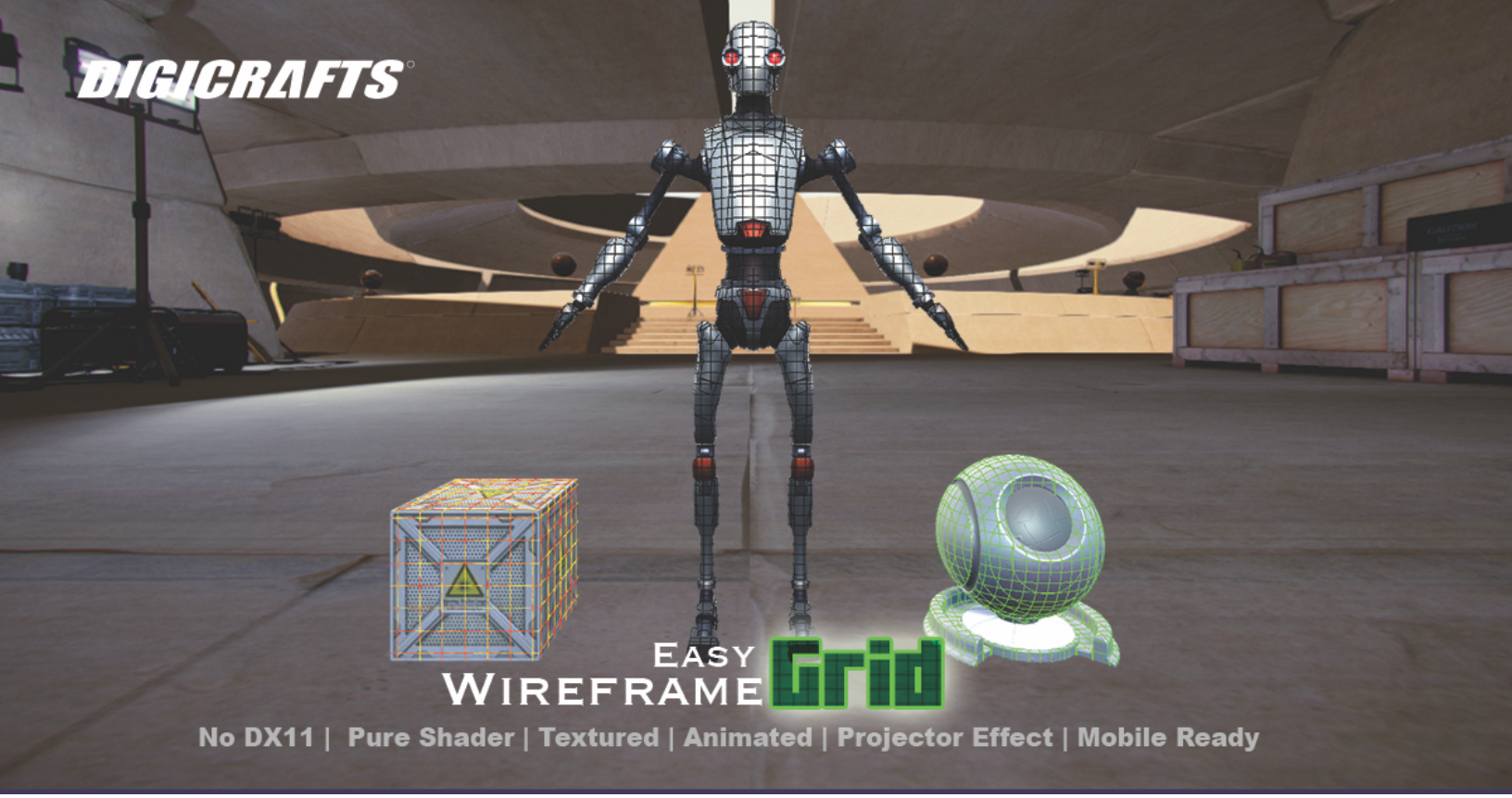


EasyWireframe Grid

Wireframe Grid Shader

Document version 1.1
Support email: support@digicrafts.com.hk

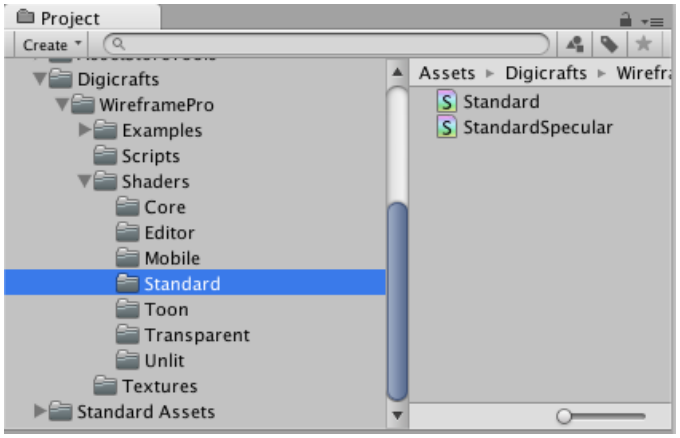
Introduction

Easy Wireframe Grid is a shader package that display grid wireframe with various effect. Textured wireframe and animated effect make it different from other wireframe shader in the market.

