



### OrthoMaster V5.1.1

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### OrthoMaster V5.1.1

#### New Feature: Windows XP64 and Windows Vista32/64 versions available

INPHO's photogrammetric software supports now the following operating systems: Windows 2000, Windows XP32, Windows XP64, Windows Vista32, Windows Vista64. The 32 bit and 64 bit versions need different installation setups that can be either downloaded from our home page or are delivered on different DVDs.

The 64 bit versions do have the advantage that the limit of 2 GB RAM is no more existing and the processing with certain applications can be faster.

By testing different data sets we found the following speed up factors when using 64 bit operating systems compared to processing with Windows XP32:

- MATCH-T DTM - XP64/Vista64 are ~ 35% faster
- MATCH-T DSM - XP64/Vista64 are ~ 15% faster
- OrthoVista – Vista64 is ~ 25% faster, XP64 is ~ 6% faster
- MATCH-AT, OrthoMaster – same processing times on all operating systems
- DTMaster – no information, no speed up tests till now

The Windows Vista operating system has the following limitations:

- No support of stereo viewing but anaglyph color stereo viewing (Microsoft Vista operating system does not support stereo in a window)
- Windows Vista 64bit requires at least 4 GB of RAM
- To take advantage of the 64 bit operating systems we suggest to install anyhow in minimum 4 GB of RAM
- Windows Vista SP1 must be installed

The Windows 64 bit versions can be only used with the Codemeter dongle from WIBU. The Aladdin hardlocks do not support 64 bit operating systems.

Please contact [sales@inpho.de](mailto:sales@inpho.de) to get an offer for replacing the Aladdin hardlock with the Codemeter dongle.

#### New Feature: Orthophoto Area Generation according to the central point

OrthoMaster is now able to generate the orthophoto areas according to the central point. If the images are oblique, the central point is positioned on one side and not in the center of the image/footprint. Therefore the orthophoto areas might not overlap completely. The orthophoto area generation allows now using the image center as central point, which leads to more "symmetrical" behavior of overlap and clipping. By default the orthophoto areas are generated according to the Nadir.

### **New Feature: Skip deactivated Orthophoto Areas for export**

A new function has been added to the orthophoto area export. OrthoMaster now offers the possibility to skip deactivated areas for export, so only activated areas are exported.

### **Change: Correction of Pixel Coordinate System**

The correction of the pixel coordinate system was not saved to the project. This has been changed now.

### **Change: Output format of ADS40 images**

The selection of the output format was always set to \*.ads format. This has been changed now. The user has now the possibility to select \*.ads/tiff/tfw, \*.ads/geotiff, tiff/tfw or geotiff as output format.

## **OrthoMaster V5.1.0**

### **New Feature: Support of Distributed Processing**

OrthoMaster is now able to be processed in parallel on several workstations. Huge projects can be splitted with the DPMaster module and are processed in a fraction of the time.

### **New Feature: OrthoVista Template File Update**

The OrthoVista template file that is used for post-processing is now automatically updated with the new generated orthophotos of a process. This minimizes the setup time for a project.

### **New Feature: Generation of geotiff Images and tfw Files**

OrthoMaster now offers the selection of geotiff images and tfw files as output format in one processing step. The generation of geotiff or tiff/tfw is still available.

### **New Feature: Support of Pushbroom – ADS40 Data**

INPHO's photogrammetric software package supports now pushbroom sensor data of the ADS40 camera from Leica Geosystems. The image format levels 0 and 1 are fully supported and can be used in all applications for image processing and display ApplicationsMaster allows the definition of projects. MATCH-AT Pushbroom enables the aerial triangulation for the ADS40 images. MATCH-T DSM can be used to automatically measure terrain or surface models which can be then checked and modified by DTMaster. Finally orthophotos can be generated with OrthoMaster.

The sensor orientation data formats created by MATCH-AT Pushbroom are compatible with the ones created by GPRO.

MATCH-AT Pushbroom requires a license which can be acquired as an extension to MATCH-AT or as a stand-alone license. All other modules are supporting ADS40 data without an extra license. In case of processing level 0 images the different bands can't be currently combined to color composites. Such color composites are in preparation for further releases as well as the support of other pushbroom images.

### **New Feature: Generation of ADS40 Images**

For ADS40 images the output file selection format has been extended. OrthoMaster now offers the generation of \*.ads files directly and additionally geotiff, tiff/tfw or geotiff/tfw files.

### **New Feature: Utilization of Radiometrix Files**

The image enhancements from the Radiometrix Editor can now be directly written to the orthophotos during the rectification.

### **New Feature: Geometry Memory Management Parameters**

When processing pushbroom data, OrthoMaster is pre-computing certain transformation values for a faster processing. These transformation values are kept in memory. To avoid a memory overflow the data can be cached and swapped to the disk. We suggest using a geometry memory cache size of 256 MB in case of processing pushbroom images. In case of processing frame based images the Geometry Memory Management should not be activated.

### **Change: Computation of True Orthophotos**

The True Orthophoto generation function has now been enhanced to ensure single pixels from the roof are not projected to the ground and vice versa.

### **Change: Support of Display Channel and Radiometrix Settings**

The functions "Channel Selection" and "Automatic Intensity Enhancement" are now replaced by the "Display Channel" definitions of the ApplicationsMaster to enhance the images and have been removed.

