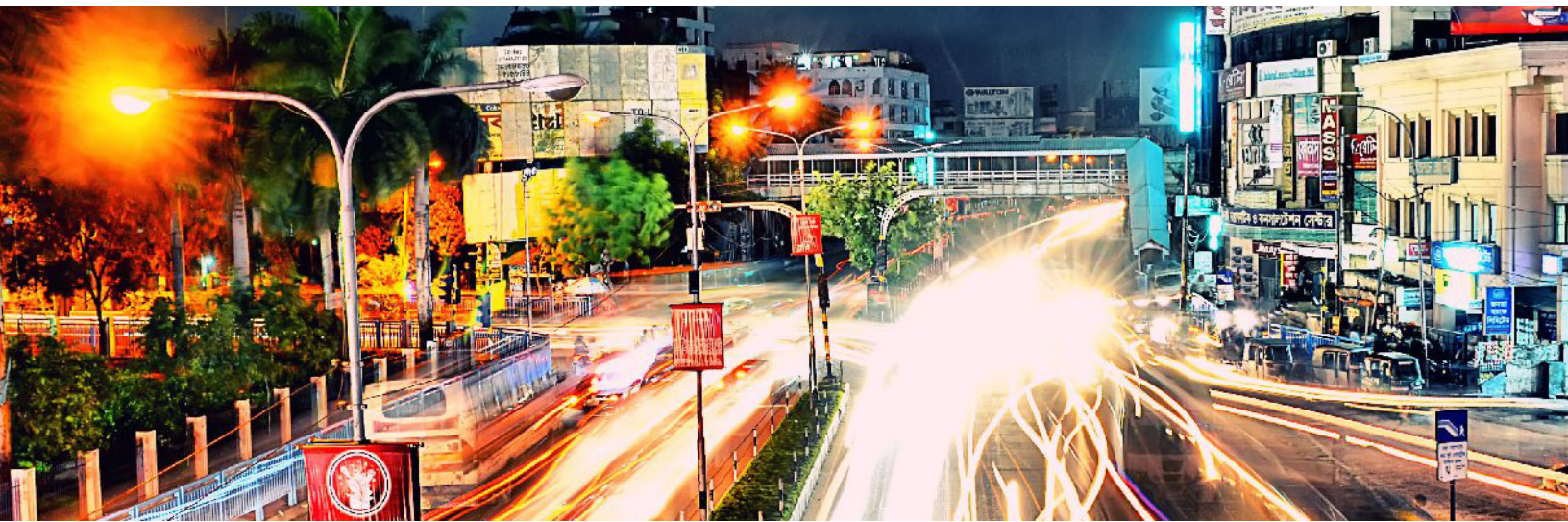


# Affirm Services

## Using the SCMP API



**cybersource**  
A Visa Solution

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For sales questions about any Cybersource service, email [sales@cybersource.com](mailto: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
August 2020	Added <b>merchant_defined_data1</b> field example and information to <a href="#">Chapter 2, Creating a Session</a> and <a href="#">Appendix A</a> ,
September 2019	Added new information about Affirm, product benefits, and going live. See <a href="#">Chapter 1, "Integrating with Affirm,"</a> on page 8.
August 2019	Added information about multibyte character strings. See " <a href="#">Working with Multibyte Character Strings</a> ," page 24.
April 2019	Initial generally available version.
December 2017	Initial beta release version.

# About This Guide

## Audience and Purpose

---

This guide is written for merchants who want to offer Affirm payments to customers.

Implementing Cybersource payment processing services requires software development skills. You must write code that uses the Cybersource API request and reply fields to integrate the services into your existing order management system.

This guide describes tasks you must complete to integrate the Cybersource services and Affirm into your existing order management system.

## Conventions

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### Note and Important Statements

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

---



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

---

## Text and Command Conventions

Convention	Usage
<b>bold</b>	Field and service names in text; for example: Include the <b>ics_applications</b> field.
Screen text	<ul style="list-style-type: none"><li>■ XML elements</li><li>■ Code examples</li><li>■ Values for API fields; for example: Set the <b>ics_applications</b> field to <code>ics_auth</code>.</li></ul>

## Related Documents

- *Getting Started with CyberSource Advanced for the SCMP API* ([PDF](#) | [HTML](#))—describes how to start using your Cybersource advanced account.
- [SCMP API Documentation and Downloads page](#).