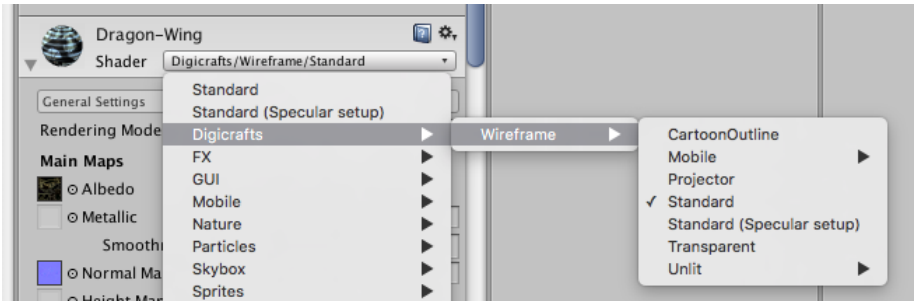
Easy Wireframe Grid didn't depend on a any uv or barycentric information of the mesh. It is a pure shader effect without scripting.

Install the package

1. Download and import the **Easy Wireframe Grid** Shader package from Asset Store
2. Shaders are located within the folder Digicrafts/WireframeGrid/Shaders.



3. Now, you can select wireframe shader from the shader section in your material inspector. The shader is inside “Digicrafts/WireframeGrid” section.

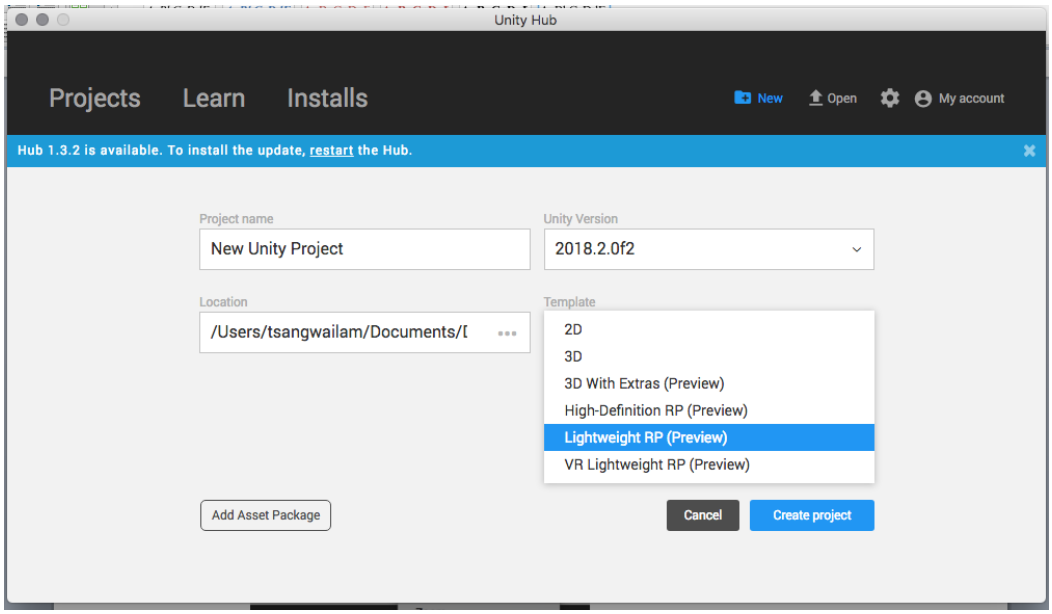


4. Examples are located in the “Digicrafts/WireframeGrid/Examples”.

Installation for Shader Graph Plugin

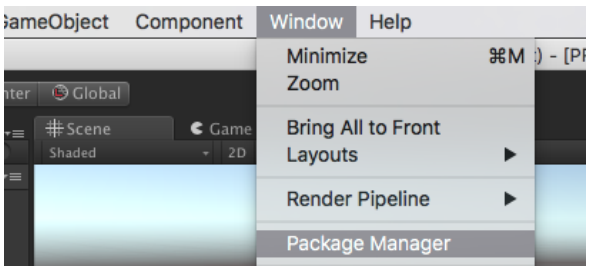
Shader Graph plugin only work with Unity 2018.2+

1. If you start a new project, create a new project with Light Weight Render Pipeline support. **Skip to step 8 if you start a new project with Light Weight Render Pipeline.**

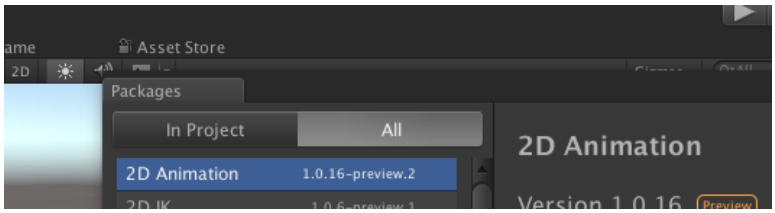


2. Or, if you already have a project. Add Light Weight Render Pipeline from Package Manager.

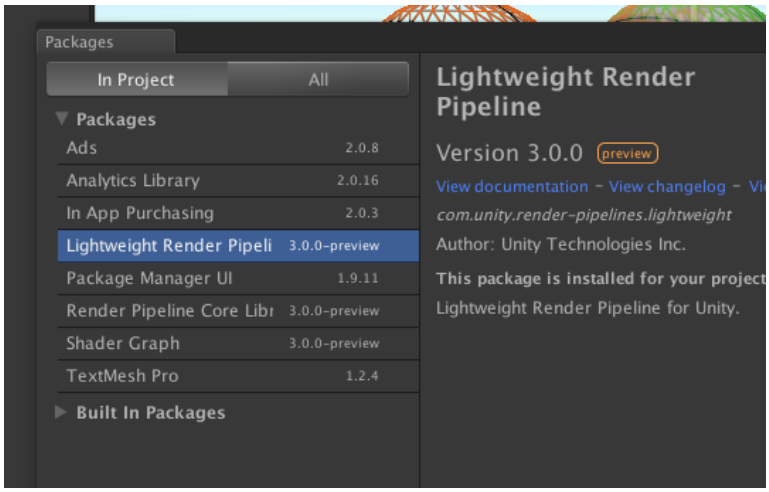
   Open Package Manager from menu *Window>Package Manager.*



