Illuminate™

Account Administrator's Guide

DIGIMARC

Contents

Account Administration

Each account on the Illuminate™ Platform is owned by a company, and each company can have multiple accounts. Account administrators can invite other users to their account. Each user must be in one or more accounts and have a role, which grants them permission to perform tasks on the Platform.

This guide is intended for the account administrator, who's responsible for inviting users and managing their Illuminate account.

As the account administrator, you can:

- Update the account details
- Invite and view users and control their access to the account
- Add and update users' roles
- Manage API and SDK license keys

You can also perform the same tasks as the Editor (see User Roles). You can find instructions for performing those tasks in the user guide for the corresponding application.

Device Requirements

The Illuminate Platform is intended for use on desktop computers and large tablets. Functionality is limited to view-only for devices with screens smaller than 601 x 1280 px.

Document Conventions

Following are the conventions used in this documentation.

Convention	Description
Numeric format	The fractional part of a numeric value is represented by the period character, such as pi =~ 3.14
Elements in the user interface	Formatting: Text in bold
Titles of panels and dialogs	Formatting: Text in italics
User input (text that a user types)	Formatting: Text in a monospace font
File and directory paths	Formatting: Text in a monospace font
Variables or variable data	Formatting: Text in italics, often within angle brackets (< >)

Manage Account Details

Your account was created for you by a Digimarc professional, but users with the Account Admin role can edit the account details. Account details are set on the *Account Settings* view.

To open the *Account Settings* view:

1 Log in to the Illuminate Platform. If you don't have credentials, contact your account representative or Digimarc.

2 If you have access to multiple accounts, Illuminate displays the *All Accounts* view. If you have access to only one account, Illuminate displays the *Engagements* list view.

- From the *All Accounts* view, click the menu icon (⋮) for the account you want to work with and then click **Settings** in the context menu.
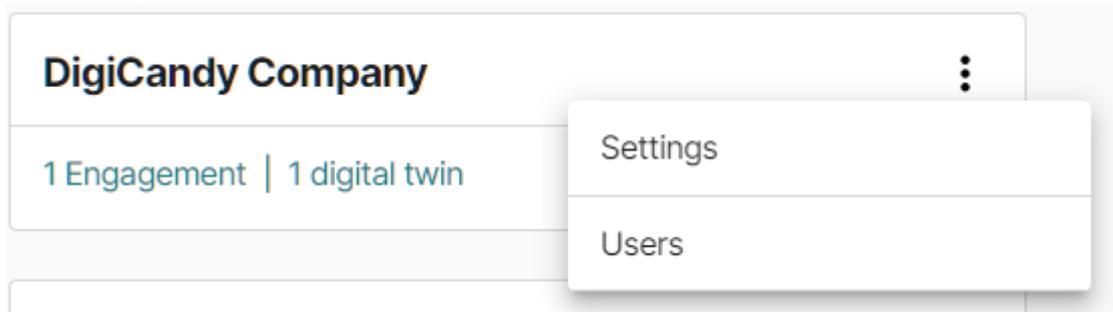
- From any view within the account, click the settings icon (⚙) in the upper right corner of the screen.

The *Account Settings* view opens.

> **Note**
> The remaining instructions throughout this guide assume you have logged in and selected an account to work with.

To change your account settings:

1 On the *Account Settings* view, click the property you want to change. See Account Settings for information about the properties.

2 Change the values as desired.

3 Click **Save**.

4 To manage users in your account, see Manage Users.

Configure Domains

Domains are specific to Digimarc Engage or Engage Premium and aren't used for other subscription types. For each digital twin, Engage or Engage Premium creates a static QR code with a unique URL embedded, which serves as the starting point for your engagements.

The embedded URL is based on a web domain or subdomain that you own and configure for this purpose, such as `yourbrand.example.com`. By adding a canonical name (CNAME) record to your domain's host configuration, you enable the Illuminate Platform to handle web traffic from your digital twins' QR codes and redirect consumers based on the engagements your brand managers set up.

All your QR codes can use the same domain, or you can use different domains for different purposes. Each account must have at least one domain. For new accounts, an alert at the top of the *Account Settings* view reminds you to configure the default domain.

⚠ One or more **Domains** need to be configured CONFIGURE

Click **CONFIGURE** on the *Domains* alert or scroll to the *Configuration* section and click **Default domain**. The *Domains* view opens. From here, you can add, activate, or deactivate a domain.

> **Note**
> A CNAME record is required for each domain you embed into the QR codes. Before you add domains to your account, we recommend you set up the CNAME for each domain you plan to use. Digimarc support engineers will gladly help you through this process.

Domain URL
https://candy.example.com/

Test this domain ✅ Domain is working 🔵 Set as default

Domain URL
https://delicious.example.com/

Activate ⚪ Set as default

Domain URL
https://yummy.example.com/

Test this domain ❌ Cannot find this domain Deactivate ⚪ Set as default

Domain URL
https://new.example.com ✕

Test this domain

Add another domain

Save Cancel

To add a domain:

1 Enter the **Domain URL**. By default, the first domain you add is designated as the default domain.

2 Click **Test this domain** to ensure the domain is configured correctly to enable Illuminate to redirect consumers. If you haven't set the CNAME for the domain, skip this step for now. If the DNS record doesn't correctly resolve to the Platform, the result is *Cannot find this domain*. In that case, return to this view to test again after the CNAME is configured.

3   To add additional domains, click **Add another domain**. Illuminate adds another set of domain options to the view. You can add up to 25 domains per account.

    3.1   Enter the **Domain URL**.

    3.2   Click **Test this domain** to ensure the domain is configured correctly.

    3.3   If you want to make this domain the default domain, enable the **Set as default** toggle (⬤).

4   Click **Save**.

To clear an unsaved domain:

You can remove domains you've added in error if you haven't saved them yet. After a domain is saved, it can't be removed, but it can be [deactivated](#).

1   Click the **clear** icon (✕) beside the unwanted domain. If you clear the default domain, the next one, if present, is automatically set to the default.

2   Alternatively, click **Cancel** to close the *Domains* view without saving. All unsaved domains are removed.

To set a domain to inactive:

1   Click **Deactivate**. Brand managers can't select inactive domains when creating QR codes for digital twins. Existing QR codes for deactivated domains continue to function normally.

