NVIDIA® Mental Ray® for 3ds Max is a plug-in renderer for entertainment and visualization professionals who are producing stunning visuals.

Battle tested with over 20 years as the industry standard in 3D rendering, Mental Ray is now available directly from NVIDIA. It includes all of the functionality users have come to rely on plus greatly improved interactive workflow and speed.

Mental Ray uses both CPUs and GPUs for global illumination and can exchange materials with NVIDIA Iray® and Chaos Group V-Ray through the use of the NVIDIA Material Definition Language (MDL).

### System Requirements

**Software**
- Autodesk 3ds Max 2018

**Operating System**
- 64-bit Windows 7 or 10

**GPU Acceleration**
- Optional: requires 2GB GPU memory of Fermi generation or later.
- Respects all GPUs and/or CPUs recognized by the operating system.

### Mental Ray Production Rendering

A Mental Ray license is only required when you render outside of a 3ds Max session. Your Mental Ray license then enables rendering with headless 3ds Max, Mental Ray Satellite, or Standalone modes on any machine at any time, as well as the separately available NVIDIA Iray for 3ds Max plug-in. Pricing options can be found here: [www.nvidia.com/object/nvidia-mental-ray-products.html](http://www.nvidia.com/object/nvidia-mental-ray-products.html)

### Free While Working Within 3ds Max

Mental Ray for 3ds Max is free to use within an interactive 3ds Max session. Unlike many competing renderers, all use cases enable all CPUs and NVIDIA GPUs within the machine. Get your copy: [www.nvidia.com/mentalrayfor3dsMax](http://www.nvidia.com/mentalrayfor3dsMax)

### Mental Ray Performance Scaling with Quadro Desktop GPUs

<table>
<thead>
<tr>
<th>Quadro Desktop GPUs</th>
<th>2X Quadro P6000</th>
<th>2X Quadro P5000</th>
<th>Quadro P6000</th>
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Tests run on an Intel ES 2697 Y3 XEON CPU, 2.6GHz, 3.6GHz Turbo, 32GB RAM, Win 10 64-bit using internal NVIDIA Mental Ray for Maya benchmark using Mental Ray version 3.14 update 1.0.1.

### NVIDIA Mental Ray for 3ds Max NEW FEATURES

- Interactive Progressive Rendering, so you quickly see final results as you edit.
- GI Next makes high-quality global illumination easy and 2-4X faster than earlier methods.
- GI-Next GPU acceleration delivers up to 5X more performance over the CPU alone, per GPU in the system.
- Standalone mode is now included for production pipeline efficiency and flexibility.

### NVIDIA MENTAL RAY FOR 3DS MAX FILM-QUALITY RENDERING. ULTIMATE FLEXIBILITY.
Interactive Global Illumination

GI Next is an intuitive global illumination engine requiring minimal setup and tuning that’s 2-4X faster than earlier GI methods of similar quality. GI Next GPU acceleration provides an additional 5X speedup, with support for traditional shaders and effects while only loading geometry into GPU memory. Ideal for interactive lighting workflows with ActiveShade.

Image Based Lighting is fast and easy-to-use including procedural environments like Sun and Sky System.

Light Important Sampling enables large numbers of lights without sacrificing performance.

Faster rendering of modern lighting setups with improved area lights and emissive materials.

Mental Ray Iray

Mental Ray Iray is the new name for the renderer previously called “NVIDIA Iray.” While the name has changed, it is fully backwards compatible with previous 3ds Max versions. Directly supports Arch+Design materials and Photometric lights.

No slowdown from adding additional light sources.

Full animation support of all material and light parameters.

Motion blur supported for cameras and objects.

Optimized sampling for accurate caustics and indirect lighting.

Photographic Exposure

Control for achieving desired exposure, white balance, and contrast adjustments.

Maximum system performance by using all supported GPUs and/or CPUs within the machine, with user control of resources.

Texture compression for optimizing rendering memory.

Visual Effects

Supports render settings from all 3ds Max geometry and modifiers.

Fast motion blur and depth-of-field camera effects with Unified Sampling.

Hair primitive for efficient hair rendering with supporting plug-ins.

Memory-efficient instancing support.

Photon Mapping for sharp, efficient caustics.

High-quality displacement mapping including vector displacement.

Contour and toon shading for illustration, cartoon, and anime productions.

Materials and Shaders

The ability to use custom C-shaders arbitrary MDL definitions and materials.

MDL materials support with Multiple Importance Sampling and improved workflow.

Procedural textures for resolution independent effects and 3D color or density maps.

Volumetric and scattering materials for real-world skin rendering and atmospheric effects like clouds and dust.

Batch Rendering (with License)

Standalone Satellite with easy-to-use remote tile rendering that can harness multiple machines to speed image creation.

Standalone command line for efficient network rendering and pipeline integration.

Improved .mi export for rendering independently of 3ds Max.

Workflow

Full support for all established 3ds Max workflows.

Continuous visual feedback with progressive rendering of final results during scene interactions.

Full animation support of geometry, material, and light parameters.

Works with core 3ds Max features for lighting analysis and texture/light baking.

Swatch rendering and real-time material preview for Mental Ray custom shaders and phenomena.

Support for production techniques like Alembic geometry caches, UV tiling, and deep data.

Complete color management and HDR pipeline from texture input to image output.