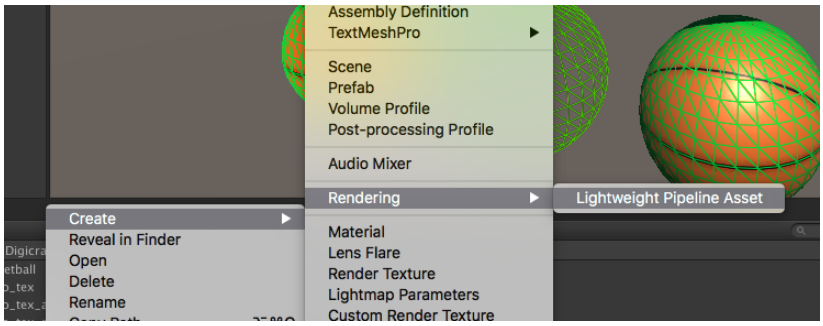
3. Select “All” in package selection



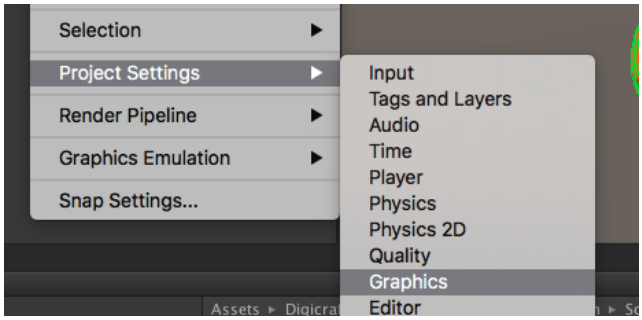
4. Select and install packages called “Render Pipeline Core”, “Lightweight Render Pipeline” and “Shader Graph”. Select version 3.0.0 or up for best compatible.



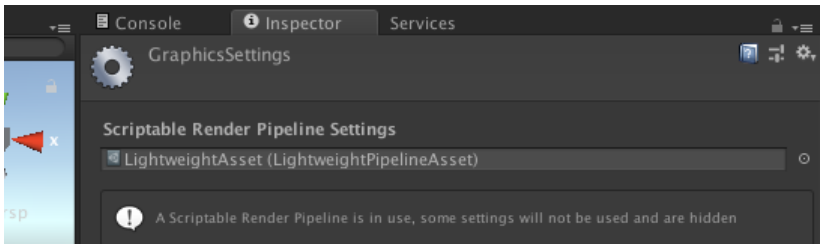
5. Create a Lightweigth Pipeline Asset from the create menu.



6. Open Graphics settings from menu>Edit>Project Settins>Graphics.

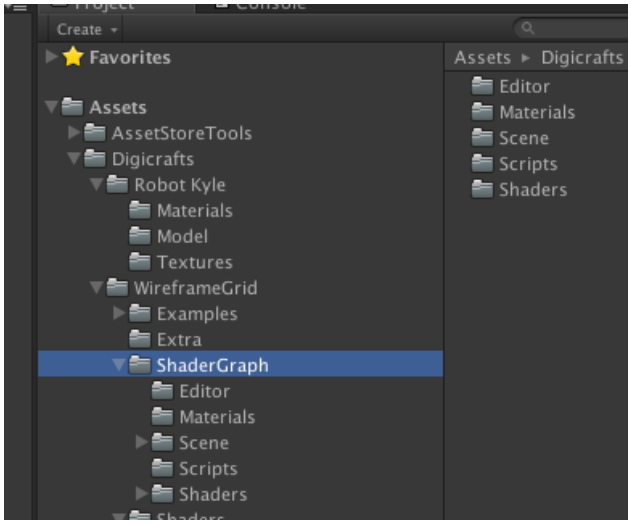


7. Assign the Lightweigth Pipeline Asset to the Scriptable Render Pipeline Settings.



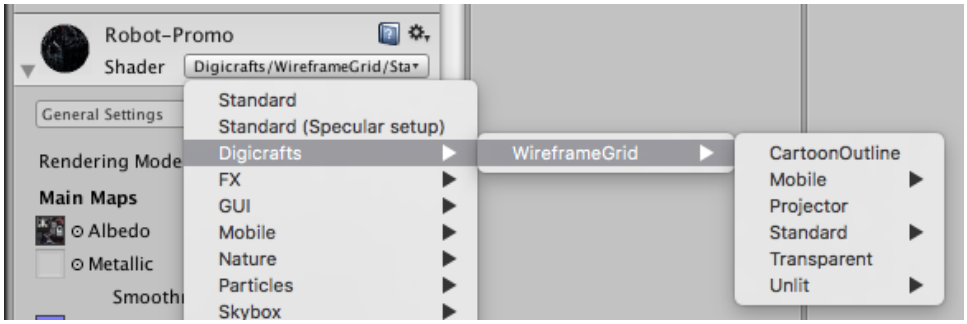
8. Install Wireframe Shader Graph Plugin from **Tools>Digicrafts>Wireframe Grid>Install Shader Graph Plugin**