### **Change: Default Feet Definition Removed**

The default feet definition in OrthoMaster has been removed. As the units are defined in the project file, this function is no longer necessary.



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### Change: Activation/Deactivation of Images

The activation/deactivation of images could have taken too long. This function has been enhanced to avoid idle time.

### Change: Message when DTM is Outside Project Area

The reported message for DTMs outside the project area could have been misleading. This has been changed now.

### Information: Pushbroom Support

To avoid a memory overflow when processing pushbroom data we recommend to generate sub-blocks with maximum 10 images. When using the DPMaster, we recommend to split the project to a maximum of 10 images per processing unit.

### Information: Satellite Support

List of supported satellites and formats:

Satellite	Sensor	Image Format	Level
IRS 1 C / D	PAN / LISS / WiFS	GeoTiff (Eosat FST Super Structure BSQ not supported)	Raw Oriented Oriented
Spot 1-4	PAN / XI / XS	CAP  DIMAP	Raw (1A), Oriented (1B, 2A) Oriented (2B, 3)
Spot 5	PAN / HI	DIMAP	Raw (1A), Oriented (1B, 2A, 2B, 3)
Landsat 4-5	TM	GeoTiff  (NLAPS not supported)	Oriented ( 1G, 1P, 1T) Oriented ( 1G, 1P, 1T)



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Landsat 7	ETM+	GeoTiff	Oriented ( 1G, 1P, 1T)
		HDF (not supported)	Raw (0Rp, 1R) Oriented ( 1G, 1P, 1T)
		Eosat FST (not supported)	Oriented ( 1G, 1P, 1T) 1P, 1T)
IKONOS 2	PAN / MSI	Tiff	Oriented (Stereo Epi-Polar)
		GeoTiff	Oriented (Geo, Ortho, Orthokit, Stereo Map Projection)
		(NITF not supported)	Oriented (Stereo) Epi-Polar, Geo, Orthokit))
Quickbird 2	PAN / MS	GeoTiff	Raw (Basic) Oriented (Standard, Ortho Ready, Ortho)
		(NITF not supported)	Raw (Basic) Oriented (Standard, Ortho Ready, Ortho)

The following premises have to be considered when working with satellite data:

- > Only images in Tiff format are supported
- > The Tiff images must not be tiled into different files. Exception are Quickbird images.
- > All channels must be stored in the same image
- > Image channels must have the same resolution
- > CartoSat meta files must be delivered in the IKONOS format

### Information: Import of TIN Models

Loading an existing TIN height model takes longer than generating a new one. We recommend the generation of a new TIN model instead of importing it.

### Information: Running Instances of OrthoMaster in Parallel

It is possible to start OrthoMaster several times in parallel under the following conditions:

- It is necessary to define user environment variables with the names OM\_PARAMETERDIRECTORY\_1 and a newly to defined directory path

Create this directory and copy the file orthomaster.bin onto this directory. This binary file can be found on the %ALLUSERSPROFILE%\inpho\ApplicationsMaster5\settings directory

### Patch: Problem with Overlapping DTM Fixed

Previous problems with overlapping DTMs lead to horizontal lines of background color within an image. This has been fixed.

### Patch: Anchor Point Method lead to Artifacts with ADS40 Images

OrthoMaster could have had problems with ADS40 images and the anchor point rectification method. This has been solved now.

### Patch: Projection of Footprints

The projection of footprints with extreme changing DTM heights at the border of blocks was not correct. This has been fixed now.

### Restriction: ADS40 Images

If an orthophoto generated for ADS40 images is subdivided into several images then only the last image of the strip is stored in the project file and also only the last image of the strip can be displayed in OrthoMaster. Use OrthoVista to display all images.

### Restriction: Import of SCOP DTM Files Must Have Write Permission

OrthoMaster requires that the directory on which a SCOP DTM file is located and imported into OrthoMaster must have write permission. Therefore it is e.g. not possible to import a SCOP DTM file from a CD or DVD.

### **Restriction: Import of Large Height Models**

When importing large height models and having only 512 MB RAM available then OrthoMaster may go into demo mode when working with a floating license. We recommend to use workstations with at least 1 GB RAM instead.

### **Restriction: Automatic Orthophoto Area Generation for Satellite Images**

The automatic orthophoto area generation for satellite images is not working. For satellite images the orthophoto areas have to be digitized or imported.

### **Restriction: Object Shapes are not Supported for ArcInfo Shape Files**

If ArcInfo Shape files are imported as object shapes, they are modelled as breaklines. Workaround is to use the DTM Toolkit instead.

### **Restriction: Display Images in Footprints not Possible for ADS40 and Satellite Images**

The display of computed orthophotos in the footprints of ADS40 and satellite images is not supported yet.

### **Restriction: Adding a Batch File to the Post-processing**

If a general batch process is added to the post-processing options before an OrthoVista process, then OrthoVista will not start. We recommend to use either a general batch process or an OrthoVista process for the post-processing.

If two batch processes are added to the post-processing, only the first batch file is processed. Workaround is here to store all necessary information in only one batch file.

### **Restriction: Generation of a Tin with Very Fine Meshes**

When generating a TIN out of very fine input data (e.g. 2mm), it might lead to wrong single pixels or small chains of pixels with background information.

Should you have any questions regarding the technical details of software, please contact your Support Team at [support@inpho.de](mailto:support@inpho.de).



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