



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

OrthoMaster can introduce shape lines of man-made objects for easy and low-cost surface model generation:

Automated one-step processing

Unique true ortho capability and Orthophoto generation

Flexible Height model support

Multicore processing and multi-threading

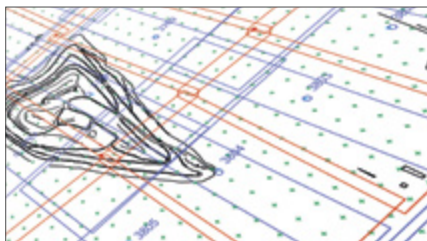
Effectively batch-create thousands of rectified orthophotos in one single process

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 when no DTM is available, or alternative 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 mosaicing
- 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

VERSION

- 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

OPTIONS

- Monthly rental and upgrades for OrthoMaster available
- Maintenance includes support and version updates
- OrthoMaster (DPL) (DPMaster computer pool organization required):
 - High-volume extension using Distributed Processing technology
 - Efficiency increase by using OrthoMaster in a multi-core and multi-computer setup Prerequisite is one full license of OrthoMaster and one DPMaster license for the pool administration.

SYSTEM REQUIREMENTS

- High-end multicore PC workstation
- 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
 - Satellites (ALOS, ASTER, CartoSat, GeoEye 1, Ikonos 2, IRS 1B/C/D, Landsat 4/5/7, OrbView 3, QuickBird 2, SPOT 1-5, WorldView 1 / 2, or any compatible RPC format) including single scene EO refinement

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SUPPORTED FORMATS

- Image formats:
 - Georeferenced orthos: GeoTIFF, TiffWorld (tfw), ADS+tif/tfw
 - TIFF, JPG, BigTiff
 - JPEG2000, TIFFjpeg
- Height model / morphology data formats available in the DTMTToolkit 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: *.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, filtering, and 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