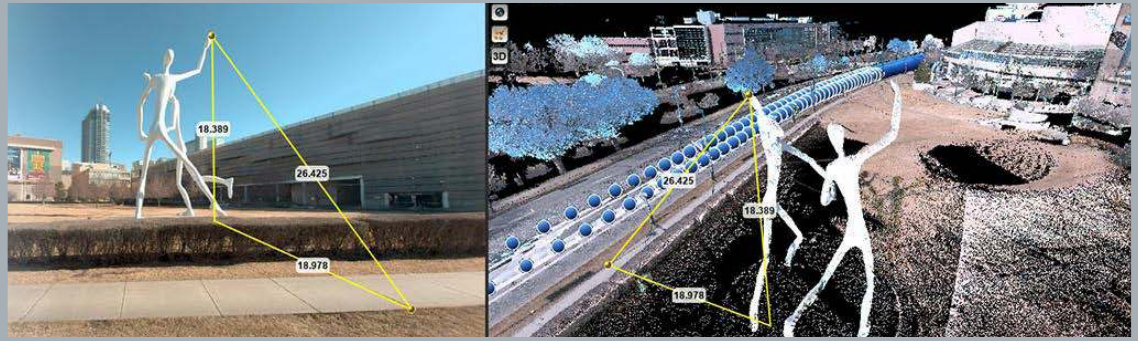


**Bentley**<sup>®</sup>  
Advancing Infrastructure

**CONNECT Edition**



## Orbit 3DM™ Feature Extraction CONNECT Edition

Advanced Feature Extraction of 3D Mapping Data

### Smart 3D Mapping for Feature Extraction

Orbit 3DM Feature Extraction allows you to complete simple and complex measurements, extract features, and perform advanced analysis using massive amounts of point cloud, imagery, textured mesh, and traditional GIS resources. In a single, user-friendly environment, you can make measurements and extract features using your aboveground, belowground, or indoor reality data acquired from terrestrial, mobile, UAS, oblique, and aerial mapping systems. Hardware-neutral, Orbit 3DM Feature Extraction gives users a full 3D 360° view of the world by enabling the real-time fusion of various reality data resources of any size from any system. Orbit 3DM Feature Extraction is available in three versions: Basic, Standard, and Pro.

### The CONNECT Edition

The SELECT<sup>®</sup> CONNECT Edition includes SELECT CONNECT services, new Azure-based services that provide comprehensive learning, mobility, and collaboration benefits to every Bentley application subscriber. Adaptive Learning Services helps you master the use of Bentley applications through CONNECT Advisor, a new in-application service that provides contextual and personalized learning. Personal Mobility Services provides unlimited access to Bentley apps, ensuring you have access to the right project information when and where you need it. ProjectWise<sup>®</sup> Connection Services allows you to securely share application and project information, to manage and resolve issues, and to create, send, and receive transmittals, submittals, and RFIs.

### Visualize and Navigate 3D Mapping Data in Full 2D or 3D View

Orbit 3DM Feature Extraction allows you to view and navigate your mapping data in 2D or 3D, automatically play through all supporting images, and overlay any 2D and 3D vector data. The application lets you set various point-cloud legend options, transparency, and view depth to any 3D point cloud. By defining point-cloud viewing modes, Orbit 3DM Feature Extraction provides stereo, perspective, and isometric 3D views. You can effectively visualize your point-cloud data using colored hovering capabilities to detect underlying surfaces, snap to the nearest point, and interpolate between points to track surfaces, ridges, and corners.

### Measure and Extract

Orbit 3DM Feature Extraction helps you accurately measure 2D and 3D coordinates from all your mapping resources. Various 3D measuring techniques can be combined by using point clouds, mesh, DEM, photogrammetry, and 2D and 3D reference planes. The application enables you to apply assisted, automated measurements of points, lines, and areas to extract features such as trees, curbs, road markings, guard rails, pavement borders, cables, and many others.

### Analyze and Report

By providing 4D digital context, Orbit 3DM Feature Extraction enables you to compare mapping data at a given point in time and analyze volumes over time. Additionally, you can detect clashes using an imported or designed shape and achieve your optimal slice view for in-depth analyses, as well as generate contour lines within a predefined area. Orbit 3DM Feature Extraction efficiently processes cross sections along your trajectory and creates a profile along a 3D path. Once you analyze and document your mapping data, you can easily create reports.