2   On the *Confirm Deactivation* dialog, click **Deactivate domain**.

3   Click **Save**. The domain isn't deactivated until you save the domains.

To reactivate an inactive domain:

1   Click **Activate**. Brand managers can use only active domains when creating QR codes for digital twins.

2   On the *Confirm Activation* dialog, click **Activate domain**.

3   Click **Save**. The domain isn't activated until you save the domains.

Set the Canonical Name (CNAME)

When a domain or subdomain is an alias for another domain, the CNAME record maps one hostname to another. This enables the Domain Name System (DNS) to resolve the URL that's embedded in the QR code to the Illuminate Platform, which then redirects consumers to the appropriate destination URL.

> **Important**
> A CNAME record is required. Illuminate can't redirect consumers without it.

The configuration of the CNAME is beyond the scope of this document. [Digimarc support engineers](#) will gladly help you through this process.

Configure Product Identifiers

A product identifier is a code that uniquely identifies a product. The identifiers you enter depend on whether the company is a GS1 member. Illuminate Platform uses the 14-digit GTIN for GS1 member companies.

For GS1 member companies that use a GTIN with fewer than 14 characters Illuminate adds one to six leading zeroes to support 8-, 12-, and 13-digit identifiers.

For new accounts, an alert at the top of the *Account Settings* view reminds you to configure the primary product identifier.

> ⚠ **Product identifier** needs to be configured   CONFIGURE

To configure the product identifiers:

1 In the *Account Settings* view, click **CONFIGURE** on the *Domains* alert or scroll to the *Configuration* section and click **Primary product identifier**.

2 **Is the company a GS1 member?** Select the option that best describes the company for this account. The options vary, depending on your initial selection.

    Yes

        The company is a GS1 member.

        GS1 prefixes

            Type the GS1 company prefixes, pressing <Enter> after each. These prefixes are provided by GS1.

        Add an additional identifier name (optional)

            Enable this check box if the product has an additional identifier, such as stock keeping unit (SKU). If you enable this option, Illuminate displays three additional fields:

            Additional identifier name

                The name of the additional identifier. This could be any suitable identifier, such as SKU, ISBN, retailer-specific identifier, and so on.

            Minimum characters

                Indicate the minimum number of characters in the additional identifier. Brand managers must enter at least this number of characters for the identifier. The minimum length is one.

            Maximum characters

                Indicate the maximum number of characters in the additional identifier. Brand managers must enter no more than this number of characters for the identifier. The maximum length is 64.

No

The company is not a GS1 member. You're asked to provide a primary product identifier type and a range for the size of the identifier's value.

Product identifier name

The name of the product identifier to use for the products associated with the account. This is often the stock keeping unit (SKU), but it could be another suitable identifier, such as ISBN, a retailer-specific identifier, and so on.

Minimum characters

Indicate the minimum number of characters in the product identifier. Brand managers must enter at least this number of characters for the product's identifier. The minimum length is one.

Maximum characters

Indicate the maximum number of characters in the product identifier. Brand managers must enter no more than this number of characters for the product's identifier. The maximum length is 64.

Add an additional identifier name (optional)

Enable this check box if the product has additional identifiers, such as a retailer-specific identifier. If you enable this option, Illuminate displays three additional fields:

Additional identifier name

The name of the additional identifier. This could be any suitable identifier, such as ISBN, a retailer-specific identifier, and so on.

Minimum characters

Indicate the minimum number of characters in the additional identifier. Brand managers must enter at least this number of characters for the identifier. The minimum length is one.

Maximum characters

Indicate the maximum number of characters in the additional identifier. Brand managers must enter no more than this number of characters for the identifier. The maximum length is 64.

3 Click **Save**.

Configure the Default Data Carriers

For new accounts, an alert at the top of the *Account Settings* view reminds you to configure the default data carrier. For details about the *Choose Default Data Carrier* view, see [Choose Default Data Carriers View](#).

> ⚠ A **default data carrier** needs to be configured

The data carrier types that are supported depend on the subscription:

- **Automate**: Supports digital watermarks and enables access to Digimarc Automate.
- **Engage**: Supports QR codes and enables access to Digimarc Engage.
- **Engage Premium**: Supports QR codes and digital watermarks and enables access to Digimarc Engage Premium.
- **Illuminate**: Supports digital watermarks and enables access to digital twins.
- **Recycle**: Supports digital watermarks and enables access to Digimarc Recycle.
- **Validate Media**: Supports digital watermarks and enables access to Digimarc Validate Media.
- **Validate Packaging**: Supports digital watermarks and enables access to Digimarc Validate Packaging.

> **Note**
> The settings described here don't apply to Validate Media.

Before You Begin

Ensure you've configured the primary product identifier for the account.

To set the default data carriers:

1 On the *Account Settings* view, scroll to the *Configuration* section and click **Default data carrier**. The *Choose Default Data Carriers* view opens.

2 To create a watermark using the default data carriers option, enable **Digital watermark**. This option is available only for subscriptions that support digital watermarks.

3 To create a QR code using the default data carrier option, enable **QR code**. Select the link format to use by default. This option is available only for subscriptions that support QR codes.
   - GS1 Digital Link
   - Short URL

Data Carriers

○ Generate data carriers from default settings

◉ Generate data carriers from custom settings

  ☑ Digital watermark

  ☑ QR code

  QR code domain
  https://exampledomain.com/   ▼

  Select link format
  ◉ GS1 digital link (recommended)
  ○ Short URL

○ Don't generate data carriers

[**Create**] [Cancel]

For GS1 member companies, the Editors can choose either format when creating a QR code using custom settings. For non-GS1 members, the short URL is the only option for the QR code's link format.

> **Note**
> To select QR code, an Engage or Engage Premium subscription is required.

4 Click **Save**.

View Subscriptions

Access to the Illuminate Platform applications and REST APIs is managed through subscriptions. For information about the REST APIs, see Using the Illuminate APIs.

To view subscriptions:

1 Open the *Account Settings* view:

   - From any view within an account, click the settings icon (⚙) in the upper right corner of the screen.
   - From the *All Accounts* view, click the menu icon (⋮) for the account you want to work with and click **Settings** in the context menu.

2 Scroll to the *Subscriptions* section to see the current subscriptions for this account. Subscriptions are:

   - **Automate**: Supports digital watermarks and enables access to Digimarc Automate.
   - **Engage**: Supports QR codes and enables access to Digimarc Engage.
   - **Engage Premium**: Supports QR codes and digital watermarks and enables access to Digimarc Engage Premium.
   - **Illuminate**: Supports digital watermarks and enables access to digital twins.
   - **Recycle**: Supports digital watermarks and enables access to Digimarc Recycle.
   - **Validate Media**: Supports digital watermarks and enables access to Digimarc Validate Media.
   - **Validate Packaging**: Supports digital watermarks and enables access to Digimarc Validate Packaging.

