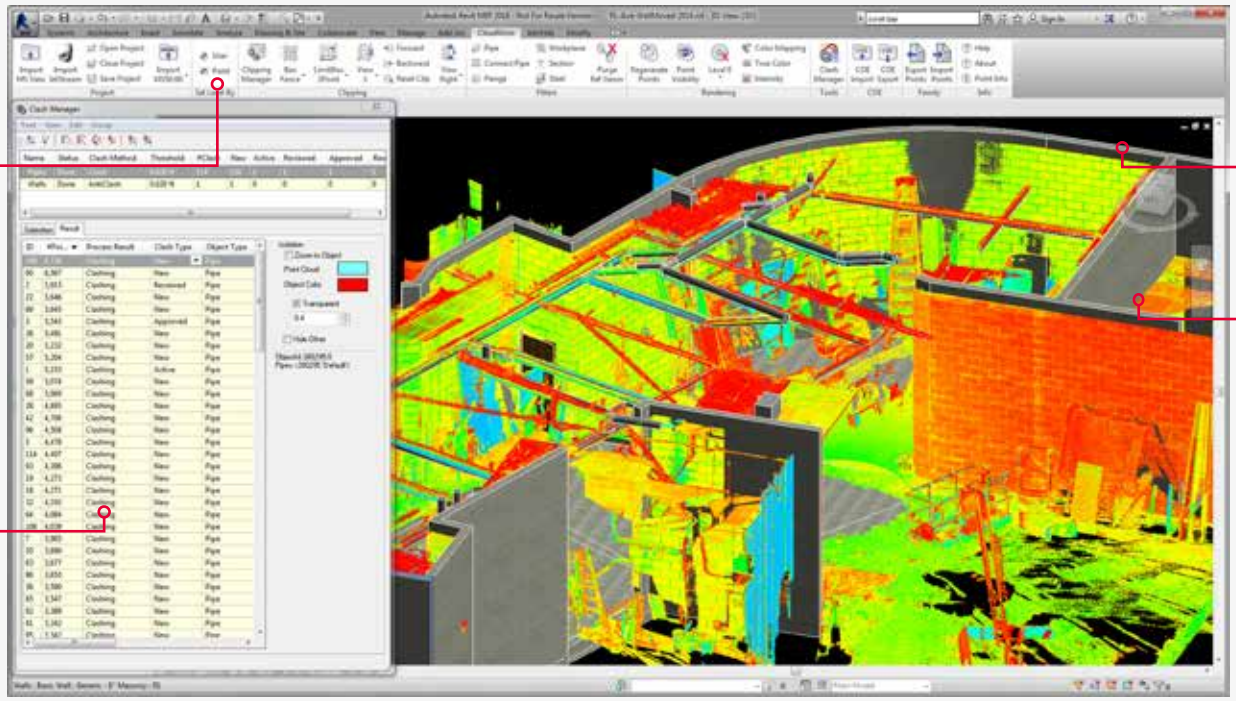
Leica CloudWorx 2.1 for Revit

Point cloud plug-in software



Leica CloudWorx for Revit is a breakthrough plug-in for efficiently using rich as-built point cloud data, captured by laser scanners, directly within Revit for better BIM modelling of existing buildings. This is useful for a wide range of BIM activities including retrofit design, construction and operations, and lifecycle asset management of the building. It provides a virtual visit to the site within Revit with a complete view of the captured reality.

Users take advantage of the familiar Revit interface and tools to shorten the learning curve for working with laser scan data. Leica CloudWorx uses the powerful Leica Cyclone and new JetStream point cloud engines to let Revit users efficiently visualise and create BIM models from large point cloud data sets. Users get all the advantages of a high-performance point cloud application directly within Revit.

Features and Benefits

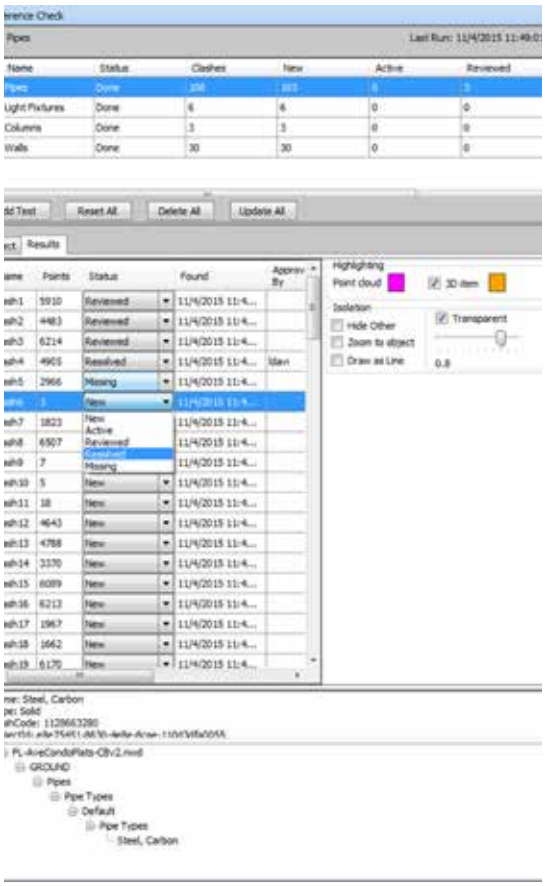
- New! JetStream experience allows you to demo the performance of JetStream
- Clash Manager
- COE import/export
- Optional Cyclone, JetStream, or ReCap data sources
- Manipulate and navigate large point cloud data sets faster
- Model walls that are “out-of-plumb”
- Work with point cloud data in Revit from any laser scanner
- Eliminate time consuming export/import process for Cyclone point cloud data
- Set Building Levels directly from the point cloud
- Crop the point cloud using Slices, Sections and Limit Boxes
- Automatically find centre-line and diameter of pipes, round ducts and columns
- Set up Work Planes from point cloud
- Place any Revit model item (walls, floors, etc.) from picks in point cloud

