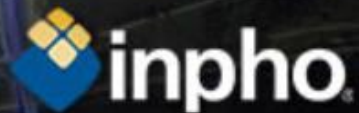




GeoSpatial Office Software  
May 9, 2016



## Release Notes for Inpho 7.0.3(Patch) and Inpho 7.1 – 7.1.1 incl. SATMaster / TRSS / SCOP++ and TopDM

Trimble announces a new major release for all the Inpho software main products.

- MATCH-AT automatic georeferencing (including inBLOCK)
- MATCH-T DSM automatic point cloud (DSM/DTM) generation
- DTMaster Stereo interactive and automated editing of point clouds, DTM/DSM and basic mapping, including Building-Add-on, Building-Generator
- OrthoMaster ortho image generation
- OrthoVista automatic ortho mosaicking
- SCOP++ DTM/LiDAR processing and database ( Kernel, Analyzer, Visualizer, LiDAR, TopDM)
- LPMaster airborne LiDAR processing for AX airborne laser scanners
- SatMaster / TRSS satellite imagery workflows
- Summit Evolution digital stereoscopic mapping into CAD, GIS

For users that are having on-going projects and don't want to change to the new major version immediately, Trimble recommends to install the patch 7.0.3. This final patch for version 7.0.x is containing several important fixes that are also available through version 7.1. Release Notes for 7.0 are also part of this document.

SatMaster and the Trimble Remote Sensing Suite (TRSS) are including the above mentioned software modules as components or embedded technologies. Changes for those modules as far as they apply to satellite processing are also part of SatMaster and TRSS. Note that TRSS also includes eCognition tools, so eCognition release notes also apply.

[www.trimble.com](http://www.trimble.com) <http://uas.trimble.com/inpho-uasmaster> <http://www.trimble.com/Imaging/aerial-software.aspx>

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# Table of Contents

<b>GeoSpatial Office Software</b> .....	1
<b>May 9, 2016</b> .....	1
What is INPHO .....	5
What's new in INPHO 7.1 .....	5
Broadening the Sensor Portfolio: Multi-head Sensors, Oblique Geometry, VisionMap A3.....	6
Extended mapping, CAD-drafting and building-modelling capability .....	7
ApplicationsMaster 7.0.3 / 7.1 – 7.1.1 .....	8
Fix 7.1.1: GUI enhancements / tools / tables, icons, resizing.....	8
Update 7.1.1: Updated language support for Spanish user interfaces .....	8
Fix 7.1.1: Activate/De-activate all points in the GCP dialog .....	8
Fix 7.1.1: (re-)Import Multi-head systems function locked .....	8
Fix 7.1.1: Update of footprints when IO or EO changes .....	8
Fix 7.1.1: Reset camera brand does not overwrite any settings .....	8
Fix 7.1.1: Renaming multi-head system camera .....	9
Update 7.1.1: Support for LPMaster (LiDAR) type projects also in other inpho modules .....	9
Update 7.1.1: Transformations for EPSG code 3880 .....	9
Fix 7.0.3: Processing of Project Overview.....	9
Fix 7.0.3: Transformations between meters and usft .....	9
Change 7.1: absolute camera calibration parameters .....	9
New Feature 7.1: Multi-head camera system and image Import .....	9
New Feature 7.1: Support for Visionmap A3 data .....	9
New Feature 7.1: Photo-importer supporting JPEG .....	10
New Feature 7.1: New camera interface.....	10
New Feature 7.1: Generate region file from Tiff Images .....	10
MATCH-AT 7.0.3 / 7.1 – 7.1.1 .....	10
Fix 7.1.1: Over estimated quality reports on check points.....	10
Fix 7.1.1: Stability with manual image measurements.....	10
Fix 7.1.1: Extreme loading times for statistics view in large projects .....	10
Fix 7.1.1: Delete single image measurements might take long for large projects .....	10
Fix 7.0.3: Display of residuals in satellite triangulations .....	10
Fix 7.0.3: Visualization of statistics .....	10
Fix 7.0.3: Change/delete ground control point types from within photomeasurement tool .....	10
Fix 7.0.3: image access over network.....	11
Fix 7.0.3: mirrored image display in stereo comparator view.....	11
Fix 7.0.3: opening the statistics viewer .....	11

