

'2023 A' PRODUCTION: TECHNICAL SPECIFICATION

vrbn studios; June 2023

GENERAL TECHNICAL SPECIFICATION

GENERAL

- Our Swiss Made buildings provide simple, drag-and-drop, high quality architectural models for use in large urban environments.
- Our buildings and assets are made to be consistent and compatible across all assets / buildings.
- Content ships as native file formats per platform (per tool).

MAIN FEATURES

- Consistent and detailed realism
- Full PBR
- Parallax occlusion interiors
- Our assets and buildings are made for direct use in games, XR, VFX, Simulation.

MODEL SPECIFICATION

- File format: Tool native (Unity, Unreal etc.)
- Production units: [cm]
- Production geo. coord. system: Left-handed (DirectX), yUp
- LODs: 1 for offline rendering, 4 for real-time rendering (5 total)

MATERIAL & TEXTURE SPECIFICATION

- Textures: PBR: metal / roughness; up to 8k/atlasses; optimized
- Channels: albedo, emission, metal, roughness, normal, opacity, alpha, geometry-AO, material-AO, dirt
- Texel density: ~400 tx/m for offline rendering, ~200 tx/m for real-time rendering
- Game Engines: Merged grayscale textures into RGBA TGA.
- Normals: Tangent space, left handed (DirectX)
- File format: TIF / TGA / PNG, 8bit, RGB, RGBA
- Interpreted color space: sRGB: albedo/emission. Linear: metal, roughness, normal, opacity, alpha, geometry-AO, material-AO
- vrbn studios based naming convention

QUALITY

- All our 3D content is manually tested. If you find anything out of order or you have questions, please contact us*.

DEMO CONTENT

- For demo content, please check our free content bundles on the shop or contact us*.

FURTHER

- Plants, cars, 3D people, the environment system, turntables and image effects in our marketing materials are for demonstration / visualization / documentation purposes only and are not part of our delivery.
- For feedback or suggestions for additional asset or building types, please contact us*.
- For questions about older format versions / compatibility or needed support for integrations in custom game engines or renderers, please contact us*.

PLATFORM SPECIFIC DETAILS

UNREAL ENGINE FEATURES

- Supported Unreal versions: 4.27.2+
- Supported rendering paths: Deferred and Forward
- Ray tracing is currently not supported. Contact us for details. *
- Unreal 5.x is currently not supported. We're working on it.
- Each building consists of 4 optimized LOD meshes, incl. setup.
- The buildings ship with a functional, custom-made collision mesh.
- Materials are instanced for better performance.
- Draw call optimized by using texture atlases.
- Building Blueprint location: Content/vrbn_studios/<production_name>/<country>/Buildings/Blueprints
- Asset Blueprint location: Content/vrbn_studios/<production_name>/<country>/Assets/Blueprints
- Dirt intensity: If you bought the dirt option for your buildings then there is a dirt slider inside the building's blueprint that allows you to alter the dirt intensity in real-time. Each building instance will have its own dirt slider, meaning you can adjust each building with different dirt values.
- Emission intensity: Inside the building's or asset's blueprint there is an emission intensity value that allows you to alter the emission intensity in real-time. Each building or asset instance will have its own emission intensity value, meaning you can adjust each building with different emission values.
- Interior mapping: If you bought the interior mapping option for your buildings then there is an interior mapping toggle inside the building's blueprint with which you can enable/disable the parallax occlusion effect in real-time. Each building instance will have its own interior mapping toggle, meaning you can have this feature in some buildings but not in others.

UNITY 3D FEATURES

- Supported Unity Versions: 2021.1.9f1 to 2022.3.0.f1
- Supported render pipelines: URP and HDRP
- Supported rendering paths: Deferred and Forward
- Ray tracing is currently not supported. We're working on it.
- Each building consists of 4 optimized LOD meshes, incl. setup.
- The buildings ship with a functional, custom-made collision mesh.
- Draw call optimized by using texture atlases.

- Building Prefab location: Assets/vrbn_studios/<production_name>/<country>/buildings/prefabs
- Asset Prefab location: Assets/vrbn_studios/<production_name>/<country>/assets/prefabs
- Dirt intensity: If you bought the dirt option for your buildings then there is a dirt slider on the building's prefab that allows you to alter the dirt intensity in real-time. At runtime each building instance will have its own dirt slider, meaning you can adjust each building with different dirt values.
- Emission intensity: On the building's or asset's prefab there is an emission intensity float that allows you to alter the emission intensity in real-time. At runtime each building or asset instance will have its own emission intensity float, meaning you can adjust each building with different emission values.
- Interior mapping: If you bought the interior mapping option for your buildings then there is an interior mapping toggle on the building's prefab with which you can enable/disable the parallax occlusion effect in real-time. At runtime each building instance will have its own interior mapping toggle, meaning you can have this feature in some buildings but not in others.
- In deferred rendering the glass normals might have small compression artefacts. See info here:
[Forward and Deferred rendering | High Definition RP | 16.0.1 \(unity3d.com\)](#)
[Deferred Rendering Path in URP | Universal RP | 16.0.1 \(unity3d.com\)](#)

***) CONTACT**

- General inquiries: studios@vrbn.io (24 hours reaction time, Mo-Fr)
- Technical support: support@vrbn.io (24 hours reaction time, Mo-Fr)