

# Uni2D: Sprite

## Reference

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Bento Studio

## SUMMARY

This document is a complete and in depth overview of the Uni2D: Sprite plug-in.

## Quick Start

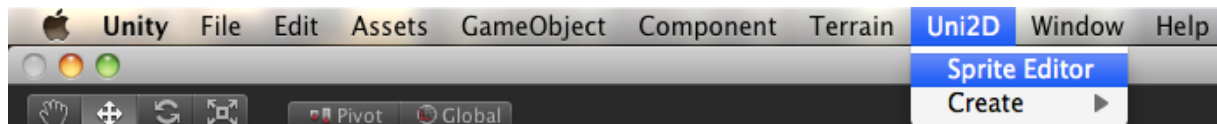
If you want to get started as soon as possible you can look at the tutorial.

**Uni2D > Sprite > Documentation > Uni2DSpriteTutorial.pdf**

## Sprite Editor

### Open the editor

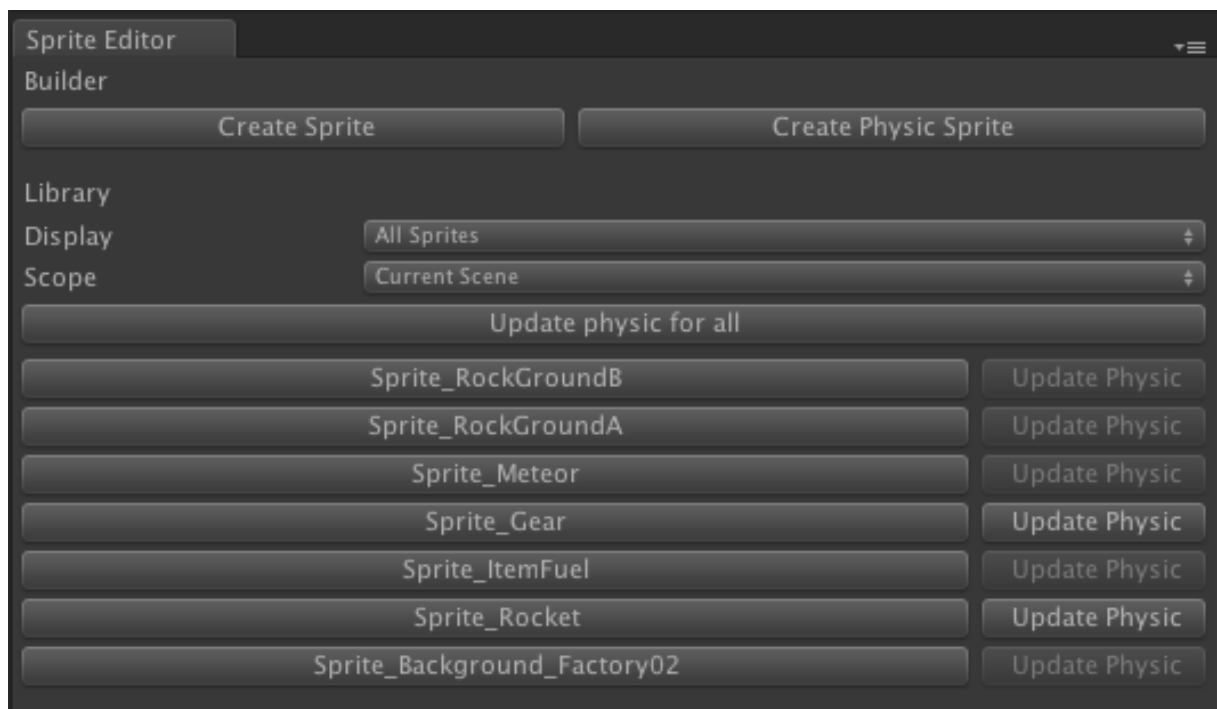
To open the **Uni2D : Sprite Editor** click on **Uni2D > Sprite Editor** in the main bar.



### Sprite editor window

The Sprite Editor is divided in two parts

- Builder: let's you create sprites.
- Library: Display existing sprites and allows you to manage them.



