Accelerating Product Design with NVIDIA AI Denoiser

GTC 2019

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SOLIDWORKS VISUALIZE OVERVIEW

RENDER 10x FASTER INSTANTLY

CUSTOMER SPOTLIGHT
What is SOLIDWORKS Visualize?

Enables anyone to create professional, photo-quality images, animations, immersive experiences and other 3D content in the **fastest** and **easiest** way possible.
Key Benefits of **Photo-quality Visualization**

**Deliver better products to the market faster**

- Make more educated design decisions early in the process
- Reduce costs & number of physical prototypes
- Create marketing content in parallel with design development

All about **saving $$$** and **beating your competition** to the market
SOLIDWORKS Visualize Packaging
A suite of visualization products to accelerate the design process

Standard

Professional

Boost

Included with SolidWorks Pro/Prem on active Subscription!

Included with Visualize Pro on active Subscription!
SOLIDWORKS Visualize Core Features

**STANDARD**
- Photo-quality Still Images

**PROFESSIONAL**
- Configurations
- Interactive Images
- One-click Turntables
- Captivating Feature Animations
- Visualize Boost
- 360° VR Images and Animations
Visualize imports 25+ file formats!
SOLIDWORKS Visualize +

Amazing photo-quality with NVIDIA Iray

Utilizing NVIDIA’s mastery of AI

Create content at ludicrous speed with latest GPUs
Render 10x Faster – INSTANTLY!

Bottom line – allows you to save loads of $$$ and get your products to market faster
How the **AI Denoiser** Works

- Neural net trained
- Noise discovered
- Noise eliminated

**Render ~10x Faster** with AI Denoiser!!

Simple checkbox on/off within Visualize
Denoiser = off

Denoiser = ON
Available NOW in Visualize 2019
NVIDIA Performance Benchmarks

HD single image @1000 passes – Accurate mode

WITH DENOISER

<table>
<thead>
<tr>
<th>Model</th>
<th>mm:ss</th>
<th>Time Difference</th>
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<tbody>
<tr>
<td>NVIDIA RTX6000+RTcores</td>
<td>00:58</td>
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<td>01:30</td>
<td>10 seconds</td>
</tr>
<tr>
<td>NVIDIA P6000</td>
<td>02:30</td>
<td>18 seconds</td>
</tr>
</tbody>
</table>

CPU = 1.5 hours!
Real-time Raytracing
RTX6000
1920x1080
Iray Photoreal
Denoiser ON
For more information:

solidworks.com/visualize

blogs.solidworks.com

YouTube Channel to become a master in no time

Follow @bhillner
Jeremy Wilkens | ID Group

Customer spotlight – accelerating product design with AI Denoiser
WE ARE A GO-TO DESIGN FIRM.
DESIGNING THE WORLD WE LIVE IN FOR OVER 20 YEARS.
FULL SERVICE IN-HOUSE PROTOTYPE SHOP.
AIRCRAFT SEATING
NVIDIA Performance Benchmarks

HD single image @10,000 passes – Accurate mode

CPU = 10+ hours!*  

<table>
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<tr>
<th>NVIDIA</th>
<th>minutes</th>
<th>WITH DENOISER</th>
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<tbody>
<tr>
<td>BETA NVIDIA RTX8000+RTcores</td>
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<td>2.5 minutes</td>
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<tr>
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<td>3.5 minutes</td>
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<tr>
<td>NVIDIA P6000</td>
<td>55</td>
<td>6 minutes</td>
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</table>

*24-core CPU
**NVIDIA Performance Benchmarks**

**HD 10-second animation @10,000 passes – Accurate mode**

<table>
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<tr>
<th><strong>BETA</strong></th>
<th>NVIDIA RTX8000+RTcores</th>
<th>WITH DENOISER</th>
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<tbody>
<tr>
<td>NVIDIA P6000</td>
<td>11 days</td>
<td>30 hours</td>
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<tr>
<td><strong>CPU</strong></td>
<td></td>
<td></td>
<td>110 days</td>
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</tbody>
</table>

*24-core CPU*
VR has changed the viz game

SW Visualize Professional
new 360 camera

Oculus GO

Immersive reviews and happy clients!

Quantum leap for visualization
Creating immersive 360-VR content rather than only still images – in same time!
[click here to play UNLISTED 360 video on YouTube]
THANK YOU
HAPPY VISUALIZE-ING!!!