

Autodesk 3ds Max 2009

Key Features and Benefits

Autodesk Media and Entertainment

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3ds Max 2009: Key Features & Benefits

Create stunning 3D in less time.

The award-winning Autodesk® 3ds Max® software is the tool of choice for leaders in the game development, television and film industries who are looking for a comprehensive 3D solution that produces results out of the box. Over the years the software has become renowned for its ready-to-use, template-based character rigging system, along with its efficient polygon modeling toolset and UV texturing workflow. Additionally, the software gives you multiple integrated rendering options, including unlimited free network rendering with mental ray® rendering software.

3ds Max 2009

Autodesk 3ds Max 2009 software introduces time-saving new animation and mapping workflow tools, groundbreaking new rendering technologies, and improved 3ds Max interoperability and compatibility with such industry-standard products as Autodesk® Mudbox™, Autodesk® Maya® and Autodesk® MotionBuilder™ software.

New rendering technologies include the Reveal™ rendering toolset for both iterative workflows and dramatically faster, finished renderings, and the ProMaterials™ material library for simulating real-world surfaces. The release also delivers numerous biped enhancements, new UV editing tools, along with improved OBJ and FBX® import and export, which vastly enhance interoperability with Autodesk Mudbox, Maya, MotionBuilder, and other third-party applications.

New Feature Highlights

New Rendering Technologies – With 3ds Max 2009, Autodesk introduces Reveal rendering, a system that streamlines iterative workflows by giving the artist very precise control over what is rendered: be it their entire scene minus a specific object, one given object, or a specific region of the Viewport/Framebuffer. Another key rendering toolset is the new ProMaterials library for mental ray, which gives artists fast access to professional-quality, building-material shaders such as glossy and matte paints, solid glass, concrete, and more.

New Mapping and Animation Workflow Toolsets – With 3ds Max 2009, biped now offers animators a more efficient workflow for rigging quadrupeds – along with other features that facilitate the character animation process. The release also delivers new UV editing features including a UV spline mapping tool, and enhanced Pelt and Relax toolsets that streamline the UVW unwrap workflow.

More Support for Inter-Application Workflows – Higher OBJ translation fidelity and more export options – including improved texture map handling and more import information with regard to face counts per object – facilitates exporting/importing of files from/to Mudbox and other digital sculpting applications. Additionally, improved FBX memory management and new import options support interoperability between 3ds Max and other products such as Maya and MotionBuilder. Lastly, there is now an on-screen, interactive ViewCube™ navigation widget that gives artists a fast and intuitive means of navigating 3D scenes, and a new SteeringWheels™ camera interface. Both of these features will become standard across Autodesk's 3D

products – providing users with a consistent navigation experience, even as they move between packages.

3ds Max 2009 and 3ds Max 2009 30-day Trial

3ds Max 2009 — The award-winning Autodesk 3ds Max software is a powerful, integrated 3D modeling, animation, and rendering solution. Its accessible tools enable leading games, film, and television studios to deliver their blockbuster hits on time and on budget.

3ds Max 2009 30-day trial — The Autodesk 3ds Max 2009 30-day trial is a fully functional version of the 3ds Max software that provides free* access to 3ds Max for non-commercial use. This allows 3D graphics and animation students, industry professionals, or anyone interested in breaking into the world of computer graphics (CG) the opportunity to explore all aspects of the 3ds Max software.

(Note: 3ds Max 2009 and 3ds Max 2009 30-day trial are available for Microsoft® Windows Vista® and Microsoft® Windows® XP Professional operating systems.)

**Free products are subject to the terms and conditions of the end-user license agreement that accompanies the download of the software.*

Animation

Character Animation

Biped

Hands Like Feet Option

Artists now have the option to have their biped character's hands behave like feet, with regards to the ground plane. This new feature dramatically simplifies the number of steps needed to create quadruped animations.

Working Pivot Rotation

3ds Max 2009 software delivers support for rotating biped objects around the Working Pivot, as well as the Pick pivot. This facilitates the creation of certain kinds of dramatic animations, such as a character falling to the ground.

Mirror Animation Options

Artists now have a choice to mirror biped animation while keeping the COM orientation intact.

Triangle Neck

Biped now gives animators the ability to link a character's clavicles to the top Spine link, instead of to the Neck – similar to the Triangle Pelvis feature.

Modeling and Mapping

UV Texturing

UV Spline Mapping

3ds Max continues to lead the industry in intelligent, easy-to-use mapping tools. The new spline mapping feature can be used to map tubular and spline-like objects, such as mapping of a road onto terrain.

UVW Unwrap Improvements

Improvements have been made to relax and pelt workflows that streamline UVW unwrapping – enabling artists to achieve their desired results in fewer steps.