Refer to the Support Center for complete Cybersource technical documentation:

[http://www.cybersource.com/support\\_center/support\\_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>

# Integrating with Affirm

## Introduction

---

Affirm is a real-time financing solution that you can offer to your customers.

Affirm integrates seamlessly in your existing checkout flow, enabling your customers to split their purchases into easy monthly payments. Because there are no gimmicks or hidden fees, what your customers see at checkout is exactly what they will pay, on a payment schedule of their choosing.

## Benefits

Affirm optimizes financing for an offline environment, with the following benefits:

- Improved customer choice and experience
- Transparent and flexible monthly payments
- Improved customer conversion, average return on value, and revenue per visitor
- Affirm takes on all risk of fraud and default after shipment
- Affirm supports payment authorization, capture and settlement, and refunds just like a credit card

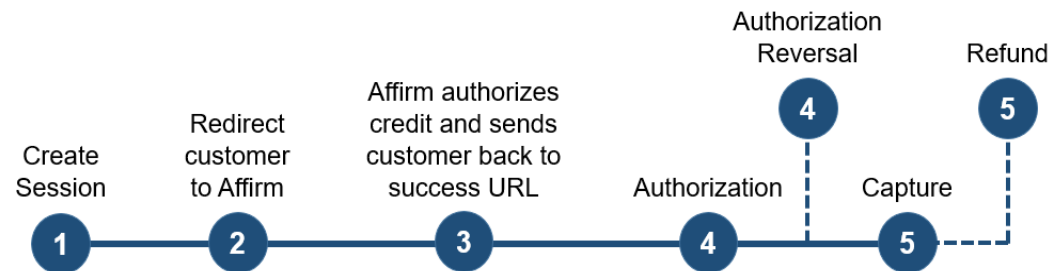
## Requirements

You must obtain an account ID from Affirm and provide it to Cybersource Customer Support.



# Transaction Flow

Figure 1 Affirm Transaction Flow



- 1 When the customer chooses the Affirm payment method, send the sessions service request. Cybersource returns a redirection URL to the Affirm site. See [Chapter 2, "Creating a Session," on page 11](#).
- 2 Using the redirection URL, redirect the customer to the Affirm site where the customer requests credit approval.
- 3 Affirm authorizes credit for the customer, creates a checkout token, and sends the customer back to the success URL that you sent in the sessions service request. This URL is appended with the checkout token that you extract and use in subsequent service requests.
- 4 Request the authorization service and include the checkout token in the request. See [Chapter 3, "Authorizing a Payment," on page 15](#).

To reverse an authorization, use the authorization reversal service. See [Chapter 4, "Reversing an Authorization," on page 17](#).

- 5 Request the capture service. See [Chapter 5, "Capturing an Authorization," on page 19](#).

To request a refund, use the refund service. See [Chapter 6, "Refunding a Payment," on page 21](#).

## Testing

For test transactions, send requests to the Cybersource test server:

`http://ics2testa.ic3.com`

## To perform a test:

---

- Step 1** Request the sessions service to initiate a checkout.
  - Step 2** Redirect the client using the redirection URL returned in sessions service response.
  - Step 3** When you are redirected to Affirm checkout, use a valid U.S. phone number to go through the Affirm checkout.
  - Step 4** Enter 1234 as the PIN. (For production, the PIN is sent to the customer's phone number.)
  - Step 5** Upon a successful credit confirmation, the checkout token is returned by the GET method to the success URL.
  - Step 6** Loan declination can be simulated by clicking the **x** in the Affirm checkout flow to cancel the loan. Both cancellations and declinations are sent to the cancel URL.
  - Step 7** Retrieve the checkout token from the front end, and send an authorization request.
  - Step 8** Use the request ID from the authorization reply to send follow-on calls for authorization reversal and captures.
  - Step 9** Use the request ID of the capture to send a partial or full refund.
- 

## Going Live

---

For information about going live, see *Getting Started with CyberSource Advanced for the SCMP API* ([PDF](#) | [HTML](#)).

For information about endpoints, see the [Endpoints](#) document. For the Affirm services, use the Akamai endpoints.

# Creating a Session

The sessions service:

- Creates a session.
- Responds with the redirection URL, the web page to which you redirect the customer where the customer applies for credit from Affirm.



Affirm includes the values that you send for the offer-level fields on the invoice that Affirm sends to the customer.