New Feature 7.1: Support for station strips.....	11
New Feature 7.1: Selection for LSM reference image.....	11
New Feature 7.1: Automatic matching with large principal point offsets .....	11
MATCH-T DSM 7.0.3 / 7.1 – 7.1.1.....	11
Fix 7.0.3: Performance of point cloud generation.....	11
Fix 7.0.3: LAS format selection (1.2/1.4) .....	11
New Feature 7.1: More homogeneous point clouds.....	11
New Feature 7.1: Build models from station information .....	12
New Feature 7.1: output option for extended exclusion areas .....	12
DTMaster Stereo 7.0.3 / 7.1 – 7.1.1 .....	13
Fix 7.1.1: DTMaster Stereo not accessible with a research license.....	13
Fix 7.1.1: Stability during classification.....	13
Fix 7.1.1: Toggle on Ctrl+Alt to (de-)activate snapping functions .....	13
Fix 7.1.1: Shortcuts working also in un-docked windows.....	13
Fix 7.1.1: Measure lengths/distances possible with 3D mouse .....	13
Fix 7.1.1: Correct number of points when generating a point list for manual measurements.....	13
Fix 7.1.1: Contour lines display.....	13
Fix 7.0.3: LAS import.....	13
Fix 7.0.3: Grid spacing for DTMaster point cloud generation .....	13
New Feature 7.1: Digitize / edit vectors in 3D profile view.....	14
New Feature 7.1: Display lines on top of the shaded display .....	14
OrthoMaster 7.0.3 / 7.1 – 7.1.1.....	14
Fix 7.0.3: Window Resize.....	14
Fix 7.0.3: Reaction to loss of license access.....	14
New Feature 7.1: Consider nadir imagery, only in Orthomaster .....	14
New Feature 7.1: Consider “Stations” for multi-head imagery for post-processing with OrthoVista .....	14
OrthoVista 7.0.3 / 7.1 – 7.1.1 .....	14
Fix 7.1.1: Progress information on parallel image pyramid generation.....	14
Fix 7.0.3: Processing JPEG imagery.....	15
LPMaster 7.0.3 / 7.1 – 7.1.1.....	15
Fix 7.1.1: Re-loading projects unloads project .....	15
Fix 7.1.1: Coloring properties for difference image offsets.....	15
Fix 7.1.1: Quicker calibration (nav file initialization for more than 1 boot) .....	15
Update 7.1.1: Support for RiProcess 4x4 calibration matrix .....	15
Fix 7.1.1: Transparency settings and line-width settings .....	15
Fix 7.0.3: Conversion of old ALS files .....	15

Fix 7.0.3: Memory problems with WDP export .....	15
Fix 7.0.3: Rotation equations in point cloud processing .....	15
Fix 7.0.3: Strip Level computation and display .....	15
New Feature 7.1: Fast computation of point density map from cov.sdc data .....	16
SCOP++ 5.6.1.1000 .....	16
Fix 5.6.1: Synchronized SCOP++ and TopDM libraries .....	16
Fix 5.6.1: DTM Export .....	16
TopDM 5.6.2.1000 .....	16
Hint 5.6.2: Coordinate Systems .....	16
Hint 5.6.2: Geoids .....	17
New Feature 5.6.2: Support of Oracle Data base .....	17
New Feature 5.6.2: UTF8 file name support .....	17
New Feature 5.6.2: Registry entry for Geoid folder .....	17
Fix 5.6.2: Derived Products (DP) Import .....	17
Fix 5.6.2: DP export, Tiff .....	17
Fix 5.6.2: TDM, Lidar data export using Scan angle filter .....	17
Update 5.6.2: TopSQL Interface, Command line .....	17
For more information .....	18

## What is INPHO

INPHO is Trimble’s traditional airborne photogrammetry / airborne LiDAR processing software suite. This modular software offering covers the complete workflow from georeferencing to high quality deliverables such as point clouds, DTM/DSM, orthomosaics and mapping products. While UASMaster or TBC APM have a clear focus on UAS acquired data, INPHO is having its focus on large traditional airborne sensors mounted to planes or helicopters or satellite data. Inpho modules are highly automated, providing an outstanding level of accuracy and confidence. Inpho is suited for massive data volumes in processing, refining and editing as well as for visualization of deliverables. Inpho deliverables create the basis for a manifold of vertical applications in different markets such as survey, energy and natural resources, environmental research, cities and buildings, (urban) planning, monitoring, agriculture, cadastre and many more.

## What’s new in INPHO 7.1

INPHO 7.1 is a new major release of our traditional photogrammetry suite of software modules. Unlike a main release (e.g. 8.0), this major release does not require a new license to be installed, if a valid license for 7.x is existing. A major release typically contains fixes to ensure processing workflows without interruptions and to grant for high quality results. Additionally the major release contains new major features like support for new sensors or new tools and functionality.

Note: For users that want to benefit from all the fixes, only, without updating to a new major version, we also offer a patch for Inpho version 7.0.3.



