



PhotoScan

Fully automated professional
photogrammetric kit

Agisoft PhotoScan is a stand-alone photogrammetric software solution for automatic generation of dense point clouds, textured polygonal models, georeferenced true orthomosaics and DSMs / DTMs from still images.

Based on the state-of-the-art technology developed by Agisoft, it allows for **very fast** processing (typically within a couple of hours), providing at the same time **highly accurate** results (up to 3cm for aerial, and up to 1mm for close-range photography).

Agisoft PhotoScan is capable of processing of **thousands of photos**, yet all the **processing is performed locally**, without the need to transmit the data outside the company, making it ideal solution for processing of sensitive data.

The software package has a linear **project-based workflow that is intuitive** and can be easily mastered even by a non-specialist, while professional photogrammetrists have **complete control over the results accuracy**, with detailed report being generated at the end of processing.



[CGPress Editor's Choice Award](#)



[3D World Highly commended](#)

Advantages



01. Highly accurate and detailed results
02. Fully automated and intuitive workflow
03. GPU acceleration for faster processing
04. Network processing for large projects
05. Reasonably powerful Standard edition for art projects
06. Easy sharing with PDF export and direct upload to online resources

Capabilities



01. Aerial and close-range triangulation
02. Dense point cloud generation and classification
03. True orthomosaic and DSM / DTM generation
04. Orthomosaic seamline editing
05. Elevation contour lines generation
06. Georeferencing using flight log and / or GCPs
07. Coded and non-coded targets auto detection
08. Coordinate / distance / area / volume measurements
09. Multispectral imagery processing and vegetation index calculation
10. Polygonal model reconstruction and texturing
11. Hierarchical tiled model generation and visualization
12. 4D reconstruction for dynamic scenes
13. Spherical panorama stitching
14. Built-in Python scripting for job automation
15. Headless operation support

Compatibility



01. Processes images from frame / fisheye / spherical / cylindrical cameras
02. Exports results in widely supported formats
03. Works well with most UAVs
04. Supports most EPSG coordinate systems and configurable vertical datums
05. Runs on Windows, Mac OS X, Linux



Build

Photorealistic, highly detailed 3D models, classified dense point clouds, fine resolution DEMs generated with Agisoft PhotoScan can be used in a wide range of applications, from visual effects industry to engineering projects

