U.Commerce®

Marketplace 7

uPay Technical Guide

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1.0   Passing Parameters to Your uPay Site

For uPay to integrate with a campus web application, the campus web application must be able to pass parameters that describe the transaction. At a minimum, the campus web application must pass a uPay site ID that identifies which uPay site will handle the transaction. In addition, in order for a transaction to be identified and tracked, the campus web application must pass a transaction ID (called EXT_TRANS_ID by uPay).

Some parameters can be used to automatically populate fields on your uPay site. For example, the customer's billing address can be passed to uPay so that the customer isn't required to re-enter this information. Likewise, a dollar amount can be passed directly to uPay.

You do not need to tell Marketplace which parameters you will be passing. You only need pass the parameters when directing a customer to your uPay site. uPay will accept any parameters that you pass and in turn pass the parameters back to your campus web application after the transaction is processed (provided you use the posting URL option, as described in **"Using a Posting URL" on page 11**).

uPay Parameter Details

In order for uPay to take action on passed parameters (such as pre-populating the billing address fields or the dollar amount field), the parameters must be named as described below.

If the campus web application passes recurring payment data—RECURRING_USER_CAN_CHANGE, RECURRING_FREQUENCY, RECURRING_START_DATE, and RECURRING_NUMBER_OF_PAYMENTS or RECURRING_END_DATE—to the uPay site, uPay will then take that data and calculate the payment schedule.

Note: To receive back the payment parameters after the payment is completed in uPay, a posting URL must be used, as described in **"Using a Posting URL" on page 11**. If recurring payments are used, this payment information becomes critical for monitoring the payment process. For example, if recurring payment parameters are sent to the Posting URL, the campus web application will have a record of when the last payment is due.

The following list describes all the parameters that uPay can use. uPay takes actions on the following parameters.

Parameters that uPay takes action upon once receiving:

Parameters	Description	Field Length	Data Type
UPAY_SITE_ID	Required. This is a numerical value unique to each uPay site. The value is displayed in the Form Parameters page for the uPay site.	unlimited	numeric

Parameters	Description	Field Length	Data Type
BILL_NAME	Used to pass the billing name.	50	alphanumeric
BILL_EMAIL_ADDRESS	Used to pass the billing e-mail address.	50	alphanumeric
BILL_STREET1	Used to pass the billing street address 1.	30	alphanumeric
BILL_STREET2	Used to pass the billing street address 2.	30	alphanumeric
BILL_CITY	Used to pass the billing city.	35	alphanumeric
BILL_STATE	Used to pass the billing state. The billing state should be passed as the two-character state abbreviation. For foreign addresses, "--" can be passed to uPay in order to select "Not applicable" for the state field. **Note:** If an invalid two-character state abbreviation is passed, the default state as established in the system administrative settings will be used.	2	alphanumeric
BILL_POSTAL_CODE	Used to pass the billing postal code. To accommodate foreign addresses, uPay will accept up to 30 characters in the postal code parameter.	30	alphanumeric
BILL_COUNTRY	Used to pass the two-letter country code for the billing country. You must use the two-letter English language country codes approved by the International Organization for Standardization. This list can be found at www.iso.org/iso/country_codes.htm. **Note:** If an invalid two-character country abbreviation is passed, the default country as established in the system administrative settings will be used.	2	alphabetic

