

LiMapper 2.1 Features

	FEATURES	ADVANTAGES
INPUTS	Aerial images (orthophoto, oblique and multispectral images) and terrestrial images	Handle data taken from both air manned or unmanned platforms and the terrestrial images
	Supports cameras of various types (compact, SLR, rededge, sequoia, Tetracam, large-frame, etc.)	Supports multiple types of camera data, from small frame to large frame, from consumer level to professional level
	Supports multiple cameras in the same project	Multiple camera data can be included in the same project and processed altogether
	Supports camera group	Process data collected by multiple synchronous cameras
	Editing, importing and exporting of ground control points (*.txt, *.gcp, *.xml)	Import and edit ground control points to improve the precision of the project
	Supports local and arbitrary coordinate systems (angle and metric units)	Select an existing coordinate system or a user-defined geography and projection coordinate system
	Supports camera orientation (*.txt, *.csv)	Optimize camera orientation parameters based on initial GPS and IMU parameters
	Import external DSM/DEM	Import external of DSM/DEM to produce DOM or TDOM
PROCESS	Quickly generate quality reports	Evaluate the quality and accuracy of collected data of the shooting area
	Detect and match features of targets	Supports customized processing of feature extraction parameters and matching parameters
	Camera self-calibration (*.out, *.prj, *.xml, *.txt)	Optimize the internal and external parameters of the camera and supports the docking with bundler\inpho\smart3D and other software
	Automatic aerial triangulation and bundle adjustment	Supports automatic processing of data with or without camera orientation parameters
	Point cloud classification	Generate DEM based on ground points classified from sparse / dense point cloud

	Automatic filtering and smoothing of point cloud	Point cloud filtering and smoothing to remove noise
	Automatic DSM/DEM extraction	Extract DEM/DSM based on sparse/dense point cloud
	Color and brightness correction	Supports color and brightness correction during the orthophoto mosaic process
	Edit project area	Adjust the bounding box to determine the project area
	Multi core and GPU processing	Improve the processing speed based on multi-CPU parallel processing and GPU processing
	Unifier ray and color	Adjust the degree of unifier ray and color
MOSAIC PHOTO EDITING	Area editing	Supports replacing a manual defined mosaicked region with the best photo from the photo list
	Regional mosaic	Edit regional area and merge the modified area
PROJECT FUNCTIONS	New project	Add the new project wizard to including functions of adding and deleting photos, importing and clearing POS, and adding camera model settings
	New project supports template option	Create different templates for different application requirements. Edit and reuse the templates in the future
	Open project	Supports manual operations and dragging to add the project
	Open recent project	Record latest projects for convenience
	Close project	Close current project
	Save project	Save current project
VIEWING FUNCTIONS	Project visualization	Display of the optimized camera attitude and 3D point cloud
	Edit the manual connection points	Add connection points to an unregistered photo based on a registered photo
	Zoom the visual cone of camera and thumbnail	Display the attitude of the camera and the coverage at different elevation
	Re-optimize project	Improve processing precision based on GPS/IMU data, ground control points, or manual connection points

	Modify DEM/DSM color bar	Modify the color bar to change the DEM/DSM rendering
	3D view EDL render	Improve the display with EDL display mode
OUTPUT RESULTS	2D results	Supports the output the mosaicked orthophoto or true orthophoto in *.tif. The extent of the mosaicked orthophoto or true orthophoto can be also output in .kml (<i>only in the geographic coordinate system</i>). Output stitching lines of a mosaicked orthophotos or true orthophotos in .shp file
	2.5D results	Output DEM/DSM in *.tif
	Vector data	Output the stitching line in *.shp
	3D results	Output the sparse or dense point clouds in *.Ply, *.obj, *.las. Output dense point cloud in *.osgb.
	Camera calibration model (internal and external parameters)	Output the camera calibration model in *.out (docking with bundler), *.prj (docking with inpho), *.xml (docking with smart3d block-AT), and *.txt (only external parameters)
	Camera internal parameter model	Output the camera internal parameter model in the format of *.xml (docking with photoscan) and *.txt (docking with Australis format)
	SETTINGS	System settings