

VEXCEL
IMAGING

ULTRAMAP V4

From raw data to high value information





ULTRAMAP V4

Streamlined Efficiency



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ULTRAMAP CUSTOMER

UltraMap is the state-of-the-art photogrammetric workflow system that provides highly automated processing capabilities allowing organizations to rapidly generate quality data products from an UltraCam flight.

UltraMap is designed to process huge amounts of UltraCam data in the shortest possible time with the highest degree of automatization, supported by guided manual interaction, quality control tools and powerful visualization.

The newest version, UltraMap v4 continues the innovation trend through several enhancements: The UltraMap team completely overhauled the project workflow and data management and implemented one application for all UltraMap modules. This leads to a simple and more intuitive user interface

allowing for excellent interaction possibilities with even bigger data sets. Additionally, the new UltraMap v4 interface enables the easy and detailed visual analysis of big blocks and improved aerial triangulation results.

UltraMap v4 also provides an advanced radiometry module featuring a simultaneous project-based color balancing and de-hazing of oblique and nadir imagery as well as flexible radiometric adjustments through interactive user guidance.

“Our new generation of true ortho images and digital surface models are second to none in terms of accuracy, evenness and speed of production. It is important for us to get data from the camera to the customer as quickly as possible.

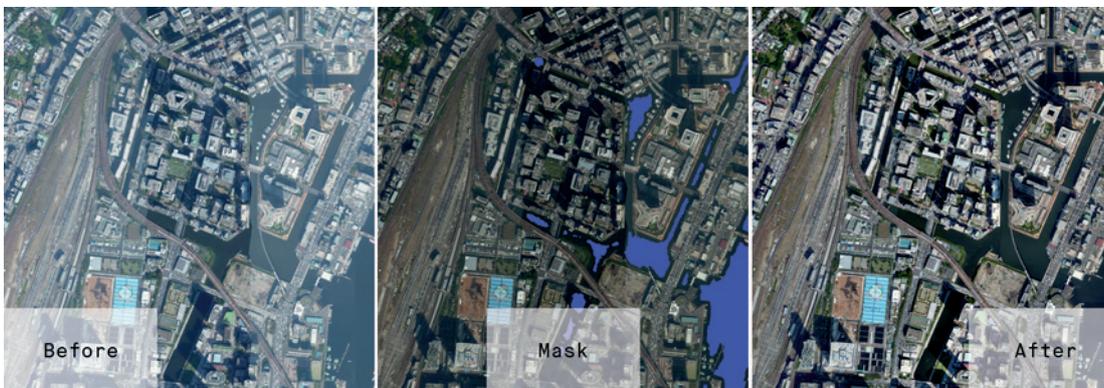
UltraMap enables this.”

NEW APPROACHES

The revised UltraMap v4 boosts the overall quality of all UltraCam aerial products to an unmet level.

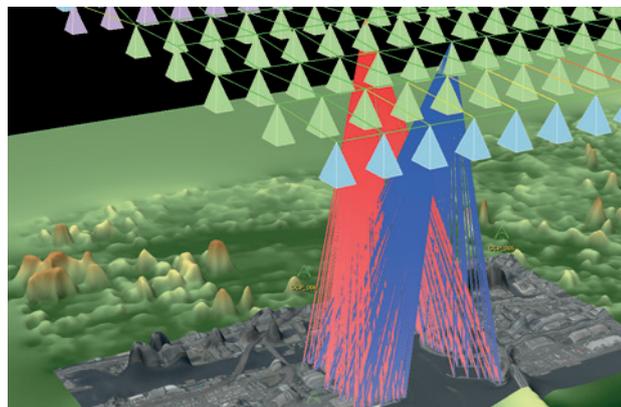
COLOR BALANCING

Automated nadir & oblique color balancing and de-hazing at best quality through a detailed radiometric correction mask based on the dense surface. A preview of the deliverable product is available already in ortho space.



GUIDED PRODUCTION WORKFLOW

The new interface and software design allows you to keep track, modify or repeat any of your data processing workflow steps.



INTERACTION WITH PROJECT DATA IN 3D

The new data interaction approach in 3D is based on meta-data and allows handling of huge projects: Load image content only on demand and inspect and adjust AT data in real-time.



QUALITY DATA GENERATION

UltraMap Modules

The end-to-end UltraMap workflow consists of five consecutive modules and provides premium UltraCam data processing from ingest of raw data to delivery of point clouds, DSMs, ortho imagery and 3D textured TINs.

The UltraMap/OrthoPipeline module generates the final ortho mosaic from all available inputs such as level-2 imagery, AT results, radiometric settings, and height field. Two different ortho images can be generated: DSMOrthos and DTMOOrthos (based on an internally generated DTM).

The UltraMap/DenseMatcher module creates high-density point clouds and DSMs from level-2 images by extrapolating precise exterior orientation data to generate per-pixel height values. The 3D point cloud and the DSM data can be exported in standard file formats for further 3rd party processing.

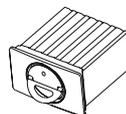
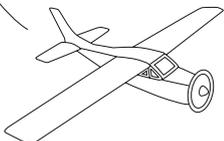
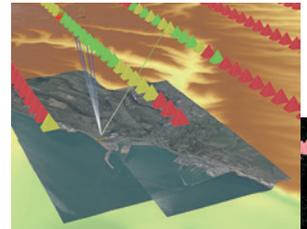
ULTRAMAP DENSE MATCHER

The UltraMap/Aerial Triangulation (AT) module provides an interactive workflow while calculating image correspondences in order to generate a precise exterior orientation for an entire image block by means of a least-squares bundle adjustment.

ULTRAMAP AT

The UltraMap/Essentials module is responsible for applying the camera calibration and postprocessing the images to file formats that can be used for further processing steps.

ULTRAMAP ESSENTIALS



Data Import



Radiometrically aligned images
(PAN, RGBI, RGB, CIR)

UltraMap is shipped with a technology preview enabling basic automated 3D textured TIN functionality. The package provides the 3D data generation as well as an interactive view and export module.

ULTRAMAP

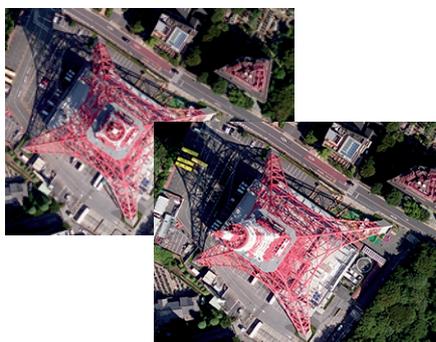
3D



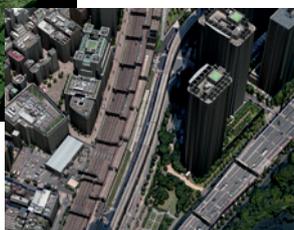
3D textured TIN, next generation 3D point clouds

ULTRAMAP

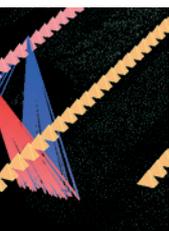
ORTHO PIPELINE



DSMOrthos and DTMOrthos



DSMs and 3D point clouds



Exterior orientations

ULTRAMAP
SUBSCRIPTION
PLAN

Your perfect match

Cost-effective, just-in-time UltraMap processing: The UltraMap subscription plan offers licensing UltraMap modules on a monthly basis. Use and pay for a specific UltraMap module or add processing power when you need it to get a job done.

Or choose the "lifetime subscription" that provides ownership of the software for an unlimited period of time.

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