# PlayCanvas Polygon Streaming SDK

Polygon Streaming models can be added to PlayCanvas with the use of a simple script, being able to stream multi-million polygon models, without limits and without the need for extensive loading times or local storage space.

Installation

To install, simply download the PlayCanvas plugin from the platform website. After the plugin is downloaded, manually add the script inside your PlayCanvas project. Next click on the cog icon in the bottom left of the PlayCanvas editor and expand the Rendering section on the right hand side and then press the "Import Basis" button.
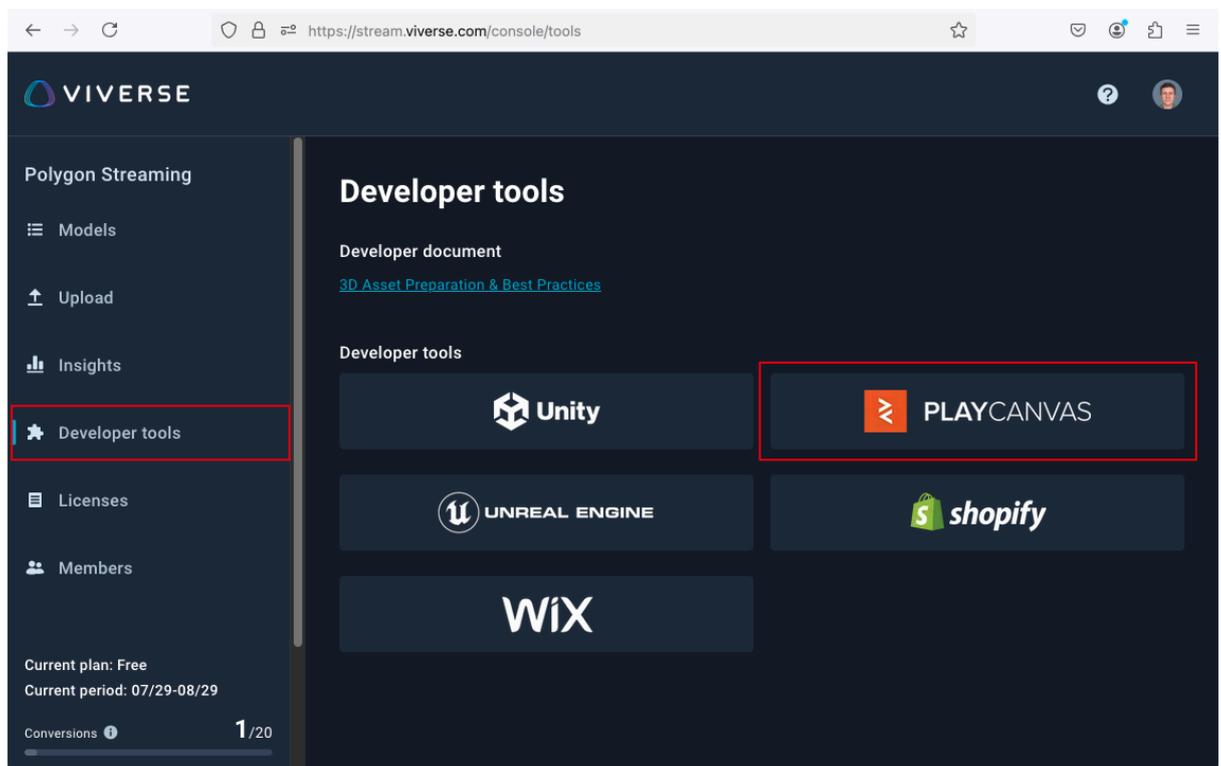
Plugin Usage

