## ArchViz**PRO** Interior Vol.5 HDRP



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# **Quick Project Setup**

1) Open Unity Hub and create a new Unity 2021.3.4fl (or higher) project with an **High\_Definition\_RP Template**. (If HDRP Template is not available, start from a 3D Template and install HDRP from Package Manager and "Fix All" errors with the "**HDRP Wizard**").

2) Download and import <u>ArchVizPRO Interior Vol.5 HDRP</u> from Asset Store. If prompted about Unity Package Manager dependencies choose "**Install/Upgrade**".

3) Open Assets\ArchVizPRO\_Interior\_Vol.5 HDRP\3D SCENE\**ArchVizPRO\_Interior\_Vol.5\_HDRP**. You should see the scene as in the next screenshot.



4) Go to Edit/Project Settings/Graphics and assign **AVP5\_HDRenderPipelineAsset** in Scriptable Render Pipeline Settings.



Wait until "Compiling Shader" has finished.

5) Go to Edit/Project Settings/Graphics/HDRP Global Settings/ and

 $assign \textbf{AVP8\_HDR} ender \textbf{PipelineGlobalSettings} in \ \textbf{Rendering.}$ 



6) Go to Edit/Project Settings/Quality and assign **AVP5\_HDRenderPipelineAsset** in Rendering.



### Scene Overview

Scenes are located at Assets\ArchVizPRO Interior Vol.5 HDRP\3D SCENE:

ArchVizPRO\_Interior\_Vol.5\_HDRP: Setup optimized for Pc Standalone. Key 1: First Person Mode Key 2: Timeline cinematic animation Key 3: Orbit Mode Key WASD : Move character Key Left Ctrl : Crouch Key Shift: Sprint Key **Right Mouse Button**: Zoom **Mouse** : Look

## Progressive Lightmapper

ArchVizPRO Vol.5 HDRP uses <u>Progressive GPU</u> as the main baking engine. It's tested to work with a GTX 1070 (8Gb VRAM) and it takes around 30 minutes to bake.

#### **Baked Lightmap:**



Directionality:



Shadow Mask:



# Shader Graph

Custom shaders are made in <u>Shader Graph</u>. Shaders are located in Assets\ArchVizPRO\_Interior\_Vol.5 HDRP\3D SHADER\

Fabric\_Rim\_Detail: A Fabric shader with Rim. Fire: A simple flipbook shader for animating fire. Vegetation: Use vertex Color for simulating wind on trees.

### Layers

Camera and Reflection Probes use <u>Layer</u> exclusion to hide or show gameobject. Usually when importing from a package, layers names are hidden. Restore them by adding names in empty fields as in this screenshot:

Tag

ags & Layers

0 7 i

<ul> <li>Tags</li> <li>Sorting Layers</li> <li>Layers</li> </ul>	
Builtin Layer 0	Default
Builtin Layer 1	TransparentFX
Builtin Layer 2	Ignore Raycast
Builtin Layer 3	
Builtin Layer 4	Water
Builtin Layer 5	UI
Builtin Layer 6	
Builtin Layer 7	
User Layer 8	PostProcessing
User Layer 9	House
User Layer 10	Furniture
User Layer 11	Props
User Layer 12	Environment
User Layer 13	PlanarFix
User Laver 14	

# FAQ:

#### 1) Progressive GPU fallback to CPU.

To bake the lightmaps at the current Lighting Settings you need at least 8 Gb of Vram.

e ugrang	
	Scene Baked Lightmaps
Environment (HDRP)	
Profile	AVP3_Scene Settings Profile (VolumeProfile)
Static Lighting Sky	None
v Mixed Lighting	
Baked Global Illumination	
Lighting Mode	Shadowmask
. Mixed lights provide realtime direct lighting. Indirect lighting gets baked into lightmaps and light probes. Shadowmasks and light probes occlusion get generat	ed for baked shadows. The Shadowmask Mode used at run time can be set in the Quality Settings panel.
v Lightmapping Settings	
Lightmapper	Progressive GPU (Preview)
Prioritize View	
Multiple Importance Sampling	
Direct Samples	1024
Indirect Samples	2048
Environment Samples	8
Light Probe Sample Multiplier	4
Bounces	4 *
Filtering	Advanced *
Direct Denoiser	Optix *
Direct Filter	None
Indirect Denoiser	Optix *
Indirect Filter	None
Ambient Occlusion Dengiser	None
Ambient Occlusion Filter	Gaussian +
Radius	2 texels
Lightmap Resolution	100 texels per unit
Lightmap Padding	4 texels
Lightmap Size	1024
Compress Lightmaps	
Ambient Occlusion	
Directional Mode	Directional
Indirect Intensity	• 1
Albedo Boost	• 1
Lightmap Parameters	Default-HinhPesolution

With a GTX 1070 8 GB baking times are around 50 minutes at 120 Lightmap Resolution.