Manage Users

As an account administrator, you can invite users to your account, change their roles, or remove a user's access to one account without affecting their access to other accounts. For detailed information about the screen, see Account Users View.
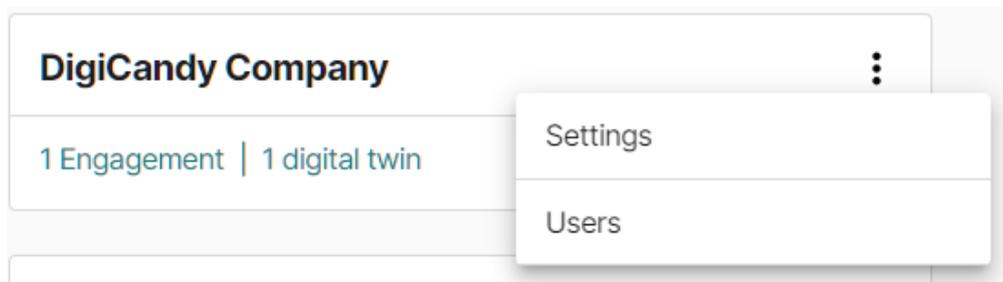
You can:

- Add users to the account
- Change a user's role
- Resend an invitation
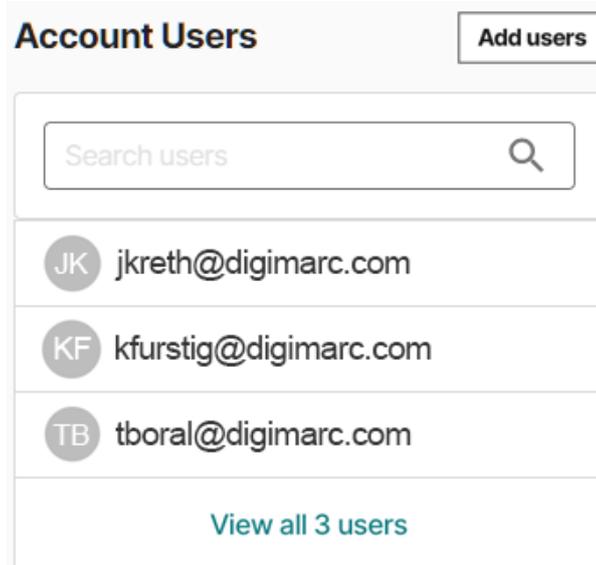- Remove a user's account access

To manage users:

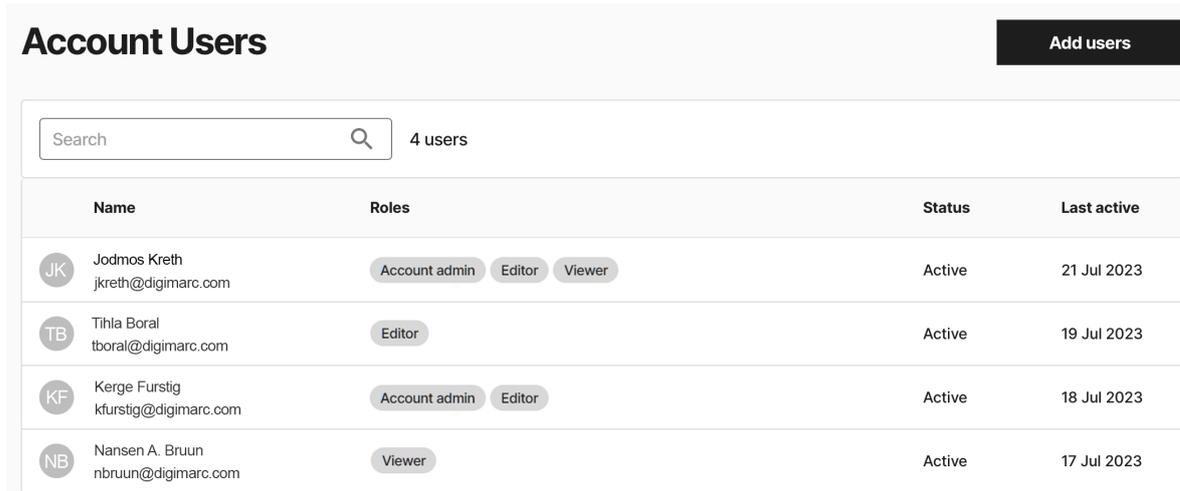1 Open the *Account Users* view:

- From the *All Accounts* list view, click the menu icon (⋮) for the account you want to work with, and then click **Users** from the context menu.

- From the *Account Settings* view, click **View all *x* users** in the Account Users pane.

The *Account Users* view opens.

Account Users

<div>Add users</div>

	Search		4 users		
	Name	**Roles**		**Status**	**Last active**
JK	Jodmos Kreth jkreth@digimarc.com	Account admin Editor Viewer		Active	21 Jul 2023
TB	Tihla Boral tboral@digimarc.com	Editor		Active	19 Jul 2023
KF	Kerge Furstig kfurstig@digimarc.com	Account admin Editor		Active	18 Jul 2023
NB	Nansen A. Bruun nbruun@digimarc.com	Viewer		Active	17 Jul 2023

2 If the list of users is long, find the user to work with by searching by name or email address.

3 Click the user to manage. The *Modify User* view opens.

Add an Account User

Account users can perform a variety of actions on the account, depending on their role.

Before You Begin

You must set the account's default domain, primary identifier, and QR code link format before you can invite users.

To add a user:

1 On the *Account Settings* view, click **Add users**. The *Add Users* view opens.

2 Add one or more email addresses for the users you want to add. The email address isn't required to be on any particular domain; you can use any valid email address.

> **Tip**
> You can add multiple users for one or more roles at the same time. Each user you list is assigned the selected roles.

3   Select one or more roles to assign to the new users.

User Roles

Role name	Description
Account Admin	Can edit account settings, create engagements[1] and digital twins, view analytics[1,2], and protect, check, and view images[3]. All accounts have at least one user with the Account Admin role for managing the account and its users.
Editor	Can create engagements[1] and digital twins, view analytics[1,2], and protect, check, and view images[3]. This role is primarily to manage protected media[3], digital twins, and engagements[1] for the account.
Viewer	This role provides read-only access to engagements[1], digital twins, analytics[1,2], and protected media[3].
Validate app user	Enables employees, merchandisers, and brand inspectors who scan digital watermarks with the Validate mobile app[2] to authenticate products.