## Broadening the Sensor Portfolio: Multi-head Sensors, Oblique Geometry, VisionMap A3



For a variety of reasons, there is an ever growing demand to create imagery with larger footprints/coverage. As sensor sizes are technically limited, more and more multi-head cameras are sold to photogrammetric professionals that conduct photo flights. Additionally more vertical applications like building modelling, power-line mapping etc. benefit from oblique looking cameras e.g. to create textures on facades, to monitor steep walls/terrain or actually to create true 3D models. In some cases there is still one camera used, mounted on a tilted gimbal mount, in other cases, again multi-head cameras (e.g. Microsoft Osprey) are used to capture imagery in nadir as well as four oblique directions simultaneously.

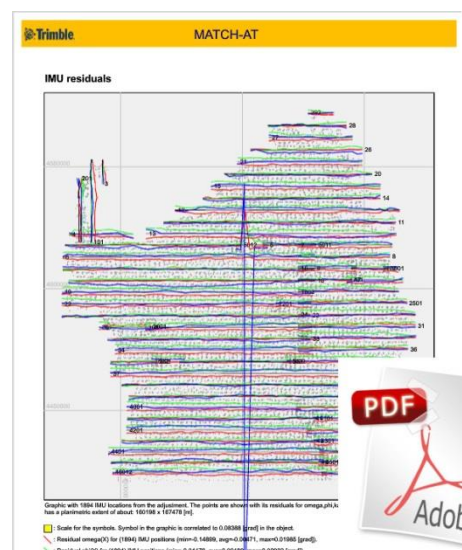
For INPHO 7.1 our software engineers created new workflows enabling optimized project setup and processing for multi-head and oblique sensors. Dedicated importers for specific camera brands have been added. Multi-head cameras are treated more like one unit built from individual cameras than being treated completely like independent cameras. As oblique viewing angles create a rather complex geometry with challenging overlap situations and perspective (and image content) differences, georeferencing, point-cloud matching as well as orthomosaic generation benefit from processing optimizations for this special kind of imagery. We want our users to be able to create deliverables with maximum quality and maximum confidence – in any situation, no matter how challenging the data might be. For more detailed information check-out the release notes for the specific Inpho modules.

In addition to multi-head support and oblique capabilities, INPHO 7.1 now also works with the VisionMap A3 photogrammetric camera. The A3 is a special pushbroom sensor camera that provides for excellent resolution and large footprints. The orientation/georeferencing format for the imagery is proprietary to VisionMap, therefore the entry point into the INPHO workflow is after having georeferences created with VisionMap software (\*.slf format). INPHO 7.1 now includes a dedicated importer for VisionMap A3 data which may be used within all INPHO modules for point-cloud matching (MATCH-T DSM), editing/refinement/mapping (DTMaster Stereo/Summit Evolution), and orthomosaic generation (OrthoMaster/OrthoVista).



### Shareable PDF processing reports including graphical analysis views

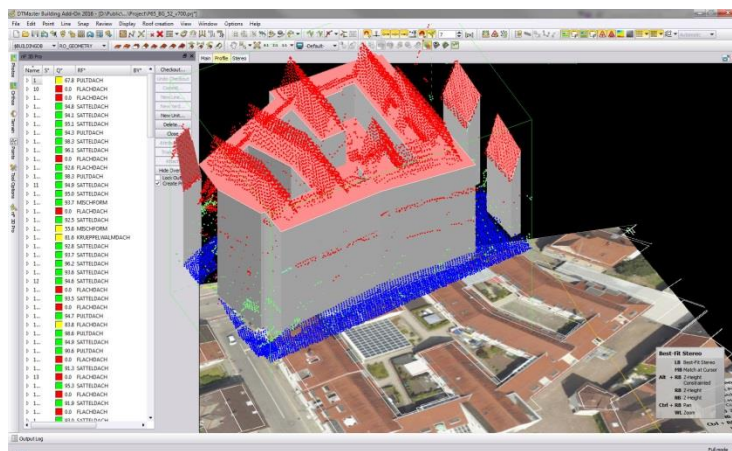
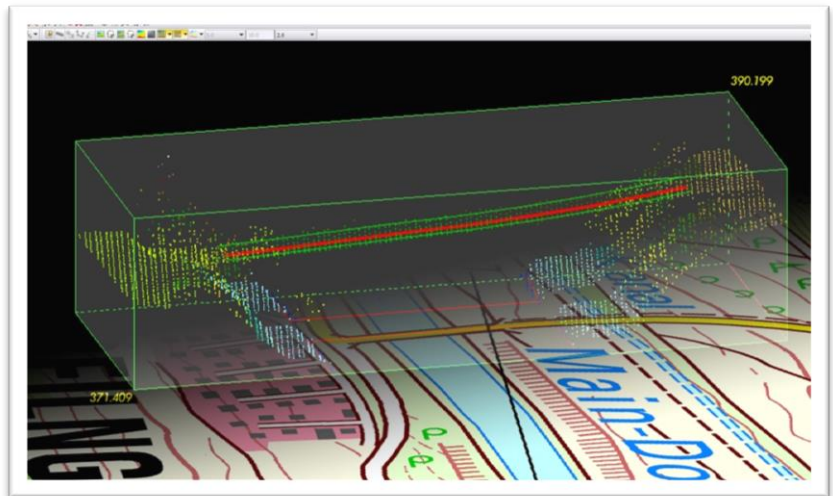
For MATCH-AT automatic georeferencing of aerial imagery, a new PDF report is available. Users can now share all quality reports, graphs and statistics with their clients or sub-contractors. The included analysis graphics inform in a clear way about accuracy, reliability and confidence the georeferencing process. Sophisticated views highlight standard deviations (error ellipses), residual vectors, tie-point distribution and connectivity. All relevant project parameters are displayed as well as all important numerical statistics. The PDF is easy to archive and also is



