement," on page 94. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Must not be all zeros or spaces)	Visa: String (12) Mastercard: String (3)
item_#_unitPrice	Unit Cost	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0).	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R) ■ Mastercard (R)	String (13)

Examples

Example 2   Level III Capture Request for Visa with Name-Value Pairs

```
merchantID=infodev
ccCaptureService_run=true
ccCaptureService_purchasingLevel=3
merchantReferenceCode=R98TV09EN200W
purchaseTotals_currency=USD
ccCaptureService_authRequestID=0839543530000172034078
invoiceHeader_userPO=4119480
shipTo_country=US
shipTo_postalCode=94043
item_0_unitPrice=59.95
item_0_quantity=10
item_0_productName=File Cabinet
item_0_taxAmount=49.46
item_0_totalAmount=648.96
item_1_unitPrice=4.99
item_1_quantity=50
item_1_productName=File Folders
item_1_productName=20.58
item_1_totalAmount=270.08
purchaseTotals_grandTotalAmount=919.04
```

Example 3 Level III Capture Request for Mastercard with XML

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.23">
    <merchantID>infodev</merchantID>
    <merchantReferenceCode>R98TV09EN200W</merchantReferenceCode>
    <invoiceHeader>
        <userPO>4119480</userPO>
    </invoiceHeader>
    <shipTo>
        <postalCode>94041</postalCode>
        <country>US</country>
    </shipTo>
    <shipFrom>
        <postalCode>42651</postalCode>
    </shipFrom>
    <item id="0">
        <unitPrice>59.95</unitPrice>
        <quantity>10</quantity>
        <productName>File Cabinet</productName>
        <taxAmount>49.46</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
        <taxRate>0.0825</taxRate>
        <totalAmount>648.96</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <item id="1">
        <unitPrice>4.99</unitPrice>
        <quantity>50</quantity>
        <productName>File Folders</productName>
        <taxAmount>20.58</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
        <taxRate>0.0825</taxRate>
        <totalAmount>270.08</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <purchaseTotals>
        <currency>USD</currency>
        <grandTotalAmount>919.04</grandTotalAmount>
    </purchaseTotals>
    <ccCaptureService run="true">
        <authRequestID>0839543530000172034078</authRequestID>
        <purchasingLevel>3</purchasingLevel>
    </ccCaptureService>
</requestMessage>
```

FDC Compass: Level II and Level III

Transaction Requirements

> ⚠️ **Important**
>
> When you send a capture or credit request with Level II or Level III data or both, you must include the required fields for every capture or credit request. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

> ⚠️ **Important**
>
> This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specification that CyberSource used to implement Level III processing for FDC Compass is the *Compass 120-Byte Processing Technical Specification, Version 1.9, July 28, 2009.*

Order-Level Fields

Table 4   Order-Level Fields for FDC Compass

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_purchasingLevel	No corresponding FDC Compass field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for captures; not used for credits) ■ Mastercard (R for captures; not used for credits)	String (1)
ccCreditService_purchasingLevel	No corresponding FDC Compass field	Flag that indicates the credit request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for credits; not used for captures) ■ Mastercard (R for credits; not used for captures)	String (1)
invoiceHeader_amexDataTAA1 invoiceHeader_amexDataTAA2 invoiceHeader_amexDataTAA3 invoiceHeader_amexDataTAA4	TAA1 TAA2 TAA3 TAA4	Four transaction advice addendum fields. These fields are used to display descriptive information about a transaction on your customer's American Express card statement. If you are sending any TAA fields, start with **invoiceHeader_amexDataTAA1**, then **...TAA2**, and so on. Skipping a TAA field causes subsequent TAA fields to be ignored. Contact CyberSource Customer Support if you plan to use these fields so that your account can be configured appropriately. The **invoiceHeader_amexDataTAA1** field is required for Level II transactions for American Express cards for FDC Compass, but the other TAA fields are optional. However, if you are including the request ID (**ccCreditService_captureRequestID**) in a Level II credit request, you are not required to include **invoiceHeader_amexDataTAA1**.	Level II ■ American Express (See description)	String (40)

Table 4   Order-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ userPO	Customer Reference Number	Value used by your customer to identify the order. This value is typically a purchase order number. CyberSource recommends that you do not populate the field with all zeros or nines.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O) ■ American Express (R for purchase/ procurement cards; otherwise O) Level III ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O)	String (25)
otherTax_ alternateTaxAmount	Alternate Tax Amount	Total amount of alternate tax for the order.	Level III ■ Mastercard (O)	String (10)
otherTax_ alternateTaxID	Alternate Tax ID	Your tax ID number to use for the alternate tax amount. Required if you set Alternate Tax Amount to any value, including zero. You may send this field without sending Alternate Tax Amount.	Level III ■ Mastercard (See description)	String (15)
otherTax_ vatTaxAmount	VAT/Tax Amount	Total amount of VAT or other tax included in the order.	Level III ■ Visa (O)	String (13)

Table 4   Order-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ vatTaxRate	VAT/Tax Rate	Rate of VAT or other tax for the order. **Example** 0.040 (=4%) Valid range: 0.01 to 0.99 (1% to 99%, with only whole percentage values accepted; values with additional decimal places will be truncated)	Level III ■ Visa (O)	String (4)
purchaseTotals_ discountAmount	Discount Amount Applied to Order	Total discount applied to the order. For example: a 20.00 discount off the order total.	Level III ■ Visa (O)	String (13)
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order.	Level III ■ Visa (O) ■ Mastercard (O)	Visa: String (13) Mastercard: String (10)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. When you include this field in your request, you must also include **purchaseTotals_ grandTotalAmount**.	Level III ■ Visa (O) ■ Mastercard (O)	Visa: String (13) Mastercard: String (10)
purchaseTotals_ grandTotalAmount	No corresponding FDC Compass field	Grand total for the entire capture or credit request.	Level III ■ Visa (R) ■ Mastercard (R)	String (15)
shipFrom_ postalCode	Ship From ZIP/ Postal Code	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C4	Level III ■ Visa (O) ■ Mastercard (R for best rate. Do not use all zeros or nines.)	String (10)

Table 4   Order-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipTo_country	Destination Country Code	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Level III ■ Visa (R for best rate) ■ Mastercard (O but recommended)	String (2)
shipTo_postalCode	Destination ZIP/Postal Code	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3 This value is the same as the value for **shipFrom_postalCode** when your customer takes possession of the items at your location.	Level III ■ Visa (R for best rate) ■ Mastercard (R for best rate. Do not use all zeros or nines.)	String (10)

Item-Level Fields

![Important] The maximum number of items you can have in a Level III FDC Compass transaction is 98. If the number of items exceeds 98, FDC Compass rejects the batch.

Table 5   Item-Level Fields for FDC Compass

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_commodityCode	Item Commodity Code	Commodity code used to classify the item. See "Numbered Elements," page 14.	Level III ■ Visa (R)	String (12)
item_#_discountAmount	Visa: Discount Amount for Line Item Mastercard: Discount Amount	Discount applied to the item. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	Visa: String (13) Mastercard: String (10)
item_#_discountIndicator	Discount Indicator	Flag that indicates whether the amount is discounted. Possible values: ■ Y: amount is discounted ■ N: amount is not discounted If you do not provide a value but you set Discount Amount to a value greater than zero, then CyberSource sets this field to Y. See "Numbered Elements," page 14.	Level III ■ Mastercard (O)	String (1)
item_#_grossNetIndicator	Gross/Net Indicator	Flag that indicates whether the tax amount is included in the Line Item Total. See "Numbered Elements," page 14. Possible values: ■ Y: item amount includes tax amount ■ N: item amount does not include tax amount	Level III ■ Mastercard (R)	String (1)

Table 5   Item-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_invoiceNumber	No corresponding FDC Compass field	Field to support an invoice number for a transaction.You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level II ■ Visa (O) ■ Mastercard (O) ■ American Express (O) Level III ■ Visa (O) ■ Mastercard (O)	String (23)
item_#_productCode	Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_productName**, and **item_#_productSKU** fields are required.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	String (12)
item_#_productName	Description	Text description of the item. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	Visa: String (26) Mastercard: String (35)
item_#_quantity	Quantity	Number of units of the item purchased. Must be a whole number. If you do not provide this value, CyberSource sets it to 1. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	Visa: Integer (12) Mastercard: Integer (5)

Table 5   Item-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_taxAmount	Tax Amount	Total tax to apply to the product. This value cannot be negative. See "Numbered Elements," page 14. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_taxAmount** and the **item_#_unitPrice** must be in the same currency.	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (13) Mastercard: String (10)
item_#_taxRate	Tax Rate	Tax rate applied to the item. See "Numbered Elements," page 14. Visa: Valid range is 0.01 to 0.99 (1% to 99%, with only whole percentage values accepted; values with additional decimal places will be truncated). Mastercard: Valid range is 0.00001 to 0.99999 (0.001% to 99.999%).	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange)	Visa: String (4) Mastercard: String (7)
item_#_taxTypeApplied	Tax Type Applied	Type of tax being applied to the item. See "Numbered Elements," page 14.	Level III ■ Mastercard (O)	String (4)
item_#_totalAmount	Line Item Total	Total amount for the item. Normally calculated as the unit price x quantity. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R. Do not use all zeros or spaces.)	Visa: String (13) Mastercard: String (10)
item_#_unitOfMeasure	Unit of Measure	Unit of measure, or unit of measure code, for the item. See Appendix A, "Codes for Units of Measurement," on page 94. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Must not be all zeros or spaces)	Visa: String (12) Mastercard: String (3)

Table 5   Item-Level Fields for FDC Compass (Continued)

CyberSource Field Name	FDC Compass Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_unitPrice	Unit Cost	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0).	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R) ■ Mastercard (R)	String (13)

Examples

Example 4   Level III Capture Request for Visa with Name-Value Pairs

