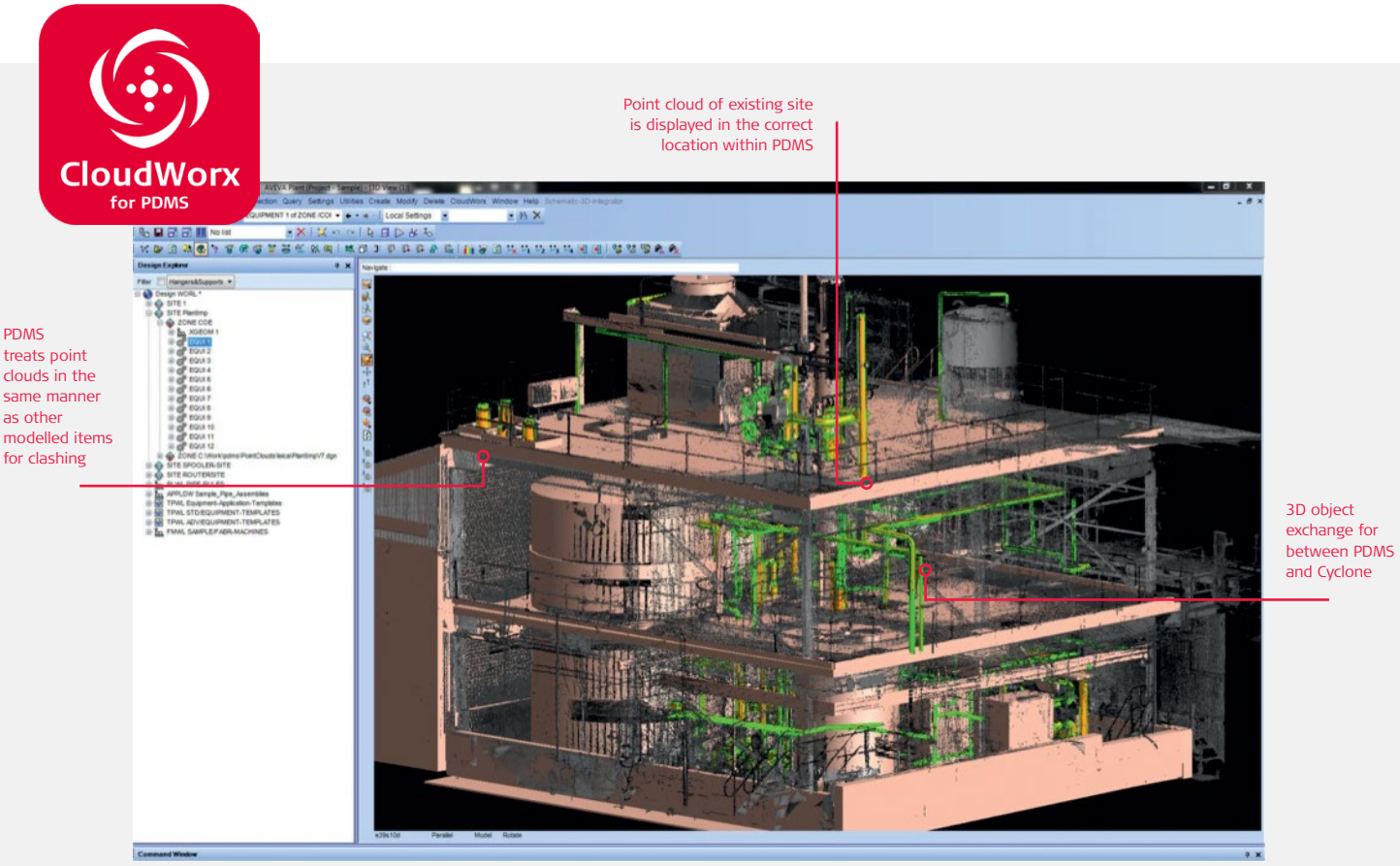
Leica CloudWorx for PDMS
Point cloud plug-in software



Efficient management and use of as-built laser scan data

Leica CloudWorx for PDMS is a plug-in for efficiently manipulating, as-built point cloud data directly within PDMS for better retrofit design, construction and operations. It provides a virtual site within PDMS, for greater confidence in assessing potential construction and operational impacts of a new design.