---

Include the following required fields:

- amount
- ap\_payment\_type—set to AFM.
- ap\_sessions\_cancel\_url—set to your web site URL that the customer is directed to after canceling the Affirm payment.
- ap\_sessions\_success\_url—set to your web site URL that the customer is directed to after successfully completing the Affirm payment.
- bill\_address1
- bill\_address2
- bill\_city
- bill\_country
- bill\_state
- bill\_zip
- currency
- customer\_email

- customer\_firstname
- customer\_lastname
- customer\_phone
- ics\_applications—set to ics\_ap\_sessions.
- merchant\_id
- merchant\_product\_sku
- merchant\_ref\_number
- product\_name
- quantity
- ship\_to\_address1
- ship\_to\_address2
- ship\_to\_city
- ship\_to\_country
- ship\_to\_email
- ship\_to\_firstname
- ship\_to\_lastname
- ship\_to\_phone
- ship\_to\_state
- ship\_to\_zip
- total\_amount

Cybersource recommends that you include the **total\_tax\_amount** field when you request the sessions service.

For descriptions of these fields see [Appendix A, "API Fields,"](#) on page 23.

# Example

---

## Example 1 Sessions Request

This example contains some optional fields.

---

```
merchant_id=mid12345
merchant_ref_number=ref1234
merchant_defined_data1=abcdef
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_address2=#1060
bill_city=Small Town
bill_state=CA
bill_country=US
bill_zip=98765
customer_email=jsmith@example.com
customer_phone=19876543210
ship_to_firstname=Jane
ship_to_lastname=Smith
ship_to_address1=123 Main Street
ship_to_street2=Apt 123
ship_to_city=Small Town
ship_to_state=CA
ship_to_country=US
ship_to_zip=98765
ship_to_email=jsmith@example.com
ship_to_phone=19876543210
currency=USD
offer0=total_amount=52.00^quantity=5^amount:10.00^
product_name:Skirt on the sky^merchant_product_sku:skirtonsky$bluegreen
ap_sessions_cancel_url=http://cancel.example.com
ap_sessions_success_url=http://success.example.com
ap_payment_type=AFM
ics_applications=ics_ap_sessions
```

---

**Example 2 Sessions Reply**

---

```
merchant_ref_number=ref1234
request_id=5064077031526017003012
request_token=AhjnrwSTEOYvvYr63+4EwhjWjLmR29VxBptJqXDsBae08gv6DjJD
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ap_sessions_rflag=SOK
ap_sessions_rcode=1
ap_sessions_rmsg=Request was processed successfully.
ap_sessions_response_code=00000
ap_sessions_merchant_url=https://sandbox.affirm.com/checkout/
GVFEH5P3AKUH1RRU/new/2QCH8HLF3JBKGRT6/
ap_sessions_amount=52.00
ap_sessions_status=COMPLETED
```

---

# Authorizing a Payment

The authorization service responds with an Affirm URL that you direct the customer to after the transaction is completed.

Include the following required fields:

- `ap_auth_preapproval_token`—set to the checkout token generated by Affirm. When Affirm authorizes credit, Affirm generates the checkout token and sends it to the browser.
- `ap_payment_type`—set to `AFM`.
- `bill_address1`
- `bill_city`
- `bill_country`
- `bill_state`
- `bill_zip`
- `currency`
- `customer_email`
- `customer_firstname`
- `customer_lastname`
- `customer_phone`
- `grand_total_amount`—set to the same grand total amount that was used in the sessions request.
- `ics_applications`—set to `ics_ap_auth`.
- `merchant_id`
- `merchant_ref_number`

For descriptions of these fields see [Appendix A, "API Fields,"](#) on page 23.

# Example

---

## Example 3 Authorization Request

---

```
ics_applications=ics_ap_auth
merchant_id=mid12345
merchant_ref_number=ref1234
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_city=Small Town
bill_state=CA
bill_country=US
bill_zip=98765
customer_email=jsmith@example.com
customer_phone=19876543210
currency=USD
grand_total_amount=52.00
ap_auth_preapproval_token=QVA6DL4OFY7EJM26
ap_payment_type=AFM
```

---

## Example 4 Authorization Reply

---

```
merchant_ref_number=ref1234
request_id=5022171547236631601541
request_token=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ap_auth_rflag=SOK
ap_auth_rcode=1
ap_auth_rmsg=Request was processed successfully.
ap_auth_response_code=00003
ap_auth_amount=52.00
ap_auth_processor_transaction_id=A8S0G2N3V5I1ESMD
ap_auth_status=AUTHORIZED
```

---



# Reversing an Authorization

The authorization reversal service enables you to reverse the amount that was authorized.

