Unreal Engine vs Twinmotion

Product comparison

While Twinmotion is built on Unreal Engine, and the two products do have some similarities, they each have different strengths and roles to play. Here are some key differences.

Twinmotion		Unreal Engine
Twinmotion is an easy-to-use real-time visualization tool that transforms design data into stunning visualizations so you can share ideas and communicate designs quickly and easily.	**Overview**	Unreal Engine is the world's most open and advanced real-time 3D creation tool that enables you to deliver photoreal visuals and sophisticated real-time immersive and interactive experiences.
Everyone from architects, urban planners, and landscaping professionals, to designers working on consumer products, transportation, or even fashion	**Who is it for?**	Visualization specialists, application and game developers, and creators across industries
Simple icon-driven interface	**User interface**	Full Unreal Editor UI with the ability to customize the layout and add user-defined commands and panels
Easy to learn and use regardless of skill level	**Ease of use**	Requires investment in learning
Twinmotion gives you a toolset focused on making visualization easy, providing everything you need out of the box to achieve great results, quickly. This includes a built-in library of smart assets and features designed to help you easily bring your scene to life, such as pedestrians that will follow a path, and trees that blow in the wind.	**Creative control**	Unreal Engine is a complete authoring and development environment, which means that what you can create is virtually limitless. It offers the flexibility to create the exact look and feel you need, using custom materials, complex animations, data-driven simulations, and so much more.

Twinmotion		Unreal Engine
Twinmotion offers direct one-click synchronization with a wide range of CAD, BIM, and DCC apps, and support for importing files from many more. Importantly, Twinmotion projects can be opened in Unreal Engine for further refinement and advanced behaviors, so you can evolve your projects according to your needs and skills.	**Interoperability**	Unreal Engine offers direct one-click synchronization with a wide range of CAD, BIM, and DCC apps, and support for importing files from many more. In addition, Unreal Engine offers a range of options for automatically optimizing data on import.
Twinmotion offers limited opportunities for customization.	**Customization**	Unreal Engine is fully customizable, and comes with free access to the complete source code. You can use Python or Blueprint visual scripting to construct custom pipelines or behaviors, or to automate time-consuming tasks, as well as leveraging the robust C++ API.
Twinmotion enables you to easily create high-quality images, animations, and interactive experiences to communicate your design with stakeholders and collaborators. You can change the time of day, the weather, or the season with a simple slider, and demonstrate how your design will develop over time with the ability to visualize construction phases over time, and grow trees from saplings to maturity.	**Storytelling**	Unreal Engine allows for a greater level of interactivity and precision so that design teams can deliver an experience in a way that is precisely tailored to the client's needs. With the ability to use triggers and actions, stakeholders and clients can do things like open doors, turn on lights, and interact with the environment—enabling them to envision a space more clearly and instinctively. Unreal Engine also supports MetaHumans—photorealistic digital humans that you can easily create and customize in MetaHuman Creator—which you can use to add believability to your scene.
With Twinmotion, you can share your projects either using Twinmotion Cloud—which enables anyone anywhere to interact with them via a web browser on a desktop, tablet, or mobile device—or locally. Presentations enable you to either predefine the camera positions and lock the view to the story you want to tell, or let your viewers navigate freely in the scene. You can also share linked Panorama Sets that enable viewers to navigate through different 360° views covering various parts of your scene.	**Presentations**	Unreal Engine enables you to create completely customized applications such as real estate or automotive configurators; you can also render to multiple displays such as video walls and caves. Its Pixel Streaming feature enables you to share interactive experiences with anyone anywhere on any device, without the need for them to download or install anything.
Clients can provide feedback on a scene in the form of written notes that can be exported in BCF format for use in tools like Revit. Twinmotion users can also share a common user library of assets and materials with other members of their team.	**Collaboration**	Unreal Engine enables a higher level of collaboration by letting you easily share your design with stakeholders in design reviews, and iterate on it with other team members in multi-user editing sessions from anywhere in the world.

Use case	Twinmotion	Unreal Engine	Notes
Fast, easy, iterative visualization	✓ Example		Twinmotion is designed to make it incredibly easy to visualize your design and to quickly iterate on its appearance. Unreal Engine requires more investment to master the necessary techniques.
High-quality still images	✓ Example	✓ Example	Unreal Engine supports additional options such as render passes for downstream compositing.
Animations	✓ Example	✓ Example	Twinmotion has limited keyframing abilities, whereas Unreal Engine has a full nonlinear animation editor. Some assets in Twinmotion have built-in animations, and animated FBX and glTF files can be imported (Early Access); Unreal Engine has an extensive animation authoring toolset and can import animations via a range of formats, including FBX, glTF, USD, and Alembic.
Interactive design reviews	✓ Example	✓ Example	With Twinmotion, stakeholders can navigate a scene and make notes. In Unreal Engine, design reviews can be completely collaborative, with multiple users interacting with the data simultaneously, including remotely.
Configurators		✓ Example	Unreal Engine enables you to create completely custom configurators.
Digital Twins		✓ Example	Unreal Engine enables you to create digital twins with live data streams.
VR experiences	✓ Example	✓ Example	Twinmotion offers support for viewing and interacting with local Presentations in VR mode and for launching and navigating Panorama Sets uploaded to Twinmotion Cloud from VR headsets. With Unreal Engine, you can build standalone virtual reality applications.
AR experiences		✓ Example	Unreal Engine's AR framework offers support for creating both iOS and Android augmented reality applications.
Cloud-based presentations	✓ Example	✓ Example	Twinmotion Cloud enables you to easily share Presentations and Panorama Sets with anyone anywhere. The underlying technology, Pixel Streaming, can be leveraged in Unreal Engine, but this requires some effort on the part of the developer.
Virtual production		✓ Example	Unreal Engine has a dedicated toolset for virtual production and in-camera VFX.
Custom interactive applications		✓ Example Example	Unreal Engine enables you to build custom interactive applications for any purpose, including digital training, exhibitions, online fashion fitting, virtual showrooms, and more.

Learn more or download on the Unreal Engine and Twinmotion websites.