Parameters	Description	Field Length	Data Type
EXT_TRANS_ID	Optional. The value for this parameter is generated by the campus web application. It serves as a cross-reference between the web application and Marketplace. If this parameter is passed to uPay, it will be stored in the Marketplace database along with information about the transaction. If the campus web application passes the VALIDATION_KEY parameter (and Yes for "Require encoded validation key for amount?" is selected on the uPay Payment Settings page), then you MUST pass the EXT_TRANS_ID parameter. This field does not appear if you selected Yes for "Site uses T-Link" on the uPay Payment Settings page. If Yes is selected for "Validate External Transaction ID is unique to this uPay site?" on the uPay Payment Settings page, uPay will require that an EXT_TRANS_ID is passed by the campus web application. In this case, the EXT_TRANS_ID value must be unique for this uPay site. uPay will validate that the submitted external transaction ID has not previously been used. (However, this EXT_TRANS_ID value CAN be used by other uPay sites.) If this value is not passed, or if the value is not unique, the customer will receive an error message. Use of the EXT_TRANS_ID parameter allows you to use Marketplace's uPay Payment Search functionality to search for payments with a specified EXT_TRANS_ID value. In addition, you will be able to view the EXT_TRANS_ID values on Marketplace's Posting Status Report.	250	alphanumeric
EXT_TRANS_ID_LABEL	Optional. This field can contain a description of the EXT_TRANS_ID value. If this parameter is used *and EXT_TRANS_ID is also passed*, this description appears on the receipt that the customer sees at the end of the uPay payment process. HTML is NOT allowed in this field.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
AMT	Optional. If used, this parameter automatically completes the Payment Amount field when the customer arrives at the uPay site. To use this parameter, you must configure your uPay site by selecting Yes for "Allow the amount to be passed in" on the uPay Payment Settings page. If the campus web application passes the VALIDATION_KEY parameter (and Yes for "Require encoded validation key for amount?" is selected on the uPay Payment Settings page), then you MUST pass the AMT parameter. By default, T-Link expects the payment amount to be passed with the AMT parameter from the web application. If a payment amount is not passed, the uPay site's default payment amount will be displayed to the customer. Maximum value: 99999.99.	8 (including 2 characters to the right of the decimal point)	numeric
SSV	This parameter can be used only used if you accept ACH payments. This is the Shared Secret Value that the user enters on the ACH agreement page when paying by checking or savings account. A shared secret value is an alphanumeric value that the user knows, for example, their birth year or their mother's maiden name. While the shared secret value is not required by uPay, it is a requirement of the NACHA rules for web-based ACH payments. Having users enter a shared secret value increases security of payments through electronic bank accounts.	unlimited	alphanumeric
SSV_PROMPT	This parameter can only be used if you accept ACH payments. The SSV_PROMPT is used when the user pays by checking or savings account. If passed, it overrides your setting for the Shared Secret Value prompt. This is the prompt shown to users so they know what to enter for the Shared Secret value. If the prompt value is not passed, uPay uses the prompt you define in the Payment Method Settings page.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
VALIDATION_KEY	If the uPay site has been configured to accept a passed amount from the campus web application, TouchNet recommends that the VALIDATION_KEY parameter also be passed. The use of an encoded validation key helps to ensure the integrity of amounts that are passed to uPay. In order to pass a VALIDATION_KEY, the following actions must be taken: ● The "Require encoded validation key for amount?" field on the uPay Payment Settings page must be set to Yes. ● You must enter a "Passed Amount Validation Key" value on the uPay Payment Settings page. ● The campus web application must pass a transaction amount (AMT) as an input parameter. ● The campus web application must pass an external transaction ID (EXT_TRANS_ID) as an input parameter. ● The campus web application must determine the value for the VALIDATION_KEY parameter. If any part of this configuration has not been completed, uPay will not accept the payment.	unlimited	alphanumeric
ADD_ON_OFFER_DISABLED	If the display of an Additional Donation has been turned on in the uPay site configuration, the Additional Donation can be turned off by passing **true** as the value for this parameter.	unlimited	alphanumeric