created in a printable format for full color-prints.

## Extended mapping, CAD-drafting and building-modelling capability

DTMaster Stereo is the INPHO module for extensive refinement and editing and visualization of massive volumes of point-cloud data as well as for basic mapping (stereo-plotting and mono-plotting). The multi-file / multi-layer CAD drafting functionality is mainly used to digitize 3D vectors for morphology information such as e.g. break-line data. So far users could generate vector maps in DTMaster via mono-plotting (digitizing in xy e.g. on top of shaded reliefs or orthos and deriving the height from point-clouds) or via stereoscopic measurements (stereoscopic 3D visualization of photogrammetric imagery). New for 7.1 is the capability to use the mapping functions also within the 3D-profile view. All selected data is visualized in a rotatable 3D-box combined with height coded and shaded views or combined with contour lines. All vector functions, snaps, horizontal and vertical movements, selection, create and edit tools can now be performed also inside the profile box. Special keyboard assignments and auto-drape to terrain functionality is used to guide the user.



For building-modelling a special add-on to DTMaster Stereo called Building-Add-on is available. The building add-on is an easy-to-use tool to create LOD2 building objects. It leverages point-cloud data as well as stereoscopic imagery of existing building-shapes to model standard roof-typed buildings as well as complex roof types. Due to context-driven automated tools, building modelling is very simple and larger groups of building objects can be modeled in a very short timeframe. New to the Building-Add-on is the capability to split very complex building structures with multiple patios and many different roof structures into adjacent individual units.

## List of Changes

Fixes for 7.0.3 are automatically included in 7.1. Changes for SatMaster and TRSS are aligning with changes in the Inpho components associated with satellite processing (ApplicationsMaster, MATCH-AT, MATCH-T DSM, DTMaster Stereo, OrthoMaster, OrthoVista).

Note: Due to changes in the camera interface, it was necessary to update the project file format. Project files used in versions earlier than 7.1 will be converted into the new format on request. The 7.0.3 patch does not use the updated project file version. If you have ongoing projects, Trimble recommends to install the 7.0.3 patch until important projects are finished not to get a mismatch of project file versions.

### ApplicationsMaster 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.1.1: GUI enhancements / tools / tables, icons, resizing...</b>	The patch fixes a variety of smaller inconsistencies around the graphical user interface, e.g. when re-sizing dialogs, warnings about missing icons etc.
<b>Update 7.1.1: Updated language support for Spanish user interfaces</b>	Missing GUI translations have been updated for Spanish.
<b>Fix 7.1.1: Activate/De-activate all points in the GCP dialog</b>	7.1.1 provides a fix for the (de-) activate all points function in the points dialog of the project definition which was not working correctly in the previous release.
<b>Fix 7.1.1: (re-)Import Multi-head systems function locked</b>	After importing multi-head system data, the import function was locked for no apparent reason. The 7.1.1 patch allows to access the import function at any time.
<b>Fix 7.1.1: Update of footprints when IO or EO changes</b>	After updating the interior orientation or the exterior orientation the display of footprints in the main view is now automatically updated.
<b>Fix 7.1.1: Reset camera brand does not overwrite any settings</b>	When changing the camera brand in the camera dialog of the project definition, all camera calibration data can now be reset to default values. This in particular has an effect when changing from camera templates with e.g. a different focal length.