9. Now the plugin is installed in Shader Graph folder.

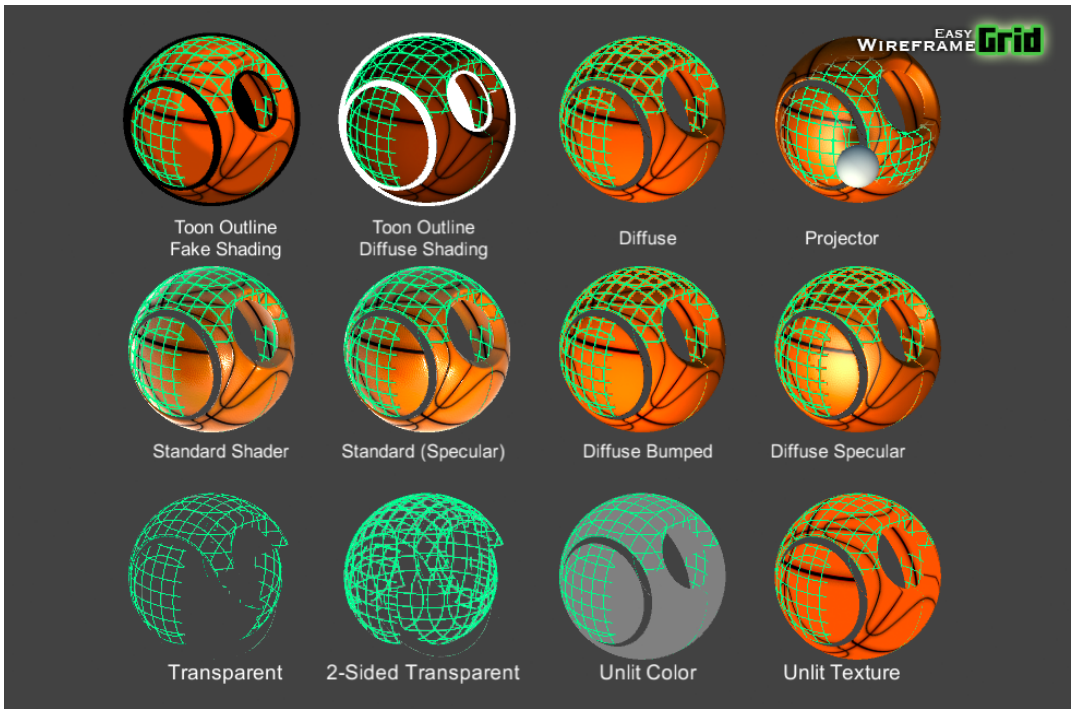


Types of Shader

Easy Wireframe Grid contains five main types of shader. Shaders are organized in categories and under the “Digicrafts/Wireframe” section of the shader selector.



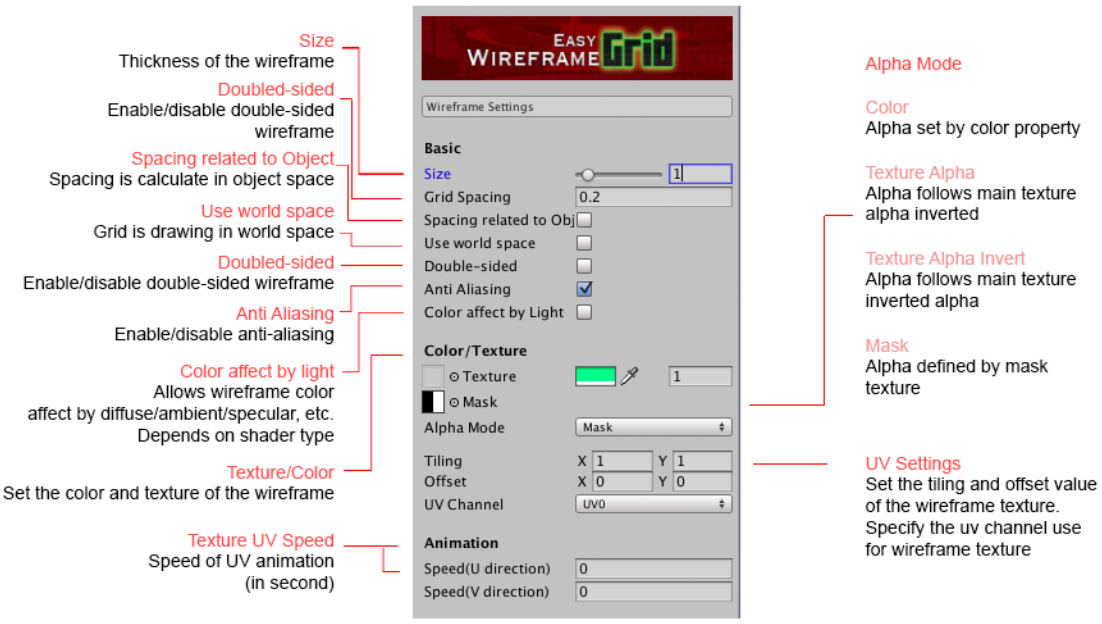
Transparent – transparent wireframe.
Unlit – wireframe with unlighted color and texture.
Standard – wireframe with full lighting and PBR effects.
Mobile – wireframe with diffuse and specular color. Best for mobile.
Cartoon – wireframe on toon shader with outline.
Projector – shader use with the projector.