```
merchantID=infodev
ccCaptureService_run=true
ccCaptureService_purchasingLevel=3
merchantReferenceCode=R98TV09EN200W
purchaseTotals_currency=USD
ccCaptureService_authRequestID=0839543530000172034078
invoiceHeader_userPO=4119480
shipTo_country=US
shipTo_postalCode=94043
item_0_unitPrice=59.95
item_0_quantity=10
item_0_productName=File Cabinet
item_0_taxAmount=49.46
item_0_totalAmount=648.96
item_1_unitPrice=4.99
item_1_quantity=50
item_1_productName=File Folders
item_1_productName=20.58
item_1_totalAmount=270.08
purchaseTotals_grandTotalAmount=919.04
```

Example 5   Level III Capture Request for Mastercard with XML

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.23">
    <merchantID>infodev</merchantID>
    <merchantReferenceCode>R98TV09EN200W</merchantReferenceCode>
    <invoiceHeader>
        <userPO>4119480</userPO>
    </invoiceHeader>
    <shipTo>
        <postalCode>94041</postalCode>
        <country>US</country>
    </shipTo>
    <shipFrom>
        <postalCode>42651</postalCode>
    </shipFrom>
    <item id="0">
        <unitPrice>59.95</unitPrice>
        <quantity>10</quantity>
        <productName>File Cabinet</productName>
        <taxAmount>49.46</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
        <taxRate>0.0825</taxRate>
        <totalAmount>648.96</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <item id="1">
        <unitPrice>4.99</unitPrice>
        <quantity>50</quantity>
        <productName>File Folders</productName>
        <taxAmount>20.58</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
        <taxRate>0.0825</taxRate>
        <totalAmount>270.08</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <purchaseTotals>
        <currency>USD</currency>
        <grandTotalAmount>919.04</grandTotalAmount>
    </purchaseTotals>
    <ccCaptureService run="true">
        <authRequestID>0839543530000172034078</authRequestID>
        <purchasingLevel>3</purchasingLevel>
    </ccCaptureService>
</requestMessage>
```

FDC Nashville Global: Level II and Level III

! **Important**	Starting May 1, 2012: Due to the limited functionality of the **invoiceHeader_supplierOrderReference**, CyberSource recommends that you use the item-level field **item_#_productName** instead. Include only one of these fields in a request; including both fields could result in an error.

Transaction Requirements

! **Important**	When you send a capture or credit request with Level II or Level III data or both, you must include the required fields for every capture or credit request. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

! **Important**	This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specification that CyberSource used to implement Level III processing for FDC Nashville Global is the *First Data PTS Specification, v2010-2,* October 30, 2010.

Order-Level Fields

Table 6   Order-Level Fields for FDC Nashville Global

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_ purchasingLevel	No corresponding FDC Nashville Global field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for captures; not used for credits) ■ Mastercard (R for captures; not used for credits)	String (1)
ccCreditService_ purchasingLevel	No corresponding FDC Nashville Global field	Flag that indicates the credit request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for credits; not used for captures) ■ Mastercard (R for credits; not used for captures)	String (1)
invoiceHeader_ purchaserVAT Registration Number	Customer VAT Registration Number	Identification number assigned to the purchasing company by the tax authorities.	Level II ■ Visa (R for non-U.S. Visa transactions; otherwise, not used)	String (13)
invoiceHeader_ supplierOrder Reference	Item Description Part A	Text description of the item. **Important** Starting May 1, 2012: Due to the limited functionality of the **invoiceHeader_supplierOrder Reference** field, CyberSource recommends that you use the item-level field **item_#_productName** instead. Include only one of these fields in a request; including both fields could result in an error.	Level III ■ Visa (R) ■ Mastercard (R for reduced interchange)	String (25)

Table 6   Order-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ userPO	Customer Code	Value used by your customer to identify the order. This value is typically a purchase order number. You must provide a value in this field or in the **merchantReferenceCode** field. CyberSource recommends that you do not populate this field with all zeros or nines.	Level II ■ Visa (See description) ■ Mastercard (See description) ■ American Express (See description) Level III ■ Visa (See description) ■ Mastercard (See description)	String (25)
invoiceHeader_ vatInvoice Reference Number	VAT Invoice Reference Number	VAT invoice number associated with the transaction.	Level II ■ Visa (R for non-U.S. Visa transactions; otherwise, not used)	String (15)

Table 6   Order-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ alternateTaxAmount	Other Tax Amount	Amount of all taxes, excluding the local tax (**item_#_taxAmount**) and national tax (**item_#_nationalTax**) included in the total tax.	Level II ■ Visa (R for non-U.S. transactions; otherwise, not used) ■ Mastercard (R for non-U.S. transactions; otherwise, not used) ■ American Express (R for non-U.S. transactions; otherwise, not used) Level III ■ Visa (O for non-U.S. transactions; otherwise, not used) ■ Mastercard (O for non-U.S. transactions; otherwise, not used)	String (11)
otherTax_ alternate TaxIndicator	Other Tax Indicator	Flag that indicates whether the alternate tax amount (**otherTax_ alternateTaxAmount**) is included in the request. Possible values: ■ 0: alternate tax amount is not included in the request. ■ 1: alternate tax amount is included in the request.	Level II ■ Mastercard (R for non-U.S. transactions; otherwise, not used) Level III ■ Mastercard (O for non-U.S. transactions; otherwise, not used)	String (1)

Table 6   Order-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ vatTaxAmount	VAT/Tax Amount	Total amount of VAT or other tax on freight or shipping only.	Level II ■ Visa (O for non-U.S. transactions; otherwise, not used) ■ Mastercard (O for non-U.S. transactions; otherwise, not used) ■ American Express (O for non-U.S. transactions; otherwise, not used)	String (11)
otherTax_ vatTaxRate	VAT/Tax Rate	Vat tax rate for freight or shipping.	Level II ■ Visa (O for non-U.S. transactions; otherwise, not used) ■ Mastercard (O for non-U.S. transactions; otherwise, not used) ■ American Express (O for non-U.S. transactions; otherwise, not used)	String (5)
purchaseTotals_ discountAmount	Discount Amount	Total discount applied to the order. This value cannot be negative. For example: a 20.00 discount off the order total.	Level II ■ Visa (R) ■ Mastercard (O) Level III ■ Visa (O)	String (11)

Table 6 **Order-Level Fields for FDC Nashville Global (Continued)**

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order. This value cannot be negative.	Level II ■ Visa (R) ■ Mastercard (O) Level III ■ Visa (O)	String (11)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. When you include this field in your request, you must also include **purchaseTotals_ grandTotalAmount**.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
purchaseTotals_ grandTotalAmount	No corresponding FDC Nashville Global field	Grand total for the entire capture or credit request.	Level III ■ Visa (R) ■ Mastercard (R)	String (15)
shipFrom_ postalCode	Ship From Zip	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha] [space][numeric][alpha] [numeric] **Example** A1B 2C4	Level II ■ Visa (O) ■ Mastercard (O) Level III ■ Visa (R) ■ Mastercard (R)	String (10)

Table 6   Order-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipTo_country	Destination Country	Country of the shipping address. Use the two-character *ISO Standard Country Codes*. **Note** If you include the **shipTo_country** field in a request and if the ship-to country is the U.S. or Canada, the request must also include the **shipTo_state** field.	Level II ■ Mastercard (R) Level III ■ Visa (R if **purchase Totals_freight Amount** is included; otherwise, recommended for best rate) ■ Mastercard (O but recommended)	String (2)

