





	Features	Advantages
INPUTS	Aerial (nadir and oblique) and terrestrial imagery	  Process images taken at any angle and from any aerial manned or unmanned platform as well as from the ground
	Video (mp4 or avi format)	 Automatically extracts still frames from video files to create a project
	Any camera (compact, SLR, GoPro, 360-degree, large-frame add-on, etc.) images in .jpg or .tiff	  Use images acquired by any camera, from small to large frames, from consumer-grade to highly specialized cameras
	Multi-camera support for the same project	  Create a project using images from different cameras and process them together
	Ground control point edit and import (.csv, .txt)	 Import and edit ground control points to improve the absolute accuracy of your project
	Local, global and arbitrary reference coordinate system support in imperial or metric units	 Select EPSG code from known coordinate systems or define your own local system
	Camera exterior orientation support	  Optimize camera exterior orientation parameters starting from GPS and IMU input parameters
PROCESSING	Processing templates	 Automate processing and generation of outputs by using standard or customized templates
	Rapid Check with Quality Report	 Rapid processing template for a dataset quick check while still on site
	Camera self-calibration	  Optimize internal camera parameters, such as focal length, principal point of autocollimation and lens distortions, without the need of a lab calibration report
	Rolling shutter effect correction	 Correct the warp of images taken with rolling shutter cameras (like GoPro, DJI Phantoms, etc.) to maintain good accuracy, especially useful when flying fast and low
	Automatic Aerial Triangulation (AAT) and Bundle Block Adjustment (BBA)	  Process automatically with or without known camera exterior orientations: (x, y, z, w, f, k)
	Automatic point cloud densification	  Produce a dense and detailed 3D point cloud, which can be used as a basis for 3D mesh
	Automatic point cloud filtering & smoothing	  Use presets for point cloud filtering and smoothing options
	Automatic brightness and color correction	  Compensate automatically for change of brightness, luminosity and color balancing of images
	Quality Report	  Assess the accuracy and quality of projects
	Project merging	 Combine individually-processed projects into one
	Project splitting	 Split large projects into sub-projects for more efficient processing
	Project area definition	 Import (.shp) or draw specific areas to faster generate results inside specific boundaries
	Targeted Feature Extraction	 Give the number of features to find, getting more features in low-texture images to assist the reconstruction or less features for large-frame images to speed up processing
	Multiprocessor CPU + GPU support	 Increase the processing speed by leveraging the power of CPU cores and threads, as well as GPUs
RAYCLOUD EDITOR	Project visualization	 Assess quality of optimized camera positions, 3D point cloud and mesh
	Navigation modes	 View 3D point cloud and mesh in standard, trackball, or first person viewing modes
	Scale Constraint	 Accurately scale projects with no or imprecise geolocation by defining one/multiple distances
	Orientation Constraint	 Orientate projects with no or imprecise geolocation by defining directions of one/multiple axes
	Manual tie point editing	 Annotate and edit 2D and 3D ground control points (GCPs), check points and manual tie points with the highest accuracy, using both original images and 3D information at the same time
	Project reoptimization	 Reoptimize camera positions and/or rematch images based on GCPs and manual tie points to improve reconstruction of difficult areas
	Image Masking	 Carve: Remove points from 3D point cloud and create filters based on image content
		 Global Mask: Disregard objects which appear in all images, such as a drone leg or tripod which occluded the lens during all image acquisition
	Point cloud editing	 Select, classify or delete points from the point cloud using various selection tools
	Polyline and surface object creation	 Accurately refine vertexes in multiple original images
	3D mesh editing	 Annotate and create surfaces in the point cloud to flatten an area, or to fill up holes in the mesh, caused by insufficient image content
Fly-through animation	 Create a virtual camera trajectory in 3D rayCloud viewer, play the animation in real-time, export the animation as a video (in mp4 and avi format) and the editable flightpath waypoints in .csv format	
OUTPUT RESULTS	3D output results	 3D PDF for easy sharing of 3D mesh
		 Full 3D textured mesh in .obj, .ply, .dxf, and .fbx format
		 Tiled Level-of-detail (LoD) mesh in .osgb and .slpk (Esri) format
		 Full 3D textured mesh in .obj and .fbx format
Fly-through animations and flightpaths	 rayCloud view fly-through animation in .mp4 and .avi formats Fly-through waypoints and path in .csv format	
Optimized camera position, external orientation and internal parameters, undistorted images	 Export Aerial Triangulation results into traditional photogrammetry software solutions (e.g. INPHO, Leica LPS, DAT/EM Summit Evolution)	

COLLABORATION

Web share and visualization

-  Visualize 2D maps and 3D models using any web browser
-  Instant measurement of distances and surfaces
-  Share Projects with annotations via a simple link
-  Embed project output in a webpage

MULTI-LINGUAL

Language Options

 Software in English, Spanish, Chinese (traditional and simplified), Russian, German, French, and Italian

**HARDWARE
SPECS**



CPU: quad-core or hexa-core
Intel i7/Xeon recommended



HD: SSD recommended



RAM: DDR4-2400
32 GB recommended



GPU: Compatible with Open-
GL 3.2 (GeForce 2 GB RAM
recommended)



OS: Windows 7, 8, 10 64 bits,
Mac OS (Beta),



Pix4D SA
EPFL Innovation Park, Building F
1015 Lausanne, Switzerland
+41 21 552 0596

General inquiries: info@pix4d.com
Sales inquiries: sales@pix4d.com
Support inquiries: support@pix4d.com

www.pix4d.com

