INPHO SOFTWARE
OrthoMaster

PROFESSIONAL ORTHO RECTIFICATION SOFTWARE WITH AUTOMATED ONE-STEP PROCESSING OF AERIAL BLOCKS, INTELLIGENT TRUE-ORTHO CAPABILITIES AND BUILT-IN DTM INTERPOLATION.

KEY FEATURES

Effectively batch-create thousands of rectified orthophotos in one single process

Automated one-step processing

Unique true ortho capabilty and Orthophoto generation

Flexible Height model support

Multicore processing and multi-threading

Effectively batch-create thousands of rectified orthophotos in one single process

OrthoMaster ensures high speed batch processing and optimized hardware utilization for excellent productivity:

- Create digital aerial or satellite imagery with ensured constant scale using orientation and digital terrain models (DTM) as source data

- Derive DTMs directly from arbitrarily distributed XYZ point cloud data and breaklines

- Effectively eliminate the relief displacements by intersecting morphological 3D object data with the basic DTM

- Fully automatic differential rectification, or alternatively rectification onto a definable plane when no DTM data is available

- Optimized for automated, high-performance orthophoto production using state-of-the-art multi-threading and distributed processing

- Batch mass rectification of standard or true ortho images – the perfect match for OrthoVista ortho-mosaicing software

FEATURE CAPABILITIES

- Orthophoto generation from aerial images (frame and pushbroom sensors), and from various types of satellite imagery

- Automated one-step batch processing of complete aerial image blocks; also in batch mode:

  – Advanced batch mode for subsequent OrthoVista postprocessing (OrthoVista license required)

  – Complete ortho workflow with Orthovista input file generation and OrthoVista pre-processing steps

- Orthophoto generation in pre-set polygonal area-of-interest:

  – Flexible definition/import of multiple geometry- and quality-optimized ortho areas per image

  – Automatic ortho area generation excluding edges from orthophotos for extracting the best quality image parts for optimized computation speed and storage requirement

  – Defined overlap percentage of adjacent orthophotos

- Unique true-ortho capability in combination with OrthoVista; advanced modelling of bridges, buildings and other man-made objects – masking of occluded areas
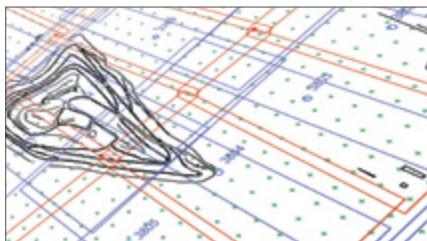
FEATURES OVERVIEW

- Flexible Height model support:
  - Hybrid grid based SCOP DTMs and various other formats
  - Realtime generation of TIN models
  - Rigorous consideration of morphological data such as break-lines
  - Unlimited volumes of DTM data supported by TPIX tile management

- Transform complete projects including EO, DTM/point clouds and orthos, between different datums and projections:
  - Grid-based transformations,
  - 7-parameters transformations
  - Custom geoid application

- Multicore processing and multi-threading for higher performance

- Optional distributed processing in combination with DPMaster high volume throughput

BENEFITS

- Optimized workflow for OrthoVista Mosaicking
- Geometric precision through integrated DTM generation with rigorous consideration of break-lines and man-made structures (buildings, bridges)
- Excellent radiometric quality through advanced processing algorithms
- Unique true-ortho capabilities
- Extensive automation features for minimal user interaction
- Powerful handling of very large DTMs
- Seamlessly integrates into the complete inpho software system or any 3rd-party photogrammetric workflow

OPTIONS

- Monthly rental and upgrades from lite versions
- Maintenance includes support and version updates
- Updates from previous versions
- OrthoMaster (DPL) (DPMaster computer pool organization required):
  - High-volume extension using Distributed Processing technology
  - Efficiency increase by using OrthoMaster in a multi-core and multicomputer setup. Prerequisite is one full license of OrthoMaster and DPMaster (free) for the pool administration
- OrthoMaster Lite:
  - Restricted to ortho-rectification of 250 aerial images or 12 satellite or pushbroom (ADS) images
  - No batch processing or multi-threading
  - No sub-block processing

SYSTEM REQUIREMENTS

- Multicore PC workstation (1 license supports up to 16 cores)
- 4 GB–8 GB RAM
- High capacity disk system
- Windows 7, 64 bit

BUNDLES

OrthoBox:

- Bundle of OrthoMaster and OrthoVista for maximum ortho performance

PERFORMANCE

- Suited for mass production of ortho projects. Process about 200 orthos per hour on a standard PC workstation.

SUPPORTED SENSOR TYPES

- Imaging sensors:
  - Analogue and digital frame sensors
  - Panchromatic or multichannel
  - ADS Pushbroom sensors
  - Satellite sensors (including SPOT 1-7, Plejades, Quickbird, IKONOS, ALOS, ASTER, CARTOSAT, IRS, GeoEye, Landsat, OrbView, RapidEye, WorldView, Resurs-P...)

SUPPORTED FORMATS

- Supported image formats:
  - Georeferenced orthos: GeoTIFF, TiffWorld (tfw), ADS+tif/tfw
  - TIFF, JPG, BigTiff
  - JPEG2000, TIFFjpeg

- Height model / morphology data formats available in the DTMToolkit for Grid interpolation, point cloud tiling and splitting, thin-out operations (classification and filtering, gap-filling, contour generation available with DTM Extension, SCOP++ LiDAR module for classification and filtering)
  - Grid-operations:
    ◊ All supported formats (*.dtm *.rdh *.bil *.fit *.tol *.grd *.tif *.tiff *.smti *.tpix.shp)
  - Output Formats
    ◊ BIL, BWNP, BXYZ, DTM, DXF, DXF_TIN, FLT , GRD, LAS, SHP_TIN, TIFF16, TIFF32, VRML, VRML_TIN, WNP, XYZ
  - Point-cloud operations
    ◊ Input formats: LAS, XYZ, BXYZ
    ◊ Output formats:
    ◊ For tiling: LAS
    ◊ For filtering: LAS
    ◊ For gap filling: LAS
    ◊ For Surface Modeling: SCOP DTM
    ◊ For Contouring: DXF and TIF

- Project Conversion/Import/Export:
  - Project conversion to Inpho
  - Z/I, DAT /EM, BAE SocetSet
  - Project and EO exports:
    ◊ DAT /EM Summit Evolution, BAE Socet Set, Z/I project, Aviosoft Ori, ABC-PC, AP32, Phorex/Pex, PATB , Bluh, Bingo
  - EO imports: Generic ASCII, Phorex/Pex, PATB , Bluh, Bingo

- DTM data import:
  - SCOP DTM, Winput, XYZ mass points, break/form lines, DXF, ArcGIS Shapefile, ArcGIS ASCII Grid, LAS (ASPRS Lidar Data Exchange Format), NED Float

- Geocoded Raster files

- TopPIT Raster

- Tile Manager File (TPIX):
  - Import of multiple raw data files, merged with SCOP functionality

For prices and distribution partner information please contact: sales@inpho.de

◈⊳ Trimble.