

AVEVA



PRODUCT DATASHEET

AVEVA LFM

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

AVEVA LFM is an open, intelligent and collaborative solution for achieving a Trusted Living Pointcloud: a single and reliable dataset 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 visualising that data can sometimes present you with challenges, especially when dealing with complex assets and multiple scan surveys from different moments in time.

AVEVA LFM 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 LFM. 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 minimised rework, less site visits and higher accuracy.

AVEVA LFM Server enables you to register, process and visualise 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

- Visualise and make measurements with confidence from anywhere in the world
- Create pin-point accurate 2D and 3D CAD deliverables using as-built data
- Use 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
- Minimise 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 visualise 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 LFM 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

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



Collaborative

Share and visualise 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 customised thresholds
- Automatic Clash Detection against existing 3D models



AVEVA LFM NetView provides a window into your point cloud data. The BubbleView gives you a scanners eye view in which 3D data can be measured and intelligence added to it.



Solid Pointcloud visualisation technology gives you a clear view of massive point cloud 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

Visualisation

- 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 AVEVA LFM NetView™ projects to share and collaboratively visualise 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

Create CAD models

- Semi-automatically create as-built 3D CAD models from as-built data
- Model pipes and structural standards from the standards library

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 LFM Compatibility

Scan Hardware	CAD software
<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• AVEVA• Hexagon PPM• Autodesk• Bentley• Others <p>Export industry standard file types</p>

These lists summarise AVEVA LFM's compatibility. Please get in touch to find out if your format of choice is compatible.



Achieve a Trusted Living Pointcloud of your asset and maintain it throughout the life cycle of your asset.

Contact AVEVA for an evaluation and to learn more about AVEVA LFM aveva.com/3d-data-capture