TOPCON

CONTEXTCAPTURE

UAS DATA PROCESSING SOFTWARE
FOR 3D REALITY MODELING





Reality Modeling Software for UAS Data

Topcon ContextCapture, powered by Bentley, is an ideal software solution for any scale of infrastructure project throughout the design, construction, and operations phases. Its power, flexibility and scalability turn simple photographs into true-to-life, highly detailed 3D models quickly and precisely. The system offers leading design construction, mapping and surveying professionals the ability to generate high-resolution and photorealistic 3D models.

Create 3D precise models from simple photographs

Cost effectively produce 3D models of the most challenging existing conditions for any infrastructure project, using photographs taken with the Sirius or Falcon 8 UAVs.

With ContextCapture Standard, quickly create highly detailed 3D reality meshes, point clouds, DEMs and orthophotos to provide precise real-world context for design construction, and operations decisions for use throughout the lifecycle of projects. With ContextCapture Advanced, take full advantage of all project data by integrating reality meshes, point clouds, raster files and legacy documentation into your infrastructure workflows.

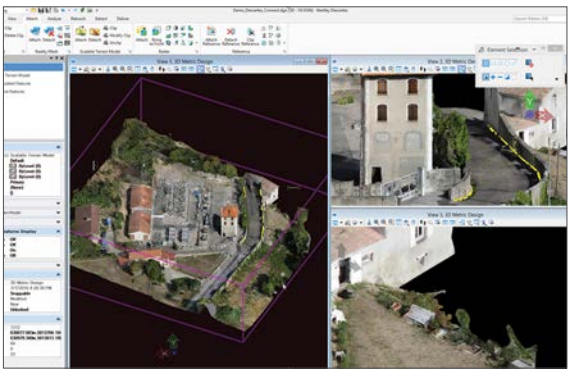
Model any scale project

Confidently and reliably deliver highly detailed models of any scale – faster than previously possible with Topcon ContextCapture's use of general-purpose computation on graphics processing units (GPU) as well as multi-core computing. Topcon ContextCapture can process as much as 15 gigapixels per day, per computer.

Integrate georeferenced data

Topcon ContextCapture also natively supports several types of positioning data including GPS tags and control points. Precisely measure coordinates, distances, areas, and volumes. Sirius Pro RTK photo positions lead to accurate results automatically.





Integrate models into any workflow

Access and share rich photo-textured 3D models of existing conditions in any CAD, inspection, asset management, GIS or survey workflow on desktop and mobile devices, in many formats.

Perform automatic aerotriangulation/reconstruction

Once the relative position and orientation of each photo has been automatically identified, you can make fine adjustments to the aerotriangulation results by adding control points and editing tie points to maximize geometric and geospatial precision. The optimized 3D reconstruction algorithms produce engineering-precision 3D models and photo texturing of each mesh facet with unmatched accuracy. Topcon ContextCapture recovers finer details and sharper edges with fewer artifacts, significantly improving geometric accuracy.

Generate 2D and 3D models

Produce accurate georeferenced 3D models in a full range of formats including meshes, point clouds, true orthophotos and the new I3S format from ESRI, with tiling. You can select from more than 4,000 spatial reference systems and add user-defined selections. Topcon ContextCapture automatically adapts the resolution and spatial distribution of input photographs. It can handle scenes with non-uniform resolution without requiring trade-offs in the overall efficiency in order to preserve several higher resolution scene regions.



Publish and view web-ready models

Produce models of any size that are optimized for Web publishing using the Topcon ContextCapture native 3MX format or the Cesium GIS open format with a browser. This enables instant sharing and visualization of 3D models with any stakeholder.

Minimum Hardware Requirements	
RAM	8GB
Graphics Card	Nvidia or AMD graphics card, or Intel integrated graphics processor compatible with OpenGL 3.2 with at least 1GB of dedicated memory
Recommended Hardware	
Operating System	Microsoft Windows 7/8/10 (Professional 64-bit)
RAM	16GB
CPU	8-core
Graphics Card	Nvidia GeForce GTX 780 Ti
Storage	Fast HDD, SSD or SAN

ContextCapture Standard	ContextCapture Advanced
Processing	
Falcon 8 and Sirius Basic/Pro data	Falcon 8 and Sirius Basic/Pro data
	Processing of third party UAV data
	Processing of other camera data
Maximum project size	
150 gigapixel	300 gigapixel
Data export	
mesh (OBJ only), point cloud, ortho, DSM	mesh, point cloud, ortho, DSM
AT quality report	KML, ESRI I3S/I3P
	AT quality report
Viewer	
Model Viewing	Model Viewing
Flythrough creation	Flythrough creation
Distance, area and volume measurements	Distance, area and volume measurements
Analysis and Editing (provided by Bentley CC Editor)	
	Data editing, line work creation
	Cross sections, contour lines
	DTM extraction
	Solid modeling

Bentley and the "B" Bentley logo are registered or non-registered trademarks of Bentley Systems, Incorporated.

Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Esri are trademarks, service marks, or registered trademarks or service marks of Esri in the United States, the European Community, or certain other jurisdictions.

Other companies and products mentioned herein may be trademarks or registered trademarks of their respective trademark owners.

TOPCON

For more information:
topconpositioning.com/contextcapture

Specifications subject to change without notice.
©2017 Topcon Corporation All rights reserved.
7010-2229 A 2/17