

ID Card

Overview

The ID Card product integration enables students to present their university ID cards from a mobile device. The barcode can be generated by the app (a range of barcode schemes are supported, including QR codes) or provided as an image by the vendor.

Note

The CODE39 barcode scheme only supports numbers and uppercase letters; lowercase letters are not supported. (This is a limitation of the CODE39 scheme, not of the campusM system. Note that the CODE128 barcode scheme does support lowercase letters.) The campusM legacy systems circumvented this limitation, but React Native does not. On the React Native platform, if you are using CODE39, and a barcode contains a lowercase letter, the barcode is not displayed in the ID card.

Once an ID card is incorporated into the campusM app, the end-user can easily add it to their digital wallet (currently only Apple Wallet for iPhones is supported), making it even easier and more convenient for them to locate it when they need it.

Vendors

- [RESTful API](#)
 - [IdP Details](#)
 - [Alma](#)
 - [PeopleSoft](#)
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User Experience

When the ID Card product integration is enabled in the app, students can present their ID cards from their mobile devices. The ID Card page can include the student's picture and other information, such as their ID number, name, department, barcode, username, and email, as configured by the university.

If the option to add the ID card to a digital wallet is enabled by the university, students can also present their ID cards from their digital wallets. In the digital wallets, the ID cards have both a front and a back; the user taps the card to switch between them.

User Activities

Students can use the ID Card in the app to present their university ID card whenever they would otherwise use their physical ID card.

User Workflow

The user can either select the ID Card tile to display the ID Card page or, if they add the ID card to their digital wallet, they can access it from there. Adding the ID card to the digital wallet is simply a matter of selecting an **Add** button in the ID Card page.

Authentication

There is no need for additional user authentication besides the API authentication.

Offline Support

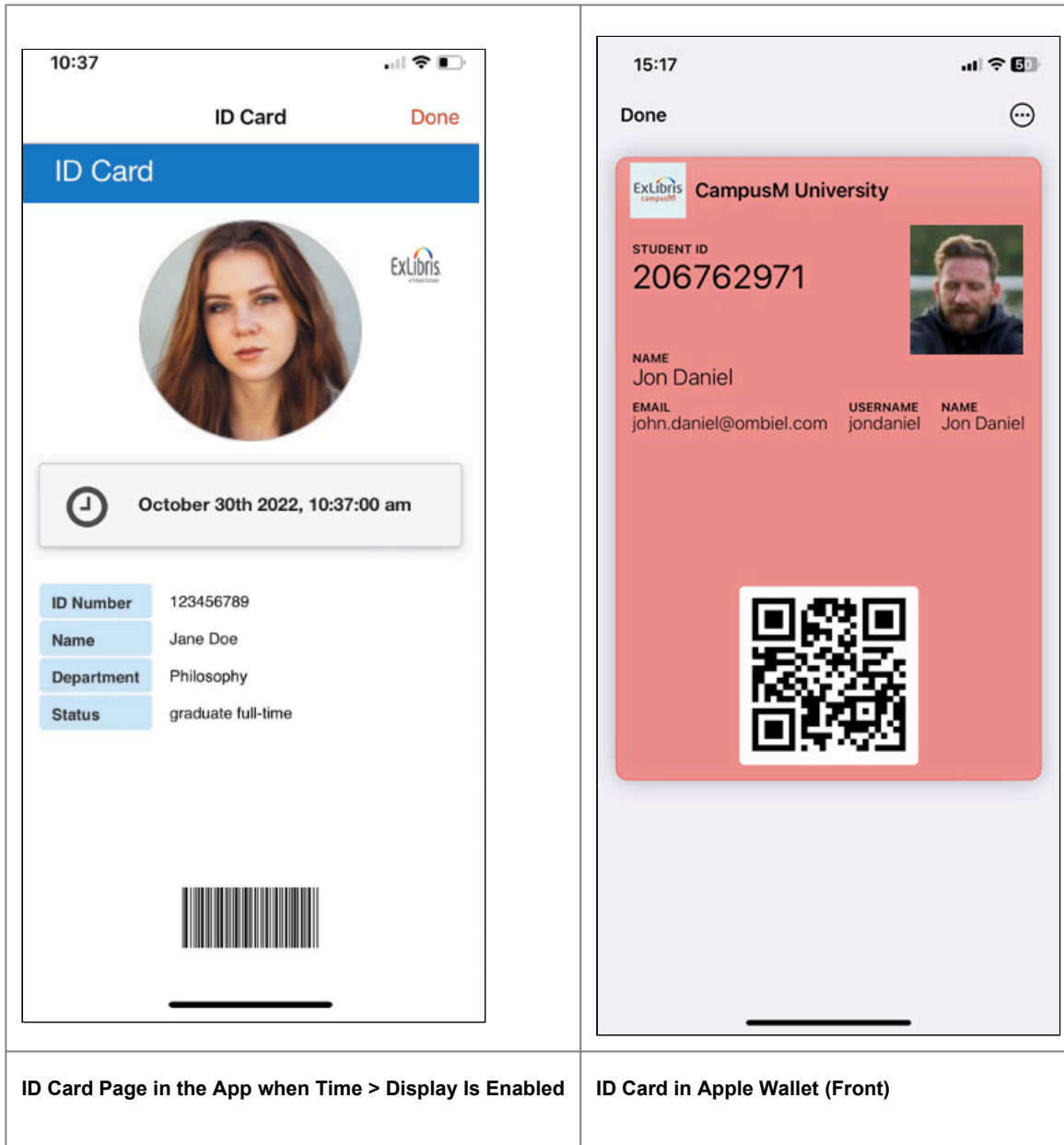
Once the student's ID card is set up, its data is stored on the user's device. While internet access is required in order to log into the app, when the user is logged in, if they then go offline, they can still access their ID card through the app.