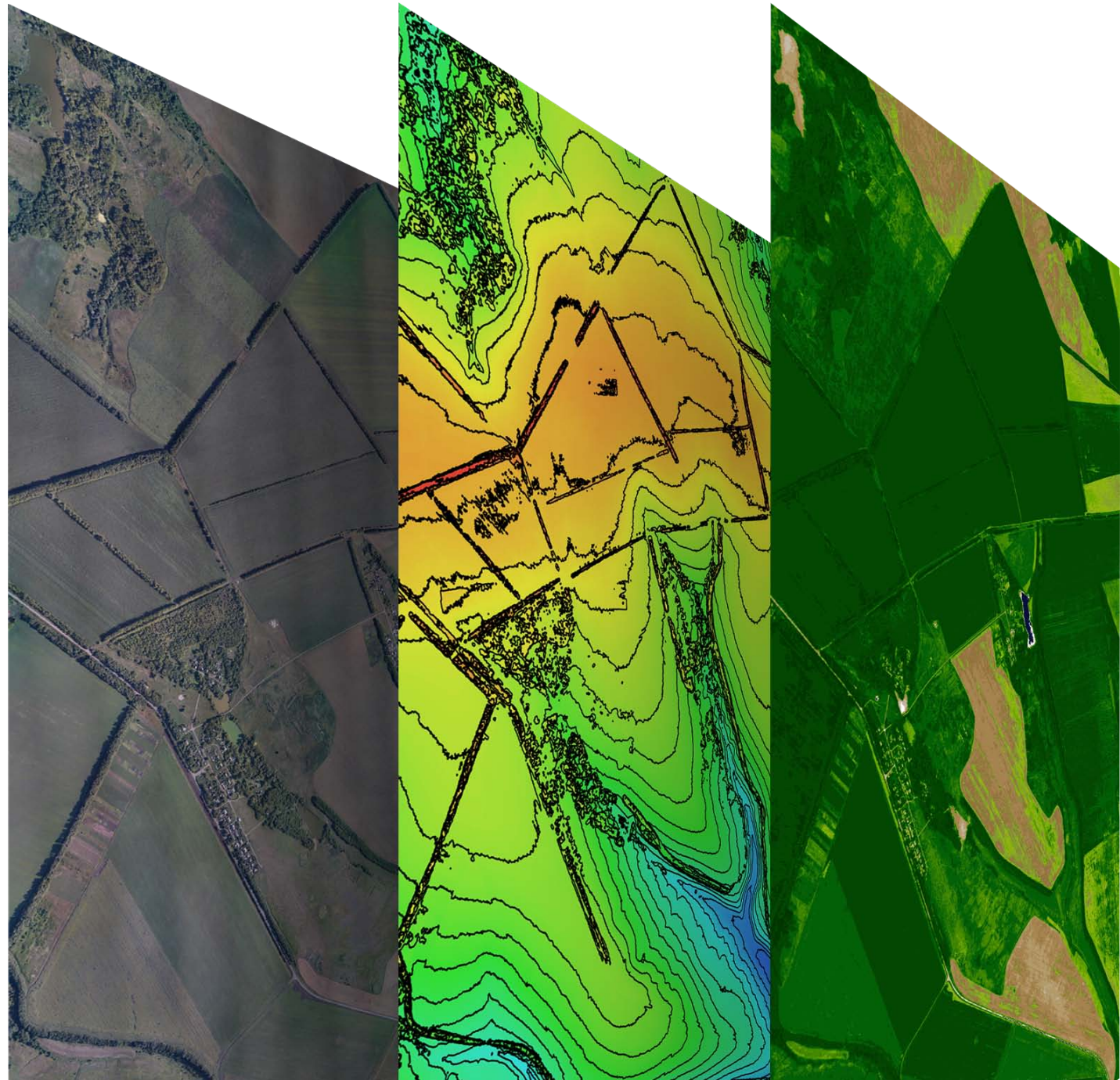
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Measure


High accuracy of polygonal models and DSMs reconstructed with Agisoft PhotoScan guarantees precise area and volume measurements. Multispectral imagery processing and NDVI index calculation support make it a valuable tool for precision agriculture projects

