MicroStation®

Design, Model, and Manage Infrastructure

MicroStation is the instrument professionals rely on to model, document, and manage infrastructure projects – better and faster. More sophisticated than just a tool, MicroStation is the solution that enables you to deliver innovative designs and creative visualizations, all while consolidating critical project elements into a single environment. With MicroStation, you have the power, control, efficiency, and security to reliably deliver the smallest to the largest and most demanding infrastructure projects.

MicroStation enables you to develop and document improved designs in less time by better connecting you to capabilities, contextual geospatial data, and teams.

INTEGRATED MODELING AND DOCUMENTATION WORKFLOWS

MicroStation provides a common environment for comprehensive project delivery and connects users, projects, and your enterprise. The application gives you a personal portal to access learning, communities, and project information. The new project portal gives your project teams the ability to review project details and status, as well as gain visibility into project performance. Your project team can take advantage of the connection with iTwin® services including Project Performance dashboards, Issues Resolution, and Scenario Services.

DEVELOP BETTER DESIGNS, FASTER

You can develop fully realized designs with unlimited design freedom with MicroStation's robust modeling capabilities, including the ability to:

Draft in 2D

By using a comprehensive set of drafting capabilities you can efficiently create precise drawings with 2D geometry. MicroStation can rapidly progress your designs from concept to completion using persistent constraints to maintain your design intent.

Model in 3D

MicroStation enables you to develop models in real-world context with a wide range of 3D modeling capabilities. You can build and edit curve, surface, mesh, feature, and solids models. Functional and parametric components can be built with predefined variations to simplify managing and find similar components.

Develop Comprehensive Model Documentation

By presenting documentation and related design information within the spatial context of the 3D model, you can significantly improve their clarity. You can embed links to related Microsoft Office documents and websites as well as easily navigate from content in one file or model to others.

Analyze and Visualize Models

MicroStation can analyze and visualize models based on their geometry or attributes. You can detect and resolve clashes as well as analyze real-world solar exposure and shading. Real-time display styles can be applied to visualize models based on each object's height, slope, aspect angle, and other embedded properties.

Accelerate Workflows

Advanced drawing capabilities provide intelligent, interactive snapping that speeds design tasks and related workflows. MicroStation improves productivity with dynamic data entry with a heads-up display. You can customize and group features and tasks, as well as reduce keystrokes and keyboard-position mapping and customized cursor menus. In addition, MicroStation can share digital twins made with iTwin with design and review team workflows.

Secure Your Data

MicroStation ensures that only certain individuals can view and/or edit files. You can ensure the integrity of your documents using digital signatures and control the digital rights to view, edit, print, and copy file contents, including a pre-defined expiration date to access the file.

MicroStation allows you to manage any kind of infrastructure project's data aligned with real-world context.

Create lifelike visualizations using the built-in VUE rendering engine. Image courtesy of WS Atkins & Partners Overseas.

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

BETTER-INFORMED TEAMS

With MicroStation, you can ensure that all your stakeholders are better informed with clearer communication of designs through intelligent deliverables, production capabilities, and the power of Bentley cloud services.

Create Animations

MicroStation can produce realistic movies and simulations from design, construction, and operational models with its built-in VUE rendering engine. You can choose from keyframe and time-based animation. Live on-screen animation previews and distributed network processing give you the results you want, faster.

Create Lifelike Renderings

You can create lifelike visualizations using the built-in VUE Rendering engine. MicroStation includes online and delivered libraries of physically correct materials, lighting, and rich photorealistic content (RPC). Distributed network rendering gets you results faster.

Generate Intelligent Documentation

With MicroStation, you can generate consistent, high-quality paper and digital deliverables such as paper plots, reports, 2D/3D PDFs, and 3D physical models. MicroStation automates and speeds annotation, display styles, and reports by generating them directly from the embedded properties of objects, giving you confidence that they will always remain in sync with the model during work in progress.

Create Your Digital Twin

You can easily start synchronizing your existing MicroStation designs with the iTwin Platform to take advantage of a digital twin. Then, you can share the digital twin with your project team to see the latest revisions and changes to the project.

Review Designs Collaboratively

MicroStation's Issue Resolution Service enables you to work in real time with your project team members for reviewing, tracking, and resolving issues. Identify, assign, and review the progress of revisions and changes for any type of issue that arises in the model.

Maintain and Enforce Standards

MicroStation ensures the proper application of organizational and project specific standards. You can apply templates to control geometry and data standards such as styles for dimensions, text, lines, detail symbols, and more. Once designs are complete, you can use automated capabilities to check drawings for standards compliance.

Intelligent Models

MicroStation can add business data (Item Types) to elements that allow for accurate reports and tables to be generated without manual effort. This capability ensures more accurate deliverables, rather than manual computations.

FREEDOM TO FOCUS ON DESIGN

You have the freedom to focus on design with better integration of information and teams with MicroStation's interoperable and scalable platform.

Localize and Add Geospatial Context to Projects

Integrate geospatial information from thousands of supported coordinate systems into your designs. Access data from Esri ArcGIS™ REST Feature and Map Services, OGC Web Map Servers, use real time GPS data, Microsoft Bing maps, and create and reference geospatial PDFs.

Incorporate Common Design Formats

MicroStation easily reads, shares, and consumes precise data in key industry formats such as Autodesk RealDWG™ (share and consume), IFC (read), Esri SHP (read), and more. You can aggregate and assemble multiple file formats including PDF, U3D, 3DS, Rhino 3DM, IGES, Parasolid, ACIS SAT, CGM, STEP AP203/AP214, STL, OBJ, VRMLWorld, SketchUp SKP, and Collada.

Incorporate Referenced Design Content

You can view and work with design information from others in real time using live referencing of 2D/3D DGN, DWG, and large image files, refreshed on demand. MicroStation can natively reference PDF files into your designs.

Integrate Point Clouds

MicroStation easily incorporates a wide range and scale of point cloud data into the design environment. You can visualize, render, and measure point cloud data to better understand existing conditions and speed dimensioning and modeling.

Integrate Raster Imagery

You can easily incorporate raster imagery of all types into your design, including aerial and satellite imagery, as well as scanned documents. MicroStation supports dozens of file formats including CALS, BMP, TIF, GeoTIFF, JPG, and many more.

Integrate Reality Meshes

You can incorporate realistic, photo-textured 3D models or reality meshes into your designs. These highly realistic models can be used directly in the design environment as the basis of your design and construction modeling for faster model production and improved quality.

Manage Design Changes

MicroStation tracks and helps you easily understand changes made to design files, even at the component level, throughout their lifecycle. You can view, plot, and selectively roll back any individual changes made throughout the history of a file.

Work in a Personalized Environment

You can confidently work in the right context for each project, because MicroStation automatically applies the required settings and standards. Personalized recommendations will help you get the most from your use of the software.

Extend and Customize Workflows

A wide range of capabilities for customizing the user interface will streamline your workflow and integrate with enterprise systems. You can develop solutions using Microsoft (VBA), .NET, C++, C#, Python as well as user-defined macros.