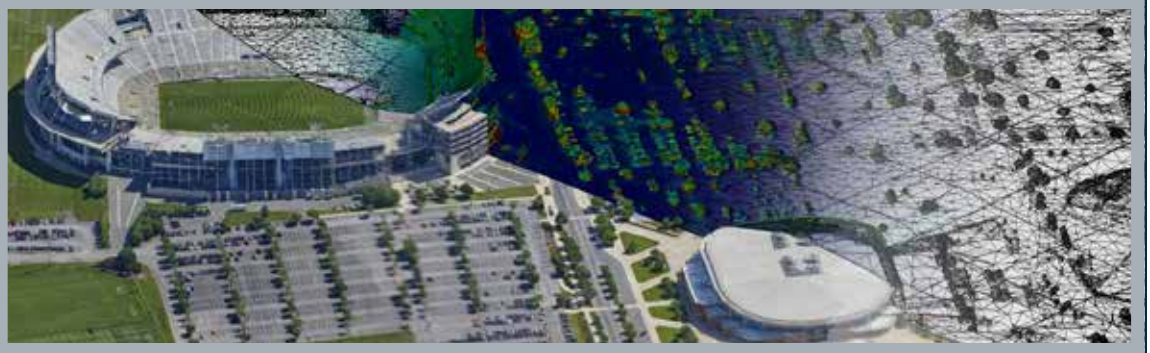
PRODUCT DATA SHEET

Bentley
Advancing Infrastructure

CONNECT Edition



Descartes CONNECT Edition

Advanced Processing for Reality Modeling Data

Descartes CONNECT Edition is a very powerful application for integrating and processing reality modeling data such as reality meshes, point clouds, scalable terrain models, and raster data for use in information modeling workflows.

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 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 mobile 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.

Work with Reality Meshes

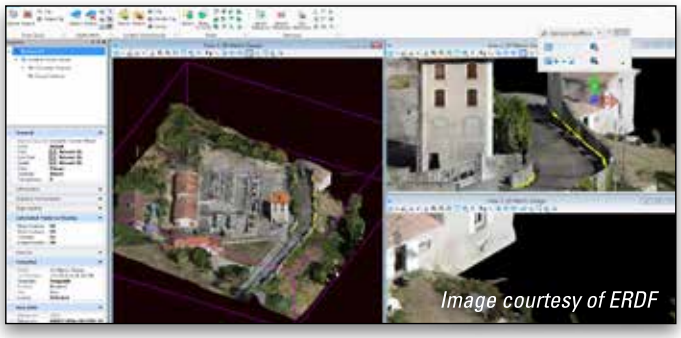
Reality meshes are rich, 3D scalable models of the real world, which are usually phototextured and automatically created from imagery (ranging from simple cell phone photos to high-end photogrammetric cameras) using Bentley's ContextCapture software. Descartes enables the fast and easy manipulation of meshes of any scale as well as the generation of cross sections, extraction of ground and breaklines, and production of orthophotos, 3D PDFs, and iModels. In addition, you can integrate your meshes with GIS and engineering data to enable the intuitive search, navigation, visualization, and animation of that information within the visual context of the mesh.

Work with Raster Images

Raster images in the form of aerial imagery, binary imagery, and raster digital elevation models (DEM) are fully supported in Descartes. It is a comprehensive image management environment with conversion (raster to vector and vector to raster), cleanup, and editing tools that extend the MicroStation® raster management tools.

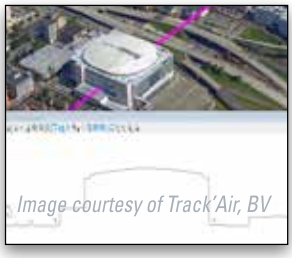
Work with Point Clouds

Point clouds can be enriched, segmented, and classified and combined with engineering models. You can then leverage Descartes' capabilities for advanced 3D modeling, cross sectioning, breaklines, and ground extraction to quickly and efficiently model as-built conditions and support the design process. You can better evaluate point clouds and produce more accurate engineering models as a result. Animations and renderings for presentation can also be produced.