### Optimize and Automate Your Feature Extraction Workflows

You can efficiently extract poles, traffic signs, and road markings with Orbit 3DM Feature Extraction's automated detection capabilities, as well as define a perfect set of parameters to complete the verification procedure for quality control. Results stored in your database include all required metadata, such as ground position, height, snapshot, and sign shape. You can create objects with any measurement technique, as well as add attribution, snapshots, and documents to your 3D mapping data.

The application helps you save time and effort by always making the right slices through captured point clouds and easily updating indoor or outdoor measurements. You can improve your workflows and generate faster feature extractions with assisted feature extraction management capabilities that easily define and manage your layer themes. These capabilities allow you to start from scratch or update existing floor plans using the application's Floor Plan Builder.

### Organize Efficient Teamwork with a Client-server Setup

You can set up your production unit with a central database and workspace management for a team manager and several operators. The team manager can import and prepare mapping data, set up feature extraction workflow and projects, manage resources and databases, and organize teams, permissions, and operator control.

Operators can use the full power of 3DM Feature Extraction to work on the assigned resources and projects. Features are extracted to a central data storage environment that provides real-time adjustments for all operators.

## System Requirements

### Operating System

Memory

### Graphics Card

No GPU required

### Memory

4 GB to 8 GB

### Disk space

500 MB

### Screen Resolution

1920x1080 or higher

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## Orbit 3DM Feature Extraction At-A-Glance

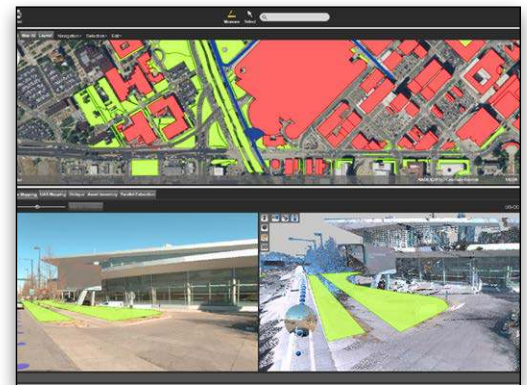
- Access advanced tools for point-cloud data feature extraction
- Access a GIS vector data toolbox
- Apply assisted and automated measurements
- Auto-detect poles and traffic signs
- Automatically recognize points, surfaces, ridges, and corners
- Calculate and report 2.5D volumes
- Create 2D floor plans
- Create 3D fly-through movies
- Display oblique or nadir images
- Display point cloud, mesh, and vector data in a full 3D view
- Display spherical images
- Generate and export profiles and cross sections
- Generate fast and efficient feature extraction workflows
- Import data of any size from any mapping system
- Measure and extract features on imagery and point clouds
- Measure points, lines, areas and simple volumes
- Navigate mapping data in a full 2D or 3D view
- Organize feature extraction teamwork with a client-server setup
- Overlay vector data and point cloud on imagery
- Save measurement in GIS, export to CAD
- Set skyline backdrops in 3D view
- Show footprints on reference view
- Show measurements by point cloud, mesh, dem, reference planes, and forward intersection
- Slice horizontally and vertically

## Orbit 3DM Feature Extraction Comparison Chart

INPUT	FEATURE EXTRACTION BASIC	FEATURE EXTRACTION STANDARD	FEATURE EXTRACTION PRO
Support all hardware systems	✓	✓	✓
Import and optimize data	✓	✓	✓
Full 3D Viewing	✓	✓	✓
Use and Overlay Vector Data	✓	✓	✓
Use Raster Data	✓	✓	✓
Measure Points, Lines, Areas	✓	✓	✓
Copy to Feature	✓	✓	✓
Volumetric Analysis	✓	✓	✓
Contour Lines	✓	✓	✓
Profiles and Cross Sections	✓	✓	✓
Semi-Automated Point Cloud Measurement Tools	✗	✓	✓
Manage Vector-data Themes	✗	✓	✓
Workflow and Speed Procedures	✗	✓	✓
Client/Server Workforce Enabled	✗	✓	✗
Clash Detection	✗	✗	✓
Automated Pole Extraction	✗	✗	✓
Automated Road Mark Extraction	✗	✗	✓
Automated Traffic Sign Extraction	✗	✗	✓



Analyze mapping data and create reports.



Navigate mapping data in full 2D or 3D view.