

Havok Physics

Battle-tested



Havok Physics is the leading real-time collision detection and physical simulation solution. Havok Physics offers the fastest, most robust simulation technology available, which is why it has become the gold standard within the games industry. Havok Physics has been chosen by leading game developers in over 200 launched titles and hundreds more in development.

Advanced Cross-Platform Optimization

Havok Physics is optimized for use on Microsoft® Xbox 360®, Sony® PLAYSTATION®3, Nintendo® Wii,™ Microsoft® Xbox®, Sony PlayStation®2, PSP,™ and the PC.

The Havok Physics SDK is fully multi-threaded and hand optimized to make full use of the available hardware on all supported platforms.

Complete Solution for Game Physics

Havok Physics provides comprehensive SDK support for the following areas:

- Collision Detection
 - Most robust, fully featured and battle-tested collision detection technology available
 - Sophisticated Collision Detection Pipeline
 - Continuous Collision Detection
 - Advanced suite of spatial queries useable for anything from audio occlusion to AI visibility checks
 - MOPP™ Technology for highly compact bounding representation for large collision meshes
- Dynamics and Constraint Solving
 - Stable and robust, highly optimized solver
 - Supports a large variety of different constraint types including industry-leading solutions for ragdolls and vehicles
 - Includes constraint motors, customizable constraints, chain constraints and breakable constraints
- Out-of-the-box Character Controller
 - Fully integrated with simulation but designed to give absolute control to the user
- Complete Production-Ready Tool Chain
 - Extensible asset conditioning pipeline with full plug-in support for Autodesk® 3Ds Max®, Maya® and Avid SOFTIMAGE®|XSI®
 - Built on an advanced reflection and serialization system
 - Advanced versioning system ensures backward compatibility of all data and assets
- Visual Debugger
 - Displays and records on-target profiling and debugging data across all supported platforms
 - Fine-grained, real-time multi-threaded performance data shows exactly where cycles are spent across all cores of the target system
 - Data can be recorded and sent for analysis by dedicated Havok support engineers
- Full integration into Havok's growing suite of industry-defining products:
 - Havok Animation
 - Havok Behavior
 - Havok Cloth
 - Have Destruction



World In Conflict™ image courtesy of Massive Entertainment AB.

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Selected Customer Testimonials

“Using the Havok Physics system allows us to amp up the Force in new and unexpected ways in *Star Wars™: The Force Unleashed™* – it’s an important part of our focus on simulation-based gameplay rather than relying solely on hand-animated reactions.”

– Haden Blackman, Project Lead,
Star Wars: The Force Unleashed, LucasArts



Star Wars: The Force Unleashed courtesy of LucasArts.

“Before using Havok, we wrote, scrapped and rewrote our physics system at least 3 times. Havok was easy to integrate into our engine and pipeline and is more powerful, flexible and efficient than any of our attempts had been. We have no future plans to do a project without Havok. Havok allowed us to stop spending time on core physics and concentrate on taking the physics and making it fun.”

– Mark Lyons, Director of Technology, Idol Minds



PAIN image courtesy of Sony Computer Entertainment America, Inc.

“Havok is one of the key pieces of technology which allowed us to make everything in *World in Conflict™* dynamic and destructible. The engine’s excellence in robustness and performance is paired with world class support”

– Niklas Westberg, Technical Director,
Massive Entertainment

“Havok’s flexibility and ease of use have made it one of our cornerstone development tools and almost a recognizable “character” within the Halo 3 engine. Its elegance and scalability mean that it adds features and value to our engine, and yet integrates seamlessly without impacting performance.”

– Eamon McKenzie, Physics Engineer, Bungie Studios

Professional Support

Havok’s dedicated support team is world renowned, having worked with over 70 global publishers and developers working to tight production deadlines. Havok has dedicated engineers in centers in North America, Europe and Japan who work directly with game teams remotely and on-site.

A designated Havok Account Manager will not only ensure that physics integration goes smoothly, but that you are best placed to take advantage of the ongoing performance improvements and continually expanding feature-set of the Havok Physics engine.

Awards

- National Academy of Television Arts & Sciences Technology & Engineering Award
- Develop Award
- Game Developer Frontline Award
- Computer Graphics World Award

Support

Havok’s first-class support, detailed help and support documentation, and online help are available for this product.

For More Information

www.havok.com

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