

ULTRAMAP



UltraMap V2.2 Feature List

Major Features



Framework 2 (new)

- Configuration & management of UltraMap nodes (computers)
- **New – Cluster management**
- Robust communication between UltraMap nodes (computers)
- Management & distribution of jobs/tasks
- Automated load balancing and flexible control of job & task execution
- **New – Sequential and interleaved job/task execution mode**
- **New – Extended job/task dispatching options based on execution order and priority**
- Multi-core task processing on each UltraMap node (computer)
- Management of central directory resources
- **New – Archiving of finished jobs (history)**
- Management and verification of camera calibrations
- Monitoring of job & task execution
- Monitoring of system status
- Integrated version check
- License management
- **New – More detailed task execution status result**
- **New – Improved visualization and functionality of Job & System monitors.**
- “One-click” system report generation for local UltraMap node and complete UltraMap system



Raw Data Center

- Full support of download and process02 workflow
- Verified download (dump or copy) with optional backup.
- Verified copy with process02 workflow.
- Distributed processing from Level-0 to Level-2 based on new “Monolithic Stitching” aerial processing core (APC).
- Full support for UltraCam D, L, X, Xp, Xp Wide Angle



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- **New – Full support of UltraCam Lp (new architecture)**
 - Full support of 16-bit workflow
 - Fast import of Level-0 raw data
 - Automatic handling of camera calibrations
 - Integrated device handling (data units, disk packs)
 - Option to format a data unit
 - Option to check unverified raw data on a data unit
 - Option to export camera operation log files from a data unit
 - **New – Option to export UltraNav POS-data files from a data unit**
 - Guided conflict (data, memory) management
 - **New – Option to filter detailed image list by conflict types**
 - Generation of new Level-2 output (DFI and TIFF)
 - Generation of Level-2 quality information for each image to be visualized by the UltraMap Viewer
 - Generation of Level-2 quality xml file for each image
 - Automated strip detection (DFI only)
 - Image position recovery (DFI only)
 - Automated project setup (DFI only)
 - Submit & track jobs
 - **New – Advanced job tracking based on new framework**
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Radiometry

- Distributed processing of Level-3 images
 - Automated quick view generation
 - Exploiting the Dragonfly technology for image interaction and visualization of large image blocks
 - Model-based radiometric correction such as hotspot, atmospheric effects, and haze
 - Fully integrated project-based color balancing based on automatically extracted parameters during AT
 - Easy and intuitive user interface
 - Clustering of images for spatial radiometric adjustments
 - Full support of 16-bit workflow
 - Various output formats for Level-3
 - Full support for UltraCam D, L, X, Xp, Xp Wide Angle
 - **New – Full support of UltraCam Lp (new architecture)**
 - Clipping visualization
 - Output range (min/max)
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Viewer

- Full support for UltraCam D, L, X, Xp, Xp Wide Angle
 - **New – Full support of UltraCam Lp (new architecture)**
 - Exploiting the Dragonfly technology for image interaction and visualization of large image blocks
 - Interactive visual quality control of flight mission
 - Level-2 quality visualization
 - Text overlays for shot position
 - Full support of 16-bit workflow
 - Visualization of different UltraCam camera types in parallel
 - New radiometry with gamma and levels dialog
 - New viewer with DFI stand-alone support
 - **New – Meta-data-based filtering for versatile image selection and grouping**
 - **New – Modify and save project files (e.g. image removal)**
 - **New – Level-2 DragonFly project merger**
 - **New – Project validation and correction functionality**
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ATv2 (Aerial Triangulation)

- Interactive aerial triangulation workflow
 - Uses in-flight GPS information for initial orientation
 - Full support for UltraCam D, L, X, Xp, Xp Wide Angle
 - **New – Full support of UltraCam Lp (new architecture)**
 - Full support of 16-bit workflow
 - Scalable tie point collection
 - Robust and automated tie point collection (1-click AAT)
 - Graphical overlays for AT results
 - Text overlays for ground control points
 - Vector residual overlays
 - **New – Improved workflow-driven point measurement**
 - Auto-completion for manual point measurement
 - **New – Improved tie pointing strategy for better and more robust image linkage**
 - Sophisticated image-based tie point thinning for optimal coverage
 - Supporting combined low and high altitude flight missions
 - Robust photogrammetric bundle adjustment software using BINGO
 - Automated blunder removal during bundle adjustment
 - Detailed AT report
 - **New – Automated and robust handling of task failures; no need for manual re-submission of tie point collection generation**
 - Automated project setup
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- Support for GPS/IMU data as a constraint for the bundle adjustment
 - Supported high and low overlapping regions
 - Simple file format for import and export (including BINGO export)
 - Multi-camera support for the whole AT workflow
 - Automated 2-ray measurements for stable block boundaries
 - Integrated data extraction for project-based color balancing
 - PAT-B bundle result export
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