

# Agisoft Metashape Pro and 3D PluraView monitors enable 3D-stereo photogrammetry at its best

*Agisoft Metashape Pro and 3D PluraView monitors - digital 3D photogrammetry at its best*

MIESBACH, BAVARIA, DEUTSCHLAND, July 13, 2023 /EINPresswire.com/ -- As a specialist in stereoscopic 3D hardware and visualization solutions with a global reach, Schneider Digital has been in close contact with the software company Agisoft for many years. Agisoft is considered a pioneer in the development of UAS and terrestrial photogrammetry solutions. From 2019 onwards, the company accelerated their functionality development for stereoscopic display and editing functions, due to rapidly growing customer demand. The 3D-stereo viewing and editing capability is especially important for UAS service providers for feature collection and in the creation and processing of dense 3D point clouds and textured building models.



3D stereo photogrammetry at the highest level: certified symbiosis of software and hardware with Agisoft Metashape Pro and 3D PluraView stereo monitor enables best viewing comfort in excellent 3D quality.

Since the June 2020 release (1.6.3), Agisoft has been integrating a number of important 3D-stereo functionality in Metashape Pro to convert digital images into detailed, completely textured 3D models. While the standard version of Metashape is sufficient for basic, non-geodetic requirements and smaller projects, the Pro version is very well suited to create extensive, georeferenced 3D GIS datasets, enabling also interactive stereoscopic digitization. With the Pro version, up to 50,000 images of a physical object or geographical area can be integrated and processed in a coherent image block. The rigid 3D bundle block adjustment enables tens of thousands of users of Metashape Pro to solve any kind 3D reconstruction, visualization, surveying, and mapping task efficiently and with maximum precision.

Due to its achievable accuracy, the software is used for UAS and aerial image triangulation, as well as for the processing of satellite images. Metashape Pro is also handling the creation of elevation models and processes terrestrial laser-scanning data, where objects are directly mapped and reconstructed with dense and precise 3D point clouds. At the heart of Metashape Pro are computationally intensive and precise reconstruction algorithms for the three-dimensional calculation and display of georeferenced objects, originally captured as densely matched surfaces by image sensors and as point clouds, originating from professional LiDAR equipment.

The Future of [Geospatial Data](#) is 3D-stereo visualization

Metashape Pro is definitely one of the most comprehensive photogrammetric software applications existing today. However, only in combination with high-performance hardware components, the real-time measurement, visualization and analysis of 3D datasets can be performed efficiently and true to reality. Key functionality elements are the stereoscopic visualization, 3D feature capture and connectivity to very large GIS databases. With the dual-screen [3D PluraView](#) displays, Schneider Digital provides the optimal desktop solution for stereoscopic viewing and data editing. With display sizes up to 28" and 4K resolution per screen, the passive beam-splitter technology provides a daylight-usable, bright and otherwise unequalled, contrast-rich display of high-resolution GIS and BIM datasets.

Agisoft Metashape Pro allows for the reliable and precise processing of very large datasets and has become an indispensable part of workflow processes for many geospatial experts. UAS systems today may capture image series with several thousand images and resolutions reaching 1cm and less. In terrestrial close-range imaging even less than 1mm pixel size is achievable. Terabyte-sized datasets can be calculated with Metashape Pro and the right processing hardware without any problems. The capability to process large datasets with ultra-high resolution is routinely used in the digital reconstruction of buildings and terrain models. A notable application being archeology, when recording and reconstructing cultural sites and assets.

With Metashape Pro, 3D models can also be recorded multiple times and displayed as a 4D time series. Due to its ability to realistically display geospatial background data together with highly detailed building models, Metashape Pro is also the ideal software for surveyors and architects. The main functionalities of this software solution are:

- To load and process diverse geospatial datasets, especially from aerial imaging and LiDAR sensors
- To positionally adjust, rigidly triangulate thousands of aerial images in photo blocks
- To geocode digital images, topographic maps, point clouds, CAX data integration
- To provide a comprehensive tool-set for stereoscopic feature collection and GIS-based attribution
- To auto-correlate digital terrain surfaces (DSM) and provide tools for editing, creating DTM output

- To adjust image data radiometrically and generate seamless, orthorectified mosaics
- To convert geospatial 3D data into various projections and height reference models
- To provide processing workflows for multispectral (thermal) UAS and aerial images
- To process LiDAR point cloud data and co-register with positionally accurate objects
- To integrate panchromatic and multispectral satellite images for geocoding and feature collection
- To generate textured and geocoded 3D models of objects and buildings

Best viewing comfort with excellent 3D quality

For the past 16 years, the passive beamsplitter monitor technology of the [3D PluraView monitors](#), especially in the geographic information industry, has been the reference with the highest user satisfaction and user acceptance among all stereoscopic display systems. As a further developed successor to the beamsplitter monitors from PLANAR, very large amounts of data can be spatially visualized in the highest resolution with up to 4K / UHD per stereo channel. Especially on the 4K displays, the image quality is so extraordinary that even finely textured objects are being displayed razor-sharp and rich in contrast, down to the smallest detail. At the same time, the passive 3D PluraView monitors are particularly durable and reliable. They deliver the substantial benefit of being able to work fatigue-free in all 3D stereo applications, even in normal office daylight conditions. Due to the passive 90° linear polarization filter glasses, which require a screen each for the left and right stereo image, the 3D PluraView monitors are absolutely flicker-free and completely independent of the room's light source. All of the 3D PluraView models are 'plug & play' compatible with the software application Metashape Pro. These 3D displays support professional software applications with high refresh and smooth image motion, combined with high color depth and contrast. The reliable 3D PluraView technology from Schneider Digital is the basis for precise, stereoscopic display capabilities of the highest quality. As a stereo-capable software solution, Agisoft Metashape always utilizes the full performance potential of each workstation. This ideal combination and the compatibility of the Agisoft Metashape Pro software with the 3D PluraView monitors has now been officially certified by Schneider Digital.

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