AVEVA

AVEVA™ Point Cloud Manager

AVEVA's 3D Data Capture solution for registering, processing and visualizing point cloud data across the asset life cycle

AVEVA Point Cloud Manager is an open, intelligent and collaborative solution for achieving a trusted, living point cloud: a single and reliable dataset hosted on the cloud for a physical asset's captured point cloud data.
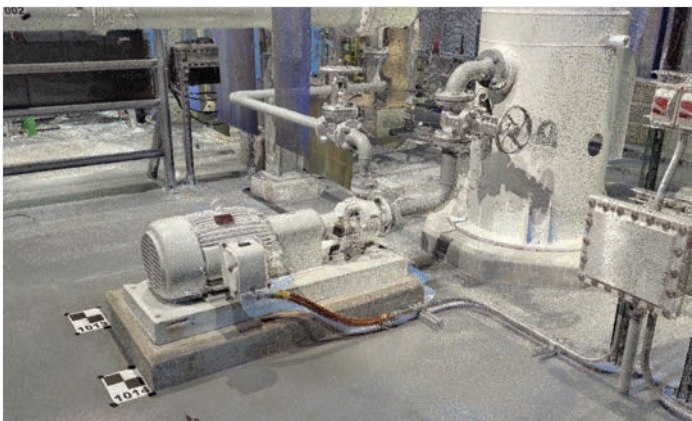
Overview

Over the life cycle of your asset, gaps appear between what engineering plans show and the actual as-built condition. Surveying with laser scanning and other 3D data capture devices, such as handheld and UAV, closes this gap by providing an accurate picture of the as-built asset. Registering, processing and visualizing that data can sometimes present you with challenges, especially when dealing with complex assets and multiple scan surveys from different moments in time.

Hosted on AVEVA™ Connect, our secure, common cloud platform, AVEVA Point Cloud Manager enables surveyors, engineers and asset owners to bring point cloud data together and collaborate on a single data source. Information captured in this way can be shared and used by data stakeholders throughout the asset life cycle.

Access a reliable digital asset without having to physically visit the site with AVEVA Point Cloud Manager. Create pin-point accurate deliverables by integrating as-built data into 2D drawings and 3D models. Your business can save time, cut costs and reduce risk with minimized rework, less site visits and higher accuracy.

AVEVA Point Cloud Manager Server enables you to register, process and visualize point cloud data across the life cycle of your asset. Data can be imported from any device and exported downstream in a variety of CAD applications.

Business benefits

Own your own data

- Maintain a single source of point cloud data
- Share data easily with partners and contractors

Reliable as-built data

- Visualize and make measurements with confidence from anywhere in the world
- Create pin-point accurate 2D and 3D CAD deliverables using as-built data
- User your trusted living pointcloud as your "3D model"
- Validate as-built condition against engineering plans to ensure data integrity
- Execute flawless revamp projects with minimal rework

Access for data stakeholders

- Make data accessible and secure on the cloud using AVEVA Connect. Also available on premises and your own cloud.
- Minimize risk and reduce costs associated with on-site visits
- Enable robust and collaborative enterprise planning

Handle massive datasets

- Using InfiniteCore technology handle an unlimited number of scans
- No data is compressed or lost with uncompromised performance
- Instantly visualize and access this data using smart technology built for all levels of network access

Simulation and training

- Use as-built data for walk throughs of an asset for immersive and accurate experiences in simulation and training

AVEVA Point Cloud Manager key principles

Open

Import data from all common scan devices or point cloud data sources and integrate or export data into your choice of CAD solution.

Intelligent

Integrate CAD objects into your data. Add information zoning, tagging and document linking to locations within the point cloud data.

Collaborative

Share and visualize data globally from an accessible, secure and reliable source for your digital asset.

Key features

Registration

- Register scan data from a comprehensive list of compatible laser scan and 3D data capture devices*
- Cloud-to-Cloud targetless registration option
- Register scans to a survey

Validation

- Smart tools validate data automatically as you add to your dataset
- Registration validation – check error values and use traffic light system for customized thresholds
- Automatic Clash Detection against existing 3D models

The Viewer functionality provides a window into your point cloud data. The BubbleView gives you like a bird's-eye view in which 3D data can be measured and intelligence added to it.