Note

On iOS devices, the homepage of the app is not loaded when the device is offline, and an *Error loading page* message appears in its place. (On Android devices, the homepage loads even when the device is offline.) Nevertheless, the menu bar still works on both iOS and Android, enabling users to view the calendar and use the search functionality to locate and access attendance functionality, maps, activities, and content pages.

Screenshots

The following are examples of the ID Card page in the app and an ID card that was added by the app to Apple Wallet:



Technical Overview

The following section describes technical information for the ID Card product integration.

Prerequisites

The following prerequisites are required for the ID Card product integration.

RESTful API Vendor

- User ID
 - ID card data should be sent based on the `userID` from IDP so `userID` must be mapped in the customer's system.

- The CMAuth `userID` (which is returned by a response from either SAML, OAuth or LDAP as one of the IDP attributes) must be mapped in the CMAuth integration profile ('Additional Mappings'). Otherwise, `userID` must be returned by a response as one of the LDAP attributes.
- This attribute needs to be added as a path or query parameter.
- The parameter can be named `userID` or any other name.

- API info

- Required Format – JSON
- Request

`https://{HOST}/UserApi/api/users/getIDcard?userid={userID}`

- Response examples:

- The following is an example of a valid response if the barcode is provided by the API:

```
{
  "pageTitle": "Testing Header",
  "studentID": "345678901",
  "name": "Jane Doe",
  "picture": "https://...exampleImage.png",
  "department": "Computer Science",
  "status": "Full-Time Undergraduate",
  "valid_until": "31-Dec-2023",
  "barcode": "https://...exampleBarcode.png"
}
```

- The following is an example of a valid response if the barcode is generated by the App

```
{
  "pageTitle": "Testing Header",
  "studentID": "345678901",
  "name": "Jane Doe",
  "picture": "https://...exampleImage.png",
  "department": "Computer Science",
  "status": "Full-Time Undergraduate",
  "valid_until": "31-Dec-2023"
}
```

- The following is an example of a valid response with the image data as a Base64 encoded string representation of the image

```
{
  "pageTitle": "Example page",
  "studentID": "12345",
  "name": "John Smith",
  "picture": "data:image/png;base64,/9j/4AAQLONGBASESIXTYFOURENCODEDSTRINGKøD/2Q==",
  "department": "Computer Science",
  "status": "Active",
  "valid_until": "29-Aug-2023"
}
```

