OrthoVista

INPHO SOFTWARE

Automatically adjust and combine orthophotos from any source into one seamless, color-balanced geometrically perfect orthophoto mosaic map without any subdivision. Excellence in mosaicking, the market leader—OrthoVista the original exclusively available from Trimble.

OrthoVista performs a block-wide color balancing through adjusting adjacent images to match in color and brightness. Multiple orthophotos are combined into one seamless, color-balanced and geometrically perfect orthomosaic. Large blocks of thousands of orthophotos can be processed without any subdivision through Big-Tiff support. Alternative map-sheet tiling is also available.

The perfect ortho-mosaicking tool to complement for OrthoMaster ortho-rectification:

- ▶ Computing radiometric adjustments that compensate for a wide range of visual effects within individual images, such as intensity, hot spots, lens vignetting, brightness or color variations
- ▶ Automatic key ortho-mosaicking functions to improve the efficiency, quality and profitability of digital orthophoto mosaic production
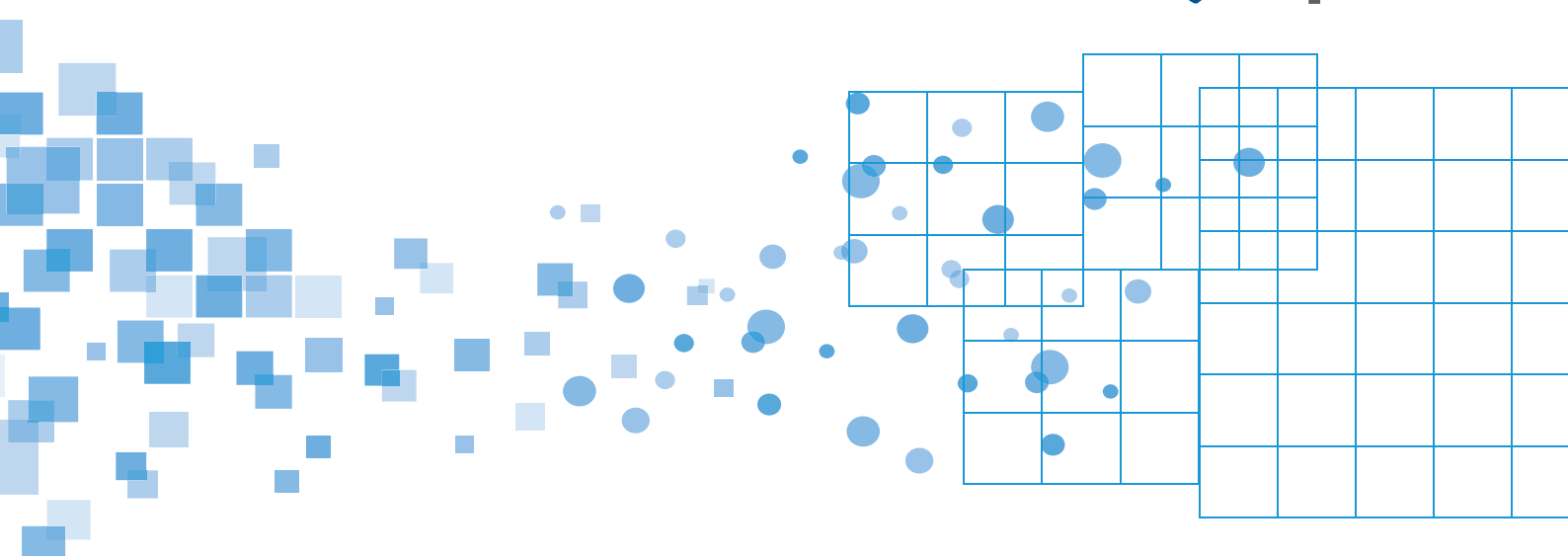
- ▶ Automatic detection of seamlines and man-made objects without manual intervention, providing high-quality mosaics even in urban areas and reducing manual seamline editing. Should interactive seamline editing be necessary, a manual seam editor is provided
- ▶ Resampling capability to combine ortho imagery with differing resolution, differing origins or differing rotation

Feature Capabilities

- ▶ Increases the efficiency and quality of digital image mosaic production using a fully automated workflow
- ▶ Easy integration into any third-party workflow
- ▶ Easy-to-use 3 step workflow even for non-photogrammetrists
- ▶ Perfectly hidden seams through adaptive blending between overlapping images depending on image content
- ▶ Feature detection algorithms for seam detection lead to a perfect result requiring no, or only very little, editing

Key Features

- ▶ OrthoVista plays a leading role in automatic radiometric image adjustment and automatic seam detection
- ▶ Handles orthophotos from any source with differing origin and resolution
- ▶ Full automatic workflow
- ▶ Automatic texture-depending adaptive feathering
- ▶ Superior geometric and radiometric quality