Rendering

Reveal Workflow

With 3ds Max 2009, Autodesk introduces Reveal rendering, a system that gives users very precise control over their renders, which in turn streamlines iterative workflows and enables artist to render final imagery faster. This key new feature gives artists the ability to visualize and manipulate a given region in both the Viewport and the Framebuffer. The rendered image Framebuffer now contains a

simplified set of tools to quickly validate changes in a render, by optionally filtering out objects, regions and/or processes to temporarily balance quality vs. speed vs. completeness. For instance, render speed can be modulated by toggling geometry translation, lighting calculation and image-quality settings, based on what the artist desires to update. Using Reveal, artists can now also auto-generate regions around selections and reuse temporary Final Gather maps at any time.

Photometric Lighting Enhancements

3ds Max 2009 delivers a number of photometric lighting enhancements. The software now gives artists support for new types of area lights (circular, cylindrical), photometric web previews in the Browse dialog and Light UI, as well as improved near-field photometry quality and spot distribution. Plus, distribution types can now support any emitting shape and artists can have their light shapes appear in their rendered image.

Updated Composite Map

The 3ds Max Composite Map has been redesigned in 3ds Max 2009. The feature-set now supports multiple blending modes, color correction via the color correction map, opacity adjustments, reordering of images or layers, as well as hiding and deleting of layers. Artists now also have the option of replacing or creating alpha channels with any type of map, including procedurals.

New Color Correct Map

The addition of a color correction map – separate from the composite map toolset – gives artists more options for independent color correction of texture maps.

Review Enhancements

Using Review, multiple maps can now be simultaneously displayed in the Viewport, for more accurate previewing. Additionally, IES files and photometric light data are now supported in the Viewport – giving instant feedback on how virtual lights will affect the environment. Finally, support has been added for realtime shadowing of objects that use Arch&Design materials.

mental ray

ProMaterials

A new library of easy-to-use, physically based materials for mental ray – based on manufacturing-supplied data and professional images – has been added to 3ds Max 2009. These give you fast access to such commonly used real-world materials as professional wall paint – with glossy or matte finishes – solid glass and concrete.

New mental ray Proxy Objects

A new primitive has been added to 3ds Max that lets the artist cache high-resolution meshes that can be demand-loaded at render time -- saving memory, increasing performance and allowing the artist to render much larger scenes.

Enhanced Accessibility of Production Shaders

The mental ray production shaders are now more accessible as of the 3ds Max 2009 software release. For example: a new lens shader enables mental ray to evaluate only those rays that intersect specified objects, a matte/shadow material is now available that can capture indirect illumination, and a chrome ball shader has been added that lets the artist quickly create reflection maps.

Enhanced Per-object Render Settings

The exposure of additional object-level settings for mental ray gives artists the maximum level of control over their renders.

Improved Render Final Gather and Global Illumination

New render final gather and global illumination only settings enable artists to quickly cache these types of maps for improved animation rendering.

New BSP2 Raytrace Acceleration

The implementation of a new, faster BSP (binary space partitioning) acceleration in mental ray 3.6 improves large scene rendering performance and object instantiation. Unlike the traditional BSP acceleration (which is still available), the new technique does not require manual tuning for BSP performance and memory consumption improvements.

New mental ray Render Elements

A new mental ray-specific render element has been added to 3ds Max for extracting HDR data from Arch&Design materials. A second new element allows the users to define the type of data they would like extracted from the shader tree.

Data and Scene Management

Data Import/Export**Autodesk Mudbox Interoperability**

Improved support for the OBJ file format, including more export options, facilitates importing and exporting of model data between Mudbox and 3ds Max software products – as well as other third-party 3D digital sculpting applications. Users can now take advantage of new export presets, additional geometry options, including hidden splines/lines and new optimize options -- to reduce file sizes and improve performance. There is also improved texture map handling and more import information with regards to face counts per object.

FBX Import/Export

Improved FBX memory management, data translation fidelity and new import options support interoperability between 3ds Max and other Autodesk products such as Maya and MotionBuilder.

Other Features**Enhanced Scene Explorer**

With 3ds Max 2009, Autodesk continues to expand the functionality of the Scene Explorer, released in 3ds Max 2008. New advanced filtering options allow artists to set and save more custom Scene Explorer object lists. Plus, there are now more options for how groups are displayed.

Vault 2009 Support

3ds Max now ships with the latest Autodesk® Vault plug-in.

General and Miscellaneous

ViewCube Navigation

With 3ds Max 2009, Autodesk introduces the ViewCube navigation system – a UI toolset that will be available in other Autodesk 3D products. This on-screen, cube-shaped widget provides users feedback about their current viewing angle in relation to the model world. Users can also directly click on a face or rotate the ViewCube (with a click and drag motion) in order to change their view.

