



Autodesk Maya 2010 Features and Benefits

What is Maya 2010?

Autodesk® Maya® 2010 software is the first release to unify the Maya 2009 feature set, advanced matchmoving capabilities and high dynamic range compositing into a single affordable offering. Maya 2010 offers artists an end-to-end computer graphic (CG) workflow based on the award-winning Maya Unlimited toolset: its advanced simulation tools for cloth, hair, fur, fluids, and particles. Also included to complete the creative workflow, are the powerful Maya Composite high dynamic range compositing system, the Autodesk® MatchMover™ camera tracker, five mental ray® for Maya batch rendering* nodes, and the Autodesk® Backburner™** network render queue manager. The Maya 2010 release makes it easier for artists, designers, and 3D enthusiasts around the world to create engaging and compelling digital imagery, stylistic designs, believable animated characters and extraordinary, lifelike visual-effects.

What is Maya?

Autodesk Maya is an award-winning creative solution for end-to-end CG production. Maya offers artists a powerful creative toolset: extensive 3D modeling, animation and rendering capabilities, innovative simulation technologies and advanced compositing capabilities. With its powerful open framework, flexible scripting capability and extensive Application Programming Interface (API) and Software Development Kit (SDK), Maya is more easily customizable and extensible for more efficient integration into pipelines. Maya makes it easier for artists, designers, and 3D enthusiasts around the world to create engaging and compelling digital imagery, stylistic designs, believable animated characters and extraordinary, lifelike visual-effects.



New Feature Highlights

In addition to the modeling, animation, rendering, and effects toolsets formerly offered as Maya Complete, every seat of Maya 2010 now includes the following functionality:

Advanced Simulation Tools

Every seat of Maya 2010 now includes the innovative Maya Nucleus unified simulation framework and the first two fully-integrated Nucleus modules—Maya nCloth and Maya nParticles—as well as Maya Fluid Effects, Maya Hair, and Maya Fur. These widely-used, production-proven toolsets—for simulating cloth, fluids, hair, and fur—enable artists to more efficiently create the types of sophisticated effects audiences crave without additional software investment.

High-Performance Compositing

Incorporating features that draw upon the heritage of the Academy Award-winning Autodesk® Flame® visual effects system, Maya Composite brings high-performance, high dynamic range (HDR) compositing to Maya 2010. The comprehensive Maya Composite toolset has tools for keying, tracking, color correction, paint, rotoscoping, warping, advanced filters—motion blur and depth of field, a full 3D compositing environment and support for stereoscopic production pipelines. Maya Composite integrates tightly with Maya to help create a higher-efficiency, collaborative environment designed to facilitate nonlinear decision-making and accelerate everyday CG workflows.

Professional Camera Tracking

Considered a critical production tool at leading visual effects facilities, Autodesk MatchMover delivers high-quality 3D camera tracking and is now included with Maya 2010. Using this toolset, artists can extract more accurate 3D camera and motion data from video and film sequences in order to insert CG elements seamlessly into a scene. MatchMover provides easier to use automatic tracking capabilities combined with the precision manual controls that professional artists demand.

Augmented Rendering Power

With five additional mental ray for Maya batch rendering nodes, each Maya seat now enables artists to use other networked computers to render their sequences faster. The Backburner network render queue manager is included to help those with smaller rendering pipelines manage the process; larger facilities can integrate the additional mental ray for Maya nodes with their existing render management software.



