GEOSYSTEMS
THE GEOSPATIAL EXPERTS

IMAGINE UAV FOR ERDAS IMAGINE®

- **Photogrammetric processing of UAV Data in ERDAS IMAGINE.**
- **End-to-end workflow for UAV data.**

The amount of data being captured is increasing exponentially. This leads to the rise in demand for systematic, automatic, batchable processes that increase efficiency and return on investments. With this unified solution, you no longer need multiple vendors, interfaces, or viewers for an end-to-end UAV workflow from raw data to the creation of critical business information.

IMAGINE UAV derives automatically high-quality geoinformation from your UAV data. The required products of an UAV survey such as point cloud, orthomosaic, digital elevation model (DSM) and 3D mesh are available within some hours. The IMAGINE UAV workflow is an ERDAS IMAGINE Spatial Model and available as add-on module. IMAGINE UAV uses Agisoft PhotoScan algorithms and embeds PhotoScan in ERDAS IMAGINE.

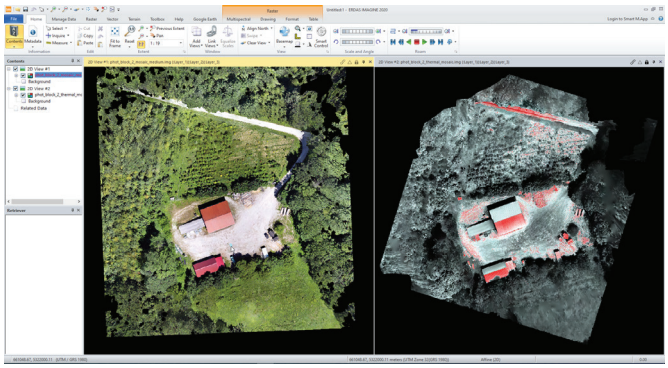
Efficient: No more transitioning between vendors and packages for creating DSMs, point clouds and mosaics for analytics. Bypass bottlenecks and issues with formats, projections, and more with a unified solution.

Batchable: Repeatability, accuracy, efficiency, and fast data creation utilizing the full potential of your hardware's processing power.

End-to-end workflow with IMAGINE Professional: Append additional spatial model operators for added functionality to the IMAGINE UAV spatial model or a full analytical solution, i.e. create NDVIs, classify point clouds, calculate volume and more.

WHO BENEFITS FROM IMAGINE UAV?

- **As user of IMAGINE Essentials** you generate fast and automatically classical UAV products in the easy-to-use IMAGINE environment you are familiar with.
- **As user of IMAGINE Professional** you not only produce UAV products but also generate an end-to-end workflow from raw data to the creation of critical business information.
- **If you are not yet using ERDAS IMAGINE,** you are provided with a complete system environment for operational UAV data processing enabling you to produce, visualize, analyze and share critical spatial information.



Orthophoto-Mosaik RGB und thermal.

„Everything works perfectly. It took IMAGINE UAV 20 minutes to process all 69 photos. It works on all 8 cores of my CPU. I'm really excited." - *Rafal Dabrowski (GEOSYSTEMS Polska)*

FEATURES

- Extraction of tie points
- Image orientation (Generic Orientation Editor)
- Calculation of point cloud
- Calculation of "true" orthomosaic
- Calculation of digital surface model and 3D mesh

OUTPUT FORMATS

- Point cloud (e.g. Wavefront OBJ, Stanfort PLY, ASPRS LAS, LAZ, Potree, Cesium)
- Orthomosaic (TIFF, ECW, JPEG2000, IMG)
- Digital surface model (TIFF, IMG)
- 3D mesh (e.g. Wavefront OBJ, VRML, COLLADA format, Stanfort PLY, Autodesk FBX, Google Earth KMZ)
- 3D tiled mesh (e.g. Cesium 3D Tiles, Scene Layer Package format, PhotoMesh Layer)
- Block file (BLK) incl. tie points
- Further formats for photogrammetric software (e.g. Bundler, Omega Phi Kappa, PATB, BINGO, ORIMA, Inpho, VisionMap)

HIGHLIGHTS

Marker support: Agisoft markers are supported which enable the automatic detection and measurement of ground control points. This enhanced technology provides a higher accuracy for the aerial triangulation.

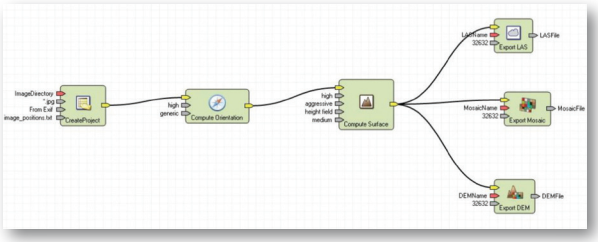
Tie points inclusion in the IMAGINE Photogrammetry block file export: The integration of measured tie points improves the post processing quality in IMAGINE Photogrammetry.

Hyper- and multi-spectral image support: All input images are used in the mosaic creation and allow mosaicking without limitations.

Incomplete orientation data: Images having partial missing information can be included in the overall calculation.

FURTHER PROCESSING

IMAGINE UAV is built as Spatial Model within ERDAS IMAGINE (s. illustration below). Append additional spatial model operators and built a customized automated analytical solution. An exemplary application is the volume calculation of excavated material during a building project (s. illustration on the right).



The Spatial Model of the IMAGINE UAV workflow in ERDAS IMAGINE

Volume calculation, realized in a Hexagon Smart M.App

Please note: This further processing is not part of the IMAGINE UAV functionality but of IMAGINE Professional.

To execute the IMAGINE UAV Spatial Model, IMAGINE Essentials is sufficient. To build an end-to-end workflow, you will need IMAGINE Professional. Further information: www.imagine-uav.com.

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Hexagon Platinum Partner

GEOSYSTEMS is a software vendor and service partner for geospatial solutions and helps public authorities, private companies and educational organizations to easily transform location-based data into actionable information. As Hexagon platinum partner, GEOSYSTEMS offers not only leading-edge products for remote sensing, photogrammetry, GIS and data management, but also Hexagon Smart M.App solutions for easy-to-use dynamic map experiences. In addition, GEOSYSTEMS develops customized applications, implements tailor-made workflows and provides excellent trainings.

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