[1] account requires the Engage or Engage Premium subscription

[2] account requires the Validate Packaging subscription

[3] account requires the Validate Media subscription

4   Click **Save**. The Illuminate Platform sends an invitation to each new email address you enter. Users who are already active on the Platform don't receive another invitation; they are immediately added to the account.

Invited users must click the link in the invitation to verify their email address. They're then asked to create a password for their account. After they do, they can log into product_name_short. The first time a new user logs in, they must provide their name and agree to the Illuminate terms of service. The user's status then changes from Invited to Active.

Resend an Invitation

If a user doesn't get the invitation email, you can resend it. Invitations can be resent to users whose status is Invited.

To resend an invitation:

1   In the *Account Users* pane, click the user. If the list of users is long, you can search by email address. The *Modify User* view opens.

< **User Details**

User status
Invited   [**Resend invitation**]

Email
bagoodman@digimarc.com

First Name   **Last Name**
-   -

---

2   Click **Resend invitation**. Illuminate sends an email inviting the recipient to join your account.

Change a User's Roles

Roles give users permission to perform tasks in an account on the Illuminate Platform. You can add or remove roles for any user on your account without affecting their access permissions on other accounts. You can also remove a user from an account without affecting other accounts for that user.

To change a user's role:

1. Open the *Account Users* view:

   - From the *All Accounts* list view, click the menu icon (⋮) for the account you want to work with, and then click **Users** from the context menu.

   - From the *Account Settings* view, click **View all *x* users** in the Account Users pane. The *Account Users* view opens.

2. On the *Account Users* view, click the user to manage. The *Modify User* view opens.

   # Modify User

   ⟨   **User Details**

   User status
   Active

   Email
   tboral@digimarc.com

First Name	**Last Name**
Tihla	Boral

   Account Access

   DigiGrocery Company
   Editor, Viewer   ⟩

3. Under *Account Access*, click the account for which you want to change the user's role. The *Modify Account Access* view opens.

   ⟨   **Modify Account Access**

   Roles
   Editor ⊗   Viewer ⊗   ▾

   Save   Cancel   **Remove Access**

4. Modify the roles as needed:

   - To add a role, select it from the **Roles** drop-down list. For more information, see User Roles.

   - To remove a role, click the **delete** icon (⊗) for the unwanted role. All users in an account must have at least one role; the only role for a user can't be removed.

5. Click **Save**.

Remove a User

You can remove a user from an account without affecting other accounts for that user.

To remove a user from an account:

1 Open the *Account Users* view:

- From the *All Accounts* list view, click the menu icon (⋮) for the account you want to work with, and then click **Users** from the context menu.

- From the *Account Settings* view, click **View all *x* users** in the Account Users pane. The *Account Users* view opens.

2 On the *Account Users* view, click the user to manage. The *Modify User* view opens.

3 Under *Account Access*, click the account you want to remove the user from. The *Modify Account Access* view opens.

4 Click **Remove access**. Illuminate displays a dialog to confirm you want to remove the user from the account.

5 Click **Remove access** on the dialog. The user is immediately removed from the account.

> **Note**
> You can re-add users to the account if needed. Users already active on the Illuminate Platform don't receive another invitation.

Using the Illuminate APIs

If you're using Digimarc's Illuminate REST APIs to develop custom applications that create, update, or read digital twins or protect or check images, you can create and edit the API keys in your account settings. API keys don't expire.

Each API key requires an active subscription to at least one supported Illuminate application. See the *API Availability By Subscription* table below.

> **Caution**
> If the relevant subscriptions expire, the API keys will stop working. See the corresponding API documentation for error codes and other details.

Illuminate REST APIs

Illuminate offers four REST APIs:

- **Validate Media API** - lets you protect, check, or view images and their metadata
- **Digital Twins API** - lets you create, edit, or read any data carrier type that's enabled for the account
- **Mobile API** - works with the DM SDK to give your mobile app access to metadata for a scanned watermark or protected image
- **Serialization API** - lets you allocate serial data carriers for existing digital twins

To create, change, or delete API keys, see Manage API Keys.

Some examples of what you can do with the Illuminate APIs include:

- Scan a product package with a mobile device and display the brand information, retrieve other images associated with the product, and display the custom attribute data for the digital twin
- Scan an image with a mobile device to determine whether it's been protected by a watermark
- Apply digital watermark protection to images on your corporate website
- Create product and variant digital twins and data carriers for each
- Create data carriers for digital twins that lack them
- Create serial watermarks or QR codes or both for digital twins (subscription dependent)
- Create a brand and add it to existing digital twins
- Update product variants with an additional language reason code

The APIs that are available depend on the subscription. The table below describes the permissions you can configure for each API:

API Availability By Subscription

Subscription	Mobile API	Digital Twins API	Validate Media API	Serialization API
Automate		read/write		read/write
Engage		read/write		read/write
Engage Premium	read	read/write		read/write
Illuminate		read/write		read/write
Recycle		read/write		read/write
Validate Media	read	read/write*	read/write	
Validate Packaging		read/write		read/write

* Although Validate Media subscribers can use the Digital Twins API, that API doesn't have functionality that applies to protected images.

Digital Twins API

You can use the Illuminate Digital Twins REST API to create, edit, or read any data carrier type that's enabled for the account, depending on the permission level you set for the key. This API also enables you to manage brands, functional names (product types), and promotional asset types and to add or edit custom data for a digital twin. To use this API, your account must have an active subscription and a Digital Twins API key.

> **Note**
>
> The Digital Twins API doesn't apply watermarks. Use the Validate Media API to protect images or the Digimarc Watermarking Plug-in for Adobe Illustrator to apply watermarks to packaging artwork.

The base URL is:

```
https://api.dmrc.app/rest
```

You can find the API documentation and examples at https://github.com/digimarc-corp/illuminate-rest-api.

Validate Media API

You can use the Validate Media REST API to protect images, check images for watermark protection, or add custom metadata to images your account has protected, depending on the permission level you set for the key. To use this API, your account must have an active Validate Media subscription and a Validate Media API key.

The base URL is:

```
https://api.dmrc.app/rest
```

You can find the API documentation and examples at https://github.com/digimarc-corp/validate-media-rest-api.

Mobile API

You can use the Illuminate Mobile REST API to read metadata from a digital watermark or a protected image scanned with a mobile device. To use this API, your account must have an active Validate Media or Engage Premium subscription and a Mobile API key. You'll also need the Digimarc Mobile SDK (DM SDK) and a license key.