Note

- The page title can be any information the user would like to present at the top of the page (for example, static text, user name, user ID).
 - If the response is empty, the user gets an error message: `Unable to reach the service at this time. Please try again later.`
 - If one of the requested fields returns empty, it is either not displayed or displayed empty (for example **Dept:**), depending on the configuration (see ID Cards > Display Empty Fields options).
 - The recommended size for a barcode image is 480 px * 60 px.
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Attributes Mapping

External Field Name	Internal App Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
Picture	picture	Picture of the user	No	String		<code>https://...exampleImage.png</code>
ID Number	studentID	Student ID number (if you configure the app to generate the barcode, ID number is required, and this must be a valid input for the barcode scheme)	Yes, if the app is generating the barcode	string		12345678
Page Title	pageTitle	Information to be presented at the head of the page	No	string		Student ID Card

Note

All of the Basic Fields are configurable for the RESTful API vendor. For example, if your API returns a field called `idNumber`, you can configure the ID Number field to use this code instead of the default `studentID` code. Make sure that the fields you defined in the App Manager are mapped in your API response.

IdP Details Vendor

The token based authentication attributes must be mapped in the Integration Profile (Username Mapping, Mail Mapping, First Name Mapping, Last Name Mapping, and Additional Mappings). For more information, see [Configuring Integration Profiles](#).

The IdP Details vendor automatically tries to take the username, email, and name attributes from the authentication token. Therefore, the token based authentication attributes must be mapped in the integration profile (Username Mapping, Mail Mapping, First Name Mapping, Last Name Mapping, and Additional Mappings). For more information, see [Configuring Integration Profiles](#).

Additional attributes from the **Additional Mappings** section of the integration profile can be mapped in the **Custom Fields** section of the ID Card product integration.

ID Number can be configured to return the `username` attribute or any of the mapped attributes. Note that this field is used to generate the barcode.

Alma ILS Vendor

The IDP returns the Alma ID attribute. The Alma ID attribute is a unique ID controlled by the customer that is defined per student and staff member in Alma. If you are using CMAuth, this attribute can have any name in the IDP attributes response (from SAML/OAuth/LDAP) but needs to be mapped in the **Additional Mappings** section of the CMAuth integration profile. If you are not using CMAuth, the Alma ID attribute must be returned in the LDAP attributes response. The attribute is configured in the **User Input Identifier** field in the **Alma Configuration** section of the App Manager configuration.

The new mapping of the authentication token requires users to log out and log in to the app.

The Alma API key requires read access.

The image file server that serves the user's picture (if any) must be either accessible publicly or added to allowed lists as per [campusM guidelines](#).

PeopleSoft Vendor

The IDP returns the end user's PeopleSoft ID attribute. In CMAuth, this attribute can have any name in the IDP attributes response (from SAML/OAuth/LDAP) but needs to be mapped in the **Additional Mappings** section of the CMAuth integration profile. The attribute is configured in the **User Input Identifier** field in the PeopleSoft API Configuration section of the App Manager configuration.

The new mapping of the authentication token requires users to log out and log in to the app.

Configuration

To configure the GET ID Card product integration, select **Add Product Integration** from the **Product Integrations** main menu option.

Select **ID Card** and the configuration page appears. The following table describes the configuration options available on this page.

Configuration Option	Description	Mandatory	Data Type	Default	Example
Manage Integration					
Enable Product Integration	Select to enable the product integration on the user's app.	No	Checkbox	Unselected	
Product Integration Description	A description of the product integration for internal use	Yes	String		
Screen Title	The title that appears in the top header of the service	No	String	ID Card	
Vendor					
Vendor Name	Defines to which vendor the integration connects. The ID	Yes	Drop-down list		RESTful API