1. Create a new Entity to your PlayCanvas project and call it **"Stream Controller"**, after adding the new Entity, click on "Add Component" and attach the script "StreamController" to this Entity.
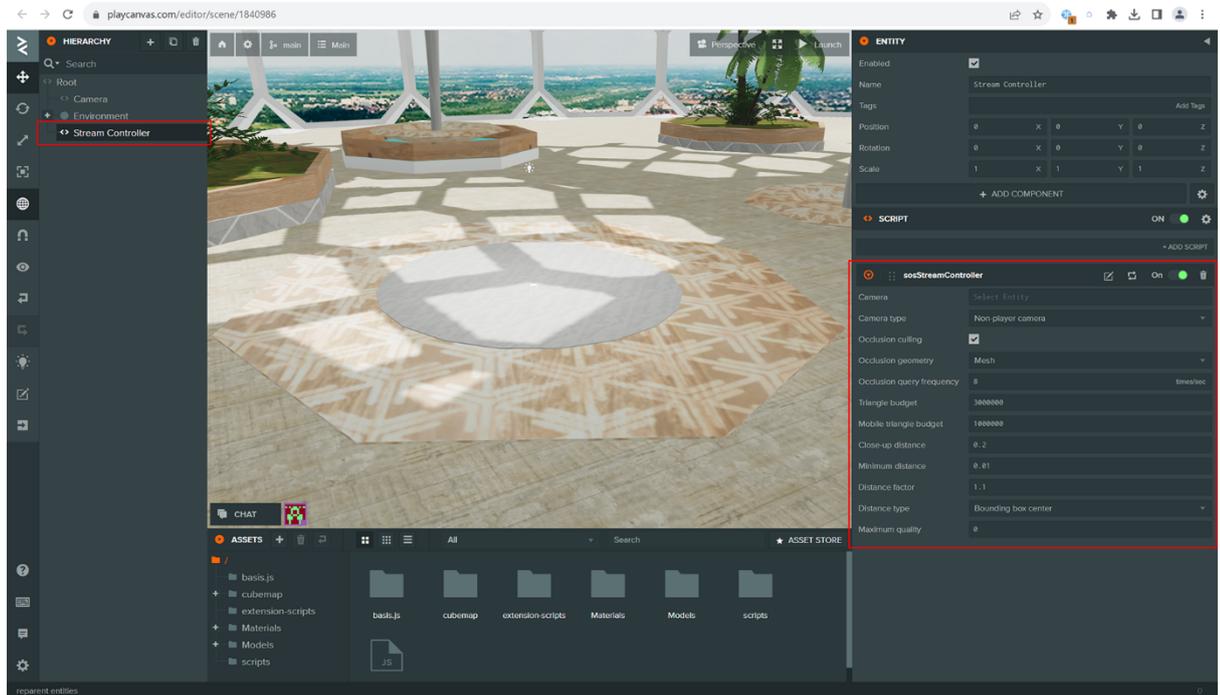
2. Select your **Camera** in the camera field of the Stream Controller.

3. Following the same steps, add a new Entity as a child of the "Stream Controller" and call it **"Streamable Model"**, after adding this new Entity, click on "Add Component" and attach the script "StreamableModel" to this Entity.
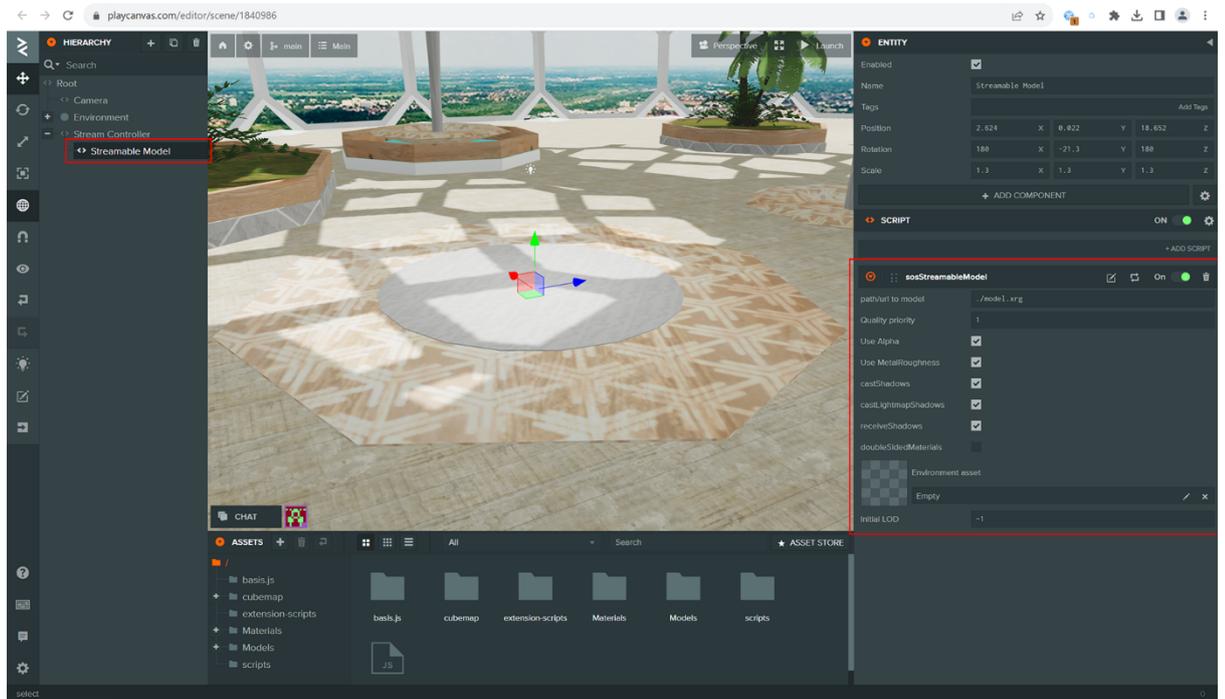
4. Now add the address of your Streamable Model to the path, don't forget to add the "**/model.xrg**" extension. Now just Launch your project and you are ready to stream your 3D models inside your PlayCanvas projects.
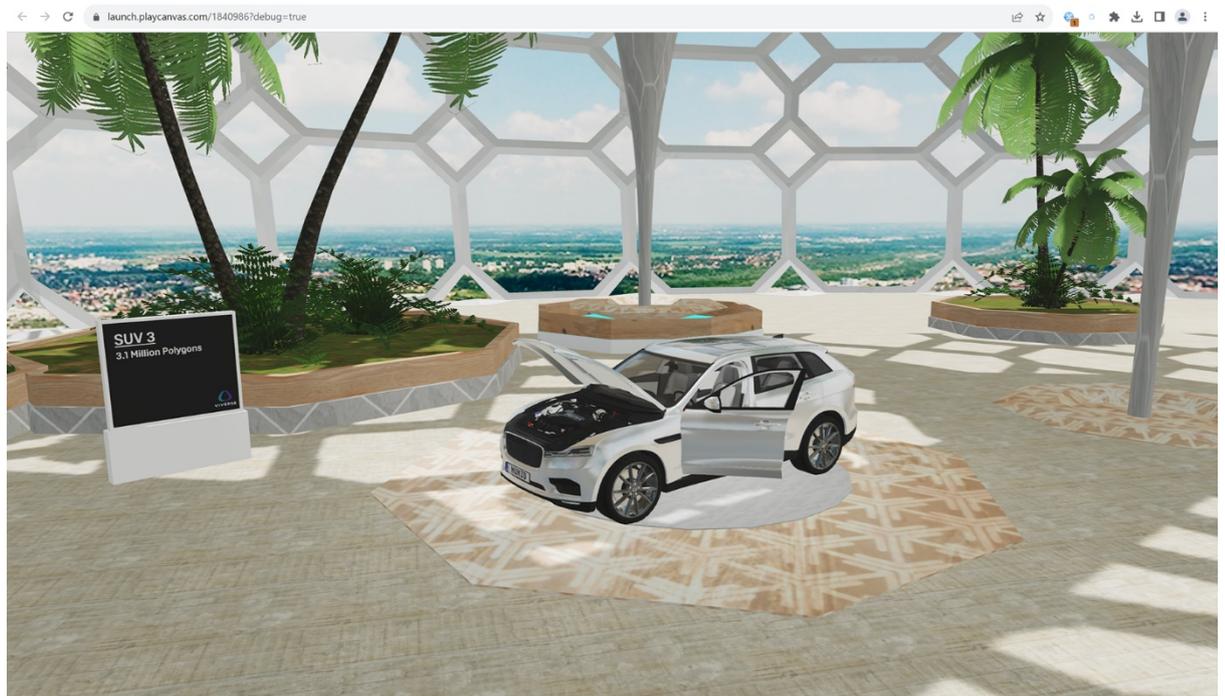
Supported Parameters