Examples of Shader Effect

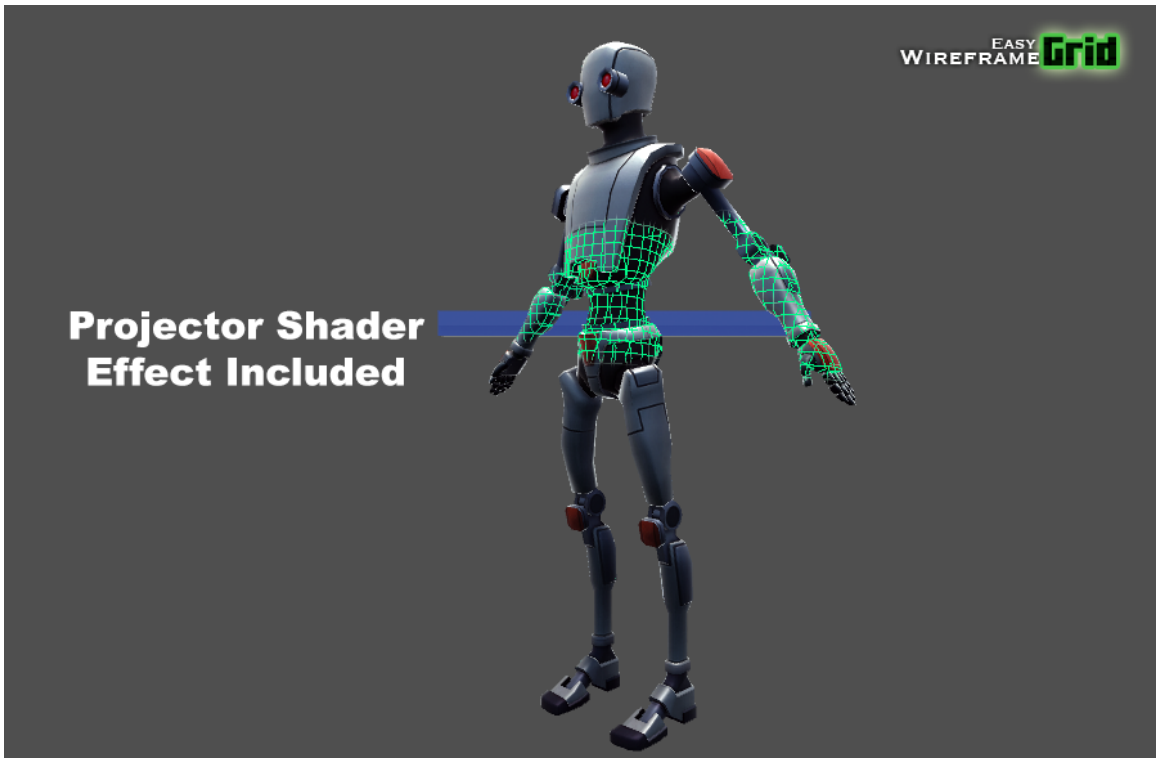
Inspector

Easy Wireframe Grid comes with a easy to use inspector which allow you to customize the wireframe effect. You can find this inspector in the shader menu of the shaders in **Easy Wireframe Grid package.**

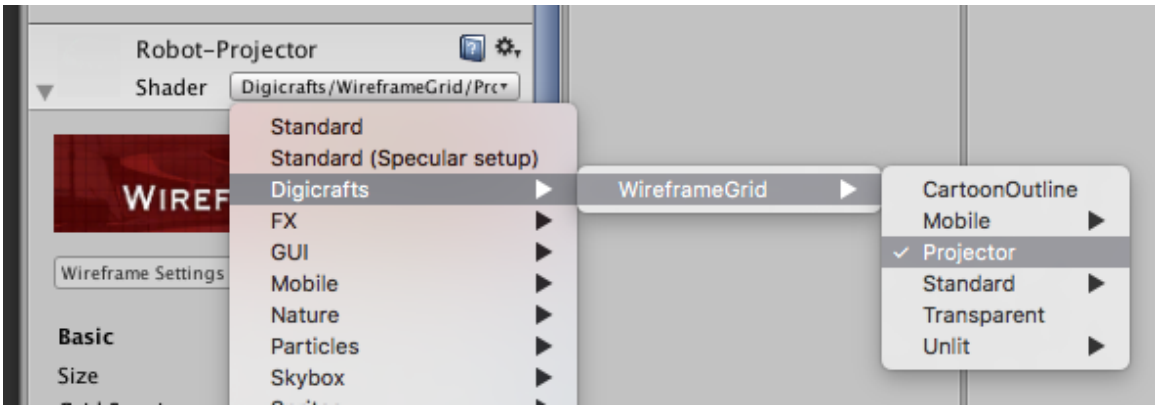


Setup Projector Effect

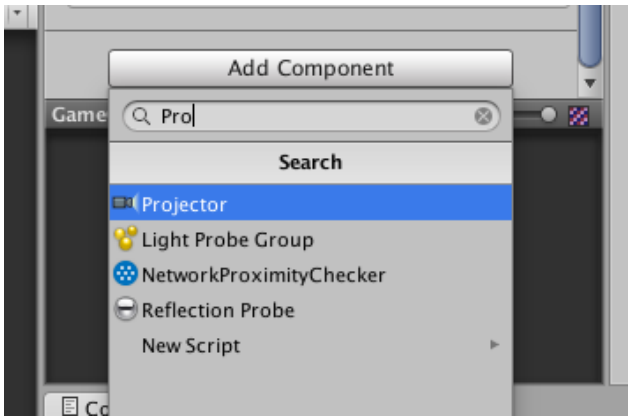
Easy Wireframe Grid allows you to setup a projector effect like an X-ray scanner.



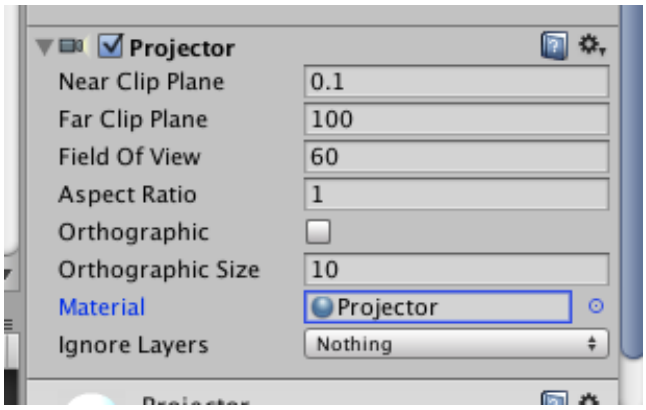
1. Create a new material and assign the “Projector” shader.