Configuration Option	Description	Mandatory	Data Type	Default	Example
	Card product integration is currently supported by the RESTful API and IdP Details vendors.				
RESTful API Configuration This section contains the RESTful API details to define the API structure. You can test the API configuration. See Testing API Product Integration Configuration .					
URL to retrieve the information	The URL for the Web service	Yes	URL		
URL Query Parameters	The parameters sent as part of the query	No	String		For <code>https://someHostName/serviceName?username={user}</code> , the query parameter is username.
URL Path Parameters	The parameters sent as part of the path	No	String		For <code>https://someHostName/serviceName/username</code> , the path parameter is username.
General Headers	Add (key, value) for additionally needed headers	No	String		
Authentication Type	Authentication type against the web service. The options are the following: <ul style="list-style-type: none"> No Auth Basic - username and password for Base64 basic authentication. API Key - can be added to a Header or to the URL (Query Param) or both. Bearer token OAuth Using User App Authentication – select an OAuth integration profile (from the Integration Profiles configured in App Settings) and choose where the access token should be added, Header, or URL. OAUTH Using Client Credentials – select this if you are using a preliminary token call to get the access token. 	Yes	Drop-down list		

Configuration Option	Description	Mandatory	Data Type	Default	Example
Alma API Configuration					
Base URL to retrieve the information	For example, https://myDomain.com	Yes	URL		https://api-na.hosted.exlibrisgroup.com/
PeopleSoft API Configuration					
Base URL to retrieve the information	This is the full domain and path of the PeopleSoft query, minus the query parameters.	Yes	URL		
User Input Identifier					
Parameter Input Option	Either "Username", "Token Property" (from CMAuth) or "Constant" (for a static value)	Yes	Drop-down list		Username
Token Property Name	Only used if "Parameter Input Option" is "Token Property"	No	String		
Constant Value	Only used if "Parameter Input Option" is "Constant"	No	String		
API Authentication					
Authentication Type	<p>Authentication type against the web service. The options are the following:</p> <ul style="list-style-type: none"> No Auth Basic - username and password for Base64 basic authentication. API Key - can be added to a Header or to the URL (Query Param) or both. 	Yes	Drop-down list		
Show Advanced Settings	Controls the display of 'Advanced Settings', below.	No	Checkbox	Unchecked	
Advanced Settings					

Configuration Option	Description	Mandatory	Data Type	Default	Example
Unique Prompt Name	For PeopleSoft, to determine the type of identifier being passed. This complements the prompt field value, which is determined by the User Identifier.	No	String	EMPLID	
Row Number	The PeopleSoft query may return more than one row. Set the row number to be used for all query responses.	No	Integer	1	
<p>API Cache</p> <p>A section to control settings related to the data cache for the product integration instance. Caching is enabled by default to reduce load on the configured API server.</p>					
Time To Live	The length of time the cache should last for before expiring and fetching fresh data from the configured API. Dependent on the unit format set below.	No	Integer	1	
Unit Of Time	The unit of time used in combination with 'Time To Live' above. This allows customization from one hour to many weeks.	No	Drop-down list	Day(s)	
Cache Enabled	Deselect to disable API caching for this instance. The integration will revert to calling the configured API every time it is opened.	No	Checkbox	True	
<p>Last Updated Widget</p> <p>A section that covers configuration for last updated widget in the event the cache is enabled.</p>					
Enable Widget	Enables or disables the widget. Disabled by default.	No	Checkbox	No	
Type Of Widget	Either "Timestamp" or "Minute, Hour, Day".	No	Drop-down list		Timestamp
Timestamp Text	Shown if type of widget is "Timestamp".	No	String	Last updated: %datetime%	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	The text pattern for the widget. %datetime% is where the date and / or time goes.				
Timestamp Date Format	Shown if type of widget is "Timestamp". The date format for the date and / or time to be displayed on the timestamp.	No	String	dddd Do MMMM	
Widget Text (Recent)	Shown if type of widget is "Minute, Hour, Day". The text pattern for the widget if data was updated in the past five minutes.	No	String	Last updated less than five minutes ago	
Widget Text (Less Than An Hour)	Shown if type of widget is "Minute, Hour, Day". The text pattern for the widget if data was updated in the last hour. %n% is where the number goes.	No	String	Last updated %n% minutes ago	
Widget Text (Hours Ago)	Shown if type of widget is "Minute, Hour, Day". The text pattern for the widget if data was updated sometime in the same day. %n% is where the number goes.	No	String	Last updated %n% hours ago	
Widget Text (Yesterday)	Shown if type of widget is "Minute, Hour, Day". The text pattern for the widget if data was updated the previous day.	No	String	Last updated yesterday	
Widget Text (Days Ago)	Shown if type of widget is "Minute, Hour, Day". The text pattern for the widget if data was updated	No	String	Last updated %n% days ago	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	more than a day ago. %n% is where the number goes.				
Widget Update Frequency	How often the 'Minute, Hour, Day' widget update in seconds.	No	Number	5	
Compact Display	Enabled by default, the widget is set to take up minimal screen space. Uncheck to display more prominently.	No	Checkbox	Yes	
Wallet Configuration					
Enable adding ID card to the Apple wallet	Select to enable students to add their ID cards to a digital wallet	No	Checkbox	Unselected	
Font Color for Apple Wallet	Select the color in which text in the ID card should be displayed in Apple Wallet.	No	Color Picker	#000000	
Background Color for Apple Wallet	Select the background color to use for the ID card in the digital wallet.	No	Color Picker	#ffffff	
Description for Wallet Item	Specify a description of the ID card to display above the card in the digital wallet.	No	Free Text	None	campusM University student ID
General					
Default Locale		Yes	Locale code	en-gb	
Link to Logo	Enter a URL for a logo file on your server or select a logo file to import.	No	URL		
Alt Text for Logo	Enter alternative text to be displayed or read to users when they cannot see the logo.	Yes	Free Text	University Logo	
Barcode Source	Select the barcode source. Two options are available:	Yes	Drop-down list		