<b>Fix 7.1.1: Renaming multi-head system camera</b>	<p>When renaming a multi-head system, the camera's list was not automatically updated and the renamed camera entry was not displayed. The patch provides a necessary fix.</p>
<b>Update 7.1.1: Support for LPMaster (LiDAR) type projects also in other inpho modules</b>	<p>LiDAR-type project files used in LPMaster were not loadable into inpho applications requiring frame type projects (e.g. MATCH-AT, MATCH-T DSM, DTMaster Stereo, OrthoMaster). As the AX series of airborne scanners not only acquire laser data but frame imagery as well, LiDAR-type projects can now also be processed with these inpho modules.</p>
<b>Update 7.1.1: Transformations for EPSG code 3880</b>	<p>The patch adds support for coordinate system definitions with the EPSG code 3880</p>
<b>Fix 7.0.3: Processing of Project Overview</b>	<p>Sometimes the process to generate the project overview image seemed not to complete although the image file already was successfully generated. Stopping the process did not work either. The new release correctly starts and stops the process.</p>
<b>Fix 7.0.3: Transformations between meters and usft</b>	<p>File importers in UASMaster automatically transform the data in the files (e.g. GNSS) into the specified project working coordinate system. In cases when data had to be converted from m to ft or vice versa, the transformations failed. The new version correctly performs those transformations now.</p>
<b>Change 7.1: absolute camera calibration parameters</b>	<p>Until now, self-calibration parameters from MATCH-AT / InBlock were considered being relative corrections from any already given calibration parameters – this is how they were stored in the Inpho project files. From version 7.1 on, only a single correction data set is allowed per calibration, so if the aerial triangulation computes self-calibration data e.g. using Pat-B-type polynomials, corrections are now stored as absolute values ( given + self-calibration).</p>
<b>New Feature 7.1: Multi-head camera system and image Import</b>	<p>Inpho modules now also support multi-head and oblique camera systems. The support of multi-head systems required a re-design of the camera editor to be able to create a platform with several camera heads assigned to their viewing angles. Specialized importers for imagery and camera data are available for Microsoft Osprey, Leica and IGI. Refer to the documentation on more information how to work with (oblique-)multi-head systems. Note: for IMU data, multi-head systems require angles specified in omega/phi/kappa, only. Roll/pitch/heading import is not available for multi-head systems. The new camera system definition allows for multiple oblique facing camera-heads as well as for multiple nadir facing heads. Thus, e.g. IGI dual head cameras can be defined with two nadir facing camera heads.</p>
<b>New Feature 7.1: Support for Visionmap A3 data</b>	<p>Inpho modules (MATCH-T DSM, DTMaster, OrthoMaster, OrthoVista) now also support the VisionMap A3 image sensor. Georeferences are proprietary to Visionmap, so the A3 workflow starts after importing georeferences (*.sfl). A special project format with specialized importers are made available for A3 processing.</p>

<b>New Feature 7.1: Photo-importer supporting JPEG</b>	Previous versions of the image importer did only load TIFF images when selecting the import from a complete directory. The new versions now also load JPEG images. Same goes for image import into the image commander.
<b>New Feature 7.1: New camera interface</b>	The camera editor is completely re-designed to support multi-head systems. Also calibration variations are no longer stored as new cameras. A new calibration is stored within the same camera assignment but with an additional camera calibration version.
<b>New Feature 7.1: Generate region file from Tiff Images</b>	A new function is made available to consider given image areas, only, for processing. Especially with A3 imagery and satellite data, sometimes the TIFF image is larger than the real image content. A region file describes the image area that is useful. The file is automatically created, when defining a background color for the images.

## MATCH-AT 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.1.1: Over estimated quality reports on check points</b>	When in some cases image observations have been eliminated for check points, the quality stated in the quality report was too optimistic. The patch corrects this and provides the correct estimates.
<b>Fix 7.1.1: Stability with manual image measurements</b>	In some cases picking manual image measurements in the photo measurement tool resulted in a crash of the tool. The patch provides a necessary fix.
<b>Fix 7.1.1: Extreme loading times for statistics view in large projects</b>	The cause for long loading times of the statistics viewer is the massive amount of adjusted tie points to be loaded (tested with 8000 images). Now, if the project contains more than 20000 adjusted points a message box will be shown. The user can then avoid loading any adjusted points. The number of photo observations shown are also limited to just the first 10000. This limit may however be changed on user request up to the maximum number of photo measurements of the project.
<b>Fix 7.1.1: Delete single image measurements might take long for large projects</b>	Tested with a project about 8000 images, deleting a single image measurement in the photo measurement tool took considerably long. The patch uses a performance-optimized approach.
<b>Fix 7.0.3: Display of residuals in satellite triangulations</b>	In the georeferencing process for satellite imagery, often residuals were not displayed in the adjustment report. This has been fixed for Inpho 7.0.3 and TRSS (SatMaster)
<b>Fix 7.0.3: Visualization of statistics</b>	The fix corrects displaying statistics information with point ID's containing special characters like "."
<b>Fix 7.0.3: Change/delete ground control point</b>	It is now possible to edit the control point type and to delete ground control points as well as photo assignments from within the photo measurement tool.