If you have less than 8 GB of VRAM available you have to:

- Go to Project/Settings and change **Texture Quality = Quarter Res**.

O Project Settings		
Audio	Quality	
Editor	Quality	
Graphics		
Input		
Physics		
Physics 2D		
Player		
Preset Manager		
Quality		
Script Execution Order	Name	Normal
Tags and Layers		
TextMesh Pro	A Scriptable Render Pipeline is in use, so	ime settings will not be used and are hidden
Time		
VFX	Rendering	
	Texture Quality	Quarter Res
	Anisetropic Textures	Ber Texture
	Anisotropic rextures	
	Realtime Reflection Probes	✓
	Billboards Face Camera Position	
	Resolution Scaling Fixed DPI Factor	1
	Texture Streaming	
	Shadows	

- Save, restart and reopen the project.

🙀 Task Manager				👰 Task Mana	ger					
File Options View				File Options	View					
Processes Performance Apphistory Startup Users Details Services		Processes Performance App history Startup Users Details Services								
Disk 5 (H:) 0%	^				Disk <mark>5 (</mark> H:) %			^		
Disk 6 (L:) 0%		Dedicated GPU mem	ory usage		Disk 6 (L:) %	p	ercentage of time the disk is rocessing read or write requ	ests	Dedicated GPU mem	ory usage
Disk 7 (K: M:)		Shared GPU memory	usage		0isk 7 (K: M:) %				Shared GPU memory	usage
Wi-Fi Wi-Fi 4 S: 0 R: 0 Kbps	÷			V V S	Vİ-Fİ Vi-Fi 4 : 0 R: 0 Kbps			i.		
GPU 0 NVIDIA GEForce RTX 2070 SUPER 32%		Utilization 32%	Dedicated GPU memory 5.4/8.0 GB		5PU 0 IVIDIA GeForce RD 0%	X 2070 SUPER			Utilization 20%	Dedicated GPU memory 2.8/8.0 GB
GPU 1 NVIDIA GeForce GTX 1070 0%	*	GPU Memory 5.5/40.0 GB	Shared GPU memory 0.1/32.0 GB		GPU 1 WIDIA GeForce GT %	TX 1070		*	GPU Memory 2.9/40.0 GB	Shared GPU memory 0.1/32.0 GB
Sewer details Open Resource Monitor				Fewer deta	ils 🛛 🔊 Open Res	source Monito	r			

Texture Quality = Full Res Texture Quality = Quarter Res

With Quarter Res we have earned **2.6 GB** of available VRAM!

- Once the bake is finished bring back textures to Full Res

- if Lightmap Size is 2048 and still fallback to CPU, try to use 1024 or 512.

#### 2) I have 2 video cards, can Progressive GPU take advantage of them?

It is possible to select one GPU for rendering the Scene and another GPU for baking lighting. If the automatic GPU assignment don't fit your needs, you can specify which graphics card to use for baking.

To see which GPU Unity currently uses for baking, in the Editor: In your Project, open the Lighting window. Next to Bake Performance, you can see the GPU.

To see the available GPUs in your machine:

- 1. Make sure you've selected the Progressive GPU lightmapper in the Editor.
- 2. Generate the lighting in your Scene.
- 3. Open File Explorer, and navigate to the following path: C:\Users\USER\AppData\Local\Unity\Editor. Open the file called Editor.log.

4. In the file, search for the line *Listing OpenCL platforms*. This should jump to the part of the log with information about OpenCL devices. Here, you can see your available GPUs along with their corresponding platform and device indexes.

To select a specific GPU for baking:

To select a specific GPU for baking, enter this command at the command line (replace platform and device index with the relevant numbers):

#### Unity.exe "-OpenCL-PlatformAndDeviceIndices" <platform> <device index>

Your choice of assignment should depend on your needs while you're working on the Scene. If you assign the strongest GPU to either activity, this can incur a performance impact on the other activity. If you encounter issues, try re-assigning GPUs.

3) Baked Lightmap view is showing nothing Rebake the scene. It's a Unity bug, hope it will be fixed soon.

4)After Exiting Play Mode the Scene View is completely blank just gizmo showing It's a Unity bug. A quick fix is to right click on any script (for example the script you find in 3D SCRIPT) and click reimport. This force the recompile and should fix the problem.

### Contacts:

For any asset related issue please contact me at: <u>ruggero.corridori@gmail.com</u> If you are interested in our services, write at: <u>info@oneirosvr.com</u>