Include the following required fields:

- `ap_auth_request_id`—set to the request ID that was included in the authorization reply message.
- `ap_payment_type`—set to `AFM`.
- `ics_applications`—set to `ics_ap_auth_reversal`.
- `merchant_id`
- `merchant_ref_number`

For descriptions of these fields see [Appendix A, "API Fields,"](#) on page 23.

## Example

---

### Example 5 Authorization Reversal Request

---

```
merchant_id=mid12345  
merchant_ref_number=ref1234  
ap_auth_request_id=5022171254726545401541  
ap_payment_type=AFM  
ics_applications=ics_ap_auth_reversal
```

---

**Example 6 Authorization Reversal Reply**

---

```
merchant_ref_number=ref1234
request_id=5022171547236631601541
request_token=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ap_auth_reversal_status=AUTH_REVERSED
ap_auth_reversal_rflag=SOK
ap_auth_reversal_rcode=1
ap_auth_reversal_rmsg=Request was processed successfully.
ap_auth_reversal_response_code=00007
ap_auth_reversal_reconciliationID=A8S0G2N3V5I1ESMD
```

---

# Capturing an Authorization

The capture service enables you to capture only the entire authorized amount. Partial and multiple captures are not supported.

Include the following required fields:

- `ap_auth_request_id`—set to the request ID that was included in the authorization reply message.
- `ap_payment_type`—set to `AFM`.
- `currency`
- `grand_total_amount`
- `ics_applications`—set to `ics_ap_capture`.
- `merchant_id`
- `merchant_ref_number`

Cybersource recommends that you include the following optional fields when you request the capture service:

- `amount`
- `product_name`
- `quantity`
- `total_amount`

For descriptions of these fields see [Appendix A, "API Fields,"](#) on page 23.

## Example

---

### Example 7 Capture Request

---

```
merchant_id=mid12345
merchant_ref_number=ref1234
currency=USD
grand_total_amount=52.00
ap_auth_request_id=5090279157766055601540
ap_payment_type=AFM
ics_applications=ics_ap_capture
```

---

### Example 8 Capture Reply

---

```
merchant_ref_number=ref1234
request_id=5022171547236631601541
request_token=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ap_capture_status=SETTLED
ap_capture_rflag=SOK
ap_capture_rcode=1
ap_capture_rmsg=Request was processed successfully.
ap_capture_response_code=00004
ap_capture_amount=52.00
```

---

# Refunding a Payment

The refund service enables you to refund the entire captured amount or part of the captured amount. Partial and multiple refunds are supported when the sum of all refunds is less than or equal to the total captured amount.

Include the following required fields:

- `ap_payment_type`—set to `AFM`.
- `ap_refund_request_id`—set to the request ID that was included in the capture reply message.
- `currency`
- `grand_total_amount`
- `ics_applications`—set to `ics_ap_refund`.
- `merchant_id`
- `merchant_ref_number`

Cybersource recommends that you include the following fields when you request the refund service:

- `customer_email`
- `customer_firstname`
- `customer_lastname`
- `offer:amount`
- `offer:product_name`
- `offer:quantity`
- `offer:total_amount`

For descriptions of these fields see [Appendix A, "API Fields,"](#) on page 23.

## Example

---

### Example 9 Refund Request

---

```
merchant_id=mid12345  
merchant_ref_number=ref1234  
currency=USD  
grand_total_amount=52.00  
request_id=5090279157766055601540  
ap_payment_type=AFM  
ics_applications=ics_ap_refund
```

---

### Example 10 Refund Reply

---

```
merchant_ref_number=ref1234  
request_id=5022171547236631601541  
request_token=Ahjn7wSTEEChjZtBWGGFjxFSG4aMWDBinUvA+kEsNP3DSGTb  
ics_rcode=1  
ics_rmsg=Request was processed successfully.  
ics_rflag=SOK  
ap_refund_status=SETTLED  
ap_refund_rflag=SOK  
ap_refund_rcode=1  
ap_refund_rmsg=Request was processed successfully.  
ap_refund_response_code=00006  
ap_refund_transaction_id=6IWYH3XH5XR7DP2A
```

---

# API Fields

## Formatting Restrictions

Unless otherwise noted, all fields are order and case insensitive and the fields accept special characters such as @, #, and %.



Values for request-level and offer-level fields must not contain carets (^) or colons (:). However, they can contain embedded spaces and any other printable characters. When you use more than one consecutive space, Cybersource removes the extra spaces.