<b>types from within photomeasurement tool</b>	
<b>Fix 7.0.3: image access over network</b>	In some network configuration it might have happened that image access is lost for very short moments, thus, tie point matching especially for large projects that take long to process might not have run successfully. The fix provides a solution that is tolerating short network instabilities.
<b>Fix 7.0.3: mirrored image display in stereo comparator view</b>	The stereo comparator tool to stereoscopically pick control points in non-oriented images displayed images in a mirrored style. This has been fixed.
<b>Fix 7.0.3: opening the statistics viewer</b>	For larger projects (e.g. several thousands of images) it takes long to load all the observations into the statistics viewer tool. For about 8000 images this may take about 5 minutes and the loading process cannot easily be stopped. For large projects, the program now shows a warning, that launching the statistics viewer takes long and lets the user decide whether to proceed or not.
<b>New Feature 7.1: Support for station strips</b>	With the new support for multi-head cameras, the exposure-"station" concept has been established. A "station" groups all camera heads into one exposure event. For MATCH-AT, multi-head systems create strips always from stations. For tie-point matching and triangulation, from the station strips automatically individual strips per camera head are created.
<b>New Feature 7.1: Selection for LSM reference image</b>	Constant improvement of the automatic image matching routines required a revision of the strategy for reference image selection. The new criteria provides for a more complete set of measurements for all overlapping images
<b>New Feature 7.1: Automatic matching with large principal point offsets</b>	Oblique and multi-head camera systems often are designed with a very large principal point offset. As an approximation like PPA being exactly in the center of an image is no longer suitable for successful automatic point extraction, the correct values are now considered also for the matching process.

## MATCH-T DSM 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.0.3: Performance of point cloud generation</b>	Constant improvement of performance of automatic matching routines required an update of the image selection strategies for point cloud matching. The new strategy results in a much faster computation.
<b>Fix 7.0.3: LAS format selection (1.2/1.4)</b>	MATCH-T DSM automatically writes LAS 1.4 formats when necessary. For users that are not able to use LAS 1.4, there is an option in the matcht.STATUS file (see MATCH-T documentation) to force MATCH-T to write LAS 1.2 in every case. Trimble however recommends to update user workflows to LAS 1.4 as LAS 1.4 is able to work with much larger point clouds than LAS 1.2 without problems.
<b>New Feature 7.1: More homogeneous point clouds</b>	Ever growing demand for more precise point clouds with less noise and of homogeneous quality made it necessary to revise the point cloud generation strategy. The new strategy creates a much more homogeneous point cloud that much better represents the terrain according to data from the aerial

	triangulation.
<b>New Feature 7.1: Build models from station information</b>	Multi-head camera systems require special treatment in automatic point extraction. As the camera heads are mounted close to one another providing for some image overlap, common automatically extracted points could be matched between the different camera heads. These points, geometrically would have an extremely bad intersection angle and therefore they are very risky to be used in computations. The new "station" concept defines one central position for all camera heads that are triggered for an exposure at the same time. The "station" concept avoids that points are extracted between camera heads belonging to the same "station" / exposure.
<b>New Feature 7.1: output option for extended exclusion areas</b>	For the DTM / WNP output of MATCH-T DSM, also expanded exclusion areas can be saved. This might be used to flag void points inside an expanded exclusion area for later use.

## DTMaster Stereo 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.1.1: DTMaster Stereo not accessible with a research license</b>	The patch now also allows to access DTMaster with a license for the Inpho research package.
<b>Fix 7.1.1: Stability during classification</b>	In some cases, the classification tools were not running stable. 7.1.1 provides fixes for those stability issues.
<b>Fix 7.1.1: Toggle on Ctrl+Alt to (de-)activate snapping functions</b>	As activating and de-activating the snapping functions in DTMaster, the software now allows to toggle on or off snapping with Ctrl+Alt pressed.
<b>Fix 7.1.1: Shortcuts working also in undocked windows</b>	Previous releases did not allow for keyboard shortcuts within un-docked dialogs. 7.1.1 provides support for shortcuts also in un-docked windows.
<b>Fix 7.1.1: Measure lengths/distances possible with 3D mouse</b>	With 7.1.1 the measuring tool for length and distance is also available to be used with a 3D mouse.
<b>Fix 7.1.1: Correct number of points when generating a point list for manual measurements</b>	With 7.1.1 the measuring tool for length and distance is also available to be used with a 3D mouse.
<b>Fix 7.1.1: Contour lines display</b>	When generating a point list for manual grid measurements, typically the total number of grid points and the number of already picked heights is displayed. The numbers shown in previous releases did not match correctly, the patch provides a fix.
<b>Fix 7.0.3: stability when loading wnp files</b>	In some situations when loading WNP type files, the import function did not successfully complete. 7.1.1 provides a corrected version of the importer.
<b>Fix 7.0.3: LAS import</b>	The import of LAS files in some cases was not working properly. The problems with these specific LAS files have been identified and DTMaster now successfully imports the data.
<b>Fix 7.0.3: Grid spacing for DTMaster point cloud</b>	The "Create Point Cloud" function inside DTMaster and UASMaster Point Cloud Editor now correctly reads the tool option settings for generating a regular grid.

