

# Procedural Cubemap Generator Reference Documentation

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## CubemapGenerator.cs

This class is attached to the Cubemap Generator prefab and controls the objects required to generate a cubemap using a procedural material. It is not intended to be used on its own.

The system uses layer 31 as the cubemap rendering layer. Ensure that any other cameras cull that layer so the cubemap renderer is not visible in your game.

### Enums

**Sizes:** `_32, _64, _128, _256, _512, _1024, _2048, _4096, _8192`

### Properties

**inputMaterial:** [ProceduralMaterial](#)

This procedural material defines the input material from which the cubemap will be generated.

**size:** `Sizes = Sizes._256`

The input linear resolution for the generate function. This is limited to the powers of two from 32 to 8192. (both inclusive)

**lastGeneratedCubemap:** [Cubemap](#)

A reference to the last cubemap is stored here so it can be quickly retrieved again, without incurring the cost of another full cubemap generation.

**thisMeshRenderer:** [MeshRenderer](#)

The mesh renderer on the sphere surrounding the cubemap render camera.

**thisCamera:** [Camera](#)

The camera doing the rendering when generating the cubemap.

### Functions

**generate():** [Cubemap](#)

This function creates a new cubemap object, sets the **thisMeshRenderer** material to **inputMaterial**, and tells **thisCamera** to render a cubemap. The resulting cubemap is returned.

# CubemapGeneratorHelper.cs

The preferred way of using Procedural Cubemap Generator, this allows you to easily create a procedural cubemap on-demand.

This class is intended to be used as a singleton. Two properties are exposed to access the singleton, for differing style preferences.

## Properties

### **cubemapGeneratorPrefab: CubemapGenerator**

This procedural material defines the input material from which the Cubemap will be generated. This should be set to the Cubemap Generated prefab. (Assets/10101 Software/Cubemap Generator/Cubemap Generator.prefab)

### **instance: CubemapGeneratorHelper**

A reference to the latest CubemapGeneratorHelper which was instantiated.

### **singleton: CubemapGeneratorHelper**

A reference to the latest CubemapGeneratorHelper which was instantiated.

## Functions

### **generateCubemap([ProceduralMaterial](#) mat, CubemapGenerator.Sizes size): [Cubemap](#)**

Spawns an instance of a **cubemapGeneratorPrefab** if one has not been spawned yet then sets the material and size of the CubemapGenerator attached to the prefab instance. The CubemapGenerator is then told to generate a cubemap and the cubemap is returned.