Table 6   Order-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipTo_postalCode	Destination Zip	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C3 This value is the same as the value for **shipFrom_postalCode** when your customer takes possession of the items at your location. If the postal code for the shipping address is not included in the request message, CyberSource uses the postal code for the billing address. If the postal code for the billing address is not included in the request message, the postal code for the shipping address is required.	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R) ■ Mastercard (R)	String (10)
shipTo_state		State or province of the shipping address. Use the *State, Province, and Territory Codes for the United States and Canada*. This field must be included in a request if the **shipTo_country** field is included and the ship-to country is the U.S. or Canada.	Level II ■ Mastercard (R) Level III ■ Visa (See description) ■ Mastercard (See description)	String (2)

Item-Level Fields

Table 7   Item-Level Fields for FDC Nashville Global

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_ alternateTaxAmount	Item Other Tax Amount	See "Numbered Elements," page 14. Visa: VAT or other tax amount Mastercard: Tax amount collected for a special type of tax **Important** For Mastercard, do not set this field to 0 (zero).	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
item_#_alternateTaxID	Tax Amount 1 Tax ID	Your tax ID number to use for the alternate tax amount. See "Numbered Elements," page 14.	Level III ■ Mastercard (R if **item_#_ alternateTax Amount** is included; otherwise O)	String (15)
item_#_ alternateTaxRate	Item Tax Rate Applied	See "Numbered Elements," page 14. Mastercard: Tax rate for a type of tax collected. Visa: VAT or other tax rate.	Level III ■ Visa (O) ■ Mastercard (O)	String (5)
item_#_ alternateTaxType	Tax Type Identifier	Flag that indicates the type of tax collected for **item_#_ alternateTaxAmount**. See "Numbered Elements," page 14. Possible values: ■ `00`: unknown ■ `01`: federal or national sales tax ■ `02`: states sales tax ■ `03`: city sales tax ■ `04`: local sales tax ■ `05`: municipal sales tax ■ `06`: other tax ■ `10`: value-added tax (VAT) ■ `11`: goods and services tax (GST) ■ `12`: provincial sales tax ■ `20`: room tax ■ `21`: occupancy tax ■ `22`: energy tax	Level III ■ Visa (O) ■ Mastercard (O)	String (2)

Table 7   Item-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_ alternateTaxType Applied	Item Tax Type Applied	See "Numbered Elements," page 14. Mastercard: Flag that defines tax categories for domestic processing in certain locations. Visa: VAT or other tax type.	Level III ■ Visa (O) ■ Mastercard (O)	String (4)
item_#_ commodityCode	Item Commodity Code	International description code used to classify the item. Contact your acquirer or FDC Nashville Global for a list of codes. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (O)	String (12)
item_#_ discountAmount	Item Discount Amount	Discount applied to the item. See "Numbered Elements," page 14. **Important** For Mastercard, do not set this field to 0 (zero).	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
item_#_invoiceNumber	No corresponding FDC Nashville Global field	You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level II ■ Visa (See description) ■ Mastercard (See description) ■ American Express (See description) Level III ■ Visa (See description) ■ Mastercard (See description)	String (23)
item_#_localTax	Item Local Tax Amount	Sales tax applied to the item. See "Numbered Elements," page 14. **Important** For Mastercard, do not set this field to 0 (zero).	Level III ■ Visa (O) ■ Mastercard (O)	String (13)

Table 7   Item-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_nationalTax	National Tax Amount	Amount of national tax or value added tax for countries in which more than one tax is applied. Provide this value if **national_tax** differs from **tax_amount**. If you do not provide this value, CyberSource assumes that **national_tax** is equal to **tax_amount**. See "Numbered Elements," page 14. **Important** For Mastercard, do not set this field to 0 (zero).	Level II ■ Visa (R for non-U.S. Visa transactions; otherwise, not used)	String (11)
item_#_productCode	Item Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_productName**, and **item_#_productSKU** fields are required.	Level III ■ Visa (R) ■ Mastercard (R for reduced interchange)	String (12)
item_#_productName	Description	Text description of the item. See "Numbered Elements," page 14.	Level III ■ Visa (R for Level III interchange) ■ Mastercard (R for Level III interchange. Do not use all zeros or spaces.)	Visa: String (26) Mastercard: String (35)
item_#_productSKU	Item Customer Code	Identification code for the product. For **ccAuthService** and **ccCaptureService**, this field is required when **item_#_productCode** is not default or one of the values related to shipping or handling. See "Numbered Elements," page 14.	Level III ■ Visa (See description) ■ Mastercard (See description)	String (30)

Table 7   Item-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_quantity	Item Quantity	Number of units of the item purchased. Must be a whole number. If you do not provide this value, CyberSource uses 1. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (RS for reduced interchange)	Integer (12)

item_#_taxAmount	Local Tax Amount	Total tax to apply to the product. This value cannot be negative. The tax amount and the unit price must be in the same currency.
		
		The tax amount field is additive. The following example uses a two-exponent currency such as USD:
		
		1 You include the following items in your request:
		`item_0_unitPrice=10.00`
		`item_0_quantity=1`
		`item_0_taxAmount=0.80`
		`item_1_unitPrice=20.00`
		`item_1_quantity=1`
		`item_1_taxAmount=1.60`
		
		2 The total amount authorized will be 32.40, not 30.00 with 2.40 of tax included.
		
		See "Numbered Elements," page 14.
		
		Note This value is the sales tax. For Visa transactions, this value must be between 0.1% and 22% of the total sale.
		
		Note For Visa and American Express, if this value is 0 (zero), the order is tax exempt.
		
		Important For Mastercard, do not set this field to 0 (zero).
			Level II
			■ Visa (R)
			■ Mastercard (R)
			■ American Express (R)
				Visa & Mastercard: String (11)
				
				American Express: String (9)

Table 7   Item-Level Fields for FDC Nashville Global (Continued)

CyberSource Field Name	FDC Nashville Global Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_unitOfMeasure	Item Bulk/Unit of Measure	Unit of measure, or unit of measure code, for the item. See Appendix A, "Codes for Units of Measurement," on page 94 See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R for reduced interchange)	String (12)
item_#_unitPrice	Item Unit Cost	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0). **Important** For Mastercard, do not set this field to 0 (zero).	Level II ■ Visa (R) ■ Mastercard (R) ■ American Express (R) Level III ■ Visa (R) ■ Mastercard (R)	String (13)

FDMS Nashville: Level II

Transaction Requirements

> ![Important] **Important**
>
> When you send a capture or credit request with Level II data, you must include the required fields for every capture or credit request. For information about the non-Level-II fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

> ![Important] **Important**
>
> This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Order-Level Fields

Table 8   Order-Level Fields for FDMS Nashville

CyberSource Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_taxable	Flag that indicates whether an order is taxable. Possible values: ■ `true`: the order is taxable. ■ `false`: the order is not taxable.	Level II ■ Visa ■ Mastercard	String (5)
invoiceHeader_userPO	Value used by your customer to identify the order. This value is typically a purchase order number. CyberSource recommends that you do not populate the field with all zeros or nines.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O)	String (25)
shipTo_postalCode	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3 If the postal code for the shipping address is not included in the request message, CyberSource uses the postal code for the billing address. If the postal code for the billing address is not included in the request message, the postal code for the shipping address is required.	Level II ■ Visa ■ Mastercard	String (10)

Item-Level Fields

Table 9   Item-Level Fields for FDMS Nashville

CyberSource Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_invoiceNumber	Field to support an invoice number for a transaction. You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level II ■ Visa (O) ■ Mastercard (O)	String (23)
item_#_unitPrice	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14.	Level II ■ Visa (R) ■ Mastercard (R)	String (15)

FDMS South: Level II

Transaction Requirements

| ⚠️ **Important** | When you send a capture or credit request with Level II data, you must include the required fields for every capture or credit request. For information about the non-Level-II fields required for capture and credit requests, see the *Credit Card Services User Guide*. |

Interchange Rates

| ⚠️ **Important** | This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time. |

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Order-Level Fields

Table 10   Order-Level Fields for FDMS South

CyberSource Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ purchaserCode	Customer ID reference number that identifies the customer for a Level II transaction.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O)	String (17)
invoiceHeader_ purchaserVAT RegistrationNumber	Identification number assigned to the purchasing company by the tax authorities.	Level II ■ Visa	String (13)
invoiceHeader_ summaryCommodity Code	Categorizes purchases for VAT reporting.	Level II ■ Visa	String (4)
invoiceHeader_taxable	Flag that indicates whether an order is taxable. Possible values: ■ true: the order is taxable. ■ false: the order is not taxable.	Level II ■ Visa ■ Mastercard	String (5)
invoiceHeader_ userPO	Value used by your customer to identify the order. This value is typically a purchase order number. CyberSource recommends that you do not populate the field with all zeros or nines.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O) ■ Mastercard (R for purchase/ procurement cards; otherwise O)	String (25)
purchaseTotals_ dutyAmount	Total charges for any import or export duties included in the order. This value cannot be negative.	Level II ■ Mastercard	String (15)

Table 10   Order-Level Fields for FDMS South (Continued)