Configuration Option	Description	Mandatory	Data Type	Default	Example
	<ul style="list-style-type: none"> Generate by app – this uses the ID Number - Code field. Get by API – the Code field appears. Also used to "Generate by app" if the vendor is "Alma". 				
Barcode Scheme	The scheme used to generate the barcode. Only used when the Barcode Source is set to <i>Generate by app</i> .	Yes	Drop-down list	Codabar	
Get Barcode From User Identifiers	Shown if the selected vendor is "Alma". Alma users have a list of user identifiers - check this to enable sourcing barcode data from these attribute values.	No	Checkbox	No	
Alma Barcode Type	Determines which Alma attribute is used to present the barcode. This overrides Data Display under Basic Fields , below.	No	Drop-down list	Description	
Code	The code in the API field that refers to the barcode image URL. Also used to "Generate by app" if the vendor is "Alma".	No	String	barcode	
Barcode Height	Height of the generated barcode, in pixels. Does not apply if Barcode Scheme is QR Code.	No	Integer	50	
Basic Fields					
Data Display	Shown if the selected vendor is "Alma". Certain attributes in Alma have both a code value and a description. Use this to select which to display, for all relevant fields, including when setting the "Code" for	No	Checkbox	No	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	User Identifiers.				
Display empty fields	<p>Indicate if you want the field to be displayed when the API returns an empty string. The options are:</p> <ul style="list-style-type: none"> Do not display – the fields are not displayed Display empty – the fields are displayed with no value Customize per field – determine per field if you want empty fields to be displayed 	Yes	Drop-down list	Do not display	
Picture - Take From User Identifiers	<p>Shown if the selected vendor is "Alma".</p> <p>Alma users have a list of user identifiers - check this to enable sourcing the user photo from these attribute values.</p>	No	Checkbox	No	
Picture - Code	The code of the field in the API	No	String	picture	
Picture - Display	The option to display or hide this field	No	Checkbox	Yes	
Picture - Enable Expandable Image	Select to have an expandable user image	No	Checkbox	No	
ID Number - Code	The code of the field in the API	Yes, if the app is generating the barcode	String	studentID	
ID Number - Label	<p>The label for the student ID number</p> <hr/> <p>Note</p> <p>Centering an image reduces the maximum</p> <hr/>	No	String	ID no.	

