



*MicroMacro Mobile Inc*

# Pass Distribution APIs User Guide

V 2.0.3

2017-08-03

## Version History

Version	UpdatedAt	Note
v 2.0.1	2015-06-16	
v 2.0.2	2016-04-14	
v 2.0.3	2017-08-03	Add support for Create a pass API, allowing you to add sourceId for tracing where the users are getting the pass.

## Overview

Quickly review all available resources for Pass2U Platform APIs with this reference overview.

★ Pass2U Platform API Service Domain is <https://www.pass2u.net/api/v1/public/passes>

HTTP Method	Endpoint	Function
GET	<a href="#">/models/{modelId}</a>	Get a pass model
POST	<a href="#">/models/{modelId}/distribute?source={anyId}</a>	Create a pass
GET	<a href="#">/distributions/{distId}/pkpass</a>	Get a pass .pkpass file
POST	<a href="#">/images/upload?type={imageType}</a>	Upload required image
PUT	<a href="#">/distributions/{distId}</a>	Update a pass
DELETE	<a href="#">/distributions/{distId}/custom/attributes/{name}</a>	Delete custom attribute of the pass
DELETE	<a href="#">/distributions/{distId}/custom/</a>	Delete custom field of the pass

	<a href="#">fields/{fieldKey}</a>	
<b>DELETE</b>	<a href="#">/distributions/{distId}/ custom/fields/{fieldKey}/attributes/{name}</a>	Delete attribute of the custom field

## Introduction

The Pass2U Pass Distribution APIs provides a series of RESTful programmatic ways to interact with the Pass2U platform in order to generate, distribute, update your Apple Wallet passes, and more.

## Technical Platform

- RESTful JSON web services via **HTTPS** connections
- Pass2U Runs a Series of Services on AWS
- Pass2U Takes PCI DSS ( Payment Card Industry Data Security Standard Standard ) to Protect Your Data

## Getting Started

In order to get started, you'll need to do the following steps on Pass2U:

1. Register as a [Pass2U](#) account
2. Contact Pass2U Support via [contact@micromacro.com.tw](mailto:contact@micromacro.com.tw) before we generate the API Key for you
3. Design your Pass Model viewing on Pass2U and you will get a **pass model ID** of the pass you have issued ( please refer to the section: 'Get a pass model' )
4. Read the following document and use the methods to create your passes

## API Key Security

Pass2U uses 32-characters length of Base64 encoded string as API Key to authenticate request. The API Key must be included in all API requests to Pass2U server in header 'Authorization' like the following sample:

**Authorization: e6a45207817bb8e9b1f3e67bb696067c**

## **API Key should not be shared outside of your company**

API Key allows access to your private data in Pass2U. They should not be shared outside of your company. If you have to change the API Key, please contact us to change your API Key.

## **API Parameters related to Pass Package of Apple Wallet**

All parameters of JSON that are sent as payload when invoking API or when getting response from APIs are listed in following tables. sometimes it may be necessary to refer back to [Apple Wallet Package Format Reference](#) or [Apple Wallet Pass Programming Guide](#), but some parameters may be different.

### **(1) Visual Appearance**

Those attributes can be updated when using "create" or "update" Pass API.

Following are replacement rules of visual appearance:

- If you don't put some attributes in JSON (ex: logoText), APIs will use attributes from the Pass Model to be default attributes.
- If you put attributes in JSON, APIs use attributes to put into the Pass and keep the data of the attribute as "customized". When you update the Pass Model in designer, those customized attributes will always be stored until using "Delete custom attribute of the pass" API.
- If you want to remove a "customized" attribute and reset to default attributes from the Pass model , please using "Delete custom attribute of the pass" API.
- If you give an empty value to the attribute (ex : "logoText" : ""), APIs will give empty value to the attribute. But if the attribute is with specific data format (ex : "relevantDate"), you will get an exception.

