

Bentley[®]
Advancing Infrastructure

 CONNECT Edition



Bentley Map Enterprise

Engineering-quality 2D/3D GIS and Mapping Software

Bentley Map Enterprise is a fully featured 3D GIS with the powerful editing capability of MicroStation. It is designed to address the unique needs of organizations that map, plan, design, build, and operate the world's infrastructure. It has the capability to natively work with all common spatial data sources such as PostGIS, Oracle, Microsoft SQL Server Spatial, and many more. Bentley Map can add semantic information to the 3D reality mesh. Bentley Map also provides a complete SDK for developing custom GIS applications.

The CONNECT Edition

The SELECT[®] 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 users master 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 users have access to the right project information when and where they need it. *ProjectWise[®] Connection Services* allow users to securely share application and project information, to manage and resolve issues, and to create, send, and receive transmittals, submittals, and RFIs.

Reality Data Processing

Bentley Map Enterprise allows you to integrate and process reality modeling data such as reality meshes, point clouds, scalable terrain models, and raster data for use in geospatial workflows.

Intelligent Geospatial Object Creation

Bentley Map Enterprise includes advanced 2D and 3D design productivity innovations to create and maintain engineering-quality spatial data. Geospatial objects can be intelligently created with ease using interactive snapping tools. Bentley Map Enterprise also includes dimensioning, annotation, raster display and editing, printing, publishing, and much more.

Spatial Analysis and Presentation

The software also includes a full collection of spatial analysis and presentation capabilities using 2D and 3D data. Among these are tools for creating buffers around objects, performing topology overlays, creating thematic maps, 3D collision detection, labeling, and more.



Experience native Oracle Spatial support for 2D and 3D objects including the support of textures.

Improved Interoperability

Users can leverage the capabilities in Bentley Map Enterprise to improve interoperability with other GIS formats. They can directly reference from the Bentley Map Enterprise interface Esri SHP files, MapInfo TAB files, Oracle Spatial, PostGIS, ODBC, WMS, Google KML/KMZ, Esri File Geodatabase, 3D PDF, iModels, SQL Server Spatial, Bing Maps, and others. Data can also be exported into these formats and with other engineering disciplines. Moreover, Bentley Map Enterprise interfaces to FME from Safe Software, greatly extending interoperability.

Symbology Synchronized With Attribution

Bentley Map Enterprise has administrative functions to define features, attributes, symbology, behavior, and placement tools. It also includes functions to promote simple geometries to intelligent features with full attribution. The product ensures that feature symbology remains synchronized with attribution.

Reality Modeling Integration

Work in real-world digital context when you integrate 3D reality meshes of any scale using the 3SM format. Easily add Bentley Map semantic information to the 3D reality mesh using the classification feature. Improve team collaboration when you share and stream the 3D models across project teams and applications using CONNECT and ProjectWise ContextShare.

Field Access

Bentley Map offers support for the Bentley Map Mobile app for tablets and Bentley Map Mobile Publisher, which together provide mobile workers access to rich Bentley Map project information, allowing them to make better informed decisions when in the field.

System Requirements

Operating System (64-bit)

Windows 10, Windows 8.1, Windows 8, Windows 7

Virtualized Environments

Citrix XenDesktop 7.6 using Microsoft Windows Server 2012 R2

Processor

Intel Pentium-based or AMD Athlon-based processor 2GHz or greater

Memory

1GB minimum, 2GB or more recommended (more memory typically results in better performance)

Connectivity

Internet connectivity is required to use some of the features of the product and installation of software pre-requisites.

Disk Space

5GB minimum free disk space.

