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# TEIGHA<sup>®</sup> CLOUD Professional SDK for Cloud-Based Engineering Applications

[www.opendesign.com](http://www.opendesign.com)

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## BACKGROUND

Teigha Cloud is a framework for developing CAD applications that run in the cloud and can be accessed via the Internet. It provides a high performance economical solution for viewing CAD models in a browser. However, it is more than just a visualization system—it also supports various types of editing and general client-server application development.



# BUSINESS OVERVIEW



## INTRODUCTION

Teigha Cloud is developed by Open Design Alliance, a technology consortium that has been providing mission critical components for the CAD industry since 1998. Web-based technologies are a part of most engineering workflows today, and Teigha Cloud was developed as a solution for web-based visualization and application development.



## MODERN TOOLS

Much of the Teigha Cloud client side is created by compiling existing Teigha C++ source code to JavaScript using Emscripten. The result is an efficient development process that intelligently leverages Teigha's stable, mature C++ code base.



## COMPLEMENTARY APPROACH

Unlike many cloud-based systems from other vendors, Teigha Cloud was developed to be compatible with existing Teigha technology. While the Teigha Cloud client is written in modern JavaScript, the server-side technology uses the same Teigha Kernel that is used on the desktop.



## INDUSTRY-PROVEN TECHNOLOGY

Teigha Cloud inherits the experience and best practices of Teigha products that have been used for decades in mission critical roles across all engineering disciplines.



## ATTRACTIVE LICENSING

Teigha Cloud is offered under a fixed fee license with no royalties for cost-effective deployment, including deployment of SaaS and other web-based applications.

# PRODUCT PORTFOLIO

## SUPPORTED FILE FORMATS

- ▶ Visualization and markup are supported for .dwg, .dxf, .dgn, .dwf, .prc, ACIS and Parasolid
- ▶ Support for .rvt/.rfa files is available for an additional fee
- ▶ Full editing is supported for .dwg files

## WEBGL RENDERING

- ▶ Teigha Cloud uses the standard WebGL library for client-side rendering

## RENDERING FEATURES

- ▶ Support for 2D and 3D models, standard navigation tools, render modes, materials, visual styles and more

## PLATFORM AND LANGUAGES

- ▶ Server side is available on Windows and Linux
- ▶ Client application is written in JavaScript
- ▶ Supported browsers include Chrome, Firefox, Edge, Safari and other WebGL-compatible browsers

# FOCUS ON PERFORMANCE

## UPDATE MANAGER

Teigha Cloud's Update Manager uses partial loading and data streaming to minimize data transfer and maximize rendering performance

## SPATIAL FILTERING

Object that are not visible on screen are culled

## METAFILE OPTIMIZATION

- ▶ Metafiles for complex entities such as hatches, TrueType text and block references are combined for fast GPU rendering
- ▶ Coming soon: Multi-threaded analysis and combining of metafiles to optimize for GPU rendering

## SHARED TECHNOLOGY WITH TEIGHA VISUALIZE

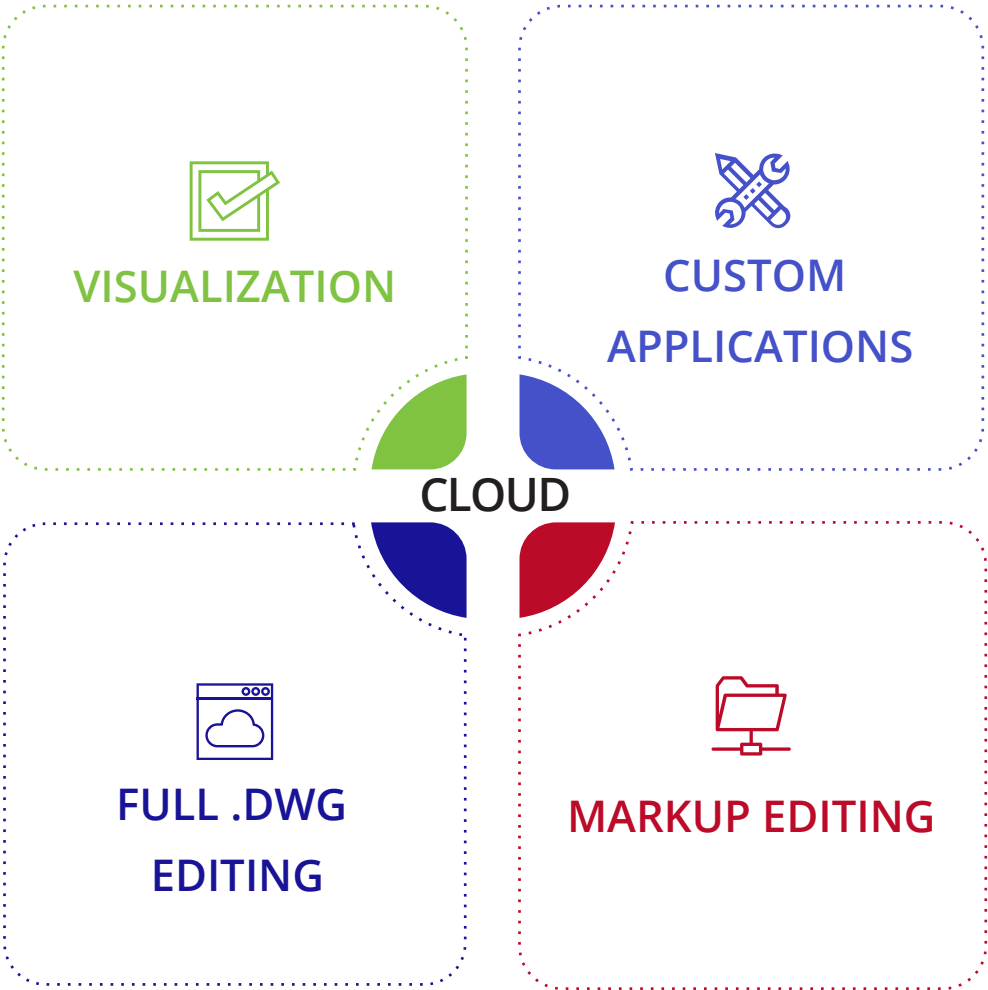
Teigha Cloud shares technology with Teigha Visualize desktop rendering support, allowing many desktop performance enhancements to be seamlessly applied to Teigha Cloud



# APPLICATIONS

Visualize standard models or custom data in any modern browser

Leverage Teigha Cloud's powerful client-server architecture to build custom applications



Fully integrated with Teigha Drawings desktop technology

Add sophisticated markup to any supported model or custom data

Compatible with Teigha Revision Control (for storing .dwg revision history)

Retain marked up geometry in an optimized Teigha cache file

## JUMPSTART YOUR WEB DEVELOPMENT

Developing web-based applications shouldn't force you to abandon your existing IP, and it shouldn't cost a king's ransom in new licensing fees. With Teigha Cloud, you can develop professional web-based applications that leverage existing Teigha technology and maintain compatibility with the current generation of engineering applications.

As a non-profit, ODA is committed to providing high quality tools for engineering application development at a fair cost. Visit the links below to see how you can benefit from using Teigha.



More information about Teigha products

[www.opendesign.com](http://www.opendesign.com)

More information about ODA

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