## Data Type Definitions

For more information about these data types, see the [World Wide Web Consortium \(W3C\) XML Schema Part 2: Datatypes Second Edition](#).

**Table 1 Data Type Definitions**

Data Type	Description
Date and time	Format is YYYY-MM-DDThhmmssZ, where: <ul style="list-style-type: none"> <li>■ T separates the date and the time</li> <li>■ Z indicates Coordinated Universal Time (UTC), also known as Greenwich Mean Time (GMT)</li> </ul> <b>Example</b> 2020-01-11T224757Z equals January 11, 2020, at 22:47:57 (10:47:57 p.m.)
Decimal	Number that includes a decimal point <b>Example</b> 23.45, -0.1, 4.0, 90809.0468
Integer	Whole number {..., -3, -2, -1, 0, 1, 2, 3, ...}
Nonnegative integer	Whole number greater than or equal to zero {0, 1, 2, 3, ...}
Positive integer	Whole number greater than zero {1, 2, 3, ...}
String	Sequence of letters, numbers, spaces, and special characters

## Working with Multibyte Character Strings

Some languages—such as Korean, Chinese, and Russian—require more than one ASCII byte per character. Therefore, a string of multibyte characters can exceed the allotted string length of some CyberSource API fields.

In some languages, a short name that visually has only three or four characters might be equivalent to 10 or 15 bytes in UTF-8. Therefore, it is important to consider the overall length of a multibyte string to be sure it fits into the allotted ASCII string length.

For best success when working with languages, make sure the total length of a multibyte string does not exceed the ASCII string length for a specific API field.

## Request-Level Fields

**Table 2 Request-Level Fields**

Field	Description	Required (R) / Optional (O)	Data Type & Length
ap_auth_preapproval_token	Token generated by Affirm. When Affirm authorizes the order, Affirm generates a preapproval token and sends it to the browser. See " <a href="#">Transaction Flow</a> ," page 9.	Authorization (R)	String (60)
ap_auth_request_id	Request ID of the authorization that you want to reverse or capture. Set the value of this field to the value of the request ID that was returned in the authorization reply message.	Authorization Reversal (R) Capture (R)	String (26)
ap_payment_type	Identifier for the payment type. Set the value for this field to AFM.	Required for all services.	String (3)
ap_refund_request_id	Request ID of the capture that you want to refund. Set the value of this field to the value of the request ID that was returned in the capture reply message.	Refund (R)	String (26)



Table 2 Request-Level Fields (Continued)

Field	Description	Required (R) / Optional (O)	Data Type & Length
ap_sessions_cancel_url	Your web site URL that the customer is directed to after canceling the Affirm payment:  1 You direct the customer to the Affirm URL that is included in the authorization response.  2 If the customer cancels the payment, Affirm directs the customer to this cancel URL.	Sessions (R)	String (255)
ap_sessions_success_url	Your web site URL that the customer is directed to after successfully completing the Affirm payment:  1 You direct the customer to the Affirm URL that is included in the authorization response.  2 If the customer successfully completes the payment, Affirm directs the customer to this success URL.	Sessions (R)	String (255)
bill_address1	First line of the billing street address.	Authorization (R) Sessions (R)	String (60)
bill_address2	Additional address information.  <b>Example</b> Attention: Accounts Payable	Authorization (O) Sessions (R)	String (60)
bill_city	City of the billing address.	Authorization (R) Sessions (R)	String (50)
bill_country	Country of the billing address. Use the two-character <i>ISO Standard Country Codes</i> .  <b>For Authorization requests:</b> You must use the same value for this field that was sent in the <b>bill_country</b> field of the Sessions request.	Authorization (R) Sessions (R)	String (2)
bill_state	State of the billing address. Use the <i>State, Province, and Territory Codes for the United States and Canada</i> .	Authorization (R) Sessions (R)	String (2)
bill_zip	Postal code for the billing address. The postal code must consist of 5 to 9 digits.  When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits]  <b>Example</b> 12345-6789	Authorization (R) Sessions (R)	String (10)