2. Create an empty GameObject or use existing GameObject.
3. Select the GameObject from the hierarchy window.
4. Click the “Add Component” button at the bottom.
5. Type “Projector” and select.



6. From the projector inspector. Choose the created projector material.

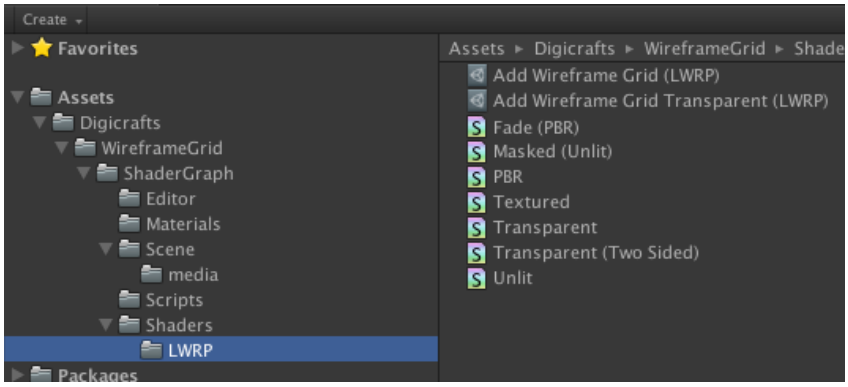


7. You can tweak the projector settings and position in order to project the wireframe into your object.

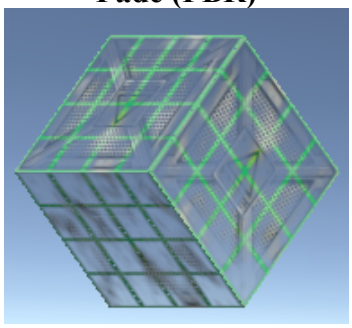
Use Shader Graph Plugin

Included LWRP Shaders

In the package, we included several ready-to-use shaders (LWRP). You can find the shaders inside the folder show below. To edit the shader, you can double click on the shader and edit with shader graph.

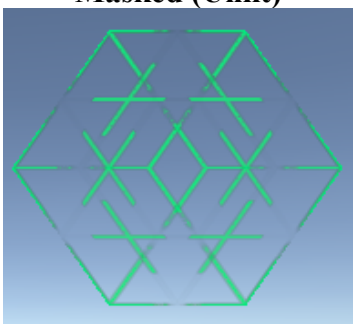


Fade (PBR)



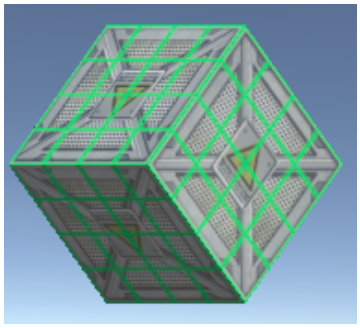
Shader fade between wireframe and base texture. Best for fade appear effect.

Masked (Unlit)



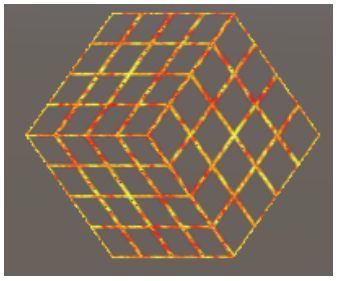
Wireframe can be masked with alpha texture.

PBR



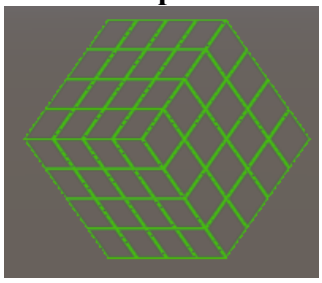
Standard PBR shader with wirframe on top.

Textured



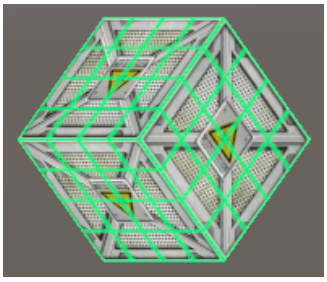
Textured wireframe shader.

Transparent



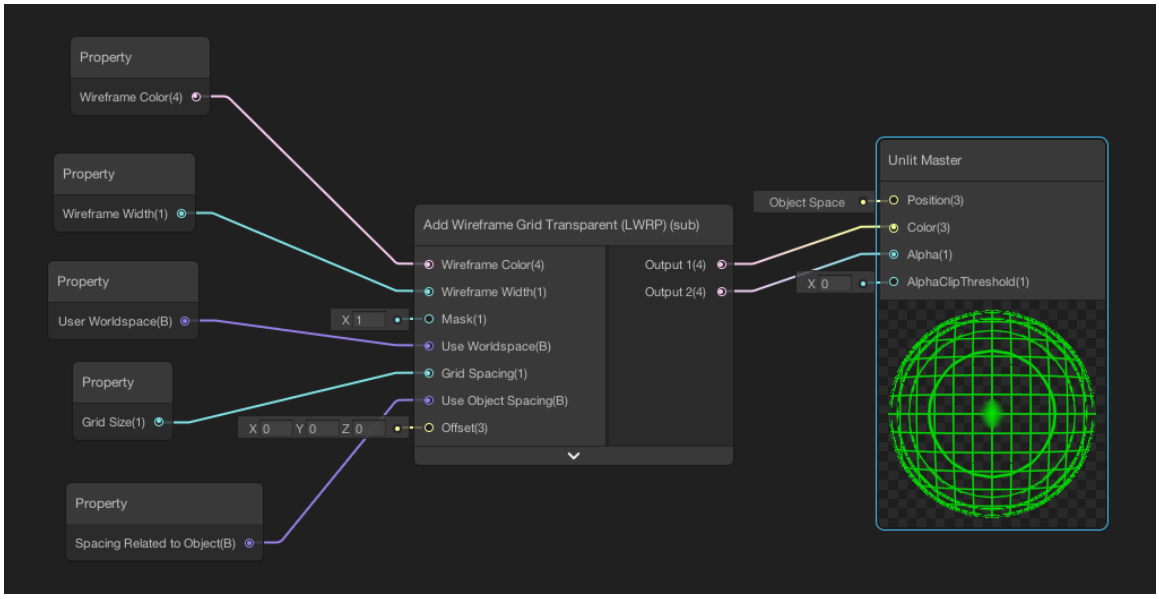
Transparent wireframe shader.