CyberSource Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipFrom_postalCode	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha] [space][numeric][alpha] [numeric] **Example** A1B 2C4	Level II ■ Mastercard	String (10)
shipTo_country	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Level II ■ Mastercard	String (2)
shipTo_postalCode	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3 If the postal code for the shipping address is not included in the request message, CyberSource uses the postal code for the billing address. If the postal code for the billing address is not included in the request message, the postal code for the shipping address is required.	Level II ■ Mastercard (R for purchase/ procurement cards; otherwise O)	String (10)

Item-Level Fields

Table 11   Item-Level Fields for FDMS South

CyberSource Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_invoiceNumber	Field to support an invoice number for a transaction.You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level II ■ Visa (O) ■ Mastercard (O)	String (23)
item_#_nationalTax	Amount of national tax or value added tax for countries in which more than one tax is applied. Provide this value if **item_#_nationalTax** differs from **item_#_taxAmount**. If you do not provide this value, CyberSource assumes that **item_#_nationalTax** is equal to **item_#_taxAmount**. See "Numbered Elements," page 14.	Level II ■ Visa ■ Mastercard	String (15)
item_#_taxAmount	Total tax to apply to the product. This value cannot be negative. See "Numbered Elements," page 14. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_taxAmount** and the **item_#_unitPrice** must be in the same currency.	Level II ■ Visa (R) ■ Mastercard (R)	String (15)
item_#_unitPrice	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14.	Level II ■ Visa (R) ■ Mastercard (R)	String (15)
item_#_vatRate	Rate used to calculate VAT. See "Numbered Elements," page 14.	Level II ■ Visa ■ Mastercard	String (5)

GPN: Level II and Level III

Transaction Requirements

![!] **Important** When you send a capture or credit request with Level II or Level III data or both, you must include the required fields for every capture or credit request. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

![!] **Important** This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specification that CyberSource used to implement Level II and Level III processing for GPN is the *Global Payments Big Batch Message Specification, Version 2006.001*, January 2006.

Order-Level Fields

Table 12   Order-Level Fields for GPN

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_ purchasingLevel	No corresponding GPN field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for captures; not used for credits) ■ Mastercard (R for captures; not used for credits)	String (1)
ccCreditService_ purchasingLevel	No corresponding GPN field	Flag that indicates the credit request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for credits; not used for captures) ■ Mastercard (R for credits; not used for captures)	String (1)
invoiceHeader_ merchantVAT RegistrationNumber	Merchant VAT Number	Your government-assigned tax identification number.	Level III ■ Visa (O) ■ Mastercard (O)	String (20)
invoiceHeader_ purchaserOrderDate	Order Date	Date the order was processed. Format: YYMMDD.	Level III ■ Visa (O) ■ Mastercard (O)	String (6)
invoiceHeader_ purchaserVAT RegistrationNumber	Customer VAT Number	Customer's government-assigned tax identification number.	Level III ■ Visa (O) ■ Mastercard (O)	Visa: String (15) Mastercard: String (20)
invoiceHeader_ summaryCommodity Code	Summary Commodity Code and Commodity Code	International description code of the overall order's goods or services. Contact your acquirer or GPN for a list of codes. This field might be required for Level III processing depending on your merchant category code. Check with your processor.	Level III ■ Visa (O) ■ Mastercard (O)	String (4)

Table 12   Order-Level Fields for GPN (Continued)

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ supplierOrder Reference	Item Description	Text description of the item.	Level III ▪ Visa (O) ▪ Mastercard (O)	String (25)
invoiceHeader_ userPO	Market Data - "m" Customer Code and Reference Number	Value used by your customer to identify the order. This value is typically a purchase order number.	Level II ▪ Visa (R) ▪ Mastercard (R) Level III ▪ Visa (R) ▪ Mastercard (R)	Visa: String (17) Mastercard: String (25)
otherTax_ alternateTaxAmount	Other Tax	Total amount of alternate tax for the order. Maximum amount is 99,999.99.	Level III ▪ Visa (O)	String (12)
otherTax_ nationalTaxAmount	National Tax	National tax for the order. Maximum amount is 99,999.99.	Level III ▪ Visa (O)	String (12)
otherTax_ vatTaxAmount	VAT/Tax Amount (Freight/ Shipping)	Tax amount applied to freight / shipping costs.	Level III ▪ Visa (O)	String (12)
otherTax_ vatTaxRate	VAT/Tax Rate (Freight/ Shipping)	Tax rate applied to freight / shipping costs. **Example** 0.040 (=4%)	Level III ▪ Visa (O)	String (4)
purchaseTotals_ discountAmount	Discount Amount	Total discount applied to the order. For example: a 20.00 discount off the order total. Maximum amount is 99,999.99. This field might be required for Level III processing depending on your merchant category code. Check with your processor.	Level III ▪ Visa (O) ▪ Mastercard (O)	String (12)
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order. Maximum amount is 99,999.99.	Level III ▪ Visa (O) ▪ Mastercard (O)	String (12)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. Maximum amount is 99,999.99. When you include this field in your request, you must also include **purchaseTotals_grandTotalAmount**.	Level III ▪ Visa (O) ▪ Mastercard (O)	String (12)

Table 12   Order-Level Fields for GPN (Continued)

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipFrom_ postalCode	Ship From Postal/Zip Code	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C4	Level III ■ Visa (O) ■ Mastercard (O)	String (10)
shipTo_country	Destination Country Code	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Level III ■ Visa (O) ■ Mastercard (O)	String (2)
shipTo_postalCode	Destination Postal/Zip Code	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C3 This value is the same as the value for **shipFrom_postalCode** when your customer takes possession of the items at your location.	Level III ■ Visa (O) ■ Mastercard (O)	String (10)
shipTo_state	Destination State/Province Code	State or province of the shipping address. Use the *State, Province, and Territory Codes for the United States and Canada*.	Level III ■ Visa (O) ■ Mastercard (O)	String (2)

Item-Level Fields

Table 13   Item-Level Fields for GPN

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_alternateTaxRate	Tax Rate N	Tax rate applied to the item. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	String (5)
item_#_commodityCode	Item Commodity Code	International description code used to classify the item. Contact your acquirer or GPN for a list of codes. See "Numbered Elements," page 14. This field might be required for all Level III processing depending on your merchant category code. Check with your processor.	Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	Visa: String (12) Mastercard: String (15)
item_#_discountAmount	Item Discount	Discount applied to the item. Maximum amount is 99,999.99. See "Numbered Elements," page 14. This field might be required for all Level III processing depending on your merchant category code. Check with your processor.	Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	String (12)
item_#_discountRate	Item Discount Rate	Rate the item is discounted. See "Numbered Elements," page 14. **Example** 5.25 (=5.25%)	Level III ■ Mastercard (Required for Level III interchange)	String (5)
item_#_invoiceNumber	No corresponding GPN field	Field to support an invoice number for a transaction. You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	String (23)

Table 13   Item-Level Fields for GPN (Continued)

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_productCode	Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_ productName**, and **item_#_ productSKU** fields are required.	Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	Visa: String (12) Mastercard: String (15)
item_#_quantity	Item Quantity	Number of units of the item purchased. Must be a whole number. If you do not provide this value, CyberSource uses 1. See "Numbered Elements," page 14.	Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	Integer (12)

Table 13   Item-Level Fields for GPN (Continued)

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_taxAmount	Level II: Amount 2 Level III: Tax Amount N	Total tax to apply to the product. This value cannot be negative. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_ taxAmount** and the **item_#_ unitPrice** must be in the same currency. Maximum amount is 99,999.99. See "Numbered Elements," page 14. For Level II, if you do not include this field in your request, CyberSource sets this field to the default value of 0. For Level II, this value is the sales tax. For Visa Level II transactions, this value must be zero or must be between 0.1% and 22% of the total sale.	Level II ■ Visa (O) ■ Mastercard (O) Level III ■ Visa (O) ■ Mastercard (O)	Level II: String (10) Level III: String (12)
item_#_unitOfMeasure	Unit of Measure	Unit of measure for the item. See "Numbered Elements," page 14.	Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	String (12)

Table 13   Item-Level Fields for GPN (Continued)

CyberSource Field Name	GPN Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_unitPrice	Unit Price	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. Maximum amount is 99,999.99. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0). **Note** For each item that you include in a request, you must include an **item_#_unitPrice** field.	Level II ■ Visa (O) ■ Mastercard (O) Level III ■ Visa (Required for Level III interchange) ■ Mastercard (Required for Level III interchange)	String (10)

RBS WorldPay Atlanta: Level II and Level III

Transaction Requirements

> **⚠ Important**
> When you send a capture request with Level II and Level III data, you must include the required fields for every capture request. For credit requests, RBS WorldPay Atlanta does not require you to indicate the request is for Level II or Level III processing. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

> **⚠ Important**
> This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specification that CyberSource used to implement Level III processing for RBS WorldPay Atlanta is *RBS Worldpay API message specification, version 7.1.0,* June 2, 2009.