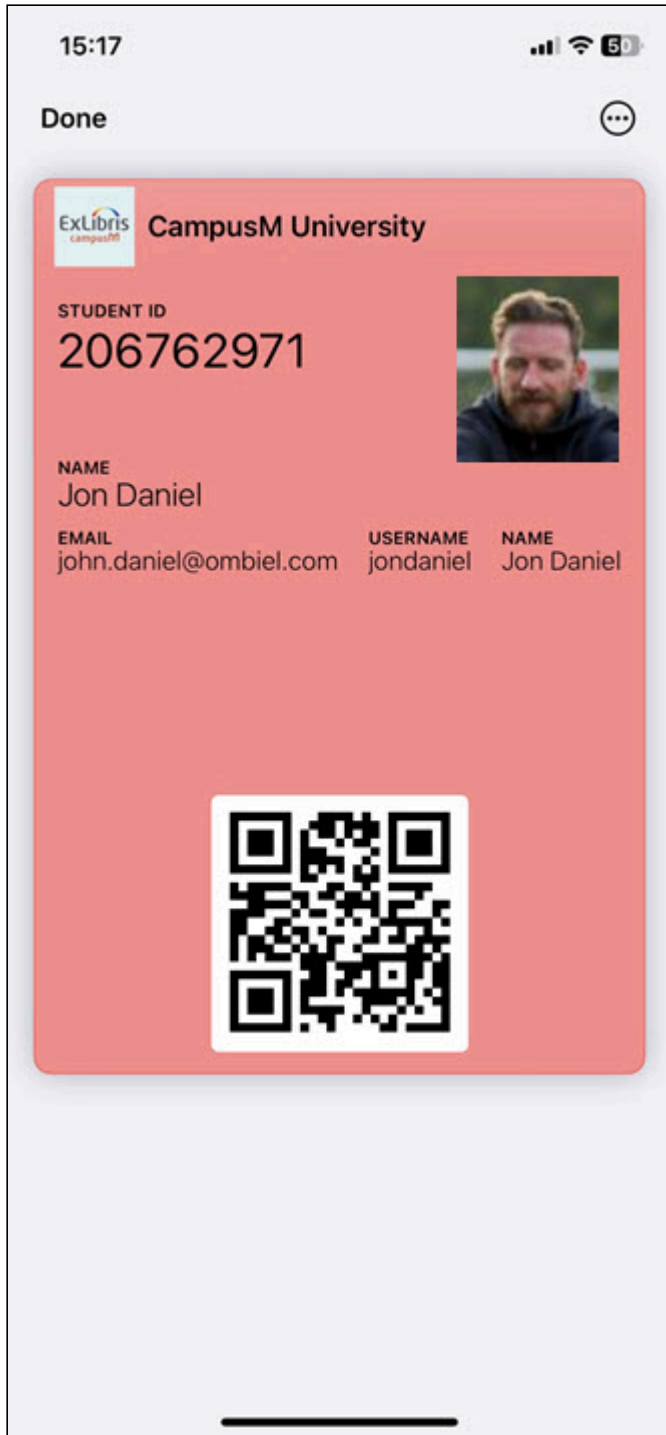
Configuration Option	Description	Mandatory	Data Type	Default	Example
	<hr/> <p>number of characters that can be displayed in the label.</p> <hr/>				
ID Number - Display	Select if you want to display the student ID number	No	Checkbox		
Page Title - Code	The code of the field in the API	No	String	pageTitle	
Page Title - Display	The option to display or hide this field	No	Checkbox	Yes	
Time - Label	The label for the dynamic time field	No	String	Time	
Time - Display	The option to display or hide this field	No	Checkbox	No	
Time - Date and Time Format	Formats the display of the dynamic time field	No	String	MMMM Do YYYY, h:mm:ss a	
Username - Label (only for IdP Details vendor)	<p>The label for the field</p> <hr/> <p>Note Centering an image reduces the maximum number of characters that can be displayed in the label.</p> <hr/>	No	String	Username	
Username - Display (only for IdP Details vendor)	The option to display or hide this field	No	Checkbox	Yes	
Email - Label (only for IdP Details vendor)	<p>The label for the field</p> <hr/> <p>Note Centering an image reduces the maximum number of characters that can be displayed in the label.</p> <hr/>	No	String	Email	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Email - Display (only for IdP Details vendor)	The option to display or hide this field	No	Checkbox	Yes	
Name - Label (only for IdP Details vendor)	<p>The label for the field</p> <hr/> <p>Note</p> <p>Centering an image reduces the maximum number of characters that can be displayed in the label.</p> <hr/>	No	String	Name	
Name - Display (only for IdP Details vendor)	The option to display or hide this field	No	Checkbox	Yes	
Custom Fields					
Code	The code of the field in the API	Yes	String		
Label	<p>The label of the field</p> <hr/> <p>Note</p> <p>Centering an image reduces the maximum number of characters that can be displayed in the label.</p> <hr/>	Yes	String		
Display if Empty	Select if you want to display the custom field if the field is empty	No	Checkbox		
Display in Wallet	<p>Select if you want to display the custom field in a digital wallet</p> <p>This field has no effect if the digital wallet feature is not enabled (see Wallet Configuration, above).</p>	No	Checkbox	Not selected	
Look and Feel					
Primary Theme Color	Select a color for the main elements on the page	No	Color Picker	#444444	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Secondary Theme Color	Select a color for the secondary elements on the page	No	Color Picker	#6f8ea4	
Background Color	Select a color for the background of the page	No	Color Picker	#ffffff	
Text Color	Select a color for the text on the page	No	Color Picker	#000000	
Logo Orientation	Select where the logo should be positioned	No	Drop-down list	Top Right	
Image Orientation	Select where the image should be positioned	No	Drop-down list	Top Center	
Text/Labels					
Error Message	Message to display when there is an error retrieving the data.	No	String	Unable to reach the service at this time. Please try again later	
Import/ Export Configuration					
You can configure the product integration and then export it to another campusM environment, for example, from sandbox to production or from preview to production.					
Import your File Here	Select Choose File to select a file to import data	No	Button		
Export	Create a JSON file with all product integration configurations.	No			
Import	Use this option to load configuration from JSON of an exported product integration.	No			

