S7400: GPU-Cloud Photorealistic Rendering for the Next Generation of Cloud CAD Tools

Miguel Arias
Manuel Garcia
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1. Onshape cloud CAD
OneRender is a web/cloud platform for 3D artists, 3D designers, and digital artists. OneRender web interface lets you manipulate 3D scenes, populate them with 3D assets and generate photorealistic images and videos using our proprietary GPU and cloud render engine.

OneRender’s key features are:

- **Photorealistic rendering in the cloud.** All raytracing process happens in the cloud.
- **Immediate results.** Traditionally, rendering is a slow process but not anymore. Feed the power of multiple GPUs working for you.
- **Simplified workflow.** Focus on what matters: your design process. Rendering pipeline has never been so easy using OneRender web interface.
- **Pay per render.** No license fees, no maintenance fees, just pay for your render. You can choose to upgrade your plan at any time.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Standard plan</th>
<th>Professional plan</th>
<th>100 Render Points</th>
<th>1000 Render Points</th>
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<tr>
<td>Free monthly usage</td>
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</table>
OneRender cloud rendering platform
Demo
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manipulate 3D scenes, populate them with 3D assets and generate photorealistic images and videos using our
proprietary GPU and cloud render engine.

OneRender’s key features are:

- **Photorealistic rendering in the cloud.** All raytracing process happens in the cloud.
- **Immediate results.** Traditionally, rendering is a slow process but not anymore. Feel the power of multiple GPUs
  working for you.
- **Simplified workflow.** Focus on what matters: your design process. Rendering pipeline has never been so easy using
  OneRender web interface.
- **Pay per render.** No license fees, no maintenance fees, just pay for your render. You can choose to upgrade your
  plan or just for a one-time purchase.
- **Collaborative tools.** You can share or acquire 3D assets within the platform. Your 3D assets are always available
  and they can be accessed from anywhere anytime.

Product screenshots

Integrating cloud applications are not currently supported on mobile platforms.

Customer ratings

4.2

(33 ratings)
2. Optix and OneRender

Advantages:

- State of the art acceleration structures
- Traversal algorithms
- GPU load balancing
- Almost 50 Mega-rays for simple scenarios
3. OneRender Architecture
4. Onshape – OneRender Integration

Changes in 3D CAD

Onshape

OneRender
(Cloud App)

Onshape Server

- User authentication
- Data retrieval
- Sync 3D CAD changes

OneRender Server

- User login
- 3D Project
  - Synced 3D CAD
- 3D Rendering
5. CAD Render Examples
8. 360° Video Render Example

Video: https://youtu.be/c0TrOJqOJpg
7. Conclusions

• Optix helped to reduce development time of raytracing core

• On demand rendering and elasticity with cloud platform

• Experience to connect to other high demanding DAM systems in the cloud

• Rendering for cloud platforms (CAD, 3D modeling, VR)
The best integrated cloud rendering solution for

www.onerender.com

Miguel Arias, CEO

miguel@onerender.com
Skype: arias.m

USA: +1 (650) 785-7075