Order-Level Fields

Table 14   Order-Level Fields for RBS WorldPay Atlanta

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_ purchasingLevel	No corresponding RBS WorldPay Atlanta field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III ■ Visa (R for captures; not used for credits) ■ Mastercard (R for captures; not used for credits)	String (1)
invoiceHeader_ merchantVAT Registration Number	Merchant VAT Number	Your government-assigned tax identification number.	Level III ■ Visa (O)	String (20)
invoiceHeader_ purchaserOrder Date	Order Date	Date the order was processed. Format: YYMMDD.	Level III ■ Visa (O)	Numeric (6)
invoiceHeader_ purchaserVAT Registration Number	Customer VAT Number	Customer's government-assigned tax identification number.	Level III ■ Visa (O)	String (13)
invoiceHeader_ summary CommodityCode	Commodity Code	International description code of the overall order's goods or services. Contact your acquirer for a list of codes.	Level III ■ Visa (O)	String (4)

Table 14   Order-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ taxable	Tax Exempt	Flag that indicates whether an order is taxable. Possible values: ■ `true`: the order is taxable. ■ `false`: the order is not taxable. **Note** This field is required for Visa and Mastercard transactions that involve Level II data. If **item_#_taxAmount** equals 0, set this field to `false`. If **item_ #_taxAmount** is greater than 0, set this field to `true`.	Level II ■ Visa (R) ■ Mastercard (R) Level III ■ Visa (R) ■ Mastercard (R)	String (5)
invoiceHeader_ userPO	PC2 Customer ID	Value used by your customer to identify the order. This value is typically a purchase order number.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) ■ Mastercard (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) Level III ■ Visa (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) ■ Mastercard (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.)	String (25)
invoiceHeader_ vatInvoice Reference Number	VAT Invoice Number	VAT invoice number associated with the transaction.	Level III ■ Visa (O)	String (15)

Table 14   Order-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ alternateTaxAmount	VAT Tax Amount	Total amount of alternate tax for the order.	Level III ■ Visa (O) ■ Mastercard (O)	String (8)
otherTax_ alternateTax Indicator	Alternate Tax Indicator	Flag that indicates whether the alternate tax amount (**otherTax_ alternateTaxAmount**) is included in the request. Possible values: ■ `0`: alternate tax amount is not included in the request. ■ `1`: alternate tax amount is included in the request.	Level III ■ Mastercard (R)	String (1)
otherTax_ vatTaxAmount	VAT Tax Amount	Total amount of VAT or other tax included in the order.	Level III ■ Visa (O)	Numeric (8)
otherTax_ vatTaxRate	Tax Rate	Rate of VAT or other tax for the order. **Example** 0.0400 (=4%) Valid range: 0.0001 to 0.9999 (0.01% to 99.99%)	Level III ■ Visa (O)	Numeric (4)
purchaseTotals_ discountAmount	Discount Amount	Total discount applied to the order. For example: a 20.00 discount off the order total.	Level III ■ Visa (O)	Numeric (8)
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order.	Level III ■ Visa (O) ■ Mastercard (O)	Numeric (8)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. When you include this field in your request, you must also include **purchaseTotals_ grandTotalAmount**.	Level III ■ Visa (O) ■ Mastercard (O)	Numeric (8)
purchaseTotals_ grandTotalAmount	Amount	Grand total for the entire capture or credit request.	Level III ■ Visa (R) ■ Mastercard (R)	String (15)

Table 14   Order-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipFrom_ postalCode	Origin Zip	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha] [space][numeric][alpha] [numeric] **Example** A1B 2C4	Level III ■ Visa (Recommended) ■ Mastercard (Recommended)	String (10)
shipTo_country	Destination Country Code	Country of the shipping address. Use the two-character *ISO Standard Country Codes*. If the request does not include this value, CyberSource uses the **billTo_country** value. If you do not provide either of these values, CyberSource uses the default value of US.	Level III ■ Visa (Recommended for best rate) ■ Mastercard (Recommended for best rate)	String (3)

Table 14   Order-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipTo_postalCode	Destination Zip	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C3 If the postal code for the shipping address is not included in the request message, CyberSource uses the postal code for the billing address. If the postal code for the billing address is not included in the request message, the postal code for the shipping address is required.	Level III ■ Visa (Recommended for best rate) ■ Mastercard (Recommended for best rate)	String (10)

Item-Level Fields

Table 15   Item-Level Fields for RBS WorldPay Atlanta

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_alternateTaxID	Alternate Tax ID	Your tax ID number to use for the alternate tax amount. You must provide this value if you include Alternate Tax Amount in the request. Providing this value is optional if you do not Alternate Tax Amount. See "Numbered Elements," page 14.	Level III ■ Mastercard (See description)	String (15)
item_#_commodityCode	Commodity Code	International description code used to classify the item. Contact your acquirer for a list of codes. See "Numbered Elements," page 14.	Level III ■ Visa (R)	String (12)
item_#_discountAmount	Discount Amount	Discount applied to the item. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	Numeric (8)
item_#_discountRate	Discount Rate	Rate the item is discounted. See "Numbered Elements," page 14. **Example** 5.25 (=5.25%)	Level III ■ Mastercard (O)	Numeric (5)
item_#_grossNetIndicator	Gross Net Indicator	Flag that indicates whether the tax amount is included in the Line Item Total. See "Numbered Elements," page 14. Possible values: ■ Y: item amount includes tax amount ■ N: item amount does not include tax amount	Level III ■ Mastercard (R)	String (1)
item_#_invoiceNumber	No corresponding RBS WorldPay Atlanta field	Field to support an invoice number for a transaction.You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	String (23)

Table 15   Item-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_productCode	Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_productName**, and **item_#_productSKU** fields are required.	Level III ■ Visa (R) ■ Mastercard (R)	String (12)
item_#_productName	Description	Text description of the item. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R)	String (35)
item_#_quantity	Quantity	Number of units of the item purchased. This value must be a whole number. If you do not provide this value, CyberSource uses 1. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R)	Visa: Numeric (10) Mastercard: Numeric (8)
item_#_taxAmount	Tax Amount	Total tax to apply to the product. This value cannot be negative. If no tax is present, you can send in a value of 0. See "Numbered Elements," page 14. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_taxAmount** and the **item_#_unitPrice** must be in the same currency.	Level II ■ Visa (R) ■ Mastercard (R) Level III ■ Visa (R) ■ Mastercard (R)	Numeric (8)

Table 15   Item-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_taxRate	Tax Rate	Tax rate applied to the item. See "Numbered Elements," page 14. Valid range is 0.0001 to 0.9999 (0.01% to 99.99%). The value can also be zero.	Level III ■ Mastercard (O)	Numeric (4)
item_#_taxTypeApplied	Tax Type	Type of tax being applied to the item. See "Numbered Elements," page 14. Possible values: ■ 0000: unknown tax type ■ 0001: federal/national sales tax ■ 0002: state sales tax ■ 0003: city sales tax ■ 0004: local sales tax ■ 0005: municipal sales tax ■ 0006: other tax ■ 0010: value-added tax ■ 0011: goods and services tax ■ 0012: provincial sales tax ■ 0013: harmonized sales tax ■ 0014: Quebec sales tax (QST) ■ 0020: room tax ■ 0021: occupancy tax ■ 0022: energy tax ■ Blank: tax not supported on line item.	Level III ■ Mastercard (R)	String (4)
item_#_totalAmount	Line Total	Total purchase amount for the item. Normally calculated as the unit price x quantity. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R. Do not use all zeros or spaces.)	Numeric (8)

Table 15   Item-Level Fields for RBS WorldPay Atlanta (Continued)

CyberSource Field Name	RBS WorldPay Atlanta Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_unitOfMeasure	Unit Of Measure	Unit of measure, or unit of measure code, for the item. See Appendix A, "Codes for Units of Measurement," on page 94. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R)	String (12)
item_#_unitPrice	Unit Cost	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0).	Level III ■ Visa (R) ■ Mastercard (R)	Visa: Numeric (10) Mastercard: Numeric (8)

Examples

Example 6   Level III Capture Request for Mastercard with Name-Value Pairs

```
ccCaptureService_authRequestID=2635119692550000139284
purchaseTotals_grandTotalAmount=1
merchantID=infodev
item_0_discountAmount=0
shipTo_country=USA
shipTo_city=New Haven
item_0_taxTypeApplied=0001
ccCaptureService_run=true
shipFrom_state=CT
billTo_country=USA
item_0_unitOfMeasure=EA
shipFrom_city=New Haven
shipFrom_country=USA
billTo_postalCode=30350
invoiceHeader_userPO=XRWEFGjdfgkdjheior
item_0_taxRate=0.99
item_0_productCode=abcdsgahstde
merchantReferenceCode=1000000145
shipFrom_postalCode=12345-1234
ccCaptureService_purchasingLevel=3
item_0_quantity=1
item_0_taxAmount=0.34
item_0_unitPrice=0.66
item_0_productName=sofa
shipTo_state=CT
item_0_discountRate=0
item_0_discountIndicator=N
shipTo_street1=234 wall street
invoiceHeader_taxable=true
item_0_grossNetIndicator=Y
item_0_totalAmount=1
otherTax_alternateTaxAmount=1
billTo_city=Atlanta
billTo_street1=600 Morgan Falls Rd
shipTo_postalCode=06511
billTo_state=GA
shipFrom_street1=234 wall street
```