### Builder

Select one or multiple textures and use the **Create Sprite** or **Create Physic Sprite** buttons to create Sprites based on the selected textures respectively without or with physic.

You can also **drag and drop** one or multiple textures from the project view to the scene view to create a **sprite**. Hold the *alt* key to create a **physic sprite**.

## Library

Display a list of the existing sprites.

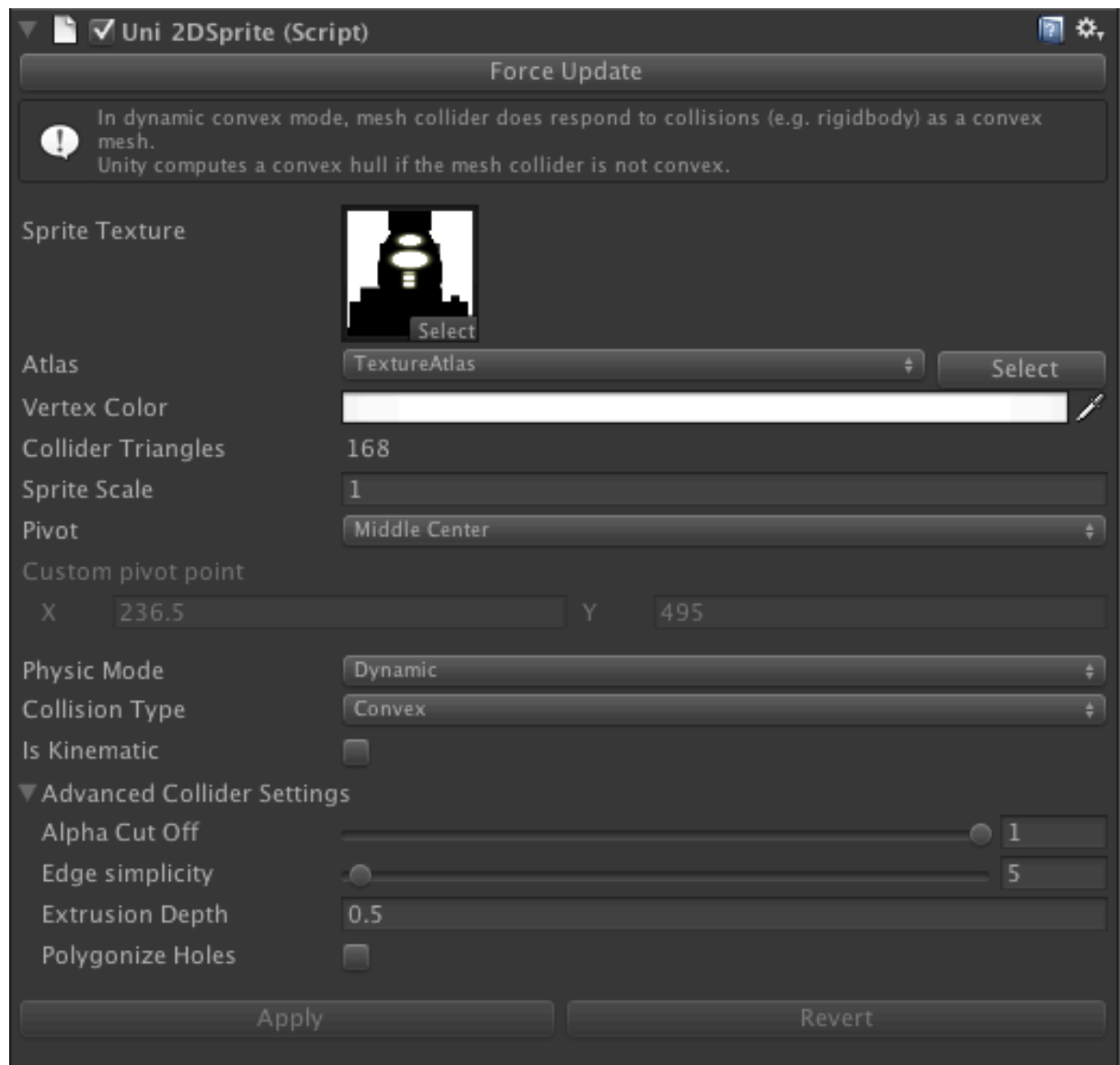
Click on the sprites names to select them.