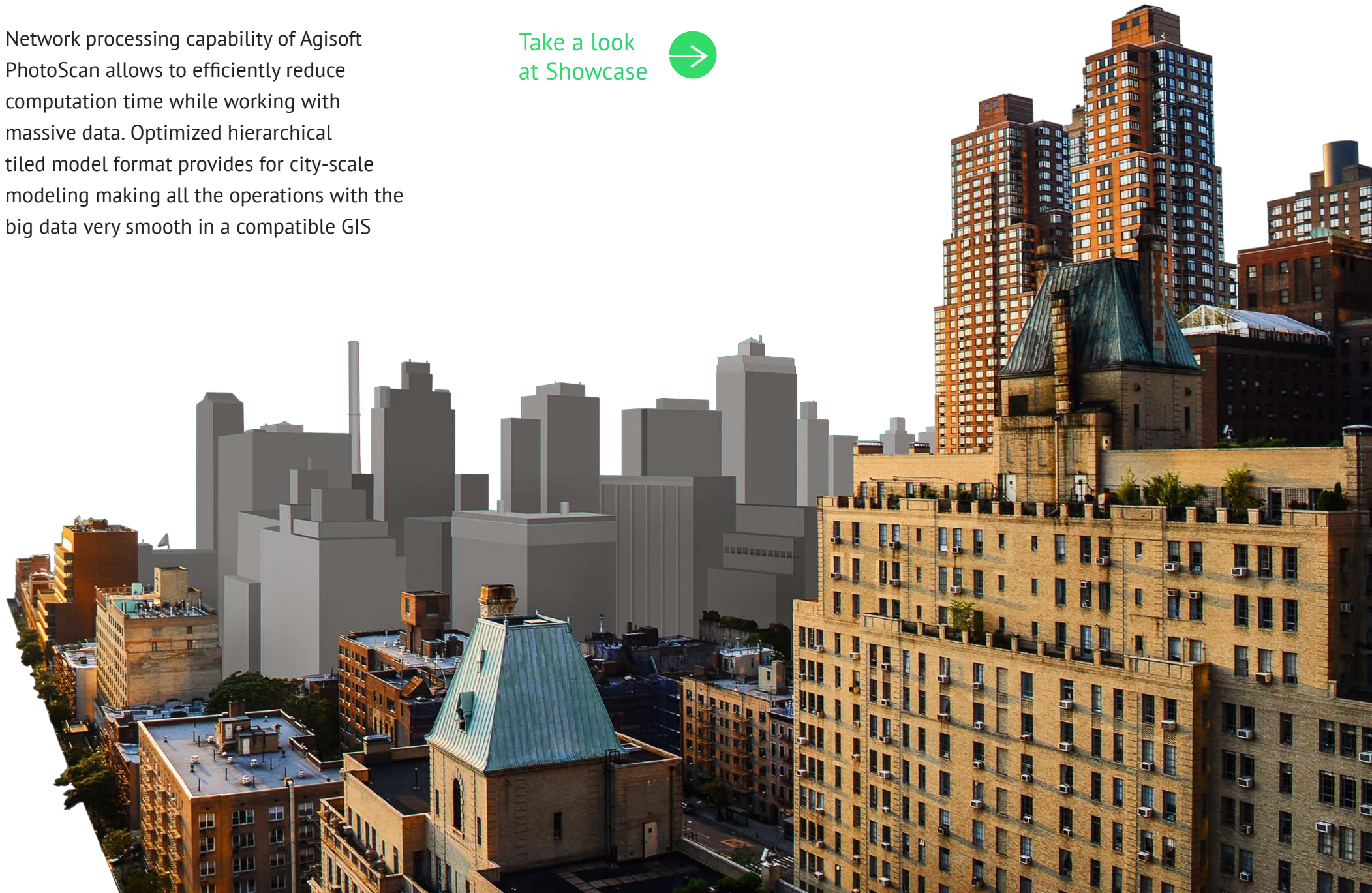
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Visualize

Network processing capability of Agisoft PhotoScan allows to efficiently reduce computation time while working with massive data. Optimized hierarchical tiled model format provides for city-scale modeling making all the operations with the big data very smooth in a compatible GIS

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Surveying and Mapping

Seamless orthomosaic

PhotoScan is a perfect tool for aerial imagery processing. The functionality of the program is being constantly developed according to the tasks set by rapidly emerging UAS industry.

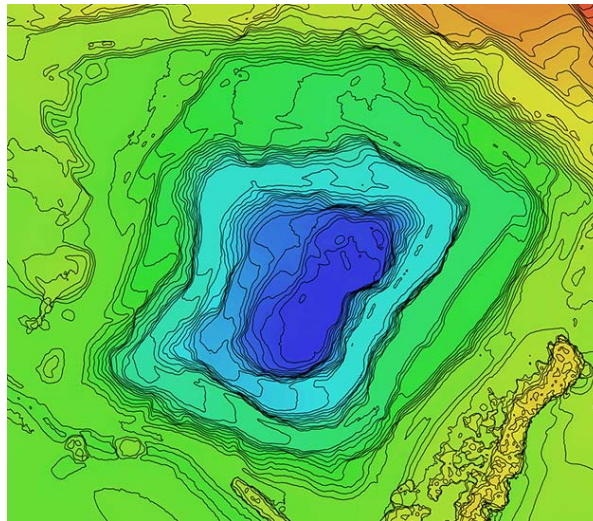


PhotoScan has proved to be a professional level post-processing tool capable of dense point clouds generation and classification for further exceptionally detailed DSMs/DTMs calculations and high-resolution seamless orthomosaics export, not to mention reconstruction of precise polygonal models of large scale objects. It is an indispensable part of the GIS workflow starting with a UAV system.