<b>generation</b>	
<b>New Feature 7.1: Digitize / edit vectors in 3D profile view</b>	The line measurement and edit functions have been added to the 3D profile view. The 3D profile is rotatable and can be used to easily measure e.g. break-lines. In order to be able to drape the cursor to the terrain, users have to activate the shading.
<b>New Feature 7.1: Display lines on top of the shaded display</b>	In association with the new function to be able to digitize and edit lines in the profile view, it was required to display lines on top of the shading. The recommended setting for digitizing in the profile view is to have the shading activated in order to interpolate any measurement into a virtually computed mesh.

## OrthoMaster 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.0.3: Window Resize</b>	In some situations, resizing the OrthoMaster window resulted in OrthoMaster to freeze or to crash. This bug has been fixed.
<b>Fix 7.0.3: Reaction to loss of license access</b>	In cases, that OrthoMaster is losing access to the license (e.g. With a broken network connection), the generation of orthos stops immediately with an according message. Previous versions just continued to generate orthos in DEMO mode.
<b>New Feature 7.1: Consider nadir imagery, only in Orthomaster</b>	The new support for oblique multi-head cameras required a change in the consideration of specific images for the ortho rectification. In the camera definition dialogue for a project, camera heads can now be flagged e.g. for being mounted in nadir direction. To get the best quality of the ortho rectification process, OrthoMaster only uses the camera heads flagged being mounted in nadir direction. Note that e.g. for multi-head cameras with small oblique angles (e.g. IGI dual head cameras) the camera heads will be defined as nadir looking.
<b>New Feature 7.1: Consider “Stations” for multi-head imagery for post-processing with OrthoVista</b>	In OrthoMaster multi-head systems need special attention when creating ortho areas or when assigning parameters for further post-processing with OrthoVista. Formerly multi-head systems were automatically assumed when photo-centers were located within a very short distance and the associated processing option was selected. Now the assigned stations are used to group the camera heads into one unit. Note that only images from camera heads defined being nadir facing are rectified, so the multi-head option is applicable whenever a multi-head system incorporates multiple nadir camera heads. Multi-head post-processing with OrthoVista helps to save a lot of processing time in the mosaicking process as between orthos from nadir heads belonging to the same station, no seams have to be searched for.

## OrthoVista 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.1.1: Progress information on parallel</b>	When using parallel processing for the image pyramid generation the progress information was not available. The patch now displays computation performance estimates also when running with several threads.

<b>image pyramid generation</b>	
<b>Fix 7.0.3: Processing JPEG imagery</b>	In some cases, especially in multithreaded environments, OrthoVista crashed without notice when image data volumes become too large (due to JPEG libraries the de-compressed data for JPEG imagery must not exceed 154.5MB) . Improved error handling now displays a warning to avoid program crashes.

## LPMaster 7.0.3 / 7.1 – 7.1.1

Change	Description
<b>Fix 7.1.1: Re-loading projects unloads project</b>	When re-loading a project, actually the currently loaded project was un-loaded, only. 7.1.1 re-loads all information correctly.
<b>Fix 7.1.1: Coloring properties for difference image offsets</b>	The patch corrects the display of the color values for difference image offset properties after altering the offset range and holding the center (offset=0) at a constant color.
<b>Fix 7.1.1: Quicker calibration (nav file initialization for more than 1 boot)</b>	As the NAV file initialization is now available for more than 1 boot, the calibration can be performed much quicker.
<b>Update 7.1.1: Support for RiProcess 4x4 calibration matrix</b>	7.1.1 now supports new ini-files in combination with a 4x4 calibration matrix with rotations delivered by RiProcess.
<b>Fix 7.1.1: Transparency settings and line-width settings</b>	Sliders for transparency and line-width settings in the viewing section are made available again.
<b>Fix 7.0.3: Conversion of old ALS files</b>	The function to convert older ALS file version has been updated to now work consistently.
<b>Fix 7.0.3: Memory problems with WDP export</b>	This fix corrects a memory problem when exporting WDP files.
<b>Fix 7.0.3: Rotation equations in point cloud processing</b>	LPMaster's point cloud processing routines are now aligned with the rotation computation equations from Riegl to avoid possible follow-up errors.
<b>Fix 7.0.3: Strip Level computation and display</b>	For larger projects it may have happened that the strip level computation or display freezes. The patch provides the necessary fix.

