Bentley[®]

Product data sheet



MicroStation®

Design, model, and manage infrastructure

Engineers and designers use Bentley MicroStation to model, document, and manage infrastructure projects better and faster. The application enables you to deliver innovative designs and creative visualizations while consolidating critical project elements into a single environment. MicroStation gives you the power, control, efficiency, and security to reliably deliver the most demanding infrastructure projects from the smallest to the largest. By using the application, you can develop and document improved designs in less time by connecting to drafting and modeling capabilities, contextual geospatial data, and teams.

Integrated modeling and documentation workflows

MicroStation provides a connected environment for comprehensive project delivery with users, projects, and your enterprise. The application enables you to reduce costly on-site changes with digital workflow processes where everything is interconnected. With MicroStation, you can see and use everyone else's data within the confines of your own application. As a result, you can increase productivity, eliminate lag time, and reduce project delays by minimizing survey rework and design delays.

Access a personal portal for learning, communities, and project information. The project portal enables your teams to review project details and status, and gain visibility into project performance. Your team can connect with Bentley iTwin® services, including performance dashboards, issue resolution, and scenario services.

Develop better designs, faster

Develop fully realized designs with unlimited design freedom. MicroStation's powerful modeling capabilities enable you to draft in 2D, model in 3D, develop comprehensive model documentation, analyze and visualize models, accelerate workflows, and secure your data.

Visualize and design with real-world context

Google Photorealistic 3D Tiles (Tech Preview) and Google Maps provide real-world geospatial context, reducing project risks with accurate data. Streamlined design processes in an integrated geospatial data environment save time and reduce costs by minimizing errors and revisions. Seamless Esri ArcGIS data exchange improves workflows,

saving time and effort. MicroStation's Python API automates tasks with geospatial context, enhancing visualization and reducing errors.

Freedom to focus on design

MicroStation's interoperable and scalable capabilities improve the integration of information and teams so you can concentrate on design. Incorporate common design formats and referenced design content. Manage design changes easily. Work in a personalized environment and extend and customize workflows.

More informed teams

MicroStation helps you ensure that all stakeholders are more informed. It provides clearer communication of design intent with intelligent deliverables production capabilities. Use MicroStation to create animations and lifelike renderings, generate intelligent documentation, create digital twins, review designs collaboratively, and maintain and enforce standards.



Visualize your designs in the real-world using 3D Tiles and Google Maps.



Automate repetitive tasks with Python Assistant (Tech Preview) or a Phyton scripting interface

System requirements

Minimum: Windows 11 or 10 (64 bit)/ Windows 11 or 10 (21H2), Windows Server 2019, Windows Server 2016 (64 bit) Intel or AMD Processor 1.0 GHz or greater, 4 GB memory

Recommended: 16 GB memory

MicroStation At-a-glance

Develop better designs, faster

- Develop precise drawings efficiently. Use a comprehensive set of drafting tools to create 2D geometry.
- Develop models in real-world context with 3D modeling tools.
- Build and edit curve, surface, mesh, feature, and solids models.
- Build functional, parametric components with predefined variations.
- Develop comprehensive model documentation.
- Analyze and visualize models based on geometry or attributes.
- Detect and resolve clashes (Licensed service – charges apply).
- Visualize models by applying real-time display styles. Use an object's height, slope, and other embedded properties.
- Accelerate design tasks and workflows with intelligent interactive snapping.
- Ensure document integrity with digital signatures and access expiration date.
 Control rights to view, edit, print, and copy files.

Visualize and design with real-world context

- MicroStation is the first CAD software with 3D Tiles and Google Photorealistic 3D Tiles (Technical Preview version). Visualize designs with immersive real-world context.
- Integrate geospatial information from thousands of supported coordinate systems.
- Integrate and access live geospatial data from:
 - Google Maps
 - Esri ArcGIS™ REST Feature Services
 - Esri ArcGIS REST Map and Image Services
 - OGC Web Map Services (WMS and WMTS)
 - OGC Web Feature Services (WFS)
 - · Real-time GPS data
- · Access static geospatial data from:
 - Esri file geodatabase and Esri shapefile (import and export)
 - Geospatial PDFs (3D geometric representations of models)
- Create and reference geospatial PDFs.
- High performance for large-scale geospatial datasets
- View and manipulate point cloud data in 17 popular formats without translation.

- Incorporate raster imagery of all types.
 Use aerial and satellite imagery, as well as scanned documents.
- Integrate engineering-ready phototextured reality meshes created from photos.
- Produce realistic video and simulations from design, construction, and operational models with VUE rendering engine.
- Render in near real-time with photorealistic rendering.
- Incorporate libraries of physically correct materials, lighting, and rich photorealistic content (RPC).
- Use point-and-shoot to physically correct materials & lighting libraries
- Python API supports geospatial context, with 20 automation samples for geospatial context through Python script.

Freedom to focus on design

- Read, share, consume data in key formats, including: Autodesk RealDWG™ (share and consume), IFC (read and export), Esri SHP (import and export), and Esri GDB (import and export).
- Aggregate and assemble multiple file formats, including: DGN, DWG, PDF, U3D, 3DS, ACIS SAT, CGM, Collada, DXF, IFC, IGES, OBJ, Parasolid, Rhino 3DM, SketchUp SKP, STEP AP203/ AP214, STL, and VRMLWorld.
- View and work with design information from others in real -time.
- Live referencing of 2D/3D DGN, DWG, and large image files.
- · Natively reference PDF files into designs.
- Attach versioned files including design history.
- · Navigate through file history.
- Many file formats supported, including: CALS, BMP, TIF, GeoTIFF, and JPG
- Record all design changes for rich revision control.
- · Compare and plot design file changes.
- · Group tools and tasks and customize interface.
- Employ universal database connection.
- Create user-defined macros.
- · Create customizable cursor menus.
- Personalized in-application learning and feature recommendations.

- Integrate with enterprise systems using a wide range of available applications to customize the user interface.
- Develop solutions using Microsoft (VBA), .NET, C++, C#, and Python, as well as user-defined macros.
- Automate and accelerate tasks with Python.
- Al Python Assistant (Technical Preview version). Use Python more easily for automation and tool creation.

More informed teams

- Generate and place accurate tables and reports derived from business intelligent elements.
- Update all annotation dynamically.
- · Manage drawing views across an entire project.
- Drag and drop plans, elevations, and sections to create documentation.
- Slice and filter 3D models to improve interactive visualization.
- Update drawings automatically when 3D models change.
- Coordinate 3D models and 2D drawings automatically.
- Synchronize existing designs with iModel® to create a digital twin.
- · View latest revisions and changes to the project.
- Issue Resolution Service to review, track, and resolve issues across the entire project team (licensed service).
- Create rich, multidiscipline models for design review.
- Consume and coordinate electronic design reviews.
- Manage CAD standards with configurable checking capabilities. Easily manage all styles for dimensions, text, lines, detail symbols, and display.