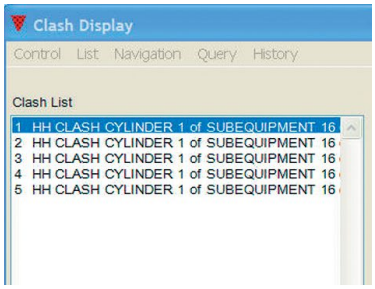
Users operate in the familiar PDMS interface, shortening the learning curve for working with point clouds. The Leica CloudWorx tools along with powerful Leica Cyclone and Leica JetStream point cloud engines and database architecture let users efficiently visualise and work with large data sets without loss of fidelity or performance. Users benefit from complete, accurate laser scan data to conceive designs, check proposed designs against existing conditions, create as-built models, perform critical construction & fabrication QA, and more all directly within PDMS.

Features and Benefits

- Steel fitter with standard catalog support
- 3D object exchange between Cyclone and PDMS
- Fast manipulation of scan data
- Slices, Half-Space Sections, and Limit Boxes
- Automatic pipe centre D-points
- Accurate tie-ins, clash checking and reporting
- Accurate Find Flange Work Point tool
- Direct measurements from point clouds
- Multi-user simultaneous network access
- Supports any laser scanner

Leica CloudWorx for PDMS

Powerful TruSpace viewing allows for fast easy navigation of the point cloud driven from the TruSpace Viewer window.



Using the standard PDMS clashing tools users can easily find critical interferences of new design work compared to the point cloud as-built data. Here a new pipe is seen to be clashing with a few large pipes in the scan just above the vessel.

Transfer models from Cyclone to PDMS and back again with ease
The PDMS COE transfer utility now enables the quick transfer of models between PDMS and Cyclone. This interchange allows users to take advantage of the utility of both Cyclone and PDMS for interference checking, tie point inspection and retrofit management. PDMS models can be exported into Cyclone, modified, updated and\or published as TruViews for real-time field inspection. Models from PDMS are exported as primitives, but have all the accurate dimensioning and tie point locations you need for inspection and retrofit.

Powerful point cloud management & measurement
With CloudWorx for PDMS users can quickly, efficiently, and effectively manage vast amounts of point cloud data. Cutplane Slices, Half-Space Sections and Limit Boxes provide a quick and easy way to navigate point cloud data. Measurements are taken using familiar PDMS measuring tools.

3D as-built modelling
Pipes and Pipe center D-Points are automatically generated by selecting a single scan point on the pipe surface. Using the point cloud, D-Points and PDMS 3D modelling tools, users can create catalog-based intelligent as-built piping systems, structures, duct work, electrical tray systems, vessels and equipment. Box shapes can be quickly created by picking on 2-3 planes of the box.

Automated point cloud clash detection and reporting
Clash detecting against point clouds with CloudWorx is performed using PDMS' own automated clashing and reporting tools. Users can automatically detect clashes between modelled objects and point clouds, based on a user's own defined setting. All interfering points within a user-defined region are visually highlighted and itemised allowing you to identify conflicts before fabrication or construction.

Versatile support of multiple scanner formats
AVEVA users can take advantage of spatial scan data from any laser scanner via industry-standard ASCII-based data formats. In addition, Leica CloudWorx for PDMS directly accepts, without any data format conversion steps, compact native data formats from the industry's most popular scanners. These include all models of Leica Geosystems HDS time-of-flight and phase-based laser scanners.

LEICA CLOUDWORX FOR PDMS*		MINIMUM SPECIFICATIONS	RECOMMENDED SPECIFICATIONS
Large point cloud mgt	3D limit boxes, slices, interactive visualisation of massive data Connects to Cyclone or JetStream Database Technology 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 bit) Windows 8 & 8.1 (64 bit) Windows 10 (64 bit) **File system:** NTFS **Supported PDMS versions:** PDMS 12.0 and earlier	**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		
Visualisation	TruSpace Viewer, Intensity mapping, True colour, Limit boxes, slices, cut planes		
Measurement	3D point coordinate, point-to-point, point-to-design entity		
Modelling	Steel fitter Region Grow Pipe and centerlines Region Grow box geometry PDMS Design Point Placement: Pipe Center D-Point (Includes actual calculated bore diameter attribute)		
COE import Export	Supported objects – Cylinder-Flange-Cone-Box-Planer Extrusion, Elbow		
Interference Checking	Check designs for interferences with point clouds using PDMS clash tool Highlight interfering points		
Supported Formats	Native Format – 3dd, scan (Leica and Cyra), zfc, zfs ASCII – pts, ptx, svy, txt, xyz		
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.

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Leica Geosystems AG
www.leica-geosystems.com

- when it has to be **right**

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