RECURRING_USER_CAN_CHANGE	Optional. In order to establish recurring payments, this parameter MUST be passed. This parameter determines whether the customer can change the recurring payment values that are passed by the campus web application. Accepted values: True or False. **Note:** If RECURRING_USER_CAN_CHANGE=false, uPay must receive RECURRING_START_DATE, RECURRING_FREQUENCY and RECURRING_END_DATE or RECURRING_NUMBER_OF_PAYMENTS. If uPay does not receive these values, uPay will display an error message to the customer.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
RECURRING_ CAN_ CHANGE_ END_DATE_ TO_CC_EXP_ DATE	If recurring payment parameters are being sent to the uPay site, this parameter determines what happens if the customer enters a payment card expiration date that will occur *before* the projected end date of the recurring payments. Accepted values: Yes or No. If RECURRING_EXP_DATE_CHANGE = Yes and the customer enters a payment card expiration date that will occur before the projected end date of the recurring payments, uPay will automatically change the end date of the recurring payments so it comes before the payment card expiration date. If RECURRING_EXP_ DATE_CHANGE = No and the customer enters a payment card expiration date that will occur before the projected end date of the recurring payments, uPay will prompt the customer to use a different payment card. **Example:** The customer uses the campus web application to make a monthly donation of $100. In the campus web application, the customer enters the following information when establishing recurring payments: start date - 10/26/2008, frequency - monthly, and end date - 06/26/10. This information is passed to uPay by the campus web application, at which point the customer enters their payment card information. The customer enters a payment card expiration date of 04/10—which predates the end date of the recurring payments. Because the campus web application sent RECURRING_EXP_DATE_CHANGE = Yes, uPay automatically changes the date of the last payment to 4/26/10. The monthly donation remains unchanged at $100. **Note:** RECURRING_CAN_CHANGE_END_DATE_TO_ CC_EXP_DATE = Yes should only be used in situations in which it is acceptable that the total dollar amount of recurring payments can be reduced by the elimination of one or more payments. RECURRING_CAN_CHANGE_ END_DATE_TO_CC_EXP_DATE = Yes might work well with donations, in which the alternative of the customer canceling the recurring payments would be less desirable than the elimination of one or more individual payments. In contrast, the elimination of payments for a product that is actually delivered to the customer, such as a parking pass or a football season ticket, would most likely be considered unacceptable.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
RECURRING_START_DATE	If the uPay site accepts recurring payments, this parameter determines the start date for the recurring payments. The customer must enter today's date or a later date (i.e., the customer cannot enter a past date). Required date format: mm/dd/yyyy.	10	alphanumeric
RECURRING_END_DATE	If the uPay site accepts recurring payments, this parameter determines the end date for the recurring payments. Any value passed in this field will override the Maximum Duration as configured in the Recurring Settings for this uPay site. Required date format: mm/dd/yyyy. (Maximum accepted value is 99 years from the start date.)	10	alphanumeric
RECURRING_FREQUENCY	If the uPay site accepts recurring payments, this parameter sets the frequency of the scheduled payments. Accepted values: 1 (Monthly), 2 (Bi-Monthly), 4 (Weekly), 5 (Quarterly), 6 (Semi-Annually), 7 (Annually), and 9 (Daily). **Note:** For RECURRING_FREQUENCY, be sure to use the accepted numerical values. For example, to set up weekly recurring payments, send RECURRING_FREQUENCY=4; Do not send RECURRING_FREQUENCY=Weekly.	unlimited	numeric
RECURRING_NUMBER_OF_PAYMENTS	If the uPay site accepts recurring payments, this parameter determines the number of scheduled recurring payments. Any value passed in this field will override the Maximum Duration as configured in the Recurring Settings for this uPay site. (Maximum accepted value is 99 years from the start date.) **Note:** If both RECURRING_NUMBER_OF_PAYMENTS and RECURRING_END_DATE are passed to uPay, uPay will use RECURRING_NUMBER_OF_PAYMENTS to calculate the payment schedule.	unlimited	numeric
CONTINUE_LINK_TEXT	Optional. This parameter can be used for passing the alternative text to be displayed as the Continue link in the uPay site.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
