



V-Ray for Revit

Product document

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Product description

V-Ray for Revit is a highly-integrated rendering solution for Autodesk Revit, enabling AEC professionals to leverage their native BIM data for physically accurate lighting studies and photorealistic design presentations – all within Revit.

With V-Ray 7 Update 2, creating stunning renders has never been easier. AI handles the repetitive tasks—refining details, generating materials from photos, and scattering grass, trees, or people naturally—so the focus stays on design. Night scenes come to life with stars, the moon, and the Milky Way, while Chaos Cloud 3D Streaming makes sharing projects as simple as sending a link.

What it's used for



Architectural visualization



Urban design



Interior design



Infrastructure

Personas

Design generalist

This persona develops the detailed BIM model in Revit. Their work includes varying tasks and they are familiar with a number of tools.

- They might use Enscape as a design tool when tasks call for quick iterations and real-time visual feedback.
- They work on solar and facade studies which need physically accurate representation of the design.
- They often present to internal and external stakeholders, calling for a high end photorealistic representation of the model.
- Often works with fairly heavy projects and needs a solution that can handle the geometry reliably.
- Could also take the role of an arch viz specialist in smaller firms.

Lighting designer

They study the model's interaction with both natural and artificial light. Their work could be part of both the concept development and the design development stages, as required.

- Needs accurate representation of light.
- Explores and validates the lighting design in terms of sun illumination and fixtures.
- Loves to experiment with lighting intensity and color but struggles as it usually takes too much time.

Arch-viz specialist

This role is not involved with the actual design of the building. They receive the ready BIM model and are responsible for creating appealing images for presentation purposes.

- Wants to leverage all previous design work in Revit, including the one coming from Enscape, as rebuilding materials and entourage from scratch is a laborious and time-consuming process.
- Has to make the model bustling and convey moods; therefore, needs compatible photorealistic entourage.
- Cares about realistic lights and material reflections.
- Needs to handle advanced visualization tasks without encumbering Revit (eg. object scattering when building terrain).
- Wants to minimize or even skip post-processing work in third-party apps.
- Might use other V-Ray host apps and want to transfer previous V-Ray work (like assets or materials) to Revit instead of recreating it.

Interoperability with other Chaos products

- Works seamlessly with V-Ray for 3ds Max, V-Ray for SketchUp and V-Ray for Rhino. One V-Ray license can be used with any host software.
- Connects to Chaos Cosmos enabling the usage of thousands of high-quality assets and AI Material Generator.
- Live links to Chaos Vantage for real-time exploration, previz and animation capabilities.
- V-Ray scenes can also be brought into Chaos Envision, offering tools for scene assembly and animation.
- Supports VRscans which allows for the most physically-accurate materials to be used.
- Connects to Chaos Cloud for one-click access to cloud rendering.
- Connects to Chaos Cloud Collaboration to unlock AI-powered services, including image enhancement and upscaling, virtual tours, and design review tools.
- Works with .vrscenes exported from Enscape, allowing V-Ray users to further refine Enscape designs while preserving the original design intent.

Key benefits for users

Seamless Revit integration. All decisions live in the Revit project without altering the BIM database, and all workflows are done within Revit without any import/export.

High-quality entourage. Our curated render-ready Chaos Cosmos library includes entourage for exteriors and interiors usable across the Chaos ecosystem.

Fast interactive preview. Interactive rendering lets users render while designing, easily adjusting lights, materials, and 3D assets before finalizing the V-Ray render.

Leveraging existing V-Ray work. Users can import V-Ray render-ready assets, reusable materials, and proxy scenes from SketchUp, Rhino, 3ds Max, and Cinema 4D. And V-Ray's vast community and resources can guide them through their experience.

Scalable quality. Traditional, monochromatic studies with convenient material overrides can be made faster than ever.

Easy to get started. V-Ray offers thousands of ready-to-render materials, smart presets, and intuitive AI tools that speed up creation, making it effortless for Revit users to bring designs to life and communicate them with impact.

Part of an ecosystem of visualization tools. V-Ray is designed to work seamlessly with other visualization tools from the Chaos ecosystem (like Enscape, Vantage, Envision), through our standardized Chaos projects file format, .vrscene. This ensures a seamless workflow between artists and designers using different tools.

Physical Accuracy. Users can analyze designs according to their actual lighting and the true reflections and refractions of their materials.