Solid point cloud visualization technology gives you a clear view of massive datasets

Data management

- Identify and focus on high value areas
- Hide unwanted data
- Keep data alive by incrementally updating your dataset with new scans
- Data is never gone forever - always retrievable
- Apply conversion options based on range, intensity and mask-mixed pixel

Visualization

- BubbleView – access a scanner's eye view of your data. Make precise measurements, add intelligence
- HyperBubble – fly through BubbleViews meshed together into a 3D landscape
- Solid Pointcloud – a low-hardware way of rendering point cloud data into visually solid surfaces. This allows user to understand an entire site on-screen at once, then dive down deeper into an area of interest.

Deliverables

- Export data into CAD packages
- Use point cloud data as your 3D model when creating new designs in 2D and 3D
- Precise as-built data in deliverables that can be trusted
- Generate projects to share and collaboratively visualize globally and securely

Integrate CAD objects

- Bring CAD objects into your point cloud dataset from compatible packages*
- Finding project tie-ins to help drive engineering decisions

Enhanced measurement utilities

- Semi-automatically measure as-built structural data
- Measure pipes and structural members using the point cloud

Add intelligence

- Tag locations with intelligent data such as labels and links to documents within the point cloud model
- Zoning – identify units and areas

Cloud-enabled

- Offload storage and computational power to cloud services
- Access via the AVEVA Connect platform for easy access and management of users in a secure data environment
- Also available on premises or your own cloud

Tablet-enabled

- Access point cloud data from mobile devices
- Take data offline when network connections are unavailable
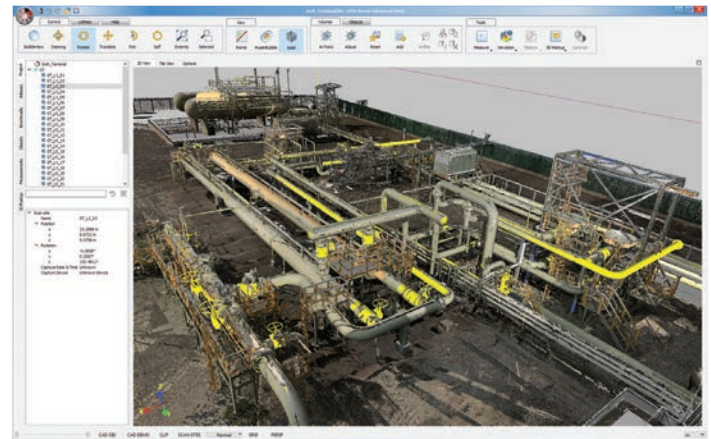
*See table on page 5 for full compatibility details

Open on the inputs, open on the outputs

AVEVA Point Cloud Manager compatibility

Scan hardware	CAD software
• Z+F - .zfs • FARO - .fls • Leica - .ptz, .ptx, .zfs, .prj • Riegl - .rxp, .rsp .3DD • Trimble - .tzf, .ptx, .fls • Topcon - .cl3 • DotProduct • Other formats - .pts, .las, .laz	• AVEVA • Hexagon PPM • Autodesk • Bentley Export industry standard file types

Achieve a trusted living point cloud of your asset and maintain it throughout the life cycle of your asset.

These lists summarize AVEVA Point Cloud Manager's compatibility. Please get in touch to find out if your format of choice is compatible.

AVEVA software in the cloud drives business resiliency for our customers; enabling you to transform faster, reduce costs and easily scale up and down to respond to dynamic economic conditions and ensure sustainable growth.

Discover AVEVA Connect, our common cloud platform, providing a central location to access the broadest and deepest industrial software portfolio enhanced by the power of industrial Artificial Intelligence.

To learn more about
AVEVA Point Cloud Manager please visit:
aveva.com/en/products/point-cloud-manager

To learn more about
AVEVA Connect, please visit:
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