Mining and Quarrying

Highly accurate measurements

Highly accurate DEMs produced by PhotoScan lay the grounds for precise area and volume measurements, both for excavations and piles. Once multiple flights performed at different time moments, PhotoScan allows for volume change tracking, soil erosion and glacier studies.



Automatic non-coded targets detection capability saves up on human work in inspection projects done on a regular basis.

Precision Agriculture and Environmental Management

Customized vegetation index calculation

With support for panchromatic, multispectral and thermal imagery, PhotoScan seamlessly integrates into workflows involving processing of data from diverse sources, like vegetation and soil analysis, fires and night studies, etc.



Vegetation indices calculation according to a user-defined formula allows to analyze crop problems and generate prescriptions for variable rate farming equipment.

Archaeology and Documentation

Works well with consumer camera

Archaeology more and more often relies on photogrammetric approaches today, be it a need to model an artifact or a demand for an excavation mapping.



Thanks to the capability to process imagery from any digital camera, PhotoScan is widely used in various archaeological projects both up in the mountains and deep under the water, including special researches like a greenery pattern study to find ancient ruins under the ground or a rock art documentation and analysis project.

Architecture and Cultural Heritage

Oblique imagery support

Numerous projects prove that PhotoScan is a quality tool to solve the tasks of facade and building modeling.



With support for oblique imagery processing, PhotoScan allows to reconstruct the whole building, which can be employed for virtual tours creation, with reconstruction results being exhibited as illustrative models of large-scale cultural heritage objects. 3D models of partially ruined monuments and artifacts generated with PhotoScan present reliable basis for restoration works thanks to exceptional accuracy of reconstruction results.

Visual Effects and Game Design

Photorealistic texture

Thanks to being highly detailed and photo-realistic, PhotoScan models meet the strict requirements of professional animation studios, which successfully employ the software for movie and game production.



Face and body capture results, being among the most demanded ones, prove that PhotoScan potential goes beyond one's imagination.

Agisoft PhotoScan 1.3

More efficient and more customizable

Agisoft PhotoScan version 1.3 presents more efficient workflow for all kinds of applications: from engineering field to visual effects industry. Image based shape drawing allows to enhance accuracy in CAD-drawing applications. Headless operation support opens ways for smooth integration of the photogrammetric software in various data processing workflows, while floating licenses can serve as the proper tool for efficient management of corporate resources.





New features

Image based shape drawing with automatic marker projection refinement feature enable engineers to easily create CAD-drawings of high accuracy for whatever type of object they like. Customizable shape styles add for usability of this functionality.

Rolling shutter compensation support extends software applicability for data captured with consumer cameras.

Advanced Raster Calculator with false color support provides new opportunities for multispectral data visualization and export.



Algorithmic Improvements

Optimized dense cloud generation reduces processing time while preserving more details in low textured regions.

Visual effects industry could benefit from **improved texture blending** in mosaic mode, which generates outstanding photorealistic texture without manual intervention.



Customizable User Interface

PhotoScan 1.3 introduces **new GUI themes**: classic, dark, light. Further customization is supported with adjustable camera size and various appearance settings. **Several handy features** are aimed at enhancing user experience, like grouping of markers and scale bars in Workspace pane, unified contour lines and shapes handling, raster interpolation options for photo and ortho views and improved cursor.



Extended Scripting Support

Professional version of PhotoScan 1.3 software can be used to execute Python scripts from the command line, which simplifies PhotoScan integration in customized workflows.

Advanced Python console makes automation script development and debugging easier and friendlier.



More Coordinate Systems

- Coordinate system editor
- Support for OSGB36 coordinate system
- Geocentric coordinate systems support

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