<b>Name</b>	<b>Required</b>	<b>Description</b>
logoText	No	Text displayed next to the logo on the pass.
barcodeMessage	Yes	Information specific to the pass's barcode. The barcodeType of the message can be set as static or dynamic on Pass2U Designer, if the Pass Model set as dynamic and can be assigned by API, you must define the barcodeMessage.
altText	No	Text displayed near the barcode. For example, a human-readable version of the barcode data in case the barcode doesn't scan.
relevantDate	No	Date and time when the pass becomes relevant. For example, the start time of a movie. The value must be a complete date with hours, minutes, and seconds with time zone. ex 2014-08-18T16:53:00+08:00
expirationDate	No	A pass is marked as expired if the current date is after the pass's expiration date. The value must be a complete date with hours, minutes, and seconds with time zone. ex 2014-10-18T16:53:00+08:00
voided	No	When the field set to true and the barcode will be removed, for example a one time use coupon that has been redeemed. The default value is false.
backgroundColor	No	Background color. The value must be a correct rgb color. ex rgb(255, 0, 0) including the 2 white spaces between the 2nd and the 3rd parameter.
foregroundColor	No	Foreground color. The value must be a correct rgb color. ex rgb(0, 0, 0) including the 2 white spaces between the 2nd and the 3rd parameter.
labelColor	No	Label color. The value must be a correct rgb color. ex rgb(255, 255, 255) including the 2 white spaces between the 2nd and the 3rd parameter.
associatedStoreIdentifiers	No	A list of iTunes Store item identifiers for the associated apps.

		Only one item in the list is used—the first item identifier for an app compatible with the current device. If the app is not installed, the link opens the App Store and shows the app. If the app is already installed, the link launches the app.
associatedPlayIdentifiers	No	A list of Google Play identifiers for the associated apps. Only one item in the list is used—the first item identifier for an app compatible with the current device. If the app is not installed, the link opens the App Store and shows the app. If the app is already installed, the link launches the app.

## (2) Field

Field includes its own attributes. Attributes of a field can be given values when using "create" or "update" pass APIs. Following are replacement rules of field:

- Only Dynamic fields can be given values. A field is configured to be "Dynamic" when design the model.

The screenshot shows a configuration panel for a field named "Header Field 1". At the top, there is a dropdown menu currently set to "Fixed". A dropdown menu is open below it, showing four options: "Fixed", "Dynamic" (which is highlighted in blue), "Points", and "Credits". Below the dropdown menu, there are several input fields: "Label" with the value "BAL", "Value" with the value "\$25", "Text" with the value "Text", and "Alignment" with the value "Left". At the bottom of the panel, there is a blue link that says "Edit notification to display when values changed".

- If you don't give data to fields, APIs will use the default data of the fields from the pass model.

- If you don't give data to attributes of a field, APIs will use default attributes of the field from the pass model.
- If you give data for a field, APIs will give data to the field and keep the field data as "customized". The field data will not be updated even if updating the model until you use "Update Pass Distribution API" to update the field.
- If you want to remove the "customized" data of the field and reset the default field data from the Pass model, please using "Delete custom field of the pass" API.
- If you give empty value to an attributes to a field (ex : "fields":[ {"key":"field1","label":""} ] ), APIs will give empty value to the attribute.

Name	Required	Description
key	Yes	This is a unique identifier for a Pass Model field that can be defined on Pass2U Designer by yourself.
label	No	Label text for the field.
value	Yes	Value of the field. It can be a <b>localizable string, ISO 8601 date format as a string</b> , or <b>number</b> .
change Message	No	Format string for the alert text that is displayed when the pass is updated. The format string must contain the escape <b>%@</b> , which is replaced with the field's new value. For example, " <b>Get changed to %@</b> ". If you don't specify a change message, the user isn't notified when the field changes.

### (3) Image list

Image list can be updated when using "create" or "update" Pass Distribution API. Following are the replacement rules of image list:

- If you don't give a image list, APIs will use the default list of images from the Pass Model.
- Please give all type of images that you want to show them in the pass. If you only give one image (ex: icon) in the image list, other images will be considered as empty.

- If you give a list of images, APIs will keep the data of the image list as "customized". When you update the model in designer, those customized images will always be stored until using "Delete custom attribute of the pass" API.
- If you want to remove a "customized" image and reset to default image from the Pass model, please use "Delete custom attribute of the pass" API.
- If you don't give right attributes to images in the list, you will get an exception.

Name	Required	Description
images	Yes	An array of image objects. Different pass style can allow different image types. Please refer to <a href="#">Apple Wallet Developer Guide</a> .
type	Yes	Image types. Must be one of the following values: <b>icon</b> , <b>logo</b> , <b>strip</b> , <b>background</b> , <b>thumbnail</b> , <b>footer</b> .
hex	Yes	A hexadecimal hash string responded by <a href="#">Upload required image</a> API. For example, a hexadecimal hash string could be like this: 01474ead01d4b4ee6ad3bda2b15013888e74c866

#### (4) Location list

Location list can be updated when using "create" or "update" Pass Distribution API. Replacement rules are the same as image list.

