



	Features	Advantages
INPUTS	Aerial and terrestrial images in .jpg .jpeg .tiff formats	☒ Process any RGB images that support basic EXIF/XMP tags.
	LiDAR and RGB images from PIX4Dcatch	☒ Process both LiDAR and RGB images outputs from PIX4Dcatch for a full terrestrial workflow.
	Multi-camera support in the same project	☒ Create a project using images from different cameras and process them together.
	Import image geolocations and orientations as .csv or .txt	☒ Text file import (.csv/.txt) for image geolocation and orientation.
	Ground Control Points (GCPs)	☒ Import and mark ground control points to improve the absolute accuracy of the project.
	GCPs marks	☒ Import of GCP marks from PIX4Dmapper into PIX4Dmatic.
	Known reference coordinate system support	☒ Select EPSG or ESRI codes from known coordinate systems libraries.
	Geoid support	☒ Support of most commonly used geoid models.
	Arbitrary coordinate reference system support	☒ Georeferencing of the project with GCPs in local or site specific coordinate systems.
	Region of interest (ROI)	☒ Define a Region of interest to delimit an area in order to reduce the extent of outputs generated for a project, speed up the processing, or even create sharper outputs.
PROCESSING	Multicore CPU + GPU support	☒ Increase the processing speed by leveraging the power of CPU cores and threads, as well as GPUs.
	Backup mechanism	☒ An automatic backup mechanism ensures that you do not lose your work when something unexpected stops PIX4Dmatic.
	Calibration	☒ Define the <i>Template</i> , <i>Pipeline</i> , <i>Image Scale</i> , <i>Keypoints</i> and <i>Internals confidence</i> parameters for the optimization of internal camera parameters (e.g. focal length, principal point of autocollimation and lens distortions) and external camera parameters (position, orientation) during calibration.
	Reoptimize	☒ Reoptimize internal and external camera parameters based on GCPs or MTPs to improve the reconstruction.
	AutoGCP	☒ Automatic detection of control targets of known shape for faster marking experience.
	Auto-mark	☒ For nadir projects, once at least 2 marks were added for a tie point, find more marks of the same point.
	Depth point cloud	☒ Create a depth point cloud based on LiDAR inputs from PIX4Dcatch.
	Point cloud densification	☒ Define the point cloud Density, Number of Matches, Image Scale, Noise filter and Sky filter parameters to create a dense point cloud based on the sparse point cloud created during calibration.
	Depth & dense fusion	☒ Create a single point cloud based on the depth point cloud and the dense point cloud.
	Mesh	☒ Define the mesh Input, Template, Texture size, Deghosting, Decimation and Sky mask parameters to create a 3D Textured Mesh.
	Digital Surface Model	☒ Define the Resolution cm/px, enable Surface smoothing with its Median filter radius (px) and enable Interpolation for the digital surface model creation.
	Orthomosaic	☒ Create an orthomosaic based on the digital surface model and the images and set Deghosting or Oblique parameters.
	Quality report	☒ Assess the quality of the reconstruction between processing steps with the Quality Report.
	Processing templates	☒ Select between a Nadir, Oblique or Custom processing template.

RAYCLOUD	Project visualization	 Visually assess the quality of optimized camera positions, automatic tie points, dense point cloud, mesh, digital surface model and orthomosaic.
	GCPs	 Annotate GCPs with the highest accuracy, using both original images and 3D information at the same time.
	Checkpoints	 Annotate Checkpoints with the highest accuracy, using both original images and 3D information at the same time to verify the absolute accuracy of the project.
	Manual Tie Points (MTPs)	 Create and mark manual tie points to improve the calibration of your project.
	Undo/Redo your changes	 Undo/Redo actions.
	History	 All actions of a given session are available in the history panel. Revert to the project at any stage, while keeping the other steps that were done as items in the history.
	Status center	 More detailed information about what happens when processing and working in the software.
	Distance measurement	 Measure a distance in the scene.
	Base maps	 Get context about your scene by displaying map or satellite data in the background of your scene in the 2D viewer.
EXPORT	Point cloud (.las)	 Export generated point clouds in .las file format.
	Mesh (.obj)	 Export a 3D Textured Mesh in .obj file format.
	Digital Surface Model (.tiff, .tfw, .prj)	 Export generated digital surface model in a single .tiff or in tiles. Optionally with .tfw and .prj files. Select the compression rate of the file. LZW compression available.
	Orthomosaic (.tiff, .tfw, .prj, .jpg, .jgw)	 Export generated orthomosaic in a single or tiled .tiff with optional .tfw and .prj files, or as .jpg with a .jgw file for geolocation. Select the compression rate of the file. LZW compression available.
	Quality report	 Export the quality report to assess the accuracy and quality of projects.
	Direct export to PIX4Dsurvey	 Seamless export of processed PIX4Dmatic projects (.p4m) into PIX4Dsurvey. Together with Pix4D's proprietary .bpc file format, this leads to optimized loading and manipulation of large point clouds in PIX4Dsurvey.
LANGUAGE	Language option	 English, Japanese, Spanish, French, Simplified Chinese, Korean

HARDWARE SPECS**CPU:** Quad-core or hexa-core Intel i5**GPU:** Any NVIDIA GPU that supports OpenGL 4.1 or higher**Disk Space:** 150 GB Free Space (2000-5000 images at 20MP). 350 GB Free Space (5000-10000 images at 20MP)**RAM:** 32GB (2000-5000 images at 20MP). 64GB (5000-10000 images at 20MP)**OS:** Windows 10, 11 (64 bit) or macOS Monterey and Big Sur