



# PHOTOMOD 7.3.3768-7.4.4107

## New functions

### General

- Measurements of tie points using GPU (increasing the productivity)
- New function of DEM editing — deleting local selected objects (buildings, etc..)
- A capability of co-editing of vector objects by several operators
- New algorithm for blunder detection and the error distribution for the projection centers
- PHOTOMOD AutoUAS for Linux operating system
- Speeding-up of automatic tie point measurements for oblique UAS survey
- Interactive classification of the point cloud
- Editing tools for the point cloud
- Set of Pan-sharpening improvements
- Boolean operations on objects in 3D-Mod

### Aerial triangulation

- New configuration of the Feature-based correlator — "Nadir oblique Camera"
- New configuration of the Feature-based correlator — "Optimal 2"
- A capability of reducing stereopairs number when tie points measurements (speeding up)
- Added the "Tie-points statistics" table to the block processing report
- Offset from image boundaries parameters (Feature-based correlator)
- Support of camera passport in Pix4D format
- Processing of a project that uses different cameras inside the strips
- Import GCPs coordinates and measurements from Trimble Inpho
- Fixed display of images in the Block processing report in the project with the left coordinate system
- Fixed the error where the GSD was not for the project in the local coordinate system
- Fixed error where the Feature-based correlation used the wrong order of images in the strip



## Satellite imagery

- Minimization of the effect of erroneous measurements on the results of adjustment
- Hierarchical RANSAC algorithm (acceleration of tie points measurements)
- Using the feature-based correlation for Pan-Sharpener
- New options in batch Pan-Sharpener: deleting selected images, skipping created images
- Bias and affine options for measuring tie points (Pan-Sharpener)
- Multi-treading mode for the adjustment with the "optimization" option enabled
- Rejection of tie points in projects without metadata
- Fixed the error of reading Pan-sharpened images when using uppercase in the path

## Digital terrain and surface models

- Automatic filling of "holes" when using the interactive "Filtering object" DEM filter
- Speed-up TIN editing
- Changing the default parameters when building SGM
- Selection of point cloud tiles
- Improved the operation of the point cloud smooth filter
- Automatic deletion of empty point cloud tiles
- Interactive selection of adjacent points in the cloud of the same class by mouse click
- Interactive selection of a point cloud area by a polygon
- Considering of invisible zones when selecting a group of points in the cloud
- Multi-step undo while point cloud editing
- Parameters of DSM interactive filtering in the form of a drop-down window
- Limit of the Z-range when calculation of 3D-points for small images
- Fixed volume calculation error when using multipolygon
- Fixed error when building TIN within selected polygons



## **Stereovectorization**

- Arithmetic operations with attribute values
- Building buffer zone parallel to selected line in the form of a polygon
- Moving a vector object to a height from an attribute
- Export of vectors via Layer Manager
- A capability of saving object heights above DEM to attribute
- The function of making measurements on the ellipsoid of the working coordinate system
- “Replace selected segment by fragment from other layer” function
- Function “Make vertices linked/unlinked” for the selected vertices

## **2D and 3D windows**

- Building histogram for project images
- Limiting the number of images in the “Open images under marker” function
- Fixed the display of TIN edges in stereo mode

## **Orthorectification and mosaics**

- Option of minimal overlap of images, which allows to limit the cropping of the image
- Setting the range of background color shift on the raster in case of coincidence with the orthomosaic output background color
- Linking cutlines without attributes to images in (by coordinates)
- Writing transparent background color in PNG format
- Speed-up the creation of the mosaic when using “work-region” polygon
- Capability to specify number of pixels beyond the frame of the DEM when cutting into sheets
- Speeding-up the process of preparing the launch of cutlines building
- New function — replacing selected node by the new cutline
- An option of displaying the general progress bar
- Checking background color of source images by channels
- Fixed error of building detailed cutlines for orthophotos with lat-lon georeference
- Fixed error of incorrect brightness adjustment with the "match histogram" and "by average brightness" parameters
- Fixed error where the link to the image source was not saved in the properties of cutlines



## **3D modeling (PHOTOMOD 3D-Mod)**

- TIN texturing by selected rasters
- Export of 3D-model to Multilevel Geometry json format
- “Cut fragment” function for georeferenced image
- Speed-up the building 3D-TIN process by DEM
- New 3D-TIN texturing options

## **TrueOrtho**

- Additional parameters of TrueOrtho pixel color calculation

## **PHOTOMOD AutoUAS**

- Using GPU for automatic measurements of tie points
- New chapters in the Block processing report
- Viewing rasters and DEMs in the 3D window
- Improved the 3D-window interface
- Support of \*.tx3 format for 3D-models
- Improved building of TIN by LAS
- Added general progress bar of the process
- Fixed the error that occurred when using Cyrillics in the project paths
- Fixed the error when writing a Block processing report in \*.html format

## **PHOTOMOD Conveyor**

- Added the Feature-based correlator for satellite projects
- New installer
- Restart individual tasks after error messages
- Changed default settings for the most efficient processing
- Auto start distributed process center at program startup
- Warning about deleting project/output files
- Fixed the function of pixel automatic calculation in the output DSM



## **Distributed processing**

- Automatic closing of the distributed processing monitor when updating the PHOTOMOD version
- Creating Data Base for the distributed processing during the first PHOTOMOD installation
- Step-by-step removal of successfully completed distributed processing tasks when working with large projects

## **Raster Converter**

- Support of \*.bil and \*.bip formats

## **DustCorrect**

- Fixed the error of displaying images when the background color is incorrectly specified

## **Project Manager**

- Optimized the appearance of several tool windows
- Modifications of pre-regions building algorithm
- The sequence of ADS images taking into account the Forward-Nadir-Backward property
- Improved news list

## **Import and Export**

- Recording tiles \*.prf in GeoTIFF format
- Support of the WEBP format for output raster data
- “Deflate” compression algorithm for images and DEMs