SUCCESS_LINK	Optional. When you establish a uPay site, you enter a URL for the success link that appears on the receipt page the customer sees after successfully making a uPay payment. Instead of providing the same URL for all customers, you can customize the success link URL. For example, for customers identified as students, you might return them to a student portal web site, while parents might be returned to a portal designed for the parents of students.	unlimited	alphanumeric
SUCCESS_LINK_TEXT	Optional. This text appears as a hyperlink on the receipt page that customers see after successfully making a payment with uPay. While the SUCCESS_LINK parameter provides the URL for the hyperlink, the SUCCESS_LINK_TEXT parameter provides the text for the hyperlink.	unlimited	alphanumeric
ERROR_LINK	Optional. When you establish a uPay site, you enter a URL for the error link that appears on the error page that the customer sees when a system error occurs while attempting to make payment. Instead of providing the same URL for all customers, you can customize the link that appears when an error is encountered.	unlimited	alphanumeric
ERROR_LINK_TEXT	Optional. This text appears as a hyperlink on the error page that customers see after a system error occurs while attempting to make a payment with uPay. While the ERROR_LINK parameter provides the URL for the hyperlink, the ERROR_LINK_TEXT parameter provides the text for the hyperlink.	unlimited	alphanumeric
CANCEL_LINK	Optional. When you establish a uPay site, you enter a URL for the cancel link that appears throughout your uPay site. Instead of providing the same URL for all customers, you can customize the link that appears when an error is encountered.	unlimited	alphanumeric
CANCEL_LINK_TEXT	Optional. This text appears when a uPay customer places their cursor over the Cancel button. (Only works with Microsoft Internet Explorer.) In the HTML for the uPay site, this text is added as the ALT attribute of the Cancel button (which appears in the HTML as an IMG tag).	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
CREDIT_ACCT_CODE	Used to pass a credit accounting code. This value will override the credit accounting code that was entered when the uPay site was configured. This value must be an approved code for the general ledger system. Additional credit account codes may be passed with _# appended to the CREDIT_ACCT_CODE and CREDIT_ACCT_AMT parameters (examples: CREDIT_ACCT_CODE_2 and CREDIT_ACCT_AMT_2). If multiple account codes are passed, CREDIT_ACCT_CODE must be passed.	unlimited	alphanumeric
DEBIT_ACCT_CODE	Used to pass a debit accounting code. This value will override the debit accounting code that was entered in Payment Gateway as the Host Payment Method ID for this uPay site. This value must be an approved general ledger code.	unlimited	alphanumeric
CREDIT_ACCT_AMT	When passing multiple accounting codes, this parameter is used to pass the amount to be associated with the corresponding credit account code (CREDIT_ACCT_CODE). If CREDIT_ACCT_AMT is passed, CREDIT_ACCT_CODE must also be passed. Additional credit account amounts may be passed with _# appended to the CREDIT_ACCT_CODE and CREDIT_ACCT_AMT parameters (examples: CREDIT_ACCT_CODE_2 and CREDIT_ACCT_AMT_2).	unlimited	alphanumeric
CREDIT_ACCT_AMT_2	When passing multiple accounting codes, this parameter is used to pass the amount to associate with the corresponding credit account code (CREDIT_ACCT_CODE_2). If this parameter is passed, CREDIT_ACCT_CODE_2 must also be passed. Additional credit account amounts may be passed using the same naming convention (Example: CREDIT_ACCT_AMT_3). The sum of these amounts must equal the amount passed with the AMT parameter.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
CREDIT_ ACCT_CODE_ 2	This parameter can be used to pass an additional accounting code. If this parameter is passed, CREDIT_ACCT_AMT_2 must also be passed. Additional credit account codes may be passed using the same naming format. (Example: CREDIT_ACCT_ CODE_3.) Whenever CREDIT_ACCT_CODE_# is passed, a corresponding CREDIT_ACCT_AMT_# must be passed to specify the amount. Any additional credit accounting codes passed must be in numerical sequence (i.e., don't skip any numbers). There is no limit to the number of credit accounting codes that can be passed as input parameters.	unlimited	alphanumeric
ADD_ON_ OFFER_ CREDIT_ ACCT_CODE	This parameter is used to pass an override value for the Additional Donation accounting code (only used if Additional Donation is enabled in the uPay site settings).	unlimited	alphanumeric
[additional parameters]	In addition to the parameters described above, the campus web application can send additional parameters. The campus merchant can configure any of these parameters to be available in Marketplace reports and orders search, as described in **"Form Parameters" on page 1**. uPay will take no additional actions on these parameters other than to return these parameters to the Posting URL, as described in **"Using a Posting URL" on page 1**).		