Example 7   Level III Capture Request for Mastercard with XML

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.49">
   <merchantID>infodev</merchantID>
   <merchantReferenceCode>1000000145</merchantReferenceCode>
   <invoiceHeader>
      <userPO>XRWEFGjdfgkdjheior</userPO>
      <taxable>true</taxable>
   </invoiceHeader>
   <billTo>
      <street1>600 Morgan Falls Rd</street1>
      <city>Atlanta</city>
      <state>GA</state>
      <postalCode>30350</postalCode>
      <country>USA</country>
   </billTo>
   <shipTo>
      <street1>234 wall street</street1>
      <city>New Haven</city>
      <state>CT</state>
      <postalCode>06511</postalCode>
      <country>USA</country>
   </shipTo>
   <shipFrom>
      <street1>234 wall street</street1>
      <city>New Haven</city>
      <state>CT</state>
      <postalCode>12345-1234</postalCode>
      <country>USA</country>
   </shipFrom>
   <item id="0">
      <unitPrice>0.66</unitPrice>
      <quantity>1</quantity>
      <productCode>abcdsgahstde</productCode>
      <productName>sofa</productName>
      <taxAmount>0.34</taxAmount>
      <unitOfMeasure>EA</unitOfMeasure>
      <taxRate>0.99</taxRate>
      <totalAmount>1</totalAmount>
      <discountAmount>0</discountAmount>
      <discountRate>0</discountRate>
      <grossNetIndicator>Y</grossNetIndicator>
      <taxTypeApplied>0001</taxTypeApplied>
      <discountIndicator>N</discountIndicator>
   </item>
   <purchaseTotals>
      <grandTotalAmount>1</grandTotalAmount>
   </purchaseTotals>
   <otherTax>
      <alternateTaxAmount>1</alternateTaxAmount>
   </otherTax>
   <ccCaptureService run="true">
      <authRequestID>2635118302700000139284</authRequestID>
      <purchasingLevel>3</purchasingLevel>
   </ccCaptureService>
</requestMessage>
```

TSYS Acquiring Solutions: Level II and Level III

> ⚠️ **Important**
>
> CyberSource does not support Level II processing for the American Express card type on TSYS Acquiring Solutions.

Transaction Requirements

> ⚠️ **Important**
>
> When you send a capture or credit request with Level II or Level III data or both, you must include the required fields for every capture or credit request. For information about the non-Level-II and non-Level-III fields required for capture and credit requests, see the *Credit Card Services User Guide*.

Interchange Rates

> ⚠️ **Important**
>
> This document provides guidelines that indicate which fields are needed in order to obtain the best interchange rates. These guidelines are based on industry information. CyberSource recommends that you contact your acquirer for the most current information because the payment card companies can change their requirements at any time.

Data Types

Fields for amounts and tax rates use a string data type. However, you should include only numbers and a decimal point in those fields.

Processor Specification

The specification that CyberSource used to implement Level III processing for TSYS Acquiring Solutions (Vital) is *Vital's EIS 1081, Level III Line Item Processing, version 6.4*, April 2004.

The records referenced are:

- Transaction Detail Record — Optional Data; Groups 25, 26, and 27
- Visa Card Non-T&E and Fleet (Non-fuel) Line Item Detail Record
- Mastercard Non-T&E and Fleet (Non-fuel) Line Item Detail Record

Order-Level Fields

Table 16   Order-Level Fields for TSYS Acquiring Solutions

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ccCaptureService_ purchasingLevel	No corresponding TSYS Acquiring Solutions field	Flag that indicates the capture request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III - Visa (R for captures; not used for credits) - Mastercard (R for captures; not used for credits)	String (1)
ccCreditService_ purchasingLevel	No corresponding TSYS Acquiring Solutions field	Flag that indicates the credit request includes Level III data. Set the value for this field to 3. For more information, see "Requesting Captures and Credits with Level III Data," page 16.	Level III - Visa (R for credits; not used for captures) - Mastercard (R for credits; not used for captures)	String (1)
invoiceHeader_ merchantVAT Registration Number	Merchant VAT Registration Number	Your government-assigned tax identification number.	Level III - Visa (O)	String (20)
invoiceHeader_ purchaserOrderDate	Order Date	Date the order was processed. Format: YYMMDD.	Level III - Visa (O)	String (6)

Table 16   Order-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
invoiceHeader_ purchaserVAT Registration Number	Customer VAT Registration Number	Customer's government-assigned tax identification number.	Level III ■ Visa (O)	String (13)
invoiceHeader_ summaryCommodity Code	Summary Commodity Code	International description code of the overall order's goods or services. Contact your acquirer for a list of codes.	Level III ■ Visa (R)	String (4)
invoiceHeader_ userPO	No corresponding TSYS Acquiring Solutions field	Value used by your customer to identify the order. This value is typically a purchase order number.	Level II ■ Visa (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) ■ Mastercard (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) Level III ■ Visa (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.) ■ Mastercard (R for purchase/ procurement cards; otherwise O. Do not use all zeros or nines.)	String (25)
invoiceHeader_ vatInvoiceReference Number	Unique VAT Invoice Reference Number	VAT invoice number associated with the transaction.	Level III ■ Visa (O)	String (15)

Table 16   Order-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ alternateTaxAmount	Alternate Tax Amount	Total amount of alternate tax for the order.	Level III ■ Mastercard (O)	String (10)
otherTax_ alternateTax Indicator	Alternate Tax Amount Indicator	Flag that indicates whether the alternate tax amount (**otherTax_ alternateTaxAmount**) is included in the request. Possible values: ■ 0: alternate tax amount is not included in the request. ■ 1: alternate tax amount is included in the request.	Level III ■ Mastercard (O)	String (1)
otherTax_ localTaxAmount	Local Tax	Sales tax for the order.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
otherTax_ localTaxIndicator	Local Tax Included Flag	Flag that indicates whether local sales tax is included in the order total. Possible values: ■ 0: local sales tax not included ■ 1: local sales tax included ■ 2: tax exempt order If you do not provide this value, CyberSource sets this field to one of the following values: ■ 0 if you set Local Tax = 0 or do not provide a Local Tax ■ 1 if you set Local Tax > 0 **Important** For GSA (General Services Administration) purchasing cards, tax is required in order to qualify for Level III when processing with TSYS Acquiring Solutions. Therefore, the only valid Level III value for this field for GSA cards is 1. If you have any questions or concerns, contact your acquirer.	Level III ■ Visa (O) ■ Mastercard (O)	String (1)
otherTax_ nationalTaxAmount	National Tax Amount	National tax for the order.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)

Table 16   Order-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
otherTax_ nationalTaxIndicator	National Tax Included Flag	Flag that indicates whether a national tax is included in the order total. Possible values: ■ 0: national tax not included ■ 1: national tax included If you do not provide this value, CyberSource sets this field to 1 if you provide a National Tax Amount greater than 0.	Level III ■ Visa (O) ■ Mastercard (O)	String (1)
otherTax_ vatTaxAmount	VAT/Tax Amount	Total amount of VAT or other tax included in the order.	Level III ■ Visa (O)	String (13)
otherTax_ vatTaxRate	VAT/Tax Rate	Rate of VAT or other tax for the order. **Example** 0.0400 (=4%) Valid range: 0.0001 to 0.9999 (0.01% to 99.99%)	Level III ■ Visa (O)	String (6)