Name	Required	Description
locations	Yes	An array of location objects. No more than 10 locations can be defined.
altitude	No	Altitude, in meters, of the location.
latitude	Yes	Latitude, in degrees, of the location.
longitude	Yes	Longitude, in degrees, of the location.
relevantText	No	Text displayed on the lock screen when the pass is currently relevant. For example, a description of the nearby location such as "Store nearby on 1st and Main."

#### (5) Beacon List

Beacon list can be updated when using "create" or "update" Pass Distribution API. Replacement rules are the same as image list.

Name	Required	Description
beacons	No	An array of beacon objects.
major	No	Major identifier of a Bluetooth Low Energy location beacon. It should be a 16-bit unsigned integer.
minor	No	Minor identifier of a Bluetooth Low Energy location beacon. It should be a 16-bit unsigned integer.
proximityUUID	Yes	Unique identifier of a Bluetooth Low Energy location beacon. ex 550e8400-e29b-41d4-a716-446655440000
relevant Text	No	Text displayed on the lock screen when the pass is currently relevant. For example, a description of the nearby location such as "Store nearby on 1st and Main."

## Get a pass model

This API can get a structure of a pass model. If the pass model will be changed some time and you can use this API to make sure the data of a pass model is compared to what you will update by "Update a pass" API (ex: a key of a field may be changed when modifying a model in designer). But if your model will not be changed, you may not need this API.

### URL Structure

Method	URL
GET	<a href="https://www.pass2u.net/api/v1/public/passes/models/{modelId}">https://www.pass2u.net/api/v1/public/passes/models/{modelId}</a>

Name	Type	Required	Description
modelId	String	Yes	The unique ID of the pass model. You can find modelId in the url of a model detail page. For example, it the text "3JeJBSb-gkU2" after "p/" in the screenshot below.



```
{
  "logoText": "Bayroast Coffee",
  "backgroundColor": "rgb(117, 87, 58)",
  "foregroundColor": "rgb(194, 186, 184)",
  "labelColor": "rgb(255, 255, 255)",
  "fields": [
    {
      "type": "secondary",
      "category": "dynamic",
      "key": "field 6",
      "label": "姓名",
      "value": "預設內文",
      "textAlignment": "left",
      "dynamic": true,
      "relative": false
    },
    {
      "type": "secondary",
      "category": "dynamic",
      "key": "field7",
      "label": "電話",
      "value": "預設內文",
      "textAlignment": "left",
      "dynamic": true,
      "relative": false
    },
    {
      "type": "back",
      "category": "fixed",
      "key": "field15",
      "value": "Please maintain networking status, to keep receive
the latest info about your Store card",
      "dynamic": false,
      "relative": false
    }
  ],
  "images": [
    {
      "type": "icon",
      "scale": "two_x",
      "hex": "d33b9f1426d363340c2946557f173c402cd74014",

```

```
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
ass2u/images/d33/d33b9f1426d363340c2946557f173c402cd74014.png
"
  },
  {
    "type": "logo",
    "scale": "two_x",
    "hex": "1dd46b392e44ec68891ffef38b155b4633ff61c6",
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
ass2u/images/1dd/1dd46b392e44ec68891ffef38b155b4633ff61c6.png
"
  },
  {
    "type": "strip",
    "scale": "two_x",
    "hex": "68b83de3656a562449f7565c4e35b51f01868165",
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
ass2u/images/68b/68b83de3656a562449f7565c4e35b51f01868165.png
"
  },
  {
    "type": "icon",
    "scale": "one_x",
    "hex": "8ca48912171addc6d77d57399a8a8066e2fcf0f5",
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
ass2u/images/8ca/8ca48912171addc6d77d57399a8a8066e2fcf0f5.png
"
  },
  {
    "type": "logo",
    "scale": "one_x",
    "hex": "3c697f5a9c3275805df1fae5a18af07105fd42f8",
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
ass2u/images/3c6/3c697f5a9c3275805df1fae5a18af07105fd42f8.png
"
  },
  {
    "type": "strip",
    "scale": "one_x",
    "hex": "2424df068a53964c3c41f4aca85e28ef44ff8b84",
    "url": "https://pass2u-tokyo.s3-ap-northeast-1.amazonaws.com/p
```



```
{
  "logoText": "Sky Air Line",
  "barcodeMessage": "1234567890",
  "altText": "1234567890",
  "relevantDate": "2014-08-18T16:53:00+08:00",
  "expirationDate": "2014-10-18T16:53:00+08:00",
  "backgroundColor": "rgb(255, 0, 0)",
  "foregroundColor": "rgb(0, 0, 0)",
  "labelColor": "rgb(255, 255, 255)",
  "fields": [
    {
      "key": "field6",
      "changeMessage": "%@",
      "value": "John Appleseed"
    },
    {
      "key": "field7",
      "changeMessage": "%@",
      "value": "09123456789"
    }
  ],
  "images": [
    {
      "type": "icon",
      "hex": "033bf57152325a5acc07b5f46eacc708cc91cc46"
    },
    {
      "type": "logo",
      "hex": "0330908af373a94c27c9d8daa358d4d621384141"
    }
  ],
  "locations": [
    {
      "latitude": 25.0456572,
      "longitude": 121.50773730000003,
      "relevantText": "Hello World!"
    },
    {
      "latitude": 25.016197,
      "longitude": 121.53074489999995,
      "relevantText": "Eye Catching"
    }
  ]
}
```

```
}
]
}
```