- Using the Mobile API, your mobile app can read custom attributes for protected images in your account.
- Using the Mobile API, your mobile app can read metadata for a digital twin's watermark, such as the digital twin ID, data carrier ID, the watermark's redirect URL, and custom attributes.

> **Note**
>
> The DM SDK detects and reads watermarks in print, packaging, and audio. It doesn't apply watermarks.

The base URL is:

```
https://api.dmrc.app/api/v1
```

You can find the API reference at https://github.com/digimarc-corp/illuminate-mobile-rest-api. The basic development workflow is:

1 Create a Mobile API key and a license key.

2 Use the Illuminate UI to get the `accountId`. You'll find it at the bottom of the Account Settings view.

3 Develop your mobile application using the DM SDK.

4 Use the DM SDK to get an encrypted `cpmPath` string.

5 Pass the `cpmPath` and `accountId` strings to the metadata endpoint with the fields you want returned.

Serialization API

You can use the Serialization REST API to list serials, request serial data carriers, and update serial settings, depending on the permission level you set for the key. To use this API, your account must have a Digital Twins API key and one or more of the following active subscriptions:

- Automate
- Engage
- Engage Premium
- Illuminate
- Recycle
- Validate Packaging

The base URL is:

```
https://api.dmrc.app/rest
```

You can find the API documentation and examples at https://github.com/digimarc-corp/illuminate-serialization-api.

Custom Attribute Data

You can create, read, and update custom attributes in any digital twin with any Illuminate subscription using the Illuminate user interface or the Digital Twins API. Validate Media subscribers can create and read custom attributes for protected images in the user interface and create them programmatically using the Validate Media REST API. For instructions on creating, reading, or updating custom attribute data, see the following documentation:

Subscription	Create, Read, and Update	Create Only	Read Only
Engage Premium	- Engage Premium User's Guide - Digital Twins API reference		Mobile API reference
Validate Media	Validate Media User's Guide	Validate Media API reference	Mobile API reference
Engage	- Engage User's Guide - Digital Twins API reference		
Automate Illuminate Recycle Validate Packaging	- Guide to Watermarking with Illuminate - Digital Twins API reference		

Manage API Keys

If you're using Digimarc's Illuminate REST APIs to develop custom applications that work with Digimarc digital watermarks, you can create and edit the API keys in your account settings.

You manage your API keys in the *API Keys* view, where you can:

- [Create an API key](#)
- [Rename an API key](#)
- [Change an API key's permissions](#)
- [Delete an API key](#)

Create an API Key

Illuminate offers four REST APIs:

- **Validate Media API** - lets you protect, check, or view images and their metadata
- **Digital Twins API** - lets you create, edit, or read any data carrier type that's enabled for the account
- **Mobile API** - works with the DM SDK to give your mobile app access to metadata for a scanned watermark or protected image
- **Serialization API** - lets you allocate serial data carriers for existing digital twins

On the *API Keys* view, you can create one or more API keys to use in the applications you build. Save the keys in a safe place on your computer.

> **Note**
> Digimarc will never ask for your API key.

To create an API key:

1. On the *Account Settings* view, scroll to the *Configuration* section and click **API keys**. The *API Keys* view opens, listing any existing keys for the account.

2. Click **Add API key**. The *Add API Key* view opens.

3. Type a **Name** for the API key. It must be unique within your account. Names can be up to 64 characters long.

4. Choose the desired API type:
   - **Validate Media API**
   - **Digital Twins API** (select this for the Serialization API)
   - **Mobile API**

5   Choose the **API key permission**. For the Digital Twins and Validate Media APIs, the options are:

- **Create, read, and update** (required to POST or PUT)
- **Read only**

For the Mobile API, the only option is **Read only**.

6   Click **Add API key**. The *New API Key* view opens, displaying your new API key.

7   Click the **Copy** icon ( ) to copy the API key and save it on your computer or click **Download API key as a text file** to save a text file in your default downloads folder. The text filename follows the pattern `Illuminate <api_type> <permission> API Key <key_name>.txt`.

> **Important**
>
> After you leave this view, you'll be unable to view the API key again. If you lose this key, repeat these steps to create another.

Change or Delete an API Key

You can change the name or permissions for any API key or delete one you no longer need.

To change an API key's name or permissions:

1   On the *Account Settings* view, scroll to the *Configuration* section and click **API keys**. The *API Keys* view opens, listing your existing API keys.

2   Click the API key to change. The *Edit API Key* view opens.

3   Change the **Name** or **API key permission** as needed.

4   Click **Save**.

To delete an API key:

1   On the *Account Settings* view, scroll to the *Configuration* section and click **API keys**. The *API Keys* view opens, listing your existing API keys.

2   Click the API key to delete. The *Edit API Key* view opens.

3   Click **Delete API key**. The *Confirm API Key Deletion* dialog opens.

4   Click **Delete API key** to confirm. Illuminate deletes the API key and opens the *API Keys* list view.

Manage License Keys

The Digimarc Mobile Software Development Kit (DM SDK) enables developers to create iOS and Android mobile apps capable of reading Digimarc digital watermarks.

- To download the DM SDK, click the Help icon (?), click **Digimarc Tools**, and select the **Digimarc Mobile SDK** for Android or iOS.

- To use the DM SDK, you need a license key.

> **Note**
>
> To enable your mobile application to read metadata (such as the redirectUrl) in watermarks that were created in Illuminate, you also need a mobile API key. See Create an API Key.

To create the license key in Illuminate:

1 On the *Account Settings* view, scroll to the *Configuration* section and click **License keys**. The *License Keys* view opens.

2 Click **Add license key**. The *Add License Key* view opens.

3 Type a descriptive **Name** for your application. It must be unique within your account. Names can be up to 64 characters long.

4 Click **Add license key**. Illuminate creates the license key and password. See the DM SDK documentation for instructions on using them.

5 Save both the license key and password:
   - Click the Copy icons ( ) to copy both the license key and password and save them on your computer.
   - Click **Download License key and password as a text file** to save the text file in your default downloads folder. The text filename follows the pattern `Illuminate License Key` *key_name*`.txt`.

> **Caution**
> After you leave this view, you'll be unable to view the license key again. If you lose it, repeat these steps to create another. License keys created in the Print & Audio module aren't visible in Illuminate or the other way around.

See the Mobile SDK documentation for instructions on installing and using the SDKs.

Appendix A: Account Settings

The Account Settings view is where you edit the properties for your account.

You reach this view:

- from the *All Accounts* view by clicking the menu icon (⋮) for the account you want to work with and then clicking **Settings** from the context menu.
- from any account view by clicking the settings icon (⚙) in the upper right corner of the screen.