2.0   Using a Posting URL

After a transaction is processed (or recurring payments are scheduled), uPay can pass parameters describing the transaction back to a campus web application. This information can include parameters that were initially passed to uPay from a web application, such as a payment amount or a transaction ID. These parameters can include information about the status of the transaction (as determined by Payment Gateway). When this information is posted, the status of the transaction can be updated in the campus web application.

Note: Campus web applications do not necessarily need to pass a transaction ID to uPay; however, without a transaction ID the campus organization will likely have difficulty matching payment information with customer information. We recommend use of the EXT_TRANS_ID parameter, which allows for payment search on this parameter in the Marketplace Operations Center.

Posting URL Parameters

Once a uPay site has been configured to use a posting URL, transaction parameters will be passed by uPay to the posting URL. The customer's browser is not navigated to the posting URL, but the parameters are posted to it. The web application targeted by the posting URL must be able to process these parameters. It is your responsibility to contact the administrator of the campus web application and provide that person with information about the posting-URL parameters.

> *Important!* Technical details on configuring a campus web application to accept the parameters passed to a posting URL are outside the scope of this document.

The following parameters are posted *along with any other parameters that the web application initially passed to uPay, except for VALIDATION_KEY*:

Parameters for both payment card transactions and ACH transactions:

Parameters	Description	Field Length	Data Type
posting_key	The Additional Posting Value specified on the uPay Miscellaneous Settings page. Some campus web applications use this value to ensure the identity of the uPay site that is communicating with the posting URL.	30	alphanumeric
tpg_trans_id	A reference number assigned by Payment Gateway.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
pmt_status	Status of the transaction as reported by Payment Gateway. Either "success" or "cancelled".	unlimited	alphanumeric
pmt_amt	Amount of the transaction processed by Payment Gateway. (Maximum value: $99,999.99.) *Forrecurring payments:* During setup, the total amount of all recurring payments is passed to the posting URL as the pmt_amt parameter. This is the same parameter used for each recurring payment. The campus web application must be able to use the value passed to the posting URL in the recurring_payment_type parameter (either "setup" or "payment") to determine if pmt_amt represents a total for all recurring payments or the amount for an individual recurring payment.	8 (including 2 characters after the decimal point)	numeric
pmt_date	Date the transaction was processed by Payment Gateway. (Format: mm/dd/yyyy.)	unlimited	alphanumeric
name_on_acct	Name on payment card account or bank account.	50	alphanumeric
acct_addr	The address entered by the customer in uPay. This parameter is passed only if the uPay site has been set up to require address verification data.	35	alphanumeric
acct_addr2	The second address line entered by the customer in uPay. This parameter is passed only if the uPay site has been set up to require address verification data.	35	alphanumeric
acct_city	The city entered by the customer in uPay. This parameter is passed only if the uPay site has been set up to require address verification data.	35	alphanumeric
acct_state	The state entered by the customer in uPay. This parameter is passed only if the uPay site has been set up to require address verification data.	2	alphanumeric
acct_zip	The zip code entered by the customer in uPay. This parameter is passed only if the uPay site has been set up to require address verification data.	30	alphanumeric

