

# Leica CloudWorx

## Point cloud plug-in software for 3ds Max

Users can create models from the point cloud.



Import scan data to use as background and scene information or as a basis for modelling.

Create stunning photo-realistic images and animations derived from point clouds.

### Convenient plug-in for efficiently creating models, renderings, animations and photo-realistic 3D content based on rich point cloud data directly – within 3ds Max

Leica CloudWorx is available for Autodesk® 3ds Max and 3ds Max Design. Design and Maya®. It seamlessly extends these applications to directly support the use of large point cloud data sets – captured by laser scanners – with all standard visual effects tools.

Now, you can easily use point cloud data in your native modeling environment to create compelling fly-through movies; serve as a template for modelling 3D geometry or lighting effects; and serve as a 3D background for visual effects processes.

The versatility of Leica CloudWorx serves the needs of surveyors, architects, engineers, forensic investigators, game makers, movie effects artists and visualisation specialists across a wide variety of applications.

#### Features and Benefits

- New direct support of Cyclone data – no export necessary
- Import from a wide range of point cloud data sources: Leica Geosystems PTG, PTS and PTX, Optech-IXF, LAS, Faro-FLS, Riegl-3DD, ASCII
- Limit Boxes for convenient point cloud segmentation
- Point Snapping
- Navigation and camera controls
- Advanced rendering
- Point cloud colouring control

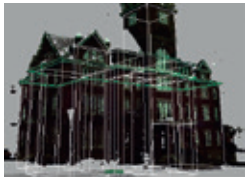
- when it has to be **right**

**Leica**  
Geosystems

# Leica CloudWorx for 3ds Max



This photorealistic image was created by first modeling the boat from a point cloud as shown.\*



A 3D wire-frame is developed by tracing over the point cloud.

\*Image provided courtesy of Dr. Hesse und Partner Ingenieure of Hamburg, Germany.

## Works Efficiently with any Point Cloud Data

Direct use of point cloud data from the Cyclone navigator. Exporting data to an intermediate format is no longer necessary.

Leica CloudWorx utilises point cloud data from all Leica Geosystems 3D laser scanners, and other sources such as Faro, Riegl and LAS format. The built-in ability to work efficiently with billions of points ensures a productive environment for creating highly accurate virtual worlds.

## Intuitive, High-Fidelity Movie-Making

The built-in animation tools of Autodesk® 3ds Max and 3ds Max Design are ideal for movie making. Users can now create professional grade movies with point clouds. Users can light the point clouds and cast shadows from modelled geometry.

## Modern Viewing and slicing Toolset

The "Limit Box" and slicing tools, common to high-end point cloud applications, lets users contain the cloud display to a defined area. Users can apply standard top or side view tools and control background colouring as a gradient or image.

## Cloud Colouring and Rendering

Users can switch colour schemes on the fly. They have options for grayscale, intensity mapped rainbow colours from scanner, and elevation mapping. Dynamic point size control is another helpful visual management tool.

## Lighting

User can improve depth perception with lighting. All standard lighting effects of the underlying systems are available for use on point clouds including ambient, shadows, spots, and other effects. Point clouds can also be included in stereo rendered output for 3D movies.

## Output

Rich, accurate point clouds are fully available as 3D content for any static or dynamic output (images or movies) totally integrated with all standard content such as 3D models, texture maps, background images, lighting effects, animated 3D content and photo-realistic images.

Leica CloudWorx for 3ds Max*		Minimum Specifications	Recommended Specifications
<b>Large point cloud mgt</b>	Direct use of point cloud data from the Cyclone navigator, Interactive visualisation of massive, multi-billion point data sets.	<b>Processor:</b> 2 GHz Dual Core processor or better	<b>Processor:</b> 3.0 GHz Quad Core w/ Hyper-threading or higher
<b>Rendering</b>	Cloud colour rendering methods include Intensity mapped grayscale, intensity mapped rainbow or colours from scanner.	<b>RAM:</b> 2 GB (4 GB for Windows Vista or Windows 7)	<b>RAM:</b> 32 GB's or more 64 bit OS
<b>Viewing and Navigation</b>	Standard 3D zoom\pan Orthographic\perspective camera Walk-through mode Limit boxes, clip boxes, slicing tools Standard views: Top, left, bottom, etc. Navigate via scanner position	<b>Hard disk:</b> 40 GB <b>Display:</b> SVGA or OpenGL accelerated graphics card (with latest drivers) <b>Supported operating systems:</b> Windows XP (SP2 or higher) (32 or 64)***, Microsoft Vista**	<b>Hard disk:</b> 500 GB SSD Drive <b>Large project disk option:</b> RAID 5, 6, or 10 w/ SATA or SAS drives <b>Display:</b> Nvidia GeForce 680 or ATI 7850 or better, with 2 GB's memory or more <b>Operating system:</b> Microsoft Windows 7 – 64bit
<b>Data formats</b>	Binary: REP, PTG, IXF, LAS, FLS, 3DD; ASCII: PTS, PTX, TXT	Windows 8 & 8.1 (64bit only)	<b>File system:</b> NTFS
<b>Drawing and Modelling</b>	Create construction plane Draw spline, particle or vertex Modelling helpers	<b>File system:</b> NTFS	
<b>Tools</b>	Units management, Individual cloud toggling, Dockable menus Performance settings		
<b>Output</b>	Point cloud data can be included in any native static or dynamic output of images or movies.		

\* Reference the Leica Cyclone Technical Specifications document for a complete listing of product specifications.  
\*\* Some systems may not support Windows Vista's Desktop Windows Manager (DWM) with Leica Cyclone and must be operated in Windows Classic Look.  
\*\*\* Can only borrow or be a floating license client.

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