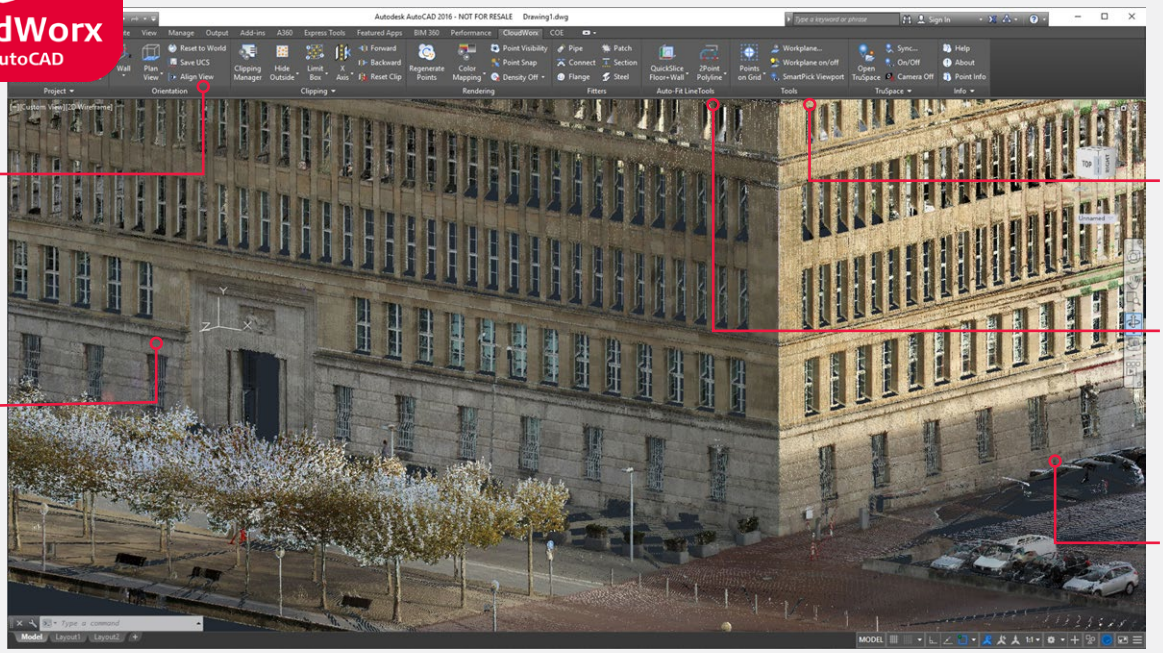
# Leica CloudWorx for AutoCAD

## Point cloud plug-in software




**Efficient management, viewing and processing of as-built laser scan data for architectural, plant, civil and other 2D & 3D projects.**

Leica CloudWorx for AutoCAD is the most efficient and popular plug-in software for using as-built point cloud data directly within AutoCAD.

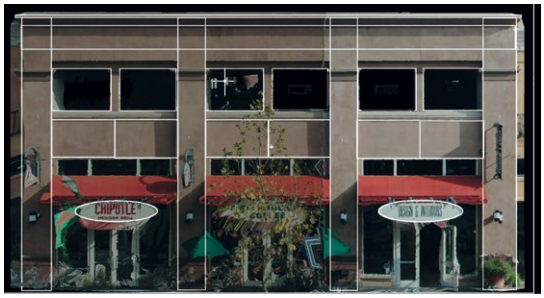
Users take advantage of the familiar AutoCAD interface and tools to shorten the learning curve for working with laser scan data. Leica CloudWorx along with the powerful Leica Cyclone and JetStream point cloud engines let users efficiently visualise and process large point cloud data sets as part of the traditional design process. By leveraging the accuracy of point cloud data users can create accurate 2D and 3D as-builts, check proposed designs against existing conditions, perform critical construction & fabrication QA, and more... all directly within AutoCAD.

In the past, users often struggled with point cloud manipulation when using AutoCAD point cloud plug-ins. CloudWorx over comes this with two powerful options. First, using CloudWorx's TruSpace viewing window. This intuitive panoramic viewing window lets users better "see" what the point cloud represents, and can drive point cloud visualisation within the AutoCAD viewspace. Or, second, connecting to Leica Geosystems' ultra high-performance JetStream point cloud engine, providing unlimited data for all-the-points, all-the-time for fidelity and finesse in 2D or 3D modelling.

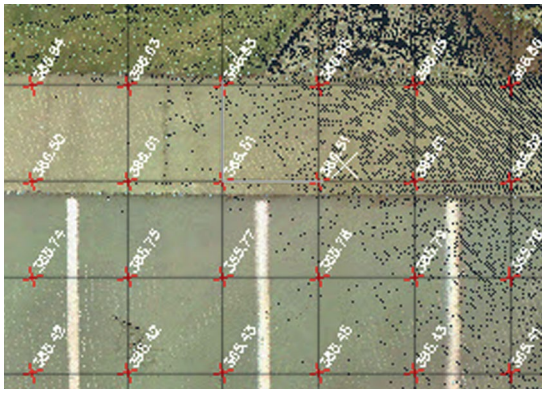
**Features and Benefits**

- Orthoimage tool to create GeoTIFF, PNG, JPEG, GIF, and BMP images
- Floor Flatness/Floor Levelness tool with auto ASTM1155 standard report
- JetStream Experience allows you to demo the performance of JetStream
- QuickSlice tool lets users quickly slice and orientate the point cloud, aligning the UCS to walls and floors
- Steel, flange, auto pipe, and 2D line fitters – intelligent as-builts
- Auto pipe fit – intelligent, as-builts in AutoPLANT, CADWorx, more
- Auto-Fit Polyline tool lets users quickly fit 2D lines and arc to the point cloud with one or two picks
- Optional Cyclone, JetStream, or ReCap data sources
- Automatic orientation of UCS to point clouds
- User specified points on a grid with SmartPicks
- English, German, Japanese and other languages available