Advanced workflows made easy. V-Ray gives architects and designers advanced 3D workflows in the form of intuitive and memory-efficient systems, so they can create rich and realistic visualization like a seasoned pro. Customizable clouds, object scattering, geometric patterns—all reduced to a few clicks while retaining creative control.

Tools beyond rendering. V-Ray provides a comprehensive set of lighting, shading, rendering, and post-production tools, all within one platform, so you can maintain your creative flow without needing to switch between different applications.

Collaboration. V-Ray significantly speeds up the review process with remote teams and clients by enabling users to provide immersive virtual tours, share their work and receive feedback via the cloud.

Power. Users can speed up their creative workflow by assigning as many processors (CPU and/or GPU) as they'd like, harnessing additional networked machines with SWARM, or using the on-demand power of Chaos Cloud.

What others say about V-Ray for Revit

"V-Ray for Revit elevates our design process, helping us achieve professional-grade renders straight out of Revit. Thanks to its photorealistic lighting and proxy implementation, we can save time in post-production and focus on our design intent."

Robert A.M. Stern Architects

Features list

Rendering

Enscape compatibility ensures a smooth end-to-end design process. With V-Ray Vision users can preview their work in real time. The CPU and GPU render engines give users pipeline flexibility to handle the most demanding projects.

- CPU rendering, GPU rendering, Denoising, Interactive rendering, Batch rendering, Distributed rendering, Cloud rendering

UI

V-Ray is part of Revit and complements the Revit UI without altering the BIM database.

- Asset Editor, Appearance manager, Frame buffer, Asset tags, Access to Chaos Cosmos assets, Access to virtual tours and review & markup services

Lighting

V-Ray gives users access to an array of natural and artificial lights that can be utilized to create realistic renders of exteriors or interiors. Powerful tools enable users to speed up rendering time, analyze lighting fixtures, generate skies, and more.

- Accurate lights, Light Mixing, Adaptive Lights, Lighting analysis, Global Illumination, Sun & sky, Procedural clouds, Procedural lights, Night Sky

Camera

V-Ray gives access to popular camera types and advanced controls, so users can work as virtual photographers.

Real-world cameras, Automatic exposure & white balance, Lens effects, VR

Materials & textures

V-Ray enables users to give their models realistic looks with both V-Ray and native Revit materials. Numerous precision tools and easy-to-use presets give users the possibility to achieve any desired look for surfaces — from cardboard-like to reflective coated metal.

- Physical materials, Material library, AI Material Generator, Native materials support, Decals, Texture maps, Layered texture system, Material overrides, VRscans

Atmospheric & volumetric effects

V-Ray gives users the ability to add depth to exteriors with realistic atmospheric effects and material light scattering and translucency.

- Fog, Aerial perspective, Volumetric materials

Geometry management

V-Ray allows users to work in a smart and memory-efficient way. Work created in Revit and other supported 3D applications can always be transferred seamlessly.

- 3D Gaussian splatting, Point cloud rendering, Geometry replacements, V-Ray proxies & V-Ray scene, Displacement, Section Box, Infinite ground plane, V-Ray Scatter, V-Ray Enmesh

AI-powered features

Chaos AI-powered features are designed to enhance the creative process, enabling users to achieve more with less effort. These tools deliver the control, speed, and quality artists need—instantly, right out of the box.

- AI Enhancer, AI Upscaler, AI Material Generator

Cloud Collaboration

Chaos Cloud Collaboration empowers teams to collaborate seamlessly, allowing stakeholders to review, explore, annotate, and refine projects from anywhere, on any device.

- Virtual tours, design review & markup tools, 3d streaming

What's new in V-Ray 7, update 2:

AI Enhancer (beta): Automatically improves realism and detail in foliage, people, and terrain.

AI Material Generator (beta): Instantly turns photos of real-world surfaces into render-ready materials.

AI Upscaler (beta): Enables one-click 2x /4x enlargement of render outputs, saving hours of rendering time.

Night Sky: Adds realistic stars, the moon, and the Milky Way with accurate lighting and phases.

Chaos Cloud 3D Streaming (beta): Share interactive 3D scenes via a simple URL for effortless collaboration.

Gaussian splats clipping: Trim and refine 3D splats directly in SketchUp for seamless blending.

Scatter improvements: Gain advanced control over clustering, altitude, orientation for natural object placement & more.

To learn all about the latest additions to V-Ray for Revit, please see the What's new document.

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