Find out about Bentley at: www.bentley.com

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Global Office Listings

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Bentley Map Enterprise At-A-Glance

Mapping and GIS

- Compile and edit data efficiently
- Build and publish accurate maps and infrastructure models
- Enforce business rules
- Brings CAD accuracy and ease to GIS

All the Power of MicroStation

- Smart, quick drawing, and editing of GIS features
- Raster management
- AccuSnap, AccuDraw®
- Display priority, transparency
- Coordinate system assignment and on-the-fly re-projection
- Full 3D modeling

Map Manager

- Intuitive, easy-to-use, persisted map definitions
- Drag-and-drop layers to control display order
- Control all aspects of map display
- Automatic creation of thematic map from template
- Export of layers to MicroStation elements

XML Feature Modeling

- XML metadata-driven GIS
- Property-based symbology and annotation
- Convert simple elements to smart GIS features

Geospatial Administrator

- Manages the XFM framework through one interface
- Runs outside MicroStation
- Defines and maintains XFM project files
- Defines features, properties, and the tools used to build those features

Choice of Data Stores

- Three-tier connection to Esri ArcGIS
- Self-contained XFM DGN files
- Any RDBMS/DGN supported by MicroStation

Data Capture and Maintenance

- Polygon parallel creation
- Dynamic domain lists

Geographic Coordinate Systems

- Custom datum/ellipsoid
- Create custom grid/graticule definitions
- Integrated alternate coordinate system (ACS) input and readout

Oracle Spatial Editing

- Fully Oracle Spatial compliant
- Two- or three-tier connection
- 3D object support

- Adherence to native Oracle Spatial models
- Support for GeoRaster, long transactions, valid time and historical tables

SQL Server Spatial Editing

- Two-tier direct connection
- 3D object support

PostGIS Editing

- Two-tier direct connection
- 3D object support

Reality Mesh Processing

- Display of very large, photo-textured reality meshes
- Editing of meshes (remove facets, fill holes)
- Ground and breakline extraction
- Efficient 3D modeling by using sections and templates
- Orthoimage extraction on any axis
- Reality mesh streaming
- Generation and manipulation of cross sections
- Mesh classification

Measurement Tools and Linear Adjustment

- Place points through radial or rectangular measurements from a baseline
- Create list of radial or rectangular staking measurements
- Perform linear adjustments on inaccurate data

Point-cloud Processing

- Drape and snap elements
- Classification editing
- Smart snap
- Visual explorer
- Batch tile export
- Export to POD, LAS, and XYZ files
- Extraction of lines, pipes and elbows
- Clash detection

Scalable Terrain Modeling (STM)

- High performance creation and display of very large digital terrain models
- High resolution image draping on STM
- Display modes: smooth shading with shadows, aspect angle, elevation, slope, contours
- STM synchronization with DGN, Civil DTMs, point clouds, and XYZ files
- Calculate view shed from point or path

Presentation and Analysis

- Spatial, solar/shadow analysis
- Thematic display

- Buffer creation
- Dynamic labeling
- Curved text placement
- Text and element halo tools
- Direct data access (DDA)
- Automatic geo-location of features*

Map Generation and Printing

- Interactive location map index with references
- WYSIWYG plot generation with user-defined templates and legends
- Publishing to intelligent PDF, PostScript
- Solve integrity problems with imported or legacy data
- Easily adopt XFM schema for imported or legacy data through Dynamic Feature Scoring

Interoperability

- Direct reference geospatial formats
- Support for Bing Maps
- MapInfo (TAB, MID/MIF), SHP files, Oracle Spatial, CSV, GML, Esri File Geodatabase, SQL Server Spatial, PostGIS, and ODBC sources
- Import/export tools
- Integration with Safe Software's FME
- Publish i-models with RDBMS properties
- Spatial data streaming
- Web feature service client - read (query) access

Image Editing Tools

- Clean up and vectorize scanned documents
- Convert, edge match, and rectify many formats of aerial imagery
- Rectify and texture 3D models with digital photographs
- Display DEMs in various shading modes

GIS Development Platform

- Utilize Open API, C/C++, C#, NET other modern programming languages

Field AccessSupport

- Support for Bentley Map Mobile and Bentley Map Mobile Publisher.
- Android and iOS Tablets, Windows
- Fast access to large geospatial databases
- Easy to use with standard tablet-based gestures
- Simple query tools
- GPS integration
- Google Maps integration
- Apple Maps integration
- Disconnected, view-only operation for access without a network connection

* Only applies to direct data access (DDA) graphical source connections (e.g. Oracle Spatial, SQL Server, WFS, etc.).