PART OF HEXAGON

- when it has to be **right**

Leica Geosystems

Leica CloudWorx 2.1 for Revit



All new point cloud clash/anti-clash manager enables the user to perform interference checking against specified geometry and the point cloud.

The plug-in advantage
Autodesk Revit software has some built-in support for point clouds. However, by adding the Leica CloudWorx plug-in, users benefit from additional tools and higher efficency of a more productive point cloud enabled BIM modelling solution. Starting with much easier access to the point cloud data, a user can open a Cyclone or JetStream project directly in Revit - no file format conversions. Users also find a critical set of tools for efficently cropping the cloud, and controlling the display parameters along with the ability to use unlimited sized point clouds.

Leica CloudWorx for Revit provides critical new modeling tools required to efficently and accurately create a BIM model of an existing structure.

The advantage of point cloud display control
To focus on particular areas of interest, easy-to-use tools define specific areas of 3D point clouds to display. For improved visualisation of point clouds, segments of point clouds can be selectively hidden using fences, slices or user-defined cutplanes.

The BIM modelling advantage
Tools to fit patches/workplanes directly from the point cloud or set up work planes facilitate the BIM-from-pointclouds process. Additional tools provide for accurate fitting of steel, flanges, pipes and 2D lines or placement of walls, floors, structural members, doors, windows, mechanical equipment, etc. And now CloudWorx for Revit allows direct import of COE models from Cyclone, and/or the the export of some Revit models to COE to take back into Cyclone.

BIM for retrofit projects
Engineers, Contractors, Architects and Designers can use CloudWorx for retrofit design projects to see their new work proposals/designs inside the point cloud that represents the actual existing condition. The unparalleled detail provided by point clouds allows users to conceive, design, clash detect, visualise and dynamically interact in context with the real world "existing condition". Users experience a virtual site presence within Revit.

LEICA CLOUDWORX 2.1 FOR REVIT*		MINIMUM SPECIFICATIONS	RECOMMENDED SPECIFICATIONS
Large point cloud mgt	3D limit boxes, slices, interactive visualisation of massive data sets Cyclone Object Database and JetStream technologies for fast, efficient point cloud management	**Processor:** 2 GHz Dual Core processor or better **RAM:** 2 GB (4 GB for Windows Vista or Windows7) **Hard disk:** 40 GB **Display:** SVGA or OpenGL accelerated graphics card (with latest drivers) **Supported operating systems:** Windows 7 (32 or 64), or Windows 8 & 8.1 (64bit only) **File system:** NTFS **Supported Revit versions:** Revit 2013-2017 family of products. Support of RCP data: AutoCAD, Civil and Map3D 2015 and later.	**Processor:** 3.0 GHz Quad Core w/ Hyper-threading or higher **RAM:** 32 GB's or more 64 bit OS **Hard disk:** 500 GB SSD Drive **Large project disk option:** RAID 5, 6, or 10 w/ SATA or SAS drives **Display:** Nvidia GeForce 680 or ATI 7850 or better, with 2 GB's memory or more **Operating system:** Microsoft Windows 7 – 64bit **File system:** NTFS
Rendering	Level of Detail (LOD) graphics, "Single pick" point cloud density control JetStream high-performance rendering		
Visualisation	Intensity mapping, True colour, and Grey scale Limit boxes, slices, and cut planes		
Measurement	3D point coordinate, Point-to-point, Point-to-design entity		
Modelling	Pipe fitting, pipe diameter, pipe center line, and & connected pipe runs Flange, Steel, and 2D line fitters Drive native Revit modeling commands using point cloud pick points Automatic planar surface (patch) detection to set work planes		

* Reference the Leica Cyclone & CloudWorx Technical Specifications document for a complete listing of product specifications.

Windows is a registered trademark of Microsoft Corporation.
Other trademarks and trade names are those of their respective owners.

Illustrations, descriptions and technical data are not binding. All rights reserved.
Printed in Switzerland. - Copyright Leica Geosystems AG, Heerbrugg, Switzerland, 2014.
795502en – 04.17

Leica Geosystems AG
www.leica-geosystems.com

- when it has to be **right**

Leica Geosystems