> **Note**
> Although Editors and Viewers can view many of these settings, only the Account Admin can edit them.

The *Account Settings* view is divided into sections:

- Corporate Details
- Configuration
- Subscriptions
- General Account Information
- Account Users

Corporate Details

These settings describe the account holder. See Manage Account Details.

Account Name
    Name of the company using product_name_short.
Corporate Address
    The official address for the account holder.
Billing Address
    The billing address for the account holder.
Primary Contact
    The name and email address for the account holder's primary contact person.
Default Timezone
    The timezone to use as the default for all product_name_short activity for the account. The dates and times for engagements and analytics are displayed in the timezone you select.

Configuration

These settings relate to the way Illuminate generates data carriers for your digital twins. You can also add or configure API keys for your Illuminate-enabled, custom applications. See Configure the Default Data Carriers or Manage API Keys.

Configuration	
Account status Active	›
Primary product identifier GTIN, 1 prefixes provided	›
Default domain https://gleeful-fedelini.net/	›
Default data carrier QR code	›
API keys Custom App API Key and 1 other	›
License keys Mobile License Key	›

Configuration	
Account status Active	›
Primary product identifier GTIN, 1 prefixes provided	›
Default domain https://gleeful-fedelini.net/	›
Default data carrier QR code	›
API keys Custom App API Key and 1 other	›
License keys Mobile License Key	›

Configuration	
Account status Active	›
API keys None configured	›

GS1 member company   **Non-GS1 member company**   **Validate Media subscriber**

Account status

> The status of the account: active or inactive. This field is read-only.

Primary product identifier

> If the company is a GS1 member company, the primary product identifier is an 8-, 12-, 13-, or 14-digit GTIN; otherwise, you set the product identifier name, such as SKU, and parameters for the length. Illuminate adds one to six leading zeroes to support GTINs shorter than 14 digits; no leading zeroes are added for non-GS1 member companies. When brand managers create digital twins, they enter the value of this identifier for each product.

Default domain

> The default domain provides the base URL for the QR codes that Digimarc Engage or Engage Premium creates for your digital twins. The domain must be configured to integrate with the Illuminate Platform. See Configure Domains.

Default data carrier

> The data carrier type(s) used when creating data carriers using default settings. Choices depend on the account's subscriptions. See Choose Default Data Carriers View.
>
> For QR codes, this also includes the link format: if the company is a GS1 member, we recommend using the GS1 Digital Link. The brand manager can choose to use a short URL when by creating the QR code using custom settings. See the *Engage User's Guide* or *Engage Premium User's Guide* for instructions. If the company is not a GS1 member, the short URL is the only available link format.

API keys

> Lists the name of a configured API key. API keys enable you to use the Illuminate REST APIs to create, read, or update digital twins or protected images in your custom applications. Your account must have at least one active, relevant subscription to use them. See Manage API Keys.

License keys

> Lists the names of the configured SDK license keys. License keys give your developers access to the Digimarc Mobile SDKs to incorporate our technology into your mobile apps for reading digital watermarks. See Manage License Keys.

Subscriptions

Lists your current Illuminate subscriptions. Subscription types are:

- **Automate**: Supports digital watermarks and enables access to Digimarc Automate.
- **Engage**: Supports QR codes and enables access to Digimarc Engage.
- **Engage Premium**: Supports QR codes and digital watermarks and enables access to Digimarc Engage Premium.
- **Illuminate**: Supports digital watermarks and enables access to digital twins.
- **Recycle**: Supports digital watermarks and enables access to Digimarc Recycle.
- **Validate Media**: Supports digital watermarks and enables access to Digimarc Validate Media.
- **Validate Packaging**: Supports digital watermarks and enables access to Digimarc Validate Packaging.

See View Subscriptions for more information.

General Account Information

These read-only properties are provided for your information.

Account ID
> This read-only field displays the account identifier used by Illuminate.

Created
> This read-only field displays the date the account was created and the ID of the user who created it.

Last Modified
> This read-only field displays the date the account was last updated and the ID of the user who modified it.

Account Users

The users invited to the account are listed in the Account Users pane. See Manage Users.
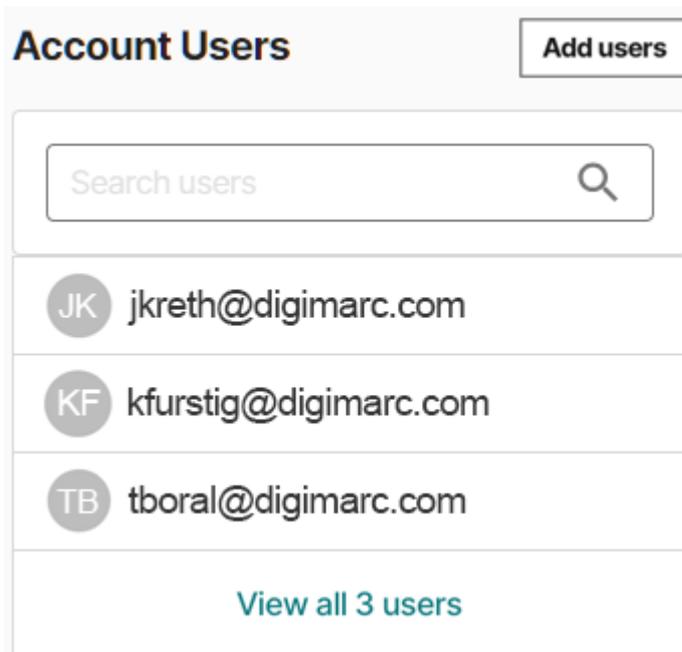
Add users
> Enables you to invite or add users to the account. See Add an Account User.

Search users
> Enables you to search for a user by name or email address.

View all *x* users
> Opens the *Account User*s view.

Domains View

For each digital twin, Engage or Engage Premium creates a static QR code with a unique URL embedded, which serves as the starting point for your engagements. The embedded URL is based on a web domain or subdomain that you own and configure for this purpose, such as `yourbrand.example.com`. If you add more than one domain, you must select one as the default. For detailed instructions on using this screen, see Configure Domains.

By adding a canonical name (CNAME) record to your domains' host configurations, you enable the Illuminate Platform to handle web traffic from your digital twins' QR codes and redirect consumers based on the engagements your brand managers set up.

> **Note**
> A CNAME record is required for each domain you embed into the QR codes. Before you add domains to your account, we recommend you set the canonical name for each domain you plan to use. Digimarc support engineers will gladly help you through this process.