Stream Controller

Name	Description	Default Value
Camera	Camera or 3d person model.	None
Camera type	Non-player camera: A camera that is not attached to a player e.g. a camera that orbits an object. Player camera: A camera that is attached to a player.	Non-player camera
Occlusion culling	Whether occlusion culling is enabled. Requires that device supports WebGL 2.	On
Occlusion geometry	Mesh: Use the mesh to check if it's occluded, Bounding Box: Use the bounding box of the mesh to check if it's occluded.	Bounding box
Occlusion query frequency	Value is in times per second. A value of 0 means will it run on every frame.	8
Triangle budget	The maximum amount of triangles that you want to be in the scene at any single point.	3000000
Mobile triangle budget	The triangle budget used on a mobile device. If it is set to 0 it will use the non-mobile triangle budget.	1000000
Minimum distance	The smallest possible distance to the camera.	0.01
Distance factor	Preference for nearby objects over objects further away. Values above one mean a preference for nearby objects. Values below one mean a preference for objects further away. One is neutral.	1.1
Maximum quality	Stops improving geometry that exceeds the maximum quality. This can be used to stop far away objects from showing more detail which can be wasteful. Leaving this at 0 means there is no maximum quality.	0
Close-Up distance	The distance where it starts using close-up distance factor. Set it to 0 to not use close-up distance factor.	3
Close-Up Distance Factor	The distance factor used when close-up to an object. Should be higher than the standard distance factor.	5
iOS Memory Limit	The maximum memory in MB used for meshes and textures to avoid crashes on iOS devices. -1 for no limit.	440

Streamable Model

Name	Description	Default Value
Path or url to model	Path of the streamable mode to be streamed into the project.	./model.xrg
Quality priority	How much to prioritize the quality of this model relative to the quality of other models in the scene. This parameter does nothing if this is the only model in the scene.	1
Use alpha	Keep on if the model uses any alpha information or transparency.	On
Cast shadows	Keep on in case the model needs to cast shadow.	On
Cast lightmap shadows	Keep on in case the model needs to cast lightmap shadows.	On
Receive shadows	Keep on in case the model needs to receive shadows.	On
Force double sided materials	Render the model double sided regardless of the setting in the model file	Off
Environment asset	Use either a cubemap asset with a prefiltered image or the prefiltered image as a texture asset	Empty
Initial triangle percent	Percentage of the triangle budget to initially load.	0.1
Use embedded collider	Use collider embedded in XRG file if it is available.	On

VIVERSE