Digital Wallet Support

You can enable end-users to add their ID cards to the digital Apple Wallet. If you choose to enable this feature, you can also control certain aspects of the way the ID cards are displayed in the digital wallets, such as the background color of the ID card and which Custom Fields are included.



Apple Wallet

The digital wallet displays basic information about the user on the front of the ID card. Apple Wallet displays up to five fields – primary and secondary fields, and three additional fields. More fields can appear on the backs of the cards.

The following items are displayed in the digital wallet if they are configured to be displayed in the ID Card page in App Manager:

- Barcode or QR code (**General > Barcode Source**)
- Logo (**General > Link to Logo**)

- User's picture (**Basic Fields > Picture**)
- User's ID number (**Basic Fields > ID Number**)

Wallet Restrictions

The following restrictions apply to the configuration of ID Cards where customers wish to enable the Digital Wallet:

1. The user's image MUST be configured as a URL (starting with "http...").
2. Only QR codes or Barcode of format Code 128 are supported by the Wallet
3. The total number of fields (IdP fields and custom fields) that can be configured to be displayed on the card must not be greater than 10
4. The header title for the card in the wallet will initially default to the field 'Page Tile'. If this field is blank, then the 'Screen Title' will be used.

ID Card Features in Apple Wallet

On the front of the ID card in Apple Wallet, up to five fields can be displayed: a primary field, a secondary field, and up to three auxiliary fields. If the ID card is configured to display more than three additional fields in digital wallets, they are displayed on the back of the ID card. Up to ten fields can appear on the back of the ID card.

- **Primary field** – The student's ID number and ID label
- **Secondary field** – If the vendor is IdP, and **Display in Wallet** is selected under **General > Username**, the label specified in App Manager for the **Username** field is displayed, followed by the user's name (which comes from the vendor). For all other vendors, and for IdP when **Display in Wallet** is not selected for **Username**, nothing is displayed for the secondary field.
- **Auxiliary fields and backfields** – Additional fields for which **Display in Wallet** is selected in App Manager appear on the front (up to three fields) and back of the card in the digital wallet. IdP fields are given priority for display over custom fields.

User Experience

User's can easily add their ID cards to their digital wallets from campusM by selecting the **Add to Wallet** button in the ID Card page.