On the *Domains* view, you can:

1 Enter a domain URL

2 Test the domain has been properly configured

3 Set a domain as the default

4 Add additional domains

5 Clear an unsaved domain entry

6 Deactivate a domain

7 Activate an inactive domain

8 Save the changes

9 Close the view without saving changes

Choose Default Data Carriers View

The default data carriers are created for a digital twin when the Editors choose to **Generate data carriers from default settings**.

Account Admins set the default data carriers at the account level, but Editors on the account can create the data carriers using custom settings if they choose. For information about user roles, see User Roles.

For new accounts, an alert at the top of the *Account Settings* view reminds you to configure the default data carrier.

> ⚠ A **default data carrier** needs to be configured

Depending on the applications you've subscribed to, you can configure digital watermarks or QR codes or both for your default data carriers. Applications create only the data carrier types they support:

- **Automate**: Supports digital watermarks and enables access to Digimarc Automate.
- **Engage**: Supports QR codes and enables access to Digimarc Engage.
- **Engage Premium**: Supports QR codes and digital watermarks and enables access to Digimarc Engage Premium.
- **Illuminate**: Supports digital watermarks and enables access to digital twins.
- **Recycle**: Supports digital watermarks and enables access to Digimarc Recycle.
- **Validate Media**: Supports digital watermarks and enables access to Digimarc Validate Media.
- **Validate Packaging**: Supports digital watermarks and enables access to Digimarc Validate Packaging.

> **Note**
>
> If your account doesn't have a subscription that supports a particular data carrier type, the option to configure it as a default data carrier isn't available. See View Subscriptions.

QR Codes

The QR codes used in Digimarc Engage or Engage Premium contain links that can use one of two styles:

- ↗ GS1 Digital Link
- short URL

Examples

If your domain is `example.com`, the short URL embedded in your QR codes might look something like this:

`https://example.com/AbCdEfG`

and a GS1 Digital Link URL might look something like this:

`https://example.com/01/abCDef123GHij456KLmn0`

Appendix B: Account Users View

The users invited to the account are listed in the *Account Users* view. You reach this view by clicking **View all *x* users** on the *Account Settings* view. For instructions on adding or removing users, see Manage Users.

Add users

Enables you to invite or add users to the account. For instructions, see Add an Account User.

Search

Enables you to search for a user by name or email address.

Name

Displays the user's name and email address. The name is displayed only for users who have accepted the invitation to join the account and completed their user profile.

Roles

Displays the roles assigned to the user. For detailed information about the roles available, see User Roles.

Status

Displays the user's status: Active or Invited. Users whose status is Invited have not completed the registration process.

Last Active

Displays the date the user last logged into Illuminate.

Modify User View

The Modify User view is where you can edit the details for a user on your account. You reach this view by clicking a user on the *Account Users* view or in *the Account Users* pane on the *Account Settings* view.

Modify User

< **User Details**

User status
Active

Email
tboral@digimarc.com

First Name
Tihla

Last Name
Boral

Account Access

DigiGrocery Company
Editor, Viewer   >

User status

> The user's status in the Illuminate Platform. This could be:

> **Active**

>> The user has accepted the terms of use and completed the registration process. They can freely use the Platform in the roles assigned.

> **Invited**

>> The user has been invited to the account. To use the Platform, invited users must click the link in the invitation to verify their email address. They're then asked to create a password for their account. After they do, they can log in to Illuminate. The first time a new user logs in, they must provide their name and agree to the Illuminate terms of service. The user's status then changes from Invited to Active.

Email

> The email address to which the invitation was sent. Users log in to the Platform using this email address. The email address can't be changed.

First Name

> The user's given name. The user provides this information when they first log in to the Platform.

Last Name

> The user's surname. The user provides this information when they first log in to the Platform.

Resend invitation

> This button, shown only for users whose status is Invited, resends the invitation to the listed email address. To use the Platform, invited users must begin the registration process by clicking the link in the invitation to verify their email address.

Account Access

> The accounts and roles for which the user was given access. Users can be invited to multiple accounts and have different roles for each account.

User Roles

Users must have at least one role and can have multiple roles. Roles for each user are set at the account level. Users who belong to multiple accounts can have different roles on each.

To change or remove a user's role, see Change or Remove a User's Roles.

User Roles

Role name	Description
Account Admin	Can edit account settings, create engagements[1] and digital twins, view analytics[1,2], and protect, check, and view images[3]. All accounts have at least one user with the Account Admin role for managing the account and its users.
Editor	Can create engagements[1] and digital twins, view analytics[1,2], and protect, check, and view images[3]. This role is primarily to manage protected media[3], digital twins, and engagements[1] for the account.
Viewer	This role provides read-only access to engagements[1], digital twins, analytics[1,2], and protected media[3].
Validate app user	Enables employees, merchandisers, and brand inspectors who scan digital watermarks with the Validate mobile app[2] to authenticate products.

Account Admin Role

The Account Admin role has the following permissions:

Attribute/Object	Create	Read/View	Update/Modify	Assign	Delete
Account	-	✓	✓	-	-
User	✓	✓	✓	✓	-
Role	N/A	✓	N/A	✓	N/A
Digital Twins	✓	✓	✓	✓	✓
Engagements[1]	✓	✓	✓	N/A	✓
Analytics[1,2]	N/A	✓	N/A	N/A	N/A
Protected Images[3]	✓	✓	✓	N/A	-
Authenticate[2]	N/A	N/A	N/A	-	N/A

Editor Role

The Editor role has the following permissions:

Attribute/Object	Create	Read/View	Update/Modify	Assign	Delete
Account	-	✓	-	-	-
User	-	-	-	-	-
Role	N/A	-	N/A	-	N/A
Digital Twins	✓	✓	✓	✓	✓
Engagements[1]	✓	✓	✓	N/A	✓
Analytics[1,2]	N/A	✓	N/A	N/A	N/A
Protected images[3]	✓	✓	✓	N/A	-
Authenticate[2]	N/A	N/A	N/A	-	N/A

Viewer Role

The Viewer role has the following permissions:

Attribute/Object	Create	Read/View	Update/Modify	Assign	Delete
Account	-	✓	-	-	-
User	-	-	-	-	-
Role	N/A	-	N/A	-	N/A
Digital Twins	-	✓	-	-	-
Engagements[1]	-	✓	-	N/A	-
Analytics[1,2]	N/A	✓	N/A	N/A	N/A
Protected images[3]	-	✓	-	N/A	-
Authenticate[2]	N/A	N/A	N/A	-	N/A

Validate App User Role

The Validate app user role has the following permissions:

Attribute/Object	Create	Read/View	Update/Modify	Assign	Delete
Account	-	-	-	-	-
User	-	-	-	-	-
Role	N/A	-	N/A	-	N/A
Digital Twins	-	-	-	-	-
Engagements[1]	-	-	-	N/A	-
Analytics[1,2]	N/A	-	N/A	N/A	N/A
Protected images[3]	-	-	-	N/A	-
Authenticate[2]	N/A	N/A	N/A	✓	N/A

[1] account requires the Engage or Engage Premium subscription

[2] account requires the Validate Packaging subscription

[3] account requires the Validate Media subscription

Appendix C: Troubleshooting

If you're having trouble using Illuminate, try the troubleshooting steps below or contact Digimarc Support.