Maya 2010 adds all the features of Maya Unlimited and Maya Complete:

Maya Nucleus Unified Simulation Framework	Create realistic simulations more efficiently with the Maya Nucleus unified simulation framework. Maya Nucleus integrates multiple solvers into a single framework enabling bi-direction influence of forces and constraints to help achieve an optimal single result.
Maya nCloth	Maya nCloth, part of the Maya Nucleus framework, provides the ability to more easily create sophisticated simulations; cloth, flexible, deformable and inflatable materials like rubber, fluidic effects and even sheet metal and rigid body simulations.
Maya nParticles	Maya nParticles, part of the Maya Nucleus framework, helps artists to quickly and efficiently create a wider range of sophisticated particle effects: liquids, clouds, smoke, fire, spray, and dust.
Integrated Stereoscopic Workflow	Maya provides you with a complete stereoscopic 3D (S3D) workflow solution for artists and studios to take advantage of the current trend in S3D films. Maya S3D capabilities are: stereoscopic camera rigs, an in-viewport stereoscopic Viewer, automatic Render Layer generation and integrated stereoscopic compositing with Maya Composite.
Maya Fluid Effects	Overcome some of the toughest challenges in computer animation with Maya Fluid Effects for the simulation and rendering of atmospheric, pyrotechnic, viscous liquid, and open ocean effects.
Maya Hair	Maya Hair is an intuitive toolset for the creation, styling, and rendering of fully dynamic long hair on NURBS or polygon objects. It includes the ability to make a NURBS curve dynamic for use in advanced character rigging and effects.
Maya Fur	This toolset helps you create incredibly realistic styling and rendering of short hair and fur. Creating realistic fur or hair is made easier using Paint Attributes with the Maya Artisan brush interface.
User Interface (UI)	The Maya UI includes such ease-of-use tools as marking menus, ViewCube® navigation tool and 3D manipulators, which help accelerate workflows.
Modeling and Texturing	Maya includes a full suite of advanced polygon, NURBS, and subdivision surface modeling and texturing tools.



Maya 2010 adds all the features of Maya Unlimited and Maya Complete (Continued):

Animation	The software includes a comprehensive range of keyframe, nonlinear and advanced character animation editing tools for helping to create, animate, adapt, and repurpose animation data and editing realistic digital characters.
Brush-Based Technologies	Maya Artisan, Paint Effects, and 3D Paint offer a unique, award-winning suite of integrated, pressure-sensitive brush tools for helping with modeling, creating 2D and 3D effects, and painting on geometry and textures.
Toon Shader	The Maya Toon Shader offers a wide range of nonphotorealistic rendering styles for traditional 2D cartoons, comic book-style imagery, sketches or Japanese manga/anime. Maya Paint Effects brushes can be used on an outline with access to an extensive range of painterly effects, as well as line style, placement, and width.
Rendering	A unified rendering user interface and workflow helps provide easy and consistent access to the Maya software, hardware and Vector renderers as well as mental ray for Maya, and mental ray for Maya network rendering (Satellite).
Maya API/SDK, Python Scripting and MEL	Maya ships with development resources for customizing and extending the software's capabilities via either standard Python™ scripting language or popular Maya Embedded scripting Language (MEL), a full Application Programmers' Interface and extensive Software Development Kit
Japan Language Support	Maya is available in Japanese featuring kanji user interface, dialogue boxes, help menus and online materials.



Maya 2010 includes the features of the former Maya Unlimited plus:

Maya Composite	A complete high-performance compositor, the Maya Composite high dynamic range toolset has keying, color correction, tracking, camera mapping, paint, spline-based warping, motion blur, depth of field, and tools to support stereoscopic productions. Maya Composite integrates tightly with Maya to create a more efficient collaborative environment which facilitates nonlinear decision-making and helps to accelerate everyday workflows.
Batch Rendering	Five additional mental ray for Maya batch rendering nodes enables artists to use other networked computers to render their sequences faster.
Backburner	The Backburner network render queue manager helps those with small rendering pipelines to help better manage the rendering process.
Autodesk MatchMover	Autodesk MatchMover software enables artists to track 3D camera data and motion from videos and film sequences, in order to more easily insert CG elements into a scene. MatchMover combines the ease of automatic tracking with the precise manual control that professional artists demand.