Parameters	Description	Field Length	Data Type
acct_country	The country selected by the customer. The two-letter code represents the English language country codes approved by the International Organization for Standardization. This list can be found at www.iso.org/iso/country_codes.htm. This parameter is passed only if the uPay site has been set up to require address verification data.	2	alphabetic
acct_email_ address	The customer can be required to enter an e-mail address or this field can be optional.	50	alphanumeric
acct_phone_day	This phone field is an optional entry field.	20	alphanumeric
acct_phone_night	This phone field is an optional entry field.	20	alphanumeric
acct_phone_ mobile	This phone field is an optional entry field.	20	alphanumeric
EXT_TRANS_ID	An ID generated/assigned by your campus web application. This value is posted only if it was initially passed to uPay from the campus web application.	250	alphanumeric
UPAY_SITE_ID	A unique ID that identifies the uPay site. Assigned by Marketplace when the uPay site was created.	unlimited	numeric
sys_tracking_id	An internal Marketplace identifier (also known as the order ID) that is displayed to the customer on the uPay receipt page.	unlimited	numeric
recurring_ payment_type	This value is only specified if the payment is a recurring payment. Two values are possible: "setup" (for the initial setup of recurring payments) and "payment" (for a single recurring payment). During setup, the total amount of all scheduled payments is passed to the posting URL as the pmt_amt parameter. This is the same parameter used for each recurring payment. The campus web application must be able to use the value passed to the posting URL in the recurring_ payment_type parameter (either "setup" or "payment") to determine if pmt_amt represents a total for all recurring payments or the amount for an individual recurring payment.	unlimited	alphanumeric

Parameters	Description	Field Length	Data Type
recurring_setup_number_of_payments	This value is specified for uPay-driven recurring payments and indicates the total number of payments.	unlimited	numeric
recurring_setup_start_date	This value is specified for uPay-driven recurring payments and indicates the date of the first scheduled payment. (Format: mm/dd/yyyy.)	10	alphanumeric
recurring_setup_end_date	This value is specified for uPay-driven recurring payments and indicates the date when the recurring payments will end. If this date does not coincide with a scheduled payment date (as determined by the selected frequency and start date), the final payment will be the last regularly scheduled payment date before the "recurring_setup_end_date". (Format: mm/dd/yyyy.)	10	alphanumeric
recurring_setup_frequency	This numerical value is specified for uPay-driven recurring payments and indicates the frequency of payments: 4=weekly, 1=monthly, 2=bi-monthly, 5=quarterly, 6=semi-annually, and 7=annually.	unlimited	numeric

Additional parameters for payment card transactions:

Parameters	Description	Field Length	Data Type
card_type	Type of payment card: MasterCard, Visa, AmEx, Discover, etc.	unlimited	alphanumeric

Additional parameters for ACH transactions:

Parameters	Description	Field Length	Data Type
bank_name	These values are obtained from Payment Gateway based on the routing number entered	unlimited	alphanumeric
bank_addr1	These values are obtained from Payment Gateway based on the routing number entered	unlimited	alphanumeric
bank_addr2	These values are obtained from Payment Gateway based on the routing number entered	unlimited	alphanumeric
bank_routing_num	These values are obtained from Payment Gateway based on the routing number entered	unlimited	alphanumeric

Parameters for cancellations:

Parameters	Description	Field Length	Data Type
posting_key	A security value specified when the uPay site was built.	unlimited	alphanumeric
pmt_status	This value is always "cancelled" for cancellations.	unlimited	alphanumeric
EXT_TRANS_ID	A unique ID generated/assigned by your campus web application. This value is posted only if it was initially passed to uPay from the campus web application.	250	alphanumeric
UPAY_SITE_ID	A unique ID that identifies the uPay site. Assigned when the uPay site was created.	unlimited	numeric

2.1   About Recurring Payment Parameters

For recurring payments, the following parameters are passed when recurring payments are established and for each subsequent recurring payment that is processed:

- sys_tracking_id
- posting_key
- name_on_acct
- acct_addr
- acct_addr2
- acct_city
- acct_state
- acct_zip
- acct_country
- acct_email_address
- acct_phone_day
- acct_phone_night
- acct_phone_mobile
- UPAY_SITE_ID
- card_type
- pmt_amt
- recurring_payment_type
- recurring_setup_number_of_payments

- recurring_setup_start_date

- recurring_setup_end_date

- recurring_setup_frequency

And the following additional parameters are passed for each recurring payment that is processed (and not when the recurring payments are established):

- pmt_status

- pmt_date

- tpg_trans_id