purchaseTotals_ discountAmount	Discount Amount	Total discount applied to the order. For example: a 20.00 discount off the order total.	Level III ■ Visa (O)	String (13)
purchaseTotals_ dutyAmount	Duty Amount	Total charges for any import or export duties included in the order.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
purchaseTotals_ freightAmount	Freight Amount	Total freight or shipping and handling charges for the order. When you include this field in your request, you must also include **purchaseTotals_ grandTotalAmount**.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
purchaseTotals_ grandTotalAmount	No corresponding TSYS Acquiring Solutions field	Grand total for the entire capture or credit request.	Level III ■ Visa (R) ■ Mastercard (R)	String (15)

Table 16 Order-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipFrom_ postalCode	Ship From Postal/ZIP Code	Postal code for the address from which the goods are shipped, which is used to determine nexus. The default is the postal code associated with your CyberSource account. The postal code must consist of 5 to 9 digits. If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha] [space][numeric][alpha] [numeric] **Example** A1B 2C4	Level III ■ Visa (O) ■ Mastercard (Recommended for best rate. Do not use all zeros or nines.)	String (10)
shipTo_country	Destination Country Code	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Level III ■ Visa (Recommended for best rate) ■ Mastercard (O but recommended)	String (2)

Table 16   Order-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
shipTo_postalCode	Destination Postal/ZIP Code	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3 This value is the same as the value for **shipFrom_postalCode** when your customer takes possession of the items at your location. The postal code must consist of 5 to 9 digits.	Level III ■ Visa (Recommended for best rate) ■ Mastercard (Recommended for best rate. Do not use all zeros or nines.)	String (10)
shipTo_state	No corresponding TSYS Acquiring Solutions field	State or province of the shipping address. Use the *State, Province, and Territory Codes for the United States and Canada*.	If any shipping information is in the request, this field is required for CyberSource front-end processing.	String (2)

Item-Level Fields

Table 17   Item-Level Fields for TSYS Acquiring Solutions

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_alternateTaxID	Alternate Tax Identifier	Your tax ID number to use for the alternate tax amount. You must provide this value if you include Alternate Tax Amount in the request. Providing this value is optional if you do not Alternate Tax Amount. See "Numbered Elements," page 14.	Level III ■ Mastercard (See description)	String (15)
item_#_commodityCode	Item Commodity Code	International description code used to classify the item. Contact your acquirer for a list of codes. See "Numbered Elements," page 14.	Level III ■ Visa (R)	String (12)
item_#_discountAmount	Visa: Discount Per Line Item Mastercard: Discount Amount	Discount applied to the item. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	String (13)
item_#_discountIndicator	Discount Indicator	Flag that indicates whether the amount is discounted. See "Numbered Elements," page 14. Possible values: ■ `Y`: amount is discounted ■ `N`: amount is not discounted If you do not provide a value but you set Discount Amount to a value greater than zero, CyberSource sets this field to `Y`.	Level III ■ Mastercard (O)	String (1)
item_#_discountRate	Item Discount Rate	Rate the item is discounted. See "Numbered Elements," page 14. **Example** 5.25 (=5.25%)	Level III ■ Mastercard (O)	String (6)

Table 17   Item-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_ grossNetIndicator	Net/Gross Indicator	Flag that indicates whether the tax amount is included in the Line Item Total. See "Numbered Elements," page 14. Possible values: ■ Y: item amount includes tax amount ■ N: item amount does not include tax amount	Level III ■ Mastercard (R)	String (1)
item_#_invoiceNumber	No corresponding TSYS Acquiring Solutions field	Field to support an invoice number for a transaction. You must specify the number of line items that will include an invoice number. By default, the first line item will include an invoice number field. The invoice number field can be included for up to 10 line items. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (O)	String (23)
item_#_productCode	Product Code	Type of product. This value is used to determine the category that the product is in: electronic, handling, physical, service, or shipping. The default value is default. See Appendix B, "Product Codes," on page 101 for a list of valid values. See "Numbered Elements," page 14. For **ccAuthService**, when you set this field to a value other than default or any of the values related to shipping or handling, the **item_#_quantity**, **item_#_ productName**, and **item_#_ productSKU** fields are required.	Level III ■ Visa (O) ■ Mastercard (Recommended for best rate. Do not use all zeros or spaces.)	String (12)
item_#_productName	Visa: Item Descriptor Mastercard: Item Description	Text description of the item. See "Numbered Elements," page 14.	Level III ■ Visa (O) ■ Mastercard (R. Do not use all zeros or spaces.)	String (35)

Table 17   Item-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_quantity	Visa: Quantity Mastercard: Item Quantity	Number of units of the item purchased. Must be a whole number. If you do not provide this value, CyberSource uses 1. See "Numbered Elements," page 14.	Level III ■ Visa (Recommended for best rate) ■ Mastercard (Recommended for best rate. Do not use all zeros or spaces.)	Integer (12)
item_#_taxAmount	Visa: VAT/Tax Amount Mastercard: Tax Amount	Total tax to apply to the product. This value cannot be negative. See "Numbered Elements," page 14. The **item_#_taxAmount** field is additive. For example, if you send one item with **unitPrice** of 10.00 and **taxAmount** of 0.80, and you send another item with **unitPrice** of 20.00 and **taxAmount** of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included. The **item_#_taxAmount** and the **item_#_unitPrice** must be in the same currency.	Level II ■ Visa (R) ■ Mastercard (R) Level III ■ Visa (R) ■ Mastercard (R)	String (13)
item_#_taxRate	Visa: VAT/Tax Rate Mastercard: Tax Rate Applied	Tax rate applied to the item. See "Numbered Elements," page 14. Valid range is 0.0001 to 0.9999 (0.01% to 99.99%). The value can also be zero.	Level III ■ Visa (O) ■ Mastercard (R)	String (6)
item_#_taxTypeApplied	Tax Type Applied	Type of tax being applied to the item. See "Numbered Elements," page 14.	Level III ■ Mastercard (O)	String (4)
item_#_totalAmount	Visa: Line Item Total Mastercard: Extended Item Amount	Total purchase amount for the item. Normally calculated as the unit price x quantity. See "Numbered Elements," page 14.	Level III ■ Visa (R) ■ Mastercard (R. Do not use all zeros or spaces.)	Visa: String (13) Mastercard: String (10)

Table 17   Item-Level Fields for TSYS Acquiring Solutions (Continued)

CyberSource Field Name	TSYS Acquiring Solutions Field Name	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_unitOfMeasure	Visa: Unit of Measure/Code Mastercard: Item Unit of Measure	Unit of measure, or unit of measure code, for the item. See Appendix A, "Codes for Units of Measurement," on page 94. See "Numbered Elements," page 14.	Level III ▪ Visa (O) ▪ Mastercard (R. Do not use all zeros or spaces.)	String (12)
item_#_unitPrice	Unit Cost	Per-item price of the product. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. See "Numbered Elements," page 14. **Important** For a Level III transaction, this value cannot be zero (0).	Level III ▪ Visa (R) ▪ Mastercard (R)	String (11)

Examples

Example 8   Level III Capture Request for Visa with Name-Value Pairs