**Table 2 Request-Level Fields (Continued)**

Field	Description	Required (R) / Optional (O)	Data Type & Length
currency	Currency for the transaction. Use the three-character <a href="#">ISO Standard Currency Codes</a> .	Authorization (R) Authorization reversal (O) Capture (R) Refund (R) Sessions (R)	String (5)
customer_email	Customer's email address.	Authorization (R) Refund (O but recommended) Sessions (R)	String (255)
customer_firstname	Customer's first name.	Authorization (R) Refund (O but recommended) Sessions (R)	String (60)
customer_lastname	Customer's last name.	Authorization (R) Refund (O but recommended) Sessions (R)	String (60)
customer_phone	Customer's phone number. Cybersource recommends that you include the country code when the order is from outside the U.S.	Authorization (R) Sessions (R)	String (15)
grand_total_amount	Grand total for the transaction. 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.	Authorization (R) Authorization reversal (O) Capture (R) Refund (R) Sessions (O)	Decimal (15)
ics_applications	Cybersource services to process for the request. At least one service must be specified in the request.	Required for all services.	String (255)
merchant_defined_data1	The unique ID that identifies a particular merchant to Affirm for transactions in a Cybersource integration.	Sessions (O)	String (255)

**Table 2 Request-Level Fields (Continued)**

Field	Description	Required (R) / Optional (O)	Data Type & Length
merchant_id	Your Cybersource merchant ID. Use the same merchant ID for evaluation, testing, and production.	Required for all services.	String (30)
merchant_ref_number	Merchant-generated transaction number or tracking number. Cybersource recommends that you send a unique value for each transaction so that you can perform meaningful searches for the transaction. For information about tracking orders and transactions, see <a href="#">Getting Started with CyberSource Advanced for the SCMP API</a> .	Required for all services.	String (50)
order_discount_amount	Total discount for the entire order.	Sessions (O)	Decimal (15)
ship_to_address1	First line of the shipping address.	Authorization (O) Sessions (R)	String (100)
ship_to_address2	Second line of the shipping address.	Authorization (O) Sessions (R)	String (100)
ship_to_city	City of the shipping address.	Authorization (O) Sessions (R)	String (40)
ship_to_country	Country of the shipping address. Use the two-character <a href="#">ISO Standard Country Codes</a> .	Authorization (O) Sessions (R)	String (2)
ship_to_email	Email of the recipient.	Authorization (O) Sessions (R)	String (255)
ship_to_firstname	First name of the recipient.	Authorization (O) Sessions (R)	String (60)
ship_to_lastname	Last name of the recipient.	Authorization (O) Sessions (R)	String (60)
ship_to_phone	Phone number for the shipping address.	Authorization (O) Sessions (R)	String (20)
ship_to_state	State of the shipping address. Use the <a href="#">State, Province, and Territory Codes for the United States and Canada</a> .	Authorization (O) Sessions (R)	String (40)

**Table 2 Request-Level Fields (Continued)**

Field	Description	Required (R) / Optional (O)	Data Type & Length
ship_to_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] 12345-6789	Authorization (O) Sessions (R)	String (20)
total_tax_amount	Total tax amount for the order.	Authorization (O) Sessions (O but recommended)	Decimal (15)

## Offer-Level Fields

**Table 3 Offer-Level Fields**

Field	Description	Required (R) / Optional (O)	Data Type & Length
amount	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.  <b>Authorization and Sessions</b> If a discount applies to the cost of the item, this value includes the discount amount. For example, if the original (pre-discount) price is 10.00 and the discount amount is 5.00, the price of the item is 15.00.  Do not include the tax amount in this value.	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	Decimal (15)
discount_amount	Offer-level discount amount. If the offer quantity is 1, then this value is the discount for the offer. If the offer quantity is more than 1, then this value is the discount for the entire quantity of the offer.	Authorization (O) Sessions (O)	Decimal (15)
merchant_product_sku	Identification code for the product.	Authorization (O) Sessions (R)	String (255)
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 <code>default</code> . See <a href="#">Table 5, "Product Codes," on page 34</a> , for a list of valid values.	Authorization (O) Sessions (O)	String (255)

**Table 3 Offer-Level Fields (Continued)**

Field	Description	Required (R) / Optional (O)	Data Type & Length
product_name	Product name. <b>Note</b> To include a shipping amount in a request, set the value of this field to <code>shipping</code> and include the <b>amount</b> , <b>total_amount</b> , and <b>quantity</b> offer-level fields for the shipping item.	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	String (255)
quantity	The default is 1.	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	Nonnegative integer (10)
tax_rate	Tax rate for the item.	Authorization (O) Sessions (O)	String (15)
total_amount	Offer-level total amount. If the offer quantity is 1, then this value is the total amount for the offer. If the offer quantity is more than 1, then this value is the total amount for the entire quantity of the offer.	Authorization (O) Capture (O but recommended) Refund (O but recommended) Sessions (R)	Decimal (15)