SteeringWheels Navigation

SteeringWheels Navigation is a simple-to-use camera interface common to several of Autodesk's 3D products.

Edit Soft Selection

By using soft selection while the *Edit Soft Selection* hotkey is pressed, 3D artists can now interactively manipulate falloff, pinch and bubble directly on the screen. The cursor changes to indicate which values are being affected. Feedback is given directly on the object.

Enhanced Windows Vista Support

3ds Max now supports the Windows Vista Aero™ Interface.

Scripting and SDK

Object Metadata

Support has been added for object-level metadata. Metadata objects can be interactively created and populated with properties by the user via MaxScript and the SDK.

.NET Support

.NET is a very productive environment compared to native C++, with very efficient debuggers, profilers, etc., and programs written on the platform tend to be robust due to its automatic memory management. Support for .NET in 3ds Max allows programmers to use Microsoft's high-level UI APIs to, for example, extend the Scene Explorer. The 3ds Max 2009 SDK ships with sample .NET code and documentation showing developers how they can take advantage of this powerful set of development tools.

Recommended System Requirements

Software

The **32-bit** version of Autodesk® 3ds Max® 2009 software is supported on any of the following operating systems:

- Microsoft® Windows Vista®
- Microsoft® Windows® XP Professional (SP2 or higher)

The **64-bit** version of 3ds Max 2009 software is supported on any of the following operating systems:

- Microsoft Windows Vista
- Microsoft Windows XP Professional x64

3ds Max 2009 software requires the following browser:

- Microsoft® Internet Explorer® 6 or higher

3ds Max 2009 software requires the following supplemental software:

- DirectX® 9.0c* (required)

** Some features of 3ds Max 2009 are only enabled when used with graphics hardware that supports Shader Model 3.0 (Pixel Shader and Vertex Shader 3.0). Check with your manufacturer to determine if your hardware supports Shader Model 3.0.*

Hardware

At a minimum, 3ds Max 2009 **32-bit** software requires a system with:

- Intel® Pentium® IV or AMD Athlon® XP or higher processor
- 512 MB RAM (1 GB recommended)
- 500 MB swap space (2 GB recommended)
- Hardware-accelerated OpenGL and Direct3D supported
- Microsoft Windows – compliant pointing device (optimized for Microsoft® IntelliMouse®)
- DVD-ROM drive

Note: Apple® computers based on Intel processors and running Microsoft operating systems are not currently supported.

At a minimum, 3ds Max 2009 **64-bit** software requires a system with:

- Intel EM64T, AMD Athlon 64 or higher, AMD Opteron® processor
- 1 GB RAM (4 GB recommended)
- 500 MB swap space (2 GB recommended)
- Hardware-accelerated OpenGL and Direct3D supported
- Microsoft Windows – compliant pointing device (optimized IntelliMouse)
- DVD-ROM drive

3ds Max 2009 30-day Trial Minimum System Requirements

Software

The 32-bit version of Autodesk 3ds Max 2009 30-day trial is supported on any of the following operating systems:

- Microsoft Windows Vista
- Microsoft Windows XP Professional (SP2 or higher)

The 64-bit version of 3ds Max 2009 30-day trial is supported on any of the following operating systems:

- Microsoft Windows Vista
- Microsoft Windows XP Professional x64

3ds Max 2009 30-day trial requires the following browser:

- Microsoft Internet Explorer 6 or higher

3ds Max 2009 30-day trial requires the following supplemental software:

- DirectX 9.0c (required)

** Some features of 3ds Max 2009 software are only enabled when used with graphics hardware that supports Shader Model 3.0 (Pixel Shader and Vertex Shader 3.0). Check with your manufacturer to determine if your hardware supports Shader Model 3.0.*

Hardware

At a minimum, 3ds Max 2009 **32-bit** 30-day trial requires a system with:

- Intel Pentium IV or AMD Athlon XP or higher processor
- 512 MB RAM (1 GB recommended)
- 500 MB swap space (2 GB recommended)
- Hardware-accelerated OpenGL and Direct3D supported
- Microsoft Windows – compliant pointing device (optimized for Microsoft IntelliMouse)
- DVD-ROM drive

Note: Apple computers based on Intel processors and running Microsoft operating systems are not currently supported.

At a minimum, 3ds Max 2009 **64-bit** 30-day trial requires a system with:

- Intel EM64T, AMD Athlon 64 or higher, AMD Opteron processor
- 1 GB RAM (4 GB recommended)
- 500 MB swap space (2 GB recommended)
- Hardware-accelerated OpenGL and Direct3D supported
- Microsoft Windows – compliant pointing device (optimized IntelliMouse)
- DVD-ROM drive

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