If the physic is outdated (the texture has changed since last physic generation) you can click on the **Update Physic** button to regenerate it.

You can filter the displayed sprites by **Display** mode (all Sprites or only the outdated) and by **Scope**. (current scene, project or both)

Click on the **Update physic for all** buttons to regenerate the physic for all the outdated sprites.

## Sprite Component



A **Sprite** is a game object with a **Uni2DSprite** Component.

You can change the sprite settings via this component inspector.

The sprite component let you manage the look and physic of the sprite.

### Look

Change the sprite texture.

Modify the sprite scale, pivot, vertex color.

For optimization (less draw calls) you can select an atlas (see the **Texture Atlas** section later in this document) containing the texture.

## Physic

Select a physic mode between **No Physic**, **Static** (just a mesh collider) or **Dynamic** (a mesh collider and a rigidbody).

Select the mesh collider type between **convex** (less accurate shape for better performances), **concave** (accurate shape but slower and can't collides with other concave mesh), **compounds** (As accurate as concave but compounds of convex shapes, can be even slower but collides with everything).

For dynamic sprite you can select whether it's **kinematic** or not. (It's exactly the same as checking the isKinematic box on the rigidbody) A kinematic sprite is no longer driven by the physic but can interact with it.

Use the **advanced Collider Settings** to control the physic mesh generation:

### *Alpha Cut Off*

Only pixels with an alpha superior at this threshold will be included in the physic shape.

### *Edge Simplicity*

Increase this number if you want a physic mesh with fewer triangles. (You can look at the *Collider Triangles* field if you want to know exactly how much triangles have been generated)

### *Extrusion Depth*

Control the thickness of the sprite. To avoid physic imprecision, keep this value high enough.

### *Polygonize Holes*

Check this if you want the holes to be taken into account in the generated physic mesh.

This option is not available for convex mesh.

### [Warning]

The physic settings need to be applied before the physic can be regenerated. Just click on the **Apply** button to validate or on the **Revert** button to come back to the last settings.

You can also force the physic to be regenerated by clicking on the **Force Update** button.

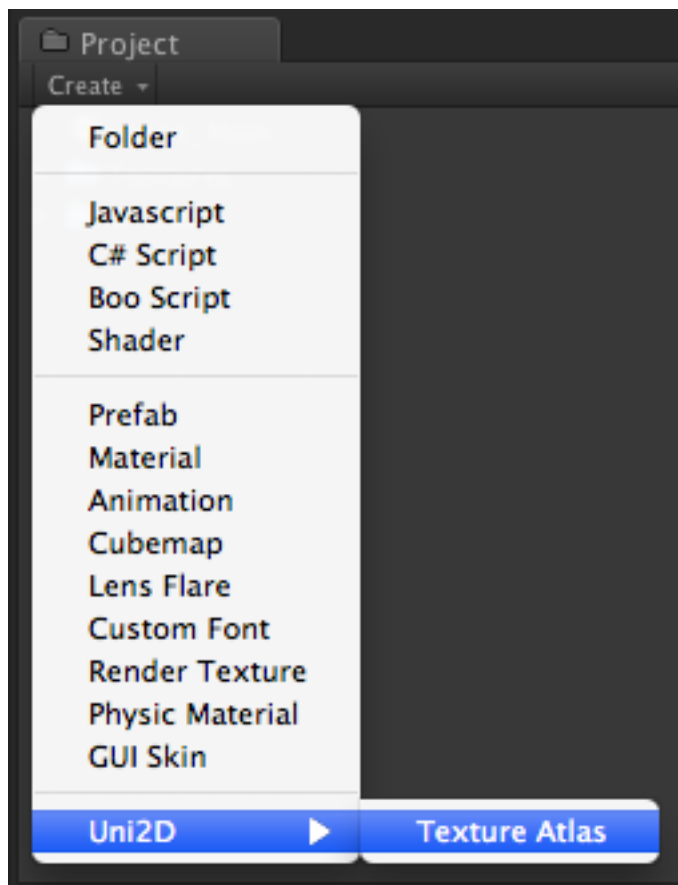
## Texture Atlas

### Atlas creation

You can create the Texture Atlas like any other unity resource.