The values you provided in the JSON payload will replace default values of the designed pass model.

## HTTP Response Header

**Content-Type:** *application/json*

## Example Response Body

If the call is successful, Pass2U returns distributionId and createTime.

```
{
  "distributionId": "2na2c3td-hLp",
  "barcodeMessage": "1234567890",
  "modelId": "xADi5KZyFv4Z",
  "createTime": "2011-12-08T13:00:00+08:00",
  "expirationDate": "2016-12-08T13:00:00+08:00"
}
```

Name	Description
distributionId	The unique identifier of the created pass distribution. You should keep this id for further usage.
barcodeMessage	The Information specific to the pass distribution's barcode.
modelId	The unique identifier of the pass model this pass distribution derived from.
createTime	The timestamp when the pass distribution is created.
expirationDate	If you set the expirationDate, there will be return the expirationDate od the pass distribution.

## Note

- Pass distribution downloadlink is <https://www.pass2u.net/d/{distributionId}>
- **Store the distribution id in your system/APP for the newly created pass.** You

must download the pkpass file, image by supplying this id later.

- **Make sure your barcodes are not duplicated** if you want to redeem them correctly on Pass2U.
- Each success call on this method will generate one unique pass distribution on Pass2U.

## Get a pass .pkpass file

This method is a download link for the .pkpass file of a pass distribution. You can download and use the file as an email attachment or serve the file from any other applications you have designed.

### URL Structure

Method	URL
GET	<a href="https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/pkpass">https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/pkpass</a>

Name	Type	Required	Description
distributionId	String	Yes	The unique ID of the pass distribution.

### HTTP Request Header

**Content-Type:** *application/vnd.apple.pkpass*

**Content-Disposition:** *attachment; filename=pass.pkpass*

### HTTP Response Body

```
MIME type .pkpass file binary stream.
```

### Note

- This method will not create a new pass distribution. You may download the same pass file multiple times.

- If you want to include a .pkpass file as email attachment, **set MIME type as application/vnd.apple.pkpass** to make it recognizable by client applications.

## Upload required image

This method is used to upload a pass image and return the hexadecimal hash key of the uploaded image. Note that the image may be reproduce by the Pass2U due to resizing or format conversion. You are able to specify the uploaded image as an image type (logo, background, ...) when creating a pass distribution, the API will automatically resize it or make it blurred according to the type.

### URL Structure

Method	URL
POST	<a href="https://www.pass2u.net/api/v1/public/passes/images/upload?type={imageType}">https://www.pass2u.net/api/v1/public/passes/images/upload?type={imageType}</a>

Name	Type	Required	Description
imageType	String	Yes	The pass image type. It must be one of the following values: <b>icon</b> , <b>logo</b> , <b>background</b> , <b>thumbnail</b> , <b>strip</b> , or <b>footer</b> .

### HTTP Request Header

**Authorization:** {API\_Key}

**Accept:** application/json

**Content-Type:** application/json

### HTTP Request Body

```
The image binary data with field name image.
```

### HTTP Response Header

**Content-Type:** image/png

**Content-Disposition:** attachment; filename={imageName}.png

### Example Response Body

```
{
  "key": "01474ead01d4b4ee6ad3bda2b15013888e74c866"
}
```

Name	Description
key	The hexadecimal hash key that uniquely identify a pass image.

#### Note

- The uploaded image will be resized if its size exceeds the image type constraint.