## Reply Fields

**Table 4 Reply Fields**

Field	Description	Returned By	Data Type & Length
ap_auth_amount	Authorized amount.	Authorization	Decimal (15)
ap_auth_date_time	Date and time when the service was requested.	Authorization	String (20)
ap_auth_processor_transaction_id	Affirm-generated transaction identifier.	Authorization	String (15)

Table 4 Reply Fields (Continued)

Field	Description	Returned By	Data Type & Length
ap_auth_rcode	Indicates whether the service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Authorization	Integer (1)
ap_auth_response_code	Affirm response code. See <a href="#">"Reply Flags and Affirm Response Codes,"</a> page 35.	Authorization	String (5)
ap_auth_reversal_date_time	Date and time when the service was requested.	Authorization Reversal	String (20)
ap_auth_reversal_rcode	Indicates whether the service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Authorization Reversal	Integer (1)
ap_auth_reversal_response_code	Affirm response code. See <a href="#">"Reply Flags and Affirm Response Codes,"</a> page 35.	Authorization Reversal	String (5)
ap_auth_reversal_rflag	One-word description of the result of the <b>ics_ap_auth_reversal</b> request. See <a href="#">"Reply Flags and Affirm Response Codes,"</a> page 35.	Authorization Reversal	String (50)
ap_auth_reversal_rmsg	Message that explains the reply flag <b>ap_auth_reversal_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Authorization Reversal	String (255)
ap_auth_reversal_status	Affirm authorization reversal status. Possible values: <ul style="list-style-type: none"> <li>■ AUTH_REVERSED: Authorization successfully reversed.</li> <li>■ FAILED: Request failed.</li> </ul>	Authorization Reversal	String (15)
ap_auth_reversal_trans_ref_no	Cybersource-generated reference number. You can use this value to reconcile your transactions with information from Affirm and information in Cybersource reports.	Authorization Reversal	String (60)
ap_auth_rflag	One-word description of the result of the <b>ics_ap_auth</b> request. See <a href="#">"Reply Flags and Affirm Response Codes,"</a> page 35.	Authorization	String (50)

Table 4 Reply Fields (Continued)

Field	Description	Returned By	Data Type & Length
ap_auth_rmsg	Message that explains the reply flag <b>ap_auth_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Authorization	String (255)
ap_auth_status	Affirm authorization status. Possible values: <ul style="list-style-type: none"> <li>■ AUTHORIZED: Payment successfully authorized.</li> <li>■ FAILED: Request failed.</li> </ul>	Authorization	String (15)
ap_capture_amount	Amount that was captured.	Capture	Decimal (15)
ap_capture_date_time	Date and time when the service was requested.	Capture	String (20)
ap_capture_rcode	Indicates whether the service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Capture	Integer (1)
ap_capture_response_code	Affirm response code. See <a href="#">"Reply Flags and Affirm Response Codes," page 35</a> .	Capture	String (5)
ap_capture_rflag	One-word description of the result of the <b>ics_ap_capture</b> request. See <a href="#">"Reply Flags and Affirm Response Codes," page 35</a> .	Capture	String (50)
ap_capture_rmsg	Message that explains the reply flag <b>ap_capture_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Capture	String (255)
ap_capture_status	Affirm capture status. Possible values: <ul style="list-style-type: none"> <li>■ CAPTURED: Payment successfully captured.</li> <li>■ FAILED: Request failed.</li> </ul>	Capture	String (15)
ap_refund_date_time	Date and time when the service was requested.	Refund	String (20)

Table 4 Reply Fields (Continued)

Field	Description	Returned By	Data Type & Length
ap_refund_rcode	Indicates whether the service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Refund	Integer (1)
ap_refund_response_code	Affirm response code. See <a href="#">"Reply Flags and Affirm Response Codes," page 35.</a>	Refund	String (5)
ap_refund_rflag	One-word description of the result of the <b>ics_ap_refund</b> request. See <a href="#">"Reply Flags and Affirm Response Codes," page 35.</a>	Refund	String (50)
ap_refund_rmsg	Message that explains the reply flag <b>ap_refund_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Refund	String (255)
ap_refund_status	Affirm refund status. Possible values: <ul style="list-style-type: none"> <li>■ REFUNDED: Payment successfully refunded.</li> <li>■ FAILED: Request failed.</li> </ul>	Refund	String (15)
ap_refund_transaction_id	Affirm identifier of the refund transaction.	Refund	String (50)
ap_sessions_amount	Amount sent in the sessions request.	Sessions	Decimal (15)
ap_sessions_merchant_url	Affirm URL. Direct the customer to this URL after the transaction is completed.	Sessions	String (2048)
ap_sessions_rcode	Indicates whether the service request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	Sessions	Integer (1)
ap_sessions_response_code	Affirm response code. See <a href="#">"Reply Flags and Affirm Response Codes," page 35.</a>	Sessions	String (5)
ap_sessions_rflag	One-word description of the result of the <b>ics_ap_sessions</b> request. See <a href="#">"Reply Flags and Affirm Response Codes," page 35.</a>	Sessions	String (50)
ap_sessions_rmsg	Message that explains the reply flag <b>ap_sessions_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	Sessions	String (255)