```
merchantID=infodev
ccCaptureService_run=true
ccCaptureService_purchasingLevel=3
merchantReferenceCode=R98TV09EN200W
purchaseTotals_currency=USD
ccCaptureService_authRequestID=0839543530000172034078
invoiceHeader_userPO=4119480
shipTo_state=CA
shipTo_country=US
shipTo_postalCode=94043
item_0_unitPrice=59.95
item_0_quantity=10
item_0_productName=File Cabinet
item_0_taxAmount=49.46
item_0_totalAmount=648.96
item_1_unitPrice=4.99
item_1_quantity=50
item_1_productName=File Folders
item_1_productName=20.58
item_1_totalAmount=270.08
purchaseTotals_grandTotalAmount=919.04
```

Example 9   Level III Capture Request for Mastercard with XML

```xml
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.23">
    <merchantID>infodev</merchantID>
    <merchantReferenceCode>R98TV09EN200W</merchantReferenceCode>
    <invoiceHeader>
        <userPO>4119480</userPO>
    </invoiceHeader>
    <shipTo>
        <state>CA</state>
        <postalCode>94041</postalCode>
        <country>US</country>
    </shipTo>
    <shipFrom>
        <postalCode>42651</postalCode>
    </shipFrom>
    <item id="0">
        <unitPrice>59.95</unitPrice>
        <quantity>10</quantity>
        <productName>File Cabinet</productName>
        <taxAmount>49.46</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
        <taxRate>0.0825</taxRate>
        <totalAmount>648.96</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <item id="1">
        <unitPrice>4.99</unitPrice>
        <quantity>50</quantity>
        <productName>File Folders</productName>
        <taxAmount>20.58</taxAmount>
        <unitOfMeasure>each</unitOfMeasure>
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        <totalAmount>270.08</totalAmount>
        <grossNetIndicator>Y</grossNetIndicator>
    </item>
    <purchaseTotals>
        <currency>USD</currency>
        <grandTotalAmount>919.04</grandTotalAmount>
    </purchaseTotals>
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        <authRequestID>0839543530000172034078</authRequestID>
        <purchasingLevel>3</purchasingLevel>
    </ccCaptureService>
</requestMessage>
```

Codes for Units of Measurement

The following table lists the codes for units of measurement used in international trade.

Table 18   Codes for Units of Measurement

Value	Description
EA	Unknown unit of measure
ACR	Acre (4840 yd^2)
AMH	Ampere-hour (3.6 kC)
AMP	Ampere
ANN	Year
APZ	Ounce GB, US (31.10348 g) (tr oz.)
ARE	Are (100 m^2)
ASM	Alcoholic strength mass
ASV	Alcoholic strength by volume
ATM	Standard atmosphere (101325 Pa)
ATT	Technical atmosphere (98066.5 Pa)
BAR	Bar
BFT	Board foot
BG	Unknown unit of measure
BHP	Brake horsepower (745.7 W)
BHX	Hundred boxes
BIL	Billion Eur (trillion US)
BLD	Dry barrel (115.627 dm^3)
BLL	Barrel
BQL	Becquerel
BTU	British thermal unit (1.055 Kilojoules)
BUA	Bushel (35.2391 dm^3)
BUI	Bushel (36.36874 dm^3)
BX	Unknown unit of measure
C	Unknown unit of measure
CA	Unknown unit of measure

Table 18   Codes for Units of Measurement (Continued)

Value	Description
CCT	Carrying capacity in metric tons
CD	Unknown unit of measure
CDL	Candela
CEL	Celsius degrees
CEN	Hundred
CGM	Centigram
CKG	Coulomb per kg
CLF	Hundred leaves
CLT	Centiliter
CMK	Square centimeter
CMT	Centimeter
CNP	Hundred packs
CNT	Cental GB (45.359237 kg)
COU	Coulomb
CS	Unknown unit of measure
CTM	Metric carat (200 Mg = 2.10-4 kg)
CUR	Curie
CWA	Hundredweight US (45.3592 kg)
D	Unknown unit of measure
DAA	Decare
DAD	Ten days
DAY	Day
DEC	Decade (10 years)
DLT	Deciliter
DMK	Square decimeter
DMQ	Cubic decimeter
DMT	Decimeter
DPC	Dozen pieces
DPT	Displacement tonnage
DRA	Dram US (3.887935 g)
DRI	Dram GB (1.771745 g)
DRL	Dozen rolls
DRM	Drachm gm (3.887935 g)
DTH	Hectokilogram
DTN	Centner / Quintal, metric (100 kg) (decitonne)

Table 18   Codes for Units of Measurement (Continued)

Value	Description
DWT	Pennyweight GB, US (1.555174 g)
DZ	Unknown unit of measure
DZN	Dozen
DZP	Dozen packs
DZR	Dozen pairs
EA	Unknown unit of measure
EAC	Each
FAH	Fahrenheit degrees
FAR	Farad
FOT	Foot (.3048 m)
FT	Unknown unit of measure
FTK	Square foot
FTQ	Cubic foot
G	Unknown unit of measure
GAL	Unknown unit of measure
GBQ	Gigabequerel
GFI	Gram of fissile isotopes
GGR	Great gross (12 gross)
GIA	Gill (11.8294 cm^3)
GII	Gill (0.142065 dm^3)
GLD	Dry gallon (4.404884 dm^3)
GLI	Gallon (4.546092 dm^3)
GLL	Liquid gallon (3.78541 dm^3)
GRM	Gram
GRN	Grain GB, US (64.798910 mg)
GRO	Gross
GRT	Gross (Register) ton
GWH	Gigawatt-hour (1 Million kWh
HAR	Hectare
HBA	Hectobar
HGM	Hectogram
HIU	Hundred international units
HLT	Hectoliter
HMQ	Million cubic meters
HMT	Hectometer

Table 18   Codes for Units of Measurement (Continued)

Value	Description
HPA	Hectoliter of pure alcohol
HTZ	Hertz
HUR	Hour
INH	Inch (25.4 mm)
INK	Square inch
INQ	Cubic inch
ITM	Item
JOU	Joule
KBA	Kilobar
KEL	Kelvin
KGM	Kilogram
KGS	Kilogram per second
KHZ	Kilohertz
KJO	Kilojoule
KMH	Kilometer per hour
KMK	Square kilometer
KMQ	Kilogram per cubic meter
KMT	Kilometer
KNI	Kilogram of nitrogen
KNS	Kilogram of named substance
KNT	Knot (1 nautical mile per hour)
KPA	Kilopascal
KPH	Kilogram of caustic potash (kilogram of potassium hydroxide)
KPO	Kilogram of potassium oxide
KPP	Kilogram of phosphoric anhydride (kilogram of phosphoric pentoxide)
KSD	Kilogram of substance 90% dry
KSH	Kilogram of caustic soda
KTN	Kilotonne
KUR	Kilogram of uranium
KVA	Kilovolt-ampere
KVR	Kilovar
KVT	Kilovolt
KWH	Kilowatt-hour

Table 18   Codes for Units of Measurement (Continued)

Value	Description
KWT	Kilowatt
LBR	Pound GB, US (0.45359237 kg)
LBS	Unknown unit of measure
LBT	Troy pound, US (373.242 g)
LEF	Leaf
LPA	Liter of pure alcohol
LTN	Long ton GB, US (1.0160469 T)
LTR	Liter (1 dm^3)
LUM	Lumen
LUX	Lux
MAL	Megaliter
MAM	Megameter
MAW	Megawatt
MBE	Thousand standard brick equivalent
MBF	Thousand board-feet (2.36 m^3)
MBR	Millibar
MCU	Millicurie
MGM	Milligram
MHZ	Megahertz
MIK	Square mile
MIL	Thousand
MIN	Minute
MIO	Million
MIU	Million international units
MLD	Billion US (milliard)
MLT	Milliliter
MMK	Square millimeter
MMQ	Cubic millimeter
MMT	Millimeter
MON	Month
MPA	Megapascal
MQH	Cubic meter per hour
MQS	Cubic meter per second
MSK	Meter per second squared
MTK	Square meter

Table 18   Codes for Units of Measurement (Continued)

Value	Description
MTQ	Cubic meter
MTR	Meter
MTS	Meter per second
MVA	Megavolt-ampere (1000 kva)
MWH	Megawatt-hour (1000 kWh)
NAR	Number of articles
NBB	Number of bobbins
NCL	Number of cells
NEW	Newton
NIU	Number of international units
NMB	Number
NMI	Nautical mile (1852 m)
NMP	Number of packs
NMR	Number of pairs
NPL	Number of parcels
NPT	Number of parts
NRL	Number of rolls
NTT	Net (register) ton
OHM	Ohm
ONZ	Ounce GB, US (28.349523 g)
OZA	Fluid ounce (29.5735 cm^3)
OZI	Fluid ounce (28.413 cm^3)
PAL	Pascal
PCB	Piece
PCE	Unknown unit of measure
PER	Unknown unit of measure
PGL	Proof gallon
PK	Unknown unit of measure
PTD	Dry pint (0.55061 dm^3)
PTI	Pint (0.568262 dm^3)
PTL	Liquid pint (0.473176 dm^3)
QAN	Quarter (of a year)
QTD	Dry quart (1.101221 dm^3)
QTI	Quart (1.136523 dm^3)
QTL	Liquid quart (0.946353 dm^3)

Table 18   Codes for Units of Measurement (Continued)

Value	Description
QTR	Quarter, GB (12.700586 kg)
RL	Unknown unit of measure
RM	Unknown unit of measure
RPM	Revolution per minute
RPS	Revolution per second
SAN	Half year (6 months)
SCO	Score
SCR	Scruple GB, US (1.295982 g)
SEC	Second
SET	Set
SHT	Shipping ton
SIE	Siemens
SMI	(Statute) mile (1609.344 m)
SST	Short Standard (7200 matches)
ST	Unknown unit of measure
STI	Stone GB (6.350293 kg)
STN	Short ton GB, US (0.90718474 T)
TAH	Thousand ampere-hour
TNE	Metric ton (1000 kg) (tonne (1000 kg))
TPR	Ten pairs
TQD	Thousand cubic meters per day
TRL	Trillion EUR
TSD	Tonne of substance 90% dry
TSH	Ton of steam per hour
VLT	Volt
WCD	Cord (3.63 m^3)
WEB	Weber
WEE	Week
WHR	Watt-hour
WSD	Standard
WTT	Watt
YDK	Square yard
YDQ	Cubic yard
YRD	Yard (0.9144 m)

Product Codes

The following table lists the values you can use for the product code in the **item_#_ productCode** request field.

Table 19   Product Codes

Product Code	Definition
adult_content	Adult content.
coupon	Coupon applied to the entire order.
default	Default value for the product code. CyberSource uses default when a request message does not include a value for the product code.
electronic_good	Electronic product other than software.
electronic_software	Software distributed electronically rather than on disks or other media.
gift_certificate	Gift certificate.
handling_only	Fee that you charge your customer to cover your administrative selling costs.
service	Service that you perform for your customer.
shipping_and_handling	The shipping portion is the charge for shipping the product to your customer. The handling portion is the fee you charge your customer to cover your administrative selling costs.
shipping_only	Charge for transporting tangible personal property from your location to your customer. You must maintain documentation that clearly establishes the location where the title to the property passed from you to your customer.
subscription	Subscription to a web site or other content.