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TECHNICAL SPECIFICATIONS

FEATURES OVERVIEW

- Full automatic workflow for perfect results:
  - Powerful intra-image tools for automatic reduction of lens vignetting, hot spot effects and radiometric variations
  - Block-wide balancing of color brightness and contrast (individual image characteristics preserved)
  - Automatic removal of sun reflections on water areas
  - Global color and contrast adjustment for correction of radiometric tilting
  - Mosaic space definition for resampling capabilities including irregular rotations of input orthos, origins or pixel sizes
- Professional radiometric image enhancement and editing tools:
  - Selective color correction option to apply changes for a small spectral range only
  - Interactive/automated adjustment of intensity, contrast, color and color saturation
  - Interactive modification of gradation curve for adjustment of brightness, contrast and color, selective color corrections for more natural colors
  - Automatic histogram adjustment
    ◊ Macro-recording for volume pre-editing
    ◊ Image enhancement with image reference to the complete block (image visualization)
- Versatile seamline functionality:
  - Fully automatic seamline detection with feature detection technology
  - Optional usage of exclusion polygons for seamline
  - Interactive seamline definition and editing
- Automatic feathering functionality:
  - Automatic adaptive blending width of the seamline with texture analysis
  - Narrow seam in "urban canyons"
  - Wide seam in open terrain
- Automatic tiling of the mosaic:
  - Mosaic is cut into map sheets
  - Easy definition of map sheets
  - Import of output tile definitions by file
  - Optional polygonal output area (as inclusion or exclusion)
- Support for area definitions for exclusion/inclusion/water areas/restricted areas for seams. Simple or complex ("islands") area definitions available.
- Flexible processing steps done independently or in combination with each other
- Excellent processing capacity handles very large orthophoto blocks
- Support for multi-channel imagery
- Unique true-ortho functionality in combination with OrthoMaster

BENEFITS

- Increases the efficiency and quality of digital image mosaic production using a fully automated workflow
- Easy-to-use – even for non-photogrammetrists
- Professional image editing tools
- Total geometric flexibility for input data
- Easy integration into any third-party workflow:
  - Perfectly integrates into the inpho photogrammetric system – use pre-processed data and project files from OrthoMaster
  - Perfect input for Trimble eCognition feature detection software

OPTIONS

- OrthoVista Lite: Restricted to 250 frame images, 12 satellite or 12 pushbroom images. No parallel processing available
- Unlimited seam editing available with OrthoVista lite as well as OrthoVista's full version
- Monthly rental, upgrades from lite, updates from previous versions
- Maintenance (1st year included in software price) includes support and version updates
- Network licensing available

SYSTEM REQUIREMENTS

- High-end multicore PC workstation (one license supports 24 cores)
- 32+ GB recommended
- High-capacity disk system
- Windows 10, 64 bit

BUNDLES

OrthoBox:
- Bundle of OrthoMaster and OrthoVista for maximum performance and easiest workflow
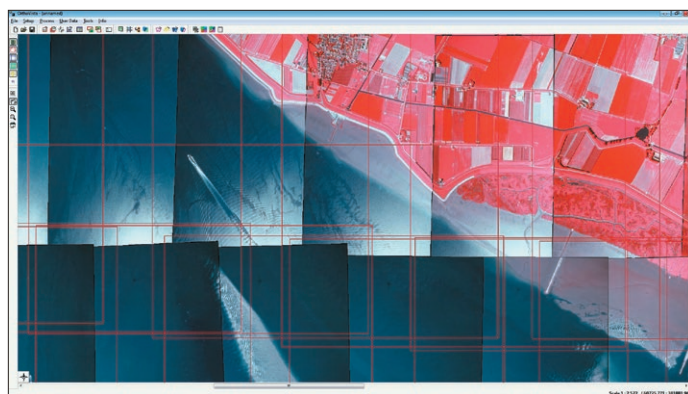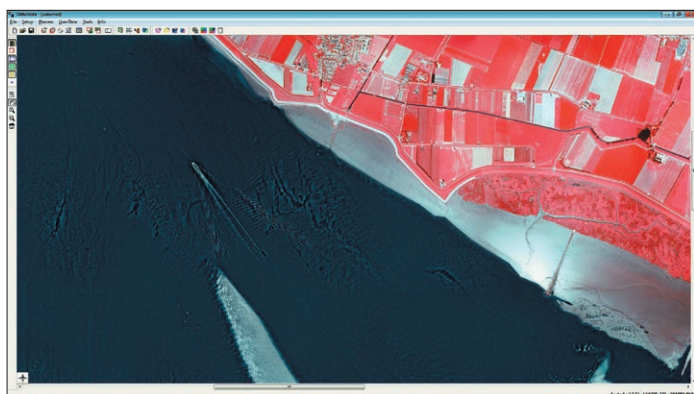
SUPPORTED SENSOR TYPES

- Imaging sensors:
  - Analogue and digital frame sensors
  - Panchromatic or multichannel
  - ADS Pushbroom sensors
  - Satellite sensors

SUPPORTED FORMATS

- Supported image formats:
  - Georeferenced orthos: GeoTIFF, TiffWorld (tfw), ADS+tif/tfw, ERMapper ERS, ZEISS inp, Vision RPT
  - TIFF, JPG, BigTiff
  - JPEG2000, TIFFjpeg
  - EXIF
  - BIP, BIL, BSQ
  - 8/12/16 bit
- Morphology data formats:
  - DXF
  - SHP

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