## Update a pass

This API updates one or more data fields for a pass distribution and send push notification by APNS or GCM to notify pass holders to update their passes.

#### URL Structure

Method	URL
PUT	<a href="https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}">https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}</a>

Name	Type	Required	Description
distributionId	String	Yes	The unique ID of the pass distribution.

#### HTTP Request Header

**Authorization:** {API\_Key}

**Accept:** application/json

**Content-Type:** application/json

#### Example Request Body

```

{
  "logoText": "Sky Air Line 2",
  "relevantDate": "2017-08-18T16:53:00+08:00",
  "expirationDate": "2017-10-18T16:53:00+08:00",
  "backgroundColor": "rgb(255, 0, 0)",
  "foregroundColor": "rgb(0, 0, 0)",
  "labelColor": "rgb(255, 255, 255)",
  "fields": [
    {
      "key": "field6",
      "changeMessage": "%@",
      "value": "John Appleseed 2"
    },
    {
      "key": "field7",
      "changeMessage": "%@",
      "value": "09123456789 2"
    }
  ]
}

```

## HTTP Response Header

**Content-Type:** *application/json*

## Example Response Body

If the call is successful, Pass2U returns distributionId and updateTime.

```

{
  "distributionId": "2na2c3td-hLp",
  "barcodeMessage": "1234567890",
  "modelId": "xADi5KZyFv4Z",
  "updateTime": "2017-12-08T13:00:00+08:00",
  "expirationDate": "2017-12-08T13:00:00+08:00"
}

```

Name	Description
distributionId	The unique identifier of the created pass distribution. You should keep this id for further usage.

barcodeMessage	The Information specific to the pass distribution's barcode.
modelId	The unique identifier of the pass model this pass distribution derived from.
updateTime	The timestamp when the pass distribution be updated.
expirationDate	If you set the expirationDate, there will be return the expirationDate od the pass distribution.

## Delete custom attribute of the pass

This API delete one custom attribute for a pass distribution and send push notification by APNS or GCM to notify pass holders to update their passes.

### URL Structure

Method	URL
<b>DELETE</b>	<a href="https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/attributes/{name}">https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/attributes/{name}</a>

Name	Type	Required	Description
distributionId	String	Yes	The unique ID of the pass distribution.
name	String	Yes	The unique Apple Wallet pass attribute name.

### HTTP Request Header

**Authorization:** {API\_Key}

**Accept:** application/json

**Content-Type:** application/json

### Example Request Body

Please refer to Create A Pass Distribution method.

### HTTP Response Header

**Content-Type:** *application/json*

## HTTP Response Body

Returns an HTTP status of 200 if the call is successful.

```
none
```

## Delete custom field of the Pass

This API delete one custom field for a pass distribution and send push notification by APNS or GCM to notify pass holders to update their passes.

### URL Structure

Method	URL
<b>DELETE</b>	<a href="https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/fields/{fieldKey}">https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/fields/{fieldKey}</a>

Name	Type	Required	Description
distributionId	String	Yes	The unique ID of the pass distribution.
fieldKey	String	Yes	The unique Apple Wallet pass field key.

### HTTP Request Header

**Authorization:** *{API\_Key}*

**Accept:** *application/json*

**Content-Type:** *application/json*

### HTTP Request Body

```
Please refer to Create A Pass Distribution method.
```

### HTTP Response Header

**Content-Type:** *application/json*

## HTTP Response Body

Returns an HTTP status of 200 if the call is successful.

```
none
```

## Delete attribute of the custom field

This API delete one field attribute of custom field for a pass distribution and send push notification by APNS or GCM to notify pass holders to update their passes.

### URL Structure

Method	URL
<b>DELETE</b>	<a href="https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/fields/{fieldKey}/attributes/{name}">https://www.pass2u.net/api/v1/public/passes/distributions/{distributionId}/custom/fields/{fieldKey}/attributes/{name}</a>

Name	Type	Required	Description
distributionId	String	Yes	The unique ID of the pass distribution.
fieldKey	String	Yes	The unique Apple Wallet pass field key.
name	String	Yes	The unique Apple Wallet pass field attribute name.

### HTTP Request Header

**Authorization:** *{API\_Key}*

**Accept:** *application/json*

**Content-Type:** *application/json*

### HTTP Request Body

```
Please refer to Create A Pass Distribution method.
```

## HTTP Response Header

**Content-Type:** *application/json*

## HTTP Response Body

Returns an HTTP status of 200 if the call is successful.

none