Speed breakline extraction from point clouds and meshes

Automatically perform ground extraction from meshes and point clouds



Easily generate cross sections

Produce and Work with Large, Scalable Terrain Models

You can produce very large scalable terrain models from many sources including point clouds, breaklines, raster digital elevation models, and existing triangulated irregular networks. Scalable terrain models are synchronized with the original data sources to remain up to date. This allows you to have a global, current, and integrated representation of all your data to perform analyses using a variety of display modes and to produce animations and visualizations.

Ensure Interoperability

With support for a wide range of reality modeling and engineering data types, you can take full advantage of your investment in existing data and get a more complete integrated view of your information. You can also streamline the production of deliverables in most standard industry formats for use in other applications.

System Requirements

Processor
Intel Pentium-based or AMD Athlon-based processor 2.0 GHz or greater

Operating System
- Windows 10 (64 bit) - Home, Pro, Enterprise, and Education
- Windows 8 (64 bit) - Standard, Pro, and Enterprise
- Windows 8.1 (64 bit) - Standard, Pro, and Enterprise
- Windows 7 SP1 (64 bit) - Home Basic, Home Premium, Professional, Enterprise, and Ultimate

Internet connectivity is required to install the product and use some of its features.

Memory
4 GB minimum, 16 GB recommended, (more memory typically results in better performance)

Disk Space
10 GB minimum free disk space

Find out about Bentley at: www.bentley.com

Contact Bentley
1-800-BENTLEY (1-800-236-8539)
Outside the US +1 610-458-5000

Global Office Listings
www.bentley.com/contact

Descartes CONNECT Edition At-A-Glance

Reality Mesh Support
- Display of very large, phototextured reality meshes produced using ContextCapture
- Editing of meshes (remove facets, fill holes)
- Automatic ground extraction
- Breakline extraction
- Efficient 3D modeling by using sections and templates
- Mesh classification to enrich mesh with data from many sources
- Orthoimage extraction on any axis
- Generation and manipulation of cross sections
- Production of 3D PDFs and iModels
- Tools' support of streamed reality meshes

Raster Image Processing
- Fast display and management of large raster images
- Vector to raster conversion
- Raster to vector conversion
- Retouch color raster images
- Cleanup binary raster images
- Register raster images
- Manage display of raster mosaics
- Generation of orthophotos
- Thematic display of Digital Elevation Models

Point-cloud Processing
- Fast display and visualization of billions of points
- Drape and snap elements
- Classification editing
- Smart Snap
- Batch tile export
- Pointools, POD, LAS, and XYZ file export
- Extraction of planar and cylindrical elements
- Linear feature extraction
- Re-color points for flexible presentation
- Class management for any type of presentation style
- Definition of custom classes
- Point-cloud colorization from orthophotos
- Clip and section manager
- Support of geographic coordinate systems

Scalable Terrain Modeling
- Creation of scalable terrain models (STMs)
- High-performance display of very large digital terrain models (DTMs)
- Display modes for smooth shading, smooth shading with shadows, aspect angle, elevation, slope, contours
- High-resolution image draping on STM
- STM update and synchronization with DGN files, civil DTMs, point-cloud data, and XYZ files
- Calculate view shed from point or path

Raster Data Interoperability
- ECW (unlimited), PDF, IMG, JPEG 2000, BIL, DOQ, FLI, SPOT CAP, and Digital Image Map
- TIFF (1-to 32-bit), GEOTIFF, iTIFF, COT, CIT, RLE, CALS, PCX, IMG, BUM, TG4, INT, RGB, TGA, JPEG, RLC, RS, HMR, BMP, and IKONOS 3 (Red), and 4 (NIR) bands from GeoEye
- Compression schemes: Deflate, Pack-Bits, CCITT3, CCITT4
- Support for lossless compression formats: ECW, MrSID, and JPEG 2000

Visualization
- Image draping on DTM
- MicroStation-based rendering
- Real-life textures
- Lighting effects
- Elevation and perspectives
- Creation of fly-throughs and animations
- Creation of 3D PDFs
- Support for engineering data, point cloud, reality meshes
- Seamless integration with LumenRT for real-time, immersive presentations
- Support for traffic animation
- Solar and shading analysis
- Thematic visualization of elements based on height, slope, and aspect angle

You can drape aerial photographs on scalable terrain models.

Perform visual analyses like solar studies

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