Top Reasons Entertainment artists and Facilities choose Maya:

Maya delivers value.	Autodesk provides tremendous value with Maya. Maya is highly affordable—yet artists do not have to compromise their creativity.
Maya is industry-standard 3D software.	The award-winning Autodesk Maya software is an industry-standard commercial 3D animation and visual effects package used by the film, game development, television and design industries. As such, there is a wide range of advanced learning tools and community support available for Maya, through Autodesk as well as from third parties.
Maya is comprehensive.	Maya is a comprehensive production solution for 3D artists and technical directors creating animation and visual effects—with efficient workflows from initial concept through to the final rendered image or animation sequence.
Maya is production proven.	Artists and technical directors know there is no workaround for instability. Years of development and rigorous use by leading feature film, visual effects, video production and game facilities – including those creating Academy Award®-winning films and IGF award-winning games – have made Maya a more stable, reliable, and production-tested commercial 3D software application.
Maya is readily extensible.	The Maya API, Python scripting and Maya Embedded Language (MEL) provide our customers and third-party developers with a rich infrastructure for extension and customization of the software: making Maya highly popular with TDs, developers and technical end users.
Platform of choice.	Maya offers platform and operating system flexibility; with support for 32-bit Microsoft® Windows® and Mac OS® X and support for 64-bit Microsoft® Windows® and Linux® operating systems.



Recommended Minimum System Requirements

Software

The **32-bit** version of Autodesk[®] Maya[®] 2010 software is supported on any of the following operating systems:

- Microsoft[®] Windows Vista[®] Business operating system (SP1 or higher)
- Microsoft[®] Windows[®] XP Professional operating system (SP2 or higher)
- Apple[®] Mac OS[®] X 10.5.7 operating system or higher

The **64-bit** version of Maya 2010 software is supported on any of the following operating systems:

- Microsoft Windows Vista Business (SP1 or higher)
- Microsoft Windows XP x64 Edition (SP2 or higher)
- Red Hat[®] Enterprise Linux[®] 5.3 WS operating system
- Fedora[™] 8 operating system

The following web browsers are supported for Maya 2010:

- Microsoft[®] Internet Explorer[®] 6.0 internet browser or higher
- Netscape[®] 7 web browser or higher
- Apple[®] Safari[®] web browser
- Mozilla[®] Firefox[®] web browser



Hardware

At a minimum, the **32-bit** version of Maya 2010 software requires a system with the following hardware:

- Windows: Intel® Pentium® 4 or higher, AMD Athlon™ 64, or AMD Opteron™ processor
- Macintosh® computer: Intel-based Macintosh computers
- 2 GB RAM
- 2 GB free hard drive space
- Qualified hardware-accelerated OpenGL® graphics card
- Three-button mouse with mouse driver software
- DVD-ROM drive
- Maya Composite media cache requirements for playback:
 - 10 GB minimum, 200 GB recommended
 - HDD: IDE, SATA, SATA 2, SAS, SCSI

At a minimum, the **64-bit** version of Maya 2010 software requires a system with the following hardware:

- Windows and Linux: Intel® EM64T processor, AMD Athlon 64, or AMD Opteron
- 2 GB RAM
- 2 GB free hard drive space
- Qualified hardware-accelerated OpenGL graphics card
- Three-button mouse with mouse driver software
- DVD-ROM drive
- Maya Composite media cache requirements for playback:
 - 10 GB minimum, 200 GB recommended
 - HDD: IDE, SATA, SATA 2, SAS, SCSI

For the latest list of qualified hardware, including graphics cards, to run Maya 2010, refer to the Maya 2010 qualification chart located at www.autodesk.com/qual-charts.

Note: Maya 2010 is also capable of running on other configurations such as boutique distributions of Linux. However, enumerating systems that are not tested and cannot be supported or that fall below the requirements for a productive user experience is beyond the scope of the online qualification charts.

* Feature only available with floating license.

** Feature only available for Windows 32-bit / 64-bit and Linux 64-bit operating systems

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