Unlit

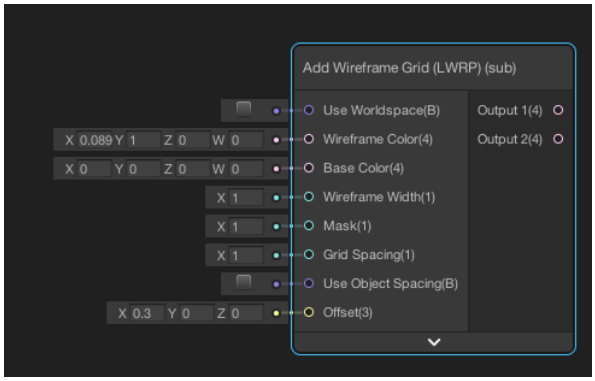


Simple unlit base color with wireframe on top.

Create your own shader graph



If you need to create your own shader effect, we have included nodes in Shader Graph to add wireframe effect.

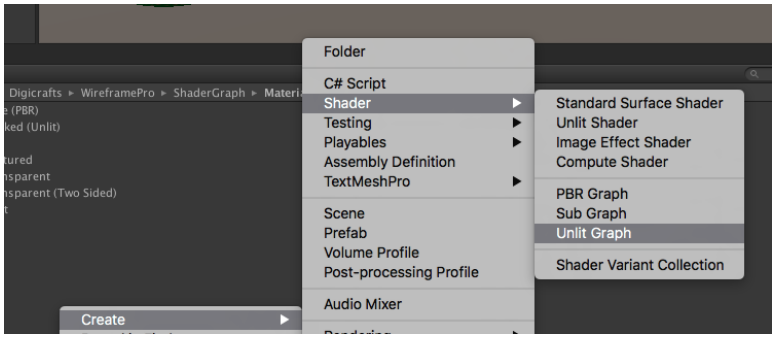


Input	Type	Description
Use World Spacing	Bool	Set if grid is draw using world space
Wireframec Color	Color	Color of the wireframe
Base Color	Color	Color of the base
Wireframe Width	Vector1	Width of the wireframe
Mask	Vector1	Masking of the wireframe
Grid Size	Vector1	The spacing of the grid
Use Object Spacing	Bool	Set if grid size is related to object
Offset	Vector3	The offset of the grid in x/y/z position

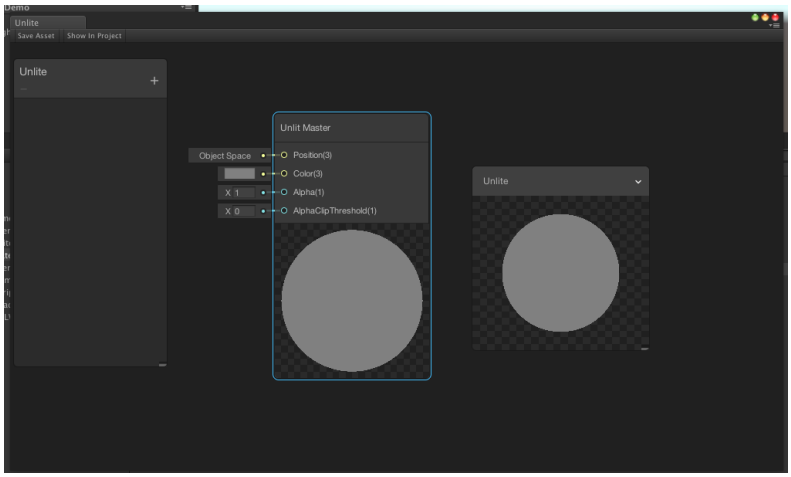
Output	Type	Description
Output 1	Color	Color value of the wireframe.
Output 2	Vector1	Alpha value of the wireframe

Example: Create transparent Unlit wireframe shader

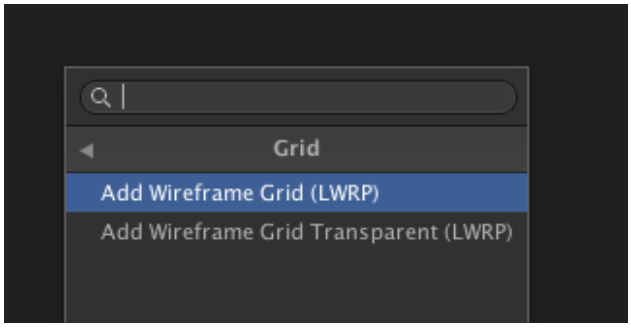
1. Create an Unlit Graph from create ***menu>Shader>Unlit Graph***.