Can't select digital watermark as the default data carrier type

Problem: When selecting the default data carrier type, digital watermark isn't available.

Solution: Digital watermarks are available only for some subscription types. Contact Digimarc to add a relevant subscription to your account. See View Subscriptions.

Cannot find this domain

Problem: When testing a domain on the *Domains* view, Illuminate responds with *Cannot find this domain*.

Solution: The CNAME must be properly configured to resolve to an Illuminate IP address. See Set the Canonical Name. Digimarc support engineers will gladly help you through this process.

Can't remove the only Account Admin role

Problem: If you try to remove the only user assigned the Account Admin role, Illuminate responds with an error.

Solution: All accounts must have at least one user with the Account Admin role for managing the account and its users. Digimarc support engineers will gladly help you remove the user or close the account.

<email> was previously invited but has not accepted the invitation

Problem: If you try to invite a user who has already been invited, Illuminate responds with this error.

Solution: Ask the person to check their email and accept the invitation from Digimarc. If the email can't be found, you can resend the invitation.

Digimarc Support

For help using the Illuminate Platform, contact Digimarc Support or create a support request.

- ↗ Digimarc Support Website
- Send email to Digimarc Support

Create a Support Request

You can request support from within Illuminate. If you're unable to log in, use one of the methods above.

To create a support request:

1 Click the Help icon (⑦) in the upper right corner of any page. A panel opens on the right.

2 Click **Create Support Ticket**.

3 In the **I need help with** drop-down list, select the subject.

4 Type a brief **Summary** of the problem or question.

5 Type a more detailed **Description** of the problem or question. Be as thorough and detailed as possible so we can better assist you.

6 Click **Submit**. A Digimarc representative will contact you soon.

Glossary

barcode

The generic term for an optically machine-readable pattern that encodes data in a way that is generally not recognizable to human observation. Barcodes include one-dimensional symbols that encode data into a machine-readable pattern of adjacent, varying width, parallel, dark rectangular bars and pale spaces, and 2-Dimensional Symbols that encode data in the X and Y-axes (sometimes referred to as a 2D barcode), for example, in the case of a QR Code, Data Matrix, and Digimarc digital watermarks.

CMP

Consent Management Platform

CNAME

A canonical name (CNAME) is a type of database record in the Domain Name System (DNS) that "maps" a nickname (or alias) for one domain to another domain. This enables web traffic from QR code scans for a digital twin to be routed to Illuminate.

consumer scan

A consumer in the real world uses their mobile phone or tablet to scan the QR code on a product or package. Modern smartphone cameras automatically recognize QR codes and present the configured destination URL on the screen.

data carrier

Data carriers (formerly called digital tags) are graphical elements that embed or "carry" data, such as a website URL. QR codes and digital watermarks are examples of data carriers.

default domain

The domain configured for the account that provides the base URL when creating a QR code from the default settings.

destination URL

The web site (URL) to which a consumer is directed after a successful scan. You set the destination URLs when you create or edit an engagement.

device language

The primary language set for the device.

Digimarc digital watermark

A novel data carrier that encodes data in media in ways that are generally imperceptible to people, permitting the carrier to be repeated many times over the surface of the Enhanced media. It delivers unprecedented ease of use, reliability, and efficiency in identifying the media due to massive mathematical and graphical redundancy.

digital twin

A digital counterpart of a physical product comprising events and attributes from and about the product. The behavior of the digital twin is customized to deliver an experience that benefits customers and brands across a wide variety of digital applications.

digital watermark

In this guide, digital watermark refers specifically to the Digimarc digital watermark.

DNS

Domain Name System

domain

A domain name controlled by your company or partner representing internet addresses sharing a common suffix.

engagement

A collection of rules that send a consumer to a specific destination URL (experience), depending on the context and parameters. An engagement runs when a consumer uses a mobile phone or table to scan the associated data carrier typically on the product's package, hang tag, or label.

GCP

Google Cloud Platform

GS1 Digital Link

per GS1: GS1 Digital Link helps barcodes and other data carriers become web links - connecting a product's unique identity to online sources of real-time information that brands control.

GTIN

Global Trade Item Number used by GS1 members to identify trade items (products).

link format

When Engage or Engage Premium embeds a URL into a QR code for a digital twin, it can do so using one of two link formats: GS1 Digital Link or a short URL.

metadata

Data that provides information about other data.

QR code

A two-dimensional barcode (data carrier) that can store information such as a URL, contact information, or other information.

scan

The action taken by a person using a scanner or the camera on their smartphone or tablet to view a data carrier (a QR code or digital watermark). When the scanner or camera detects the data carrier, it performs the specified function associated with the subscription type or provides the custom web experience.

scan country

The country in which a consumer scanned a product's QR code or digital watermark with their mobile device.

scan destination

The scan destination is the website where Illuminate sends the consumer after they scan a product with their mobile device, provided the device meets the criteria (location, language, and so on) for the engagement.

segment

A segment groups filtered data in meaningful ways, such as by scanning user type (new versus returning).

short URL

A combination of a short domain (such as example.com) and a globally unique, automatically generated identifier.

snackbar

A small, non-modal dialog that displays feedback about the current operation. It sometimes includes a button or other control, such as a Close icon (X).

untracked users

Users who scan products with their mobile devices but who opt not to share private data with Digimarc.

Urchin Tracking Module (UTM)

Parameters used by marketing departments to track the effectiveness of online campaigns.

validation

The process of checking that the data carried in Digimarc Barcode is both accurate and consistent. Also called verification.

variant

A variation of a product, such as a special event edition or holiday flavor.

verification

The process of checking that the data carried in Digimarc Barcode is both accurate and consistent. Also called validation.

web experience

The web-based experience a consumer has after scanning a QR code and tapping the link that's presented onscreen.