Table 4 Reply Fields (Continued)

Field	Description	Returned By	Data Type & Length
ap_sessions_status	Status of the sessions request. Possible values: <ul style="list-style-type: none"> <li>■ COMPLETED: Sessions request successfully completed.</li> <li>■ FAILED: Request failed.</li> </ul>	Sessions	String (15)
ics_rcode	Indicates whether the entire request was successful. Possible values: <ul style="list-style-type: none"> <li>■ -1: An error occurred.</li> <li>■ 0: The request was declined.</li> <li>■ 1: The request was successful.</li> </ul>	All services.	Integer (1)
ics_rflag	One-word description of the result of the entire request. See <a href="#">"Reply Flags and Affirm Response Codes," page 35.</a>	All services.	String (50)
ics_rmsg	Message that explains the reply flag <b>ics_rflag</b> . Do not display this message to the customer, and do not use this field to write an error handler.	All services.	String (255)
merchant_ref_number	Merchant-generated transaction number or tracking number. Cybersource recommends that you send a unique value for each transaction so that you can perform meaningful searches for the transaction. For information about tracking orders and transactions, see <a href="#">Getting Started with CyberSource Advanced for the SCMP API.</a>	All services	String (50)
request_id	Identifier for the request.	All services	String (26)
request_token	Request token data created by Cybersource for each reply. The field is an encoded string that contains no confidential information such as an account or card verification number. The string can contain a maximum of 256 characters.	All services	String (256)

# Product Codes

The following table lists the values you can use for the product code in the **product\_code** offer-level field.

**Table 5 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 <code>default</code> 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.

# Reply Flags and Affirm Response Codes



Cybersource recommends using the reply flag value and the Affirm response code to determine the transaction result.

**Table 6 Reply Flags and Affirm Response Codes**

Reply Flag	Affirm Response Codes	Description
DINVALIDDATA	<ul style="list-style-type: none"> <li>■ 10000—status: failed.</li> <li>■ 30600—status: failed.</li> <li>■ 30700—status: failed.</li> </ul>	<p>Invalid request.</p> <p>Possible reasons:</p> <ul style="list-style-type: none"> <li>■ The request data is invalid.</li> <li>■ Affirm declined the transaction because of tax errors or government compliance errors.</li> </ul>
DPAYMENTREFUSED	<ul style="list-style-type: none"> <li>■ 30200—status: failed.</li> <li>■ 30350—status: failed.</li> <li>■ 30500—status: failed.</li> </ul>	<p>Possible reasons:</p> <ul style="list-style-type: none"> <li>■ Affirm declined the transaction because of funding source problems.</li> <li>■ The transaction was flagged as high risk.</li> <li>■ Insufficient funds.</li> </ul>
ESYSTEM	<ul style="list-style-type: none"> <li>■ 20000—status: failed.</li> <li>■ 20001—status: failed.</li> <li>■ 20002—status: failed.</li> <li>■ 30000—status: failed.</li> <li>■ 30100—status: failed.</li> </ul>	<p>Possible reasons:</p> <ul style="list-style-type: none"> <li>■ The signature was not included in the HTTP header.</li> <li>■ The signature in the HTTP header has expired or is not a valid signature.</li> <li>■ The API version in the HTTP header was missing or is not supported.</li> </ul>
SOK	<ul style="list-style-type: none"> <li>■ 00000—status: completed.</li> <li>■ 00001—status: pending.</li> <li>■ 00002—status: abandoned.</li> <li>■ 00003—status: authorized.</li> <li>■ 00004—status: settled.</li> <li>■ 00006—status: refunded.</li> </ul>	<p>Successful transaction.</p>