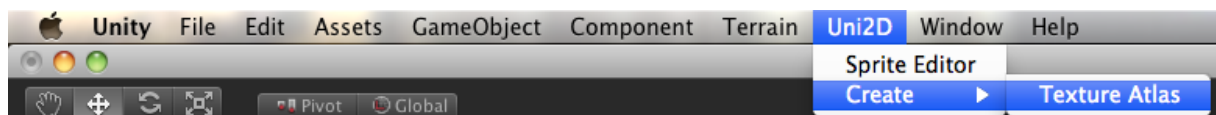
On the Project tab:

**Create -> Uni2D -> Texture Atlas**



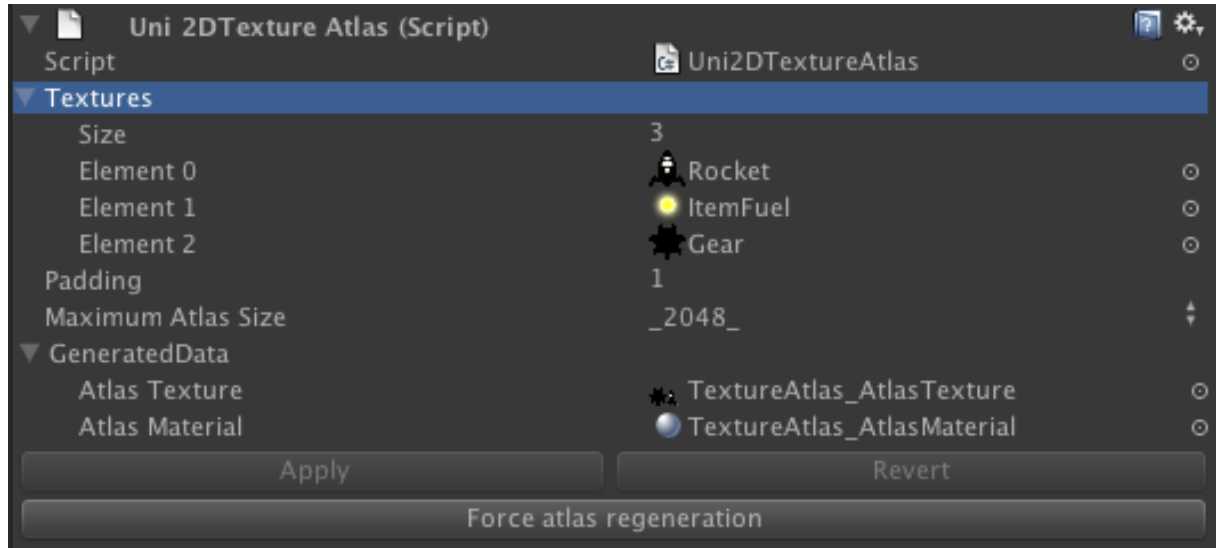
On the Main bar:

**Uni2D->Create->Texture Atlas**



## Atlas inspector

If you select an atlas, you can see and edit its settings on the inspector panel, under the **Uni2DTextureAtlas** Component



### Textures

Add to this list all the textures you want to be included in the atlas.

### Padding

Indicate the margin between each textures of the atlas

### Maximum atlas size

The generated atlas texture size will adapt in order to contain all the textures until the maximum atlas size is reached.

Beware that if the textures are too larges for the atlas max size they will be cropped.

### Generated Data

When the atlas is generated, an atlas texture (the big texture with all the textures in it) and an atlas material will be created.

You can't edit the **Atlas Texture** and **Atlas Materials** Fields but you can click on it to retrieve the corresponding resources in the project.

[Warning]

Once you have set the atlas parameters you need to apply it so that the atlas can be generated.

Click **Apply** to valid the settings and regenerate the atlas or click **Revert** to come back to the previous settings.

You can regenerate the atlas by clicking on the **Force atlas regeneration button**.