<p><b>New Feature 7.1: Fast computation of point density map from cov.sdc data</b></p>	<p>With LPMaster it is now possible to visualize the coverage result for detection of gaps directly after a flight session. The point density is directly determined from cov.sdc data. Changes associated with that were:</p> <ul style="list-style-type: none"> <li>- include the laser scan rate into the boot import dialog</li> <li>- include the thin out rate to the cov.sdc processing, the rate is stored in the history string of the cov-pat file</li> <li>- the thin out rate is considered by the pc2tile density processing</li> <li>- add the point return select box into the density dialog</li> <li>- a new dialog to view the statistic information of the boot / density information is integrated in the edit-&gt;density map-&gt;density report menu</li> </ul>
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## SCOP++ 5.6.1.1000

Change	Description
<p><b>Fix 5.6.1: Synchronized SCOP++ and TopDM libraries</b></p>	<p>SCOP++ as well as TopDM use common libraries and functions. These functions were synchronized.</p>
<p><b>Fix 5.6.1: DTM Export</b></p>	<p>For DTM export, the line points were checked for close-spaced points (&lt;5cm). This simple algorithm was now replaced by a thinning with the Douglas-Peucker algorithm and 1cm tolerance. The export of the DTM also verifies whether the start and end point coincide. If the distance of points is below a set tolerance, then the endpoint is set identical to the starting point. The tolerance so far was set to 20cm and now is reduced to 1cm.</p>

## TopDM 5.6.2.1000

This is a patch version for the main version 5.6.0. It includes the changes from the previous hotfix and patch versions. It is not necessary to install previous versions, it is a full setup. A license for version TopDM 5.6 is required.

An update of the data base version 5.6.1 is not necessary. An automatic data base update is possible for older data base versions. Starting the new Patch you get a message if an update is necessary. Please save your existing data base before an automatic update

Change	Description
<p><b>Hint 5.6.2: Coordinate Systems</b></p>	<p>There is a registry entry to define the folder containing the coordinate definitions. The registry entry can be found under:</p> <p>[HKEY_LOCAL_MACHINE\SOFTWARE\Trimble\TopDM 5.6]</p> <p>"INPHO_COORD_SYSTEMS"="C:\\ProgramData\\Trimble\\Trimble Photogrammetry7\\CoordinateTransformations\\"</p> <p>It is possible and makes sense to use the same coordinate system folder for Inpho ApplicationsMaster and TopDM. During the installation of TopDM the user can define whether the coordinate system folder from ApplicationsMaster (if installed) should be used for TopDM or not.</p>



	<p>If not the following folder is used and the coordinate definitions are installed under:</p> <p>C:\ProgramData\TopDM5\CoordinateTransformations</p>
<b>Hint 5.6.2: Geoids</b>	<p>There is a new registry entry to define the folder for the Geoid definitions. The registry entry can be found under:</p> <p>[HKEY_LOCAL_MACHINE\SOFTWARE\Trimble\TopDM 5.6]</p> <p>"INPHO_GEOIDS"="C:\\ProgramData\\Trimble\\GeoSpatial Geoids 7.0\\"</p> <p>Please check the entry for the Geoid folder.</p> <p>If the folder is not set correctly you have an empty Geoid Selection Box in TopDM (Basic Definitions – Georeferencing – Coordinate Systems... - Geographic – Geoid file).</p> <p>The installation program searches for an existing valid Geoid folder and automatically sets the registry entry on success.</p> <p>The current geoid files can be downloaded from our download server <a href="http://www.imaging-download.com">www.imaging-download.com</a>.</p>
<b>New Feature 5.6.2: Support of Oracle Data base</b>	<p>The version includes adaptations for support of Oracle Data bases</p>
<b>New Feature 5.6.2: UTF8 file name support</b>	<p>TopDM now supports UTF8 file names.</p>
<b>New Feature 5.6.2: Registry entry for Geoid folder</b>	<p>A new environment/registry variable INPHO_GEOIDS was introduced (automatically set during program installation).</p>
<b>Fix 5.6.2: Derived Products (DP) Import</b>	<p>Bug fix: Import of large RDH files (&gt;2GB)</p>
<b>Fix 5.6.2: DP export, Tiff</b>	<p>Large DTMs stored in GeoTiff Format (&gt;4GB) were unreadable.</p>
<b>Fix 5.6.2: TDM, Lidar data export using Scan angle filter</b>	<p>The scan angle filter did not work correctly.</p>
<b>Update 5.6.2: TopSQL Interface, Command line</b>	<p>The command buffer length increased for enabling (very long) SQL commands (typically needed for INSERT statements)</p>

## For more information

For more information contact your Trimble Inpho Support Team at [imaging\\_support@trimble.com](mailto:imaging_support@trimble.com) and register at <https://community.trimble.com> in order to track all news on Inpho.

Note: the 7.1 release does not require a new license to be installed. Users with a valid license for 7.0.x are entitled to download and use the new release.

Also note that inpho's WiBU licensing system also is updating their libraries constantly. To guarantee for stable license access, Trimble strongly recommends to update the WiBU libraries (available for download on above mentioned site

