


























	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.
	Site localization	☑ Import a .wkt created with PIX4Dcatch, or a .prj file and set your custom coordinate system.
	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.
	Scale constraint	☑ Define a scale constraint with a distance and an accuracy, which enables scaling a project based on that input at the Calibration step.
	Orientation constraint	☑ Define an orientation constraint with a direction and an assigned axis, which enables orienting a project without orientation information at the Calibration step.
	Open Photogrammetry Format (OPF) 1.0	☑ Import a project created with the Open Photogrammetry Format (OPF) 1.0 specifications.
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.
	Intersection Tie Points (ITPs)	☑ Generate intersection tie points as part of the calibration for improved calibration e.g. for indoor scenes.
	Merging projects	☑ Merge two or more projects with the Calibration step processed that have overlap.
	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.
	Planes	☑ Generate planes automatically for improving the mesh of your model.
	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 the Nadir, Oblique, PIX4Dcatch 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. In Perspective or Orthographic views.
	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.
	Intersection Tie Points (ITPs)		Create and mark manual ITPs or edit and delete automatic ITPs 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.
	Polygon		Create polygons or edit and automatically generated planes to improve the mesh of your project.
	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, .laz)		Export generated point clouds in .laz and .las file format.
	Mesh (.obj, Cesium 3D tiles, .slpk)		Export a 3D textured mesh in .obj, Cesium 3D tiles (.b3dm, .json) and .slpk file format.
	Point cloud from Mesh (.laz)		Export a point cloud from your mesh for better modeling in Revit.
	Digital Surface Model (.tiff, .tif, .prj, .jpg, .jgw)		Export generated digital surface model in a single .tiff or in tiles. Optionally with .tif and .prj files. Select the compression rate of the file. LZW compression available.
	Orthomosaic (.tiff, .tif, .prj, .jpg, .jgw)		Export generated orthomosaic in a single or tiled .tiff with optional .tif 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.
	Share to PIX4Dcloud		Upload results from PIX4Dmatic to PIX4Dcloud for sharing and collaboration.
	Open Photogrammetry Format (OPF) 1.0		Export a project in the Open Photogrammetry Format (OPF) 1.0 specifications.

LANGUAGE	Language option		English, Japanese, Spanish, French, Simplified Chinese, Traditional Chinese, Korean, German, Portuguese
----------	---------------------------------	---	---

LICENSING OPTIONS	Organizational license support		If you are in a Pix4D organization, you can access those organizational licenses and see how many are available.
	SSO support		SSO-enrolled companies can use their defined SSO provider to log in.
	Offline license		Fully offline licensing available.

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 Ventura and Monterey