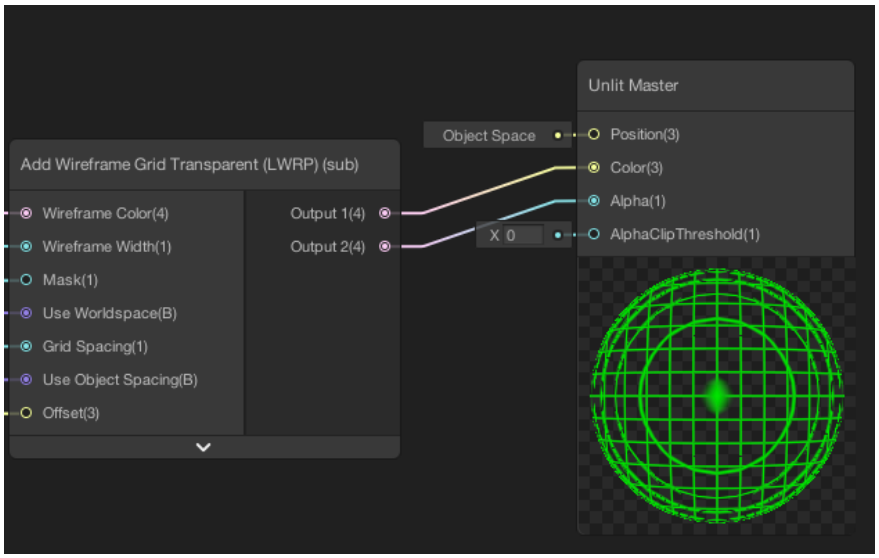
2. Open the shader in *Shader Graph* by double click on the file.



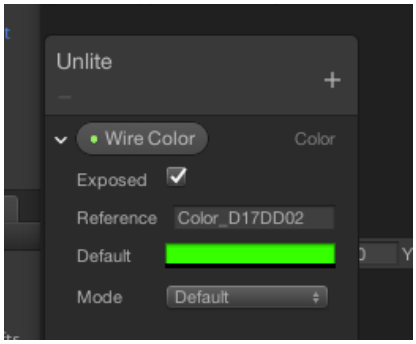
3. Right click on the Shader Graph window. Create a node from the node menu **Digicrafts>Grid>Add Wireframe Grid Transparent (LRWP).**



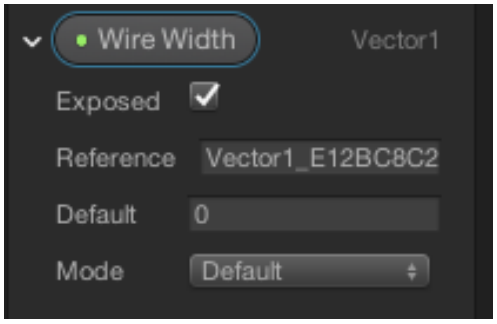
4. Connect the **Output1** to the **Color port** of the Unlit Master node. And **Output2** to the **Alpha port**.



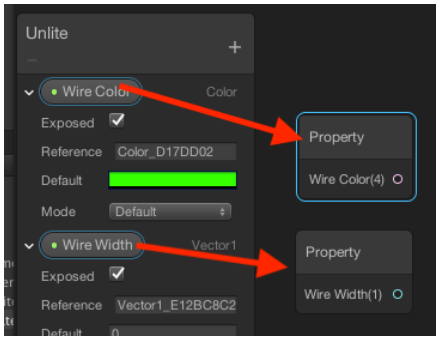
5. Create a Color property in the properties panel. Use to specify the wire color.



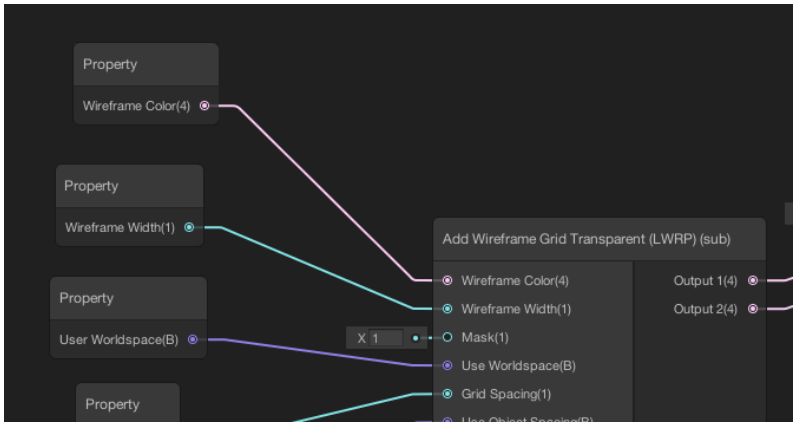
6. Create a Vector 1 property to specify the width of the wireframe.



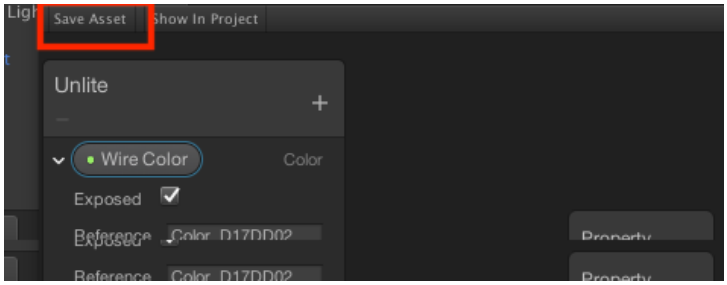
7. Drag and drop the properties to the graph.



8. Connect the port to the wireframe node.



9. Save and compile the graph.



10. Now, the shader is reader to use. You can select from the shader menu.