# Leica CloudWorx for AutoCAD



Several CloudWorx commands simplify the common process of tracing point clouds to create dimensionally correct 2D or 3D wire frames for building renovations, model extrusions, etc.



Points on a grid and intelligent SmartPick snaps provide a highly productive automated surveying tool used to create COGO points most typically used to generate a ground surface\TIN.

**Control point cloud display**
Easy-to-use tools allow a user to quickly define specific areas of interest to display while hiding other portions of a point cloud for improved visualisation and comprehension. Quickly work in 2D and 3D by using fences and user-defined cutplanes, slices or 3D limit boxes.

**Accurate building documentation**
Slices through point cloud data facilitate the creation of planimetric and elevation drawings. 2D lines, polylines, and arcs can be best-fit to provide accurate results. Cross sections of point clouds can also be plotted directly, introducing an entirely new, accurate deliverable and reducing project cycle time.

**As-built models**
Pipe fitting, steel fitting, and flange fitting tools enable users to create accurate as-built 3D models and piperuns, best-fit to the point clouds and in conjunction with AutoPLANT, CADWorx, etc. without the labor intensive process of hand modeling each obejct.

**Detailed information for retrofit projects**
Engineers can use CloudWorx in retrofit design projects to check for potential interferences with as-built or as-is conditions by leveraging the accuracy and precision of laser scanning. The unparalleled detail provided by point clouds allows engineers to create 2D or 3D designs based on accurate, comprehensive information, providing time and cost savings throughout a project's various construction phases.

**Civil engineering applications**
Leica CloudWorx integrates with applications like Autodesk Land Desktop and Civil 3D to deliver solutions for civil engineering projects – such as transportation infrastructure, land development, bridge models and more. Users can extract 3D coordinates to represent site features that are easily identifiable in detailed point clouds. Original ground points can be extracted for topographic modelling.

**Available in multiple versions and languages**
Leica CloudWorx for AutoCAD is available in Basic and Pro versions and has been localized in multiple languages. See the Leica CloudWorx Technical Specifications document for a complete listing of product specifications.

| LEICA CLOUDWORX FOR AUTOCAD* | | MINIMUM SPECIFICATIONS | RECOMMENDED SPECIFICATIONS |
|---|---|---|---|
| **Large point cloud mgt** | 3D limit boxes, slices, interactive visualisation of massive data sets<br>Connects to Cyclone or JetStream Database Technology for fast efficient point cloud management | **Processor:** 2 GHz Dual Core processor or better<br>**RAM:** 2 GB (4 GB for Windows Vista or Windows 7)<br>**Hard disk:** 40 GB<br>**Display:** SVGA or OpenGL accelerated graphics card (with latest drivers)<br>**Supported operating systems:** Windows 7 (32 and 64 bit), Windows 8 & 8.1 (64 bit), Windows 10 (64 bit)<br>**File system:** NTFS<br>**Supported AutoCAD versions:** AutoCAD, Civil3D and Map3D 2010-2018<br>Support of RCP data: AutoCAD, Civil and Map3D 2015 and later. | **Processor:** 3.0 GHz Quad Core w/ Hyper-threading or higher<br>**RAM:** 32 GB's or more 64 bit OS<br>**Hard disk:** 500 GB SSD Drive<br>**Large project disk option:** RAID 5, 6, or 10 w/ SATA or SAS drives<br>**Display:** Nvidia GeForce 680 or ATI 7850 or better, with 2 GB's memory or more<br>**Operating system:** Microsoft Windows 7 – 64bit<br>**File system:** NTFS |
| **Rendering** | Level of Detail (LOD) graphics, "Single pick" point cloud density control | | |
| **Visualisation** | Intensity mapping, true colour<br>TruSpace panoramic viewer<br>– Select view point from key plan<br>– Drive CAD viewpoint from TruSpace<br>– Quick limit box in CAD from single pick in TruSpace<br>– Send point picks from TruSpace to CAD commands<br>– Include background image<br>Limit boxes, slices, cut planes | | |
| **Measurement** | 3D point coordinate, point-to-point, point-to-design entity | | |
| **Modelling** | Pipe Modelling: Least-squares fitting, Fit points inside fence, Grow from pick, Grow a piping run from picks, Connection of piping run<br>Planar surface (patch) modelling: Best-fit 2D lines, polylines, arcs, Steel Fitter, Flange Fitter & Tie-Point location tools | | |
| **Interference checking** | Check designs for potential interferences with point clouds, Advanced clash management database system | | |
| **CloudWorx Ultimate Compatibility** | CloudWorx for Navisworks is compatible with the CloudWorx Ultimate License | | |



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



**Leica Geosystems AG**
leica-geosystems.com

- when it has to be **right**

Leica Geosystems